

 <p style="text-align: center;"><b>ENGINEERING MEMO</b></p>	Date Issued: June 16, 2021
	Date Effective: June 16, 2021
	Related Specifications: 606.04.9
<b>Subject: Concrete Barrier Compliance (Revised)</b>	

To: Distribution

From: Dwane Kailey, P.E. *Dwane E. Kailey 6/24/2021*  
 Chief Engineer  
 Highways & Engineering Administrator

The information contained in this memo supersedes all previous guidance concerning the criteria for the replacement of the old 2-loop concrete barrier. In a letter dated December 2, 2011, FHWA stated that all existing 2-loop concrete barrier, including tall wall barrier, which must be moved for any reason during construction, must be replaced with NCHRP 350 compliant concrete barrier. This directive includes barrier that would be moved temporarily to perform paving and replaced in its original location. FHWA has also stated that salvaged 2-loop barrier may not be used on Federal-aid highway projects for temporary or permanent installations. The following bullet points provide guidance for that replacement:

- Existing 2-loop barrier that is planned for replacement during a project may be shifted to accommodate the contractor's sequencing during that same project, which includes for a temporary shift of traffic (Work Zone Traffic Control) but must be removed and replaced with NCHRP 350 compliant concrete barrier as planned by the end of the project
- Existing 2-loop barrier cannot be moved to another location on the project for temporary use.
- Do not use existing 2-loop barrier for worker protection.
- Connecting NCHRP 350 compliant concrete barrier to existing 2-loop barrier will require modification of the last 3-loop barrier section(s) at the connecting end(s) of the new barrier. For this connection only, either cast the barrier without the middle loop or remove the middle loop without damaging the concrete.
- Connecting NCHRP 350 compliant concrete barrier to existing 2-loop barrier may require minor movement of the end that will be connected to during connection activities. Ensure the existing 2-loop concrete barrier remains in its existing position once connected.
- The last section of concrete barrier in a permanent run that terminates at an impact attenuator must be pinned. For new installations of impact attenuators onto existing runs of 2-loop barrier, replace or extend the barrier so that at least one transition piece (2-loop to 3-loop) and one pinned section 3-loop section are installed.

## Maintenance

- Maintenance of concrete barrier consists of replacement of segments that have been hit or replacement of worn-out sections (barrier that has reached the end of its service life). When replacing damaged rail, we recommend that NCHRP 350-compliant concrete barrier be used. The 2-loop concrete barrier may be perpetuated if the length to be replaced is 50 feet or less and it is determined to have remaining service life.

FHWA has taken this position for the following reasons:

- The 2-loop concrete barrier was never tested for NCHRP 230 compliance
- The woven wire loop connections, which are used on much of the existing barrier has exhibited damage and deterioration which can significantly reduce the strength of the connection.

If you have questions concerning this, please contact me at 444-6414.

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