CITY OF SOUTH PASADENA
MOBILITY AND TRANSPORTATION INFRASTRUCTION COMMISSION
REGULAR MEETING AGENDA

Council Chamber
1424 Mission Street, South Pasadena, CA 91030

July 21, 2020, at 6:30 p.m.

South Pasadena Mobility and Transportation Infrastructure Commission Statement of Civility
As your elected governing board we will treat each other, members of the public, and city employees with patience, civility and courtesy as a model of the same behavior we wish to reflect in South Pasadena for the conduct of all city business and community participation. The decisions made tonight will be for the benefit of the South Pasadena community and not for personal gain.

NOTICE ON PUBLIC PARTICIPATION & ACCESSIBILITY

Pursuant to Section 3 of Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, the regular meeting of the Mobility and Transportation Infrastructure Commission for July 21, 2020 will be conducted remotely and held by video conference. The Meeting will be broadcast live on the City's website http://www.spectrumstream.com/streaming/south_pasadena_mtic/live.cfm) and local cable channels.

Please be advised that pursuant to the Executive Order, and to ensure the health and safety of the public by limiting human contact that could spread the COVID-19 virus, the Council Chambers will not be open for the meeting. Commission Members will be participating remotely and will not be physically present in the Council Chambers.

If you would like to comment on an agenda item, members of the public may submit their comments in writing for consideration, by emailing comments or questions to: mticpubliccomments@southpasadenaca.gov. **Public Comments must be received by 12 p.m., July 21, 2020** to ensure adequate time to compile and post. Public Comment portion of the email is limited to 250 words. Please make sure to indicate: 1) your name; 2) what agenda item you are submitting public comment on, or if it is a general public comment; and/or 3) if you request for your public comment to be read at the meeting.

CALL TO ORDER: Chair Sam Zneimer

ROLL CALL: Commissioners: Lawrence Abelson, John Fisher, Michelle Hammond, Kimberley Hughes and Sam Zneimer

CITY COUNCIL LIAISON: Dr. Richard Schneider, M.D.

STAFF PRESENT: Shahid Abbas, Public Works Director, Kristine Courdy, Deputy Director of Engineering and Operations and Leaonna DeWitt, Public Works Assistant

PLEDGE OF ALLEGIANCE: Vice Chair Lawrence Abelson

PUBLIC COMMENTS AND SUGGESTIONS
The Mobility and Transportation Infrastructure Commission welcomes public input. If you would like to comment on an agenda item, members of the public may submit their comments in writing for consideration, by emailing comments or questions to: mticpubliccomments@southpasadenaca.gov. **Public Comments must be received by 12p.m., July 21, 2020** to ensure adequate time to compile and post. Public Comment portion of the email is limited to 250 words. Please make sure to indicate: 1) your name; 2) what agenda item you are submitting public comment on, or if it is a general public comment; and/or 3) if you request for your public comment to be read at the meeting.

1. **Public Comment – General**

ACTION ITEMS

2. **Minutes of the Regular Mobility and Transportation Infrastructure Commission on June 16, 2020**

DISCUSSION ITEMS

3. **North South Corridor Smart Mobility Plan: Fremont Avenue and Meridian Avenue**

COMMUNICATIONS

4. **City Council Liaison Communications**
5. **COVID-19 Mobility and Transportation Related Matters Ad Hoc Committee**
6. **Commissioner Communications**
7. **Staff Liaison Communications**

ADJOURNMENT

FUTURE MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION MEETINGS

August 18, 2020	TBD	6:30 p.m.
September 15, 2020	TBD	6:30 p.m.
October 20, 2020	TBD	6:30 p.m.

PUBLIC ACCESS TO AGENDA DOCUMENTS AND BROADCASTING OF MEETINGS

Commission Meeting agenda packets are available online at the City website: https://www.southpasadenaca.gov/government/boards-commissions/mobility-and-transportation-infrastructure-commission

ACCOMMODATIONS

The City of South Pasadena wishes to make all of its public meetings accessible to the public. If special assistance is needed to participate in this meeting, please contact the City Clerk's Division at (626) 403-7230. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities. Notification at least 48 hours prior to the meeting will assist staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting (28 CFR 35.102-35.104 ADA Title II).

I declare under penalty of perjury that I posted this notice of agenda on the bulletin board in the courtyard of City Hall at 1414 Mission Street, South Pasadena, CA 91030, and on the City's website as required by law.

07/16/20
Date

/s/
Leaonna DeWitt
Public Works Assistant

ITEM 2

Minutes of the Regular Meeting of the Mobility and Transportation Infrastructure Commission – June 16, 2020

MINUTES OF THE
MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION
16TH DAY OF JUNE 2020 AT 6:30 P.M. AT THE
CITY COUNCIL CHAMBERS
1424 MISSION STREET

CALL TO ORDER
The Regular Meeting of the Mobility and Transportation Infrastructure Commission was called to order by Chair Zneimer at 6:34p.m. The meeting was held in a virtual setting, with all Commissioners and Council Liaisons attending via Zoom, and the meeting being broadcast via the Council Chamber, located at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

Present: Commissioner Abelson, Commissioner Fisher, Commissioner Hammond and Commissioner Hughes, and Commissioner Zneimer.

Absent: None

City Staff
Present: Deputy Director of Public Works Kristine Courdy (DDPW) and Public Works Assistant Leaonna DeWitt

PLEDGE OF ALLEGIANCE
Chair Zneimer led the pledge of allegiance.

1. PUBLIC COMMENT

PWA DeWitt announced that one public comment was received in writing via email from the following individual:

- Isabela Harrington – Bike Path Easement Project

PRESENTATIONS

2. 2020-2025 Citywide Pavement Management Program
DDPW Courdy gave a brief overview of the item and introduced Peter Bucknam of Bucknam Infrastructure Group. Mr. Bucknam presented the 2020-2025 Citywide Pavement Management Program.

Commissioners had various questions and comments regarding the type of treatment, pavement condition index, and funding.

3. Update on City Street Improvement Projects
DDPW Courdy presented an update on the City Street Improvement Project. She announced the Alpha Avenue and Camino Del Sol Street Improvement Project, Monterey Road Phase 3 and the traffic signal at Orange Grove Avenue and Monterey Road are underway.

Public Comment:

1. Alan Ehrlich – He suggested the streets with the majority of heavy traffic such as Fair Oaks Avenue and Fremont Avenue be the City's first and primary focus.

Commissioners had various questions and comments regarding funding and timing of projects.

4. Measure M Multi-Subregional Projects (MSP)
DDPW Courdy gave a brief overview on this item. The next round of Measure M MSP Funding projects are:

- Meridian Avenue Complete Street from Monterey Road to Kendall Avenue
- Mission Street, Stoney Drive and Arroyo Drive Intersection Improvements
- Diamond Avenue and Lyndon Street Intersection Improvements

Public Comment:

1. Brandon Fox – He shared his concerns regarding Fremont Avenue (comment was signed by an additional 32 individuals).
2. Mark Hess – He expressed concern of traffic on Hermosa Street.
3. Alan Ehrlich – He opposed the recommendations in the report and suggested other alternatives for slowing traffic on Meridian.

Commissioners had various questions and comments regarding proposed projects and funding.

ACTION ITEMS

5. Minutes of the Special Joint Meeting of the Public Works Commission and Mobility and Transportation Infrastructure Commission on May 11, 2020.
Commission approved as amended (Abelson, Hughes; passed unanimously)

6. Minutes of the Regular Mobility and Transportation Infrastructure Commission on May 19, 2020.
Commission approved as amended (Hughes, Abelson; passed unanimously)

7. Review and Recommend that the City Council Approve the Senate Bill (SB1) Resolution.
DDPW Courdy gave a brief overview on this item.
Commission approved the street improvement project list recommended for the 2020-21 FY SB1 Resolution (Zneimer, Hammond; passed unanimously)

DISCUSSION ITEMS

8. Commissioner Lead Discussion: COVID-19 Mobility and Transportation Related Matters.
Discussion ensued regarding safer streets, closure of streets for dining opportunities, closure of Meridian, and business community efforts and outreach. The Commission unanimously approved a COVID-19 Sub-Committee with Chair Zneimer and Commissioner Hammond.

9. Council Liaison Communications
Council Liaison Dr. Schneider shared the agenda from the Metro meeting.

10. Commission Communications
Commissioner Fisher discussed and shared a sketch of the interchange of Fair Oaks Avenue and SR-110. Council Liaison Dr. Schneider informed the Commission that he would be meeting with staff to discuss the discretionary funds set aside for a preliminary plan of the proposed loop ramp.

Commissioner Hughes inquired about the status of the Gold Line improvements.

Commissioner Abelson expressed concern that projects are being prevented from moving forward and not giving the community what they want.

11. Staff Liaison Communications
PWA DeWitt announced the Annual Dumpster Day Event on Saturday, June 20 at 8am. Seniors can qualify for curbside pickup by registering with the Senior Center.

DDPW Courdy announce the City's new social media platform called City Hall Scoop. It provides information on City events and programs.

ADJOURNMENT: Meeting adjourned at 9:22 pm.

I HEREBY CERTIFY that the foregoing minutes were adopted by the Mobility and Transportation Infrastructure Commission of the City of South Pasadena at a meeting held on July 21, 2020.

_____
Sam Zneimer, Chair

PUBLIC COMMENT

MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION MEETING

June 16, 2020

(Deadline to submit Comments 6/15/20)

Item No.	Name	Document	Date Received
GC	Isabela Harrington; Mark Hess	E-mail Public Comment	6/15/20
3	Alan Ehrlich	E-mail Public Comment	6/15/20
4	Families on Fremont; D Shane; Alan Ehrlich;	E-mail Public Comment	6/15/20

Leaonna Dewitt

From: Isabela Harrington [redacted]
Sent: Monday, June 15, 2020 5:55 PM
To: MTIC Public Comments
Subject: Public Comment Submission - Bike Path Project
Attachments: Easement Bike Path Project.pptx

Hi there,

I'd like to request public speaking at this forum

1) Your name Isabela Harrington, resident of South Pasadena 1721 Mission St
2) what agenda item you are submitting public comment on or if it is a general public comment How can we move forward the Easement Bike Path Project?
3) clearly state if you wish for your comment to be read during the meeting I will speak to it

Attached is a presentation that I've put together if there is opportunity to show it as a visual aid to my comment

Please let me know if there is space for me to present tomorrow

Thanks,

Isabela

Best,

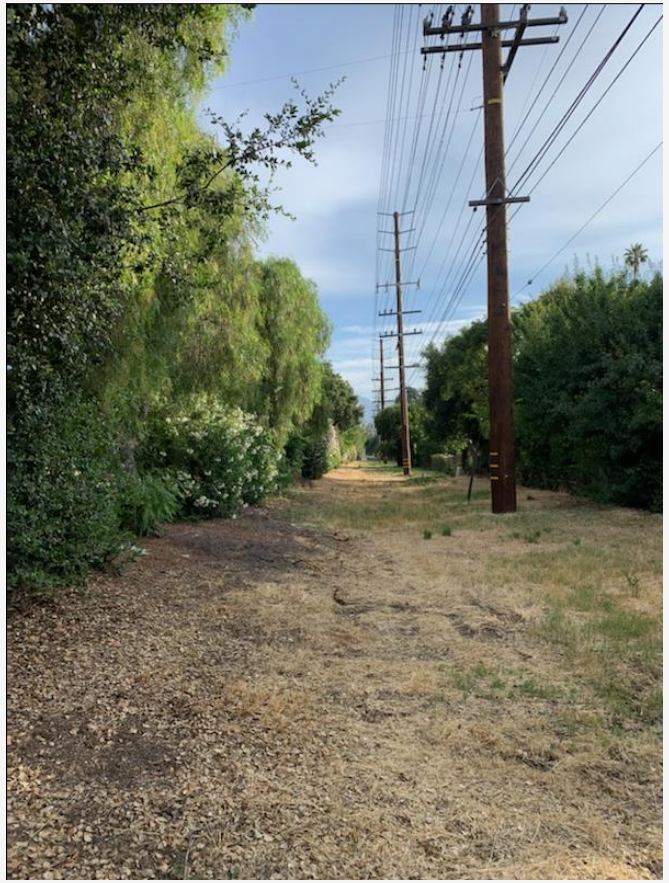
Isabela

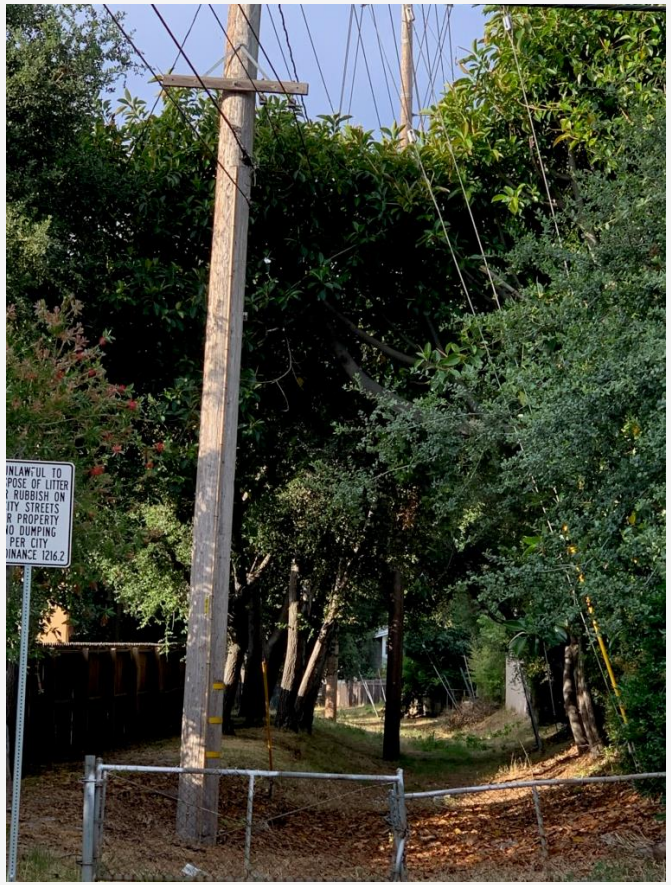
Easement Bike Path Project

Continuously Improving South Pasadena

Why

- Sustainability – Enhance paths for no or low carbon emissions mode of transport (walk, bike, scooters, skates).
- Safety - Safe bike and walk path for Middle School Students encouraging students to walk or ride to school – less traffic near the school premise.
- Beauty - Beautify our city transforming the eye sore which currently these easements represent –weeds and overgrown with grass most of the year, boundaries marked by ugly chain link fences.
- Health – Additional recreational space to get resident families active and healthier.





What

This project proposes a walk/bike bath and landscaping project to be conducted where the current electrical easements are, connecting Garfield park to the Middle School and Huntington Avenue to the Middle school. There is a mention on the City Plan of doing so but no clear timeline.

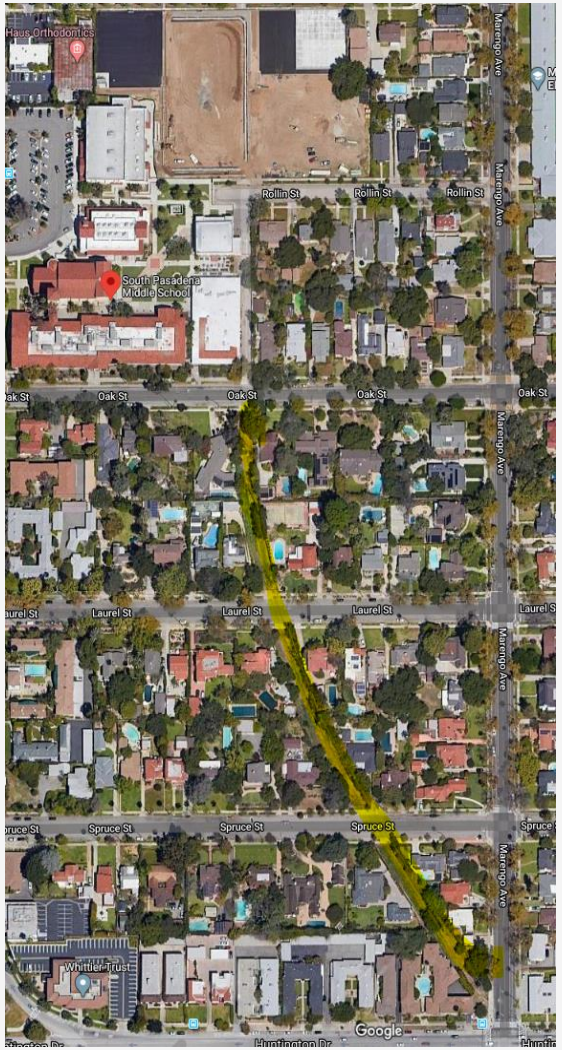
- 5 Blocks between Mission and Bank
- 3 Blocks between Oak and Huntington
- Total of 8 Blocks - aprox 1 miles of path

Investment:

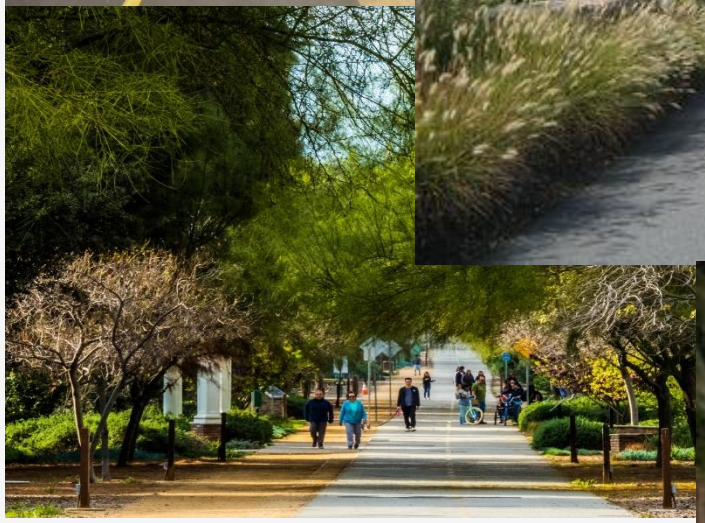
- Paved – asphalt path with two lanes
- Pebbles landscape around it with occasional native planting pods
- Solar – self sufficient - lighting system
- Stripped path crossings and signage on main street crossing points

Cost:

Dependent on materials/design – min about $200k investment but can go up to 800k.



Vision Board



How can we partner?

Sources:

http://www.pedbikeinfo.org/cms/downloads/Countermeasure_Costs_Summary_Oct2013.pdf

https://www.treehugger.com/bikes/1-mile-protected-bike-lane-100x-cheaper-1-mile-roadway-chart.html

https://www.citylab.com/transportation/2011/10/how-much-bike-trail-worth/382/

https://www.jkpavement.com/asphalt-vs-concrete-for-bike-trail-paving/

https://peopleforbikes.org/blog/protected-bike-lanes-do-not-cost-1-million-per-mile/

http://pedestrians.org/topics/row-gallery.htm

Leaonna Dewitt

[redacted]

From: mhess1
Sent: Monday, June 15, 2020 1:25 PM
To: MTIC Public Comments
Subject: MTIC Meeting - 6/16/2mhess1100@gmail.com020 - Public Comment for Item #4

My name if Mark Hess and we reside at 718 Hermosa St., South Pasadena.

