



CITY OF MORRO BAY PUBLIC WORKS ADVISORY BOARD A G E N D A

The City of Morro Bay is dedicated to the preservation and enhancement of the quality of life. The City shall be committed to this purpose and will provide a level of municipal service and safety consistent with and responsive to the needs of the public.

**Thursday, December 19, 2013
Veteran's Memorial Building - 6:00 P.M.
209 Surf Street, Morro Bay, CA**

Matt Makowetski, Chair

Ron Burkhart
Janith Goldman
Marlys McPherson

Deborah Owen
(Vacant)
Stephen Shively

ESTABLISH QUORUM AND CALL TO ORDER
MOMENT OF SILENCE/PLEDGE OF ALLEGIANCE
ANNOUNCEMENTS/PRESENTATIONS

PUBLIC COMMENT PERIOD

Members of the audience wishing to address the Board on City business matters other than scheduled items may do so at this time. To increase the effectiveness of the Public Comment Period, the following rules shall be followed:

- When recognized by the Chair, please come forward to the podium and state your name and address for the record. Board meetings are audio and video recorded and this information is voluntary and desired for the preparation of minutes.
- Comments are to be limited to three minutes.
- All remarks shall be addressed to the Board, as a whole, and not to any individual member thereof.
- The Board respectfully requests that you refrain from making slanderous, profane or personal remarks against any elected official, commission and/or staff.
- Please refrain from public displays or outbursts such as unsolicited applause, comments or cheering.
- Any disruptive activities that substantially interfere with the ability of the Board to carry out its meeting will not be permitted and offenders will be requested to leave the meeting.
- Your participation in Board meetings is welcome and your courtesy will be appreciated.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Public Services' Administrative Technician at (805) 772-6291. Notification 24 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

A. CONSENT CALENDAR

A-1 Approval of Minutes of November 4, 2013 Meeting
Recommendation: Approve minutes.

A-2 Director's Report/Information Items –Verbal Report

B. OLD BUSINESS - None

C. NEW BUSINESS

- C-1 Review of Public Art Proposal – Painting of Traffic Signal Control Cabinets – Quintana and Main
Recommendation: Consider proposal, and recommend the City Council approve the concept to decorate the traffic Signal Control Cabinets.
- C-2 Request for Stop Sign at the Intersection of Marina and Fresno and Review of the Public Process for Traffic Control Signs.
Recommendation: Receive Report, take public testimony, and forward any recommendations to the City Council.

D. FUTURE AGENDA ITEMS

E. ADJOURNMENT

Adjourn to the Public Works Advisory Board meeting at the Veteran’s Memorial Building, 209 Surf Street, on **Thursday, February 20, 2013 at 6:00 p.m.**

This agenda is subject to amendment up to 72 hours prior to the date and time set for the meeting. Please refer to the agenda posted at the Public Services Department, 955 Shasta Avenue, for any revisions or call the department at 772-6291 for further information.

Materials related to an item on this Agenda are available for public inspection during normal business hours in the Public Services Department, at Mill’s/ASAP, 495 Morro Bay Boulevard, or the Morro Bay Library, 695 Harbor, Morro Bay, CA 93442, or online at www.morro-bay.ca.us/pwab . Materials related to an item on this Agenda submitted to the Board after publication of the Agenda packet are available for inspection at the Public Services Department during normal business hours or at the scheduled meeting.

- A-3 Approval of Minutes of September 5, 2013
Recommendation: Approve minutes.
- A-4 Approval of Minutes of October 1, 2013
Recommendation: Approve minutes.
- A-5 Report on North Coast Transit Surveys 2013 Project
Recommendation: Receive the draft North Coast Transit Surveys 2013 Technical Memorandums 1 and 2 on Existing Conditions and Survey Results, and provide written comments to Staff as necessary by November 7, 2013.
- A-6 Director's Report/Information Items
Recommendation: Receive and file.

Boardmember McPherson asked staff how the public was notified of the state water shutdown. Livick stated the City published a press release in the local newspaper, posted the information on the City's website, advertised it on Channel 20, and announced the shutdown at most public meetings.

Boardmember McPherson asked staff to clarify what percentage of the City's water comes from the state. Livick explained the state provides 35 percent of the overall allocation. Without the drought buffer, the City would receive 35 percent of 13,013 cubic feet of water (which is the City's total allocation of state water), and with the drought buffer, the City would receive 100 percent of water requested, (which is up to 36.5 percent). Livick stated the City also has water in storage at San Luis Reservoir.

MOTION: Boardmember Shively moved to approve the Consent Calendar.

The motion was seconded by Boardmember Burkhart and carried unanimously. (6-0).

OLD BUSINESS

None.

NEW BUSINESS

- C-1 Morro Bay Transit Options for Weekend Service
Recommendation: Consider options, and recommend the City Council expand Morro Bay Transit service on Saturday as outlined in the Staff Report commencing July 1, 2014.

Burlingame presented the staff report.

Chairperson Makowetski opened Public Comment period, and seeing none, closed Public Comment period.

Boardmember Burkhart asked staff if the penalties on the 10 percent fare that were discussed in the past are the same as those presented in the staff report. Burlingame explained the last time the farebox ratios were discussed with the Board, only Morro Bay Transit was examined. She then stated all City transit services are combined and the City exceeds the 10 percent fare ratio. In 2011-2012, the farebox ratio for the entire transit system was 10.7 percent. More recently, Morro Bay Transit alone has experienced a 2.5 percent farebox increase.

Boardmember Goldman confirmed with staff that during the trolley season, Morro Bay Transit and the trolleys would run on Saturdays. Burlingame explained each service serves two different populations: the trolley primarily serves tourists whereas Morro Bay Transit serves primarily locals. She explained the City has funding available for both services and one would not take funding away from the other.

Boardmember Shively confirmed with staff that Transportation Development Act (TDA) money comes from the state. Burlingame stated staff is confident that the City will receive the same amount of money that was received last year.

Boardmember McPherson asked staff what proportion the requested \$15,000 is of the total funding received. Burlingame explained that the total transit budget for existing programs and services is about \$350,000-\$357,000 after bike path, pedestrian, and regional transit authority funding is deducted. The requested \$15,000 is a small percentage of the total budget.

Chairperson Makowetski asked staff if the City is doing any sort of advertising for the Morro Bay Transit. Burlingame stated there is information on the City's website, Channel 20, and in the Bay News.

Chairperson Makowetski asked staff to clarify the difference in costs of Morro Bay Transit in the off-season versus the high season. Burlingame explained the difference in cost is because there are fewer hours of operation, so all costs are lower.

Chairperson Makowetski asked staff about the likelihood of increasing the farebox ratio if Option 5 is selected. Burlingame explained that it would be unlikely at this point unless the City Council voted to approve additional funding.

MOTION: Boardmember Shively moved to accept staff recommendations #1-4 as stated in the staff report dated October 29, 2013.

The motion was seconded by Boardmember Owen and carried unanimously. (6-0).

C-2 Public Draft Options Report for the NEW Water Reclamation Facility
Recommendation: Receive Report, take public testimony, and forward any recommendations to the City Council.

Livick presented the staff report.

Chairperson Makowetski opened Public Comment period.

Bill Martony, resident of Morro Bay, expressed concern about the proposed cost of about \$90-160 million to build the new Water Reclamation Facility. He compared the proposed cost to the total the City of Oceanside spent on their new facility, which was about half as much. Martony stated he would like the City to consider the Tri W site as a potential location for the new facility.

Bob Keller, resident of Morro Bay, expressed support for exploring the Tri W site as well. He stated this site makes sense economically, it is situated close to the City, and there is sufficient space around the property to build ponds.

Chairperson Makowetski closed Public Comment period.

Livick explained the cost estimates for the new facility thus far have been conservative, as cost estimates usually tend to be at the beginning stages of most projects.

Boardmember Owen asked staff to clarify the location of the Tri W site. Livick explained the property extends from the Seashell Communities (to the southeast) to the Radcliffe neighborhood (to the northwest). Livick stated he would get clarification from John regarding how far he looked into the valley area.

Martony explained the Tri W site is comprised of approximately 160 acres inside the City limits and an additional 400 acres which are zoned agricultural and are located outside the City limits. The 400 acres are located behind the Seashell Community, in the valley, and were not included in the study.

Boardmember Burkhart asked staff if an environmental impact study has been conducted which indicates what the proposed development would do to property values in the area, and how it would affect hotels in the City. Livick stated such a report has not been conducted. He explained the purpose of the study is to compare the relative cost to build projects on different sites.

