High Tension Cable
Median Guardrail

Emily Gustafson,
NDDOT Project Engineer

May 19, 2020
Length of job = 5 miles

The Contractor began
August 5, 2019

The Contractor finished
installing the guardrail
Sept 6, 2019

Seeding and mulching was
completed Sept 26, 2019

Cost of project =
$1,398,355.57
Guardrail Posts

50” tall

Cable
A = 35 inches
B = 28 inches
C = 21 inches
D = 14 inches

Post sits 12 inches into the sleeve

Post spacing is 10’
Guardrail Cable and Turnbuckles

The cable is weaved through the posts. The cable splices are called turnbuckles. Each spool of cable was about 1000’.

The cable is tensioned according to temperature

0 degrees F = 5700 lbs
20 degrees F = 5100 lbs
40 degrees F = 4500 lbs
60 degrees F = 3900 lbs
80 degrees F = 3300 lbs
100 degrees F = 2700 lbs
Guardrail Anchor System

- Anchors were poured while sleeves were driven
- 18 anchors, 9 runs
- First three posts after the anchor are shorter
Guardrail Installation
Guardrail Crashes
Guardrail Maintenance

• NDDOT Maintenance Crews
Emily Gustafson
701-328-6953
ekgustafson@nd.gov