We have a problem with traffic on our street and it's getting worse, more brazen. The problem is traffic. Drivers blowing through the 4-way stop, speeding, and not allowing a safe distance between pedestrians and autos where there is no sidewalk. Yes, no sidewalk. For all of us who walk, run, or push baby carriages, we have minimum sidewalk access. Did you know roughly 70% of Hermosa between Grand Avenue to Columbia has no sidewalks.

Our issues:

1. 4-way stop: This were installed 4-5 years ago and have helped slow the traffic but for drivers who drive through, it's only a slight distraction. Running the stop signs is very significant.
2. Speeding: Especially the case for west bound traffic, it's very concerning.
3. Minimal sidewalks availability
4. Unsafe distance between autos and anyone else. I've literally had people point their cars as me as I walk my dog thinking this was good fun.

The problem is traffic flow and use. Police traffic enforcement, while greatly appreciated can't do it all. We need a more comprehensive solution

I believe your role is to promote the traffic management to utilize funding that will promote safety for those who either live on or around Hermosa or other traffic challenged areas. Please confirm with me and my neighbors, that is your role. Please know, I feel unsafe on Hermosa and as a senior, my anxiousness continues to rise.

Leaonna Dewitt

From: Alan Ehrlich [redacted]
Sent: Monday June 15 2020 6:04 PM
To: MTIC Public Comments
Cc: Fremont Brandon Fox; Delaine Shane; laalaw@att.net; Maria Ayala; Dr Richard Schneider - Personal
Subject: Public Comment Agenda Items #3, #4
Attachments: Public Comment t MTIC 2929 06 16.docx

During this era of corona virus uncertainty, help protect yourself and others, be chill, be informed, wear a face mask, practice social distancing and wash your hands frequently. Stay safe, Stay healthy, Stay home

Recommended COVID-19 Information
LA County - http://publichealth.lacounty.gov
CA Dept of Public Health - http://covid19.ca.gov
CDC - https://www.cdc.gov
Harvard School of Public Health - http://theforum.sph.harvard.edu/events
Johns Hopkins Univ - http://coronavirus.jhu.edu

From Alan Ehrlich
To Mobility and Tranportation Infrastructure Commission

Agenda Item #3
Update on City Street Improvement Projects

Chairman Zneimer, Commissioners

While this is just a progress report, it is disheartening to see that virtually all of the street improvement projects completed, underway and planned are east / west roadways and none are north /south, when the majority of heavy traffic is on Fair Oaks and Fremont. These should be your first and primary focus.

Agenda Item #4
Update on the Measure M Sub-regional Projects

Chairman Zneimer, Commissioners.
Again, the recommendations in this report are seriously flawed. The former Transportation Commission and city council approved a number of projects, none of which are to be seen in this report, are you just making up projects so you waste money on more studies?

Your recommendations for the southern portion of Meridian fail to effectively address the concerns of residents.The city has already installed rectangular rapid flashing beacons at the intersection of Oak Street. Half of the lights are burned out. I reported this to Public Works over a month ago. What's the point of installing more if you can't maintain the ones that are already there? In order to make Meridian part of a safe streets program, you need to start by slowing down traffic, especially on the speedway behind the high school grand stands. This can quickly, easily and for a nominal cost be completed by constructing two sets of speed humps, one near the mid portion of the grandstand and another futher south closer to the 'S' curve of the roadway.
Speed can also effectively be slowed by the installation of LED radar signs that alert drivers to the speed limit and how fast they are traveling. Studies have shown these to be extremely effective, slowing up o 80% of vehicles. Many police departments and city managers descibe them as having an extra officer on duty 24/7. There's nothing sexy about them, but they don't require spending more money on another traffic survey, are easy to install and effective. Why is that a problem for the Public Works department. Are they get incentive pay for the more money they waste?

To save you the of doing your job, here is some information about Radar Signs.

https://www.sfmta.com/projects/automated-speed-enforcement

https://www.policemag.com/342411/15-things-you-should-know-about-speed-enforcement-tools

https://www.radarsign.com/radar-speed-signs/ I'll work on getting prices for these. The basic model, TC 400 is what they use on Pasadena Ave and on mobile. The TC-600 has as an optional simulated camera flash that I think would increase the effectiveness another 10x. Both units are wi-fi capable and have data capture. The 400 can run off dedicated power or batteries (last about 2 weeks). The 600 is solar.

Even easier, are two model you can purchase off Amazon for under $3,600, and shipping is free. These don't have the data collection computer software, but only cost $3600 for the more expensive model, and shipping is free.

https://www.amazon.com/speed-radar-signs/s?k=speed+radar+signs

I'd like to see someone from the city explain how hard and difficult this is. It took me all of 20 minutes.

Leaonna Dewitt

From: Families on Fremont [redacted]
Sent: Monday, June 15, 2020 11:18 AM
To: MTIC Public Comments
Cc: Dr. Richard Schneider - Personal; Lawrence A. Abelson; Michelle.h826@gmail.com; Stephanie DeWolfe; Shahid Abbas
Subject: Measure M Funds - public comments slight revisions

The 32 signatories below would like the following statement read at the next MTIC meeting. It is 248 words not including our names and addresses

Commissioners,

In 2016, voters approved Measure M, designed to "ease traffic congestion" and "transform transportation." We are extremely disappointed to hear that the City is again ignoring Fremont Avenue by not planning to use this money to fix any of our issues, which cause problems for our street and others that deal with pass-through traffic.

We have asked for simple fixes, including:

1. Installation of digital speed signs,
2. Construction of medians restricting illegal trucks accessing the street, and
3. Creation of a roundabout/crosswalk at Fremont and Buena Vista.

We have presented the Commission and City with the City's own studies showing how our congestion is the worst in the City. There is an urgent need, as there have been multiple accidents, including a fatal one, this year alone. That fatal accident highlighted many of our issues, as it involved a speeding motorcycle trying to create its own lane to pass an illegal truck.

Despite obvious needs, the City failed to ask for any Measure R funds to fix our issues. Now, it fails to propose any projects from Measure M funds for our pressing needs. Waiting and hoping for a future grant is not the solution, especially in this budget crisis and without any specific designs. We ask that you pass a resolution calling for the City to use Measure M funds to: (1) decrease congestion and illegal trucks on our street, (2) deter excessive speeding, and (3) make our residential street more family and pedestrian friendly.

Families on Fremont

Lisette Carreno and Rafael Lopez
307 Fremont Avenue

Tony and Teri Ryan
315 Fremont Avenue

Brandon and Andrea Fox
319 Fremont Avenue

Erna Ohlsson
329 Fremont Avenue

Lori Barba
415 Fremont Avenue

John and Deana Ng
500 Fremont Avenue

Alexis and Oren Boxer
508 Fremont Avenue

Eugenie Throckmorton
514 Fremont Avenue

Dollie Chapman
1941 Fremont Avenue

John Kenyon
501 Fremont Lane

Terry Madigan
1023 Buena Vista Street

Michael Serrano
1124 Buena Vista Street

Cathleen Hoadley and Leslie Brill
1109 Buena Vista Street

Whitney Bruen-Azat and Alexander Azat
1134 Buena Vista Street

Toya Cho
1129 Foothill Street

319 Fremont Avenue

Erna Ohlsson
329 Fremont Avenue

Lori Barba
415 Fremont Avenue

John and Deana Ng
500 Fremont Avenue

Alexis and Oren Boxer
508 Fremont Avenue

Eugenie Throckmorton
514 Fremont Avenue

Dollie Chapman
1941 Fremont Avenue

John Kenyon
501 Fremont Lane

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1023 Buena Vista Street

Michael Serrano
1124 Buena Vista Street

Cathleen Hoadley and Leslie Brill
1109 Buena Vista Street

Whitney Bruen-Azat and Alexander Azat
1134 Buena Vista Street

Toya Cho
1129 Foothill Street

Ashlee Ricci
1139 Foothill Street

Delaine and Russell Shane
2003 Meridian Avenue

Alan, Stephanie and Justin Ehrlich and Jenny Banjong Muninnopmas
1221 Lyndon Street

Jeffrey Tom-Yon
1711 Huntington Drive

Leaonna Dewitt

[redacted]

From: D Shane
Sent: Monday, June 15, 2020 5:04 PM
To: MTIC Public Comments; Kristine Courdy
Cc: laalaw@att.net; Dr. Richard Schneider - Personal; WISPPA; Ben Tansey; Bill Glazier; Maria Ayala; Sam Zneimer; ezneimer; Leaonna Dewitt
Subject: MTIC Meeting for June 16, 2020: Public Comment for AGENDA ITEM NO. 4 PLEASE READ PETITION COMMENT OUT LOUD DURING COMMISSION MEETING FROM 11 FAMILIES CONCERNED WITH MERIDIAN AVENUE
Attachments: Summary on Stop Sign Approval at Meridian and Oak in 1999-2000.pdf; 081600 Council Agenda Packet_Stop Signs at Meridian and Oak 2000.pdf; Council Meeting Minutes Page 86 of August 16 2000.JPG

Importance: High

Dear Honorable MTIC Commissioners:

We residents appreciate the recognition of Meridian Avenue in Agenda Item No. 4. However, we need IMMEDIATE relief from the dangerous traffic conditions that we experience daily. Our street has been compromised due to decades of 710 planning and City neglect. Thankfully the 710 is now dead and Public Works has done enough short-term studies. In 2000, the City approved a 3-way stop for Meridian/Oak that was never installed. The TAC at that time recommended approval, but for political reasons by Council, it was never installed (see attachments). That same Council asked for follow up if the problems persisted and would support TAC's recommendation. We now request that MTIC recommend this signage installation to City Council. More recently, the current City Council requested Public Works to study the intersection at Meridian/Maple. Please recommend the two, three-way stops at Meridian/Oak and Meridian/Maple with related signage warning that stop signs are ahead. Curbs need to be painted red within the zebra crossing at Meridian/Oak to prevent cars from parking within that crossing. A permanent digital speed sign coupled with enforcement would control the speed. Finally, key intersections such as Meridian/Bonita need limited, red painted curbs to ensure that residents have clear sight lines for public safety whether for walking, bicycling, or driving. These simple, cost-effective solutions can do so much now while the results of the Complete Street Project will take years to implement. With over 20 years of worsening traffic, we simply cannot wait any longer.

Thank you.

Delaine, Russell, and Sara Shane
2003 Meridian Avenue

Susan Sulsky
2013 Meridian Avenue

Denise Philley, Paul Wood, and Linus Wood
2018 Meridian Avenue

Margot Healey
2021 Meridian Avenue

Ron Rosen
901 Wolford Lane

Kim Carlson
732 Bonita Drive

Ava and Ed Herrera
889 Braewood Court

Joanne and Tom Nuckols
1531 Ramona Avenue

Amber and Patrick Haley
1535 Ramona Avenue

Jeff Tran
1541 Ramona Ave

Alan, Stephanie, and Justin Ehrlich, and Banjong Muninnopmas
1221 Lyndon Street

889 Braewood Court

Joanne and Tom Nuckols
1531 Ramona Avenue

Amber and Patrick Haley
1535 Ramona Avenue

Jeff Tran
1541 Ramona Ave

Alan, Stephanie, and Justin Ehrlich, and Banjong Muninnopmas
1221 Lyndon Street

The following excerpts are taken from the official report of the City Council on August 16, 2000:

Recommendation
It is recommended that the City Council adopt the attached resolution approving:

1. the installation of all-way stop signs at the intersections of:
   a. Meridian Avenue & Oak Street
   b. Oakhill Avenue & Pinecrest Drive
   c. Oxley Street and Brent Avenue; and

2. the prohibition of parking for approximately 40 feet on the north side of the 2000 block of Hanscom Drive.

Background
The Traffic Safety Advisory Committee (TSAC) has reviewed a number of requests for additional traffic controls and parking limitations in recent months. Following public input and discussion by the committee, the TSAC has made recommendations for implementation of the changes enumerated herein.

Proposed All-Way Stop Signs at Meridian Avenue & Oak Street
Meridian Avenue is a heavily traveled collector street that has limited sight distance due to curves and cross streets that intersect at a sharp angle in the vicinity of Oak Street. This City has received numerous complaints about the difficulty of making a right turn from westbound Oak Street onto northbound Meridian Avenue, and about the danger posed to school children crossing this intersection. TSAC initially reviewed this proposal on May 20, 1997, and the request was denied because the numeric warrants were not met. Upon reevaluation by TSAC, it was determined that greater consideration should have been given to the great number of students of all ages on their way to and from school that must cross Meridian Avenue at this intersection. In light of these factors, the TSAC unanimously recommended the installation of all-way stops signs and the installation of crosswalks on both sides of the intersection in yellow because of the proximity to the school.

AGENDA ITEM 13

Council denied this determination, due to political reasons, because the vehicles should not be impeded, rather than to give significant weight to the public safety of school children crossing the intersection.

The commission of that time in October 1999 stated in its notes:

next month and request funds for next year's budget.

PROPOSED 4-WAY STOP SIGNS
Dr. Van Winkle provided a memo to all members with background information on this item. The main complaint regarding the intersection is the difficulty drivers experience making right turns from Oak onto northbound Meridian and the large number of students who cross at this location. After some discussion, all members agreed to the installation of all-way stops signs and the installation of crosswalks on both sides of the intersection in yellow because of the proximity to the school. This improvement, it was agreed, will calm traffic and provide a safer crossing for children.

The minutes to the City Council meeting on August 16, 2000 stated:

RESOLUTION NO. 6627 INSTALLATION OF ALL-WAY STOP SIGNS AT: MERIDIAN/ OAK; OAKHILL/PINECREST; AND OXLEY/BRENT; AND PROHIBITION OF PARKING AT 2000 BLOCK OF HANSCOM DR.	Councilmember Saeta expressed concern that the proposed stop sign at the intersection of Meridian Avenue and Oak Street would impede the flow of traffic on Meridian. Councilmembers Knapp and Zee concurred with this opinion. Council unanimously (5 ayes) adopted Resolution No. 6627, entitled A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA AUTHORIZING THE INSTALLATION OF ALL-WAY STOPS AT THE INTERSECTIONS OF OAKHILL AVENUE AND PINECREST DRIVE, AND OXLEY STREET AND BRENT AVENUE, AND THE PROHIBITION OF PARKING ON PORTIONS OF HANSCOM DRIVE. A stipulation to this approval is that, should the Traffic Safety Advisory Committee still determine that the all-way stops at the intersection of Meridian and Oak are necessary, the Council would defer to their recommendation. (Saeta, Rose)
WARRANTS APPROVED	By roll call vote (5 ayes), the general City warrants in the amount of $877,294.42 were approved. (Rose, Zee)

City of South Pasadena
Official Report

COUNCIL AGENDA: August 16, 2000

TO: City Council

VIA: Sean Joyce, City Manager

FROM: James R. Van Winkle, Public Works Director

SUBJECT: **Installation of all-way stop signs and parking limitations at various locations.**

Recommendation
It is recommended that the City Council adopt the attached resolution approving:

1. the installation of all-way stop signs at the intersections of:
   a. Meridian Avenue & Oak Street
   b. Oakhill Avenue & Pinecrest Drive
   c. Oxley Street and Brent Avenue; and

2. the prohibition of parking for approximately 40 feet on the north side of the 2000 block of Hanscom Drive.

Background
The Traffic Safety Advisory Committee (TSAC) has reviewed a number of requests for additional traffic controls and parking limitations in recent months. Following public input and discussion by the committee, the TSAC has made recommendations for implementation of the changes enumerated herein.

Proposed All-Way Stop Signs at Meridian Avenue & Oak Street
Meridian Avenue is a heavily traveled collector street that has limited sight distance due to curves and cross streets that intersect at a sharp angle in the vicinity of Oak Street. This City has received numerous complaints about the difficulty of making a right turn from westbound Oak Street onto northbound Meridian Avenue, and about the danger posed to school children crossing this intersection. TSAC initially reviewed this proposal on May 20, 1997, and the request was denied because the numeric warrants were not met. Upon reevaluation by TSAC, it was determined that greater consideration should have been given to the great number of students of all ages on their way to and from school that must cross Meridian Avenue at this intersection. In light of these factors, the TSAC unanimously recommended the installation of all-way stops signs and the installation of crosswalks on both sides of the intersection in yellow because of the proximity to the school.

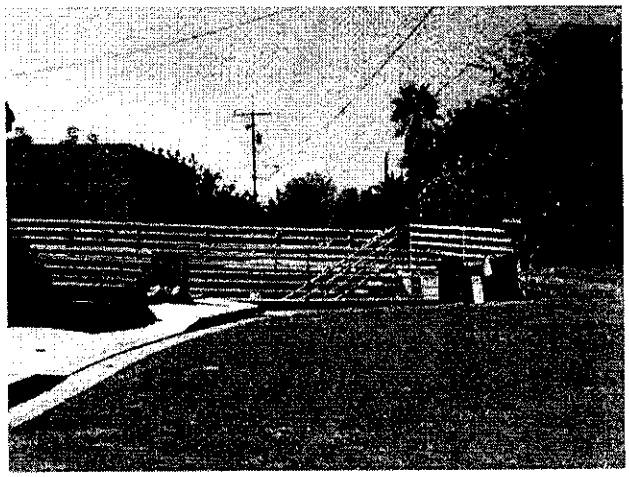
AGENDA ITEM 13

Proposed All-Way Stop Signs at Oakhill Avenue & Pinecrest Drive
The Public Works Department has been monitoring speeds on Oakhill Avenue in response to complaints from local residents, and in conjunction with studies concerning the impact of the large residential development being planned in Los Angeles, immediately adjacent to South Pasadena. Much of the traffic from this new 91 unit single family development will be attempting to exit by way of Pinecrest Avenue. The other access points to the development are restricted and not convenient for motorists wishing to access points in South Pasadena, Pasadena and other cities to the north and east of the development. The volume and speed of traffic on Oakhill Avenue is not high at this time, however there are some extreme site conditions that would make this intersection a difficult one to travel through. The grade on Oakhill Avenue is very steep at this point and the northbound traffic has just cleared a blind turn at the top of a hill with very limited sight distance as they approach the intersection with Pincecrest Drive.

Although this intersection would not meet the numerical warrants for an all-way stop, the unusual site conditions, and the anticipated large increase in traffic to the neighborhood would warrant the installation of an all-way stop to improve the safety of this intersection. For this reason, TSAC unanimously recommended that an all-way stop is justified at this intersection.

Proposed All-Way Stop at Brent Avenue and Oxley Street
The installation of an all-way stop was considered in 1997 but did not meet the State's numeric warrants. The TSAC reconsidered this decision at its June 27, 2000 meeting after receiving numerous complaints from adjacent residents, and following the receipt of information providing a more complete accident history than had been available in 1997. Brent Avenue, unlike a typical residential street, functions as a "by-pass" street around congestion sometimes experienced on Fair Oaks Avenue, and the resulting heavier traffic on Brent Avenue makes is difficult for traffic and pedestrians to safely cross at Oxley Street. For these reasons, TSAC unanimously recommended that a 4-way stop be installed at this intersection.