Boardmember Shively discussed with staff the following items:

1. He asked how many rate payers there are in Morro Bay. Livick confirmed there are about 5,600 rate payers.
2. He confirmed with staff the \$90 million alternative is at the site next to the power plant. The \$160 million alternative is at the California Men's Colony site.
3. He asked if the site next to the power plant is more protected from natural disasters than the existing site. Livick explained the site next to the power plant is at a higher elevation but has several other development issues.

Boardmember McPherson discussed with staff the following items:

1. McPherson suggested that for comparison purposes, the City should announce to the public only the cost of construction, which is a more accurate number to cite because it does not include contingency costs and other fees that are less certain.
2. She asked if in preparing the study, the City examined the feasibility of acquiring the sites. She stated such a discussion would be helpful.
3. McPherson asked staff if they have considered partnering with existing facilities in the Morro Valley.
4. McPherson confirmed with staff the cultural resources mentioned by staff earlier in the meeting do not include marine resources.

Livick clarified the existing facility in the Morro Valley is too small and would not meet the needs of the City, and thus it is not being considered as an alternative site for the water reclamation facility.

Chairperson Makowetski expressed concern that it may be difficult for the City to acquire the Dynege property for the development of the facility because other, less-impactful development proposals have been denied at that location. Livick stated the City has not yet entered into the property acquisition stage or met with property owners. The City is now only looking at the relative feasibility of development at the site. Staff will address this issue in more detail at the next meeting.

C-3 Review of San Jacinto Street Parking and Striping

Recommendation: Receive the options, take public testimony, and provide any recommendations or comments to Staff.

Livick presented the staff report.

Chairperson Makowetski opened Public Comment period.

Larry McKay, resident of Morro Bay, expressed concern about losing the on-street parking in front of his residence. He suggested only prohibiting parking in that area for certain periods of time during the day.

Boardmember Owen asked staff if handicap parking is required along San Jacinto Street. Livick explained it is not required, and he explained the difficulties associated with installing curbside handicap parking. He stated the City may be able to install pavement on the north side of the street, instead of on the south side, to accommodate bicyclists and pedestrians. He stated there is a conflict, however, with an existing power pole which would need to be addressed.

Boardmember McPherson asked staff how many complaints have been received since the City made the initial improvements to the street. Livick stated he has not personally received any complaints but noted complaints tend to come through the City Council members. He stated there appear to be two main issues:

1. The City is proposing to remove parking in the area east of Birch Street in order to accommodate bicyclists and pedestrians.
2. The City is proposing to widen the street between Alder and Birch Streets in order to accommodate parking and all lanes of traffic.

Boardmember McPherson stated it is not possible to accommodate all users; there must be trade-offs. She asked staff if it would be possible to wait a little longer before making the proposed changes in order to give the public more opportunity to respond to the proposal. Livick stated the City did notice the appropriate properties of the project to see if any members of the public wanted to comment on it. The notices did not result in any comments.

Boardmember Shively asked staff if this is the only property that fronts San Jacinto Street. Livick stated there may be one or two other properties that front this street but they also have tree street frontages. Shively suggested a strategy for how to avoid moving the power pole while still completing the minor paving job.

Chairperson Makowetski asked staff why handicap access will be installed at the corner of Birch and San Jacinto instead of the corner of Alder and San Jacinto. Livick stated the corner of Alder and San Jacinto was not selected for handicap access because that location cannot meet all ADA requirements.

Livick stated staff will report back to the Board before any improvements are made.

McKay asked staff how much it would cost to move the power pole at the intersection of Birch and San Jacinto. Livick stated it depends. Shively discussed the difficulties associated with moving the pole at this location. Livick stated this intersection will need additional work in the future, and the City will address that as a different project.

C-4 Formation of a PWAB Subcommittee for the preparation of a Request for Proposals and assistance in the selection of a Water and Sewer Rate Consultant
Recommendation: Select two members to serve on the sub-committee.

Livick presented the staff report.

Boardmember Shively asked staff if it would be possible to separate water and sewer costs given the uncertain future of the wastewater treatment plant and the fact that the rate structure may change. Livick

stated the City is required to reassess the rate structure every five years. If the rate structure is modified now, in five years the wastewater treatment plant project will likely be in the design phase, in which case the City can re-examine the rate structure at that time.

Boardmember McPherson stated it would be helpful for the City Council to see how water and sewer rates have changed over the past 20 years. Livick stated, in the past 20 years, water rates have not increased. He noted there are increasing costs on the water side that the current rates cannot support.

McPherson noted sewer rates have increased over time for the purpose of funding the proposed remodel of the existing wastewater treatment plant. Livick clarified the proposed increase in sewer costs would accommodate existing operations. Livick explained the process for changing the water and sewer rate structures in the City.

Chairperson Makowetski noted a number of infrastructure projects have been completed with the money raised from sewer rates. He also noted the importance of letting the public know why the City is raising rates.

Chairperson Makowetski confirmed the City would like two Boardmembers to fill the positions for the PWAB subcommittee. Livick explained the roles and responsibilities of these positions. Boardmembers decided Goldman and Makowetski will fill the positions.

FUTURE AGENDA ITEMS

None.

ADJOURNMENT

The meeting adjourned at 7:47 pm to the next scheduled meeting to be held at the Veteran's Memorial Hall on Thursday, December 19, 2013, at 6:00 p.m.

RECEIVED
City of Morro Bay

NOV 05 2013

Administration

Elizabeth Morin
2626 Maple Ave.
Morro Bay, CA 93442
(805) 772-3581
gratefulmorin@gmail.com

Andrea K. Lueker
City Manager
City of Morro Bay
805-772-6206

October 5, 2013

Dear Morro Bay Council Members and City Staff,

We would like to donate a public mural to be placed on two electrical boxes at the corner of Main St. and Quintana Blvd. in Morro Bay.

The artist who will paint the mural is Annette Stemper. She has done other large murals in Morro Bay, including the mural on the wall of the Catch a Wave Salon in the Fitness Works shopping center and two large outdoor murals at Del Mar Elementary School.

The Mural will cover all four sides and the top of the boxes. It will not impede access to the boxes. It shall be painted with acrylic paint and sealed to endure through many years of exposure to the outdoors. No special maintenance of the mural will be required.

The estimated value of the mural is \$500.

Included with this application is a photo of the proposed mural.

Please let us know if you have any questions as you consider our application.

