CITY OF MORRO BAY
PLANNING COMMISSION
AGENDA

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.

Regular Meeting - Wednesday, September 4, 2013
Veteran's Memorial Building - 6:00 P.M.
209 Surf Street, Morro Bay, CA

Chairperson Rick Grantham
Vice-Chairperson John Solu — Commissioner John Fennacy
Commissioner Michael Lucas — Commissioner Robert Tefft

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

PUBLIC COMMENT PERIOD
Members of the audience wishing to address the Commission on matters not on the agenda may do so at this time. In a continual attempt to make the public process open to members of the public, the City also invites public comment before each agenda item. Commission hearings often involve highly emotional issues. It is important that all participants conduct themselves with courtesy, dignity and respect. All persons who wish to present comments must observe the following rules to increase the effectiveness of the Public Comment Period:

- When recognized by the Chair, please come forward to the podium and state your name and address for the record. Commission 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 so keep your comments brief and to the point.
- All remarks shall be addressed to the Commission, as a whole, and not to any individual member thereof. Conversation or debate between a speaker at the podium and a member of the audience is not permitted.
- The Commission 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 Commission to carry out its meeting will not be permitted and offenders will be requested to leave the meeting.
- Your participation in Commission 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. There are devices for the hearing impaired available upon request at the staff's table.

PRESENTATIONS
Informational presentations are made to the Commission by individuals, groups or organizations, which are of a civic nature and relate to public planning issues that warrant a longer time than Public Comment will provide. Based on the presentation received, any Planning Commissioner may declare the matter as a future agenda item in accordance with the General Rules and Procedures. Presentations should normally be limited to 15-20 minutes.

A. CONSENT CALENDAR

A-1 Approval of minutes from Planning Commission meeting of August 21, 2013
Staff Recommendation: Approve minutes as submitted.

B. PUBLIC HEARINGS
Public testimony given for Public Hearing items will adhere to the rules noted above under the Public Comment Period. In addition, speak about the proposal and not about individuals, focusing testimony on the important parts of the proposal; not repeating points made by others.

B-1 **Public hearing continued from August 21, 2013.**
Case No.: Zoning Text Amendment #A00-015 (project originally noticed for a Public hearing on June 17, 2013 and subsequently continued to additional meetings).
Site Location: Citywide
Proposal: The City of Morro Bay is proposing a Municipal Code Amendment modifying Section 17.68 "Signs
CEQA Determination: To be determined.
Staff Recommendation: Review draft ordinance, take public testimony, and provide direction to staff.
Staff Contact: Erik Berg-Johansen, Planning Intern (805) 772-6291

C. UNFINISHED BUSINESS

C-1 Current and Advanced Planning Processing List
Staff Recommendation: Receive and file.
Upcoming Projects: To be determined.

D. NEW BUSINESS
None

E. DECLARATION OF FUTURE AGENDA ITEMS

F. ADJOURNMENT
Adjourn to the a next regularly scheduled Planning Commission meeting at the Veteran's Memorial Building, 209 Surf Street, on Wednesday, September 18, 2013, at 6:00 p.m.

PLANNING COMMISSION MEETING PROCEDURES
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.

Written testimony is encouraged so it can be distributed in the Agenda packet to the Commission. Material submitted by the public for Commission review prior to a scheduled hearing should be received by the Planning Division at the Public Services Department, 955 Shasta Avenue, no later than 5:00 P.M. the Tuesday (eight days) prior to the scheduled public hearing. Written testimony provided after the Agenda packet is published will be distributed to the Commission but there may not be enough time to fully consider the information. Mail should be directed to the Public Services Department, Planning Division.
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. Materials related to an item on this Agenda submitted to the Planning Commission after publication of the Agenda packet are available for inspection at the Public Services Department during normal business hours or at the scheduled meeting.

This Agenda may be found on the Internet at: www.morro-bay.ca.us/planningcommission or you can subscribe to Notify Me for email notification when the Agenda is posted on the City's website. To subscribe, go to www.morro-bay.ca.us/notifyme and follow the instructions.

The Brown Act forbids the Commission from taking action or discussing any item not appearing on the agenda, including those items raised at Public Comment. In response to Public Comment, the Commission is limited to:

1. Responding to statements made or questions posed by members of the public; or
2. Requesting staff to report back on a matter at a subsequent meeting; or
3. Directing staff to place the item on a future agenda. (Government Code Section 54954.2(a))

Commission meetings are conducted under the authority of the Chair who may modify the procedures outlined below. The Chair will announce each item. Thereafter, the hearing will be conducted as follows:

1. The Planning Division staff will present the staff report and recommendation on the proposal being heard and respond to questions from Commissioners.
2. The Chair will open the public hearing by first asking the project applicant/agent to present any points necessary for the Commission, as well as the public, to fully understand the proposal.
3. The Chair will then ask other interested persons to come to the podium to present testimony either in support of or in opposition to the proposal.
4. Finally, the Chair may invite the applicant/agent back to the podium to respond to the public testimony. Thereafter, the Chair will close the public testimony portion of the hearing and limit further discussion to the Commission and staff prior to the Commission taking action on a decision.

APPEALS

If you are dissatisfied with an approval or denial of a project, you have the right to appeal this decision to the City Council up to 10 calendar days after the date of action. Pursuant to Government Code §65009, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Commission, at, or prior to, the public hearing. The appeal form is available at the Public Services Department and on the City's web site. If legitimate coastal resource issues related to our Local Coastal Program are raised in the appeal, there is no fee if the subject property is located with the Coastal Appeal Area. If the property is located outside the Coastal Appeal Area, the fee is $250 flat fee. If a fee is required, the appeal will not be

considered complete if the fee is not paid. If the City decides in the appellant's favor then the fee will be refunded.

City Council decisions may also be appealed to the California Coastal Commission pursuant to the Coastal Act Section 30603 for those projects that are in their appeals jurisdiction. Exhaustion of appeals at the City is required prior to appealing the matter to the California Coastal Commission. The appeal to the City Council must be made to the City and the appeal to the California Coastal Commission must be made directly to the California Coastal Commission Office. These regulations provide the California Coastal Commission 10 working days following the expiration of the City appeal period to appeal the decision. This means that no construction permit shall be issued until both the City and Coastal Commission appeal period have expired without an appeal being filed. The Coastal Commission's Santa Cruz Office at (831) 427-4863 may be contacted for further information on appeal procedures.

AGENDA ITEM: A-1

DATE: September 4, 2013

ACTION:

SYNOPSIS MINUTES – MORRO BAY PLANNING COMMISSION
REGULAR MEETING – AUGUST 21, 2013
VETERANS MEMORIAL HALL – 6:00 P.M.

Chairperson Grantham called the meeting to order at 6:00 p.m.

PRESENT:	Rick Grantham	Chairperson
	John Solu	Vice-Chairperson
	John Fennacy	Commissioner
	Robert Tefft	Commissioner
ABSENT:	Michael Lucas	Commissioner
STAFF:	Rob Livick	Public Services Department
	Kathleen Wold	Planning Manager
	Cindy Jacinth	Associate Planner
	Erik Berg-Johansen	Planning Intern

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

PUBLIC COMMENT

Chairperson Grantham opened Public Comment period.

Garry Hixon, resident of Morro Bay, praised the Planning Commission for their good work.

Craig Schmidt, CEO of the Morro Bay Chamber of Commerce, announced the Avocado and Margarita Festival will take place on September 14-15.

Chairperson Grantham closed Public Comment period.

PRESENTATIONS – None.

Unless an item is pulled for separate action by the Planning Commission, the following actions are approved without discussion.

CONSENT CALENDAR

A-1 Approval of minutes from Planning Commission meeting of July 3 and July 17, 2013
Staff Recommendation: Approve minutes as submitted.

MOTION: Commissioner Fennacy moved to approve the minutes from the July 3, 2013 meeting.

Chairperson Grantham seconded and the motion passed. (4-0).

MOTION: Commissioner Fennacy moved to approve the minutes from the July 17, 2013 meeting.

Chairperson Grantham seconded and the motion passed. (4-0).

A. PUBLIC HEARINGS

B-1 **Public hearing continued from May 15, 2013.**
Case No.: Coastal Development Permit #CP0-246
Site Location: 360 Cerrito in the R-1 zoning district
Proposal: Appeal of Administrative Coastal Development Permit #CP0-246 approval for the demolition of an existing 1,183 square foot single-family residence and removal of two trees, and the subsequent construction of a 2,155 square foot single-family residence and an associated 648 square foot garage. This site is located outside of the appeals jurisdiction of the California Coastal Commission.
CEQA Determination: Categorically exempt, Class 1 and Class 3
Staff Recommendation: Continue the Public Hearing to September 4, 2013.
Staff Contact: Kathleen Wold, Planning Manager, (805) 772-6211
Commissioner Tefft recused himself from the discussion as he owns property within 500 feet of the subject site.

Wold presented the staff report.

Chairperson Grantham asked for clarification from Wold regarding why staff was unable to give proper attention to this project. Wold stated due to time frames for meeting material submittals, there was not sufficient time to route and review the items requested from the applicant so they will be brought to the next Planning Commission meeting.

Commissioner Fennacy confirmed with staff that the applicant's architect has provided all the necessary materials for review to present the item at the next meeting. Wold stated staff has explicitly stated what is needed from the applicant in order to move forward with review of the project. The revised plans have been received and are action ready for the September 4, 2013 Planning Commission meeting.

Chairperson Grantham opened Public Comment period.

Commissioner Tefft recused himself from the discussion due to the proximity of his residence to the project location.

Berta Parish, resident of Morro Bay, stated she disagreed with staff's recommendation to continue this item a third time. She asked if there is a limit to the number of continuances any project may be granted. She stated the applicant has already been allowed sufficient time to produce the materials requested by staff. Parish also stated the City has not granted equal consideration to her and her neighbors' requests as the applicant. She asked the Commission to uphold her 2007 appeal and deny the project. Parish would like the applicant to submit a new application that meets staff's recommendations.

Chairperson Grantham closed Public Comment period.

Wold stated Parish provided an accurate overview of the project. She stated there was an absence of activity for a long time on the applicant's behalf, and it continues to be a struggle to resolve the issues between the two property owners. Wold explained the differences between how the project was originally approved and what is being required by current City staff.

Livick stated he spoke with the project architect and expressed the need for the remaining items. He stated the architect indicated that he had revised the setbacks and has shown the road in relation to the property lines and will submit new plans.

Chairperson Grantham asked for clarification regarding the Volbrecht survey. Livick stated the area of the City where the project is located was originally shown on an 1888 map. Subsequent surveys continued a boundary error from a misread of the 1888 map that affected a few properties in this area. The boundary error needed to be corrected to the original descriptor. Agreement now exists between the two property owners on the true boundary of the property.

Commissioner Solu confirmed with staff that the applicant was directed to use the Volbrecht survey at the June 19, 2013 Planning Commission Meeting. Livick stated the applicant was to use the Volbrecht survey to show the revised boundaries on the site plan and in relationship to the existing features.

Commissioner Solu asked staff if the applicant submitted the required materials in a timely manner. Wold stated the architect used the Volbrecht survey but he did not reference the Volbrecht survey in the plans, other than a notation, so it was difficult for the public to understand the relationship of the existing features on the property. This deficiency stalled staff's review of the project.

Commissioner Fennacy expressed concern that the applicant has not voiced any concerns or provided reasons for the numerous delays. He stated he is inclined to grant the appeal and send the project back to the applicant to revise and resubmit their application.

Commissioner Solu stated he agreed with Commissioner Fennacy's comments.

Livick explained if the Commission decided to not grant the continuance and thereby upholding the appeal, the applicant will have to start over again by re-applying if they choose not to appeal to the City Council.

MOTION: Commissioner Fennacy moved to deny the request for a continuance and uphold the appeal of Coastal Development Permit #CP0-246.

Chairperson Grantham seconded and the motion passed. (3-0).

Commissioner Tefft rejoined the meeting.

B-2 **Public hearing continued from July 17, 2013.**
Case No.: Zoning Text Amendment #A00-015 (project originally noticed for a Public hearing on June 17, 2013 and subsequently continued to additional meetings).
Site Location: Citywide
Proposal: The City of Morro Bay is proposing a Municipal Code Amendment modifying Section 17.68 "Signs
CEQA Determination: To be determined.
Staff Recommendation: Review draft ordinance, take public testimony, and provide direction to staff.
Staff Contact: Erik Berg-Johansen, Planning Intern (805) 772-6291

Berg-Johansen presented the staff report, with specific attention given to the North Main District (Part I) and the Embarcadero District Tourism-Oriented Directional Sign Plan (Part II).

Chairperson Grantham opened Public Comment period.

Susan Stewart, Morro Bay business owner and President of the Morro Bay Chamber of Commerce, expressed concern about prohibiting brand-name advertising. She stated such signs can be helpful to consumers who may be looking for particular products, and it can be important to business owners to help them do business.

Amber Badertscher, Morro Bay business owner, stated she would like clarification regarding why the City is proposing to prohibit brand-name signs. She asked if brand-name advertising restrictions would apply to other locations, such as umbrellas. She also asked about the proposed regulations and fees for A-frame signs and the directional signs proposed along the Embarcadero.

Chairperson Grantham closed Public Comment period.

Part I: North Main District

Wold clarified the purpose of prohibiting brand-name signs is to ensure that the sign ordinance has vertical consistency with state and local regulations of the Coastal Act, Local Coastal Plan, and General Plan that are already in place.

Berg-Johansen addressed Badertscher's comment regarding A-frame signs and stated the purpose of requiring a permit for such signs is to regulate design and decrease blight in the streetscape. Regarding the Embarcadero District Tourism-Oriented Directional Sign Plan, Berg-Johansen stated these signs will be "tested" along the Embarcadero because of the high concentration of businesses there, and will be implemented in other areas of the City if the project is successful.

Commissioner Fennacy asked for clarification regarding the costs associated with A-frame signs. Livick explained that because A-frame signs are placed in the public right-of-way, it requires an encroachment permit which takes staff time to process. He stated it would not be a revenue-generating fee.

Commissioner Tefft suggested requiring a minimum sign size.

Commissioner Fennacy stated there is an opportunity for businesses in North Main to draw customers from the highway, so percentages there are important. He expressed support for the proposed allowable signage in the North Main District.

Chairperson Grantham agreed that signage in this area needs to be large enough so that it can be seen at high speeds from the highway.

Commissioner Solu agreed that large signs are important in this area. He stated he supports the recommended allowable signage in this District.

Wold explained it is important to make the signs large enough in this area so that cars on the highway have enough time to safely exit the highway. She suggested staff could present this issue in a more concrete sense at the next Planning Commission meeting.

Commissioner Tefft asked for clarification regarding how monument signs and architectural signs are calculated in terms of primary and secondary building facades. Berg-Johansen stated if such signs are directly in front of building, they would count toward the primary façade. He stated he would clarify this in the proposed ordinance.

Chairperson Grantham asked staff to address the issue of brand-name signs on surfaces not attached to the building. Wold stated staff is not intending to prohibit business owners from marketing certain products but there are certain considerations that will need to be made regarding total allowable signage.

Commissioner Fennacy stated he would like to see more business owners attending the next Planning Commission meeting to provide comment on the sign ordinance update.

Commissioner Tefft stated it is important to regulate free advertising in the City as it may become a problem.

Part II: Embarcadero District Tourism-Oriented Directional Sign Plan

Berg-Johansen continued to present the staff report, with specific attention to the Tourism-Oriented Directional Sign Plan.

Chairperson Grantham asked if there are enough spaces for all business owners along the Embarcadero. Berg-Johansen explained there are about 85 existing businesses and the City would try to accommodate all of them by installing 18 signs on each structure.

Commissioner Tefft asked if business owners could apply to install more than one sign if space permits. Berg-Johansen stated he would incorporate Tefft's comment into the proposed sign ordinance. Berg-Johansen stated the empty sign spaces could be used to advertise City events. Commissioner Tefft suggested using a material other than steel in this area due to the coastal weather. Staff explained the sign materials would be chosen carefully so that the signs are durable and remain aesthetically pleasing.

Chairperson Grantham clarified with staff that there would be a one-time fee to install a directional sign, rather than a yearly fee.

Berg-Johansen stated it would cost business owners between $75-100 to manufacture each sign.

Commissioner Solu stated he would like to address the issue of nonconforming signs with regard to ownership change at the next Planning Commission meeting. Livick explained existing nonconforming signs were legal at the time they were permitted. Those signs can remain until they are in such poor condition that they can no longer be repaired, at which time they must be replaced. Wold clarified a sign only falls under the category of "legal nonconforming" if it has been permitted by the City. Illegal nonconforming signs are those which never had a permit.

Commissioner Tefft asked staff how the City intends to implement an enforcement program for illegal signs. Wold stated staff is in the process of developing a procedure to document all non-permitted signs in the City, and will then go forward with enforcement procedures.

MOTION: Commissioner Solu moved to continue Zoning Text Amendment #A00-015 to the September 4, 2013 Planning Commission meeting.

Chairperson Grantham seconded and the motion passed. (4-0).

B-3 **Case No.:** Time Extension for #UP0-120 and #AD0-024.
Site Location: 1170 Front Street
Proposal: Concept Plan approved in December 2006 for a 6 unit motel and manager's unit and subterranean parking lot. A Minor Amendment was approved to convert manager's unit to a guest unit.
CEQA Determination: Mitigated Negative Declaration adopted.
Staff Recommendation: Grant time extension for one year.
Staff Contact: Cindy Jacinth, Associate Planner, (805) 772-6577

Wold presented the staff report and stated the request for extension has been withdrawn, therefore, no action is necessary for this item.

UNFINISHED BUSINESS

C-1 Current and Advanced Planning Processing List
Staff Recommendation: Receive and file.
Upcoming Projects: To be determined.

Wold reviewed the Work Program with the Commission.

NEW BUSINESS

None.

DECLARATION OF FUTURE AGENDA ITEMS

None.

ADJOURNMENT
The meeting adjourned at 7:37 pm to the next regularly scheduled Planning Commission meeting at the Veteran's Hall, 209 Surf Street, on Wednesday, September 4, 2013 at 6:00 pm.

_____
Rick Grantham, Chairperson

ATTEST:

_____
Rob Livick, Secretary

AGENDA NO: B-1

MEETING DATE: September 4, 2013

Staff Report

TO: **Planning Commission** **DATE: August 27, 2013**

FROM: **Kathleen Wold, Planning and Building Manager**
Erik Berg-Johansen, Intern Planner

SUBJECT: **Proposed Sign Ordinance Update and Embarcadero Tourism Oriented Directional Sign Plan (both continued from August 21 meeting)**

RECOMMENDATION

Review materials and continue to provide direction to staff.

BACKGROUND

Beginning with the June 19, 2013 Planning Commission meeting, the 2013 Draft Sign Ordinance was presented to the Commissioners. Discussion at this meeting focused primarily on the Embarcadero District and more general issues such as sidewalk signs, the Master Sign Program, and amortization schedules.

At the July 3, 2013 Planning Commission meeting, discussion primarily focused on the Downtown District. Allowed sign types and allowable sign area were the key topics of discussion. Other issues were revisited and discussed at the July 3 meeting such as multi-sided buildings, primary vs. secondary facades, sign amortization, window signs, A-frame signs (sidewalk signs) and specifics for the Embarcadero District.

Then, at the July 17, 2013 Planning Commission meeting discussion was focused on the Quintana District. Specific issues discussed included pole signs, monument signs, allowable sign area, and businesses that are not visible from Highway 1 and/or Quintana Road. Also presented at the July 17 meeting was the Embarcadero District Tourism-Oriented Directional Sign Plan (TODSP), a plan formulated by staff over the past year. This proposal was developed to address the issue of sidewalk (A-frame) signs along the Embarcadero and associated pedestrian hazards. Because sidewalk signs will continue to be prohibited in the Embarcadero District, this plan has been designed to give businesses a viable alternative to sidewalk signs.

Prepared By: KW / EBJ **Dept Review:** RL

And finally, at the August 21, 2013 Planning Commission meeting, the Planning Commission took public testimony and then continued discussions regarding the Draft Sign Ordinance. Discussions at this meeting were focused on the North Main District. Staff has updated the Draft Sign Ordinance per Commission direction from the August 21, 2013 meeting, and a new revised draft is being presented at the September 4 meeting.

A revised version of the Embarcadero District Tourism-Oriented Directional Sign Plan was also presented at the meeting; the Commissioners accepted the changes and agreed to review the Plan so that any final comments can be provided at the September 4 meeting. Because no changes were made to the Plan after the August 21, 2013 meeting, the plan is not attached to this report.

Included as Attachment A to this report is the 2013 Draft Sign Ordinance (revised after the August 21, 2013 meeting). Included as Attachment B to this report is Chapter 2 (On-Premise Signs and Traffic Safety) of an article called "Context-Sensitive Signage Design." The chapter, written by Douglas Mace, can be found at the American Planning Association's website (www.planning.org).

DISCUSSION

The following section discusses the revisions made to the Draft Sign Ordinance in response to comments and direction given during the August 21, 2013 Planning Commission meeting:

General Changes:

- Changed general standards for pole signs to clarify how they are counted towards allowable signage.

- Changed general standards for monument signs to clarify how they are counted towards allowable signage.

Conforming vs. Non-Conforming vs. Non-Permitted (illegal) Signs:

Type	Initially Permitted?	Can it remain after new code adopted?
Conforming	**Yes**	**Yes**
Non-Conforming	**Yes**	**Yes** (until new signs are proposed or if the Director determines the sign has not been properly maintained)
Non-Permitted (illegal)	**No**	**No**

Sign Area in Relation to Traffic Speeds

The following section is intended to provide the Commission more information about pole signs and their relation to traffic safety:

According to an article on the American Planning Association's (APA) website, taller and larger signs are needed in areas where traffic speeds are higher. The article discusses that **font types** and **layout design** are also very important to the legibility of signs. That is, certain types of font, letter size, number of words on the sign, and various other factors affect the legibility index of signs. For example, the size and mounting height of a sign are only two of many factors that should be considered (a sign could be very large but the text could still be small and unreadable). The entirety of the Chapter, "On-Premise Signs and Traffic Safety," is included as Attachment B to this report. More specifically, pages 23 -31 of the attached article discuss the issues mentioned above in more detail.

The complexity of this issue further supports the decision that a Conditional Use Permit be required for all pole signs. When a pole sign is proposed, Planning Staff will be able to analyze the sign on a case-by-case basis to make sure it will be legible to drivers traveling on Highway 1.

CONCLUSION

The changes above are reflected in the revised Draft Sign Ordinance attached to this report. Major changes have been highlighted with the use of red text and strikethroughs. These changes are not final; staff will make further changes according to direction from the Commissioners.

The presentation planned for September 4, 2013 is focused on defining regulations for **Lodging Establishments** and **businesses within industrial zones.** This meeting is also planned to be the final meeting for discussions regarding the Draft Sign Ordinance, which means that any final changes to the draft ordinance shall be discussed and confirmed. Final discussions regarding the **Embarcadero District Tourism-Oriented Directional Sign Plan** will also take place.

Staff hopes that the Planning Commission will offer a favorable recommendation to City Council in regards to the Draft Sign Ordinance and the Embarcadero District TODSP. If favorable recommendations are made at the September 4 meeting, these projects will be presented to the City Council in the near future.

Attachments

Attachment A – 2013 Draft Sign Ordinance (revised)
Attachment B – Chapter 2 - On-Premise Signs and Traffic Safety (article).

ATTACHMENT A

Chapter 17.68 Sign Regulations

Sections:

17.68.010 Purpose

The purpose of this Chapter is to regulate signs so that they express and enhance the character and environment of the City of Morro Bay and its community. These regulations recognize the importance of business activity to the economic vitality of the City. Specifically, these regulations are intended to:

1. Encourage communications which aid in the identification of businesses and activities.
2. Preserve and enhance the aesthetic character of the City.
3. Restrict signs that overload the public's capacity to receive information or that violate privacy.
4. Prohibit signs which increase the probability of automobile accidents.
5. Provide distinct regulations for different districts and lodging establishments.

