


Memorandum


*Serious drought.
Help Save Water!*

To: DEPUTY DISTRICT DIRECTORS
Construction, Design, Maintenance, and
Traffic Operations

Date: May 10, 2016

File: Division of Traffic
Operations


From: THOMAS P. HALLENBECK
Chief
Division of Traffic Operations


TONY TAVARES
Chief
Division of Maintenance

Subject: ROUTE SHIELD PAVEMENT MARKINGS

The purpose of this memo is to establish criteria and guidance for the use of route shield pavement markings. Route shield pavement markings are available for use in accordance with California Manual on Uniform Traffic Control Devices (CA MUTCD) Section 3B.20. Route shield pavement markings should be considered as a supplement to vertical signage. Overhead or roadside signs can be missed by drivers due to visual clutter or obstructed by other traffic (large trucks, etc). Route shield pavement markings can reiterate the information provided on overhead or roadside signs that depict the upcoming interchange geometry. When drivers receive information on interchange geometry early, and in multiple ways, they are more likely to make better driving decisions and change lanes further upstream, thereby reducing late lane changes and erratic movements near freeway exits.

Route shield pavement markings should be considered:

- At locations with complex freeway to freeway interchanges.
- At locations with a collision history where collisions are likely due to weaving.
- At complex lane assignments such as lane drops or double lane exits with optional lanes.
- At locations where crash cushions are hit frequently.
- At unusual geometries.
- When there is unexpected congestion at an interchange due to the underutilization of the optional lane or excessive lane changing maneuvers.
- Where overhead signing normally would be required but installation is impractical.
- At turn lanes from local streets to the on-ramps, where overhead sign structures are not practical.

DEPUTY DISTRICT DIRECTORS, et al.

May 10, 2016

Page 2 of 2

Installation or replacement of route shield pavement markings should be done by contract in order to reduce maintenance staff exposure. Please see the attached Route Shield Pavement Marking Recommendations and Guidance with example photographs.

If you have any questions regarding this memo, please contact Duper Tong, Chief, Office of Traffic Engineering at (916) 654-5176, or by e-mail at duper.tong@dot.ca.gov.

Attachment

Route Shield Pavement Markings Recommendations and Guidance

c: District Directors

Steve Takigawa, Deputy Director, Maintenance and Operations

Karla Sutliff, Chief Engineer

Kuo-Wei Lee, Chief, Office of Roadway Maintenance

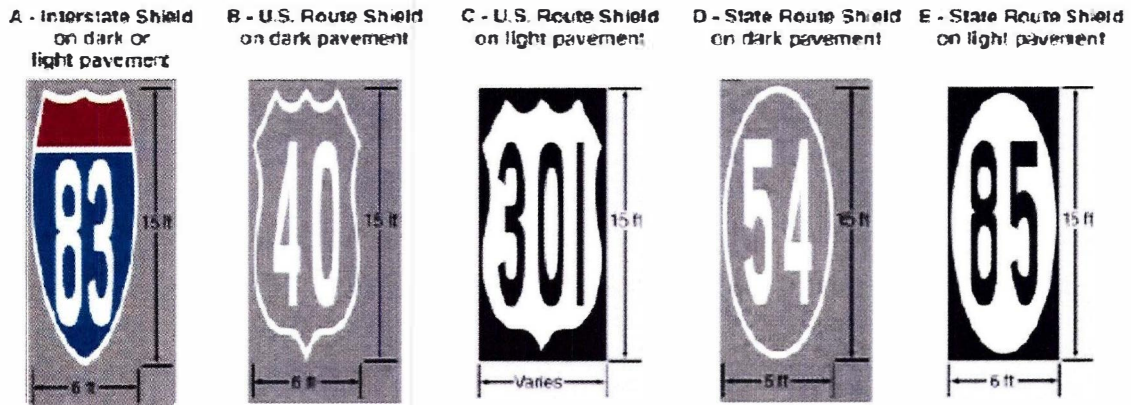
ROUTE SHIELD PAVEMENT MARKINGS RECOMMENDATIONS AND GUIDANCE

The following are some of the recommendations to be considered when using route shield pavement markings (refer to CA MUTCD Section 3B.20 for additional details):

- Route shield pavement markings should be used as opposed to text for highway identification.
- Arrows or messages (TO, LEFT, RIGHT, NORTH, SOUTH, EAST, WEST) may be used to supplement route shields and shall follow the route shield. The greatest benefit to motorists is gained through the use of both arrows and shields in the interchange area.
- Per the CA MUTCD, the longitudinal space between words and symbol message markings, including arrow markings, should be at least four times the height of the characters for low-speed roads, but not more than ten times the height of the characters under any conditions.
- Simple, single-lane exits (particularly traditional right exits) need route shield pavement marking symbols to be placed only in the exit lane.
- If route shield pavement markings are used at complex interchanges (e.g., optional lanes, multi-lane exits, etc.), they should be applied to all lanes.
- The symbols should be aligned in the center of the lane.
- Optional lane symbol pavement markings should provide the same basic information as other lanes at that interchange (i.e., show both highway shields and an optional arrow).
- The order of information in the optional lane should be:
 1. Arrows preceding the highway route shields.
 2. Primary (through traffic) highway route shield.
 3. Exiting route shield last.
- Route shield pavement markings should be placed after the motorist has passed at least one overhead guide sign for the interchange.
- The route shield pavement marking symbols should be strategically placed upstream of the decision point to allow a motorist to safely change lanes based on the information provided.
- Do not install under or immediately adjacent to overpasses as they can cast shadows on the shields. Note that placement on downhill slopes may reduce their effectiveness.
- No more than two sets of markings (route shield, with arrow or message) should be placed before the gore or decision point.

ROUTE SHIELD PAVEMENT MARKINGS - CA MUTCD

Figure 3B-25. Examples of Elongated Route Shields for Pavement Markings



Notes:

1. See the "Standard Highway Signs and Markings" book for other sizes and details
2. Colors and elongated shapes simulating State route shield signs may be used for route shield pavement markings where appropriate

ROUTE SHIELD PAVEMENT MARKINGS – DISTRICT 11 Interstate 8 (I-8) WESTBOUND



ROUTE SHIELD PAVEMENT MARKINGS – DISTRICT 11
Interstate 8 (I-8) WESTBOUND