Thank you,

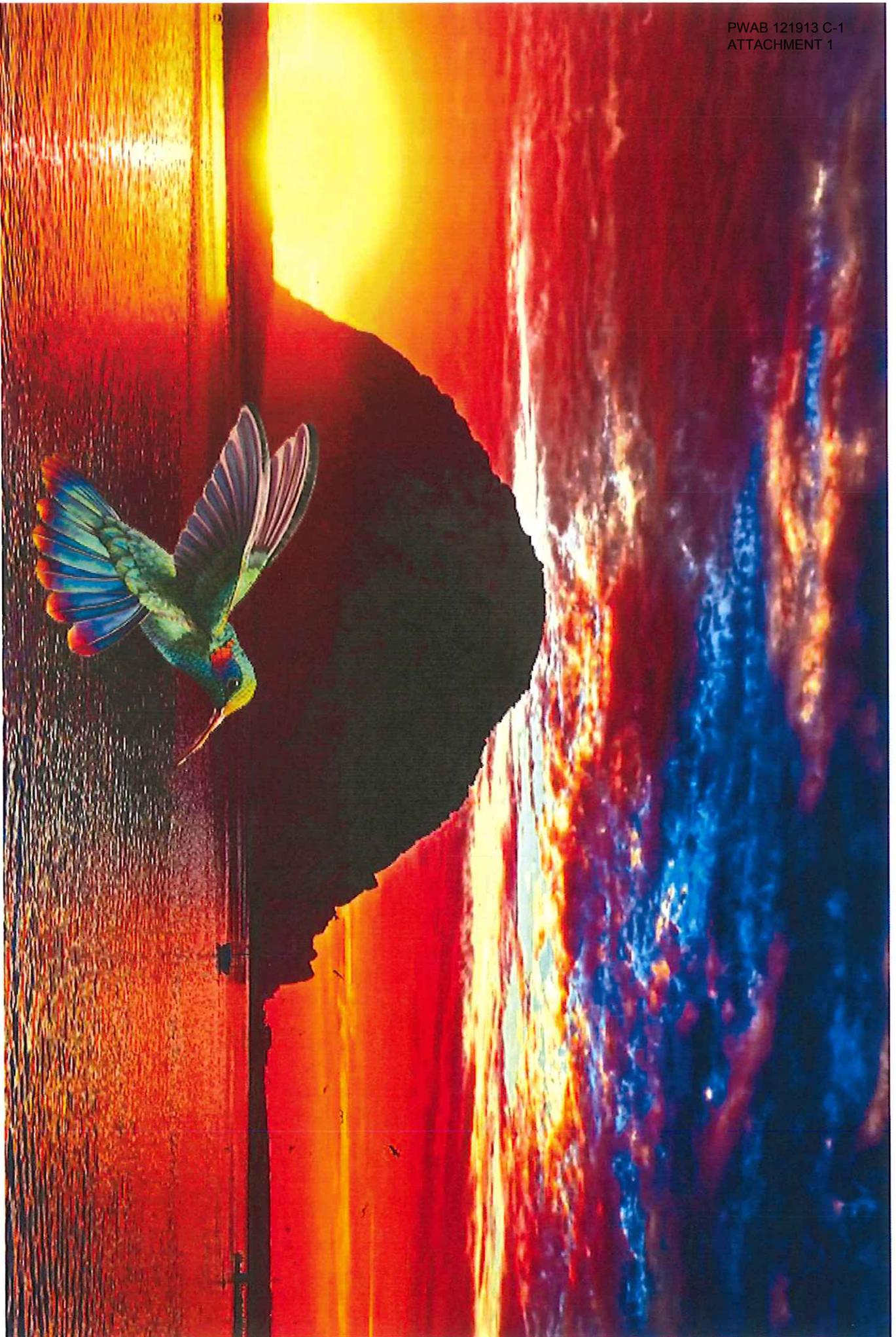


Elizabeth Morin
(805)458-6734



Mafy Ann Britton
(805) 801-2626





**City of Morro Bay
PUBLIC ART POLICY**

Approved by Morro Bay City Council on February 27, 2006

PURPOSE

The City of Morro Bay encourages public art on appropriate City owned property. The purpose of this policy is to set forth standardized policies and procedures for the acceptance of donated artwork offered to the City by the artist.

DEFINITION OF PUBLIC ART

For the purpose of this policy, public art will be artwork located in public places (indoor or outdoor) owned by the City of Morro Bay.

REVIEW PROCEDURE

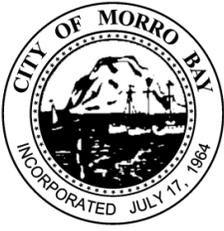
- A. Any artist wishing to donate artwork to the City of Morro Bay must submit an application to the City Manager's office in the form attached hereto:
 1. Photo, plans or model of proposed donation
 2. Technical description of the work
 3. Any special care, maintenance, mounting or display requirements
 4. Resume of the artist
 5. Statement of value of the proposed donation
- B. City staff shall review the application and supporting documentation for the proposed donation. Upon finding that the application is complete, City staff shall place the application on the agenda of all City boards and commissions for their comments. Input shall be encouraged from the Morro Bay Art Association, Morro Bay Public Art Foundation and the public at large. It shall then go to the City Council for final approval or denial.

SELECTION CRITERIA

- A. The City Council will consider the following criteria when considering whether to accept or reject a donation of public art.
 1. The design and placement of public art will not impede pedestrian or vehicle traffic or conflict with public or private easements.
 2. Whether the artist has the necessary funds/resources to properly install, care for and maintain the donated public art.
 3. Appropriateness of the site.

ACCEPTANCE

- A. If the City Council votes to accept the donated artwork, the artist shall enter into a donation agreement. Upon execution of the agreement by the artist, title of the artwork shall pass to the City.
- B. The City in its sole discretion may remove from its collection any donated artwork. In such event the City shall make reasonable efforts to contact the artist who donated the artwork and offer to return the artwork. If the artist cannot be located after reasonable efforts, or the artist declines to accept the return of the artwork, the City may determine the disposition of the artwork.



AGENDA NO: C-2

MEETING DATE: December 19, 2013

Staff Report

TO: Public Works Advisory Board

DATE: December 16, 2013

FROM: Rob Livick, PE/PLS – Public Services Director/City Engineer

SUBJECT: Request for Stop Sign at the Intersection of Marina Street and Fresno Avenue and Review of the Public Process for Traffic Control Signs.

RECOMMENDATION

Receive the report, take public testimony, and forward any recommendations or comments to the City Council.

FISCAL IMPACT

The approximate cost for the installation of a stop sign is approximately \$400 per sign and legend installation. Additionally, the labor to perform the “warrant” analysis takes between 18 person hours and is approximately \$1,500 in staff time.

DISCUSSION

The City receives approximately 10-15 requests for the installation of Stop Sign at uncontrolled or partially controlled intersections per year. Earlier this year the City received a request for signs specifically at the intersection of Marina Street and Fresno Avenue. Based on that request, the City Council requested that the Public Works Advisory Board (PWAB) review that intersection and revisit the policy of installation of traffic control devices based on citizen request. The PWAB has previously reviewed the idea of a petition process for unwarranted traffic control devices in February of 2012 and rejected that process as described at the February 2012 meeting.

Installation of Traffic Control Devices is governed by three separate regulations: the City of Morro Bay Municipal Code Chapter 10, The California Vehicle Code (CVC) and the California Manual of Uniform Traffic Control Devices (CMUTCD).

The City of Morro Bay performs an analysis of the intersection to determine whether installation of a Stop Sign is “warranted”. This “warrant” criterion for installation of Stop Signs is summarized below:

1. The CVC establish the right-of-way rule at intersections having no regulatory traffic control signs such that the driver of a vehicle approaching an intersection must yield the right-of-way to any vehicle or pedestrian already in the intersection. When two vehicles approach an intersection from different streets or highways at approximately the same time, the right-of-way rule requires the driver of the vehicle on the left to yield the right-of-way to the vehicle on the right. The right-of-way can be

Prepared By: RL Dept Review: RL

modified at through streets or highways by placing YIELD signs or STOP signs on one or more approaches.

2. Engineering judgment should be used to establish intersection control. The following factors should be considered:
 - A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
 - B. Number and angle of approaches;
 - C. Approach speeds;
 - D. Sight distance available on each approach; and
 - E. Reported crash experience.
3. YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:
 - A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;
 - B. A street entering a designated through highway or street; and/or
 - C. An unsignalized intersection in a signalized area.
4. In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:
 - A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;
 - B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or
 - C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.
5. Yield or stop signs should not be used for speed control.

Based upon the above criterion Morro Bay has relatively few intersections where standard warrants are not met but where managing traffic continues to be a public concern, including Marina and Fresno. There is a provision in Chapter 10 of the Morro Bay Municipal Code that allows the City Council to place traffic control devices: *10.08.080 - Placement by council: Notwithstanding the above sections (in Chapter 10 of the MBMC), the city council shall have the power to place and maintain or cause to be placed or maintained official traffic-control devices when and as required under this chapter to make effective the provisions of this chapter and may place and maintain such additional traffic-control devices as it deems necessary to regulate traffic under this chapter or under the state law, or to guide or warn traffic.* This provision allows the placement of a traffic control device without the engineering analysis normally required for the City Engineer to place such device.

CONCLUSION

Staff recommends the Board review the particulars of the stop sign analysis and recommend that the City Council against the installation of signs at Marina Street and Fresno Avenue. Additionally, the Board should

make any recommendations regarding the process for the installation of traffic control devices.

ATTACHMENT

1. Stop Sign Warrant Analysis – Fresno Ave and Marina Street, March 26, 2012

Stop Sign Warrant Analysis

Fresno Avenue and Marina Street



**February - March
2012**

Prepared by:

**Department of Public Services
955 Shasta Avenue
Morro Bay, CA 93442**

Certification

Preparation of this report included efforts by the following persons:

Sarah Cosseboom, E.I.T.
Rob Livick, City Engineer/ Director of Public Services

Professional Engineer

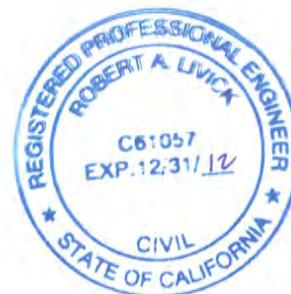
This report was prepared by, or under the direction of the following Professional Engineer in accordance with the provisions of Section 6700 of the Business and Professions Code of the State of California.

