

Figure 5-397.173(B)

Concrete Parapet (Type P-4, TL-4) Integral or Semi-Integral Abutment (With 2” Concrete Wearing Course)

Re-approved, and signed, April 9, 2020.

Re-Approved 04-09-2020

General

- The primary changes in this re-approval include changing the barrier height from 32” to 36”, changing the crash test approval from NCHRP 350 TL-4 to MASH TL-4 and updating the end post geometry and reinforcement to connect to a Type 31 guardrail.
- Changed the crash testing note from “Parapet meets test level 4 requirements of NCHRP report 350” to “Parapet meets MASH TL-4 requirements on bridge deck and TL-3 on approach panel.”
- Changed the barrier code (bottom right corner, just above the standard figure number) from 68 to 70.
- Changed last sentence in title block from “(With Concrete Wearing Course)” to “(With Concrete 2” Wearing Course)”.

Under GENERAL NOTES:

- Added new 2nd note “For slipform construction, tie 100% of the reinforcement bar intersections in the parapet.”
- In the 3rd note, changed the weight per foot from 591 lbs. to 658 lbs. and changed the cubic yards per foot from 0.146 to 0.162.
- Minor changes in the notes to update to active voice.

At INSIDE ELEVATION OF PARAPET:

- Changed the height of the parapet from 32” to 36” and added a 1:6 vertical taper at the end.
- Added a designer note stating the minimum parapet length on an approach panel is 13’-4”.
- Changed the dimension to the first row of bolts in the guardrail connection from 1’-8” from the end of the parapet to 1’-10¾”.
- Updated the amount and spacing of reinforcement to meet MASH TL-4.
- Updated the end post geometry to include a chamfer and tapered brush curb for use with a Type 31 guardrail.
- Added curb off the end of the parapet (dashed line) and added note “Approach curb required (see approach panel plans).”

At SECTION B-B:

- Updated the parapet height, increased the clear cover on the back face bars from 2” to 2¾”, and updated the shape of bar R501E.

At END VIEW:

- Updated the reinforcement to match the elevation view and updated the shape of bar R503E.

Added SECTION E-E (Plan view):

- Added a plan view showing the geometry & chamfers and the brush curb transition geometry at the end of the parapet.

At Designer Notes:

- Updated the designer note on the left to include the new 13’-4” minimum length and new dowel reinforcement requirements. Also added reference to Memo to Designers #2020-1.
- Updated the dowel bar designations in the designer note on the right.

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Added ISOMETRIC VIEW:

- Added an isometric view showing the new tapered end post and guardrail connection geometry & chamfers and the concrete curb and brush curb transition geometry.

At GUARDRAIL CONNECTION DETAIL – SECTION A-A:

- Updated the plan view to show the chamfer on the end post.

At CONTROL JOINT DETAILS:

- Changed notes from “Typ. three sides” to “Typ. Top & sides”.

Reinforcement Bend Details:

- Updated all of the reinforcement details and bends to match the updated MASH design.

Bill of Reinforcement:

- Updated all of the reinforcement details and bends to match the updated MASH design.

Approved, and signed, February 22, 2018.

NEW STANDARD

Added new standard for Concrete Parapet (Type P-4, TL-4) Integral or Semi-Integral Abutment (With Concrete Wearing Course). This standard was developed from old Standard Figure 5-397.173 (new Std Fig 5-397.173(D)) as its base.

Approved, and signed, February 22, 2018

NEW STANDARD