Proposed Parking Prohibition on a portion of the 2000 Block of Hanscom Drive
The southerly portion of 2000 block of Hansom Drive is severely narrowed by a protruding fence and stairway at 2048 Hansocom Drive that was allowed to be constructed in 1989. When vehicles are parked on the northerly side of the road there is insufficient road width for cars and emergency vehicles to pass and for the Fire Department to access the existing fire hydrant in that area. The TSAC unanimously recommended that parking be prohibited for a distance of 20' to the east of the protruding stairs and railing to 2048 Hanscom Drive to the west to provide required clearance for the existing fire hydrant.



Legal Action
None requested.

Fiscal Impact
The recommended actions will require minimal expenditure of operational funds of the Street Maintenance Division (230-6116-8020), which have been anticipated in the preparation of the current budget.

Attachments
TSAC Minutes of 12/13/99
TSAC Minutes of 6/27/00
Resolution

DRAFT MINUTES
TRAFFIC SAFETY ADVISORY COMMITTEE
JUNE 27, 2000

ROLL CALL

The meeting was called to order at 3:30 p.m. Present were members: Jim Van Winkle, Director of Public Works; Martha Van Rooijen, Transportation Manager; Mike Ward, Police Captain and Diana Tompkins, Public Works Assistant.

MINUTES

Minutes of the meeting of March 8, 2000 were approved, and all members were in favor 3-0.

PUBLIC COMMENTS AND SUGGESTIONS- None.

REQUEST FOR FULL 4-WAY STOP AT THE INTERSECTION OF BRENT AVENUE AND OXLEY STREET

The installation of a 4-way stop was considered in 1997 but did not meet State warrants. The Committee discussed mitigating circumstances that may warrant the installation due to Police Department accident records on file that were not reported to SWITRS. The committee has received no communication opposing the installation of a 4-way stop at the intersection. The Committee finds Brent Avenue to be less of a typical residential street, and more of a "by-pass" street and close to commercial areas. Ward made a motion to approve the installation of a 4-way stop at Brent and Oxley, the motion was seconded by Van Rooijen, and all members were in favor 3-0. Van Winkle will prepare the staff report to City Council for the first meeting in August. The installation, if approved, could be scheduled before school starts in September. Three residents attended the meeting regarding this item and expressed their concerns regarding safety and speed. They were all in favor of the installation of 4-way stop signs at the intersection.

REQUEST FOR A STOP SIGN ON CRESTLAKE AVENUE AT THE INTERSECTION OF ELM PARK STREET AND CRESTLAKE

Van Winkle received three e-mail responses all opposed to the proposed installation of a stop sign at Elm Park and Crestlake. Further investigation found no accidents at the intersection and no commercial activity on the streets. The intersection does not meet the minimum standards to warrant installation of stop signs. Van Rooijen made a motion to reject the installation, the motion was seconded by Ward, and all members were in favor 3-0.

REQUEST FOR ELIMINATION OF PARKING ALONG PORTIONS OF THE 2000 BLOCK OF HANSCOM DRIVE

Van Winkle explained how the street was awkwardly built creating a "throat" at the end of the street. He explained that site distance along the street was an issue at every bend. Ward identified a fire hydrant off the roadway at the area in question. Discussion ensued. Van Rooijen made a motion for the installation of 20' of red curb to the east of the protruding stairs and railing to 2048 Hanscom Dr. and enough red curb to the west of this area to provide required clearance for the fire hydrant. The motion was seconded by Ward, and all members were in favor 3-0.

TRAFFIC SAFETY ADVISORY COMMITTEE
DECEMBER 13, 1999

ROLL CALL

The meeting was called to order at 3:30 p.m. Present were members: Jim Van Winkle, Director of Public Works; Martha Dale, Transportation Manager; Mike Ward, Police Captain and Diana Tompkins, Public Works Assistant.

MINUTES

Minutes of the meeting of October 12, 1999 were approved, and all members were in favor 3-0.

PUBLIC COMMENTS AND SUGGESTIONS- None.

PROPOSED TRAFFIC SIGNAL AT GARFIELD AVENUE AND OAK STREET

Dr. Van Winkle provided a memo to all members with background information on this item. Attachments included support memos, speed analysis on Oak Street, and traffic warrants.
The City of San Marino has proposed that a traffic signal be installed at this intersection, with each City paying half of the cost. Dr. Van Winkle indicated his support for the installation of traffic signals as it marginally meets State warrants. After some discussion, the general consensus of members was to recommend that a traffic signal be installed at the intersection of Garfield Avenue and Oak Street, provided that it were coordinated with the signal system at Garfield-Atlantic-Huntington Drive. Dr. Van Winkle indicated that he would make a recommendation to City Council next month and request funds for next year's budget.

PROPOSED 4-WAY STOP SIGNS

Dr. Van Winkle provided a memo to all members with background information on this item. The main complaint regarding the intersection is the difficulty drivers experience making right turns from Oak onto northbound Meridian and the large number of students who cross at this location. After some discussion, all members agreed to the installation of all-way stops signs and the installation of crosswalks on both sides of the intersection in yellow because of the proximity to the school. This improvement, it was agreed, will calm traffic and provide a safer crossing for children.

Residents in both South Pasadena and Los Angeles requested the city consider the installation of stop signs at Oakhill Avenue & Pinecrest Drive, as they anticipate increased traffic congestion with the construction of a 96-unit condominium development in their area. Dr. Van Winkle explained that vehicle traffic speeds through the intersection were only about 15 miles per hour and slow due to the street configuration and hillside where they meet. While speed is not a factor, the increase in traffic due to the condo development and unusual site conditions would warrant the installation of stop signs to improve safety. After some discussion, all members were in favor of recommending the installation of stop signs for added safety at Oakhill & Pinecrest, 3-0.

ADJOURNMENT - The meeting adjourned at 4:30 p.m.

Respectively submitted,

_____

Diana Tompkins, Public Works Assistant

REQUEST FOR ELIMINATION OF PARKING ALONG THE 1800 AND 1900 BLOCKS OF MERIDIAN AVENUE

After some discussion regarding the width of the street and driving conditions along Meridian Avenue, Ward made a motion for no action at this time pending further investigation. Plans are to take speed counts and solicit further public input from affected residents. The motion was seconded by Van Rooijen, and all members were in favor 3-0.

SUGGESTIONS FOR FUTURE AGENDA ITEMS

Consider installation of stop signs at Meridian & Oak
Consider traffic issues surrounding the Arroyo Vista School

ADJOURNMENT - The meeting adjourned at 4:35 p.m.

Respectively submitted,

_____

Diana Tompkins, Public Works Assistant

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOUTH PASADENA AUTHORIZING THE INSTALLATION OF ALL-WAY STOPS AT THE INTERSECTIONS OF MERIDIAN AVENUE AND OAK STREET, OAKHILL AVENEUE AND PINECREST DRIVE AND, OXLEY STREET AND BRENT AVENUE, AND THE PROHIBITION OF PARKING ON PORTIONS OF HANSCOM DRIVE

WHEREAS, local residents have petitioned the City to evaluate the traffic conditions at the intersections of Meridian Avenue and Oak Street, Oakhill Avenue and Pinecrest Drive, and Oxley Street and Brent Avenue; and

WHEREAS, local residents have petitioned the City to evaluate the parking conditions on the 2000 block of Hanscom Drive; and

WHEREAS, the Public Works Director has conducted an investigation and completed an analysis of warrants for a 4-way stop at these intersections; and

WHEREAS, the Public Works Director has conducted an investigation into the parking and traffic access conditions in the 2000 block of Hanscom Drive; and

WHEREAS, the Traffic Safety Advisory Committee has reviewed and approved of the Director of Public Work's recommendations with respect to these requests;

NOW THEREFORE, the City Council of the City of South Pasadena does hereby resolve as follows:

Section 1: That the installation of an all-way stop at the intersection of Meridian Avenue and Oak Street is hereby approved.

Section 2: That the installation of an all -way stop at the intersection of Oakhill Avenue and Pinecrest Drive is hereby approved.

Section 3: That the installation of an all -way stop at the intersection of Oxley Street and Brent Avenue.

Section 4: That parking be prohibited on the north side of Hanscom Drive, 20 feet east of the prolongation of the easterly line of Lot 12 of Tract 2672, and 20 west of said easterly line of Lot 12.

Section 5: This resolution shall become effective immediately upon its adoption.

Section 6: That the City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

APPROVED AND ADOPTED this 16th day of August, 2000.

_____
Dorothy M. Cohen, Mayor
City of South Pasadena

ATTEST:

Jeannine A. Gregory,
City Clerk

APPROVED AS TO FORM:

City Attorney

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the City Council of the City of South Pasadena at a regular meeting held on the 16th day of August, 2000, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAINED:

City Clerk

Leaonna Dewitt

From: Alan Ehrlich [redacted]
Sent: Monday June 15 2020 6:04 PM
To: MTIC Public Comments
Cc: Fremont Brandon Fox; Delaine Shane; laalaw@att.net; Maria Ayala; Dr Richard Schneider - Personal
Subject: Public Comment Agenda Items #3, #4
Attachments: Public Comment t MTIC 2929 06 16.docx

During this era of corona virus uncertainty, help protect yourself and others, be chill, be informed, wear a face mask, practice social distancing and wash your hands frequently. Stay safe, Stay healthy, Stay home

Recommended COVID-19 Information
LA County - http://publichealth.lacounty.gov
CA Dept of Public Health - http://covid19.ca.gov
CDC - https://www.cdc.gov
Harvard School of Public Health - http://theforum.sph.harvard.edu/events
Johns Hopkins Univ - http://coronavirus.jhu.edu

From Alan Ehrlich
To Mobility and Tranportation Infrastructure Commission

Agenda Item #3
Update on City Street Improvement Projects

Chairman Zneimer, Commissioners

While this is just a progress report, it is disheartening to see that virtually all of the street improvement projects completed, underway and planned are east / west roadways and none are north /south, when the majority of heavy traffic is on Fair Oaks and Fremont. These should be your first and primary focus.

Agenda Item #4
Update on the Measure M Sub-regional Projects

Chairman Zneimer, Commissioners.
Again, the recommendations in this report are seriously flawed. The former Transportation Commission and city council approved a number of projects, none of which are to be seen in this report, are you just making up projects so you waste money on more studies?

Your recommendations for the southern portion of Meridian fail to effectively address the concerns of residents.The city has already installed rectangular rapid flashing beacons at the intersection of Oak Street. Half of the lights are burned out. I reported this to Public Works over a month ago. What's the point of installing more if you can't maintain the ones that are already there? In order to make Meridian part of a safe streets program, you need to start by slowing down traffic, especially on the speedway behind the high school grand stands. This can quickly, easily and for a nominal cost be completed by constructing two sets of speed humps, one near the mid portion of the grandstand and another futher south closer to the 'S' curve of the roadway.
Speed can also effectively be slowed by the installation of LED radar signs that alert drivers to the speed limit and how fast they are traveling. Studies have shown these to be extremely effective, slowing up o 80% of vehicles. Many police departments and city managers descibe them as having an extra officer on duty 24/7. There's nothing sexy about them, but they don't require spending more money on another traffic survey, are easy to install and effective. Why is that a problem for the Public Works department. Are they get incentive pay for the more money they waste?

To save you the of doing your job, here is some information about Radar Signs.

https://www.sfmta.com/projects/automated-speed-enforcement

https://www.policemag.com/342411/15-things-you-should-know-about-speed-enforcement-tools

https://www.radarsign.com/radar-speed-signs/ I'll work on getting prices for these. The basic model, TC 400 is what they use on Pasadena Ave and on mobile. The TC-600 has as an optional simulated camera flash that I think would increase the effectiveness another 10x. Both units are wi-fi capable and have data capture. The 400 can run off dedicated power or batteries (last about 2 weeks). The 600 is solar.

Even easier, are two model you can purchase off Amazon for under $3,600, and shipping is free. These don't have the data collection computer software, but only cost $3600 for the more expensive model, and shipping is free.

https://www.amazon.com/speed-radar-signs/s?k=speed+radar+signs

I'd like to see someone from the city explain how hard and difficult this is. It took me all of 20 minutes.

ITEM 3

North South Corridor Smart Mobility Plan: Fremont Avenue and Meridian Avenue

City of South Pasadena
Public Works Department

Memo

Date:	July 21, 2020
To:	Mobility and Transportation Infrastructure Commission
From:	Shahid Abbas, Public Works Director Kristine Courdy, Deputy Public Works Director
Re:	Agenda Item 3: North South Corridor Smart Mobility Plan: Fremont Avenue and Meridian Avenue

---

An overview of the North South corridor smart mobility plan for Fremont Avenue and Meridian Avenue will be presented to the Mobility and Transportation Infrastructure Commission on July 21, 2020 and will also be presented to the City Council on August 5, 2020.

Attachments:

1) North/South Corridor Smart Mobility Plan: Fremont Avenue and Meridian Avenue Presentation
2) Stop Sign Analysis of Meridian Avenue at Oak Street, Pine Street, and Maple Street

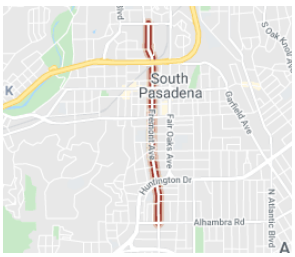
ATTACHMENT 1

North/South Corridor Smart Mobility Plan:
Fremont Avenue and Meridian Avenue Presentation

NORTH/SOUTH CORRIDOR SMART MOBILITY PLAN:
FREMONT AVENUE
MERIDIAN AVENUE

MOBILITY AND TRANSPORTATION INFRASTRUCTURE COMMISSION
JULY 21, 2020

FREMONT AVENUE



Fremont Ave Outline

- Fremont Ave Data Overview
- 2011 Fremont Ave Concept Plan Prepared by Glatting, Jackson, Kercher, Anglin, Inc.
- Neighborhood Requested Improvements
- Short Term Measures
- City's Plan Looking Ahead
- Funding

Fremont Ave Data Overview

- Fremont Avenue
  - Classification: Arterial
  - Capacity of Arterial: 1,600 to 1,900 vph per lane
  - Two lane arterial (one lane in each direction)
  - The data presented for Fremont Ave between Columbia Street and Buena Vista Street

Fremont Ave Data Overview

- Average ADT
  - 2014: 26,071 vehicles
  - December 17, 2019: 19,907 vehicles
  - January 22, 2020: 18,494 vehicles
  - Decrease between 2014 and 2020: 29.1%
- Peak Hour Volume
  - AM Peak: 1,236 vehicles (total both directions)
  - AM Peak Hour Factor: 0.9
  - PM Peak: 1,448 vehicles (total both directions)
  - PM Peak Hour Factor: 0.9

Fremont Ave Data Overview

- Average Speed
  - Posted Speed: 30 mph
  - 2020: 29 mph (consistent with 2014 speed survey data)
  - Actual travel speed 23 to 24 mph
  - 81% of the vehicles traveling within posted speed limits
- Vehicle Classification
  - Single Unit Vehicles (passenger cars/SUV): 18,051 units (98%)
  - 2-Axel 6 tire (mostly utility trucks): 380 units (2%)
  - Large Trucks (3-axel units): 25 units
  - Buses (mostly school): 26 units

Fremont Ave Data Overview

- Collision Data (2015 to 2019 from SWITRS)
  - 4 collision in 5 years at an average of 0.8 collisions per year.
  - No fatal or serious injuries in the data reported years.
  - Rear End Collision - Fremont and Foothill: southbound on 5/14/2015.
  - Rear End Collision - Fremont and Foothill: southbound on 11/28/2016.
  - Collision with Parked Vehicle - Fremont and 588' south of Columbia: southbound on 12/9/2015.
  - Rear End Collision - Fremont and 519' south of Columbia: southbound on 11/11/2019.
  - Motorcycle collision on 1/8/2020 no yet reported in SWITRS.

Neighborhood Requested Improvements

- Installation of digital speed signs.
- Construction of medians restricting illegal trucks accessing the street.
- Creation of a roundabout/crosswalk at Fremont and Buena Vista.
- Decrease congestion and illegal trucks.
- Deter excessive speeding.
- Safe pedestrian crossings and sidewalk connectivity.
- Make Fremont more family and pedestrian friendly.

2011 Fremont Ave Concept Plan

- 2011 Concept Plan prepared by Glatting, Jackson, Kercher, Anglin, Inc.
- Raised medians at intersections and raised intersections around the schools.
- Bulbouts at major intersections (such as Monterey Road).
- Pedestrian treatments at post office (near El Centro).
- Roundabout at railroad crossing and Grevalia Street.
- Fremont Ave and Alhambra extension of the merge lane.
- A concept plan, no data and engineering details are provided in the report.

Short Term Measures: Fremont Ave

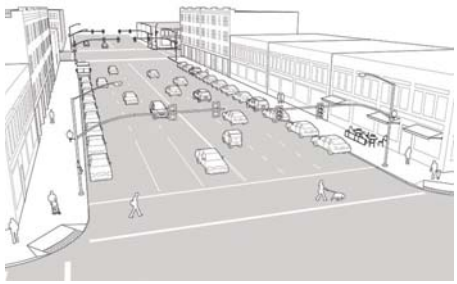
- Replace faded striping along the corridor.
- Added “Keep Clear” striping and signage at Fremont and Lyndon.
- Add speed limit signage as needed.
- Coordination with Police Department to increase enforcement and deployment of portable speed feedback signage.
- Install additional signage to deter trucks on Fremont Ave.
- Completed CIP Project Forms for Fremont Avenue funding.
- Applied for Metro MAT grant seeking funding for Active Transportation.
- Attended community meetings.

City's Plan Looking Ahead on Fremont Ave

- Staff continues to work with Families on Fremont to gain support for the Fremont Avenue Complete Street Project.
- Convert Fremont Avenue to a "*Livable Complete Street*" with "*Smart Mobility and Active Transportation*" incorporating "*Green Streets*" design elements.