Civil Engineer:


_____ 3/26/2012

Rob Livick, PE/PLS
C 61057 exp. 12/31/2012

Date



Purpose

The City of Morro Bay received requests for installations of stop signs at the intersection of Fresno Avenue and Marina Street. Currently, there are no stop signs at this intersection. The first step in the stop sign petition process is for the City Engineer to evaluate whether or not this location meets specific traffic warrants. If some or all of these warrants are met, the City Engineer may approve the installation of traffic control devices at this intersection. However, if these warrants are not met, residents in the area may sign a petition and submit it to the Department of Public Services. The objective of this report is to evaluate the traffic conditions at this intersection of Fresno Avenue and Marina Street. If the warrants are met, then the installation of stop signs in this area will be justified. It is expected with Morro Bay's low vehicular traffic and population that most, if not all, of the warrants will not be met. If this is the case, other options will be explored.

Background



Figure 1: Study Location

The study area is located in the southeastern part of Morro Bay, as can be seen in Figure 1. The surrounding area is a quiet residential neighborhood. Fresno Avenue services vehicles travelling to and from Morro Bay Boulevard or to and from Highway 1. Marina Street leads to the downtown and waterfront areas. Currently, this intersection is a blind, uncontrolled intersection.

This area has been known to have low volumes of traffic throughout the day, and therefore the intersection has not needed stop signs thus far. However, the City of Morro Bay has received complaints that this intersection is dangerous, and a perceived speeding problem is present. Throughout the years, there have been a few crashes at these

intersections. Due to the safety concerns brought forth by a few citizens, a traffic study was conducted between February 22nd and March 9th of 2012.

Method of Study

The California Manual on Uniform Traffic Control Devices (MUTCD) details eight different warrants or criteria for the installation of traffic signals. It is not necessary that all eight of these be met for the signals to be approved. The warrants are listed below:

Warrant 1: Eight-Hour Vehicular Volume

Warrant 2: Four-Hour Vehicular Volume

Warrant 3: Peak Hour

Warrant 4: Pedestrian Volume

Warrant 5: School Crossing

Warrant 6: Coordinated Signal System

Warrant 7: Crash Experience

Warrant 8: Roadway Network

Each warrant has specific conditions and standards that must be met, and these are discussed thoroughly in the California MUTCD. Therefore; this report will contain only relevantly specific details.

The first four warrants are concerned primarily with volumes. For the first warrant to be met, conditions for volume must be met for at least eight hours. There are two conditions—

Condition A is for minimum vehicular

volume, and Condition B is for the interruption of continuous traffic—both of these conditions need inputs of the number of lanes of the intersecting streets and the volume, in vehicles per hour, of both

Condition A—Minimum Vehicular Volume									
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1.....	1.....	500	400	350	280	150	120	105	84
2 or more...	1.....	600	480	420	336	150	120	105	84
2 or more...	2 or more...	600	480	420	336	200	160	140	112
1.....	2 or more...	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic									
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1.....	1.....	750	600	525	420	75	60	53	42
2 or more...	1.....	900	720	630	504	75	60	53	42
2 or more...	2 or more...	900	720	630	504	100	80	70	56
1.....	2 or more...	750	600	525	420	100	80	70	56

Figure 2: Warrant 1, Eight-Hour Vehicular Volume

the major and minor street. Either Condition A or Condition B must be satisfied at 100%, or both must be satisfied at 80%, and these specific volumes are given in the MUTCD and are shown in Figure 2.

Warrant 2 is similar to the first one, but it only requires four hours of volume to meet certain standards. The data needed for this warrant are the same as for Warrant 1: the number of lanes of the two streets and the volumes (veh/hr) of both the major and minor streets. This warrant is met if for any four hours of an average day, their volumes plot above the applicable curve given in the MUTCD and shown in Figure 3.

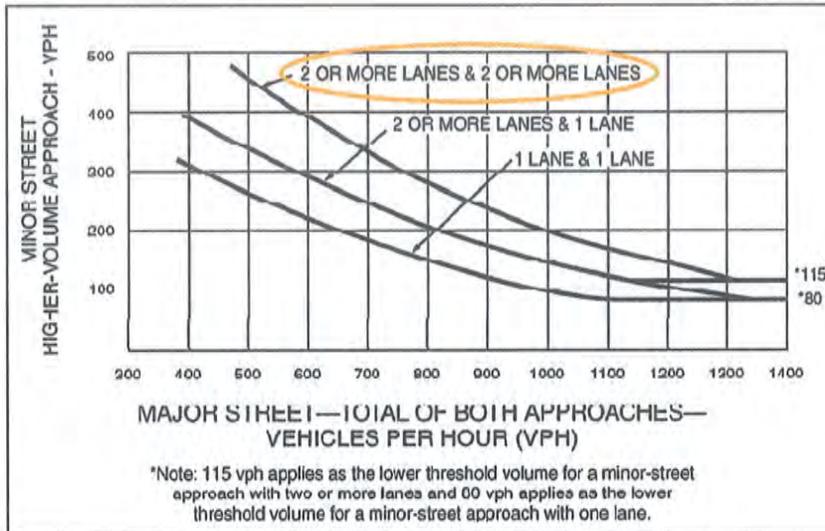


Figure 3: Warrant 2, Four-Hour Vehicular Volume

The third warrant is similar to the first two, except it focuses on the study area for a specific hour. This warrant is typically used when traffic conditions peak at a specific hour, causing excess delay to the minor street vehicles. Similar to Warrant 2, the Peak Hour Warrant requires at least one hour to plot above the given curve. The variables are the same, but the standard is higher for one hour than it was

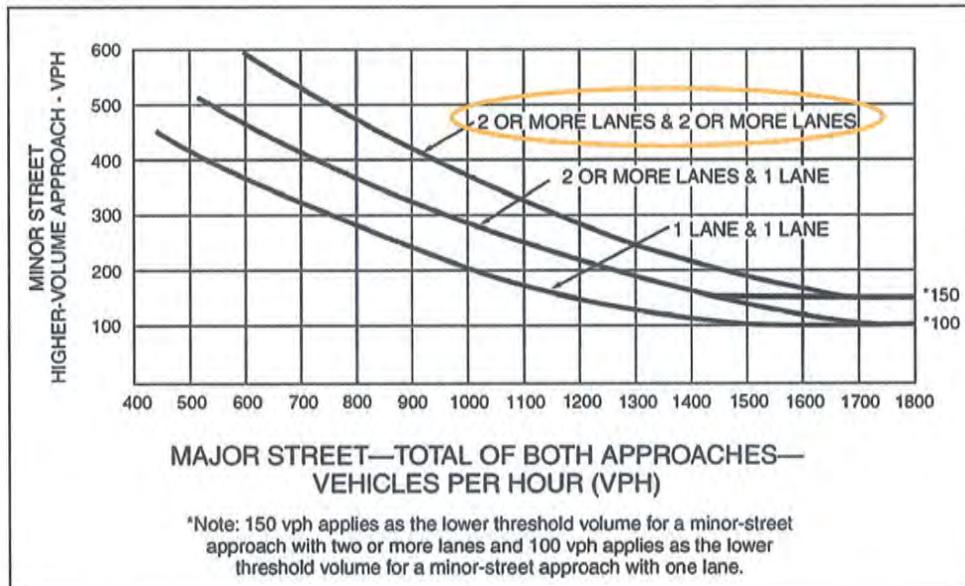


Figure 4: Warrant 3, Peak Hour

for four or eight. The peak hour curve can be seen in Figure 4.

Warrant 4 is the Pedestrian Volume Warrant. This warrant is typically considered when the volume on the major street prevents pedestrians from crossing the street comfortably. This warrant is met if

both of the following conditions from the MUTCD are met. First, the pedestrian volume crossing the major street at an intersection or midblock location during an average day is 100 or more for each of any

4 hours or 190 or more during any 1 hour. The second condition is met if *there are fewer than 60 gaps per hour in the traffic stream of adequate length to allow pedestrians to cross during the same period when the pedestrian volume criterion is satisfied.* In addition to these specific conditions, unless it does not interfere with progressive traffic flow, this warrant should not be applied if there is a traffic control signal located within 300 ft of the proposed location. Another important piece to note is that the MUTCD states that *the criterion for the pedestrian volume crossing the major roadway may be reduced as much as 50 percent if the average crossing speed of pedestrians is less than 1.2 m/sec (4 ft/sec).* This exception is most likely applicable in Morro Bay, since the city has a high population of elderly citizens.