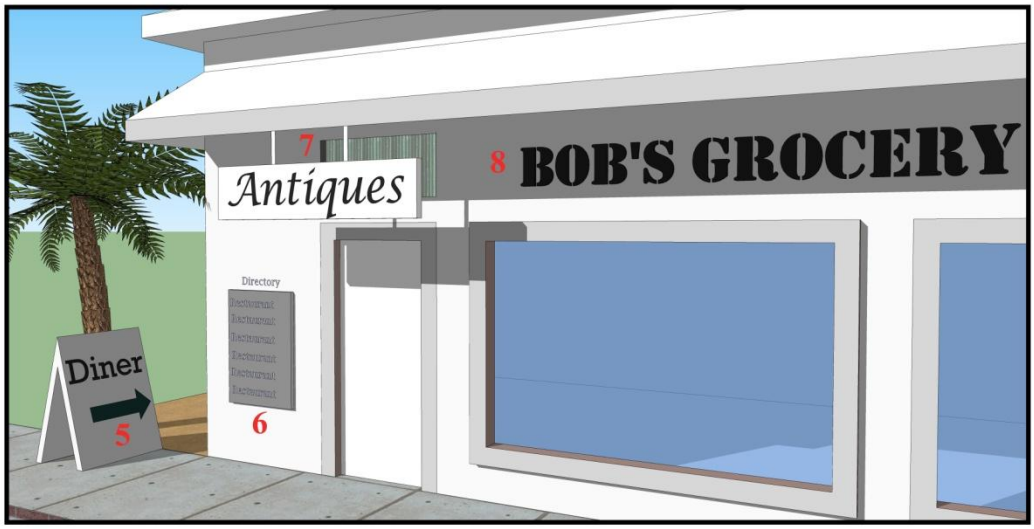
Morro Bay's General Plan states, "The commercial areas of Morro Bay are composed of a variety of commercial uses as well as motels and some residential uses. These areas include Downtown, the Embarcadero, Quintana Road, and North Main Street. Each has its own special character and function." This Chapter provides different sign regulations for each individual district as defined by the General Plan, as well as a custom set of regulations for lodging establishments. It must be noted that *sign districts* as defined by this Chapter are different than the *zone districts* as defined by Morro Bay's Municipal Code.

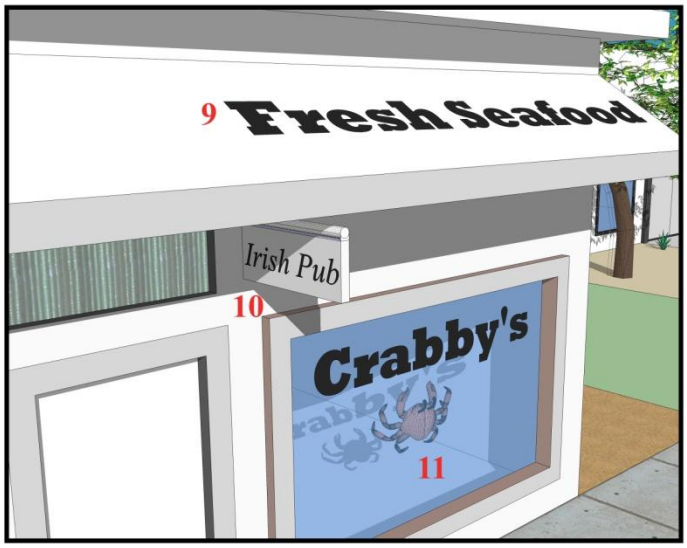
This Chapter is also consistent with the City's Local Coastal Land Use Plan. Chapter XIII of the City's Coastal Land Use Plan includes the following provisions under Policy 12.05:

a. Require monument and surface mounted signs and discourage roof mounted and pole signs;
b. Require that view protection and the nighttime characteristics of the sign be mandatory considerations of any sign installation;
c. Prohibit billboards;
d. Reduce allowable height and size where they interfere with views to and along State Highway One.
e. Develop and adopt sign criteria for signs appropriate for Morro Bay's commercial districts.

17.68.020 Commercial Signs and Calculations

Figure 17.021: Sign Types





1 Roof Sign
2 Wall Sign
3 Monument Sign (externally illum.)
4 Pole Sign
5 A-frame Sign
6 Directory Sign
7 Suspended (Hanging) Sign
8 Wall Sign (Channel Letters)
9 Awning Sign
10 Projecting (Pub) Sign
11 Window Sign

a. **Sign Types**

1. **Attraction Board** means a device used to display information regarding conveniences and services offered by facilities providing temporary accommodation.

2. **Architectural Signs.** Freestanding signs situated on two (2) or more supporting structures.

3. **Awning and Canopy Signs**. Signs painted on awnings, canopies, arcades, or similar attachments or structures. Sign area for awning and canopy signs is calculated as the area within a single continuous enclosure around only the copy area of the lettering or logo of the sign.

4. **Banners**. A temporary sign of fabric, plastic, paper or other light pliable material not enclosed in a rigid frame, and which is suspended, mounted, or attached to buildings or poles at two ends or continuously across its longest side so as to allow movements of the sign by atmospheric conditions.

5. **Changeable Copy sign** means a sign designed so that characters, letters or illustrations can be changed or rearranged without substantially altering the face or the surface of the sign.

6. **Directory Sign**. A collection of signs which list names of individual businesses located in a single building, courtyard, or property.

7. **Dock Sign.** Any sign that is placed on a floating dock structure or gangway.

8. **Externally Illuminated Signs.** A sign that is illuminated by a light source not attached to the sign.

9. **Fence Signs**. Signs on fences or free-standing walls, not part of a building.

10. **Hanging (Suspended) Signs.** A sign that hangs parallel to the building's façade.

11. **Internally Illuminated Signs.** A sign which radiates light from any internal source or is backlit.

12. **Marquee Sign.** A projecting sign that is part of a permanent entryway or canopy and traditionally associated with theaters. A marquee may include a projecting vertical sign extending above the cornice line of a building. See "Projecting Signs" below.

13. **Monument Signs.** A sign erected on the ground or on a monument base designed as an architectural unit (and not attached to a building). Monument signs shall not interfere with safety sight angles on corners and at driveways.

14. **Pole Signs.** A freestanding sign erected on top of a pole (and not attached to a building) that is taller than 8 feet.

15. **Projecting Signs (Pub Signs)**. Signs under canopies or covers in conjunction with pedestrian walkways, or signs projecting from the building wall.

16. **Roof Signs.** Signs erected upon, over or above the roof of a building or structure, or any sign affixed to the wall of a building so that it projects above the eave line of a roof.

17. **Shopping Center Identification Signs.** A sign structure located in front of a shopping center that advertises the name of the center and associated businesses.

18. **Sidewalk Signs**. Signs not permanently attached to the ground or any other permanent supporting structure. These signs are sometimes referred to as A-frame signs. Where permitted, sidewalk signs are subject to special regulations and permits.

19. **Snipe Sign**. An off-site sign which is tacked, nailed, posted, pasted, glued or otherwise attached to trees, poles, stakes, fences or to other objects.

20. **Temporary Sign**. A sign or advertising display designed or intended to be displayed for a short period of time.

21. **Wall Signs (Surface**). Wall surface signs include any sign attached to, erected against or painted upon the wall of a building or structure, the face of which is in a single plane parallel to the plane of the wall. Wall signs also include signs on a false or mansard roof.

22. **Window sign** means any sign placed inside or upon a window facing the outside and which is intended to be seen from the exterior.

b. **Determining Computable Sign Area**

1. Single-faced Signs. The sign face on a single plane and viewable from only one side of the plane shall be measured as the entire area within a single continuous perimeter composed of squares or rectangles that enclose the extreme limits of all sign elements including, but not limited to, sign structures or borders, written copy, logos, symbols, illustrations, and color.

2. Double-faced Signs. Double-faced signs with sign faces that are parallel (back-to-back) and a distance of less than three feet apart, or sign faces that have an interior angle of 45 degrees or less, shall be counted as a single sign with only one face measured in calculating sign area. Where the faces are not equal in size, the larger sign face shall be used as the basis for calculating sign area.

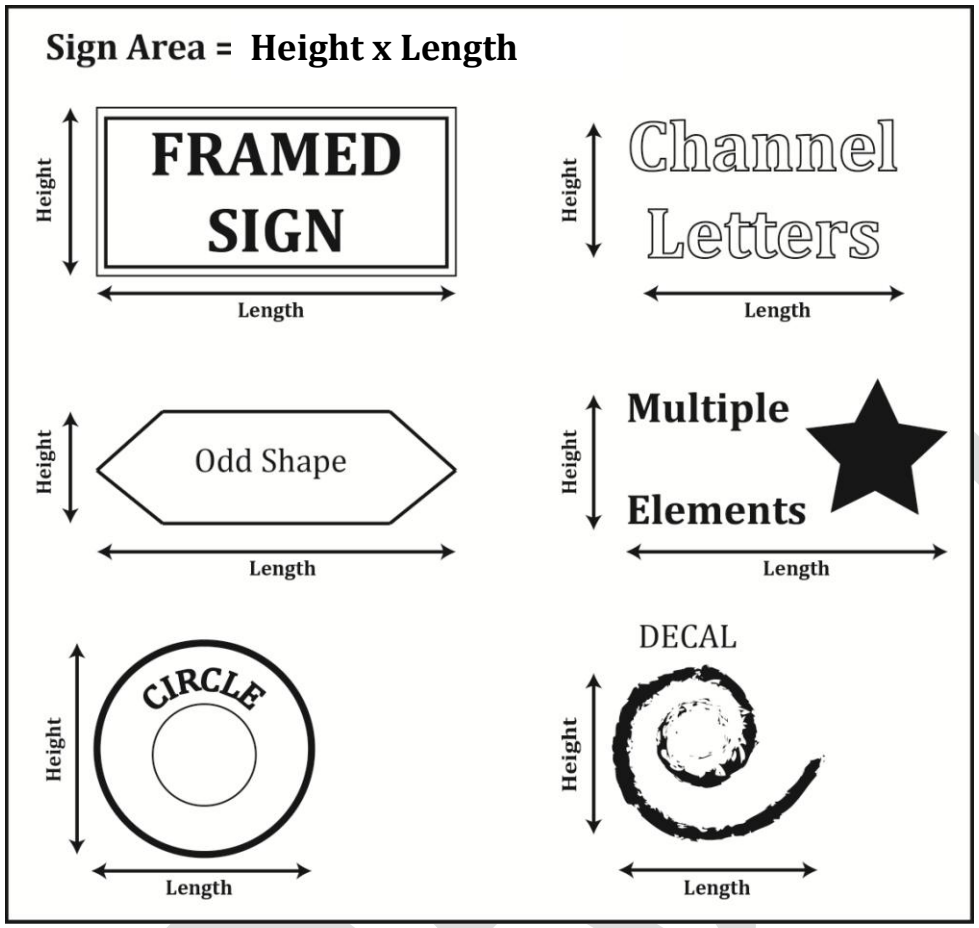
3. Multi-faced Signs. The sign area of signs with three or more sign faces, or signs with two sign faces with a distance greater than three feet apart or an interior angle greater than 45 degrees, shall be calculated as the sum of all the sign faces.

4. Three-dimensional Signs. Signs that consist of, or have attached to them, one or more three-dimensional objects (i.e., balls, cubes, clusters of objects, sculpture, or statue-like trademarks), shall have a sign area of the sum of two adjacent sides or sign faces.

Allowable sign area and sign types are designated by *District.* See Figure 17.031 to determine what district your business is located in. If your business is located on or near the border of a district, please contact the Morro Bay Planning Department.

For Lodging Establishments see section 17.68.080
For businesses located in Industrial Zones see section 17.68.090

Figure 17.023: Measurement of Sign Area



Three-Dimensional Signs

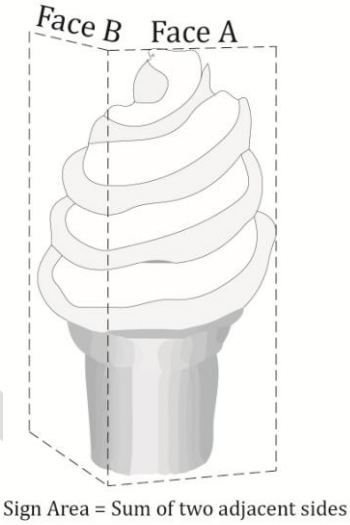
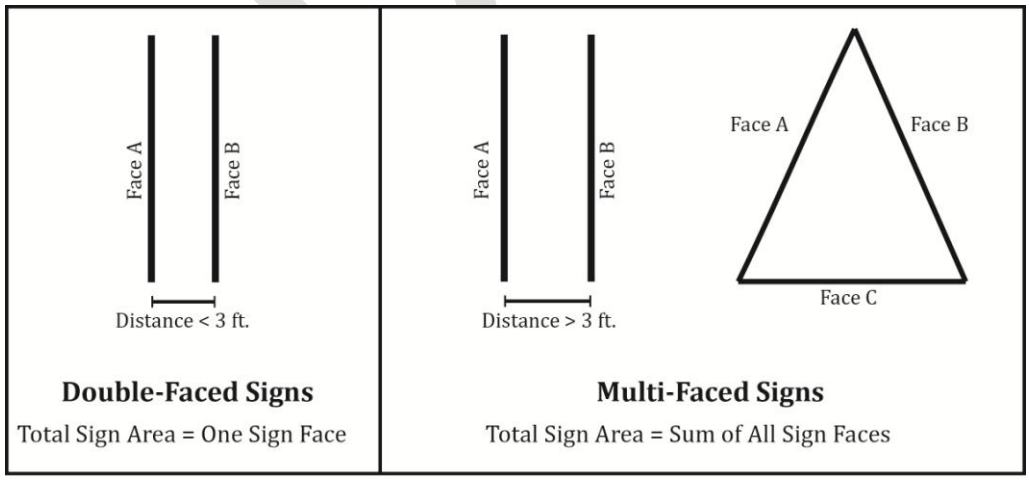


Figure 17.024: Measurement of Double and Multi-Faced Signs



c. **Computation of Facades**

"Façade" = (Façade Length x Facade Height)

*For the purposes of this Ordinance, "Facade Height" shall not include the roof

*For definitions of "Façade Length and Façade Height" see Section 17.68.120.

Figure 17.025: Single-Tenant Façade Calculation

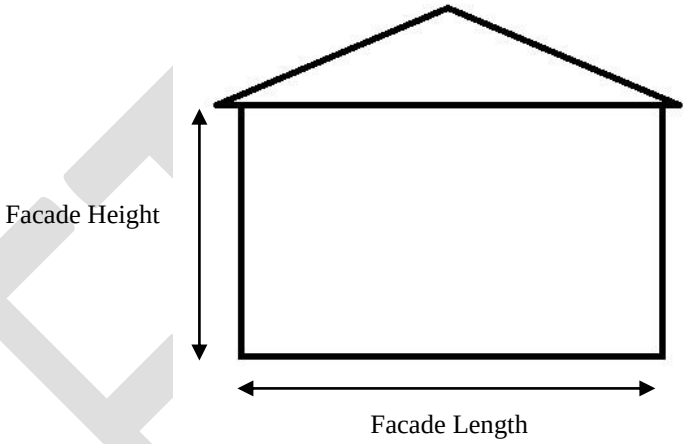


Figure 17.026: Multi-Tenant Façade Calculation Example #1

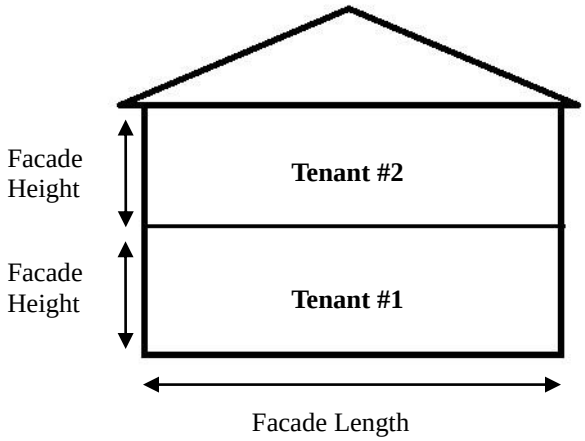
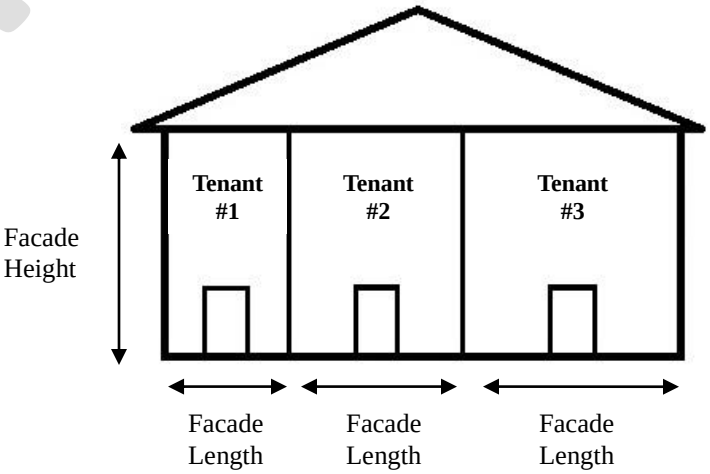


Figure 17.027: Multi-Tenant Façade Calculation Example #2



17.68.030 Standards for All Districts and Zones

The following principles and regulations apply to all areas within the City. No area in the City is exempt from the provisions listed in the following section. See other applicable commercial sign standards by following these steps: (1) Determine appropriate sign district (using Figure 17.031) (2) View table that applies to the appropriate district (Sections.17.68.040-17.68.070). For Lodging Establishments see Section 17.68.080.

A. Construction, Maintenance, Abandonment and Removal

1. **Construction and Maintenance**
   a. Unless exempt, signs and supporting structures shall be installed in accordance with the Building Code.
   b. All signs, together with all supporting structures, shall be maintained in the following manner:
      i. Signs shall be kept free of rust, dirt and chipped, cracked or peeling paint.
      ii. All hanging, dangling, torn or frayed parts of signs shall be promptly repaired and graffiti and unauthorized attachments shall be removed.
      iii. Burned-out illumination shall be replaced immediately.
      iv. Sign areas shall be kept free and clear of all noxious substances, rubbish, and weeds.
   c. If a sign is removed from its supporting structure for longer than 60 days, the supporting structure shall be removed.
   d. Any sign deemed unsafe by a Building Official shall be removed or fixed within 3 days of written notice.
   e. Every sign, including those signs for which no permit is required, together with all supports braces, guys and anchors shall be maintained in a safe, presentable and good structural condition at all times. The display surfaces of all signs shall be kept neatly painted, posted or otherwise maintained at all times. The owner of property on which the sign is located shall be responsible for the condition of the area in the vicinity of the sign, and shall be required to keep this area clear, sanitary and free from noxious or offensive substances, rubbish and flammable waste materials.

2. **Abandonment.** The following signs shall be presumed to be abandoned:
   a. **Located on Property**. Any sign which is located on property that becomes vacant and is unoccupied for a period of 60 days or longer.
   b. **Unrelated to Property**. Any sign which was erected for an occupant or business unrelated to the present occupant or business.
   c. **Time, Event or Purpose Sign**. Any sign which pertains to a time, event or purpose which no longer exists.
   d. **Exceptions**
      i. **Temporarily Suspended Business**. Permanent signs applicable to a business temporarily suspended because of a change of ownership or management of such business shall not be deemed abandoned unless the property remains vacant for a

period of 60 days or more.

3. **Removal.** Abandoned signs are found to be a public nuisance due to their misleading and distracting nature and due to their contributing to visual blight, detrimental to surrounding areas and the community generally. An abandoned sign face is prohibited and shall be removed by the property owner.

B. Provisions for Nonconforming and Illegal Signs

1. **Existing Nonconforming Signs**. Signs existing at the time of adoption of this Title, that do not comply with the provisions of this Chapter but that were legally erected pursuant to applicable state and city ordinances in effect at the time of construction, shall be regarded as nonconforming signs, subject to the following:

    a. **Use Change**. Whenever the type of business or use changes with which a nonconforming sign is associated, the nonconforming sign associated with business shall be removed or otherwise made to conform to the provisions of this Chapter. An example of a change in use is a traveler-serving amenity (such as a gas station or convenient store) becoming a resident-serving amenity (such as a furniture or clothes store).

    b. **Ownership Change.** Whenever a business leaves a location and new business occupies a property, the nonconforming sign associated with the previous business shall be removed or otherwise made to conform to the provision of this Chapter.

    c. **Sign Maintenance.** When a nonconforming sign becomes deteriorated or dilapidated to the extent of over fifty percent (50%) of the physical value it would have if it had been maintained in good repair, it must be removed within sixty (60) days after receiving notice from the Public Services Department.

        i. If an ill-maintained sign cannot be adequately valued and assessed, the Public Services Director may require that such sign be removed or repaired.

    d. **Limited Expansion**. A nonconforming sign may not be expanded, extended, reconstructed, or altered in any way in its location or orientation to enable it to be read or viewed from a different direction than its original position, except in the following cases:

        i. Changes in sign face, copy, graphic design or color are permitted provided that such sign not be removed.

    e. **Other Requirements**. Nonconforming signs are also subject to the provisions of Chapter 17.56: Nonconforming Uses and Structures.

2. **Illegal Signs**. Whenever a sign is found to be erected or maintained in violation of any

provision of this Chapter, this Title, or any other Federal, State, or local law, and such sign is not a nonconforming sign (e.g. it was a legal sign under the sign regulations in effect prior to adoption of the ordinance codified in this Chapter), the Public Services Director shall order that such sign be altered, repaired, reconstructed, demolished or removed, as may be appropriate, to abate such condition or the Director may initiate proceedings to abate the sign as a public nuisance under the provisions of the Business and Professional Code (Sections 5499.1 to 5499.16). Any work required to be done shall be completed within ten days of the date of such order, unless otherwise specified in writing.

a. An illegal sign that conforms to the provisions of this Chapter may become legalized if the owner submits a sign permit application within five days of illegal sign notification. If said sign permit is granted the sign may remain in its current state.

C. General Sign Standards (Commercial and Non-Commercial)

1. **Architectural Signs.**
   a. Maximum Height: 8 feet (from the ground to top of sign).
   b. Shall be supported by two (2) or more posts or beams.
   c. Minimum Setbacks: One foot from setback line.
   d. Sign faces: Maximum of two sign faces permitted.
   e. Landscaping. Signs shall be placed in a landscaped planter or berm. As a condition of any sign permit for a monument sign, additional landscaping of the site may be required to better integrate sign appearance with the site.

2. **Awning and Canopy Signs**.
   a. Maximum Height. 25 feet above a sidewalk or public right-of-way
   b. Sign copy and/or logos may not extend beyond the area of the awning or canopy.

3. **Clearance from Utilities**. Signs and their supporting structures shall maintain clearance and not interfere with electrical conductors, communications equipment or lines, surface and underground facilities and conduits for water, sewage, gas, electricity and communications equipment or lines. Signs shall not be placed in public utility easements unless express written permission from the affected public utility is obtained.

4. **Community Promotional Display Programs**. Community promotion signs advertising, directing or informing pedestrian of community events and services not related to or located on the site shall be permitted on private property in all commercial districts, and on public land with the granting of an encroachment permit.

5. **Dock Signs.** Any sign placed on a dock shall not in any way impede the right-of-way for pedestrians or watercraft. A dock sign may only be placed on docks or gangways owned by the subject property.

6. **Drainage**. The roofs of canopies or marquees exceeding 25 square feet shall be drained to prevent dripping or flow onto public sidewalks or streets and shall be connected to an

approved disposal source of adequate conductors.

7. **Encroachment into Public Street or Sidewalk**. For signs projecting over a public street or sidewalk refer to "Title 14: Buildings and Construction" within the City's municipal code.

8. **Equipment Signs**. Signs, not more than eight square feet in sign area, incorporated into displays, machinery, or equipment by a manufacturer, distributor, or vendor that identify or advertise only the product or service dispensed by the machine or equipment, such as signs customarily fixed to automated teller machines (ATMs), gasoline pumps, menu boards, and umbrellas. If a vending machine is visible from the street, the sign area shall be included in the total sign area allowed for the use.