- Complete Street Definition: "A transportation facility that is planned, operated and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the **function and context** of the facility." – Caltrans Deputy Directive 64-R2

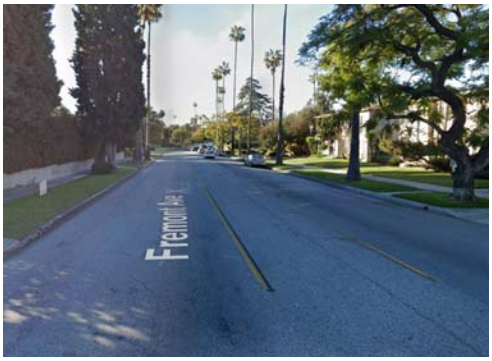
Complete Street – Before & After



Before

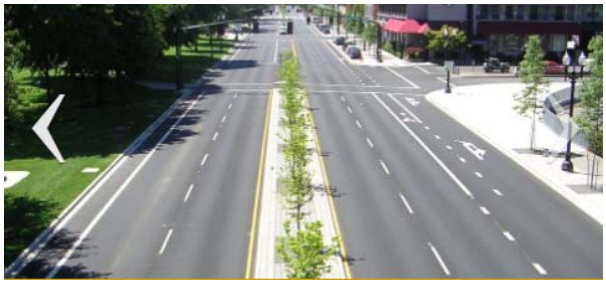
After

Street without Complete Street Elements



Complete Street – Examples

Complete Street – Examples



City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street

Green Streets

City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and high visibility crosswalks to improve visibility and traffic calming

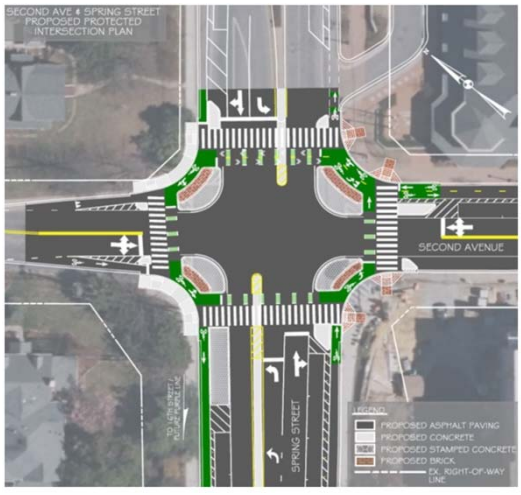
Raised Intersection & Crosswalk Improvements

High Visibility Crosswalks

City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections

Protected Intersections



City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation

Median Treatments & Refuge Islands

Median Treatments & Refuge Islands

City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation
  - Gateway treatments including roundabouts and channelizers

Roundabouts

Gateway Treatments: Channelizers

City's Plan Looking Ahead on Fremont Ave

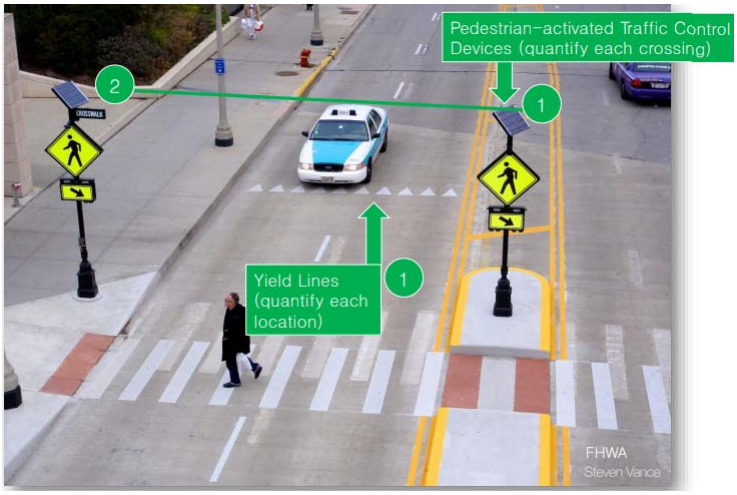
- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation
  - Gateway treatments including roundabouts and channelizers
  - Pinchpoints

Pinchpoints

City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation
  - Gateway treatments including roundabouts and channelizers
  - Pinchpoints
  - Pedestrian control features such as Rectangular Rapid Flashing Beacons and other hybrid devices like Hawk Signals

Pedestrian-Activated Traffic Control Devices & Refuge Island



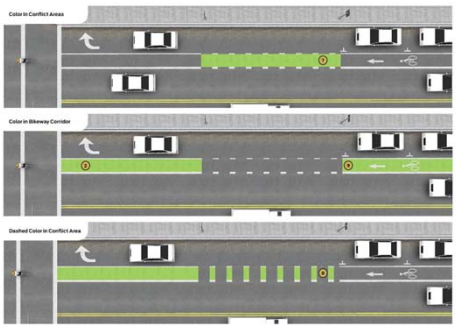
Rectangular Rapid Flashing Beacon

High-Intensity Activated Crosswalk (HAWK)

City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation
  - Gateway treatments including roundabouts and channelizers
  - Pinchpoints
  - Pedestrian control features such as Rectangular Rapid Flashing and other hybrid devices like Hawk Signals
  - Install bike facilities including green pavement marking

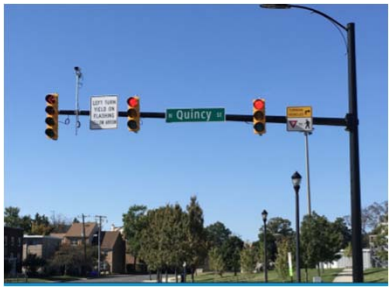
Green Bike Pavement Markings



City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation
  - Gateway treatments including roundabouts and channelizers
  - Pinchpoints
  - Pedestrian control features such as Rectangular Rapid Flashing and other hybrid devices like Hawk Signals
  - Install bike facilities including green pavement marking
  - Upgrade traffic signal to include adaptive pedestrian and bike safe crossing features

Upgraded Traffic Signals



City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Improve signal progression to create traffic platooning
  - Real-time speed and travel time monitoring systems.
  - Changeable speed feedback signage.
  - Pavement resurfacing/rehabilitation.
  - Upgrade the pavement markings and signs throughout the corridor.
  - Improve pedestrian and ADA accessibility along the corridor.
  - Improve safe route to schools where possible.
  - Parkway treatment where appropriate.
- Complete street design elements will require a detailed study to determine effective elements that meet all design requirements and standards.

Real-time Travel Information

FREMONT AVENUE COMPLETE STREET CONCEPT PLAN

Fremont Ave – Existing Configuration

Fremont Ave – Complete Street Concept

Funding Available for Fremont Ave

- City has received $10M in Measure R MIP to mitigate SR-710 impacts to increase north-south through put traffic and capacity on Fremont.
- This is against the wishes of the community and these funds cannot be used for traffic calming.
- Therefore, the City applied for MAT grant with Metro for Fremont Avenue Complete Street.
- Complete Street may require parking removal to install active transportation facilities.
- Funding has been requested for Fremont Complete Street Project in the City's Capital Improvement Plan.
- Continue to seek active transportation grant funding.

MERIDIAN AVENUE

Meridian Ave Outline

- Meridian Ave Data Overview
- Neighborhood Requested Improvements
- Short Term Measures
- Meridian Ave Stop Sign Requests
- City's Plan Looking Ahead
- Funding Available

Meridian Ave Data Overview

- Meridian Avenue
  - Classification: Collector
  - Capacity of Arterial: 1,200 to 1,600 vph per lane
  - Two lane collector (one lane in each direction)
  - The data presented for Fremont Ave between Oak Street and Monterey Road

Meridian Ave Data Overview

- Average ADT
  - 2014: 7,541 vehicles
  - January 22, 2020: 9,620 vehicles
  - Increase between 2014 and 2020: 27.57%
- Peak Hour Volume
  - AM Peak: 1,038 vehicles (total both directions)
  - AM Peak Hour Factor: 0.7
  - PM Peak: 1,048 vehicles (total both directions)
  - PM Peak Hour Factor: 0.9

Meridian Ave Data Overview

- Average Speed
  - Posted Speed: 25 mph (established during the 2014 speed survey)
  - No speed data collected on Meridian on January 22, 2020
- Vehicle Classification
  - Single Unit Vehicles (passenger cars/SUV): 9,402 units (99%)
  - 2-Axel 6 tire (mostly utility trucks): 103 units (1%)
  - Large Trucks (3-axel units): 0 units
  - Buses (mostly school): 7 units

Meridian Ave Data Overview

- Collision Data (2015 to 2019 from SWITRS)
  - 7 collision in 5 years at an average of 1.4 collisions per year.
  - No fatal or serious injuries in the data reported years.
  - Single Vehicle Fixed Object (DUI) - Meridian and 378' north of Bank: southbound on 9/21/2017.
  - Single Vehicle Fixed Object (DUI) - Meridian and Bank: northbound on 5/5/2018 single vehicle.
  - Drive on Wrong Side of the Road - Meridian and 461' north of Oak: southbound on 11/18/2015.
  - Unsafe Backing Up into Bike at a Driveway - Meridian and 406' north of Oak: southbound on 9/22/2019.
  - Pedestrian at Fault Went in front of northbound vehicle - Meridian and Gillette Crescent: 5/14/2018.
  - Rear End Collision - Meridian and Bonita Drive: southbound on 4/4/2019.
  - Pedestrian at Fault went in front of southbound vehicle – Meridian and Kendall: 3/4/2017

Neighborhood Requested Improvements

- All-way stops on Meridian Ave at Oak St and Maple St.
- Red curbs within crosswalks to prevent cars from parking within the crosswalk.
- A permanent speed feedback sign and enforcement.
- Additional red curb on key intersections such as Meridian Ave and Bonita Dr.
- Safely walk, jog, use a wheelchair, or bike on Meridian Ave.
- Local streets turn safely onto Meridian Ave without being involved in a collision.
- Enter parked cars and back out of driveways without fear of being sideswiped or t-boned.
- Parked cars not totaled when parked on Meridian Ave.

Neighborhood Requested Improvements

- Fix in-ground flashing lights at Oak and Meridian.
- Re-stripe crosswalks to high visibility.
- Speed humps.

Short Term Measures: Meridian Ave

- Replace faded striping along the corridor including crosswalks.
- Updated striping to provide advance pedestrian notification at Meridian Ave and Oak St.
- Add speed limit signage as needed.
- Add additional advisory and warning signs.
- Coordination with Police Department to increase enforcement and deployment of portable speed feedback signage.
- Additional red curb painting to improve the sight distance along the corridor.
- Speed feedback sign.
- Secured funding for Meridian Ave Complete Streets Project.
- Completed stop sign studies for three requested stop signs.

Meridian Ave Stop Sign Requests

- Stop signs were requested at the following three intersections:
  - Meridian Ave and Oak St
  - Meridian Ave and Maple St
  - Meridian Ave and Pine St

Meridian Ave Stop Sign Requests

In accordance with the California Manual of Uniform Control Devices (CAMUTD) Section 2B.07 the following criteria should be considered in an engineering study for a multi-way stop sign installation:

A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
C. Minimum volumes:
1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.

D. Where no single criterion is satisfied, but where Criteria B, C.1, and, C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Meridian Ave Stop Sign Requests

1) <u>Meridian Avenue and Oak Street:</u>
- Collision: one accident driveway related with bicycle not at the intersection.
- The stop sign at this location did not meet the MUTCD warrants listed above.

2) <u>Meridian Avenue and Pine Street:</u>
- Collision: one accident rear end.
- The stop sign at this location did not meet the MUTCD warrants listed above.

3) <u>Meridian Avenue and Maple Street:</u>
- Collision: No collisions.
- The stop sign at this location did not meet the MUTCD warrants listed above.

City's Plan Looking Ahead on Meridian Ave

- Convert Meridian Avenue to a "*Livable Complete Street*" with "*Smart Mobility and Active Transportation*" incorporating "*Green Streets*" design elements.
- Complete Street Definition: "A transportation facility that is planned, operated and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the **function and context** of the facility." – Caltrans Deputy Directive 64-R2

City's Plan Looking Ahead on Merdian Ave

- Potential Complete Street elements for Meridian Ave:
  - Create safe and attractive Green Street
  - Aesthetically pleasing raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming
  - Protected Intersections
  - Medians treatments along the corridor
  - Refuge islands and vehicle separation
  - Gateway treatments including roundabouts and channelizers
  - Pinchpoints
  - Pedestrian control features such as Rectangular Rapid Flashing and other hybrid devices like Hawk Signals
  - Install bike facilities including green pavement marking
  - Upgrade traffic signal to include adaptive pedestrian and bike safe crossing features

City's Plan Looking Ahead on Meridian Ave

- Potential Complete Street elements for Meridian Ave:
  - Improve signal progression to create traffic platooning
  - Real-time speed and travel time monitoring systems.
  - Changeable speed feedback signage.
  - Pavement resurfacing/rehabilitation.
  - Upgrade the pavement markings and signs throughout the corridor.
  - Improve pedestrian and ADA accessibility along the corridor.
  - Improve safe route to schools where possible.
  - Parkway treatment where appropriate.
- Complete street design elements will require a detailed study to determine effective elements that meet all design requirements and standards.

Funding Available for Meridian Ave

- City has received $1M in Measure M MSP Funding for Meridian Ave Complete Street Project.
- Complete Street may require parking removal to install active transportation facilities.
- Funding has been requested for Meridian Complete Street Project in the City's Capital Improvement Plan.
- Continue to seek active transportation grant funding.

QUESTIONS?

ATTACHMENT 2

Stop Sign Analysis of Meridian Avenue at Oak Street, Pine Street, and Maple Street

May 6, 2020

MEMORANDUM

Shahid Abbas
Director of Public Works
City of South Pasadena
1414 Mission Street
South Pasadena, CA 91030

Stop Sign Analysis: Meridian Avenue at Oak Street, Pine Street, and Maple Street

Dear Mr. Abbas:

The purpose of this memorandum is to present the findings of a Stop Sign Analysis related to the proposed installation of a Stop Sign at three (3) intersections along Meridian Avenue. The three intersections are at Oak Street, Pine Street, and Maple Street. An aerial map of the locations is provided as Exhibit A.

The stop sign analysis was based upon the Manual on Uniform Traffic Control Devices, 2009 Edition, produced by the Federal Highway Administration (FHWA) which was amended in 2014 by the California Department of Transportation and also considered street geometry, sight distance, safety, and traffic patterns.

California Manual of Uniform Traffic Control and Devices (CA MUTCD) Criteria:

The California Manual of Uniform Traffic Control Devices, 2014 Edition (CA MUTCD) provides guidance and criteria for Multi-Way STOP Applications in Section 2B.07. A stop sign should not be installed unless one or more of these criteria is met. Section 2B.07 of the CA MUTCD recommends that engineering judgment be used in the evaluation of the criteria to ensure that a stop sign will improve the overall safety and/or operation of the intersection. Typically, multi-way stop control is used where the volume of traffic on the minor road is approximately equal to the major road.

As per Section 2B.07 of the CA MUTCD, the decision to install a multi-way stop should be based on an engineering study and the following criteria should be considered for a multi-way stop sign installation:

A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*

B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*

C. *Minimum volumes:*

1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*

2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*

3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*

D. *Where no single criterion is satisfied, but where Criteria B, C.1, and, C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Methodology:

The CAMUTCD provides guidance for stop sign applications for traffic volume, sight distance, and accident history. On Wednesday, January 22, 2020, National Data & Surveying Services (NDS) collected peak hour traffic data at each of the intersections (Oak Street, Pine Street, and Maple Street) along with traffic volumes just north of the Meridian Avenue and Oak Street intersection.

Intersection vehicular volumes, major street volumes, and accident data were reviewed for each of the intersections. After further review, none of the intersections satisfy the conditions presented in points A-D of Section 2B.07 Multi-Way STOP Applications of the CA MUTCD.

Conclusions:

Meridian Avenue and Oak Street

The intersection of Meridian Avenue and Oak Street is a t-intersection as shown on the attached aerial photo. Approximately 150 feet north of Oak Street, Meridian Avenue is approximately 40 feet wide and then transitions to 35 feet. Prior to the transition, parking is allowed on both sides of Meridian north of the intersection, south of the intersection parking is allowed on both sides except for the easterly side of the street where there is 97 feet of red curb to prevent parked cars from blocking the line of sight for vehicles making a right turn onto Meridian from Oak. Along the west side of the intersection there is a driveway that serves a single-family residence. Oak Street is 30 feet wide which allows for parking along both sides of the street. Westbound Oak currently has a stop sign, while the north and southbound legs Meridian Avenue do not. The southerly leg of the intersection has a crosswalk with in-pavement lighting along with the appropriate signage.

Accident history obtained from SWITRS from January 31, 2019 – January 31, 2020 shows that there was only one (1) accident at the intersection which does not satisfy the requirement of five (5) accidents within a 12-month period. The summary of the accident(s) is presented in the Table 1 below:

Table 1: Meridian Avenue and Oak Street 12-Month Accident History			
Date of Collision	**Type of Collision**	**Collision Severity**	**Motor Vehicle Involved With**
9/22/2019	Broadside	Injury (Complaint of Pain)	Bicycle

Traffic volumes including pedestrian and bicycle volumes were analyzed for the intersection. Based on the data collected by NDS, the average daily volume (ADT) of Meridian Avenue is 9,620 vehicles per day where 4,767 vehicles head north and 4,853 vehicles go south. The data along Meridian Avenue shows that the vehicular volume from Meridian does average at least 300 vehicles per hour for any 8 hours of an average day. Although an ADT count was not conducted on Oak Street, the peak hours of the intersection was reviewed. Typically, the peak hour of an intersection experiences the heaviest amount of traffic during the day. The peak hour data which includes vehicles, pedestrians, and bicycles was tabulated for Oak Street is summarized in Table 2 below.

Table 2: Vehicles, Pedestrians, and Bicycles Entering from Oak Street During the Peak Hour(s)						
Intersection	AM Peak 7:30AM – 8:30AM		Noon Peak 11:30AM – 12:30PM		PM Peak 5:00PM – 6:00PM	
Meridian Avenue and Oak Street	Vehicles	114	Vehicles	30	Vehicles	49
	Pedestrian	36	Pedestrian	14	Pedestrian	31
	Bicycles	0	Bicycles	0	Bicycles	0
	AM Total	**150**	**Noon Total**	**44**	**PM Total**	**80**

Based on these numbers, this intersection does not satisfy the minimum of 200 units vehicular volume for a minor street. Therefore, this intersection does not meet the requirements for minimum volumes for a multi-way stop.

Meridian Avenue and Pine Street

The intersection of Meridian Avenue and Pine Street is a t-intersection. At this intersection, Meridian Avenue is 35 feet wide which allows for parking on both sides of Meridian north and south of Pine. Along the westerly side of Meridian there is an apartment complex. Pine Street is 45 feet wide, has a downward slope which meets Meridian Avenue, and parking is allowed on both sides of Pine Street. The westbound leg of Pine Street has a stop sign, while the north and southbound legs of Meridian Avenue does not.

Accident history obtained from SWITRS from January 31, 2019 – January 31, 2020 shows that there was only one (1) accident at the Meridian Avenue and Pine Street intersection, which does not satisfy the requirement of five (5) accidents within a 12-month period.

Table 3: Meridian Avenue and Pine Street 12-Month Accident History			
Date of Collision	**Type of Collision**	**Collision Severity**	**Motor Vehicle Involved With**
01/17/2020	Rear End	Injury (Complaint of Pain)	Other Motor Vehicle

Traffic volumes including pedestrian and bicycle volumes were analyzed for the intersection. Based on the data collected by NDS, the average daily volume (ADT) of Meridian Avenue is 9,620 vehicles per day where 4,767 vehicles head north and 4,853 vehicles go south. The data along Meridian Avenue shows that the vehicular volume from Meridian does average at least 300 vehicles per hour for any 8 hours of an average day. Although an ADT count was not conducted on Pine Street, the peak hours of the intersection was reviewed. Typically, the peak hour of an intersection experiences the heaviest amount of traffic during the day. The peak hour data which includes vehicles, pedestrians, and bicycles was tabulated for Pine Street is summarized in Table 4 below.