Warrant 5 is for School Crossings, and is applied in cases where there are a significant number of school children crossing the street. For this warrant to be applied, there must be a minimum of 20 students crossing at the highest crossing hour, and there must be an insufficiency in crossing gaps. In addition to these, unless it does not interfere with progressive traffic flow, this warrant should not be applied if there is a traffic control signal located within 300 ft of the proposed location. Also, if this warrant is met, other options should be explored first: warning signs, school speed zones, and school crossing guards.

The sixth warrant is for a Coordinated Signal System. This warrant is applied when there are other traffic signals nearby, and an additional signal is needed to maintain proper platooning of vehicles and facilitate progressive traffic flow. This warrant should not be applied when the resultant spacing of signals would be less than 1,000 feet.

Warrant 7 deals with Crash Experience at the location of interest. There must be records of crashes at the intersection, and other alternatives must have been tested before the installation of a signal is to be considered. In a 12 month period, there must have been at least 5 recorded injury-related or property-damaging crashes at the intersection that could have been avoided with a traffic signal. Also, certain conditions from Warrant 1 and 4 must also be met—relating vehicular and pedestrian volume to crash experience.

Warrant 8 is called the Roadway Network Warrant, and this warrant would be used in conditions that would encourage drivers to use particular routes—channeling vehicles onto main routes, rather than causing congestion on local, minor roads. This warrant can be used with current or projected vehicular volumes, if there are plans for new development.

Results of Study

From Wednesday, February 22nd through Friday, March 9th, a traffic study was conducted at the intersection of Fresno Avenue and Marina Street. Vehicular volume data was collected; pedestrian behavior was observed; and crash history was researched. With this information, an analysis was completed on whether or not the signal warrants could be met for this area.

The first three warrants, as described earlier, are related to hourly vehicular volume. Volume counts were done on Marina Street, just west of its intersection with Fresno Avenue. These data can be seen in Table 1. Similarly, volume counts were done on Fresno Avenue, just north of its intersection with Marina Street. These data can be seen in Table 2. As can be seen, these streets have comparable volumes, but Fresno's are slightly higher. However, even though Fresno is the major street, the peak volume of traffic on it during any one hour was only 26 veh/ hr.

Table 1: Hourly Volume Data (Wednesday-Tuesday) for Marina Street

Start Time	22-Feb-12 WB-EB	23-Feb-12 WB-EB	24-Feb-12 WB-EB	25-Feb-12 WB-EB	26-Feb-12 WB-EB	27-Feb-12 WB-EB	28-Feb-12 WB-EB
12:00 AM	*	1	0	0	0	1	0
01:00	*	0	1	0	0	0	0
02:00	*	0	4	0	1	3	2
03:00	*	5	0	4	3	0	0
04:00	*	0	0	0	0	0	0
05:00	*	1	0	0	2	0	2
06:00	*	3	2	1	0	2	1
07:00	*	3	6	0	3	3	1
08:00	*	4	7	2	5	5	4
09:00	*	14	14	24	9	8	12
10:00	*	12	16	17	12	11	16
11:00	*	13	10	21	7	12	6
12:00 PM	16	7	7	17	7	11	11
01:00	11	16	18	11	18	9	14
02:00	9	10	10	13	5	10	10
03:00	15	7	11	9	4	9	5
04:00	13	10	7	13	9	12	14
05:00	8	11	6	4	3	3	8
06:00	8	6	9	3	7	4	8
07:00	11	4	6	2	2	4	1
08:00	5	6	1	3	1	6	6
09:00	0	1	3	1	0	1	1
10:00	0	0	3	2	1	1	1
11:00	0	0	1	1	0	0	0

Table 2: Hourly Volume Data (Friday-Thursday) for Fresno Avenue

Start Time	02-Mar-12 SB-NB	03-Mar-12 SB-NB	04-Mar-12 SB-NB	05-Mar-12 SB-NB	06-Mar-12 SB-NB	07-Mar-12 SB-NB	08-Mar-12 SB-NB
12:00 AM	*	0	0	0	0	0	0
01:00	*	0	0	1	1	1	1
02:00	*	0	1	0	0	0	0
03:00	*	0	0	0	0	0	0
04:00	*	3	1	4	5	2	5
05:00	*	4	3	3	5	4	3
06:00	*	4	3	3	4	7	5
07:00	*	8	1	8	12	7	7
08:00	*	14	5	15	20	11	9
09:00	*	9	13	13	10	11	12
10:00	*	13	12	16	19	12	9
11:00	*	23	17	14	9	12	8
12:00 PM	12	12	21	13	12	11	17
01:00	*	10	14	10	16	15	16
02:00	*	21	20	15	10	16	18
03:00	*	16	12	14	26	21	15
04:00	21	12	9	20	18	11	18
05:00	13	10	13	17	18	11	11
06:00	13	13	10	9	12	9	8
07:00	10	5	2	5	4	4	9
08:00	7	1	0	4	3	2	1
09:00	4	6	1	6	3	6	11
10:00	2	6	1	0	1	1	2
11:00	1	2	1	0	0	2	0

For Warrant 1 to be met, it is necessary to have a major street hourly volume of at least 480 veh/hr to even be considered, and this volume would have to be present for at least eight hours of an average day. Similarly, to meet Warrant 2, four points would have to plot above the given curve. The lowest major street volume shown on the graph is 300 veh/hr, and for that to be met, the minor street would have to exhibit an hourly volume of well over 500 veh/hr. Warrant 3 is the Peak Hour Warrant, and the standards are even higher. As can be seen in Figure 4, the minimum major street volume displayed is 400 veh/hr. On Fresno Street, the highest hourly volume recorded was only 26 veh/hr, and the highest hourly volume on Marina Street was only 24 veh/hr; therefore, the first three warrants on vehicular volume fail to be met by a significant margin for both intersections.

The intersection of Marina Street with Fresno Avenue exhibits very low pedestrian activity; therefore, the hourly volumes do not approach 100 ped/hr. For Warrant 4 to be met, the pedestrian volume must be at least 100 ped/hr for at least 4 hours or over 190 ped/hr for at least one hour during an average day. Clearly, this warrant is not met for this area.

Warrant 5 and 6 are not applicable for this study location, as there are no schools or traffic signals located in close proximity.

Warrant 7 has to do with Crash Accident Experience in the area. After looking at records for the past five years (2007-2011), it was found that there have been four reported crashes within the past five years at the intersection of Marina and Fresno: one in 2010, one in 2009, one in 2008, and one in 2007. The first requirement with respect to this warrant calls for *five or more crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash*. Since there was only one crash within a 12 month period, this requirement is not satisfied. There is a second requirement for this warrant; however, *both* requirements must be met to meet the warrant. Furthermore, this second requirement states that one condition of either warrant 1 or 4 must be satisfied at 80%. The intersection of Fresno Avenue and Marina Street does not meet these conditions either. Therefore, Warrant 7 is not satisfied.

Warrant 8 states that the intersection must have *a total existing or immediately projected entering volume of at least 1,000 vehicles per hour* during the peak hour or during 5 weekend hours. It is not evident that this intersection has such volumes, nor are there any projections for such an increase.

Conclusions and Recommendations

Through this warrant analysis, it was found that all eight of the warrants are not met at the intersection of Marina Street with Fresno Avenue, as expected. The vehicular and pedestrian volumes in the area are too low to meet the requirements given in the MUTCD for the first four warrants. In addition, with the low crash experience and absence of local schools and traffic control signals, warrants 5, 6, and 7 are not met. Warrant 8 is not applicable either, due to low volumes. Since none of the warrants are met, it seems unnecessary, by the standards brought forth in the MUTCD, to install stop signs at Fresno and Marina.

In addition to collecting data on vehicular volumes, the traffic count also collected data on vehicle speeds on Fresno Avenue and Marina Street. The average speeds were 14 mi/hr and 13 mi/hr, respectively, which is within the speed of unmarked intersections of 15 mph; therefore, it does not appear that speeding is the cause of unsafe driver behavior. Sight distances at the intersections are limited on certain approaches, as can be seen in the photos on the cover page. Yield signs, rather than stop signs, may be more appropriate at this intersection. The Department will periodically evaluate this intersection's accident history to determine if a change in conditions warrants a traffic control device installation.

As has been shown through this report, stop signs are not warranted in this area. However, if it is still the desire of the community, they may petition City Council for the installation of these stop signs. For more information, see the Municipal Code 10.16.010, Subsection C.