9. **Hanging (Suspended) Signs**.
    a. Bottom of sign must maintain a minimum clearance of 8 feet above the public right-of-way or sidewalk.
    b. Shall not be internally illuminated.

10. **Illumination**. Signs with any type of illumination are subject to all of the following standards:
    a. All lighting is subject to necessary electrical permits.
    b. All newly fabricated signs shall incorporate light-emitting diodes (LEDs) or an equally energy efficient light source.
    c. Illuminated signs that are larger than 10 square feet in area shall not be switched ON during daylight hours. All newly fabricated signs larger than 10 square feet in area shall incorporate an automatic on/off switch.
    d. All illuminated signs shall be turned off at 10 PM or at the time the business closes.
    e. External lighting shall be properly shielded to prevent glare upon an adjacent public right-of-way or adjacent property.
    f. Illumination shall be constant in intensity and color and shall not consist of flashing, animated or changing lights.
    g. Illumination shall not be distracting to pedestrians, motorists, or neighboring property.
    h. No sign shall emit or reflect light exceeding ten foot-candle power at ten feet from the face of the sign.

11. **Marquee Signs.** Marquee signs may not project above the marquee face.

12. **Materials**. All signs shall be made of substantial materials that are not subject to rapid deterioration, as determined by the Public Services Director.

13. **Monument Signs**
    a. Maximum Height. 5 feet
    b. Minimum Setbacks: One foot from setback line.
    c. Sign faces: Maximum of two sign faces permitted.
    d. Number of signs: Maximum of two monument signs per business.

e. If one monument sign proposed, sign shall count towards allowable signage for the *Primary Façade.* If a second monument sign is proposed, sign shall count towards nearest secondary façade.
f. Landscaping. Signs shall be placed in a landscaped planter or berm. As a condition of any sign permit for a monument sign, additional landscaping of the site may be required to better integrate sign appearance with the site.

14. **Pole Signs**
    a. Landscaping. Pole signs shall be placed within a landscaped planter with at least 28 square feet of planting area. As a condition of any sign permit for a pole sign, additional landscaping of the property may be required where needed to better integrate sign appearance with the site through scale and softening effects.
    b. Maximum Height. 15 feet;
    c. Pole signs shall count towards allowable signage for the *Primary Façade.*
    d. Subject to Conditional Use Permit and shall meet the following conditions:
        i. Business is traveler-serving.
        ii. Proposed sign does not degrade or block scenic views (professional viewshed study may be required).
        iii. If oriented towards Highway 1, sign shall be legible from a distance that will allow drivers to comprehend information and safely exit the highway (professional engineering study may be required).
        iv. Sign design shall be compatible with neighborhood character, and shall not degrade the overall aesthetic quality of the subject property and surrounding area.

15. **Projecting (Pub) Signs**.
    a. Minimum Height. 8 feet above a sidewalk or other public right-of-way.
    b. Maximum Height. 20 ft. above a sidewalk or other public right-of-way, but not above an eave or roof.
    c. Shall not be internally illuminated.

16. **Roof Signs.** The top of the sign may not extend above the maximum building height for the zone in which the business is located.

17. **Sign Orientation**. No sign, other than a projecting sign, shall be permitted that is so oriented as to be viewed primarily across an adjacent private property line. All signs must be visible directly from a public right-of-way, other public open space or parking lot or courtyard on the same site as the sign, without view lines extending over private property different from that on which the sign is located.

18. **Substitution of Sign Message**. The owner of a permitted sign may substitute a non-commercial message for a commercial message or a commercial message for a non-commercial message.

19. **Wall Surface Signs** ("Wall" Signs). Wall signs are subject to the standards in the following table. No wall surface sign may cover wholly or partially any required wall

opening.

WALL (SURFACE) SIGN STANDARDS	
Minimum Horizontal and Vertical Separation Between Signs	3 ft.
Maximum Projection from Surface of Building	12 in
Minimum Vertical Separation Between Sign and Roof Line	1 ft. (8 inches on a mansard roof)
Maximum Height	20 ft. above a sidewalk or public right-of-way.

D. Exempt Signs

The following signs are exempt in ALL districts and do not count towards total allowable sign area:

1. **Announcement Signs**. One sign, not exceeding 16 square feet in area and 6 feet in height, per street frontage on real property where construction, structural alteration or repair is to take place, or is taking place, which contains information regarding the purpose for which the building is intended and the individuals connected with the project, including names of architects, engineers, contractors, developers, finances and tenants. Announcement signs are exempt only for the duration of the construction of the building and shall be removed prior to issuance of a certificate of occupancy.

2. **Automatic Teller Signs.** Any business owning one or more ATM machines is allowed one (1) single-sided automatic teller sign.
   a. Maximum area. 3 square feet.

3. **Businesses Outside of Defined Districts.** In the case a business does not exist within any of the sign districts as defined by this Chapter, the business shall conform to the regulations of the sign district it best fits in, as determined by the Public Services Director.

4. **Change of Business Signs**. A temporary attachment or covering of wood, plastic, or canvas over a permanent sign indicating a change of ownership or activity may be displayed no longer than 30 days following the change of ownership or activity for which the sign is intended, or up to 90 days following issuance of a building permit. The sign shall be no larger than the previously permitted permanent sign.

5. **Civic Event Signs**. One temporary sign announcing a campaign drive or event of a civic, public, quasi-public, philanthropic, educational or religious organization is allowed.
   a. Maximum Sign Area. 32 square feet.
   b. Maximum Time Period. Shall not be displayed for a period exceeding thirty calendar days previous to such event. An establishment shall not display such signs more than 60 days each year. Such signs shall be removed immediately after the event.

6. **Fence Signs**. One fence sign allowed per property to advertise community and non-profit events. Such signs shall not be displayed for a period exceeding thirty calendar days previous to such event. An establishment shall not display such signs more than 60 days each year. Such signs shall be removed immediately after the event.

7. **Flags**. Flags and insignia of any government, except when incorporated into a commercial sign, are permitted.

8. **Garage Sale Signs**. One unlighted sign is permitted for garage sales, provided such sign does not exceed four square feet in area and is displayed on the property where such sale shall take place only on the day of the sale.

9. **Mobile Home Parks**. A mobile home park may be allowed one externally illuminated or non-illuminated identification sign, not to exceed the equivalent of one square foot of sign area per ten linear feet of frontage on each right-of-way upon which it takes vehicular access. No sign shall have a surface area of greater than 30 square feet, a height of 8 feet, or be erected at right angles to the right-of-way.

10. **Mobile Vendor (Non-permanent Vendor) Signs**. Signs fixed to mobile vending carts that identify or advertise the name, product, or service provided by the vendor. Each mobile vending cart is limited to a maximum sign area of eight square feet.

11. **Murals.** Artwork painted on buildings; such artwork shall not include logos, text, or graphics that intentionally advertise a business, as determined by the Public Services Director.

12. **Off-Site Directional Sign**. One off-site sign not to exceed 36 square feet, providing direction to real estate available for sale or lease, during daylight hours only. Permission from the property owners of the site where the sign is placed is required.

13. **Official Government Signs and Legal Notices**. Official notices issued by a court, public body or office and posted in the performance of a public duty; notices posted by a utility or other quasi-public agent in the performance of a public duty; historical markers erected by a governmental body; identification information; directional signs erected by government bodies; or other signs required or authorized by law.

14. **Parking and Directional Signs**. On-site parking and directional signs, not exceeding eight square feet in sign area and five feet in height, that do not include any advertising messages or symbols.

15. **Political Campaign Signs**. Political campaign signs not to exceed sixty-four square feet in area per site and shall be permitted only on private property;

16. **Public Restroom and Public Access Signs.** One on-site public restroom sign not exceeding 3 square feet and one on-site public access sign not exceeding 4 square feet.

17. **Real Estate and "Open House" Signs**. Signs conveying information about the sale, rental, or lease of a property and the identification of the person **or** firm (agent) handling such sale, lease or rental, provided they comply with the following standards. Real estate and open house signs are exempt only during the period for which the property is offered for sale or lease.

18. **Restaurant Menu Boards.** Restaurants with a valid business license are allowed one (1) menu board per entrance with a maximum of two (2) menu boards.
    a. Maximum area. 4 square feet.
    b. Menu boards shall be securely placed on a building face.
    c. Menu boards shall not in any way obstruct or block a door, window, or exit.
    d. Menu boards shall consist solely of the restaurant's current menu.

19. **Sidewalk Signs.** Subject to a special *Sidewalk Sign Permit.* Sidewalk signs proposed to be placed within the public right-of-way require a *Sidewalk Sign Encroachment Permit* in addition to a general *Sidewalk Sign Permit.*

20. **Subdivision Signs.** One sign per frontage, advertising the sale of a subdivision may be displayed on the site of the subdivision upon approval of a final map and initiation of construction for a period of one year. The display period may be extended with written approval of the Public Services Director for a reasonable period of time, not to exceed one year at any one time.

21. **Shopping Center Identification Signs**. A shopping center with four (4) or more tenants is allowed one Identification Sign per major street frontage.
    a. Minimum Height. 6 ft.
    b. Maximum Height. 8 ft.
    c. Sign shall include name of shopping center and spaces for a maximum of 8 tenants.
    d. The sign(s) shall incorporate the design theme of the existing shopping center.
    e. The sign(s) are subject to Public Services Director's approval.

22. **Special Private Event Displays**. A temporary sign may be erected on the premises of an establishment having a special event provided that such sign shall not be displayed for a period exceeding thirty calendar days previous to such event. An establishment shall not display such signs more than 60 days each year. Such signs shall be removed immediately after the event.

23. **Temporary New Business Signs.** One temporary sign not exceeding 30 square feet for new businesses is allowed. A temporary sign may remain erected for a maximum of 30 days unless the Public Services Director grants an extension.

24. **Temporary "Sale" Signs.** One temporary sign not exceeding 10 square feet in area signifying a sale or specials is allowed. A temporary sale sign may remain erected for a maximum of 90 days during one calendar year.

E. Prohibited Signs

The following signs are prohibited in ALL districts:

1. **Animated and Moving Signs**. Signs that incorporate, in any manner, any flashing, moving, rotating, pulsating or intermittent lighting, with the exception of approved time and temperature displays.

2. **Banners, Streamers, or Pennants**. Signs, banners, pennants, valances or any other advertising display constructed of cloth, canvas, light fabric, paper, cardboard, wallboard or other light materials except for awnings and temporary signs as provided for in this Chapter.

3. **Billboards**. Off premises outdoor advertising signs.

4. **Digital Signs.** Any electronic sign that resembles a television screen or video monitor, or that can be altered or changed from a remote location.

5. **Emissions.** Signs that produce noise or sounds in excess of 40 decibels, excluding voice units at drive-through facilities, and signs that emit visible smoke, vapor, particles, or odor.

6. **Inflatable Signs.** Three-dimensional signs that are made of flexible material that is designed to be filled with gas or air.

7. **Obscenities**. Signs that depict, describe, or relate to "specified sexual activities" or "specified anatomical areas."

8. **Obstruction to Exits**. Signs that obstruct any fire escape, required exit, window or door opening intended as a means of egress.

9. **Obstruction to Ventilation**. Signs that interfere with any opening required for ventilation.

10. **Persons or Animal Signs.** Signs that use humans or animals to display signs or act as signs.

11. **Signs Advertising Brand Names.** Any sign that advertises a brand name or logo (except the brand name or logo directly related to the business) is prohibited. Example: Grocery stores may use signs to advertise that they sell "cereal," but may not use signs to display the names of brands that make the cereal.

12. **Signs Creating Traffic Hazards**. Signs located in such a manner as to constitute a traffic hazard or obstruct the view of any authorized traffic sign or signal device, or signs that may be confused with any authorized traffic sign, signal, or device; or that makes use of the words "stop", "look", "danger", or any other word, phrase, symbol, or character that

interferes with, misleads, or confuses vehicular drivers.

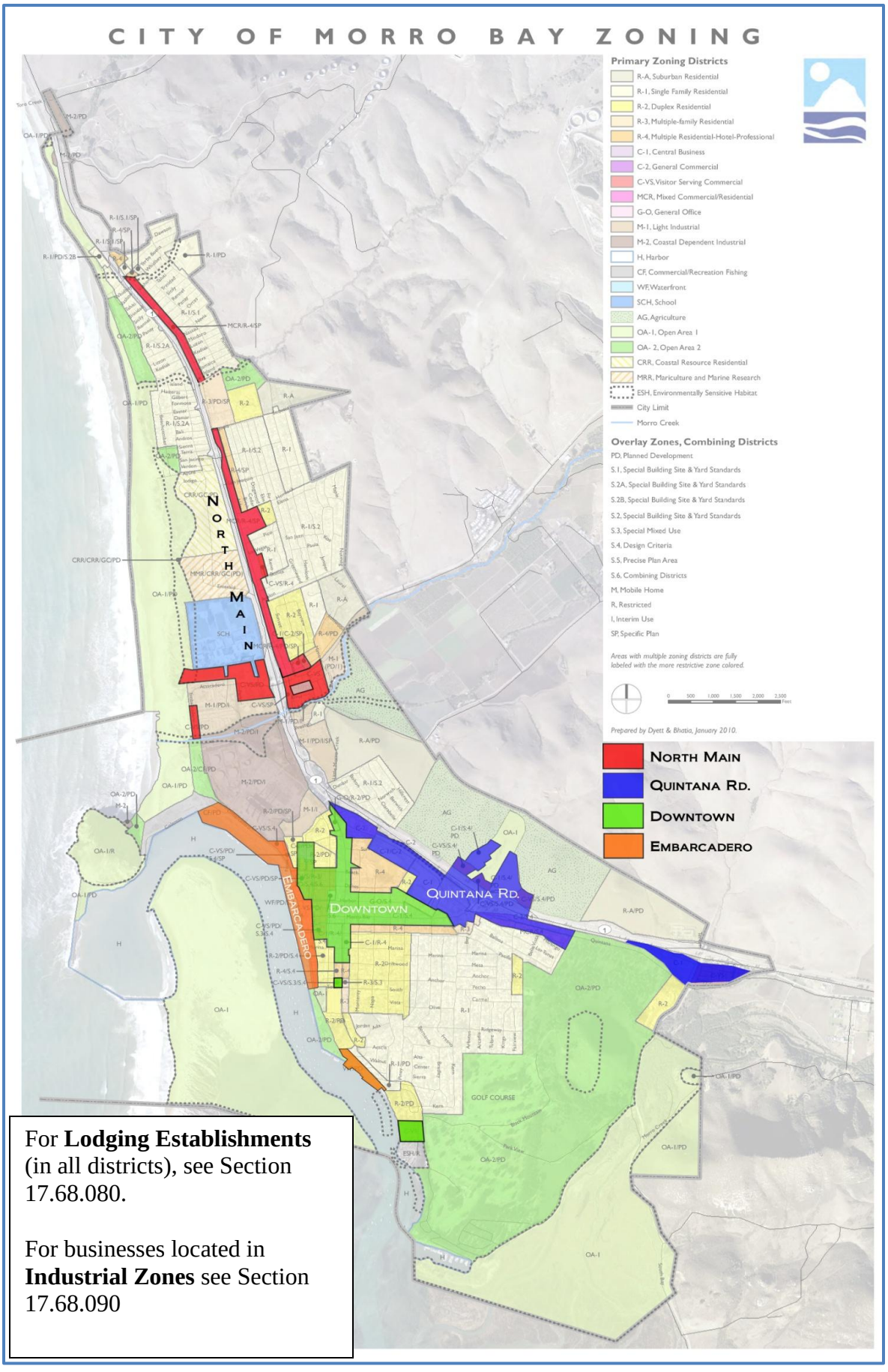
13. **Snipe Signs.** Off-premise signs advertising a business or service. All commercial signs shall be on property owned or leased by the business owner.

14. **Signs on Public Bus Shelters or Benches**. Signs located on bus shelters, benches, or similar structures provided for the use of passengers along the route of a bus, not including plaques containing the names of persons or organizations which have made gifts or donations of such street furniture.

15. **Vehicle Displays**. Signs placed or displayed on vehicles parked in a conspicuous location to be used for on-site or off-site advertising, with the exception of signs advertising such vehicles for sale and vehicle identification signs in locations where sale of vehicles is permitted.

16. **Tire Stacks.** Signs placed on stacked tires.

Figure 17.031: Sign District Map



For **Lodging Establishments** (in all districts), see Section 17.68.080.

For businesses located in **Industrial Zones** see Section 17.68.090

17.68.040 Embarcadero District

Purpose. The Embarcadero District is home to many of the tourist-serving businesses in Morro Bay. The Embarcadero District contains a dense collection of restaurants, hotels, bars, museums, gift shops, and recreation-based businesses. The sign regulations for this district are intended to maintain the unique, beach town character of Morro Bay's waterfront. The Embarcadero District is dominated by pedestrians; the code promotes small scale signs and projecting type signs that are oriented towards pedestrians and bicyclists. With the prohibition of window signs and pole signs, the code also aims to maximize views of the bay from the street and walkways.

The following chart displays all allowable sign types and specifications for businesses located in the Embarcadero District.

IMPORTANT NOTES

- **See Chapter 17.68.100 for MASTER SIGN PROGRAM if property has three or more tenants or includes a building with a facade exceeding 3,000 square feet.**
- **If a business is near the edge of a district, please consult Planning Staff to confirm appropriate district designation.**
- **If a sign type does not appear in the following table it is prohibited in this district.**
- **Signs advertising BRAND NAMES are prohibited in all districts.**
- **Signs that describe offered products or services COUNT towards total allowed signage.**
- **If illumination or lighting of ANY kind is proposed on or around signs, see Section 17.68.030, C-10.**

Projecting Sign Bonus: All businesses are entitled to one (1) "free" projecting sign per frontage. The proposal of a projecting sign *must be reported in the sign permit application*, but will not count towards the total allowable signage for the business. The bonus 8 sq. ft. can be applied to the placement of a larger projecting sign (e.g. after the bonus is applied 16 sq. ft. projecting sign counts towards 8 sq. ft. of allowable area).

Embarcadero District				
Sign Type	**Total # of signs allowed**	**Sign Area Allowed**	**Max. Sign Area per sign (sq. ft)**	**Additional Regulations**
Awning and Canopy	1 per frontage (choose one type) *window signs: 1 per window*	10% of primary facade, 5% of secondary façades*	--	See Section 17.68.030, C-2
Roof			--	See Section 17.68.030, C-16
Wall (Surface) **			--	See Section 17.68.030, C-19
Hanging (Suspended)			--	See Section 17.68.030, C-9
Window			20% of window area	--
Monument (Freestanding)	1 per frontage		25	See Section 17.68.030, C-13
Projecting (Pub)	2 per frontage (30 ft. of spacing between required)		8	See Section 17.68.030, C-15
Dock	1 per business		16	See Section 17.68.030, C-5
Bonuses				
Projecting (Pub)	PLUS (+) 8 sq. ft.		8	
Wall (Surface)	PLUS (+) 4 sq. ft. for **Individual Lettering**		--	
Window	PLUS (+) 3 sq. ft. for **Individual Lettering**		20% of window area	

*** Primary facades shall contain maximum signage equal to 10% of facade area, and secondary facades shall contain maximum signage equal to 5% of façade area (extra allowable sign area granted for secondary facades cannot be implemented on the primary façade, and vice versa).**

****One wall sign signifying the entrance to a business and not exceeding 3 square feet in area may be implemented in conjunction with all other sign types. Such signs must be placed above the main entrance and shall count towards total allowable signage.**

17.68.050 Downtown District

Purpose. The Downtown District houses a combination of resident-serving and tourist-serving businesses. While there are many restaurants, gift shops and galleries, the district also contains banks, shopping markets, offices, and service-based businesses such as automobile repair shops. The sign regulations for this district are intended to preserve the small-town character that residents, tourists, and business owners enjoy. The code is designed to eliminate excessive signage while promoting pedestrian-oriented signs.

The following chart displays all allowable sign types and specifications for businesses located in the Embarcadero District.

IMPORTANT NOTES

- **See Chapter 17.68.100 for MASTER SIGN PROGRAM if property has three or more tenants or includes a building with a facade exceeding 3,000 square feet.**
- **If a business is near the edge of a district, please consult Planning Staff to confirm appropriate district designation.**
- **If a sign type does not appear in the following table it is prohibited in this district.**
- **Signs advertising BRAND NAMES are prohibited in all districts.**
- **Signs that describe offered products or services COUNT towards total allowed signage.**
- **If illumination or lighting of ANY kind is proposed on or around signs, see Section 17.68.030, C-10.**

Sidewalk Signs. *See draft Sidewalk Sign Application / Encroachment Permit.*

Projecting Sign Bonus: All businesses are entitled to one (1) "free" projecting sign per frontage. The proposal of a projecting sign *must be reported in the sign permit application,* but will not count towards the total allowable signage for the business. The bonus 8 sq. ft. can be applied to the placement of a larger projecting sign (e.g. after the bonus is applied 16 sq. ft. projecting sign counts towards 8 sq. ft. of allowable area).

Downtown District				
Sign Type	**Total # of signs allowed**	**Sign Area Allowed**	**Max. Sign Area per sign (sq. ft)**	**Additional Regulations**
Awning and Canopy	1 per frontage (choose one type); *window signs: 1 per window*	15% of primary facade, 15% of secondary façades*	--	See Section 17.68.030, C-2
Marquee			--	See Section 17.68.030, C-11
Wall (Surface) **			--	See Section 17.68.030, C-19
Window			30% of window area	--
Hanging (Suspended)	1 per frontage		--	See Section 17.68.030, C-9
Monument (Freestanding)	1 per frontage		25	See Section 17.68.030, C-13
Projecting (Pub)	2 per frontage (30 ft. of spacing between required)		16	See Section 17.68.030, C-15
Bonuses				
Projecting (Pub)	PLUS (+) 8 sq. ft.		16	
Wall (Surface)	PLUS (+) 10 sq. ft. for **Individual Lettering**		--	
Window	PLUS (+) 5 sq. ft. for **Individual Lettering**		30% of window area	
Sidewalk Sign	See Sidewalk Sign specifications			

*** Primary facades shall contain maximum signage equal to 15% of facade area, and secondary facades shall contain maximum signage equal to 15% of façade area (extra allowable sign area granted for secondary facades cannot be implemented on the primary façade, and vice versa).**

****One wall sign signifying the entrance to a business and not exceeding 3 square feet in area may be implemented in conjunction with all other sign types. Such signs must be placed above the main entrance and shall count towards total allowable signage.**

17.68.060 Quintana Road District

Purpose. The Quintana Road District contains many of the City's larger commercial buildings, strip malls, and gas stations. Due to the existence of large parking lots and the adjacent Highway 1, this district is auto-oriented. The sign regulations for this zone focus on allowing large-scale commercial and industrial businesses adequate signs that are proportionate to the associated structures. The regulations also promote motorist safety by requiring that signs are clear and legible from the road.