Table 4: Vehicles, Pedestrians, and Bicycles Entering from Pine Street During the Peak Hour(s)

Intersection	AM Peak 7:30AM – 8:30AM		Noon Peak 11:30AM – 12:30PM		PM Peak 5:00PM – 6:00PM	
Meridian Avenue and Pine Street	Vehicles	77	Vehicles	28	Vehicles	51
	Pedestrian	17	Pedestrian	1	Pedestrian	15
	Bicycles	0	Bicycles	0	Bicycles	0
	AM Total	**94**	**Noon Total**	**29**	**PM Total**	**66**

Based on these numbers, this intersection does not satisfy the minimum of 200 units vehicular volume for a minor street. Therefore, this intersection does not meet the requirements for minimum volumes for a multi-way stop.

Meridian Avenue and Maple Street

The Meridian Avenue and Maple Street intersection is a t-intersection located south of the Pine Street intersection. Meridian Avenue is 36 feet wide while Maple Street is 48 feet wide which allows parking on both sides of the street. Maple Street slopes down to meet Meridian Avenue. The area surrounding the intersection consists mainly of single-family residences. On the north leg of the intersection there is a crosswalk. Maple Street is stop controlled while Meridian Avenue is not.

Accident history obtained from SWITRS from January 31, 2019 – January 31, 2020 shows that there were no accidents at the Meridian Avenue and Maple Street intersection, which does not satisfy the requirement of five (5) accidents within a 12-month period.

Traffic volumes including pedestrian and bicycle volumes were analyzed for the intersection. Based on the data collected by NDS, the average daily volume (ADT) of Meridian Avenue is 9,620 vehicles per day where 4,767 vehicles head north and 4,853 vehicles go south. The data along Meridian Avenue shows that the vehicular volume from Meridian does average at least 300 vehicles per hour for any 8 hours of an average day. Although an ADT count was not conducted on Maple Street, the peak hours of the intersection was reviewed. Typically, the peak hour of an intersection experiences the heaviest amount of traffic during the day. The peak hour data which includes vehicles, pedestrians, and bicycles was tabulated for Maple Street and present in Table 5 below.

Table 5: Vehicles, Pedestrians, and Bicycles Entering from Maple Street During the Peak Hour(s)						
Intersection	AM Peak 7:15AM – 8:15AM		Noon Peak 11:30AM – 12:30PM		PM Peak 5:00PM – 6:00PM	
Meridian Avenue and Maple Street	Vehicles	251	Vehicles	88	Vehicles	257
	Pedestrian	27	Pedestrian	13	Pedestrian	46
	Bicycles	2	Bicycles	2	Bicycles	1
	AM Total	**280**	**Noon Total**	**103**	**PM Total**	**304**

Although, the AM and PM peak reaches the required 200 unit threshold, the noon peak does not which indicates that during the non-peak hours the 200 unit minimum threshold is probably not met. Based on the data, any other 5 hours of the day of this intersection does not reach the minimum of 200 units needed to satisfy the minimum vehicular volume for a minor street. Therefore, this intersection does not meet the requirements for minimum volumes for a multi-way stop.

Recommendations:

Meridian Avenue and Oak Street: It is not recommended to install a STOP sign on the northbound and southbound leg of Meridian Avenue. It is recommended to continue to monitor the intersection for excessive speeds, pedestrians, and other traffic conditions. It is also recommended to install horizontal alignment warning signs (W1-4) with a 25 MPH speed advisory sign (W13-1P) along Meridian Avenue to help discourage speeding.

Meridian Avenue and Pine Street: It is not recommended to install a STOP sign on the northbound and southbound leg of Meridian Avenue. It is recommended to continue to monitor the intersection for excessive speeds, pedestrians, and other traffic conditions. It is also recommended to install horizontal alignment warning signs (W1-4) with a 25 MPH speed advisory sign (W13-1P) along Meridian Avenue to help discourage speeding along the corridor.

Meridian Avenue and Maple Street: It is not recommended to install a STOP sign on the northbound and southbound leg of Meridian Avenue. It is recommended to continue to monitor the intersection for excessive speeds, pedestrians, and other traffic conditions. It is also recommended to install a 25 MPH speed advisory sign (W13-1P) on the existing W1-5 sign on the northeast corner of the intersection to help discourage speeding along the corridor.

The existing crosswalk on the north leg of the intersection currently does not have adequate access for a pedestrian to enter the crosswalk. At the westerly side of the crosswalk, the crosswalk ends at the curb which forces the pedestrian to step up onto the sidewalk. On the easterly end of the crosswalk, the crosswalk ends at the north wing of the existing curb ramp. To enter the crosswalk, the pedestrian must step down into the crosswalk. This does not meet the minimum criteria for ADA access. Pedestrian data was collected during the AM, Noon, and PM peak hours to determine how many pedestrians use the crosswalk. During the peak hours there were 4 pedestrians in the morning, 4 at noon, and 4 during the PM peak. Based on the numbers and existing conditions, it is recommended to remove the crosswalk based on language provided in Section 21950.5 of the California Vehicle Code (CVC).

If you have any questions regarding this memo, please feel free to contact me at 714-799-1700 x 100.

Sincerely,
W.G. Zimmerman Engineering, Inc.

Bill Zimmerman, PE, TE, PTOE
President

WGZE

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17011 Beach Boulevard, Suite 1240
Huntington Beach, CA 92647
Phone: 714-799-1700 Fax: 714-333-4712

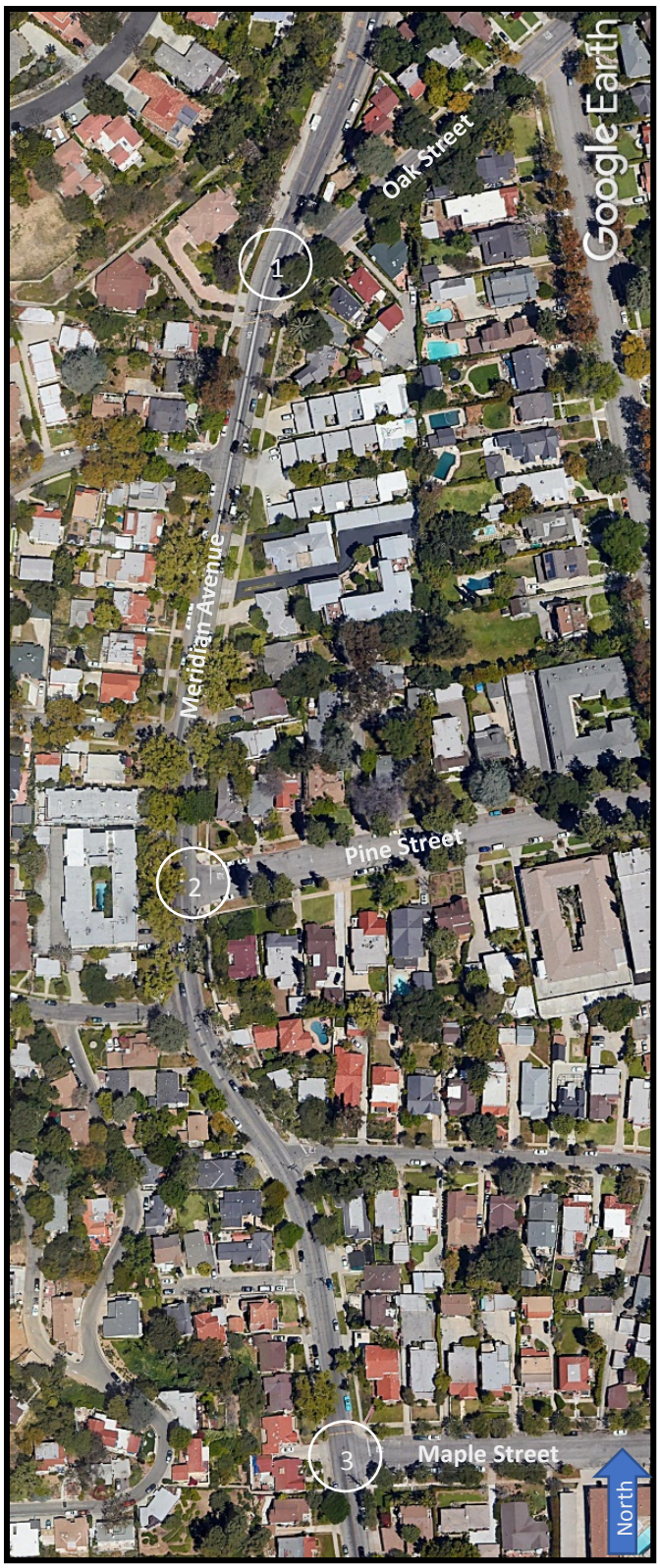

Exhibit A

Aerial Photo

WGZE

W.G. Zimmerman Engineering, Inc.
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Huntington Beach, CA 92647
Phone: 714-799-1700 Fax: 714-333-4712

DATA

W.G. Zimmerman Engineering, Inc.
17011 Beach Boulevard, Suite 1240
Huntington Beach, CA 92647
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Prepared by National Data & Surveying Services

CLASSIFICATION

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
0:30	0	3	0	0	1	0	0	0	0	0	0	0	0	4
0:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:30	0	0	1	0	1	0	0	0	0	0	0	0	0	2
1:45	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:45	0	6	2	0	0	0	0	0	0	0	0	0	0	8
5:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
5:15	0	11	1	0	0	0	0	0	0	0	0	0	0	12
5:30	0	13	3	0	0	0	0	0	0	0	0	0	0	16
5:45	0	13	3	0	0	0	0	0	0	0	0	0	0	16
6:00	0	26	4	0	0	0	0	0	0	0	0	0	0	30
6:15	0	32	6	0	0	0	0	0	0	0	0	0	0	38
6:30	0	36	9	0	0	0	0	0	0	0	0	0	0	45
6:45	0	55	11	0	1	0	0	0	0	0	0	0	0	67
7:00	0	70	8	0	1	0	0	0	0	0	0	0	0	79
7:15	0	125	15	0	0	0	0	0	0	0	0	0	0	140
7:30	0	129	22	0	1	0	0	0	0	0	0	0	0	152
7:45	0	137	24	1	3	0	0	0	0	0	0	0	0	165
8:00	0	100	13	0	1	0	0	0	0	0	0	0	0	114
8:15	0	78	9	0	0	0	0	0	0	0	0	0	0	87
8:30	1	98	17	0	2	0	0	0	0	0	0	0	0	118
8:45	0	85	17	0	0	0	0	0	0	0	0	0	0	102
9:00	0	83	5	0	1	0	0	0	0	0	0	0	0	89
9:15	0	60	11	0	0	0	0	0	0	0	0	0	0	71
9:30	0	54	14	0	1	0	0	0	0	0	0	0	0	69
9:45	0	55	19	0	2	0	0	0	0	0	0	0	0	76
10:00	0	39	15	0	0	0	0	0	0	0	0	0	0	54
10:15	0	47	7	0	0	0	0	0	0	0	0	0	0	54
10:30	0	38	8	0	0	0	0	0	0	0	0	0	0	46
10:45	1	49	9	0	3	0	0	0	0	0	0	0	0	62
11:00	0	43	8	0	1	0	0	0	0	0	0	0	0	52
11:15	0	41	11	0	1	0	0	0	0	0	0	0	0	53
11:30	0	41	10	0	0	0	0	0	0	0	0	0	0	51
11:45	0	49	11	0	0	0	0	0	0	0	0	0	0	60
12:00 PM	0	49	11	1	1	0	0	0	0	0	0	0	0	62
12:15	0	40	16	0	2	0	0	0	0	0	0	0	0	58
12:30	0	50	9	0	0	0	0	0	0	0	0	0	0	59
12:45	0	46	7	0	3	0	0	0	0	0	0	0	0	56
13:00	1	48	8	0	1	0	0	0	0	0	0	0	0	58
13:15	0	55	6	0	0	0	0	0	0	0	0	0	0	61
13:30	1	56	7	0	1	0	0	0	0	0	0	0	0	65
13:45	0	67	9	0	1	0	0	0	0	0	0	0	0	77
14:00	0	63	16	0	2	0	0	0	0	0	0	0	0	81
14:15	0	64	8	0	0	0	0	0	0	0	0	0	0	72
14:30	1	70	13	0	1	0	0	0	0	0	0	0	0	85
14:45	0	98	18	0	0	0	0	0	0	0	0	0	0	116
15:00	1	90	17	0	1	0	0	0	0	0	0	0	0	109
15:15	0	59	20	0	1	0	0	0	0	0	0	0	0	80
15:30	0	55	14	0	1	0	0	0	0	0	0	0	0	70
15:45	1	65	12	0	1	0	0	0	0	0	0	0	0	79
16:00	0	83	15	0	2	0	0	0	0	0	0	0	0	100
16:15	0	84	13	0	4	0	0	0	0	0	0	0	0	101
16:30	0	76	12	0	0	0	0	0	0	0	0	0	0	88
16:45	0	74	17	0	2	0	0	0	0	0	0	0	0	93
17:00	0	105	19	0	0	0	0	0	0	0	0	0	0	124
17:15	0	95	14	0	1	0	0	0	0	0	0	0	0	110
17:30	1	96	13	0	1	0	0	0	0	0	0	0	0	111
17:45	0	93	14	0	0	0	0	0	0	0	0	0	0	107
18:00	0	81	4	0	1	0	0	0	0	0	0	0	0	86
18:15	0	71	10	0	1	0	0	0	0	0	0	0	0	82
18:30	0	61	11	0	2	0	0	0	0	0	0	0	0	74
18:45	0	60	11	0	0	0	0	0	0	0	0	0	0	71
19:00	0	56	3	0	0	0	0	0	0	0	0	0	0	59
19:15	0	45	3	0	0	0	0	0	0	0	0	0	0	48
19:30	0	44	3	0	1	0	0	0	0	0	0	0	0	48
19:45	0	24	8	0	0	0	0	0	0	0	0	0	0	32
20:00	0	26	2	0	1	0	0	0	0	0	0	0	0	29
20:15	0	29	3	0	0	0	0	0	0	0	0	0	0	32
20:30	0	23	3	0	0	0	0	0	0	0	0	0	0	26
20:45	0	25	1	0	0	0	0	0	0	0	0	0	0	26
21:00	0	31	2	0	0	0	0	0	0	0	0	0	0	33
21:15	0	15	2	0	0	0	0	0	0	0	0	0	0	17
21:30	0	26	1	0	0	0	0	0	0	0	0	0	0	27
21:45	0	12	1	0	0	0	0	0	0	0	0	0	0	13
22:00	0	23	2	0	0	0	0	0	0	0	0	0	0	25
22:15	0	9	1	0	0	0	0	0	0	0	0	0	0	10
22:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
22:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10
23:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
23:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
23:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
23:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Totals	**8**	**4021**	**684**	**2**	**52**									**4767**
% of Totals	0%	84%	14%	0%	1%									100%

AM Volumes	2	1646	298	1	20	0	0	0	0	0	0	0	0	1967
% AM	0%	35%	6%	0%	0%									41%
AM Peak Hour														
Volume														
PM Volumes	6	2375	386	1	32	0	0	0	0	0	0	0	0	2800
% PM	0%	50%	8%	0%	1%									59%
PM Peak Hour														
Volume														

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	957	↔	20%	496	↔	10%	834	↔	17%	2480	↔	52%

Classification Definitions

1	Motorcycles	**4**	Buses	**7**	> =4-Axle Single Units	**10**	>=6-Axle Single Trailers	**13**	>=7-Axle Multi-Trailers
2	Passenger Cars	**5**	2-Axle, 6-Tire Single Units	**8**	<=4-Axle Single Trailers	**11**	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	**6**	3-Axle Single Units	**9**	5-Axle Single Trailers	**12**	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services

CLASSIFICATION

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
0:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
1:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	3	0	0	1	0	0	0	0	0	0	0	0	4
2:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:45	0	5	3	0	3	0	0	0	0	0	0	0	0	11
6:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
6:15	0	12	1	0	0	0	0	0	0	0	0	0	0	13
6:30	0	36	4	0	0	0	0	0	0	0	0	0	0	40
6:45	0	46	8	0	0	0	0	0	0	0	0	0	0	54
7:00	2	60	7	0	2	0	0	0	0	0	0	0	0	71
7:15	0	62	6	1	0	1	0	0	0	0	0	0	0	70
7:30	0	87	23	0	0	0	0	0	0	0	0	0	0	110
7:45	0	128	34	0	3	0	0	0	0	0	0	0	0	165
8:00	1	92	27	1	1	0	0	0	0	0	0	0	0	122
8:15	0	98	22	0	2	0	0	0	0	0	0	0	0	122
8:30	0	70	11	0	1	0	0	0	0	0	0	0	0	82
8:45	0	59	15	0	1	0	0	0	0	0	0	0	0	75
9:00	0	44	10	0	1	0	0	0	0	0	0	0	0	55
9:15	0	57	9	0	0	1	0	0	0	0	0	0	0	67
9:30	0	39	7	0	0	0	0	0	0	0	0	0	0	46
9:45	0	50	16	1	1	0	0	0	0	0	0	0	0	68
10:00	1	31	7	0	3	0	0	0	0	0	0	0	0	42
10:15	0	31	8	1	2	0	0	0	0	0	0	0	0	42
10:30	0	34	9	0	1	0	0	0	0	0	0	0	0	44
10:45	0	36	8	0	3	1	0	0	0	0	0	0	0	48
11:00	0	33	10	0	0	0	0	0	0	0	0	0	0	43
11:15	1	37	6	0	0	0	0	0	0	0	0	0	0	44
11:30	1	47	15	0	0	1	0	0	0	0	0	0	0	64
11:45	0	40	3	0	0	0	0	0	0	0	0	0	0	43
12:00 PM	0	38	5	0	0	0	0	0	0	0	0	0	0	43
12:15	0	46	11	1	1	0	0	0	0	0	0	0	0	59
12:30	0	39	12	0	0	0	0	0	0	0	0	0	0	51
12:45	0	47	11	0	0	0	0	0	0	0	0	0	0	58
13:00	0	48	8	0	0	0	0	0	0	0	0	0	0	56
13:15	0	40	5	0	2	0	0	0	0	0	0	0	0	47
13:30	0	46	12	0	0	0	0	0	0	0	0	0	0	58
13:45	1	44	9	0	2	0	0	0	0	0	0	0	0	56
14:00	0	48	11	0	0	1	0	0	0	0	0	0	0	60
14:15	1	50	11	0	4	0	0	0	0	0	0	0	0	66
14:30	0	56	18	0	0	0	0	0	0	0	0	0	0	74
14:45	1	69	21	0	1	0	0	0	0	0	0	0	0	92
15:00	0	85	15	0	1	0	0	0	0	0	0	0	0	101
15:15	0	90	21	0	1	0	0	0	0	0	0	0	0	112
15:30	1	89	18	0	1	0	0	0	0	0	0	0	0	109
15:45	0	78	15	0	1	1	0	0	0	0	0	0	0	95
16:00	0	91	24	0	0	0	0	0	0	0	0	0	0	115
16:15	1	81	18	0	1	1	0	0	0	0	0	0	0	102
16:30	0	80	17	0	0	0	0	0	0	0	0	0	0	97
16:45	2	84	23	0	2	0	0	0	0	0	0	0	0	111
17:00	1	135	15	0	1	0	0	0	0	0	0	0	0	152
17:15	1	131	17	0	3	0	0	0	0	0	0	0	0	152
17:30	1	126	26	0	2	0	0	0	0	0	0	0	0	155
17:45	0	112	24	0	1	0	0	0	0	0	0	0	0	137
18:00	0	118	16	0	0	0	0	0	0	0	0	0	0	134
18:15	0	84	12	0	0	0	0	0	0	0	0	0	0	96
18:30	0	68	12	0	0	0	0	0	0	0	0	0	0	80
18:45	0	81	14	0	1	0	0	0	0	0	0	0	0	96
19:00	0	63	7	0	0	0	0	0	0	0	0	0	0	70
19:15	0	64	8	0	0	0	0	0	0	0	0	0	0	72
19:30	0	43	1	0	0	0	0	0	0	0	0	0	0	44
19:45	0	48	4	0	1	0	0	0	0	0	0	0	0	53
20:00	0	47	4	0	0	0	0	0	0	0	0	0	0	51
20:15	0	49	6	0	0	0	0	0	0	0	0	0	0	55
20:30	0	51	1	0	0	0	0	0	0	0	0	0	0	52
20:45	0	31	2	0	0	0	0	0	0	0	0	0	0	33
21:00	0	38	2	0	0	0	0	0	0	0	0	0	0	40
21:15	0	31	3	0	0	0	0	0	0	0	0	0	0	34
21:30	0	32	1	0	0	0	0	0	0	0	0	0	0	33
21:45	0	20	2	0	0	0	0	0	0	0	0	0	0	22
22:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23
22:15	0	19	3	0	0	0	0	0	0	0	0	0	0	22
22:30	0	12	2	0	0	0	0	0	0	0	0	0	0	14
22:45	0	15	2	0	0	0	0	0	0	0	0	0	0	17
23:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
23:15	0	11	0	0	0	0	0	0	0	0	0	0	0	11
23:30	0	9	1	0	0	1	0	0	0	0	0	0	0	11
23:45	0	5	2	0	0	0	0	0	0	0	0	0	0	7
Totals	**16**	**4019**	**754**	**5**	**51**	**8**								**4853**
% of Totals	0%	83%	16%	0%	1%	0%								100%