Appendix

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Pacific Street

Start Time	02-Mar-12 SB-NB	03-Mar-12 SB-NB	04-Mar-12 SB-NB	05-Mar-12 SB-NB	06-Mar-12 SB-NB	07-Mar-12 SB-NB	08-Mar-12 SB-NB
12:00 AM	*	0	0	0	0	0	0
01:00	*	0	0	1	1	1	1
02:00	*	0	1	0	0	0	0
03:00	*	0	0	0	0	0	0
04:00	*	3	1	4	5	2	5
05:00	*	4	3	3	5	4	3
06:00	*	4	3	3	4	7	5
07:00	*	8	1	8	12	7	7
08:00	*	14	5	15	20	11	9
09:00	*	9	13	13	10	11	12
10:00	*	13	12	16	19	12	9
11:00	*	23	17	14	9	12	8
12:00 PM	*	12	21	13	12	11	17
01:00	*	10	14	10	16	15	16
02:00	*	21	20	15	10	16	18
03:00	*	16	12	14	26	21	15
04:00	21	12	9	20	18	11	18
05:00	13	10	13	17	18	11	11
06:00	13	13	10	9	12	9	8
07:00	10	5	2	5	4	4	9
08:00	7	1	0	4	3	2	1
09:00	4	6	1	6	3	6	11
10:00	2	6	1	0	1	1	2
11:00	1	2	1	0	0	2	0
Total	71	192	160	190	208	176	185
AM Peak		11:00	11:00	10:00	08:00	10:00	09:00
Vol.		23	17	16	20	12	12
PM Peak	16:00	14:00	12:00	16:00	15:00	15:00	14:00
Vol.	21	21	21	20	26	21	18

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

Start Time	09-Mar-12 SB-NB	10-Mar-12 SB-NB	11-Mar-12 SB-NB	12-Mar-12 SB-NB	13-Mar-12 SB-NB	14-Mar-12 SB-NB	15-Mar-12 SB-NB
12:00 AM	2	*	*	*	*	*	*
01:00	0	*	*	*	*	*	*
02:00	1	*	*	*	*	*	*
03:00	0	*	*	*	*	*	*
04:00	3	*	*	*	*	*	*
05:00	3	*	*	*	*	*	*
06:00	5	*	*	*	*	*	*
07:00	16	*	*	*	*	*	*
08:00	18	*	*	*	*	*	*
09:00	11	*	*	*	*	*	*
10:00	16	*	*	*	*	*	*
11:00	15	*	*	*	*	*	*
12:00 PM	10	*	*	*	*	*	*
01:00	13	*	*	*	*	*	*
02:00	15	*	*	*	*	*	*
03:00	15	*	*	*	*	*	*
04:00	0	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*
Total	143	0	0	0	0	0	0
AM Peak	08:00						
Vol.	18						
PM Peak	14:00						
Vol.	15						

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED

Report for 3/2/2012 3:58:00 PM to Midnight

Vehicles	Peak Periods	
	AM	PM
60	Time Count PHF	04:15 16 0.667

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	1	47	6	0	1	1	0	0	0	0	0	0	0	4
Percent	1.7	78.3	10.0	0.0	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	1	0	0	0	0	1	0	0	0	0	1	1	0	51
Percent	1.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.8	1.8	0.0	92.7

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	45	14	1	0	0	0	0	0	0	0	0	0	0	0
Percent	75.0	23.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	15	1	0	0	0	0	0	0	0	0	0	0	0	0
Percent	25.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	5	7	7	11	12	13	18	19	20

Average (Mean) 12

Pace Speed 7-16
Number in Pace 44
Percent in Pace 73.3

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	107.1	96.8	121.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.10

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED

Report for Saturday, March 03, 2012

Vehicles	Peak Periods	
	AM	PM
150	Time 11:00	Time 02:30
	Count 19	Count 16
	PHF 0.679	PHF 0.667

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	12	101	26	0	7	1	0	0	0	0	0	0	0	3
Percent	8.0	67.3	17.3	0.0	4.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	4	1	0	2	0	0	1	0	1	1	2	0	0	119
Percent	3.1	0.8	0.0	1.5	0.0	0.0	0.8	0.0	0.8	0.8	1.5	0.0	0.0	90.8

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	89	47	14	0	0	0	0	0	0	0	0	0	0	0
Percent	59.3	31.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	61	14	0	0	0	0	0	0	0	0	0	0	0	0
Percent	40.7	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	50%	55%	85%	90%	95%
Speed	6	8	8	14	15	19	20	21

Average (Mean) 14

Pace Speed 8-17
Number in Pace 102
Percent in Pace 68.0

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	105.9	137.0	0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.05

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
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Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED

Report for Sunday, March 04, 2012

Vehicles	Peak Periods	
	AM	PM
126	Time 11:30 Count 14 PHF 0.700	Time 01:45 Count 19 PHF 0.679

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	7	85	18	0	9	1	0	0	0	0	0	0	0	6
Percent	5.6	67.5	14.3	0.0	7.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	2	3	0	0	0	1	0	0	1	0	1	0	0	103
Percent	1.8	2.7	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	0.9	0.0	0.0	92.8

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-999
Count	85	30	8	3	0	0	0	0	0	0	0	0	0	0
Percent	67.5	23.8	6.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	41	11	3	0	0	0	0	0	0	0	0	0	0	0
Percent	32.5	8.7	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%					
Speed	5	5	6	6	13	13	14	18	20	22				

Average (Mean) 13

Pace Speed 8-17
Number in Pace 77
Percent in Pace 61.1

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	110.9	91.5	123.0	0	0	0	0	0	0	0	0
Axles Per Vehicle	2.10										

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
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Closest Cross Street: Pacific Street

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

COMBINED

Report for Monday, March 05, 2012

Vehicles	Peak Periods			
	AM	PM	Time	Count
148	14	17	10:15	04:45
	PHF	PHF		
	0.875	0.850		

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	7	105	16	0	10	2	0	0	0	0	0	0	0	8
Percent	4.7	70.9	10.8	0.0	6.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	2	1	0	2	1	0	1	0	1	1	3	0	0	120
Percent	1.5	0.8	0.0	1.5	0.8	0.0	0.8	0.0	0.8	0.8	2.3	0.0	0.0	90.9

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	96	28	19	5	0	0	0	0	0	0	0	0	0	0
Percent	64.9	18.9	12.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	52	24	5	0	0	0	0	0	0	0	0	0	0	0
Percent	35.1	16.2	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	55%	85%	90%	95%
Speed	6	7	8	13	14	21	22	25

Average (Mean) 14

Pace Speed 8-17
Number in Pace 96
Percent in Pace 64.9

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	109.0	77.3	118.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.09

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED

Report for Tuesday, March 06, 2012

Vehicles	Peak Periods			
	AM	PM	AM	PM
154	Time	07:45	03:15	
	Count	17	18	
	PHF	0.607	0.750	

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	2 Axle Tire	Buses	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	16	93	25	16	0	2	0	0	0	0	0	0	0	2
Percent	10.4	60.4	16.2	10.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	4	1	2	3	2	1	0	0	2	2	0	0	0	122
Percent	2.9	0.7	1.4	2.2	1.4	0.7	0.0	0.0	1.4	1.4	0.0	0.0	0.0	87.8

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	96	46	11	1	0	0	0	0	0	0	0	0	0	0
Percent	62.3	29.9	7.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	58	12	1	0	0	0	0	0	0	0	0	0	0	0
Percent	37.7	7.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile	5%	10%	15%	50%	55%	85%	90%	95%						
Speed	6	7	8	14	14	18	20	22						

Average (Mean) 14

Pace Speed 9-18
Number in Pace 107
Percent in Pace 69.5

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	108.7	118.8	125.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.05

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED

Report for Wednesday, March 07, 2012

Vehicles	Peak Periods			
	AM		PM	
132	Time	10:15	Time	03:15
	Count	11	Count	14
	PHF	0.688	PHF	0.583

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	4	95	18	1	11	0	0	0	0	0	0	0	0	3
Percent	3.0	72.0	13.6	0.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	0	1	0	1	1	1	1	1	0	1	0	0	1	112
Percent	0.0	0.8	0.0	0.8	0.8	0.8	0.8	0.8	0.0	0.8	0.0	0.0	0.8	93.3

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	79	38	14	1	0	0	0	0	0	0	0	0	0	0
Percent	59.8	28.8	10.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	53	15	1	0	0	0	0	0	0	0	0	0	0	0
Percent	40.2	11.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	7	8	9	14	15	15	20	21	22