IMPORTANT NOTES

- **See Chapter 17.68.100 for MASTER SIGN PROGRAM if property has three or more tenants or includes a building with a facade exceeding 3,000 square feet.**
- **If a business is near the edge of a district, please consult Planning Staff to confirm appropriate district designation.**
- **If a sign type does not appear in the following table it is prohibited in this district.**
- **Signs advertising BRAND NAMES are prohibited in all districts.**
- **Signs that describe offered products or services COUNT towards total allowed signage.**
- **If illumination or lighting of ANY kind is proposed on or around signs, see Section 17.68.030, C-10.**

Sidewalk Signs. *See draft Sidewalk Sign Application / Encroachment Permit.*

Quintana Road District

Sign Type	Total # of signs allowed	Sign Area Allowed*	Max. Sign Area per sign (sq. ft)	Additional Regulations
Awning and Canopy	1 per frontage (choose one type) *window signs: 1 per window*	15% of primary facade, 15% of secondary façades*	--	See Section 17.68.030, C-2
Marquee			--	See Section 17.68.030, C-11
Wall (Surface)			--	See Section 17.68.030, C-19
Window			30% of window	
Architectural (Freestanding)	1 per driveway entrance (choose one)		25	See Section 17.68.030, C-1
Monument (Freestanding)			40	See Section 17.68.030, C-13
Pole (Freestanding)	1 per property		--	Conditional Use Permit See Section 17.68.030, C-14
Projecting (Pub)	1 per frontage		16	See Section 17.68.030, C-15
Bonuses				
Architectural and Monument	PLUS (+) 20 sq. ft. for businesses with **facade set back more than 30 ft. from edge of public ROW**		40	
Wall (Surface)	PLUS (+) 10 sq. ft. for **Individual Lettering**		--	
Window	PLUS (+) 5 sq. ft. for **Individual Lettering**		30% of window	
Sidewalk Sign	See Sidewalk Sign Specifications			

*** Primary facades shall contain maximum signage equal to 15% of facade area, and secondary facades shall contain maximum signage equal to 15% of façade area (extra allowable sign area granted for secondary facades cannot be implemented on the primary façade, and vice versa).**

17.68.070 North Main District

Purpose. The North Main District is composed of industrial, commercial, and mixed use zones. While pedestrian and bicycle activity is present, this district is auto-oriented. The regulations for this district promote signs that are appealing to pedestrians, bicyclists, and automobiles.

The regulations for this district also intend to increase the aesthetic quality of signs that are visible from Highway 1.

IMPORTANT NOTES

- **See Chapter 17.68.100 for MASTER SIGN PROGRAM if property has three or more tenants or includes a building with a facade exceeding 3,000 square feet.**
- **If a business is near the edge of a district, please consult Planning Staff to confirm appropriate district designation.**
- **If a sign type does not appear in the following table it is prohibited in this district.**
- **Signs advertising BRAND NAMES are prohibited in all districts.**
- **Signs that describe offered products or services COUNT towards total allowed signage.**
- **If illumination or lighting of ANY kind is proposed on or around signs, see Section 17.68.030, C-10.**

Sidewalk Signs. *See draft Sidewalk Sign Application / Encroachment Permit.*

North Main District

Sign Type	Total # of signs allowed	Sign Area Allowed	Max. Sign Area per sign (sq. ft)	Additional Regulations
Awning and Canopy	1 per frontage (choose one type) *window signs: 1 per window*	15% of primary facade, 15% of secondary façades	--	See Section 17.68.030, C-2
Marquee			--	See Section 17.68.030, C-11
Wall (Surface)			--	See Section 17.68.030, C-19
Window			30% of window	
Architectural (Freestanding)	1 per driveway entrance (choose one)		40	See Section 17.68.030, C-1
Monument (Freestanding)			40	See Section 17.68.030, C-13
Pole (Freestanding)	1 per property		--	Conditional Use Permit See Section 17.68.030, C-14
Projecting (Pub)	1 per frontage		16	See Section 17.68.030, C-15
Bonuses				
Architectural and Monument	PLUS (+) 20 sq. ft. for businesses with **facade set back more than 30 ft. from edge of public ROW**		40	
Wall (Surface)	PLUS (+) 20 sq. ft. for **Individual Lettering**		--	
Window	PLUS (+) 10 sq. ft. for **Individual Lettering**		30% of window	
Sidewalk	See Sidewalk Sign Specifications			

*** Primary facades shall contain maximum signage equal to 15% of facade area, and secondary facades shall contain maximum signage equal to 15% of façade area (extra allowable sign area granted for secondary facades cannot be implemented on the primary façade, and vice versa).**

17.68.080 Lodging Establishments

Purpose. The following regulations apply to lodging establishments in ALL districts. Lodging establishments in the City are located in both residential and commercial zones, and have unique requirements that do not coincide with the signage needs of other types of businesses. The regulations in this section are intended to promote signs that attract potential customers and that are also appealing to both residents and tourists

1. **Attraction Boards for Hotels. Motels and Bed and Breakfast Establishments**. An attached or detached attraction board, not to exceed five square feet in sign area, is allowed, provided it is included within the calculation of the maximum allowable sign area for a hotel, motel, or bed and breakfast establishment. Advertisement of current rates is prohibited.

IMPORTANT NOTES

- **See Chapter 17.68.100 for MASTER SIGN PROGRAM if property has three or more tenants or includes a building with a facade exceeding 3,000 square feet.**
- **If a business is near the edge of a district, please consult Planning Staff to confirm appropriate district designation.**
- **If a sign type does not appear in the following table it is prohibited in this district.**
- **Signs advertising BRAND NAMES are prohibited in all districts.**
- **Signs that describe offered products or services COUNT towards total allowed signage.**
- **If illumination or lighting of ANY kind is proposed on or around signs, see Section 17.68.030, C-10.**

<table>
<tr><th colspan="5">Lodging Establishments</th></tr>
<tr><th>Sign Type</th><th>Total # of signs allowed</th><th>Sign Area Allowed*</th><th>Max. Sign Area per sign (sq. ft)</th><th>Additional Regulations</th></tr>
<tr><td>Attraction Boards</td><td>1 per business</td><td rowspan="7">15% of primary facade, 10% of secondary facades</td><td>5</td><td>Cannot display rates.</td></tr>
<tr><td>Awning and Canopy</td><td rowspan="2">1 per frontage (choose one)</td><td>--</td><td>See Section 17.68.030, C-2</td></tr>
<tr><td>Wall (Surface)</td><td>--</td><td>See Section 17.68.030, C-19</td></tr>
<tr><td>Architectural (Freestanding)</td><td rowspan="2">1 per driveway entrance (choose one)</td><td>25</td><td>See Section 17.68.030, C-1</td></tr>
<tr><td>Monument (Freestanding)</td><td>25</td><td>See Section 17.68.030, C-13</td></tr>
<tr><td>Projecting (Pub)</td><td>1 per frontage</td><td>16</td><td>See Section 17.68.030, C-15</td></tr>
<tr><td colspan="3">Bonuses</td><td colspan="2" rowspan="3"></td></tr>
<tr><td>Wall (Surface)</td><td colspan="2">PLUS (+) 4 sq. ft. for Individual Lettering</td></tr>
<tr><td>Sidewalk</td><td colspan="2">See Sidewalk Sign Specifications;
NOT allowed in Embarcadero District</td></tr>
</table>

*** Primary facades shall contain maximum signage equal to 15% of facade area, and secondary facades shall contain maximum signage equal to 10% of façade area (extra allowable sign area granted for secondary facades cannot be implemented on the primary façade, and vice versa).**

Additional Illumination Standards:

- Signs on facades facing residential zones shall not be illuminated after 10 PM regardless if business is open or closed.

17.68.090 Industrial Zones

Purpose. The following regulations apply to businesses located in industrial zones in ALL districts. Industrial businesses have unique requirements that do not coincide with the signage needs of other types of businesses.

IMPORTANT NOTES

- **See Chapter 17.68.100 for MASTER SIGN PROGRAM if property has three or more tenants or includes a building with a facade exceeding 3,000 square feet.**
- **If a business is near the edge of a district, please consult Planning Staff to confirm appropriate district designation.**
- **If a sign type does not appear in the following table it is prohibited in this district.**
- **Signs advertising BRAND NAMES are prohibited in all districts.**
- **Signs that describe offered products or services COUNT towards total allowed signage.**
- **If illumination or lighting of ANY kind is proposed on or around signs, see Section 17.68.030, C-10.**

Industrial Zones				
Sign Type	**Total # of signs allowed**	**Sign Area Allowed***	**Max. Sign Area per sign (sq. ft)**	**Additional Regulations**
Awning and Canopy	1 per frontage (choose one)	10% of primary facade, 5% of secondary facades	--	See Section 17.68.030, C-2
Wall (Surface)			--	See Section 17.68.030, C-19
Bonuses				
Wall (Surface)	PLUS (+) 8 sq. ft. for **Individual Lettering**		--	

*** Primary facades shall contain maximum signage equal to 10% of facade area, and secondary facades shall contain maximum signage equal to 5% of façade area (extra allowable sign area granted for secondary facades cannot be implemented on the primary façade, and vice versa).**

17.68.100 Sign Permits

A. **Zoning Clearance or Sign Permit Required**

1. **Authority**. No sign, other than an exempt sign, shall be erected or altered, without first obtaining a zoning clearance or sign permit from the Public Services Director. The Director may attach reasonable conditions on the approval of the sign permit to help ensure compliance with this Chapter. These conditions may require the removal, modification or relocation of existing signs where the proposed sign(s) would be located on sites where existing signs are nonconforming.

2. **Application Requirements**. Applications for a sign permit shall be made in writing upon forms furnished by the Public Services Director, accompanied by the required fee and plans drawn to scale and with all of the following information. Where the scale and scope of the sign proposal so warrants, the Director may waive some of the informational requirements listed below provided all information necessary for adequate review of the proposal is submitted.

   a. The proposed design, dimensions, copy, color, lighting methods and location of the sign on the site, including the dimensions of the sign's supporting members, and details of all connections, guy lines, supports and footings, and materials to be used.
   b. The maximum and minimum height of the sign.
   c. The location of off-street parking facilities, including entries and exits where directional signs are proposed.
   d. The size and dimension of all signs existing on the site.
   e. The location and horizontal frontage of any building(s) on the property, both existing and proposed.
   f. Photographs of all existing signage and the building faces or sites where signage is proposed.
   g. Any other information deemed necessary by the Public Services Director.

B. **Required Findings. In approving a sign permit, the Director must find that:**

1. Signs on all proposed buildings or new additions to existing buildings are designed as an integral part of the total building design.

2. The location of the proposed sign and the design of its visual elements (lettering, words, figures, colors, decorative motifs, spacing and proportions) are legible under normal viewing conditions that prevail where the sign is to be installed.

3. Review of signs at city entryways as defined in the Scenic Highway Element of the General Plan shall also be subject to the following provisions:

   a. Sign area, height and location of signs shall be designed so as not to interfere with

view corridors as defined and specified in the General Plan/Local Coastal Plan.

b. Freestanding signs shall not exceed eight feet in height except within one hundred feet of Highway 1 or Highway 41. Where feasible, all freestanding signs within or along city entryways shall be placed within a landscaped planter.

17.68.110 Master Sign Program

A. **Purpose.** Master Sign Programs establish criteria for multi-tenant properties that ensure signage is uncluttered, consistent, and fairly distributed between tenants.

B. **Applicability.**

1. Any site having three (3) or more non-residential occupants shall submit a master sign program to be reviewed and approved by the decision-making authority for the use (e.g. the Public Services Director or the Planning Commission).

2. Any site having three or fewer non-residential occupants may submit a master sign program to be reviewed and approved by the decision-making authority.

3. Projects involving construction or renovation of more than 25,000 square feet of space in the commercial and mixed use zoning districts shall submit a master sign program which must be approved prior to issuance of any occupancy permit.

4. Properties subject to a MSP that do not have one shall establish a MSP when a current tenant proposes the installation of a new sign.

5. Nonconforming signs shall be amortized when a tenant closes their business and a new tenant moves in. All new signs shall conform to the approved Master Sign Program.

C. **Application Requirements.** Applications for approval of a master sign program shall be submitted to the Public Services Director and shall include the following:

1. Master Sign Program. A Master Sign Program, drawn to scale, delineating the site proposed to be included within the signing program and the location of all proposed signs.

2. Drawings and Sketches. Drawings and/or sketches indicating the exterior surface details of all buildings on the site on which wall signs, directory signs, ground signs or projecting signs are proposed. Illuminated sign locations and illumination methods shall also be specified.

3. Photographs of all existing signage and the building faces or sites where signage is proposed.

4. Statement for Modifications. A statement of the reasons for any requested modifications

to the regulations or standards of this Chapter.

5. Sign Standards. A written program specifying sign standards, including color, size, construction details, placement, and necessity for City review for distribution to future tenants.

6. Directory Sign. A directory sign not exceeding 12 feet in area shall be integrated into the site design and placed on the primary frontage or entryway. The sign shall have space to advertise the names of businesses associated with the MSP.

7. Public Access Sign. If a property includes a public access way, this access shall be indicated with a sign (minimum 3 square feet) on the primary building façade.

D. **Allowable Modifications**. A Master Sign Program may provide for additional sign area and other deviations from the standards of this Chapter, provided that the Master Sign Program is consistent with the provisions of all Sections in this Chapter.

E. **Required Findings**. In approving a Master Sign Program, the decision-making authority shall find that all of the following are met:

1. The proposed signs are compatible in style and character with any building to which the sign is to be attached, any surrounding structures, and any adjoining signage on the site;

2. Future tenants will be provided adequate opportunities to construct, erect or maintain a sign for identification;

3. All current and future tenants shall be granted adequate advertisement space on the property's primary frontage; and

4. Directional signage, required directory sign, and building addressing is adequate for pedestrian and vehicular circulation and emergency vehicle access.

F. **Conditions of Approval**. The Planning Commission may attach any reasonable conditions necessary to carry out the intent of the Master Sign Program requirement, while still permitting each sign user opportunities for effective identification and communication.

G. **Administrative Approval of Signs Consistent with Master Sign Program**. Following approval of a Master Sign Program, the Public Services Director is authorized to issue building permits or other permits, as deemed necessary, to install signs that conform to an approved Master Sign Program. Minor modifications of individual sign area may be approved, provided the maximum allowed by an approved Master Sign Program is not exceeded.

17.68.120 Appeals

A. **Persons Who May Appeal**. Except as provided for elsewhere in this Title, appeals may be made by the following persons, in the following instances:

1. Local Appeals**.** Appeals to the Planning Commission or City Council may be filed by the applicant, by the owner of property, or by any other person aggrieved by a decision that is subject to appeal under the provisions of this Title.

B. **Final Decision Required**. Unless otherwise specified by Federal or State law, an appeal must be brought and a final decision rendered by the hearing body before the matter may be appealed to a court of law.

C. **Time Limits.** Unless otherwise specified in State or Federal law, all appeals shall be filed within 10 days of the date of action.

D. **Proceedings Stayed by Appeal**. The timely filing of an appeal shall stay all proceedings in the matter appealed, including, but not limited to, the issuance of City building permits and business licenses.

E. **Appeals of Director Decisions**. A decision of the Public Services Director on any application may be appealed to the Planning Commission by filing a written appeal with the Planning Department. The appeal shall identify the decision being appealed and shall clearly and concisely state the reasons for the appeal.

F. **Appeals of Planning Commission Decisions**. Decisions of the Planning Commission may be appealed to the City Council by filing a written appeal with the City Clerk. The appeal shall identify the decision being appealed and shall clearly and concisely state the reasons for the appeal.

G. **Transmission of Record**. The Director, or in the case of appeals to the City Council, the City Clerk, shall schedule the appeal for consideration by the authorized appellate body within 60 days of the date the appeal was filed. The Public Services Director shall forward the appeal, the Notice of Action, and all other documents that constitute the record to the appellate body. The Director also shall prepare a staff report that responds to the issues raised by the appeal and may include a recommendation for action.

H. **Appellate Body Action**. The appellate body shall review the appeal, the administrative record, and any written correspondence submitted after the appeal has been filed, and may take one of the following actions:

1. Conduct a public hearing and decide on the action; or

2. Remand the matter to the decision-making body or official to cure a deficiency in the record or the proceedings.

I. **No "De Novo" Review**. At an appeal or review, the appellate body shall consider only the same application, plans, and related project materials that were the subject of the original decision.

J. **Appellate Body Decision**. The appellate body shall render its decision within 60 days of the date the hearing is closed unless State law requires a shorter deadline. An action to grant an appeal shall require a majority vote of the appellate body members. A tie vote shall have the effect of rejecting the appeal.

K. **Standards of Review.** When reviewing any decision on appeal, the appellate body shall use the same standards for decision-making required for the original decision. The appellate body may adopt the same decision and findings as were originally approved.

17.68.130 Definitions

Abandoned Sign. A sign that no longer applies to a business space, building, or site, due to lack of a valid business license, change of business name, or for any other reason that renders the sign not applicable to the premises involved.

Billboard (Outdoor-off-site freestanding sign). A sign placed for the purpose of advertising products or services that are not produced, stored or sold on the property or any other subject no related to the property or use of the property, upon which the sign is located.

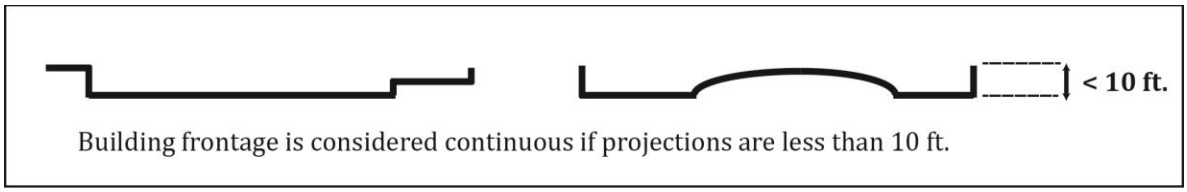
Building Mounted Sign. Any sign mounted or erected on or against any building or façade and includes all walls signs, awning and canopy signs and projecting signs.

Business Sign. Any interior or exterior sign which is intended to identify the name or portions of the business name and which is viewable from any exterior area open to the public.

Canopy shall refer to an ornamental roof like structure upon which a sign may be attached or otherwise affixed which is usually located over gasoline pumps.

Construction Sign. A sign displayed by a contractor, subcontractor, or architect on a project site whenever a building permit has been issued for construction, alteration, or repair of a structure and when work is in progress on site pursuant to such permit.

Building frontage. The linear measurement in feet of the property line directly fronting on a public street, or other public right-of-way to which such sign is oriented, excluding California State Highway One.



Height of a sign means the greatest vertical distance measured from the ground level directly beneath the sign to the top of the sign or from the nearest property line fronting on a public street, whichever is lower.

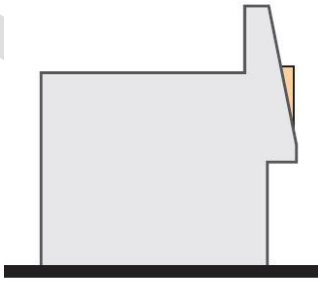
Illegal Sign. An unpermitted sign that is found to be erected or maintained in violation of any provision of this Chapter, this Title, or any other Federal, State, or local law.

Façade Length. The length of the building face or tenant lease site (see page 6 of this Chapter for a graphical representation).

Façade Height. The height of the building face or tenant lease site (see page 6 of this Chapter for a graphical representation).

Master Sign Plan. A coordinated program of all signs, including exempt and temporary signs for a business, or businesses if applicable, located on a development site. The sign program shall include, but not be limited to, indications of the locations, dimensions, colors, letter styles and sign types of all signs to be installed on a site.

Mansard. A roof-like façade comparable to an exterior building wall.



Nonconforming Sign. Any previously approved and permitted sign that existed prior to a change in the municipal code that prohibits such sign. A nonconforming sign is different than an illegal sign (see definition above for "Illegal Sign").

Open House Sign. An open house sign advertises that a house is open for view as part of the sale or exchange of the property.

Primary Façade. The face of a building or tenant lease site that incorporates the main entrance to the business and that faces a primary street, as determined by the business owner.

Real Estate Sign. A sign identifying that a property is for sale, lease, exchange, or rent. The purpose of this sign is to help owners in the sale of their property by providing information on

the location of the property to potential buyers without impairing the appearance of the community.

Secondary Façade. The face of a building or tenant lease site that serves as a secondary entrance and/or advertising space to the primary façade, as determined by the business owner.

Signs. Any object, structure, symbol, emblem, logo, or display, or any combination thereof, which is intended to or does identify, attract attention to, advertise, or communicate information of any kind to the public. See also Chapter 17.68: Signs.

Sign Area. The entire area of a sign calculated for maximum sign area purposes, pursuant to Chapter 17.68:

Sign Face. The surface or surfaces used for the display of a sign message as seen from any one direction.

CHAPTER 2

On-Premise Signs and Traffic Safety

By Douglas Mace

Traffic engineers understand that drivers use many roadside features other than public highway and street signage as navigational aids. Some of those roadside features are commercial, on-premise signs.

In fact, these signs may be just as important to wayfinding as street names, addresses, and highway directional signs. Recognizing that importance, this chapter, based on traffic engineering research about highway signs, will explore three important factors that affect the behavior of drivers and the effectiveness of signs. Those factors are:

- conspicuity or visibility, referring to how distinguishable a sign is from its "surround," which is a term used to describe the area around the sign that the a viewer sees from the location where the viewer would ideally detect the presence of the sign (in other words, how "conspicuous" the sign is given the elements in the area around it);
- legibility, which is related to a viewer's ability to make out the symbols (e.g., letters, icons, etc.) that constitute the sign, a factor dependent on distance and the viewer's eyesight; and
- recognition or readability, which describes how well the viewer can understand or make sense of what appears on the sign.

The chapter first addresses three hypotheses about the relationship of commercial signs to traffic safety. It then describes the engineering practice of Positive Guidance and the relationship of driving tasks, driver cognitive behavior, and the principles of Positive Guidance. This is followed by a section on guidelines that the business community, sign makers, sign regulators, and citizens might find helpful in determining how to make commercial signs visible and readable in a way that enhances economic activity, community appearance, and traffic safety.[1] Finally, it describes a process, cooperative triangulation, that might help communities reach a consensus among all the parties affected by signage issues. Firth (Transportation Research Circular, in press) has cited examples of this process that have produced positive results.

RESEARCH RELATING ON-PREMISE SIGNS AND TRAFFIC SAFETY

While there has been research directed at electronic message signs and billboards, there has been very little published research into the relationship of on-premise signing and traffic safety. The research that exists appears to explore the validity of two hypotheses that have sometimes been generalized to include on-premise signing.

The first hypothesis is that commercial (including on-premise) signs distract drivers and result in more accidents. This hypothesis suggests that advertising signs are traffic hazards because they distract a driver's attention from the primary driving tasks and, therefore, increase the likelihood of accidents. This may occur when a driver samples (i.e., looks at or pays full attention to) the traffic environment too infrequently for conditions. Without advertising displays, the driver may sample the roadway more frequently, providing a greater margin of safety.

The second hypothesis is that commercial signs mask the visibility of highway signs, which also results in more accidents. Advertising signs may provide background luminance, color, or movement that could make a traffic sign or signal of greater importance more difficult to detect. For example, Jenkins (1981) and Mace et al. (1982) have shown that the visual complexity of a scene reduces the likelihood of traffic sign detection. The problem can be circular because signs may contribute to visual complexity that reduces the conspicuity of other signs. Complex scenes reduce conspicuity, and conspicuity, together with information value, determine what signs are noticed.

The problem with both of these hypotheses is that they emphasize only the possible negative effects of commercial signs on traffic safety. Working from that premise alone, one can never prove that signs are good, only that they are bad. Therefore, these hypotheses and the conclusions that follow from testing them are limited.

Johnson and Cole (1976) point out that, in general, drivers' sampling *must* be sound; if not, there would be many more accidents in the vicinity of advertising signs. Also, they suggest that drivers can ignore information that they judge to be irrelevant or when they are preoccupied with a more important task. We would agree that "in general" this is all probably true. What concerns traffic engineers are the exceptions to the "in general" rule. Accident reduction is always concerned with the exceptions, not the rule.

Whatever the truth of these hypotheses,[2] there is a counter hypothesis that better serves the public interest by emphasizing the positive effect of all signing on traffic safety. That hypothesis simply states that information deficiencies increase the likelihood of accidents. This is true whether the deficiency is caused by distraction so that drivers do not attend to important information, by masking that prevents drivers from seeing information, by information overload that results in drivers missing information because they lack sufficient time to process it, or by the complete absence of information at the point where drivers need it. An information deficiency exists when needed information is not there at all, is not visible enough to be recognized at the required distance in the existing lighting conditions, is not presented with sufficient time to process it, or is not located within the "cone of vision" (i.e., the area in which a driver has a generally clear view of objects in and around the roadway).

