

Memorandum

*Making Conservation
a California Way of Life*

To: DISTRICT DIRECTORS
DEPUTY DIRECTORS
DIVISION CHIEFS

Date: June 25, 2021

From: RACHEL CARPENTER
Chief Safety Officer
Safety Programs

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Subject: DESIGN INFORMATION BULLETIN (DIB) 91 GUIDELINES ON THE USE OF POSITIVE WORK ZONE PROTECTION (PWP) & MITIGATION MEASURES

DIB 91, "Guidelines on the Use of Positive Work zone Protection (PWP) & Mitigation Measures", is available on the Division of Design website at: <https://dot.ca.gov/programs/design/design-information-bulletins-dibs> and is effective as described in the IMPLEMENTATION section of this memorandum. The intent is to use approved PWP devices or mitigation measures in public works projects on the State Highway System to reduce preventable injuries and deaths to workers and drivers. Projects, where project development efforts have started, shall comply with Highway Design Manual (HDM) Index 82.5 "Effective Date for Implementing Design Revisions to Design Standards".

BACKGROUND

This DIB provides guidance to apply PWP and mitigation measures in projects on the State Highway System based on requirements of the Streets and Highways Code Section 92.1 (Assembly Bill 759 – Bigelow) and the Federal Highway Administration (FHWA) Subpart K of the Title 23 Code of Federal Regulations. Positive protection has been defined by the FHWA as "devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in NCHRP Report 350 and the Manual for Assessing Safety Hardware (MASH)."

RESPONSIBILITY

The project engineer is responsible for documenting the selected PWP, mitigation measures, and exceptions if applicable on the Form CEM-1302 "POSITIVE WORK ZONE PROTECTION DETERMINATION" for each work zone location within the project limits as well as filing the approved copy in the project history file. The resident engineer is responsible for documenting revisions, additions, or exceptions for PWP or mitigation measures that occur during construction on Form CEM-1303 "POSITIVE WORK ZONE PROTECTION SUPPLEMENT". Collaboration with district design and district traffic operations is encouraged.

KEY CONCEPTS

- PWP devices that are consistent with FHWA's definition of positive barrier are described along with picture examples, typical uses, relative costs, benefits, and other considerations.
- PWP evaluation steps, mitigation measures and consideration of other road users is provided.
- PWP engineering analysis and documentation process is included with detailed explanation of each analysis step and corresponding risk factor.
- Reference to the Work Zone Safety Guidance website is provided for further information on the PWP devices and mitigation measures:
<https://safetyprograms.onramp.dot.ca.gov/work-zone-safety>
- Reference to the Caltrans Plans Preparation Manual for examples of how to indicate specified PWP devices on traffic handling and stage construction plan sheets.

IMPLEMENTATION

All projects meeting Plans, Specifications & Estimate (PS&E) delivery on or after December 31, 2021, are required to include a completed Form CEM-1302. Form CEM-1302 will be included on the RTL Checklist Form. Any modification to the completed and approved Form CEM-1302 during construction must be justified and approved on supplemental Form CEM-1303 and filed in the project file Category 13 Signs and Striping. Both CEM forms are available in the Appendix of the DIB until the electronic forms are posted on the Division of Construction webpage.

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Please contact Charles Suszko, Division of Construction at (916) 798-6029 or Reza Valizadeh, Division of Design at (916) 862-4213 for DIB guidance questions. Project-specific applicability and questions should be referred to the Division of Design, Project Delivery Coordinators.

Attachment

DIB 91 Guidelines on the Use of Positive Work zone Protection (PWP) & Mitigation Measures

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