Average (Mean) 15

Pace Speed 8-17
Number in Pace 89
Percent in Pace 67.4

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	112.1	153.8	119.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.05

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED

Report for Thursday, March 08, 2012

Vehicles	Peak Periods	
	AM	PM
151	Time 11:30 Count 16 PHF 0.667	Time 01:30 Count 18 PHF 0.643

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	4	104	24	0	12	1	0	0	0	0	0	0	0	6
Percent	2.6	68.9	15.9	0.0	7.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	0	0	1	1	2	1	3	1	0	0	1	4	1	117
Percent	0.0	0.0	0.8	0.8	1.5	0.8	2.3	0.8	0.0	0.0	0.8	3.0	0.8	88.6

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	91	38	14	8	0	0	0	0	0	0	0	0	0	0
Percent	60.3	25.2	9.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	60	22	8	0	0	0	0	0	0	0	0	0	0	0
Percent	39.7	14.6	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
Speed	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	25

Average (Mean) 15

Pace Speed 7-16

Number in Pace 94

Percent in Pace 62.3

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	112.7	98.0	212.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.08

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

Closest Cross Street: Pacific Street

COMBINED
Report for Friday, March 09, 2012, Midnight to 04:12 PM

Vehicles	Peak Periods	
	AM	PM
115	Time 10:30 Count 18 PHF 0.750	Time 01:00 Count 14 PHF 0.700

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	5	74	17	0	12	3	0	0	0	0	0	0	0	4
Percent	4.3	64.3	14.8	0.0	10.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	3	0	1	0	0	1	0	0	1	0	1	4	1	91
Percent	2.9	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	3.9	1.0	88.3

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	73	33	6	3	0	0	0	0	0	0	0	0	0	0
Percent	63.5	28.7	5.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	42	9	3	0	0	0	0	0	0	0	0	0	0	0
Percent	36.5	7.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	7	9	13	14	14	18	19	22

Average (Mean) 14

Pace Speed 9-18
Number in Pace 84
Percent in Pace 73.0

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	110.8	180.8	345.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.09

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Pacific Street

Fresno at Marina
Friday - Friday
Installed by Barry & Sarah

COMBINED

Report for Report From 3/2/2012 3:58:00 PM to 3/9/2012 4:12:15 PM

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	No Class
Count	56	704	150	1	78	11	0	0	0	0	0	0	0	36
Percent	5.4	68.0	14.5	0.1	7.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	16	7	4	9	6	6	6	2	6	5	9	9	3	835
Percent	1.7	0.8	0.4	1.0	0.7	0.7	0.7	0.2	0.7	0.5	1.0	1.0	0.3	90.5

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	654	274	87	21	0	0	0	0	0	0	0	0	0	0
Percent	63.1	26.4	8.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	382	108	21	0	0	0	0	0	0	0	0	0	0	0
Percent	36.9	10.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	7	8	13	14	14	19	21	23

Average (Mean) 14

Pace Speed 8-17

Number in Pace 682

Percent in Pace 65.8

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	109.8	115.5	181.1	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.07

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Bernardo Ave.

Start Time	22-Feb-12 WB-EB	23-Feb-12 WB-EB	24-Feb-12 WB-EB	25-Feb-12 WB-EB	26-Feb-12 WB-EB	27-Feb-12 WB-EB	28-Feb-12 WB-EB
12:00 AM	*	1	0	0	0	1	0
01:00	*	0	1	0	0	0	0
02:00	*	0	4	0	1	3	2
03:00	*	5	0	4	3	0	0
04:00	*	0	0	0	0	0	0
05:00	*	1	0	0	2	0	2
06:00	*	3	2	1	0	2	1
07:00	*	3	6	0	3	3	1
08:00	*	4	7	2	5	5	4
09:00	*	14	14	24	9	8	12
10:00	*	12	16	17	12	11	16
11:00	*	13	10	21	7	12	6
12:00 PM	16	7	7	17	7	11	11
01:00	11	16	18	11	18	9	14
02:00	9	10	10	13	5	10	10
03:00	15	7	11	9	4	9	5
04:00	13	10	7	13	9	12	14
05:00	8	11	6	4	3	3	8
06:00	8	6	9	3	7	4	8
07:00	11	4	6	2	2	4	1
08:00	5	6	1	3	1	6	6
09:00	0	1	3	1	0	1	1
10:00	0	0	3	2	1	1	1
11:00	0	0	1	1	0	0	0
Total	96	134	142	148	99	115	123
AM Peak		09:00	10:00	09:00	10:00	11:00	10:00
Vol.		14	16	24	12	12	16
PM Peak	12:00	13:00	13:00	12:00	13:00	16:00	13:00
Vol.	16	16	18	17	18	12	14

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Bernardo Ave.

Start Time	29-Feb-12 WB-EB	01-Mar-12 WB-EB	02-Mar-12 WB-EB	03-Mar-12 WB-EB	04-Mar-12 WB-EB	05-Mar-12 WB-EB	06-Mar-12 WB-EB
12:00 AM	0	0	0	*	*	*	*
01:00	0	0	0	*	*	*	*
02:00	0	0	1	*	*	*	*
03:00	4	4	5	*	*	*	*
04:00	0	0	0	*	*	*	*
05:00	2	2	2	*	*	*	*
06:00	2	4	5	*	*	*	*
07:00	5	2	6	*	*	*	*
08:00	3	4	9	*	*	*	*
09:00	10	11	9	*	*	*	*
10:00	11	12	8	*	*	*	*
11:00	10	11	16	*	*	*	*
12:00 PM	6	17	13	*	*	*	*
01:00	8	14	17	*	*	*	*
02:00	7	9	22	*	*	*	*
03:00	17	4	6	*	*	*	*
04:00	11	11	*	*	*	*	*
05:00	10	7	*	*	*	*	*
06:00	10	14	*	*	*	*	*
07:00	8	3	*	*	*	*	*
08:00	4	1	*	*	*	*	*
09:00	1	3	*	*	*	*	*
10:00	1	0	*	*	*	*	*
11:00	0	0	*	*	*	*	*
Total	130	133	119	0	0	0	0
<hr/>							
AM Peak	10:00	10:00	11:00				
Vol.	11	12	16				
<hr/>							
PM Peak	15:00	12:00	14:00				
Vol.	17	17	22				

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for 2/22/2012 11:56:00 AM to Midnight

Vehicles	Peak Periods	
	AM	PM
61	Time 11:30	Time 01:00
	Count 5	Count 11
	PHF 0.417	PHF 0.458

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	3	42	13	0	2	0	0	0	0	0	0	0	0	1
Percent	4.9	68.9	21.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	0	0	0	0	0	0	1	0	1	0	0	0	0	53
Percent	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.8	0.0	0.0	0.0	0.0	96.4

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	36	17	7	1	0	0	0	0	0	0	0	0	0	0
Percent	59.0	27.9	11.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	25	8	1	0	0	0	0	0	0	0	0	0	0	0
Percent	41.0	13.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	8	8	14	15	15	19	22	23

Average (Mean) 14

Pace Speed 8-17

Number in Pace 41

Percent in Pace 67.2

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	110.8	16.0	0	0	0	0	0	0	0	0	0
Axles Per Vehicle	2.02										

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Thursday, February 23, 2012

Vehicles	Peak Periods	
	AM	PM
87	09:00 Count 13 PHF 0.813	01:30 Count 12 PHF 0.333

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	6	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	6	58	16	1	4	0	0	0	0	0	0	0	0	0	2
Percent	6.9	66.7	18.4	1.1	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	3	0	0	0	0	2	0	0	0	0	0	0	0	63
Percent	4.4	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	92.6

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	63	15	6	3	0	0	0	0	0	0	0	0	0	0
Percent	72.4	17.2	6.9	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	24	9	3	0	0	0	0	0	0	0	0	0	0	0
Percent	27.6	10.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	7	7	12	13	13	19	20	22

Average (Mean) 13

Pace Speed 6-15

Number in Pace 60

Percent in Pace 69.0

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	108.6	121.6	0	0	0	0	0	0	0	0	0
Axles Per Vehicle	2.06										

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damanis & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Friday, February 24, 2012

Vehicles	Peak Periods	
	AM	PM
80	09:45 Count 10 PHF 0.625	01:15 Count 10 PHF 0.625

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	13	51	11	0	1	1	0	0	0	0	0	0	0	3
Percent	16.3	63.8	13.8	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	3	0	1	0	0	0	0	0	0	1	0	1	0	51
Percent	5.3	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.8	0.0	89.5