The deficiency hypothesis suggests that sign deficiencies foster driver uncertainty and, therefore, increase the likelihood of an accident. Schwab (1998) noted that "traffic safety is not jeopardized by the sign itself or some type of stimulus overload; instead the culprit is inadequate sign size or lighting, or inappropriate placement, or a combination of these fac-

tors." He concluded that the proper use of on-premise signs could become a "major tool for enhancing public safety." Specifically, he set out to establish a minimum visibility threshold to assist sign makers, sign users, and public officials in identifying and eliminating deficient signing.

To expand the applicability of this alternative hypothesis, sign deficiencies should be defined in a very broad sense to include:

- too much irrelevant information for the current traffic circumstances;
- too many competing signs masking the visibility of needed information;
- missing navigational information (including on-premise signs);
- poor placement of signs (e.g., outside the cone of vision); and
- inadequate legibility distance, given traffic circumstances.

Signs are deficient if they do not provide needed information when and where it is needed. Signs that are missing, difficult to find, difficult to read, or provide too much, too little, or confusing information result in driver disorientation. Disoriented drivers are more likely to vary speed, brake excessively, encroach on lane lines, or miss exits or turns. Signs must have the conspicuity and size to be noticed and read where the information is needed, while at the same time recognizing the legitimate information needs of other driving tasks. Deficient signing is not a sign attribute, but a construct relating sign characteristics with driver needs determined by their motivation, expectancies, and visual ability. Hungry drivers are motivated to find food. Violated expectancies increase the importance and type of information needed. Drivers expecting an entrance in a certain location need a sign to tell them if it is or is not going to be there. Failure to provide this information is a signing deficiency.

All these hypotheses are accepted at face value and are not proved by any strong experimental foundation. This does not make them false, but it does serve notice that not much is known about the extent or conditions under which they are valid. In sum, we think all sides in the arguments over commercial signing have elements of truth in their positions. In other words, *in some circumstances*, commercial signs *do* distract, *sometimes* they *mask* more important information, and *sometimes* they *help* disoriented drivers find their way and drive more safely.

A THEORY OF DRIVER BEHAVIOR

In order to understand the interplay between commercial signing and traffic safety, one must understand the dynamics of driving. The highway literature is filled with accepted principles that can be used to infer a general theory relating signing and driver behavior. This information has provided researchers with a set of principles that can be employed in analytic tools to improve highway and traffic engineering. In particular, the theory described in this section was implicit in the development of the engineering practice called Positive Guidance (Alexander and Lunenfeld 1990). Positive Guidance was developed as a tool for traffic engineers to diagnose problems and propose solutions to improve safety and traffic operations at sites with identified safety problems, particularly problems related to the processing of highway information, including signs, by drivers. Positive Guidance attempts to improve the highway information system to match driver attributes and information demands. This chapter represents the first effort to apply the practice of Positive Guidance to commercial signing.

Driving and the Role of Primacy

Driver error results from excessive task demands, expectancy violations, too much or too little processing demand, or deficient information displays. There are three generic tasks in driving that can be described in terms of an ascending scale of task complexity and a descending scale of primacy (i.e., the relative importance of each task to safety).

1. ***Control:*** high in primacy; low in complexity
2. ***Guidance:*** medium in both primacy and complexity
3. ***Navigation:*** low in primacy; high in complexity

Control includes all activities (e.g., steering and speed control) involved in the driver's interaction with the vehicle and its controls and displays (e.g., the steering wheel and speedometer). Task performance ranges from relatively undemanding (passenger vehicle with automatic transmission and power steering) to relatively demanding (tractor-trailer with multiple gears and clutches). Information for this subtask comes primarily from the "feel" of the vehicle itself, from its displays, and from the roadway. Drivers continually make minute adjustments and use feedback to maintain control. While this is the most critical subtask (rated high in primacy), most control activities, once mastered, are performed "automatically" with little conscious effort (rated low in complexity). This situation can rapidly become more complex, such as when a vehicle loses stability on a slippery surface, experiences a tire blow-out, etc.

At the guidance level, the driver's main activities involve the maintenance of a safe speed and proper path relative to roadway and traffic elements (e.g., intersections, other vehicles, and work areas). Guidance activities are characterized by judgment, estimation, and prediction within a dynamic, constantly changing environment. Information is gathered from the highway and its appurtenances, traffic, and the highway's information system. Guidance-level decisions are translated into speed and path maneuvers in response to alignment, grade, delineation, hazards, traffic, and the environment.

The most complex subtask, navigation, refers to the execution of a trip from point of origin to destination. Trips may be planned in advance but may change in route (e.g., a driver suddenly gets hungry or the gas tank approaches empty). Most navigation consists of a pre-trip phase, when trips are planned and routes selected, and an in-trip phase, when the travel route is followed. Pre-trip information sources include maps and verbal instructions. In-trip information sources include landmarks, route guidance signs, street name signs, and on-premise signing. This subtask is most complex in that it requires integrating information from many sources and applying judgment.

The Hierarchy of Information Needs

The information needs of the driver mirror the three driving tasks of control, guidance, and navigation. Alexander and Lunenfeld (1990) point out that drivers are continually accepting information for all three subtasks. When information needs are competing, primacy dictates what information is needed most. For example, a driver stops looking for a place to eat when negotiating a sharp curve because control is higher in primacy than navigation. While it is true that failures in navigation are usually noncatastrophic (drivers become lost and delayed when navigation mistakes are made, but navigation failures generally have less impact on the system than control or guidance errors), navigational errors should not be dis-

ISSUES IN THE REGULATION OF COMMERCIAL ELECTRONIC VARIABLE-MESSAGE SIGNAGE (CEVMS)

By Jerry Wachtel

The Federal-Aid Highway Beautification Act of 1965 prohibited signs that used flashing, intermittent or moving lights, or animated or moving parts. In November 1978, the U.S. Congress amended the Act to allow on-premise signs, displays, and devices "including those which may be changed at reasonable internals by electronic process or remote control…and which provide public service information or advertise activities conducted on the property on which they are located."

Following the 1978 amendment, the Federal Highway Administration (FWHA) undertook a study about the safety and aesthetic impact of these signs, which came to be known as Commercial Electronic Variable-Message Signage (CEVMS). FHWA requested the study because Congress had left it to the agencies administering the law to conduct research that would refine the general criteria and specifications that Congress had set out for CEVMS use.

With regard to human factors and highway safety considerations, the report reached two principal conclusions, which are summarized below:

1. While some accident studies have reported a positive relationship between accidents, high driving-task demands, and the presence of roadside advertising, others have reached opposite conclusions. Because of the limitations of accident studies, the available evidence that can be drawn from them remains statistically insufficient to *support* or *refute* such a relationship. Some investigators, both prior and subsequent to the publication of the FHWA report, suggested that drivers are capable of exercising appropriate primacy by ignoring visual or other stimuli that are not essential to the driving task, such as CEVMS. Other research, however, including recent studies of driver distraction, indicates that drivers do not always engage in appropriate primacy behavior.

Marya Morris

2. The substantial flexibility of display possessed by CVEMS makes it possible to use such signs in ways that can attract drivers' attention at greater distances, hold their attention longer, and deliver a wider variety of information and image stimuli than is possible by the use of conventional advertising signs. Use of this potential by advertisers seeking to reach an audience of highway users may increase the risk of overloading a driver's capacity to process important safety information and, consequently, increase the likelihood of driver error, particularly under road and traffic conditions in which drivers may already be stressed. Although the nature of these risks has been recognized in the research literature, the authors of the FHWA study suggested that further research was needed to quantify and categorize it. Those studies have never been conducted to the best of our knowledge.

Proponents of CEVMS hold that such technology can be operated in a manner that is quite different from traditional flashing, animated, scintillating, or moving message signs. Indeed, the adoption of such technology for use in official highway signs supports this view. The fact remains, however, that CEVMS uses technology that *can* be operated in a manner that is distracting. Therefore, issues of sign operation, location, and use, rather than the existence of the technology per se needs to be addressed by the highway safety community.

Issues in regulating CEVMS are complex. The best information available at this juncture is in Appendix A to this PAS Report, which takes excerpts directly from the 1980 FHWA report. These excerpts define the issues that local government needs to examine before regulating CEVMS. Table 4 from that report, included in Appendix A, will be especially helpful in addressing issues related to traffic safety and the visual environment for CEVMS.

Jerry Wachtel is a psychologist and was one of the principal investigators and authors of the FHWA study, *Safety and Environmental Design Considerations in the Use of Commercial Electronic Variable-Message Signage*, FHWA/RD-80-051.

missed since they may increase driving time and distance, increasing exposure to an accident. Traffic safety is usually defined in terms of accidents per million vehicle miles. Therefore, to the extent that signing deficiencies result in additional miles of driving, these deficiencies reduce safety.

Information-Decision-Action

Each of the three driving tasks (control, guidance and navigation) are referred to as "information-decision-action" tasks. Drivers receive information from numerous sources and use that with information they already have (e.g., experience, skills, expectancies, and trip plans) to make decisions and perform actions. Drivers often have overlapping information needs. For example, a driver would need to know the position of his or her car in the lane at the same time he or she was trying to find an entrance to a drug store. In order to make a safe turn into that driveway, the driver: searches the environment; detects, receives, and processes information; makes decisions; and performs control actions in a continual feedback process.

Many researchers have noted different levels of information processing, which include the following stages.

1. Visual attention
2. Stimulus recognition and comprehension
3. Response selection and decision making

Visual attention. Hughes and Cole (1984) conceptualized the information acquisition process as it relates to driving. Their conclusions are summarized here.

- The visual environment contains information that is transferred to the retina of the eye where it is transformed to a neural code and transferred to iconic memory.
- There is probably little loss of information in this process, and the loss that does occur is related to the limits of the observer's eyesight.
- Iconic memory decays rapidly, but it can be "read" by some form of central processor and the information "read" is then transferred to short-term memory where it is available for recall or for decision making. Short-term memory decays over a period of several seconds, and its contents tend to be obliterated by new incoming information.

The factors that determine whether an element of information in iconic memory will be transferred to short-term memory, and therefore will be part of a recall or decision-making process, are the sensory conspicuity of the element, its information content, and the informational needs of the observer. Besides the incoming data, the central processor also employs other cognitive processes of the observer, including long-term memory. All of these sources will bear on the strategy used to scan the contents of iconic memory and on the criteria for selection of particular elements of information contained in it for transfer to short-term memory.

With regard to visual stimuli, drivers are serial processors who handle one source of visual information at a time. Given the need to parallel process (handle several displays simultaneously) while driving, they compensate by "juggling" several information sources. Drivers integrate various activities and maintain an appreciation of a dynamic, changing environment by sampling information in short glances and shifting atten-

tion from one thing to another. They rely on judgment, experience, estimation, prediction, and memory to fill in the gaps, to share tasks, and to shed less important information. Expectancy, motivation, and conspicuity all play a role in determining what a driver will notice.

Of course, for drivers to find information useful, it must first be noticed. Of the different levels of information processing, the greatest amount of research appears to have focused on the attention skills of the driver and driver performance. Attentional factors include, but are not limited to, *the preattentive process, selective attention,* and *divided attention*. There is also the issue of what attracts attention when driving. Of special significance is the relationship between attention factors and the abilities of older drivers—a topic addressed in the paragraphs below on selective attention and divided attention.

In the *preattentive process*, a driver's attention is quickly directed to events occurring in the visual field, including those in peripheral vision. The size of the visual field has long been addressed by visual science. Sanders (1970) defined the "functional" field of view as the spatial area needed to perform a specific visual task. Ball and Owsley (1993) defined the useful field of view (UFOV) as the visual field in which information can be quickly acquired in a glance. UFOV relates the diameter of the visual field to the ability of a subject to detect, localize, and identify highly conspicuous targets in complex scenes. Unlike the functional field of view, the diameter of this field is not related to the sensitivity of the eye but to both the conspicuity of the target and the duration of the target's exposure.

Parasuraman and Nestor (1991) define *selective attention* as the ability to focus and shift attention among stimulus locations, features, and categories. On the relationship of accident rates to information-processing stages, they present evidence that the switching of visual selective attention has the greatest correlation with driving performance. Higher correlations between selective attention and self-reported accident rates were found for older adults, and the highest correlations were found when switching attention from one focus to another.

A literature review (Staplin et al. 1986) on selective attention shows disagreement among researchers on the relationship of selective attention to driver performance. Staplin et al. suggest that the findings from several studies point toward the presence of age-related deficits on selective attention tasks "only when the whole stimulus array must be processed in order to find the relevant stimuli." For example, if visual search is required to gain relevant information for the driving task, the slower speeds of information processing for older drivers may be apparent. However, not all driving tasks require visual search, and experienced older drivers may know where to focus their attention.

Since driving already requires that a driver be capable of *divided attention*, the relationship between divided attention deficits and performance is unclear. The effects of divided attention on the driving task appear to be most evident when the driving environment is highly complex or demanding. In such an environment, drivers might have difficulty "automatically" responding to a situation and may need a greater reliance on memory to process information.

Brouwer et al. (1991) found older adults to have a significantly decreased ability to divide their attention between two tasks of lane tracking and visual analysis when compared to young adult drivers. In the visual analysis task, the older drivers had significantly more errors even though the task was self-paced. Their findings appeared to indicate that older subjects "were less able to detect their errors or to adjust their

speed," which may offer evidence on age-related accidents where older drivers misperceive situations or do not react appropriately.

As the population ages[3] and demographics change, these considerations will necessarily play a greater role in helping determine how commercial on-premise signs, as part of the navigational aids experienced by drivers, can be sited and designed. Further research about visual attention and older drivers may lead to more definitive guidelines about such placement and design.

As regards an underlying issue (namely, what attracts attention when driving), Hughes and Cole (1986) report that, half of the time, drivers fixate on things not related to driving. And, when asked to report what they see, drivers report that half of the objects they see are not related to driving. Where advertising appears, there is increased attention to advertising, but this increased attention to advertising *does not result* in less attention to driving-related objects. Instead, a driver decreases attention to other non-driving-related objects. Hughes and Cole report several studies that all show that drivers have from 30 percent to 50 percent spare capacity that can be devoted to objects not related to driving, such as on-premise signs.

While these studies seem to suggest that the distraction and masking hypotheses described at the beginning of this chapter are not a significant problem, they need to be replicated in this country because their findings might not be accurate for twenty-first century America. Even without additional research, common sense suggests that the amount of spare capacity available to process navigational information is a function of the road, the environment, and driver familiarity.

Stimulus recognition and comprehension. Stimulus recognition occurs in stages as incoming visual information is compared with stored memory and an object that is first detected becomes partially recognized, perhaps with respect to its color or shape or texture. Hughes and Cole (1986) suggest that information content and the informational needs of the observer play a critical role in attention. If the object is recognized as something that might satisfy the information needs of the driver, additional sensory input will be acquired as the driver gets closer and recognition is completed. Objects that are recognized but not understood are not likely to receive attention. On-premise signs that communicate the nature of the business early and quickly will enable interested drivers to attend to the secondary information on the sign as they approach. Other drivers will be able to disregard the sign and search for other information more relevant to their needs.

Expectancy also plays a role in stimulus recognition and comprehension. Alexander and Lunenfeld (1990) suggest that drivers assume that their destination, no matter how obscure, will be signed on the freeway. Likewise, when looking for a commercial establishment, drivers expect to see signs telling them where businesses are, if not directing them as they get near. It would be helpful if drivers could know in advance how the destination will be signed. This is one of the elements that makes well-established logos so valuable to both the general public and the business community.

Response selection and decision making. A study of the role of information processing in highway design and its effect on decision making (COMSIS 1995) noted that decision sight distance (DSD) is a key concept of highway design and is based on perception reaction time and maneuver time. Alexander and Lunenfeld (1975) defined DSD as "the distance at which a driver can detect a signal . . . recognize it . . . select appropriate

speed and path, and perform the required action safely and efficiently." This definition clearly parallels the stages of information processing: visual search, recognition, evaluation, decision making, response selection, and response maneuver.

Response selection and decision making can be a more significant problem for older drivers. Perhaps contrary to the findings in Brouwer et al. (1991), Hildebrand and Wilson (1990) report that "when faced with a decision, elderly people opt for accuracy in making a choice rather than speed. Their performance is worse when faced with severe time constraint." The speed/accuracy tradeoff has been studied by many researchers, and it has generally been found that speed is associated with higher error rates. Overall, older subjects tend to reduce their response speed for the sake of accuracy when the task is self-paced. Thus, we should expect them to take more time to read the information from an on-premise sign.

In uncertain or complex driving situations with multiple alternatives, older drivers demonstrate slower responses as they attempt to integrate information to make an appropriate response selection. One aspect of the age-related slowing of information processing occurs when older drivers scan their immediate and working memory to access information for decision making. Researchers have found that older individuals scan memory less effectively than younger subjects. Memory scanning for action sequences and decision rules are an important component of driving, and slower scanning is an age-related effect that increases as driving complexity increases (Staplin and Fisk 1991).

Use of advance cues or response preparation appear to help older drivers with response selection and decision making. When preparation time allows longer stimulus exposure and longer intervals between stimuli, older drivers performed better with less slowness in response (Stelmach and Nahom 1992). In a study on left-turn intersection problems, Staplin and Fisk (1991) found that "cueing drivers with advanced notice of the decision rules through a redundant upstream posting of sign elements improved both accuracy and latency of young and older drivers' decisions."

In general, age differences in performance are greater at increased retinal eccentricities, indicating a loss of UFOV (the Useful Field of View) among older drivers. Ball and Owsley (1993) reported that the three components of age-related reduction of UFOV are attention deficits in (1) speed of visual processing, (2) decreased ability to divide attention, and (3) reduced selective attention or the decreased ability to localize targets. Both Shiner and Schieber (1991) and Ball, Sloane, Roenker, and Bruni (1993) have shown that restricted UFOV results in an increased probability of accidents, particularly at intersections. The reduction in UFOV and its associated attention deficits are not easily overcome. The AARP 55 ALIVE/Mature Driving program stresses ways that older drivers can minimize the effects of these problems. (The program is an 8-hour classroom refresher course for motorists age 50 and older who have years of driving experience.) Sign designers, business interests, and planners can also minimize the problems associated with restricted UFOV by following principles suggested elsewhere in this report, including reducing the density of information on a sign through simplifying sign design and increasing recognition distances to give older drivers more time to respond to a sign safely.

GENERAL PRINCIPLES OF HIGHWAY SIGNING

Before looking at the specifics of designing signs for legibility and conspicuity, it may be helpful to review some general guidelines for sign

design for road users. Some general guidelines can be obtained from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (hereinafter MUTCD). According to the FHWA web site (http://mutcd.fhwa.dot.gov/), "the MUTCD contains standards for traffic control devices that regulate, warn, and guide road users along the highways and byways in all 50 States. Traffic control devices are important because they optimize traffic performance, promote uniformity nationwide, and help improve safety by reducing the number and severity of traffic crashes." Other guidelines can be taken from the Positive Guidance engineering practice, which, as noted above, is based on principles that describe the relationship between highway information, including signs, and driver behavior. In both cases, the usefulness of these guidelines for our discussion about on-premise signs needs to be tempered with this acknowledgment; namely, these guidelines are primarily concerned with *highway* signage and will need to be revised and adapted when necessary for their application to on-premise signs.

Guidelines Based on Federal Sign Standards

The MUTCD addresses the requirements for a wide range of signs, including warning, regulatory, guidance, and Tourist-Oriented Directional Signs (TODS). The manual discusses sign shape, color, symbol and text, dimensions, and lettering. It also addresses standardization, uniformity, and the excessive use of signs. Although developed for highway signs, the criteria described in the MUTCD and supporting documents can be used to develop minimum size and proper placement guidelines for the design and installation of on-premise and other commercial signs.

Fulfill a need. The MUTCD requires that traffic signs fulfill a need, and it is important to recognize that all commercial signs, and particularly on-premise signs, also fulfill a need of drivers.

Command attention. Signs that command attention are safer as they increase the range of distance over which they may be read. Commanding attention does not mean the sign should have entertainment value (commercial signs should never compete with traffic control devices for attention), just that it can be noticed in time to be read where the information is needed. Remember, signs that fulfill a need require less conspicuity than other signs to be noticed.

Convey a clear simple message. Clear messages reduce the time to make decisions. Johnson and Cole (1976) conclude that, since reading a sign message requires a driver to remove his or her eyes from the road, the message should be as simple as possible, thus ensuring its rapid acquisition and minimizing the amount of time the driver must turn his or her eyes from events on the roadway. Additionally, simple messages may require fewer words, allowing larger letter size for a given sign face size, thereby increasing legibility and readability and reducing driver response time. Complicated messages may require very large signs, and excessive size may elicit conflict with citizens concerned about aesthetics. Finally, if a sign contains so much copy that it loses its information value (especially navigational value), requiring a driver to glance at it multiple times, conflicts may occur not only with control and guidance tasks, but also with the driver's attention to other on-premise signs that may have interest as well.

Give adequate time for proper response. Size and placement affect conspicuity, legibility, and readability, which, in turn affect the time that a driver has to read the sign and react safely to it. Site conditions play a major role in determining how much time is needed for a driver to have adequate time to respond to a sign. This issue is discussed in more detail below.

Command respect of road users. Drivers will respect signs if they meet the criteria described above because meeting those criteria will result in signs that meet the driver's expectations and fulfill the driver's need for information. Respect for signs gives users faith in the entire signing system, including on-premise, commercial signs.

Guidelines Based on the Positive Guidance System

The research findings about regulating attention, comprehension, response selection, and decision making are the basis for a number of general principles in the Positive Guidance approach to identifying information deficiencies.

Design for drivers and accommodate target groups. A sign system must meet the information needs of drivers and special groups like older drivers, truck drivers, non-English speaking, etc.

Be responsive to task demands. If the task demands that the driver look left, don't expect the driver to see your sign on the right. This requires proper site planning integrated with road geometry. Otherwise, provide advance information (e.g., an off-premise sign) to create proper expectancy. Traffic engineers use "Stop Ahead" and "Left Exit" signs to create expectancies.

Meet the driver's expectations for signage and avoid surprises. To avoid surprises, on-premise signing should make it clear where a business is and how to get there with a reasonable amount of advance notice. For example, a sign clearly indicating the distance to an entrance to a mall will help overcome problems caused by geometry and roadside design. Likewise, an off-premise sign should make it clear it is off-premises and that the business is somewhere else. Ambiguity will leave the driver bewildered and searching for the business.

Eliminate sources of information error and upgrade any deficient signing. The most obvious source of information error is a sign with incorrect information. A far more insidious source of information error is the absence of information needed to correct false impressions created by other highway features or expectancies. For example, a sign on the road may not provide the information that the business is to the rear of a shopping center and which entrance should be used. Or a group of signs may give the appearance that the businesses are adjacent to the sign when, in fact, access to them requires a turn at the next street and some additional wayfinding is warranted.

Avoid overload. The principles of primacy and avoiding overload are the reasons for numerous conflicts between traffic engineers, business interests, and sign regulators. The fact that advertising signs are sometimes placed where primacy suggests that they should not be placed is often the result of the restrictions on the placement of businesses in commercial districts where businesses benefit from proximity to one another but must also compete for attention. The design of the commercial district, including the design as it is affected by zoning regulations (e.g., setback, height, bulk, and landscaping regulations), is a factor in influencing the placement of signs. It is incumbent upon the urban planner, representatives of the business community, and traffic engineers to work together if overload is to be avoided and traffic safety enhanced.

Devices that have the potential to overload the driver include:

- moving or dynamic displays that may hold a driver's attention until the dynamic is concluded;

- changeable message signs that use a number of displays in sequence, making it difficult for the driver to know when the sequence is ended and not stressing the most relevant information; and
- signs with so much navigational information that the driving tasks of control and guidance are affected negatively.

Devices that are less likely to overload the driver include:

- signs that contain information that has nothing to do with navigation or guidance, such as a telephone number or address, which are likely to be ignored unless a driver is seeking it;
- coded information that can assist drivers in knowing what information is irrelevant to them (e.g., prices at gas stations are unlikely to be noticed unless a driver wants to buy gas); and
- information presented in small type may readily be discarded when the primary message is very legible (e.g., "Smith's Floral Shop" should be readable but secondary information, like "a dozen roses for $12," might be presented in small type that most drivers would ignore if they had no interest in purchasing flowers).