AM Volumes	6	1295	278	4	25	4	0	0	0	0	0	0	0	1612
% AM	0%	27%	6%	0%	1%	0%								33%
AM Peak Hour	6:15	7:30	7:30	7:15	10:00	10:45								7:30
Volume	2	405	106	2	9	2								519
PM Volumes	10	2724	476	1	26	4	0	0	0	0	0	0	0	3241
% PM	0%	56%	10%	0%	1%	0%								67%
PM Peak Hour	16:45	17:00	17:15	12:00	16:45	15:30								17:00
Volume	5	504	83	1	8	2								596

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	817	⟷	17%	428	⟷	9%	1021	⟷	21%	2587	⟷	53%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
0:15	0	9	0	0	0	0	0	0	0	0	0	0	0	9
0:30	0	6	1	0	1	0	0	0	0	0	0	0	0	8
0:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:30	0	2	2	0	1	0	0	0	0	0	0	0	0	5
1:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:00	0	3	0	0	1	0	0	0	0	0	0	0	0	4
2:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7
4:45	0	8	3	0	0	0	0	0	0	0	0	0	0	11
5:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12
5:15	0	16	2	0	0	0	0	0	0	0	0	0	0	18
5:30	0	17	3	0	0	0	0	0	0	0	0	0	0	20
5:45	0	18	6	0	3	0	0	0	0	0	0	0	0	27
6:00	0	30	6	0	0	0	0	0	0	0	0	0	0	36
6:15	0	44	7	0	0	0	0	0	0	0	0	0	0	51
6:30	0	72	13	0	0	0	0	0	0	0	0	0	0	85
6:45	0	101	19	0	1	0	0	0	0	0	0	0	0	121
7:00	2	130	15	0	3	0	0	0	0	0	0	0	0	150
7:15	0	187	21	1	0	1	0	0	0	0	0	0	0	210
7:30	0	216	45	0	1	0	0	0	0	0	0	0	0	262
7:45	0	265	58	1	6	0	0	0	0	0	0	0	0	330
8:00	1	192	40	1	2	0	0	0	0	0	0	0	0	236
8:15	0	176	31	0	2	0	0	0	0	0	0	0	0	209
8:30	1	168	28	0	3	0	0	0	0	0	0	0	0	200
8:45	0	144	32	0	1	0	0	0	0	0	0	0	0	177
9:00	0	127	15	0	2	0	0	0	0	0	0	0	0	144
9:15	0	117	20	0	0	1	0	0	0	0	0	0	0	138
9:30	0	93	21	0	1	0	0	0	0	0	0	0	0	115
9:45	0	105	35	1	3	0	0	0	0	0	0	0	0	144
10:00	1	70	22	0	3	0	0	0	0	0	0	0	0	96
10:15	0	78	15	1	2	0	0	0	0	0	0	0	0	96
10:30	0	72	17	0	1	0	0	0	0	0	0	0	0	90
10:45	1	85	17	0	6	1	0	0	0	0	0	0	0	110
11:00	0	76	18	0	1	0	0	0	0	0	0	0	0	95
11:15	1	78	17	0	1	0	0	0	0	0	0	0	0	97
11:30	1	88	25	0	0	1	0	0	0	0	0	0	0	115
11:45	0	89	14	0	0	0	0	0	0	0	0	0	0	103
12:00 PM	0	87	16	1	1	0	0	0	0	0	0	0	0	105
12:15	0	86	27	1	3	0	0	0	0	0	0	0	0	117
12:30	0	89	21	0	0	0	0	0	0	0	0	0	0	110
12:45	0	93	18	0	3	0	0	0	0	0	0	0	0	114
13:00	1	96	16	0	1	0	0	0	0	0	0	0	0	114
13:15	0	95	11	0	2	0	0	0	0	0	0	0	0	108
13:30	1	102	19	0	1	0	0	0	0	0	0	0	0	123
13:45	1	111	18	0	3	0	0	0	0	0	0	0	0	133
14:00	0	111	27	0	2	1	0	0	0	0	0	0	0	141
14:15	1	114	19	0	4	0	0	0	0	0	0	0	0	138
14:30	1	126	31	0	1	0	0	0	0	0	0	0	0	159
14:45	1	167	39	0	1	0	0	0	0	0	0	0	0	208
15:00	1	175	32	0	2	0	0	0	0	0	0	0	0	210
15:15	0	149	41	0	2	0	0	0	0	0	0	0	0	192
15:30	1	144	32	0	2	0	0	0	0	0	0	0	0	179
15:45	1	143	27	0	2	1	0	0	0	0	0	0	0	174
16:00	0	174	39	0	2	0	0	0	0	0	0	0	0	215
16:15	1	165	31	0	5	1	0	0	0	0	0	0	0	203
16:30	0	156	29	0	0	0	0	0	0	0	0	0	0	185
16:45	2	158	40	0	4	0	0	0	0	0	0	0	0	204
17:00	1	240	34	0	1	0	0	0	0	0	0	0	0	276
17:15	1	226	31	0	4	0	0	0	0	0	0	0	0	262
17:30	2	222	39	0	3	0	0	0	0	0	0	0	0	266
17:45	0	205	38	0	1	0	0	0	0	0	0	0	0	244
18:00	0	199	20	0	1	0	0	0	0	0	0	0	0	220
18:15	0	155	22	0	1	0	0	0	0	0	0	0	0	178
18:30	0	129	23	0	2	0	0	0	0	0	0	0	0	154
18:45	0	141	25	0	1	0	0	0	0	0	0	0	0	167
19:00	0	119	10	0	0	0	0	0	0	0	0	0	0	129
19:15	0	109	11	0	0	0	0	0	0	0	0	0	0	120
19:30	0	87	4	0	1	0	0	0	0	0	0	0	0	92
19:45	0	72	12	0	1	0	0	0	0	0	0	0	0	85
20:00	0	73	6	0	1	0	0	0	0	0	0	0	0	80
20:15	0	78	9	0	0	0	0	0	0	0	0	0	0	87
20:30	0	74	4	0	0	0	0	0	0	0	0	0	0	78
20:45	0	56	3	0	0	0	0	0	0	0	0	0	0	59
21:00	0	69	4	0	0	0	0	0	0	0	0	0	0	73
21:15	0	46	5	0	0	0	0	0	0	0	0	0	0	51
21:30	0	58	2	0	0	0	0	0	0	0	0	0	0	60
21:45	0	32	3	0	0	0	0	0	0	0	0	0	0	35
22:00	0	42	6	0	0	0	0	0	0	0	0	0	0	48
22:15	0	28	4	0	0	0	0	0	0	0	0	0	0	32
22:30	0	18	3	0	0	0	0	0	0	0	0	0	0	21
22:45	0	23	4	0	0	0	0	0	0	0	0	0	0	27
23:00	0	23	1	0	0	0	0	0	0	0	0	0	0	24
23:15	0	14	1	0	0	0	0	0	0	0	0	0	0	15
23:30	0	13	2	0	0	1	0	0	0	0	0	0	0	16
23:45	0	7	3	0	0	0	0	0	0	0	0	0	0	10
Totals	**24**	**8040**	**1438**	**7**	**103**	**8**								**9620**
% of Totals	0%	84%	15%	0%	1%	0%								100%

AM Volumes	8	2941	576	5	45	4	0	0	0	0	0	0	0	3579
% AM	0%	31%	6%	0%	0%	0%								37%
AM Peak Hour	10:45	7:15	7:30	7:15	7:45	10:45								7:15
Volume	3	860	174	3	13	2								1038
PM Volumes	16	5099	862	2	58	4	0	0	0	0	0	0	0	6041
% PM	0%	53%	9%	0%	1%	0%								63%
PM Peak Hour	16:45	17:00	14:45	12:00	16:45	15:30								17:00
Volume	6	893	144	2	12	2								1048

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	1774	⟷	18%	924	⟷	10%	1855	⟷	19%	5067	⟷	53%

Classification Definitions

1	Motorcycles	**4**	Buses	**7**	> =4-Axle Single Units	**10**	>=6-Axle Single Trailers	**13**	>=7-Axle Multi-Trailers
2	Passenger Cars	**5**	2-Axle, 6-Tire Single Units	**8**	<=4-Axle Single Trailers	**11**	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	**6**	3-Axle Single Units	**9**	5-Axle Single Trailers	**12**	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services

CLASSIFICATION

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00 AM	0	10	0	0	1	0	0	0	0	0	0	0	0	11
1:00	0	7	2	0	1	0	0	0	0	0	0	0	0	10
2:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00	0	12	3	0	0	0	0	0	0	0	0	0	0	15
5:00	0	43	9	0	0	0	0	0	0	0	0	0	0	52
6:00	0	149	30	0	1	0	0	0	0	0	0	0	0	180
7:00	0	461	69	1	5	0	0	0	0	0	0	0	0	536
8:00	1	361	56	0	3	0	0	0	0	0	0	0	0	421
9:00	0	252	49	0	4	0	0	0	0	0	0	0	0	305
10:00	1	173	39	0	3	0	0	0	0	0	0	0	0	216
11:00	0	174	40	0	2	0	0	0	0	0	0	0	0	216
12:00 PM	0	185	43	1	6	0	0	0	0	0	0	0	0	235
13:00	2	226	30	0	3	0	0	0	0	0	0	0	0	261
14:00	1	295	55	0	3	0	0	0	0	0	0	0	0	354
15:00	2	269	63	0	4	0	0	0	0	0	0	0	0	338
16:00	0	317	57	0	8	0	0	0	0	0	0	0	0	382
17:00	1	389	60	0	2	0	0	0	0	0	0	0	0	452
18:00	0	273	36	0	4	0	0	0	0	0	0	0	0	313
19:00	0	169	17	0	1	0	0	0	0	0	0	0	0	187
20:00	0	103	9	0	1	0	0	0	0	0	0	0	0	113
21:00	0	84	6	0	0	0	0	0	0	0	0	0	0	90
22:00	0	46	6	0	0	0	0	0	0	0	0	0	0	52
23:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23
Totals	8	4021	684	2	52									4767
% of Totals	0%	84%	14%	0%	1%									100%

AM Volumes	2	1646	298	1	20	0	0	0	0	0	0	0	0	1967
% AM	0%	35%	6%	0%	0%									41%
AM Peak Hour	8:00	7:00	7:00	7:00	7:00									7:00
Volume	1	461	69	1	5									536
PM Volumes	6	2375	386	1	32	0	0	0	0	0	0	0	0	2800
% PM	0%	50%	8%	0%	1%									59%
PM Peak Hour	13:00	17:00	15:00	12:00	16:00									17:00
Volume	2	389	63	1	8									452

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	957	20%	496	10%	834	17%	2480	52%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00 AM	0	16	2	0	0	0	0	0	0	0	0	0	0	18
1:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
2:00	0	9	1	0	1	0	0	0	0	0	0	0	0	11
3:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
5:00	0	18	4	0	3	0	0	0	0	0	0	0	0	25
6:00	0	98	15	0	0	0	0	0	0	0	0	0	0	113
7:00	2	337	70	1	5	1	0	0	0	0	0	0	0	416
8:00	1	319	75	1	5	0	0	0	0	0	0	0	0	401
9:00	0	190	42	1	2	1	0	0	0	0	0	0	0	236
10:00	1	132	32	1	9	1	0	0	0	0	0	0	0	176
11:00	2	157	34	0	0	1	0	0	0	0	0	0	0	194
12:00 PM	0	170	39	1	1	0	0	0	0	0	0	0	0	211
13:00	1	178	34	0	4	0	0	0	0	0	0	0	0	217
14:00	2	223	61	0	5	1	0	0	0	0	0	0	0	292
15:00	1	342	69	0	4	1	0	0	0	0	0	0	0	417
16:00	3	336	82	0	3	1	0	0	0	0	0	0	0	425
17:00	3	504	82	0	7	0	0	0	0	0	0	0	0	596
18:00	0	351	54	0	1	0	0	0	0	0	0	0	0	406
19:00	0	218	20	0	1	0	0	0	0	0	0	0	0	239
20:00	0	178	13	0	0	0	0	0	0	0	0	0	0	191
21:00	0	121	8	0	0	0	0	0	0	0	0	0	0	129
22:00	0	65	11	0	0	0	0	0	0	0	0	0	0	76
23:00	0	38	3	0	0	1	0	0	0	0	0	0	0	42
Totals	16	4019	754	5	51	8								4853
% of Totals	0%	83%	16%	0%	1%	0%								100%

AM Volumes	6	1295	278	4	25	4	0	0	0	0	0	0	0	1612
% AM	0%	27%	6%	0%	1%	0%								33%
AM Peak Hour	7:00	7:00	8:00	7:00	10:00	7:00								7:00
Volume	2	337	75	1	9	1								416
PM Volumes	10	2724	476	1	26	4	0	0	0	0	0	0	0	3241
% PM	0%	56%	10%	0%	1%	0%								67%
PM Peak Hour	16:00	17:00	16:00	12:00	17:00	14:00								17:00
Volume	3	504	82	1	7	1								596

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	817		17%	428		9%	1021		21%	2587		53%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00 AM	0	26	2	0	1	0	0	0	0	0	0	0	0	29
1:00	0	14	4	0	1	0	0	0	0	0	0	0	0	19
2:00	0	11	1	0	1	0	0	0	0	0	0	0	0	13
3:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:00	0	20	4	0	0	0	0	0	0	0	0	0	0	24
5:00	0	61	13	0	3	0	0	0	0	0	0	0	0	77
6:00	0	247	45	0	1	0	0	0	0	0	0	0	0	293
7:00	2	798	139	2	10	1	0	0	0	0	0	0	0	952
8:00	2	680	131	1	8	0	0	0	0	0	0	0	0	822
9:00	0	442	91	1	6	1	0	0	0	0	0	0	0	541
10:00	2	305	71	1	12	1	0	0	0	0	0	0	0	392
11:00	2	331	74	0	2	1	0	0	0	0	0	0	0	410
12:00 PM	0	355	82	2	7	0	0	0	0	0	0	0	0	446
13:00	3	404	64	0	7	0	0	0	0	0	0	0	0	478
14:00	3	518	116	0	8	1	0	0	0	0	0	0	0	646
15:00	3	611	132	0	8	1	0	0	0	0	0	0	0	755
16:00	3	653	139	0	11	1	0	0	0	0	0	0	0	807
17:00	4	893	142	0	9	0	0	0	0	0	0	0	0	1048
18:00	0	624	90	0	5	0	0	0	0	0	0	0	0	719
19:00	0	387	37	0	2	0	0	0	0	0	0	0	0	426
20:00	0	281	22	0	1	0	0	0	0	0	0	0	0	304
21:00	0	205	14	0	0	0	0	0	0	0	0	0	0	219
22:00	0	111	17	0	0	0	0	0	0	0	0	0	0	128
23:00	0	57	7	0	0	1	0	0	0	0	0	0	0	65
Totals	24	8040	1438	7	103	8								9620
% of Totals	0%	84%	15%	0%	1%	0%								100%

AM Volumes	8	2941	576	5	45	4	0	0	0	0	0	0	0	3579
% AM	0%	31%	6%	0%	0%	0%								37%
AM Peak Hour	7:00	7:00	7:00	7:00	10:00	7:00								7:00
Volume	2	798	139	2	12	1								952
PM Volumes	16	5099	862	2	58	4	0	0	0	0	0	0	0	6041
% PM	0%	53%	9%	0%	1%	0%								63%
PM Peak Hour	17:00	17:00	17:00	12:00	16:00	14:00								17:00
Volume	4	893	142	2	11	1								1048

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	1774		18%	924		10%	1855		19%	5067		53%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Meridian Ave N/O Oak St