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	68	7	1	4	0	0	0	0	0	0	0	0	0	0
Percent	85.0	8.8	1.3	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	12	5	4	0	0	0	0	0	0	0	0	0	0	0
Percent	15.0	6.3	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	55%	85%	90%	95%
Speed	6	6	8	11	12	15	17	23

Average (Mean) 13

Pace Speed 6-15
Number in Pace 66
Percent in Pace 82.5

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	99.1	139.5	211.3	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.13

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Saturday, February 25, 2012

Vehicles	Peak Periods	
	AM	PM
66	Time 10:15 Count 13 PHF 0.813	Time 01:30 Count 8 PHF 0.667

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	7	43	10	0	4	0	0	0	0	0	0	0	0	2
Percent	10.6	65.2	15.2	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	1	0	0	1	3	1	0	0	1	1	1	1	0	37
Percent	2.1	0.0	0.0	2.1	6.4	2.1	0.0	0.0	2.1	2.1	2.1	2.1	0.0	78.7

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	52	4	7	1	2	0	0	0	0	0	0	0	0	0
Percent	78.8	6.1	10.6	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	14	10	3	2	0	0	0	0	0	0	0	0	0	0
Percent	21.2	15.2	4.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	5	6	6	10	10	11	19	22	25

Average (Mean) 12

Pace Speed 5-14
Number in Pace 50
Percent in Pace 75.8

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	105.8	77.7	114.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.08

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Bernardo Ave.

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

COMBINED

Report for Sunday, February 26, 2012

Vehicles	Peak Periods	
	AM	PM
46	Time Count PHF	04:15 6 0.750

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	3	30	11	0	0	0	0	0	0	0	0	0	0	2
Percent	6.5	65.2	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	0	0	1	0	0	0	0	0	0	0	0	0	0	25
Percent	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96.2

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	32	9	5	0	0	0	0	0	0	0	0	0	0	0
Percent	69.6	19.6	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	14	5	0	0	0	0	0	0	0	0	0	0	0	0
Percent	30.4	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	8	9	13	14	14	20	20	23

Average (Mean) 14

Pace Speed 6-15
Number in Pace 32
Percent in Pace 69.6

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	105.7	76.3	0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.07

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Bernardo Ave.

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

COMBINED

Report for Monday, February 27, 2012

Vehicles	Peak Periods	
	AM	PM
71	Time Count PHF	Time Count PHF
	11:30 8 0.500	12:00 9 0.563

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	6	35	20	0	2	0	0	0	0	0	0	0	0	8
Percent	8.5	49.3	28.2	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	3	0	1	0	0	1	0	0	0	0	0	0	1	42
Percent	6.3	0.0	2.1	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1	87.5

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	54	12	4	1	0	0	0	0	0	0	0	0	0	0
Percent	76.1	16.9	5.6	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	17	5	1	0	0	0	0	0	0	0	0	0	0	0
Percent	23.9	7.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	5	6	8	11	11	12	18	20	21

Average (Mean) 12

Pace Speed 5-14
Number in Pace 52
Percent in Pace 73.2

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	112.5	62.6	111.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.18

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Tuesday, February 28, 2012

Vehicles	Peak Periods	
	AM	PM
73	Time Count PHF	09:00 11 0.688
		01:15 10 0.500

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	5	47	13	0	5	0	0	0	0	0	0	0	0	3
Percent	6.8	64.4	17.8	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	1	1	1	1	0	0	0	0	0	1	0	0	1	45
Percent	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	88.2

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	53	16	2	2	0	0	0	0	0	0	0	0	0	0
Percent	72.6	21.9	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	20	4	2	0	0	0	0	0	0	0	0	0	0	0
Percent	27.4	5.5	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
Speed	5	6	7	7	12	13	13	13	18	19	19	20	20	20	20	20	20	20	20

Average (Mean) 13

Pace Speed 6-15
Number in Pace 49
Percent in Pace 67.1

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	111.8	110.3	121.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.11

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Wednesday, February 29, 2012

Vehicles	Peak Periods	
	AM	PM
77	Time 10:45 Count 10 PHF 0.625	Time 03:00 Count 10 PHF 0.500

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	No Class
Count	13	41	13	1	3	1	0	0	0	0	0	0	0	5
Percent	16.9	53.2	16.9	1.3	3.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	1	0	0	0	0	1	0	0	0	0	0	0	0	55
Percent	1.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96.5

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	59	11	6	0	1	0	0	0	0	0	0	0	0	0
Percent	76.6	14.3	7.8	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	18	7	1	1	0	0	0	0	0	0	0	0	0	0
Percent	23.4	9.1	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	55%	85%	90%	95%
Speed	6	7	8	11	12	16	18	23

Average (Mean) 12

Pace Speed 7-16
Number in Pace 61
Percent in Pace 79.2

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	106.5	91.1	110.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.14

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Thursday, March 01, 2012

Vehicles	Peak Periods	
	AM	PM
76	Time Count PHF	10:45 8 0.667
		05:45 11 0.688

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	4	45	16	0	5	0	0	0	0	0	0	0	0	6
Percent	5.3	59.2	21.1	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	0	1	1	1	0	0	0	0	0	0	0	0	0	52
Percent	0.0	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.5

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	56	17	3	0	0	0	0	0	0	0	0	0	0	0
Percent	73.7	22.4	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	20	3	0	0	0	0	0	0	0	0	0	0	0	0
Percent	26.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%
Speed	5	5	6	6	6	6	6	6	6	6	6	6	6	6
Average (Mean)	12	12	12	12	12	12	12	12	12	12	12	12	12	12

Average (Mean) 12

Pace Speed 8-17
Number in Pace 53
Percent in Pace 69.7

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	115.7	98.5	100.5	0	0	0	0	0	0	0	0
Axles Per Vehicle	2.16										

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Closest Cross Street: Bernardo Ave.

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

COMBINED
Report for Friday, March 02, 2012, Midnight to 03:41 PM

Vehicles	Peak Periods	
	AM	PM
58	Time 08:45 Count 8 PHF 0.667	Time 02:15 Count 14 PHF 0.700

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	9	25	17	0	2	0	0	0	0	0	0	0	0	5
Percent	15.5	43.1	29.3	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	2	0	0	2	0	1	1	0	0	1	0	0	0	36
Percent	4.7	0.0	0.0	4.7	0.0	2.3	2.3	0.0	0.0	2.3	0.0	0.0	0.0	83.7

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	43	7	6	2	0	0	0	0	0	0	0	0	0	0
Percent	74.1	12.1	10.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	15	8	2	0	0	0	0	0	0	0	0	0	0	0
Percent	25.9	13.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	7	8	12	13	13	18	21	22

Average (Mean) 13

Pace Speed 7-16
Number in Pace 42
Percent in Pace 72.4

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	106.8	104.8	122.0	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.19

City of Morro Bay
955 Shasta Avenue
Morro Bay CA 93442
(805) 772-6200

Marina at Fresno, West Side
Wednesday - Friday
Installed by: Damaris & Sarah

Closest Cross Street: Bernardo Ave.

COMBINED

Report for Report From 2/22/2012 11:56:00 AM to 3/2/2012 3:41:22 PM

CLASS STATISTICS - Modified Scheme F

Class	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	No Class
Count	69	417	140	2	28	2	0	0	0	0	0	0	0	37
Percent	9.9	60.0	20.1	0.3	4.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3

COMBINED GAP STATISTICS - 2 To 26+ by 2 Seconds

Seconds	2	4	6	8	10	12	14	16	18	20	22	24	26	28
Count	14	2	5	5	3	6	2	0	2	4	1	2	2	459
Percent	2.8	0.4	1.0	1.0	0.6	1.2	0.4	0.0	0.4	0.8	0.2	0.4	0.4	90.5

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	516	115	47	14	3	0	0	0	0	0	0	0	0	0
Percent	74.2	16.5	6.8	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	179	64	17	3	0	0	0	0	0	0	0	0	0	0
Percent	25.8	9.2	2.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	6	7	8	12	12	13	18	20	23

Average (Mean) 13

Pace Speed 6-15
Number in Pace 488
Percent in Pace 70.2

MISC. STATISTICS

Number of Axles	2	3	4	5	6	7	8	9	10	11	12
Avg. Wheelbase	108.3	95.6	134.2	0	0	0	0	0	0	0	0

Axles Per Vehicle 2.11