Apply primacy when information competes. On-premise signing should recognize the natural primacy of information affecting control (i.e., the driver's interaction with the vehicle and its controls and displays) and guidance (i.e., the driver's maintenance of a safe speed and proper path relative to roadway and traffic elements) and not attempt to interfere with the selective attention that primacy invokes. This principle requires cooperation and not finger pointing. While the driver can sometimes be expected to apply primacy when determining what information should be attended to, the number of signs and the amount of information on them may create information overload in some locations. It needs to be recognized, however, that sometimes traffic signs have less importance to the driver than an on-premise sign. Therefore, reducing the number of signs does not necessarily mean reducing only the number of commercial signs. It may mean removal of some unnecessary highway signs as well.

TOWARD AN EFFECTIVE AND SAFE SIGN SYSTEM

The principles articulated in both the Manual on Uniform Traffic Control Devices (MUTCD) and the Positive Guidance system make it possible to suggest some guidelines for the placement and design of on-premise, commercial signs. The following sections offer some observations and recommendations about sign density, information density, sign visibility, and sign design

Sign Density

Other than a general admonition against too many signs, the MUTCD does not offer any specific guidelines on sign density. Clearly, there should be fewer signs where vehicle operators may be overloaded with information from all roadside sources. As an example, consider that Johnson and Cole (1976) concluded that "such loading may occur in merging situations or at interchanges or within decision distances from formal traffic sign displays that present complex information and decisions to operators."

Planners could benefit from guidelines pertaining to the spacing of information on the highway. A number of techniques are available that may be used to limit the effects of sign density, including minimum spacing requirements and grouping signs for adjacent businesses on a single sign structure.

Spreading. Lower primacy information should be moved upstream or downstream to avoid conflicts with higher primacy information. The principle of spreading can be applied to on-premise signs in one of two ways. With new construction, care should be given to place entrances to shopping plazas so that on-premise signs do not interfere with higher primacy information. For example, entrances to business activity should be located as far from intersections and ramps as possible. Second, larger text can be used to move recognition of the most important information further upstream, and smaller text can be used to move less critical information downstream.

Coding. The use of graphics and icons reduces reading time and effectively increases the information processing capacity of the driver. Color and shape coding may be used to increase cognitive conspicuity (viz., conspicuity related to the information content of the sign and the psychological state of the observer) so that information density may be increased. While every sign cannot have the recognition of the Golden Arches, it is often possible to use a symbol of the service or product being offered to aid driver recognition and recall. For example, use of a symbol on an entry or exit sign for a parking lot to a franchise would be more conspicuous and deliver more information than the enter or exit sign alone. Maintaining sign space limits but using that space to deliver more conspicuous and more informative "copy" through coding could simultaneously benefit community aesthetics, business activity, and traffic safety.

Repetition. When possible there should be continuity of signing from billboards, Tourist-Oriented Directional Signs, and other advance signing to the on-premise sign and the specific business. A graphic on an advanced sign can help a driver better recognize sign content when that graphic is repeated on an on-premise sign.

Redundancy. Use redundancy to make certain that signs are visible to drivers from each approach or to reduce the chance of blocking or masking. A projecting sign is designed to be seen from upstream, from downstream, or across the street. For businesses that are setback from the street, a sign on the street and a high mounted sign over the building may be effective in helping the driver more easily find the business.

Information Density per Sign

In general, the more information on a sign, the greater the potential for the sign to distract drivers from other signs and highway information. This being said, there is no conclusive evidence that signs with more information are more distracting. Still, less copy on a sign permits more white space, which researchers believe increases drivers' attention or sign conspicuity. The United States Sign Council is currently funding research by The Pennsylvania State University to consider the benefits to business success of more empty space on signs. Empty space generally should result in less secondary copy. Empty space may also mean more aesthetically pleasing signs. This research may yield the first of many examples of how the interests of business, traffic engineers, the public, and planners may come together.

While more empty space and less secondary copy may best serve the needs of some businesses, other businesses may need to provide more secondary copy on their signs. This is not necessarily a problem for drivers since, as noted earlier, drivers filter out information that is not relevant to their needs. However it is easier for drivers to filter nonrelevant information if the primary navigational information is made highly legible. Therefore, secondary, nonnavigational information should not be the same size as the primary navigational message.

Douglas Mace

Signs that clearly and quickly identify the type of business allow drivers to ignore secondary information if they are not interested. In this case, a driver would need more than a quick glance at this sign to know that the business is selling ice cream.

Douglas Mace

The name of the business is clearly displayed on this sign, but only at the same legibility as all the secondary advertising copy. Although drivers can filter out nonessential information (in this case, the secondary ad copy), signage is more effective when the navigational information (in this case the Burger King logo) is larger than the non-navigational information ("Treat Yourself . . .").

Douglas Mace

Secondary information (e.g., the gas prices) presented in positive contrast (light against dark) is less likely to be noticed, thus drawing the driver's attention above to the primary message needed for navigation.

There are two issues here; one issue is to get the navigational information large enough to satisfy the information needs of motorists, the other is to find ways to code secondary information so that it is less distracting to drivers. The two issues are related. Signs that clearly and quickly identify the type of business allow drivers to ignore secondary information if they have no interest in that type of business. This should reduce the potential of unnecessary distraction. Gas stations and motels are two examples of businesses that quickly communicate their identity to drivers—gas stations because we are familiar with their names and logos; motels because the word motel is only five letters that is usually made highly legible.

In areas with high overload and information conflicts, the information density of the primary navigational message should be limited to a single glance. A simple message (i.e., one with few characters or elements) can be made larger, which allows it to be seen further upstream, possibly removing the recognition time from the area where the driver is heavily loaded. A simple message that a driver can recognize in a single glance consists of, at most, six words. Zwahlen (1989) deter-

mined that two seconds was the maximum amount of time a driver could take his eyes off the road and look at the dashboard without losing lateral control of the vehicle. This might be extended to three or even four seconds if the sign is in the cone of vision, allowing the driver to see the road in the periphery with some detail. Various reading time models (Mitchell and Forbes 1943, and Odescalchi et al. 1962) suggest that a driver can read anywhere from 1.5 to 3 words per second. Therefore, the primary navigational information (e.g., the description of the business) should be limited to a maximum of six words. In a separate analysis, Kuhn et al. (1998) suggested a maximum limit of five words. In general, large signs should be used to make information more visible and not just to increase the amount of information presented.

The sign in the photo at the top of page 28 is an example where the driver is forced to read all the text before finding out that the business sells ice cream. Unless familiar with "The Meadows," the driver looking for a particular type of business will have to make repeated glances at the sign until close enough to read the entire sign contents (i.e., all the secondary copy). This will consume the driver's time that could be devoted to the acquisition of other information. What makes a sign like this even worse is that, when the words "Ice Cream" are finally legible, the sign is probably outside the cone of vision, forcing the driver to take his eyes off the road. In this case the sign has taken a disproportionate amount of the driver's time, which could have been given to other on-premise signs, created an unsafe situation, and resulted in the loss of some business because some drivers will give up trying to read the sign and place their attention elsewhere.

The sign in in the middle photo on the opposite page clearly names the business but only at the same distance that all the secondary copy is legible. Depending on the approach speed, increasing the size of this sign so that the business was identified further upstream could benefit both the business and the driver. While everyone might benefit from increasing the size of the business name, the size of the secondary copy should not be increased. That way, drivers not interested in Burger King can easily ignore the secondary copy, and the potential distraction of the sign is reduced.

While it is best to have the primary navigational information visible upstream and recognized quickly, other methods of coding may also be effective. The sign in the photo at the bottom of the opposite page shows how information placed underneath in positive contrast (light against dark) is less likely to be noticed, which effectively draws the motorist's attention to the most critical navigational information. With effective coding methods, the secondary information is less likely to distract drivers or mask more important information. Forbes (1939) found that signs on top in a group had the highest priority value; that is, they were seen first and best. Others might argue that it is the white space surrounding the place name that draws attention. Certainly the gas prices appear to be less conspicuous. More research is needed to quantify the effect of these techniques on the driver's capacity to filter information.

Sign Visibility

Assuming that a commercial sign is providing a clear and simple message that is relevant to a driver's need for information and that the other issues (e.g., sign density) discussed above have been considered, sign regulators and business owners need to develop effective regulations for ensuring sign visibility. These issues include sign placement and sign design, which determines the conspicuity, legibility, and readability of the signs.

Sign placement that promotes visibility and readability. As objects move into the periphery of a person's field of vision, their images become less clear and eventually they are not seen at all. With respect to traffic signs, the first concern is that they not be placed outside the cone of vision where drivers may not notice them at all or may not be able to find signs they are looking for. The MUTCD requires signs to be placed so that they appear in the cone of vision. According to the American Association of State Highway Transportation Officials (AASHTO) (1994):

> Speed reduces the visual field, restricts peripheral vision, and limits the time available to receive and process information. Highways built to high design standards help compensate for these limitations by simplifying control and guidance activities, by aiding drivers with appropriate information, by placing this information in the cone of clear vision, by eliminating much of the need for peripheral vision, and by simplifying the decisions required and spacing them further apart to decrease information processing demands.

With respect to signs that are not in the cone of vision, the concern is not only that drivers may miss the sign, but that drivers will try to read these signs, forcing their eyes to leave the road to focus on the sign. When this happens, the road must be viewed peripherally, which creates an unsafe situation. It is in the interest of traffic safety that commercial signs providing necessary navigational information be placed in the cone of vision. Line of sight for commercial signs is essential to minimize conflict with public directional/informational or guidance/control signs that have higher primacy. Signs that must be read at large angles to the line of sight on the road risk not being read or result in unsafe driving behavior. Either the driver will skip the sign or have a very poor vision of the road while reading the sign. For the purpose of minimizing driver overload and improving traffic safety, placing on-premise signs in the cone of vision to the extent possible given factors such as building orientation, required setbacks, and roadway width, is equally as important as providing sufficient legibility.

There is no clear rule as to exactly what boundaries define the cone of vision. Pignataro (1973) regarded the most acute vision to be within a cone of 3 to 5 degrees and the limit of "fairly clear sight" to be within a cone of 10 or at most 12 degrees. Beyond this limit, vision becomes blurred. While peripheral vision determines the horizontal angle at which a driver can read a sign, the vertical angle is determined by the attenuation from the windshield, normally 5 to 7 degrees. In general, signs that can be seen only at horizontal angles greater than 10 degrees and vertical angles greater than 5 to 7 degrees are considered "out of view" for normal driver eye tracking of the road.

Garvey et al. (1996) provided the sign setback and mounting height requirements necessary to maintain a sign within this field of view. These specifications are a function of the required viewing distance, which is a function of speed. Table 2-1 provides the recommendations from their paper.

Placing an on-premise sign in the cone of vision and maximizing its legibility and recognition distance serves not only the interests of traffic safety, but the interests of business and the community as well. Drivers who did not notice or could not find the on-premise sign when it was placed outside the cone of vision will have a greater likelihood of seeing the sign when it is within the cone of vision. Assuming adequate conspicuity and legibility of the sign, and the business's ability to satisfy the needs of some drivers, the volume of business should increase and the likelihood of business failure should be reduced.

Table 2-1 suggests that the faster the speed, the longer the Minimum Required Legibility Distance (MRLD), and the longer the MRLD, the greater the setback and mounting height. While the data provided by Garvey et al. (1996) are useful as a frame of reference, there are several problems with their assumptions that must be considered.

First, in computing MRLD, they do not consider that drivers may need additional time and distance if they need to make a lane change or slow down to turn into a business. This would not make much difference at low speeds because their assumptions are generous, but more distance may be needed at higher speeds.

Second, while MRLD is the minimum required distance, there is no reason longer distances can't be used to increase setback and mounting height. A larger sign that can be read further away may be set back further. This assumes, however, that there is a line of sight to the sign. Buildings, trucks, or other signs will often prevent a line of sight to a large offset so that this advantage for large signs is not realized. Still, larger signs may be needed for adequate letter size, even if larger setbacks are not possible because of sight distance. Also, even if sight distance makes large setbacks and tall mounting heights possible, smaller setbacks and heights may be desirable because they make the sign readable over a greater distance.

Finally, the use of MRLD does not consider extra visibility distance to allow drivers time to notice the sign and begin to read it. Sign conspicuity may require a sign to be noticed (not the same as being recognized) further away than MRLD. The relationship between conspicuity, letter size, and MRLD is discussed in more detail below.

TABLE 2-1. THE RELATIONSHIP BETWEEN VEHICLE SPEED, LEGIBILITY DISTANCE, SETBACK, AND HEIGHT

Vehicle Speed		MRLD*	Setback	Mounting Height
in MPH	in feet per second	(in feet)	(in feet)	(in feet)
55	81	440	77	39
50	73	400	70	35
45	66	360	63	32
40	59	320	56	28
35	51	280	49	25
30	44	240	42	21
25	37	200	35	18

*MRLD is the minimum required legibility distance or the recommended distance at which a sign should be readable. Further discussion of MRLD is provided below in the section on sign design.

Source: Garvey et al. (1996)

When a sign is placed within the cone of vision, other factors can still affect its ability to be seen, recognized, and understood. Those factors are *angular presentation* (the viewing angle of the sign from perpendicular to the line of sight) and the sign's *surround*. Surround is the term used to describe the area around the sign viewed from the location where the sign should be detected. It is to be distinguished from the sign background, which normally refers to the area of the sign against which the letters are read. Therefore the background of a Stop sign is red, its surround is determined by whatever is in the visual field around the sign. The contrast of a sign with its surround determines detection, while the contrast of the letters and background determine legibility.

A sign may be mounted within the cone of vision but still be presented to the driver with a large *angular presentation*. Conspicuity is reduced by the visual distortion of the sign shape. Legibility will also be reduced because of distortion in the apparent shape of the letters. Garvey et al. (1996) recommend keeping this angle at less than 20 degrees. Also, for signs that are not internally illuminated, large viewing angles prevent headlights from effectively illuminating retroreflective signs. Replacing a wall sign with a projecting sign, for instance, might be one way of improving a sign's angular presentation.

Mace et al. (1982) found that, as visual complexity is increased, the effects of contrast with the *surround* are reduced. Visual complexity is multidimensional; namely, it is affected by the number of light sources, level of visual detail, and the demands placed on the driver. Signs will be more readily seen if placed to have maximum external contrast (meaning the luminance of the sign compared with the luminance of the area immediately surrounding the sign) in an area with low visual complexity.

Sign design that promotes visibility. The focus of this section will be on principles for designing signs to improve the visibility of on-premise and other commercial signing to promote safe wayfinding. Most of these principles are the same as those that govern all highway signs. Issues of sign design relate to many of the principles already discussed and have been summarized by several authors (see Schwab 1998 or Garvey et al.1996).

Mace et al. (1986) developed an analytic framework for evaluating the adequacy of any sign. The framework reflects the principles of supply and demand, and is based upon the simple observation that drivers need a minimum amount of time, and therefore distance, to process and respond to information. The supply of information refers to the sign design characteristics that provide conspicuity and legibility. Colors, materials, illumination and font, and letter size, for example, all have an impact on conspicuity and legibility. The most universal measure of this is detection and recognition distance; however, reaction time is also often used as an evaluation criterion. In general, it is the design of the sign, together with the method of lighting and its placement on the road that determines how much distance and, therefore, time that must be supplied to the driver.

The Minimum Required Visibility Distance (MRVD) model for estimating the minimum detection and legibility distances that drivers require incorporates the findings of numerous studies to make an estimate of the distance requirements for sign legibility and conspicuity (Paniati and Mace 1993). MRVD is a generic term to refer to both MRDD (minimum required detection distance) and MRLD (minimum required legibility distance). MRDD includes MRLD, but adds additional time and, therefore, distance to allow a sign to be noticed. It is assumed in this model that, depending on the type of sign, the driver may need time for some or all of the following: detect a sign, comprehend its message, make a decision, initiate a response, and implement or complete a vehicle maneuver (such as a lane change or deceleration) before reaching the sign.[4]

The following sections are directed at methods to increase the conspicuity and recognition of signs.

Conspicuity. A conspicuous object, according to Cole and Jenkins (1978) is one that will, for any given background, be seen with certainty probability ($p>.9$) within a short observation time ($t<.25$ s) regardless of the location of the target with respect to the line of sight. Hughes and Cole (1986) cite the work of Engel (1976), who drew attention to the sensory conspicuity of an object, which depends upon the prominence of its phys-

ical properties compared with its background, and cognitive conspicuity, which he saw as dependent on the information content of the sign and the psychological state of the observer. Mace and Pollack (1983) made a similar observation when they suggested that the conspicuity of a sign depends upon the motivation and expectancy of the driver, so that Stop signs following "Stop Ahead" warning signs are more conspicuous, as are all signs at intersections compared with those midblock. This is why Cole and Hughes (1986) found that the conspicuity of an object depended upon the instructions given to an observer, and this is why we have difficulty generalizing the results of previous research beyond the specific group of subjects and the instructions they were given.

Hughes and Cole (1984) discussed two kinds of conspicuity: *attention conspicuity*, which is the capacity of the target to attract attention when the observer's attention is not directed to its likelihood of occurrence, and *search, cognitive,* or *conspicuity*, which was defined as the accessibility of the target when the observer was explicitly directed to look for the object. Signs with advertising as their primary purpose seem to require attention conspicuity, and billboards, because of their size and location, are more likely to gain attention. Wayfaring signs seem suited to search conspicuity. Smiley et al. (1998) found that subjects' recall of the types of facilities listed on signs was poor except for the name they were explicitly instructed to search for. The data collected by Hughes and Cole (1986) suggest that traffic control devices are considerably less conspicuous in shopping center environments than on other types of roads and less conspicuous on arterial roads than on residential roads. Cole and Hughes (1984) argue that visual clutter is the most likely explanation for reduced attention conspicuity and not the added demands of the driving task.

Attention (sensory) conspicuity is determined by the physical prominence of an object's properties compared with its surround. It may be improved by an increase in the brightness of a sign or its contrast with its surround. Placing the sign in a less visually complex surround helps. The internal layout or graphic quality of a sign may also be a determinant of conspicuity. Just as white space gains attention in a newspaper, signs that have blank space are more easily noticed. Blank space may be obtained by making signs larger or by removing secondary copy that has no navigational value. A research study is currently being conducted by the Pennsylvania State University on the effectiveness of white space surrounding the text of on-premise signs.

Cognitive (search) conspicuity is dependent on the information content of the sign and the psychological state of the observer. Hungry drivers are more likely to notice restaurant signs. The more useful the information on the sign, the more likely it will be noticed. If drivers are looking for your business by name, then the name is important. If drivers are looking for your business by the type of product or service, then product or service name is most important. While basic research would suggest that sign conspicuity is greater if the sign has a distinctive shape compared with other signs, there has not been much research of this in a road environment. Distinctive shapes can yield recognition as is the case with the Stop and Yield signs and many commercial signs.

Some of the variables that affect attention conspicuity are discussed below.

Display message content. A number of researchers have speculated that the graphic content of a sign affects both conspicuity and recognition. Jenkins (1981) writes that one of the factors that affects conspicuity is "information content of the object including information arising from the unusual or unex-

pected character of the object." He further writes that the "exogenous control of visual selection will be primarily influenced by the design of the sign, its size, reflectivity, bold legend, and the background in which it is placed." Please note that Jenkins is referring to reflectivity as it relates to highway signs; "luminosity" would be the equivalent concern for on-premise signs. Hughes and Cole (1986) cite converging evidence that the bold internal graphics of symbolic signs contribute usefully to their conspicuity. Taken together, these references suggest that it may be possible to increase the conspicuity and/or recognition of signs by adding icons to the text. When the graphics used are not familiar and are not likely to become familiar through frequent encounters, the legibility of text may still have to be relied upon.

Beyond graphic content, other factors that can influence conspicuity and recognition include the border, color, shape, and size of a sign.

Border. A dark border around a light colored sign and a light border around a dark colored sign can aid conspicuity, particularly when the surround does not contrast well with the sign.

*Color***.** The evidence suggests that conspicuity is improved by both luminance and color contrast; however, as long as color contrast is maintained, there does not appear to be any advantage for any one color. Legibility can be mediated through either color or luminance contrast (Morales 1987). Cole and Jenkins (1978) and Mace (1983) found that white signs were detected less easily at night than signs of color. During daylight, signs of dark color are generally more noticeable because the backgrounds are normally light. At night, the reverse is likely to be true. The reader is advised that the relationship between color and conspicuity is a complex one. We recommend seeking the advice of an experienced professional sign designer and consulting the most recent traffic engineering research before making any regulation related to the use of color on signs.

Shape. Basic research suggests that sign conspicuity is greater if the sign has a distinctive shape compared with other signs. Distinctive shapes can increase recognition distance as is the case with the Stop and Yield signs or McDonald's golden arches.

Sign Size. The size of a sign affects its conspicuity as well as the size, spacing, and layout of message content. With respect to conspicuity, size can be minimized by attending to the issues of surround and luminance. The need for large on-premise signs may also be reduced by making effective use of symbols or by transferring some of the information to off-premise signing.

Legibility and Recognition

Legibility refers to the ability of the eye to clearly distinguish individual characters and numbers in an alphanumeric message. It is generally described in terms of visual acuity, which ranges from about 20/17 (young drivers) to 20/40, the minimum required for licensing. Recognition or readability refers to the ability of an observer to understand the meaning of an alphanumeric or graphic message. Words are often recognized without total legibility because of familiarity with the length of the word or the pattern of letters. Even when reading alphanumeric signs, recognition often results without legibility because, in any font, not all letters are equally legible. Some letters in the alphabet might have only half the legibility distance of other letters.

Factors that relate to recognition and legibility have been studied far more than the issue of conspicuity, and there is a large body of literature that addresses these issues. (See Garvey et al. (1996) for an annotated bibliography.) Of all the factors that affect legibility, the visual acuity of the observer, the font, and font size are the most critical. Other factors, such as spacing, contrast, background, luminance, and the use of lower case

have an effect, but nowhere near as great an effect as font and size. With regard to alphanumeric text, the required size depends on the required legibility distance, the acuity of the observer, and the font used.

Forbes and Holmes (1939) used the legibility index (LI) to describe the relative legibility of different letter styles (fonts) used on highway signs. The LI is the distance in feet at which a one-inch letter is legible for individuals with a specific level of visual acuity. LI changes as acuity changes. Multiplying the LI by the letter height in inches tells you the distance in feet at which a word or letter should be legible.

The legibility of a verbal message or recognition of symbols requires that the visual system resolve the critical detail of the key elements of the sign message content. The MRLD model may be used to determine either the required detection or legibility distance or the required LI for a sign based upon the required distance and the available letter height. The LI is important to the determination of the required size for a sign in a specific application. Mace (1988) noted the following relationships:

Required letter size = MRLD / LI

or

Required LI = MRLD / letter size

Either the letter size or the LI may be manipulated to satisfy the MRLD requirement. For any observer, LI is determined primarily by the font. While other factors, such as letter spacing and contrast have some effect, from the standpoint of sign maintenance, spacing and contrast cannot be expected to compensate for inadequate letter size. Therefore it is important to determine the required size at the time of sign installation. However, contrast and luminance will have an effect on the LI; therefore, the required letter size may depend on the method of illumination as well as other factors that determine legibility (e.g., letter spacing and the use of lower and upper case). Signs of adequate size should be installed so that daytime legibility is maintained and the luminance requirements for nighttime recognition are realistic.

Letter size. The formula above is an oversimplification in that it assumes that letter size is proportional to legibility distance and that the LI of a particular font remains constant over distance. Mace and Garvey (1993) show that beyond certain distances, which were shorter for older drivers, proportional increases in legibility distance did not occur under conditions of retroreflective sign illumination. The effect, which may be optical or atmospheric, has not been well quantified, and is generally inconsequential inside 500 feet. For long distances, a little extra letter size may be necessary. With other types of sign lighting, the effect may be quite different and further research is needed.