Day: Wednesday
Date: 1/22/2020

City: South Pasadena
Project #: CA20_5029_002

DAILY TOTALS	NB	SB	EB	WB	Total
	4,767	4,853	0	0	9,620

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
0:00	1		4		0	0	5		12:00	62		43		0	0	105	
0:15	5		4		0	0	9		12:15	58		59		0	0	117	
0:30	4		4		0	0	8		12:30	59		51		0	0	110	
0:45	1	11	6	18	0	0	7	29	12:45	56	235	58	211	0	0	114	446
1:00	2		2		0	0	4		13:00	58		56		0	0	114	
1:15	2		3		0	0	5		13:15	61		47		0	0	108	
1:30	2		3		0	0	5		13:30	65		58		0	0	123	
1:45	4	10	1	9	0	0	5	19	13:45	77	261	56	217	0	0	133	478
2:00	0		4		0	0	4		14:00	81		60		0	0	141	
2:15	1		4		0	0	5		14:15	72		66		0	0	138	
2:30	1		1		0	0	2		14:30	85		74		0	0	159	
2:45	0	2	2	11	0	0	2	13	14:45	116	354	92	292	0	0	208	646
3:00	1		0		0	0	1		15:00	109		101		0	0	210	
3:15	1		1		0	0	2		15:15	80		112		0	0	192	
3:30	0		2		0	0	2		15:30	70		109		0	0	179	
3:45	1	3	1	4	0	0	2	7	15:45	79	338	95	417	0	0	174	755
4:00	2		4		0	0	6		16:00	100		115		0	0	215	
4:15	0		0		0	0			16:15	101		102		0	0	203	
4:30	5		2		0	0	7		16:30	88		97		0	0	185	
4:45	8	15	3	9	0	0	11	24	16:45	93	382	111	425	0	0	204	807
5:00	8		4		0	0	12		17:00	124		152		0	0	276	
5:15	12		6		0	0	18		17:15	110		152		0	0	262	
5:30	16		4		0	0	20		17:30	111		155		0	0	266	
5:45	16	52	11	25	0	0	27	77	17:45	107	452	137	596	0	0	244	1048
6:00	30		6		0	0	36		18:00	86		134		0	0	220	
6:15	38		13		0	0	51		18:15	82		96		0	0	178	
6:30	45		40		0	0	85		18:30	74		80		0	0	154	
6:45	67	180	54	113	0	0	121	293	18:45	71	313	96	406	0	0	167	719
7:00	79		71		0	0	150		19:00	59		70		0	0	129	
7:15	140		70		0	0	210		19:15	48		72		0	0	120	
7:30	152		110		0	0	262		19:30	48		44		0	0	92	
7:45	165	536	165	416	0	0	330	952	19:45	32	187	53	239	0	0	85	426
8:00	114		122		0	0	236		20:00	29		51		0	0	80	
8:15	87		122		0	0	209		20:15	32		55		0	0	87	
8:30	118		82		0	0	200		20:30	26		52		0	0	78	
8:45	102	421	75	401	0	0	177	822	20:45	26	113	33	191	0	0	59	304
9:00	89		55		0	0	144		21:00	33		40		0	0	73	
9:15	71		67		0	0	138		21:15	17		34		0	0	51	
9:30	69		46		0	0	115		21:30	27		33		0	0	60	
9:45	76	305	68	236	0	0	144	541	21:45	13	90	22	129	0	0	35	219
10:00	54		42		0	0	96		22:00	25		23		0	0	48	
10:15	54		42		0	0	96		22:15	10		22		0	0	32	
10:30	46		44		0	0	90		22:30	7		14		0	0	21	
10:45	62	216	48	176	0	0	110	392	22:45	10	52	17	76	0	0	27	128
11:00	52		43		0	0	95		23:00	11		13		0	0	24	
11:15	53		44		0	0	97		23:15	4		11		0	0	15	
11:30	51		64		0	0	115		23:30	5		11		0	0	16	
11:45	60	216	43	194	0	0	103	410	23:45	3	23	7	42	0	0	10	65
TOTALS		1967		1612				**3579**	**TOTALS**		2800		3241				**6041**
SPLIT %		55.0%		45.0%				**37.2%**	**SPLIT %**		46.3%		53.7%				**62.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	4,767	4,853	0	0	9,620

AM Peak Hour	7:15	7:30					**7:15**		**PM Peak Hour**	17:00	17:00					**17:00**		
AM Pk Volume	571	519					**1038**		**PM Pk Volume**	452	596					**1048**		
Pk Hr Factor	0.865	0.786					**0.786**		**Pk Hr Factor**	0.911	0.961					**0.949**		
7 - 9 Volume	957	817	0	0			**1774**		**4 - 6 Volume**	834	1021	0	0			**1855**		
7 - 9 Peak Hour	7:15	7:30					**7:15**		**4 - 6 Peak Hour**	17:00	17:00					**17:00**		
7 - 9 Pk Volume	571	519	0	0			**1038**		**4 - 6 Pk Volume**	452	596	0	0			**1048**		
Pk Hr Factor	0.865	0.786	0.000	0.000			**0.786**		**Pk Hr Factor**	0.911	0.961	0.000	0.000			**0.949**		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Oak St
City: South Pasadena
Control: 1-Way Stop (WB)

Project ID: 20-05030-001
Date: 1/22/2020

Total

NS/EW Streets:	Meridian Ave				Meridian Ave				Oak St				Oak St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	79	5	0	3	69	0	0	0	0	0	0	4	0	7	0	167
7:15 AM	0	121	6	0	2	57	0	0	0	0	0	0	2	0	10	0	198
7:30 AM	0	137	28	0	19	84	0	0	0	0	0	0	2	0	17	0	287
7:45 AM	0	131	71	0	61	112	0	0	1	0	0	0	6	0	32	0	414
8:00 AM	0	87	22	0	13	113	0	0	0	0	0	0	12	0	35	0	282
8:15 AM	0	78	6	0	9	115	0	0	0	0	0	0	2	0	8	0	218
8:30 AM	0	109	9	0	5	87	0	0	0	0	0	0	2	0	5	0	217
8:45 AM	0	98	4	0	3	73	0	0	0	0	0	0	0	0	9	0	187
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	840	151	0	115	710	0	0	1	0	0	0	30	0	123	0	1970
APPROACH %'s :	0.00%	84.76%	15.24%	0.00%	13.94%	86.06%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	19.61%	0.00%	80.39%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	433	127	0	102	424	0	0	1	0	0	0	22	0	92	0	1201
PEAK HR FACTOR :	0.000	0.790	0.447	0.000	0.418	0.922	0.000	0.000	0.250	0.000	0.000	0.000	0.458	0.000	0.657	0.000	0.725
		0.693				0.760				0.250				0.606			

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	50	4	0	2	45	0	0	0	0	0	0	2	0	3	0	106
11:15 AM	0	49	5	0	1	42	0	0	0	0	0	0	3	0	6	0	106
11:30 AM	0	41	2	0	7	45	0	0	0	0	0	0	2	0	5	0	102
11:45 AM	0	61	6	0	3	50	0	0	0	0	0	0	1	0	0	0	121
12:00 PM	0	50	5	0	2	33	0	0	0	0	0	0	3	0	9	0	102
12:15 PM	0	51	1	0	5	55	0	0	0	0	0	0	2	0	4	0	118
12:30 PM	0	56	3	0	3	52	0	0	0	0	0	0	1	0	3	0	118
12:45 PM	0	55	4	0	3	54	0	0	0	0	0	0	5	0	3	0	124
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	413	30	0	26	376	0	0	0	0	0	0	19	0	33	0	897
APPROACH %'s :	0.00%	93.23%	6.77%	0.00%	6.47%	93.53%	0.00%	0.00%					36.54%	0.00%	63.46%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	212	13	0	13	194	0	0	0	0	0	0	11	0	19	0	462
PEAK HR FACTOR :	0.000	0.946	0.650	0.000	0.650	0.882	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.000	0.528	0.000	0.931
		0.953				0.863								0.625			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	67	5	0	8	51	0	0	0	0	0	0	3	0	21	0	155
2:15 PM	0	54	7	0	2	65	0	0	0	0	0	0	6	0	20	0	154
2:30 PM	0	77	3	0	11	63	0	0	0	0	0	0	3	0	4	1	162
2:45 PM	0	94	15	0	19	69	0	0	0	0	0	0	9	0	19	0	225
3:00 PM	0	81	9	0	16	80	0	0	0	0	0	0	5	0	25	0	216
3:15 PM	0	76	3	0	8	107	0	0	0	0	0	0	6	0	16	0	216
3:30 PM	0	64	5	0	6	97	0	0	0	0	0	0	4	0	6	0	182
3:45 PM	0	72	1	0	8	84	0	0	0	0	0	0	3	0	6	0	174
4:00 PM	0	85	3	0	9	94	0	0	0	0	0	0	4	0	10	0	205
4:15 PM	0	100	4	0	5	110	0	0	0	0	0	0	6	0	10	0	235
4:30 PM	0	81	7	0	2	88	0	0	0	0	0	0	6	0	6	0	190
4:45 PM	0	90	2	0	6	106	0	0	0	0	0	0	4	0	4	0	212
5:00 PM	0	111	6	0	8	134	0	0	0	0	0	0	6	0	11	1	277
5:15 PM	0	111	4	0	17	147	0	0	0	0	0	0	7	0	5	0	291
5:30 PM	0	106	4	0	12	139	0	0	0	0	0	0	3	0	4	0	268
5:45 PM	0	95	7	0	9	134	0	0	0	0	0	0	6	0	7	0	258
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1364	85	0	146	1568	0	0	0	0	0	0	81	0	174	2	3420
APPROACH %'s :	0.00%	94.13%	5.87%	0.00%	8.52%	91.48%	0.00%	0.00%					31.52%	0.00%	67.70%	0.78%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	423	21	0	46	554	0	0	0	0	0	0	22	0	27	1	1094
PEAK HR FACTOR :	0.000	0.953	0.750	0.000	0.676	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.786	0.000	0.614	0.250	0.940
		0.949				0.915								0.694			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Oak St
City: South Pasadena
Control: 1-Way Stop (WB)

Project ID: 20-05030-001
Date: 1/22/2020

Bikes

NS/EW Streets:	Meridian Ave				Meridian Ave				Oak St				Oak St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	7
APPROACH %'s :	0.00%	33.33%	66.67%	0.00%									0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
		0.625															

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
		0.500															

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	3	0	0	0	0	0	0	3	0	0	0	8
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
						0.250											

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Oak St
City: South Pasadena
Project ID: 20-05030-001
Date: 1/22/2020

Pedestrians (Crosswalks)

NS/EW Streets:	Meridian Ave		Meridian Ave		Oak St		Oak St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	1	1	0	0	0	3	5
7:15 AM	0	0	1	0	0	0	2	0	3
7:30 AM	0	0	12	0	1	1	1	3	18
7:45 AM	0	0	8	0	1	0	2	0	11
8:00 AM	0	0	2	0	1	0	0	2	5
8:15 AM	0	0	0	0	1	1	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	1	0	1	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	24	2	4	3	5	8	46
APPROACH %'s :			92.31%	7.69%	57.14%	42.86%	38.46%	61.54%	
PEAK HR :	**07:30 AM - 08:30 AM**								TOTAL
PEAK HR VOL :	0	0	22	0	4	2	3	5	36
PEAK HR FACTOR :			0.458		1.000	0.500	0.375	0.417	0.500
			0.458		0.750		0.500		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	0	0	0	0	0	1	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	1	1	0	2
11:45 AM	0	0	1	0	0	0	1	2	4
12:00 PM	0	0	0	2	2	0	0	1	5
12:15 PM	0	0	0	2	0	1	0	0	3
12:30 PM	0	0	0	0	1	2	0	0	3
12:45 PM	0	0	0	1	0	0	1	1	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	1	5	3	5	3	4	21
APPROACH %'s :			16.67%	83.33%	37.50%	62.50%	42.86%	57.14%	
PEAK HR :	**12:00 PM - 01:00 PM**								TOTAL
PEAK HR VOL :	0	0	0	5	3	3	1	2	14
PEAK HR FACTOR :				0.625	0.375	0.375	0.250	0.500	0.700
			0.625		0.500		0.375		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
2:00 PM	0	0	0	3	0	1	1	0	5
2:15 PM	0	0	0	2	0	1	1	1	5
2:30 PM	0	0	0	1	1	0	2	0	4
2:45 PM	0	0	1	1	2	1	1	0	6
3:00 PM	0	0	0	5	1	3	1	1	11
3:15 PM	0	0	2	6	3	2	1	1	15
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	2	1	3	0	0	1	7
4:00 PM	0	0	3	3	1	0	0	0	7
4:15 PM	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	0	2	1	1	1	3	8
4:45 PM	0	0	1	3	0	2	2	2	10
5:00 PM	0	0	3	2	1	2	1	1	10
5:15 PM	0	0	4	0	0	0	0	3	7
5:30 PM	0	0	3	1	0	3	1	3	11
5:45 PM	0	0	1	0	0	1	0	1	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	22	30	13	17	12	17	111
APPROACH %'s :			42.31%	57.69%	43.33%	56.67%	41.38%	58.62%	
PEAK HR :	**05:00 PM - 06:00 PM**								TOTAL
PEAK HR VOL :	0	0	11	3	1	6	2	8	31
PEAK HR FACTOR :			0.688	0.375	0.250	0.500	0.500	0.667	0.705
			0.700		0.583		0.625		

Prepared by National Data & Surveying Services

Meridian Ave & Oak St

Peak Hour Turning Movement Count

ID: 20-05030-001
City: South Pasadena

Day: Wednesday
Date: 01/22/2020

Meridian Ave

SOUTHBOUND

PEAK HOURS								COUNT PERIODS
07:30 AM - 08:30 AM	AM	0	424	102	0	526	AM	07:00 AM - 09:00 AM
12:00 PM - 01:00 PM	NOON	0	194	13	0	231	NOON	11:00 AM - 01:00 PM
05:00 PM - 06:00 PM	PM	0	554	46	0	450	PM	02:00 PM - 06:00 PM

CONTROL

1-Way Stop (WB)

TEV	1201	462	1094
	AM	NOON	PM
PHF	0.73	0.93	0.94

EASTBOUND (Oak St)

AM	NOON	PM		
0	0	0		
0	0	0	↰	0
1	0	0	↱	0
0	0	0	→	1
0	0	0	↴	0

WESTBOUND (Oak St)

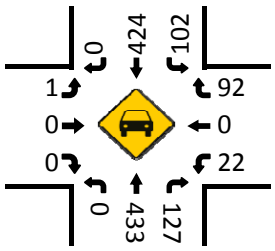
PM	NOON	AM		
27	19	92	↰	0
0	0	0	←	1
22	11	22	↰	0
1	0	0	↰	0
68	26	229		

				0	1	0	0	
				0	0	1	0	
PM	576	0	0	423	21	PM		
NOON	205	0	0	212	13	NOON		
AM	446	0	0	433	127	AM		

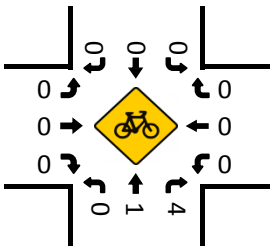
NORTHBOUND

Meridian Ave

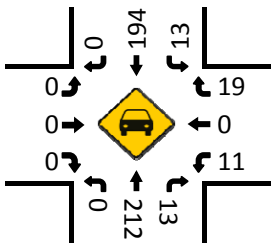
Total Vehicles (AM)



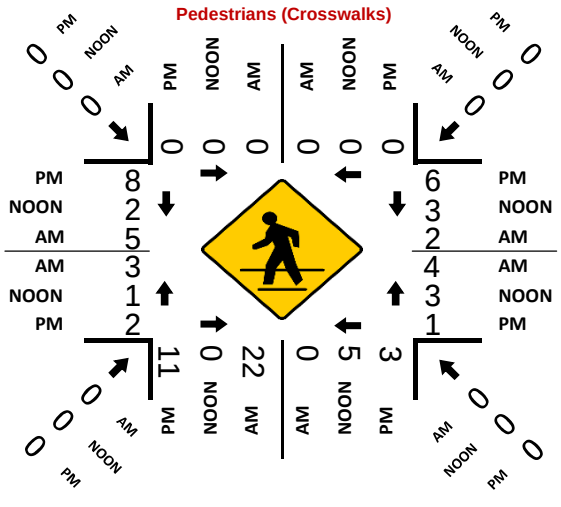
Bikes (AM)



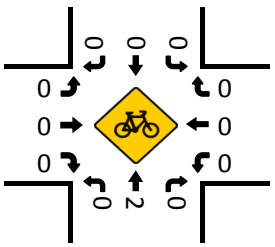
Total Vehicles (Noon)



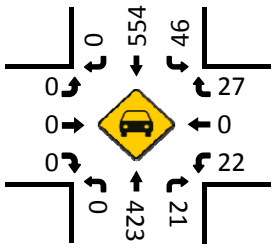
Pedestrians (Crosswalks)



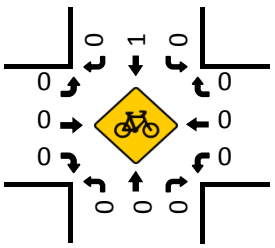
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Maple St
City: South Pasadena
Control: 1-Way Stop (WB)

Project ID: 20-05030-002
Date: 1/22/2020

Total

NS/EW Streets:	Meridian Ave				Meridian Ave				Maple St				Maple St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	32	1	0	25	45	0	0	0	0	0	0	1	0	39	0	143
7:15 AM	0	56	2	0	23	45	0	0	0	0	1	0	0	0	69	0	196
7:30 AM	0	86	1	0	28	61	0	0	0	0	0	0	2	0	61	0	239
7:45 AM	0	94	3	0	39	95	0	0	1	0	0	0	14	0	54	0	300
8:00 AM	0	38	11	0	46	89	0	0	0	0	0	0	11	0	40	0	235
8:15 AM	0	46	6	0	54	40	0	0	0	0	0	0	2	0	37	0	185
8:30 AM	0	55	1	0	38	36	0	0	0	0	0	0	3	0	56	0	189
8:45 AM	0	36	6	0	31	39	0	0	0	0	0	0	2	0	43	0	157
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	443	31	0	284	450	0	0	1	0	1	0	35	0	399	0	1644
APPROACH %'s :	0.00%	93.46%	6.54%	0.00%	38.69%	61.31%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	8.06%	0.00%	91.94%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	274	17	0	136	290	0	0	1	0	1	0	27	0	224	0	970
PEAK HR FACTOR :	0.000	0.729	0.386	0.000	0.739	0.763	0.000	0.000	0.250	0.000	0.250	0.000	0.482	0.000	0.812	0.000	0.808
		0.750				0.789				0.500				0.909			

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	17	6	0	10	29	0	0	0	0	0	0	3	0	29	0	94
11:15 AM	0	26	5	1	9	32	0	0	0	0	0	0	1	0	18	0	92
11:30 AM	0	31	2	0	11	40	0	0	0	0	0	0	0	0	15	0	99
11:45 AM	0	30	3	0	7	38	0	0	0	0	0	0	1	0	27	0	106
12:00 PM	0	29	3	0	9	26	0	0	0	0	0	0	0	0	22	1	90
12:15 PM	0	39	0	0	11	44	0	0	0	0	0	0	2	0	20	0	116
12:30 PM	0	25	1	0	5	37	0	0	0	0	0	0	2	0	16	0	86
12:45 PM	0	31	1	0	10	41	0	0	0	0	0	0	1	0	25	0	109
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	228	21	1	72	287	0	0	0	0	0	0	10	0	172	1	792
APPROACH %'s :	0.00%	91.20%	8.40%	0.40%	20.06%	79.94%	0.00%	0.00%					5.46%	0.00%	93.99%	0.55%	
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	0	129	8	0	38	148	0	0	0	0	0	0	3	0	84	1	411
PEAK HR FACTOR :	0.000	0.827	0.667	0.000	0.864	0.841	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.778	0.250	0.886
		0.878				0.845								0.786			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	23	3	0	14	42	0	0	0	0	0	0	4	0	23	0	109
2:15 PM	0	30	2	0	13	58	0	0	1	0	0	0	2	0	28	0	134
2:30 PM	0	38	5	0	22	36	0	0	0	0	0	0	5	0	41	0	147
2:45 PM	0	55	3	0	22	56	0	0	0	0	0	0	7	0	39	0	182
3:00 PM	0	48	3	0	18	65	0	0	0	0	0	0	2	0	38	0	174
3:15 PM	0	19	0	0	30	58	1	0	0	0	0	0	1	0	41	0	150
3:30 PM	0	33	1	0	25	66	0	0	0	0	0	0	0	0	25	0	150
3:45 PM	0	37	3	0	19	50	0	0	0	0	0	0	1	0	39	0	149
4:00 PM	0	37	3	0	25	65	0	0	0	0	0	0	3	0	37	0	170
4:15 PM	0	48	0	0	35	61	0	0	0	0	0	0	2	0	48	0	194
4:30 PM	0	37	1	0	32	55	0	0	0	0	0	0	2	0	44	0	171
4:45 PM	0	44	2	0	35	49	0	0	0	0	0	0	3	0	38	0	171
5:00 PM	0	40	0	0	42	96	0	0	0	0	0	0	2	0	61	0	241
5:15 PM	0	46	2	0	34	87	0	0	0	0	0	0	1	0	56	0	226
5:30 PM	0	34	1	0	30	86	0	0	0	0	0	0	5	1	71	0	228
5:45 PM	0	43	0	0	30	84	0	0	0	0	0	0	2	0	58	0	217
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	612	29	0	426	1014	1	0	1	0	0	0	42	1	687	0	2813
APPROACH %'s :	0.00%	95.48%	4.52%	0.00%	29.56%	70.37%	0.07%	0.00%	100.00%	0.00%	0.00%	0.00%	5.75%	0.14%	94.11%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	163	3	0	136	353	0	0	0	0	0	0	10	1	246	0	912
PEAK HR FACTOR :	0.000	0.886	0.375	0.000	0.810	0.919	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.866	0.000	0.946
		0.865				0.886								0.834			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Maple St
City: South Pasadena
Control: 1-Way Stop (WB)

