

Pavement History:

- 10" - 7" - 10" PCC (20 feet wide) in 1941
- 3" ACC Overlay in 1974 (20 feet wide)
- 3" ACC Overlay in 1985 (and widened to 24 feet)
- Station 269+50 to 293+00 was replaced with 11" ACC in 1985 in conjunction with the South Timber Creek bridge replacement.
- Station 439+50 to 461+50 was replaced with 10" PCC in 1993 in conjunction with the Timber Creek bridge replacement.
- Maintenance has performed several spot HMA overlays thru this project route

Course Aggregate Source:

- Ferguson (1985)
- Le Grand (1941 & 1974)

Existing Conditions and Causes Of Distress:

The original roadway was graded and paved in 1941 as a 20 feet wide PCC roadway. This route was last resurfaced in 1985 and has longitudinal cracking at the quarter points, substantial transverse cracking, and rutting.

Safety Consideration:

All crest vertical curves meet or exceed 55 mph stopping site distance criteria. There are 8 sag vertical curves below 55 mph stopping site distance criteria, although all 8 are above the 3R minimum stopping site distance criteria of 35 mph.

There are four horizontal curves within the project location that require super elevation:

- PI at 210+87 (3 degree, super elevation rate is unknown)
- PI at 244+03 (3 degree, super elevation rate is unknown)
- PI at 435+80 (4 degree, 7.8% super) - this can remain at 7.8% per section 2A-2 of the Design Manual
- PI at 454+78 (4 degree, 7.8% super) - this can remain at 7.8% per section 2A-2 of the Design Manual

The four curves do not have advisory speed limits or chevrons. Survey has been requested from Marshalltown construction to verify the super elevation rates on these curves.

As-built plans indicate fore slopes are 3:1 for fills of less than 6 feet high and 2:1 for fills over 6 feet.