Still, as noted above, to determine the required letter size one needs to know the MRLD and the LI, which will depend on the font used and the acuity of the observer.

Several attempts have been made to determine the MRLD. The *Traffic Control Devices Handbook* (U.S. DOT 1983) assumes a minimum legibility distance of four seconds for an acceptable sign. The research by Garvey et al. (1996) assumed 5.5 seconds as the minimum requirement. A computer model that estimates a unique time and distance for most signs in the MUTCD was described by Paniati and Mace (1992). This approach allows the MRLD requirement to reflect differences in the amount of legend on a sign, the complexity of the decision the sign requires, and, most important, whether the driver needs to slow down or change lanes before reaching the sign. In a recent report to the American Association of State Highway and Transportation Officials (AASHTO), McGee and Mace (2000) recommended two sets of generic values based upon the MRLD

computer model. One set was to meet the MRLD requirements of signs requiring some maneuver before the sign, the other set requiring no maneuver.[5] Table 2-2 shows the MRLD for 4 seconds, 5.5 seconds, and the values recommended by McGee and Mace.

The 5.5-second values from Garvey et al. (1996) give lower values than the MRLD with maneuver from McGee and Mace (2000). Compared with the MRLD without maneuver from McGee and Mace, the values using either 4 or 5.5 seconds are very generous.

It should be noted that the values in the table are minimum values for most signs in most situations. Signs requiring greater legibility distance include:

- signs grouped in a cluster where there are several signs that must be read;
- signs that have more than six words to be read; and
- signs with a message that is not readily understood.

Acuity of observer. Given an MRLD, one still needs to know the LI of the font being used in order to determine the letter size needed. The LI of a font is dependent not only on the font, but the visual acuity of the observer. The LI for younger drivers with good visual acuity is much greater than the LI for older drivers. Also, the LI is 10 to 20 percent less at night than during daylight.

Under daytime conditions, highway series B, C, and D letters were reported to have an LI of 33, 42.5, and 50 feet per inch of letter height (Forbes and Holmes 1939). To find the legibility distance for these LI ratings, multiply the LI by the letter height (in inches); for instance, a sign using 10-inch-high letters for the D series, which have an LI of 50, would be legible at 500 feet and closer for a daytime driver with 20/40 vision. Forbes et al. (1950) found the wider, series E letters to have an index of 55. Over time, the value of 50 feet per inch of letter height has become a nominative, though arbitrary and disputed, standard. While these LIs may be reasonable for younger drivers, the LI of the series D letters for older drivers is closer to 40 and may be as low as 30 for some drivers.

Garvey et al. (1996) and Schwab (1998) based their recommendations for required letter height on drivers with the poorest (20/40) vision who still receive driver's licenses in most states. They also assumed that the font being used was equal to the visibility of the fonts used on highway signs. If we assume the use of a highway font, or equivalent, and an older driver with 20/40 vision just acceptable for a drivers license, the appropriate LI as used by these authors is 30. With this assumption, a 12-inch letter is legible at 360 feet and closer.

TABLE 2-2. MINIMUM REQUIRED LEGIBILITY DISTANCES IN VARYING SITUATIONS

Speed MPH	MRLD @ 4 seconds (in feet)	MRLD @ 5.5 seconds (in feet)	MRLD @ with manuever (in feet)	MRLD @ without manuever (in feet)
25-30	175	225	410	155
35–40	235	325	550	185
45–50	290	405	680	220
55–60	350	485	720	265
>65	385	525	720	280

A reasonable alternative would be to target drivers with 20/30 vision, which represents about 90 percent of the population and an even greater percentage of drivers. While not proven (another research need), drivers with the worst vision are assumed to adjust their driving behavior to match their abilities and are also more likely to know where they are going and not rely on signs. In our opinion, the cost to accommodate every driver is too great and probably would not be met. It is far better to use the 20/30 criteria and seriously attempt to meet the requirements of most drivers. The series D font would have an LI of 40 for drivers with 20/30 acuity and a 12-inch letter would provide them with 480 feet of legibility. Please note that the use of 30 as the LI of a highway font is a gross but conservative generalization. The different series of highway fonts have different LIs. And remember, LI is higher during daylight and is further increased by driver familiarity with the word.

Font. In addition to acuity, font is the other major factor in determining the legibility of a sign. The legibility of the font is best expressed by its legibility index (LI) for a driver with a specified acuity. This should be considered the reference LI for the font. As discussed below, other factors such as contrast and spacing can prevent a font from achieving its reference LI.

The research on the legibility of different fonts at long distances has been primarily funded by the government and limited by its desire to maximize legibility and to avoid artistic presentations and fonts with serifs. Kuhn et al. (1998) concluded that while an extensive font choice allows for creative designs, it creates problems for sign designers because there is virtually no legibility distance data for the vast range of fonts used in advertising signing.

While trying to obtain funding to perform this critical research for the on-premise sign industry, researchers at the Pennsylvania State University have begun the work (Zineddin, Garvey, and Pietrucha, under review). Using eye charts like the familiar Snellen chart, they have determined, for example, that the font displayed in the accompanying graphic has less than half the legibility of the highway series E font. Therefore, to have your sign readable at 400 feet will require a 20-inch letter with this font, where a 10-inch series E font would be readable at the same distance.

A font example with less than half the legibility of the highway series E font.

The design of on-premise signs must recognize that stylized fonts may be acceptable for pedestrian traffic, but some of these fonts severely reduce legibility for highway traffic.

Other factors affecting legibility. Other variables that will reduce the reference LI of a font are briefly summarized below.

Internal contrast and sign luminance. The luminance contrast of a letter against its background is necessary to accommodate the visual acuity of all drivers. While minimum luminance and contrast are necessary, excessive contrast created by too bright a background will reduce legibility. (Readers interested in the issue of luminance and contrast are encouraged to consult the *IES Sign Lighting Handbook*, 8th edition.) A minimum contrast ratio of 4:1 is recommended and 50:1 is considered too great (Mace et al. 1994).

Spacing of letters. Crowding letters reduces legibility. The spacing of letters following the MUTCD guidelines is recommended for all signs. While minimum spacing will allow a font to achieve its reference LI, this LI will not be increased by wider spacing (Mace et al. 1994).

Use mixed-case letters. Use of mixed-case letters does not provide consistently greater legibility (Mace et al. 1994) but may create recognition of a business name, product, or service before the words are legible. This is primarily effective with names and words with which drivers have famil-

iarity and that have an identifiable pattern in word length or the number of ascenders or decenders. Garvey et al. (1997) indicate the height of mixed-case letters may be reduced about 10 percent for equivalent recognition distance.

Contrast orientation. Positive contrast signs (light text on a dark background) are easier to read than negative contrast signs (dark text on a light background). The use of positive contrast may increase the LI of a font up to 30 percent.

Orientation of text. Horizontal text is easier to read then vertical text.

COOPERATIVE TRIANGULATION

Although additional research will certainly be beneficial, there is an abundance of information from which a design guide for quality commercial signs can be developed. Still, it will be difficult to fully implement these principles without the cooperative effort of all the stakeholders and other interested parties. The primary stakeholders include traffic engineers, business owners, sign manufacturers, city planners, elected officials, neighborhood and environmental groups, financial institutions and consultants, and learning and behavioral experts.

The interests of these and other groups seem to be focused on three issues: traffic safety, aesthetic achievement, and economic success. Cooperative triangulation is a method by which these stakeholders can find solutions that can result in success with regard to all three criteria. Firth (Transportation Research Circular, under review) reports success with this approach in his experience developing wayfinding systems in Pennsylvania.

A road map to achieve cooperative triangulation would be a project unto itself; however, a few first thoughts here may be helpful to initiate the process. First, the ways that each stakeholder can help the others must be identified. For example, Tourist-Oriented Directional signing is an effort by highway agencies to aid navigation to businesses. Another step highway agencies could take is to enforce more self-discipline in the installation of unnecessary highway signs, particularly unnecessary changeable message signs (CMS), or lengthy CMS messages.

City planners need to understand the significance of primacy and how it relates to zoning and access to business and parking lots, and how good planning and well-designed on-premise signs can add to the economic vitality and aesthetic quality of their community. A traffic

Visual acuity of observers, font, and font size are the most critical factors affecting sign recognition and legibility. Other factors such as contrast, sign spacing, background, luminance, and use of upper and lower case letters also have an effect. Shown below are two similarly situated signs with stark differences in legibility.

Marty Roupe

Marty Roupe
Marty Roupe

engineering study, which looks at driver overload in the area and the required decision sight distance for on-premise information, should be part of each new business construction plan. An important part of this plan will be the recognition that adequate sign size that enhances conspicuity, legibility, and readability is important to business vitality and traffic safety.

Given traffic engineering input concerning where drivers should safely receive navigation information and an assumption that the necessary content will be six or fewer elements, an appropriate legibility distance can be determined. Given information regarding minimum required legibility distance and an assumption about the expected LI of the font to be used, a community could develop some guidelines about appropriate sign size. While maximum size could be regulated, the use of traffic engineering data would establish some guidelines about minimum size and height. The goal would be to develop a set of recommendations resulting in a sign system that would help motorists receive the information they need or want within sufficient time and distance.

While there is not a simple solution as to how these ideas may be implemented, this chapter, together with an opening dialogue among the stakeholders, could result in more communication and cooperative participation. A similar initiative was suggested by Cannon (1999), who urged "city planners and other municipal officials to work in creative collaboration with sign users and sign designers." He believes the result will be "a community in which the quality-of-life indicators would always be rising." Cannon sets out two goals: the need for retail merchants "to survive and succeed, producing prodigious tax revenues for the city" and for commercial signs to "visually unify the commercial areas, and at the very least, improve the appearance of commercial streets." He goes on to point out that "measurable success requires an honest equilibrium between the needs of all stakeholders." It is important to invite the traffic engineering community to join in this collaboration and see that the third leg of cooperative triangulation (traffic safety) is added to the common ground that everyone should be trying to perfect. There is nothing to be gained by ignoring the traffic safety problem and have city planners and sign users work alone.

NOTES

1. This discussion is concerned only with signs intended to be seen and read by drivers of moving vehicles and is not intended to be applied to signs intended only for pedestrians. We recognize that there are many commercial areas that are not automobile-oriented and that changes in demographics and planning policy may be increasing the number of commercial areas that are pedestrian-oriented. The expertise of the author, however, and the importance of this issue in crafting legal and effective regulation for signs led to an editorial decision to limit the discussion to traffic-oriented signs.

2. Some courts have, in fact, rejected these hypotheses because of a lack of evidence. Planners must, therefore, be extremely careful in crafting any sign regulation that would be based *solely* on the issue of traffic safety. Traffic safety is a legitimate purpose for sign regulations and should be addressed. There are legitimate prohibitions on signage that do not run afoul of First Amendment protections. For example, restrictions on advertising signs that have lighting, color, or movement that could make it more difficult to detect a sign that affects traffic safety (e.g., a flashing sign located in the same area of vision as a traffic light) can be regulated or prohibited. Readers of this report should review the chapter on legal considerations in drafting regulations and must consult their municipal attorney before attempting to write effective and legally defensible

regulations related to commercial signage and traffic safety. This chapter provides an understanding of how the principles that foster safety also serve the interests of business and the community. This information will not only serve to develop regulations that benefit everyone, but to encourage the voluntary development of better signage within the boundaries of regulations.

3. This section's focus on older drivers is consistent with the evolving concern of transportation officials with the diminishing capacities of an aging population whose demand for mobility has increased their rate of exposure in highway traffic. While there is a gradual deterioration of vision throughout life, visual deterioration generally becomes significant about the age of 50. It will be seen that older drivers not only need more time and therefore distance to access information from signs, but losses in visual capacity result in older drivers needing larger signs just to provide the identical time and distance that a younger driver would need for recognition of information. The concept of a legibility index is discussed in the chapter as the practical method by which the signing needs of older drivers can be met.

4. The Minimum Required Visibility Distance (MRVD) for older drivers may be considerably longer than for younger drivers because of diminished abilities to recognize and process information and to execute lane-changing maneuvers. Without reference to MRVD, one might think that the special needs of older drivers for conspicuity and legibility are based solely on visual impairment. The concept of MRVD makes it obvious that factors such as reaction time, decision making, and problem solving increase the distance needed by the older driver to detect and read signs, and that these factors can create visibility problems for the older driver even when visual impairment is not considered. In general, older drivers not only have problems seeing what younger drivers can see at a given distance, but they also need to recognize and be able to read signs at greater distances to provide them with the additional time they need to respond in a safe manner.

5. McGee and Mace have a third set of values for symbol signs not requiring a maneuver, but these values, which are higher, only apply for retroreflective signs being illuminated solely by headlamps.

REFERENCES

American Association of State Highway and Transportation Officials. 1994. *A Policy on Geometric Design of Highways and Streets*. Washington, D.C.: AASHTO.

Alexander, G.J., and H. Lunenfeld. 1975. *Positive Guidance in Traffic Control*. Washington, D.C.: Federal Highway Administration.

_____. 1990. *A Users' Guide to Positive Guidance*. 3rd ed. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, Report No. FHWA-SA-90-017, 1-39.

Ball, K., and C. Owsley. 1993. "The Useful Field of View Test: A New Technique for Evaluating Age-related Declines in Visual Function. *Journal of American Optometric Association* 64, no. 1: 71-9.

Ball, K. Owsley, C. Sloane, M.E. Roenker, D.L. Bruni, J.R. 1993. "Visual Attention Problems as a Predictor of Vehicle Crashes in Older Drivers." *Investigative Opthalmology an Visual Science* 34, no. 11 (October).

Brouwer, W.H., W. Waterink, P.C. Van Wolffelaar, and T. Rothengatter. 1991. "Divided Attention in Experienced Young and Older Drivers: Lane Tracking and Visual Analysis in a Dynamic Driving Simulator." *Human Factors* 33, no. 5.

Cannon, J. 1999. "Sign Design and Community Aesthetics." National City Planners and Sign Users Conference. Cleveland, Ohio. 10 June.

Cole, B.L., and P.K. Hughes. 1984. "A Field Trial of Attention and Search Conspicuity." *Human Factors* 26, no. 30: 299-313.

Cole B.L., and S.E. Jenkins. 1978. *Conspicuity of Traffic Control Devices*. Australian Road Research Board, ARRB Internal Report AIR 218-1.

COMSIS Report. 1995. *Older Driver Perception-Relation Time for Intersection Sight Distance and Object Detection*. Vol. 1. Final Report, U.S. Department of Commerce.

Engel, F.L. 1976. "Conspicuity as an External Determinant of Eye Movements and Selective Attention." Thesis, Technische Hogeschool, Eindhoven.

Federal Highway Administration. 1996. "National Highway System Route Marker Study; Request for Comments." *Federal Register* 61 (August): 164.

Firth., R. (Transportation Research Circular, under review)

Forbes, T.W. 1939. "A Method for Analysis of the Effectiveness of Highway Signs." *Journal of Applied Psychology* 4, no. 23: 669-84.

Forbes, T.W., and R.S. Holmes. 1939. "Legibility Distances of Highway Destination Signs in Relation to Letter Height, Width, and Reflectorization." *Highway Research Board (HRB) Proceedings* 19: 321-26.

Forbes, T.W., K Moskowitz, and G. Morgan. 1950. "A Comparison of Lower Case and Capital Letters for Highway Signs." *Highway Research Board (HRB) Proceedings* 30: 355-73.

Garvey, P.M., B. Thompson-Kuhn, and M.T. Pietrucha. 1996. *Sign Visibility: Research and Traffic Safety Overview*. Bristol, Pa.: The United States Sign Council.

Garvey, P.M., M.T. Pietrucha, and D. Meeker. 1997. "Effects of Font and Capitalization on Legibility of Guide Signs." *Transportation Research Record* 1605: 73-79.

Hildebrand, E., and F.R. Wilson. 1990. "An Assessment of Elderly Driver Accident Patterns." Paper presented at the Transportation Research Board 69th Annual Meeting.

Hughes, P.K., and B.L. Cole. 1984. "Search and Attention Conspicuity of Road Traffic Control Devices." *Australian Road Research* 14, no. 1: 1-9.

_____. 1986. "What Attracts Attention When Driving?" *Ergonomics* 29, no. 3: 377-91.

International Commission on Illumination. 2000. "The Conspicuity of Traffic Signs in Complex Backgrounds," CIE Report 137. Vienna, Austria: The Commission.

Jenkins, S.E. 1981. "Consideration of the Effects of Background on Sign Conspicuity." *Proceedings of the Australian Road Research Board* 2.

Johnson, A.W., and B.L. Cole. 1976. "Investigations of Distraction by Irrelevant Information." *Australian Road Research* 6, no. 3: 3-23.

Kuhn, B.T., Garvey, P.M. & Pietrucha, M.T. 1998. "Sign Legibility: Impact of Color and Illumination on Typical On-Premise Sign Font Legibility." A Research Project of the United States Sign Council.

Mace, D. J. 1988. "Sign Legibility and Conspicuity." *Transportation in an Aging Society: Improving Mobility and Safety for Older Persons*. Transportation Research Board, National Research Council, Special Report 218, 270-293.

Mace, D.J., and P.M. Garvey. 1993. "The Effects of Increased Character Height on Sign Legibility." Paper presented at The Transportation Research Board 72nd Annual Meeting, Paper No. 931070.

Mace, D.J., P. M. Garvey, and R.F. Heckard. 1994. *Relative Visibility of Increased Legend Size vs. Brighter Materials for Traffic Signs*. U.S. Department of Transportation, Federal Highway Administration, No. DTFH61-90-C-00015 Final Report, 1-44.

Mace, D.J., R.S. Hostetter, L.E. Pollack, and W.P. Zweig. 1986. *Minimal Luminance Requirement for Official Highway Signs*. Washington, D.C.: U.S. Department of Transporation, Federal Highway Administration, Report FHWA/RD-86-151.

Mace, D.J., K. Perchonok, and L. Pollak. 1982. *Traffic Signs in Complex Visual Environments*. Washington, D.C.: U.S. Department of Transporation, Federal Highway Administration, Report No. FHWA/RD-82/102.

Mace, D.J., and L. Pollock. 1983. "Visual Complexity and Sign Brightness in Detection and Recognition of Traffic Signs." *Transportation Research Record* 904: 33-41.

Manual of Uniform Traffic Control Devices (MUTCD). 1988. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration.

McGee, H.W., and D.J. Mace. 2000. "Alternative Guidelines for Evaluating Sign Retroreflectivity." National Cooperative Highway Research Program (NCHRP) Project 20-7, Final Report, 1-36.

Mitchell, A. and Forbes, T.W. *1943, "Design of Sign Letter Sizes." Transactions of the American Society of Civil Engineers*, 108: 233-46.

Morales, J.M. 1987. "Retroreflective Requirements for Traffic Signs: A Stop Sign Case Study." *ITE Journal* 25-32.

Odesalchi, P., K.S. Rutley, and A. W. Christie. 1962. *The Time Taken to Read a Traffic Sign and Its Effect on the Size of Lettering Necessary*. Report No. LN/98/PO.KSR.AWC, Road Research Laboratory, Great Britain.

Paniati, J.F., and D.J. Mace. 1993. *Minimum Retroreflectivity Requirements for Traffic Signs*. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, Report No. FHWA-RD-93-077.

Parasuraman, R., and P.G. Nestor. 1991. "Attention and Driving Skills in Aging and Alzheimer's Disease." *Human Factors* 33, no. 5: 539-59.

Pignataro, L.J. 1973. *Traffic Engineering Theory and Practice*. Englewood Cliffs, N.J.: Prentice-Hall Inc.

Sanders, A. 1970. "Some Aspects of the Selective Process in the Functional Field of View." *Ergonomics* 13: 101-17.

Schwab, R. N. 1998. *Design Considerations for On-Premise Commercial Signs*. The Signage Foundation for Communication Excellence, Inc. and the International Sign Association..

Shiner, D., and F. Schieber. 1991. "Visual Requirements for Safety and Mobility of Older Drivers." *Human Factors* 33, no. 5.

Smiley, A., C. MacGregor, R.E. Dewar, and C. Blamey. 1998. "Evaluation of Prototype Highway Tourist Signs for Ontario." Transportation Research Board 77th Annual Meeting.

Staplin, L.K., M.E. Breton, S.G. Haimo, E.I. Garber, and A.M. Byrnes. 1986. "Age-related Diminished Capabilities and Driver Performance." Federal Highway Administration Working Paper.

Staplin, L., and A.D. Fisk. 1991. "A Cognitive Engineering Approach to Improving Signalized Left Turn Intersections." *Human Factors* 33, no. 5: 559-71.

Stelmach, G.E., and A. Nahom. 1992. "Cognitive-motor Abilities of the Elderly Driver." *Human Factors* 34, no. 1: 53-65.

Transportation Research Circular. n.d. "The Role of Private Signing in Traveler Navigation and Wayfinding." Under review.

U.S. Department of Transportation, Federal Highway Administration. 1983. *Traffic Control Devices Handbook*. Washington, D.C.: Federal Highway Administration.

Zineddin, A.Z., P.M. Garvey, and Pietrucha, M. 2001. (Under review). "Legibility of Fonts for Use on Highway Signs." Washington, D.C.: Transportation Research Board.

Zwahlen, H. T. 1989. "Conspicuity of Suprathreshold Reflective Targets in a Driver's Peripheral Visual Field at Night." The 68th Annual Meeting, Transportation Research Board, Paper No. 880550, 1-31. Washington, D.C.: Transportation Research Board.

Agenda No: C-1

Meeting Date: August 21, 2013

City of Morro Bay
Public Services/Planning Division
Current Project Tracking Sheet
This tracking sheet shows the status of the work being processed by the Planning Division

New Planning items or items recently updated are highlighted in yellow. Building permit updates are highlighted in green.

Approved projects are deleted on next version of log.