Project ID: 20-05030-002
Date: 1/22/2020

Bikes

NS/EW Streets:	Meridian Ave				Meridian Ave				Maple St				Maple St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	0	0	0	1	0	0	0	0	0	0	0	0	2	0	6
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500
	0.250												0.250				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	5
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.250				0.250												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	0	0	0	5	0	0	0	0	0	0	1	0	1	0	10
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					50.00%	0.00%	50.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
					0.250												

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Maple St
City: South Pasadena
Project ID: 20-05030-002
Date: 1/22/2020

Pedestrians (Crosswalks)

NS/EW Streets:	Meridian Ave		Meridian Ave		Maple St		Maple St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	3	3
7:15 AM	0	0	0	0	0	0	3	0	3
7:30 AM	1	0	0	0	6	1	3	0	11
7:45 AM	1	0	0	0	0	0	3	1	5
8:00 AM	0	2	0	0	2	0	1	3	8
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	3	4
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	2	0	0	9	1	10	10	34
APPROACH %'s :	50.00%	50.00%			90.00%	10.00%	50.00%	50.00%	
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	2	2	0	0	8	1	10	4	27
PEAK HR FACTOR :	0.500	0.250			0.333	0.250	0.833	0.333	0.614
	0.500				0.321		0.875		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	2	0	0	0	1	1	1	0	5
11:15 AM	0	1	0	0	0	1	0	3	5
11:30 AM	1	0	0	0	0	0	5	0	6
11:45 AM	0	0	0	1	0	0	1	1	3
12:00 PM	0	0	0	0	0	0	0	1	1
12:15 PM	0	0	0	0	0	0	1	2	3
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	3	1	0	1	1	2	8	7	23
APPROACH %'s :	75.00%	25.00%	0.00%	100.00%	33.33%	66.67%	53.33%	46.67%	
PEAK HR :	11:30 AM - 12:30 PM								TOTAL
PEAK HR VOL :	1	0	0	1	0	0	7	4	13
PEAK HR FACTOR :	0.250			0.250			0.350	0.500	0.542
	0.250		0.250				0.550		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
2:00 PM	0	0	0	0	0	2	0	0	2
2:15 PM	0	1	0	0	1	0	1	0	3
2:30 PM	0	0	0	0	0	0	1	1	2
2:45 PM	0	0	0	0	4	0	1	1	6
3:00 PM	1	0	0	0	1	3	1	2	8
3:15 PM	2	1	0	0	1	1	2	4	11
3:30 PM	1	0	0	0	1	4	2	0	8
3:45 PM	0	0	0	0	0	0	0	1	1
4:00 PM	0	0	0	0	0	1	4	1	6
4:15 PM	0	1	0	0	2	3	2	1	9
4:30 PM	0	0	0	0	0	3	2	3	8
4:45 PM	0	0	0	0	2	0	3	0	5
5:00 PM	0	0	0	0	0	3	2	6	11
5:15 PM	0	1	0	0	0	4	5	1	11
5:30 PM	0	0	0	0	3	0	5	3	11
5:45 PM	2	1	0	0	1	5	3	1	13
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	6	5	0	0	16	29	34	25	115
APPROACH %'s :	54.55%	45.45%			35.56%	64.44%	57.63%	42.37%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	2	2	0	0	4	12	15	11	46
PEAK HR FACTOR :	0.250	0.500			0.333	0.600	0.750	0.458	0.885
	0.333				0.667		0.813		

Prepared by National Data & Surveying Services

Meridian Ave & Maple St

Peak Hour Turning Movement Count

ID: 20-05030-002
City: South Pasadena

Day: Wednesday
Date: 01/22/2020

Meridian Ave

SOUTHBOUND

PEAK HOURS								COUNT PERIODS
07:15 AM - 08:15 AM	AM	0	290	136	0	499	AM	07:00 AM - 09:00 AM
11:30 AM - 12:30 PM	NOON	0	148	38	0	213	NOON	11:00 AM - 01:00 PM
05:00 PM - 06:00 PM	PM	0	353	136	0	409	PM	02:00 PM - 06:00 PM

Maple St — **EASTBOUND**

AM	NOON	PM		
0	0	1	⇦	
0	0	0	↶	0
1	0	0	↱	0
0	0	0	→	1
1	0	0	↷	0
AM	NOON	PM		

CONTROL

1-Way Stop (WB)

	AM	NOON	PM
TEV	970	411	912
PHF	0.81	0.89	0.95

WESTBOUND — **Maple St**

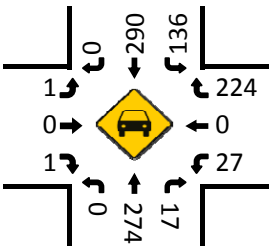
				PM	NOON	AM
0	↶	246	84	224		
1	←	1	0	0		
0	↰	10	3	27		
0	↩	0	1	0		
⇨		139	47	153		
PM	NOON	AM				

PM	363	0	0	163	3	PM
NOON	151	0	0	129	8	NOON
AM	318	0	0	274	17	AM

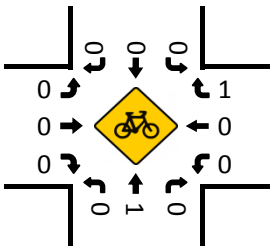
NORTHBOUND

Meridian Ave

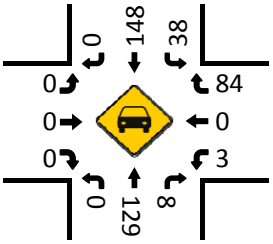
Total Vehicles (AM)



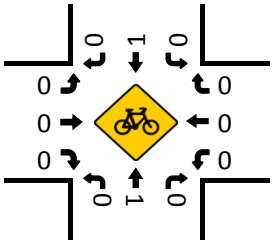
Bikes (AM)



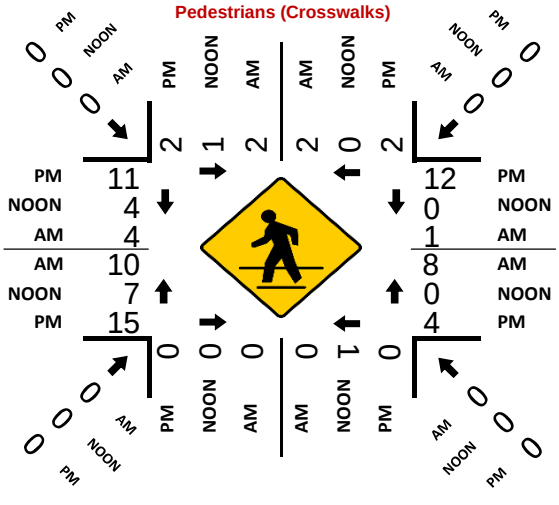
Total Vehicles (Noon)



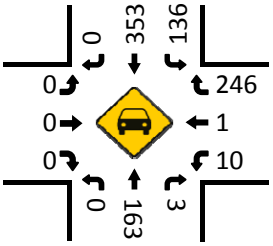
Bikes (NOON)



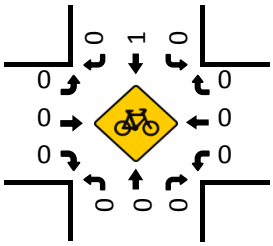
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Pine St
City: South Pasadena
Control: 1-Way Stop (WB)

Project ID: 20-05030-003
Date: 1/22/2020

Total

NS/EW Streets:	Meridian Ave				Meridian Ave				Pine St				Pine St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	69	2	0	1	69	0	0	0	0	0	0	2	0	9	0	152
7:15 AM	0	128	2	0	0	65	0	0	0	0	0	0	0	0	9	0	204
7:30 AM	0	160	1	0	4	84	0	0	0	0	0	0	2	0	10	0	261
7:45 AM	0	155	4	0	12	119	0	0	0	0	0	0	12	0	23	0	325
8:00 AM	0	85	5	0	8	121	0	0	0	0	0	0	11	0	10	0	240
8:15 AM	0	75	8	0	18	96	0	0	0	0	0	0	0	0	9	0	206
8:30 AM	0	111	2	0	7	73	0	0	0	0	0	0	3	0	12	0	208
8:45 AM	0	84	1	0	7	69	0	0	0	0	0	0	0	0	10	0	171
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	867	25	0	57	696	0	0	0	0	0	0	30	0	92	0	1767
APPROACH %'s :	0.00%	97.20%	2.80%	0.00%	7.57%	92.43%	0.00%	0.00%					24.59%	0.00%	75.41%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	475	18	0	42	420	0	0	0	0	0	0	25	0	52	0	1032
PEAK HR FACTOR :	0.000	0.742	0.563	0.000	0.583	0.868	0.000	0.000	0.000	0.000	0.000	0.000	0.521	0.000	0.565	0.000	0.794
		0.766				0.882								0.550			

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	46	1	0	1	40	0	1	0	0	0	0	0	0	4	0	93
11:15 AM	0	46	3	0	3	40	0	0	0	0	0	0	2	0	5	0	99
11:30 AM	0	45	0	0	3	50	0	0	0	0	0	0	2	0	9	0	109
11:45 AM	0	59	1	0	3	43	0	0	0	0	0	0	2	0	7	0	115
12:00 PM	0	49	2	0	2	35	0	0	0	0	0	0	0	0	3	0	91
12:15 PM	0	61	0	0	2	54	0	0	0	0	0	0	0	0	5	0	122
12:30 PM	0	47	3	0	1	46	0	0	0	0	0	0	2	0	6	0	105
12:45 PM	0	52	1	0	6	50	0	0	0	0	0	0	1	0	6	0	116
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	405	11	0	21	358	0	1	0	0	0	0	9	0	45	0	850
APPROACH %'s :	0.00%	97.36%	2.64%	0.00%	5.53%	94.21%	0.00%	0.26%					16.67%	0.00%	83.33%	0.00%	
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	0	214	3	0	10	182	0	0	0	0	0	0	4	0	24	0	437
PEAK HR FACTOR :	0.000	0.877	0.375	0.000	0.833	0.843	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.667	0.000	0.895
		0.889				0.857								0.636			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	50	1	0	3	56	0	0	0	0	0	0	4	0	13	0	127
2:15 PM	0	55	2	0	2	69	0	0	0	0	0	0	5	0	6	0	139
2:30 PM	0	74	0	0	6	56	0	0	0	0	0	0	1	0	11	0	148
2:45 PM	0	94	5	0	7	73	0	0	0	0	0	0	7	0	13	0	199
3:00 PM	0	78	6	0	5	82	0	0	0	0	0	0	5	0	6	0	182
3:15 PM	0	61	1	0	7	93	0	0	0	0	0	0	0	0	15	0	177
3:30 PM	0	62	2	0	6	93	0	0	0	0	0	0	0	0	6	0	169
3:45 PM	0	75	1	0	3	68	0	1	0	0	0	0	0	0	4	0	152
4:00 PM	0	74	1	0	6	94	0	0	0	0	0	0	2	0	12	0	189
4:15 PM	0	93	2	0	4	95	0	0	0	0	0	0	3	0	14	0	211
4:30 PM	0	90	2	0	3	85	0	1	0	0	0	0	4	0	5	0	190
4:45 PM	0	79	2	0	9	92	0	0	0	0	0	0	2	0	2	0	186
5:00 PM	0	104	0	0	5	142	0	0	0	0	0	0	3	0	12	0	266
5:15 PM	0	106	5	0	11	120	0	0	0	0	0	0	3	0	8	0	253
5:30 PM	0	104	2	0	13	121	0	0	0	0	0	0	3	0	9	0	252
5:45 PM	0	102	0	0	8	121	0	0	0	0	0	0	2	0	11	0	244
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1301	32	0	98	1460	0	2	0	0	0	0	44	0	147	0	3084
APPROACH %'s :	0.00%	97.60%	2.40%	0.00%	6.28%	93.59%	0.00%	0.13%					23.04%	0.00%	76.96%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	416	7	0	37	504	0	0	0	0	0	0	11	0	40	0	1015
PEAK HR FACTOR :	0.000	0.981	0.350	0.000	0.712	0.887	0.000	0.000	0.000	0.000	0.000	0.000	0.917	0.000	0.833	0.000	0.954
		0.953				0.920								0.850			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Pine St
City: South Pasadena
Control: 1-Way Stop (WB)

Project ID: 20-05030-003
Date: 1/22/2020

Bikes

NS/EW Streets:	Meridian Ave				Meridian Ave				Pine St				Pine St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
APPROACH %'s :	0.00%	80.00%	20.00%	0.00%													
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.500																

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	11:30 AM - 12:30 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.250				0.250												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	1	0	0	6	0	0	0	0	0	0	0	0	0	0	9
APPROACH %'s :	0.00%	66.67%	33.33%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
					0.250												

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meridian Ave & Pine St
City: South Pasadena

Project ID: 20-05030-003
Date: 1/22/2020

Pedestrians (Crosswalks)

NS/EW Streets:	Meridian Ave		Meridian Ave		Pine St		Pine St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	1	0	0	0	2
7:30 AM	0	0	0	0	5	1	0	0	6
7:45 AM	1	1	0	0	4	0	0	0	6
8:00 AM	0	0	0	0	3	0	0	0	3
8:15 AM	0	0	0	0	1	1	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	1	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	3	0	0	14	3	0	0	21
APPROACH %'s :	25.00%	75.00%			82.35%	17.65%			
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	1	1	0	0	13	2	0	0	17
PEAK HR FACTOR :	0.250	0.250			0.650	0.500			0.708
	0.250				0.625				

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	0	2	0	0	1	1	0	0	4
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	1	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	1	1	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	2	0	0	3	2	0	0	7
APPROACH %'s :	0.00%	100.00%			60.00%	40.00%			
PEAK HR :	11:30 AM - 12:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	1
PEAK HR FACTOR :					0.250				0.250
					0.250				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
2:00 PM	0	0	0	0	0	1	0	0	1
2:15 PM	0	0	0	0	1	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	2	1	0	0	4
3:00 PM	0	2	0	3	5	5	0	0	15
3:15 PM	0	2	0	0	2	6	0	0	10
3:30 PM	0	0	1	0	2	0	0	0	3
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	1	0	0	0	1	5	0	0	7
4:15 PM	0	0	0	0	1	1	0	0	2
4:30 PM	1	1	0	1	1	1	0	0	5
4:45 PM	0	1	0	0	1	2	0	0	4
5:00 PM	0	0	0	0	0	4	0	0	4
5:15 PM	0	0	0	0	1	1	0	0	2
5:30 PM	0	0	0	1	1	5	0	0	7
5:45 PM	0	0	2	0	0	0	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	7	3	5	18	32	0	0	67
APPROACH %'s :	22.22%	77.78%	37.50%	62.50%	36.00%	64.00%			
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	0	0	2	1	2	10	0	0	15
PEAK HR FACTOR :			0.250	0.250	0.500	0.500			0.536
			0.375		0.500				

Prepared by National Data & Surveying Services

Meridian Ave & Pine St

Peak Hour Turning Movement Count

ID: 20-05030-003
City: South Pasadena

Day: Wednesday
Date: 01/22/2020

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
11:30 AM - 12:30 PM	11:00 AM - 01:00 PM
05:00 PM - 06:00 PM	02:00 PM - 06:00 PM

Meridian Ave — SOUTHBOUND

	U-turn	Right	Through	Left	Exiting (northbound)
AM	0	420	42	0	527
NOON	0	182	10	0	238
PM	0	504	37	0	456
Lanes	0	1	0	0	

Pine St — EASTBOUND

	AM	NOON	PM	Lanes
Exiting (westbound)	0	0	0	
U-turn	0	0	0	0
Left	0	0	0	0
Through	0	0	0	0
Right	0	0	0	0

Pine St — WESTBOUND

	Lanes	PM	NOON	AM
Left	0	40	24	52
Through	1	0	0	0
Right	0	11	4	25
U-turn	0	0	0	0
Exiting (eastbound)		44	13	60

CONTROL

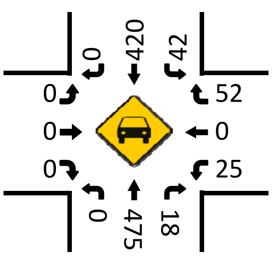
1-Way Stop (WB)

	AM	NOON	PM
TEV	1032	437	1015
PHF	0.79	0.90	0.95

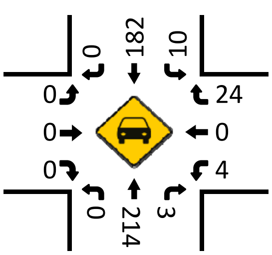
Meridian Ave — NORTHBOUND

	Exiting (southbound)	U-turn	Left	Through	Right
Lanes		0	0	1	0
PM	515	0	0	416	7
NOON	186	0	0	214	3
AM	445	0	0	475	18

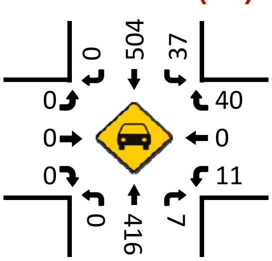
Total Vehicles (AM)



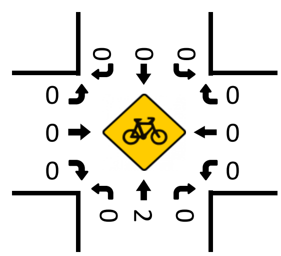
Total Vehicles (Noon)



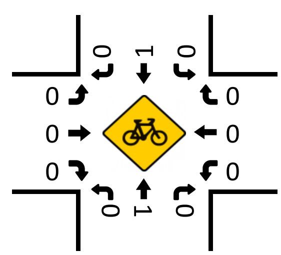
Total Vehicles (PM)



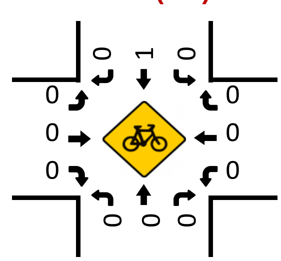
Bikes (AM)



Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)