#	Applicant/ Property Owner	Project Address	Date	Permit Numbers	Project Description/Status	Planning Comments and Notations	Building/Fire Comments and Notations	Engineering Comments and Notations	Harbor/Admin Comments and Notations
Hearing or Action Ready									
1	City of Morro Bay	Citywide	6/19/13	A00-015	**Sign Ordinance Update.** Text Amendment Modifying Section 17.68 "Signs"	Text Amendment Modifying Section 17.68 "Signs". Planning Commission placed the ordinance on hold pending additional work on definitions and temporary signs. 5/17/2010. Planning Commission made recommendations and forwarded to Council. Anticipate a City Council public hearing on the draft ordinance on May 2011. Scheduled for 5/10/11 CC meeting, item was continued. Item heard at 5/24/11 City Council Meeting. Interim Urgency Ordinance approved to allow projecting signs. A report on the status of this project brought to PC on 2/7/2011. The item shall be brought back to City Council first meeting in November. Workshops scheduled September 29, 2011 and October 6, 2011.-Workshop results going to City Council December 13, 2011. Continued to 1/10/12 CC meeting. Staff Report to PC. Project went to 5/2/2012. Currently an intern is working on the Sign Ordinance. Update due to City Council in June 2013. Draft Sign Ordinance reviewed by PC on 6/19/13. Continued to 7/3/13 PC meeting for further review. PC has reviewed Downtown, Embarcadero, and Quintana Districts as well as the Tourist-Oriented Directional Sign Plan. 8/21/13 PC meeting scheduled to review North Main Street District. Final Draft of Sign Ordinance to be presented at 9/4/13 PC meeting.	No review performed.		
2	*Ferguson*	*605 Ironwood Ct*	*5/22/13*	*CP0-400*	***Admin Coastal Development Permit for new SFR on vacant lot***	*CJ- Application deemed incomplete. Requested corrections 6/10/13. Resubmittal received 6/25/13. Admin CDP noticed 8/7/13. Review period ends 8/19/13.*	No review performed.		
3	*Helfert*	*2940 Greenwood*	*5/22/13*	*CP0-401*	***Coastal Development Permit for new SFR on vacant lot - Concurrent permitting***	*CJ- Application deemed incomplete. 6/10/13 Corrections sent 6/10/13. Resubmittal received 7-17-13 and under review.* *KM - Planning resubmittal received 8/9/13. Admin CDP noticed 8/28/13.*	TP-FD Approve 8/9/13.	RS -Plan revisions rqd per 6/14/13 memo	
4	*Fowler*	*1215 Embarcadero*	*8/27/13*	*UP0-058*	***Request for Minor Modification of Permit***	*Applicant requesting minor modification to reconfigure and reduce dock length and size. Administrative approval of modification issued 8-28-13. CJ.*			

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5	*Held/Viole*	*575/591 Embarcadero*	*8/23/13*	*UP0-140*	***Request for Minor Modification of Permit***	*Applicant request for a minor modification to amend the design of the floating docks and relocate gangway. Administrative approval of modification issued 8-29-13. CJ.*			
30 -Day Review, Incomplete or Additional Submittal Review									
5	TNF Ventures - Foster	500 Dawson	*8/16/13*	CP0-405	***Admin Coastal Development Permit for new SFR on vacant lot***	*Under initial review. CJ - Concurrent permitting*			
6	Sonic	1840 Main St.	*8/14/13*	UP0-364 & CP0-404	***Conditional Use Permit and Coastal Development Permit to develop Sonic restaurant.***	*Under initial review. CJ*			
7	*Redican*	*725 Embarcadero Rd.*	*6/26/13*	*UP0-359*	***Use Permit for seven boat slips and gangway***	*Under review. Incomplete letter sent 7-23-13.*	*Under review.*		
8	*AT&T*	*788 Main St.*	*6/10/13*	*UP0-362 & CP0-403*	***Special Use Permit for Recycling Container Enclosure in Parking Lot***	*CJ- Applcation under Review. Deemed Incomplete. Letter sent 7-9-13.*	Bldg -- Review complete, applicant to obtain building permit prior to construction.TP-FD Disapprove Express Check 3/18/13 & FD Disapprove UPO 362 7/23/13	RS- Rvw complete no frontage improvemnts required	
9	*Head/Andrich*	*320 Trinidad*	*5/29/13*	*AD0-083*	***Parking Exception for additional parking space***	*Under review.Deemed Incomplete. Letter sent 7-1-13. Applicant pursuing alternative options. Waiting for direction from Applicant.*		N/A	
10	*Goodwin*	*2920 Juniper*	*5/21/13*	*CP0-399*	***Coastal Development Permit for new SFR on vacant lot***	*CJ- Application deemed incomplete. Requested corrections 6/10/13.*	No review performed.	RS&DH-Plan revisions rqd per memo 5/29/13	
11	*Lucky 7*	*1860 Main*	*3/12/13*	*CP0-394*	***Construct Fuel Island Canopy***	*CJ- Requested additional info. 3-29-13 Resubmittal received 7-22.*	Review complete, applicant to obtain building permit prior to construction.	N/A	
12	*Diaz*	*1149 Market*			***Business License App for Mexican Market.***	*Directed Applicant on 11-27-12 to re-submit parking plan demonstrating compliance with Zoning Ordinance. Parking plan submitted demonstrating seven parking spaces 12-20-2012. Sent letter requesting plan corrections 1-15-13. Waiting for response from applicant.*	Review complete, applicant to obtain building permit prior to construction.	N/A	
13	*City of Morro Bay*	*N/A*			***MND for Chorro Creek Stream Gauges***	*Applicant requesting meeting for week of 8/19/13.*	No review performed.		
Continued projects									

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14	*City of Morro Bay*	*End of Nutmeg*	*1/18/12*	*UP0-344*	***Environmental documents for Nutmeg Tanks.*** *Permit number for tracking purposes only County issuing permit. Demo existing and replace with two larger reservoirs. City handling environmental review*	*KW--Environmental contracted out to SWCA estimated to be complete on 4/27/2012. SWCA submitted draft I.S. to City on May 1, 2012. MR-Reviewed MND and met with SWCA to make corrections. In contact with County Environmental Division for their review. MND received by SWCA on 10/7/12. MND out for public notice and 30 day review as of 11/19/12. 30 day review ends on 12/25/12. No comments received. Scheduled for 1/16/13 Planning Commission meeting and then to be referred back to SLO County. Planning Commission continued this item to address concerns regarding traffic generated from the removal of soil. In applicant's court, they are addressing issues brought up by neighbors during initial P.C. meeting. Project has been redesigned and will be going forward with concrete tanks. Modifications to the MND are in process.*	No review performed.	BCR- New design concept completed. Needs new MND for concrete tank, less truck trips.	
Ongoing Projects									
15	*City of Morro Bay*	*N/A*			*CDBG funding to CAPSLO for operation of the Prado Day Center & Homeless Shelter*	*Staff has ongoing responsibilities for contract management.*	No review performed.	Rqstd direction on NEPA revision for San Jacinto Sidewalk addition	
Projects in Process									
16	*Frye*	*244 Shasta*	*3/6/13*	*CP0-396 and AD0-081*	***Secondary Unit and Parking Exception.***	*Proposed creation of secondary unit from garage. Parking exception. First Noticed 5-16-13. Setbacks noted on plan incorrect, therefore project required to be re-noticed on 6/26/13.*	No review performed.		

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17	LaPlante	3093 Beachcomber	11/3/11	CP0-365	**New SFR.** Resubmittal and Phase 1 Arch report 2/6/12.	SD-- Incomplete Letter 12/12/11. Phase 1 Arch Report required and Environmental Document. Environmental in process. Letter sent 4/11/2012 requesting environmental study. Applicant has requested a meeting on August 9, 2012 to review environmental study request. MR-Met with Applicant and discussed potential impacts of project and CEQA information requested to complete MND. Applicant will provide MND fees with submittal of Biological report. 8/9/12 MR met with applicant and owner to discuss environmental issues. Would require a detailed MND. Applicant is still considering preparation of Biological Report. Staff met with applicant and his agent, discussed elements of the project especially the Biological report needs to be prepared. Draft biological report received and under review. Project referred to environmental consultant and Coastal. MND in process.	Review complete, applicant to obtain building permit prior to construction.	DH comments submitted 1/18/2012. Provide EC, drainage report, SW mgmt.	No Comments to date

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Environmental Review									
18	*Held*	*901 Embarcadero*	*4/26/13*	*UP0-342*	***Amendment to Use Permit and Mitigated Negative Declaration. Adding new water lease area and proposing floating dock for the Harbor Center project.***	*Plans submitted and project description. CJ- under initial review. Project deemed incomplete, letter sent to applicant/agent 5/20/13. Resubmittal received 5/31/13. Initial Study/Draft MND routed to State Clearinghouse. Review and comment period in progress until 9/30/13. CJ.*	Review complete, applicant to obtain building permit prior to construction.TP-Cond.App.w/FDCode Req.5/7/13	RS- Rcmd Approval subect to considtions in Memo of 5/29/13	
19	*City of Morro Bay*	*Morro Creek/Embarcadero*	*3/14/13*	*-*	***FHWA Approved PE funds - CASB12RP-5391(013) - Phase 1 Morro Creek Trail & Bridge Project***	*In process. NEPA review required.RFP released 3-25-13. Planning working on PES form. Working with Althouse to do Botany survey and wetland delineation. Met with consultants on site on May 22, 2013. Consultant selected.*	No review performed.	BCR-Planning and engineering underway.	
20	*Sequoia Court Estates*	*670 Sequoia*	*4/3/12*	*UP0-349 & S00-112*	***Parcel Map. 3 parcels and an open space parcel.*** *A revised subdivision map was submitted for review on August 6, 2012.*	*Incomplete letter sent to applicant/agent. Project submitted without necessary materials for processing. Applicant submitted a revised plan reducing the number of lots, and is providing additional information as requested addressing City requested information. Additional information submitted; waiting for biological report. Report should be submitted in September 2012. Needs drainage plans. MR: Second incomplete letter sent 11/13/12. MND in preparation. Susan Craig, Coastal Commission staff confirmed property is entirely outside coastal zone. Met with applicant on 1/30/2013 project moving ahead, staff waiting on resubmittal. Applicant directed to obtain wetland determination. Project waiting on applicant.*	Review complete, applicant to obtain building permit prior to construction.	BCR- comments submitted 4/47/12. Drainage issues need to be addressed.	
Grants									
21	*Community Development Block Grant (CDBG) / HOME Program through Urban County Consortium*	*Downtown area*	*11/13/12*		***CDBG Applications received 10/12/12. Nine applications received. Draft funding recommendations to be adopted at 11/13/12 City Council Meeting. Final Funding Approval heard at 2-13-13 City Council Meeting. Final action taken by County Board of Supervisors 3-5-13.***	*Application recommended for funding is Pedestrian Accessibility Improvements for City of Morro Bay. Council approved on 11-13 funding for Senior Nutrition and Pedestrian Accessibility. 2nd Funding Workshop to be held at Community Center on 1/9/13. Subreceipient Agreement and NEPA Environmental Review under review. CEQA NOE filed. NEPA clearance obtained 6/21/13. FY2014 Funding Cycle: Applications to be released on 9/9/13 and due on 10/15/13. Needs Workshop to be held on 9/16/13 at City of Atascadero.*	No review preformed.		

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22	*Sustainable Communities*	*City-wide*			***$900,000 Grant Opportunity for funding for long-range planning activities including LCP update, General Plan. State has not released grant information for the next application cycle.***	Draft guidelines not yet released for 3rd round of funding.	No review performed.	N/A	
23	*Coastal Conservancy, California Coastal Commission, California Ocean Protection Council*	*City-wide*			***$250,000 Grant Opportunity for funding for LCP update to address sea-level rise and climate change impacts.***	Application submitted July 15, 2013. Awaiting results.	No review performed.	N/A	
24	*Coastal Conservancy Climate Ready Grant*	*City-wide*			***$200,000 Grant Opportunity for funding for a wide range of activities that address climate change impacts.***	Application submitted 8-28-13. Awaiting results.	No review performed.	N/A	
Project requiring coordination with another jurisdiction									
25	City of Morro Bay	Outfall			**Original jurisdiction CDP for the outfall and for the associated wells**	Coastal staff is working with staff. Coastal letter received 4/29/2013.	No review performed.	City provided response to CCC on 7/12/13. Per Qtrly Conference Call CCC will take 30days to respond	
26	City of Morro Bay Desal Plant	170 Atascadero			**Project requires a Coastal Development Permit for upgrades at the Plant. Final action taken Sent to CCC but pursuant to their request the City has rescinded the action.**	Waiting for outcome from the CDP application for the outfall	No review performed.	BCR- Maint and Repair project is underway. Phase 2 postponed pending permit renewal.	
Preapplication projects									
27	Galvin	861 Quintana			Applicant/agent requests to fence and rock vacant lot	Commercial structure demolished pursuant to approved CDP. Meeting scheduled to discuss issues regarding expansion of the U-Haul business without benefit of permit. Applicant finalizing plans to submit.	No review performed.	N/A	

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28		Little Morro Creek Road			BMX park	Permit process info provided to applicant on 7-23-13. Staff waiting for additional information.	No review performed.	N/A	
29		110 Orcas			Inquires regarding construction of a new house on a vacant lot with wetlands (per U.S. Wildlife mapper)	Staff met with seller and potential buyers to explain code requirements	No review performed.	N/A	
30	Triad Homes	253 Main			Discussions on a parcel map, dividing residential use from commercial uses		No review performed.	N/A	
31		214 Beach			Property for sale, inquiries regarding demolishing and placing houses.		No review performed.	N/A	
Final Map Under Review									
32	Zinngarde	1305 Teresa	5/9/11	Map	**Final Map. Public Works review of the final map, CCR's and conditions of approval. Plans 8/5/11. Applicant resubmitted CCRS. Incomplete submittal as of 1/23/12. Resubmitted 4/4/2012**	KW--Comments given to applicant, held meeting on 9/27/2011 regarding comments. Biological being review by applicant to address drainage issues. Biological Report approved by Planning as well as the CCRs. Tentative map impovements.	Review complete, applicant to obtain building permit prior to construction. Public Improvements under construction.	DH - PIP submitted PIP to be buildt prior to map recordation. Public Improvements under construction.	
33	Medina	3390 Main	10/7/11	Map	**Final Map. Issues with ESH restoration. Applicant placed processing of final map on hold by proposing an amendment to the approved tentative map and coastal development permit. Applicant proposed administrative amendment. Elevated to PC, approved 1/4/12. Appealed, scheduled for 2/14/12 CC Meeting. Appeal upheld by City Council, and project with denied 2/14/12. map check returning for corrections on 3/9/12**	SD--Meeting with applicant regarding ESH Area and Biological Study. MR- Received letters from biologist regarding revegetation on 9/2/12. Letter sent to biologist. Recent Submittal reviewed and memo sent to PW regarding deficiencies. Initial review shows resubmitted map does not meet the 50 foot ESH boundary.	No review preformed.	DH - resubmitted map and Biological study on Dec 19th 2012. PW has completed their review. Received a letter from Median's lawyer and preparing response. PW comments sent to RS to be included with his response letter. RS said to process map for CC. Letter being prepared to send to applicant to submit mylars for CC meeting.	
Projects Continued Indefinitely, No Response to Date on Incomplete Letter or inactive									

#	Applicant/ Property Owner	Project Address	Date	Permit Numbers	Project Description/Status	Planning Comments and Notations	Building/Fire Comments and Notations	Engineering Comments and Notations	Harbor/Admin Comments and Notations
34	Maritime Museum Association (Larry Newland)	Embarcadero	11/21/05	UP0-092 & CP0-139	**Embarcadero-Maritime Museum (Larry Newland)**. Submitted 11/21/05. Resubmitted 10/5/06, tentative CC for landowner consent 1/22/07 Landowner consent granted. Resubmitted 5/25/07. Applicant resubmitted additional material on 9/30/2009. Applicant working with City Staff regarding an lease for the subject site. Applicants enter into an agreement with City Council on project. Applicant to provide revised site plan. Staff is processing a "Summary Vacation	KW--Incomplete 12/15/05. Incomplete 3/7/07. Incomplete Letter sent 6/27/07. Met to discuss status 10/4/07 Incomplete 2/4/08. Met with applicants on 3/3/09 regarding inc. later. Met with applicants on 2/19/2010. Environmental documents being prepared. Meeting held with city staff and applicants on 2/3/2011.	Please route project to Building upon resubmittal.	An abandonment of Front street necessary. To be scheduled for CC mtg.	
35	*James Maul*	*530, 532, 534 Morro Ave*	*3/12/10*	*SP0-323 & UP0-282*	***Parcel Map.** CDP & CUP for 3 townhomes. Resubmittal 11/8/10. Resubmittal did not address all issues identified in correction letter.*	*KW-Incomplete letter sent 4/20/10. Met with applicant 5/25/10. Letter sent to applicant/agent indicating the City's intent to terminate the application based on inactivity. City advised there will be a new applicant and to keep the application viable.MR: Received letter from applicant's rep 11/15/12 requesting project remain open. Called B. Elster for further information. Six month extension granted.*	Please route project to Building upon resubmittal.	N/A	
Projects going forward to Coastal Commission for review									
36	City of Morro Bay	Citywide	2/1/13	Ordinance 556	AMENDING THE MUNICIPAL CODE BY ADDING CHAPTER 17.27 ESTABLISHING REGULATIONS AND PROCEDURES ENTITLED "Antennas and Wireless Telecommunications Facilities" AND MODIFYING CHAPTER 17.12 TO INCORPORATE NEW DEFINITIONS, 17.24 to MODIFY primary district matrices to incorporate the text changes , 17.30 to eliminate section 17.30.030.F "antennas", 17.48 modify to eliminate section 17.48.340 "Satellite dish antennas" and Modify THE TITLE PAGE TO REFLECT THE NEW CHAPTER.	*In progress*	No review preformed.	N/A	
Projects Appealed to City Council									

#	Applicant/ Property Owner	Project Address		Date	Permit Numbers	Project Description/Status	Planning Comments and Notations	Building/Fire Comments and Notations	Engineering Comments and Notations	Harbor/Admin Comments and Notations
37	*Perry*	*3202 Beachcomber*		*9/8/11*	*AD0-067*	***Variance.*** *Demo/Reconstruct. New home with basement in S2.A overlay. Variance approved for deck only; the issue of stories was resolved due to inconsistencies in Zoning Ordinance.*	*Variance approved at 8/15/12 PC meeting. Appealed by 3 parties to City Council. Appeal to be heard. City Attorney reviewing.Appeal in abeyance until coastal application complete.*	Review complete, applicant to obtain building permit prior to construction.	See above	
Projects in Building Plan Check										
38	Sangren	675	Anchor	11/28/12	B-29813	SFR Addition	Requested corrections 1/9/13. CJ.	BC- Returned for corrections 1/9/13.	N/A	
39	LaPlante	3093	Beachcomber	11/3/11	B-29586	New SFR	SD--Incomplete Letter 12/12/11. Phase 1 Arch Report required and Environmental Document. Incomplete letter sent 2/2012. MR: Met with applicant to go over environmental issues.	BC- Application on hold during planning process	DH- Provide SW mgmt, drainage rpt, EC.	
40	Peter	190	Dana	5/30/13	B-29926	New SFR	CJ- conditionally approved subject to amending CDP 6-25. Approved 7-10-13	BC-Grading and Building Issued. Drainage under separate permit, to be issued prior to foundation inspection.	Drainage rpt rcvd 7/10/13. Under review	
41	Bylo	593	Driftwood	3/12/13	B-29870	SFR Addition	Disapproved. Compact in-fill permit conditions not met. 3-27	BC-Returned for corrections 3/28/13.	DH- Provide SW mgmt, drainage rpt, EC.	
42	Imani	571	Embarcadero	4/23/12	B-29695	Commercial alteration, addition	CJ- Incomplete Memo 11/26/2012 sent to applicant's representative. Correction sent 7/22/13.	BC- Resubmitted 6/20/2013.	BCR- Approved 5/23/12	
43	Fowler	1215	Embarcadero	7/10/13	B-29695	Construct First Phase Water site improvements.		BC- under review.	RS- Under review	
44	Harbor	1620	Embarcadero	4/4/13	B-29888	Construct restroom and storage mezzanine within existing "Cal Poly Building."	CJ-requested corrections 4-15 KM - Resubmittal received 7/23/13 and under review.	BC-Returned for corrections 4/16/13.	BCR- approved	
45	Cribbs	2360	Greenwood	7/26/13	B-299720	SFR Addition	KM - Approved 8/8/13.	BC- under review.	JW- correction given 8.23.13, frontage req.	
46	Helfelt	2940	Greenwood	5/21/13	B-29924	New SFR	Needs CDP from Planning	BC-resubmitted.	RS - Awaiting Plan revisions	
47	Methodist Church	3000	Hemlock	8/16/12	B-29752	Construct new modular classroom, site work.	Approved by MR 8-30-12	BC- under review.	BCR- need drainage rpt	
48	Ferguson	605	Ironwood	4/24/13	B-29861	New SFR	Needs CDP from Planning	BC- returned for corrections 7/24/13.	BCR-returned for CDP app	
49	Stanton	2335	Ironwood		B-29939	Deck		BC- Issued 7/1/13.		
50	Santoianni	2570	Ironwood	5/29/13	B-29922	SFR Demo/ Reconstruct	Approved. CJ.	BC- Issued.	BCR-approved with frontage reqs. And deferrals	
51	Wilber	481	La Jolla	4/8/13	B-29889	Deck	CJ-approved 4-15	BC-Returned for corrections.	N/A	
52	Norris	335	Las Vegas	8/12/13	B-29966	Secondary Unit	KM - Resubmittal received 8/12/13 and under review.	BC- resubmitted 8/12/13.		
53	Hough	281	Main	6/16/13	B-29936	New SFR	Approved. CJ.	BC- under review.	BCR-Needs owner to certify existing drainage facility	
54	Lemos	1320	Main	5/2/13	B-29845	Commercial demo/ reconstruct	KM - Approved by KW on 8/16/13.	BC- Returned for corrections 6/17/2013.	BCR-developer is revising drainage plan. TP-FD Approve B-29845 8/9/13.	
55	Naran	2176	Main	5/13/13	B-29918	Partial change of occupancy	CJ - Corrections sent 5-29	BC-under review.		
56	Storm	1029	Monterey	5/3/12	B-29702	Partial Demo/ Reconstruct of MFR dwelling	KW-under review	BC- Returned for corrections 7/3/2012.	N/A	
57	Bezinover	451	Mindoro	7/23/13	B-29960	SFR Addition	CJ- approved 7-30	BC-under review.	JW- correction given 8.23.13, sewer video	
58	Markowitz	589	Morro Avenue	8/17/11	B-29820	Roof Deck	Under review. Spoke with architect 1/23/13 to clarify requested corrections. Architect to discuss with applicant. CJ.	BC- Corrections	N/A	
59	Shirkey	341	Nevis	2/13/13	B-29821	New SFR	Approved. CJ.	BC- Issued.	BCR- approved	

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60	Frantz	499 Nevis	9/23/12	B-29510	New SFR	CJ- Requested additional info 5-28	BC- Communications with TF 7/15/13.	N/A	
61	Vallely	460 Olive	3/29/13	B-29885	New Second Unit, Detached garage	CJ- approved 4-15-13	BC- Returned for corrections 4/25/13.	N/A	
62	G2F	423 Panay	6/10/13	B-29928	SFR Alteration		BC- Issued.	N/A	
63	Autozone	450 Quintana	6/17/13	B-29942	Expand Storage, install fire sprinklers	Approved 8-8. CJ	BC-Ready to Issue.	RS - Frontage Improvements rqd per memo 6/20/13	
64	Rock Harbor	1478 Quintana	1/10/13	B-29834	Microwave Dish	CJ -Planning approved.	BC-RTI 2/27/13		
65	Frye	244 Shasta	5/7/13	B-29910	Garage to Second Unit conversion	KM - Needs to comply or modify existing CDP.	BC- under review, Planning?	BCR-approved 5/13/13	
66	Inn at MB	60 State Park	6/27/13	B-29884	Main Building Remodel	CJ- Corrections sent 7-17	BC- under review.	RS - Referred to State Parks for comment on frontage imprvmts	
67	Seashell	1305 Theresa	6/24/13	G-38	Grading and Onsite Improvements for Tract	Approved. CJ.	BC- Issued.	DH- review complete	
68	Najarian	505 Yerba Buena	6/12/13	B-29941	New SFR	KM - CDP approved on 8/9/13.	BC- under review.	DH -approved	
Projects & Permits with Final Action									
3	*Nicki Turner*	*360 Cerrito*	*8/15/07*	CP0-246	***Appeal of Demo/Rebuild SFR and 2 trees removal. Planning Commission c*** ontinued to a date uncertain. Project folder given to Rob S.	*Project placed on hold for a long extended period of time. Staff contacted the applicant for information concerning the status of this project and received a letter on April 1, 2013. Project scheduled for next Planning Commission meeting to hear appeal. Applicant requested a continuance, PC approved a continuance to July 17, 2013 meeting. Submitted plans incomplete do not meet Commission direction. Project to be continued to 8-21-13 PC mtg. Planning Commission upheld appeal thereby denying project at 8-7-13 PC meeting.*	Review complete, no conditions noted.	Review completed in 2007, provide drainage details, erosion control, utility locations	
65	*City of Morro Bay*	*170 Atascadero*	*1/9/13*	*CP0-389*	***Coastal Development Permit for water treat plant (Desal) modifications.***	*Permit approved at 2-6-13 PC Mtg. Letter received from Coastal Commission staff regarding permit and response sent 2-15. Final action pending until resolution with Coastal Commission*	No review preformed.	BCR-Repair and maintenance under consideration.	
66	*Davis*	*501 Embarcadeo Rd.*	*6/17/13*	*UP0-363*	***Minor Use Permit for massage and spa business as an ancillary use to Estero Inn***	*KM - Noticed.7/3/13. MUP approved with conditions 7/23/13. 10 day appeal period over 8/5/13. Applicant required to obtain a business license.*			
Final Action Sent to Coastal Commission									