Safety Performance Management Target Setting

Data: Fatalities and Serious Injuries

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Georgia DOT

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CBMPO
Executive Summary

• Purpose of the Regulatory Action is to clarify the Moving Ahead for Progress in the 21st Century Act (MAP-21) (Pub. L. 112-141) and the Fixing America's Surface Transportation Act (FAST Act) (Pub. L. 114-94) continue the Highway Safety Improvement Program (HSIP) under section 148, title 23 of the United States Code (U.S.C.) as a core Federal-aid program with the purpose to achieve a significant reduction in fatalities and serious injuries on all public roads.
The purpose of this final rule is to incorporate changes to the Highway Safety Improvement Program (HSIP) regulations to address provisions in the Moving Ahead for Progress in the 21st Century Act (MAP-21) as well as to incorporate clarifications to better explain existing regulatory language. The DOT also considered the HSIP provisions in the Fixing America's Surface Transportation Act (FAST Act).

- Effective April 14, 2016
Safety Performance Measures

- Number of Fatalities
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
- Number of Serious Injuries
- Rate of Serious Injury per 100 Vehicle Miles Traveled (VMT)
- Number of Non-Motorized Fatalities and Serious Injuries
- Using a Unweighted Rolling Five(5) Year Average
Safety Performance Measures

Strategic Highway Safety Plan

- Highway Safety Plan
- Behavioral
- Analyze Data
  - ID Problems
  - Define Emphasis Areas
  - Set Goals
- Highway Safety Improvement Program
- Infra-structure

Implement

SAVE LIVES

NHTSA approves

FHWA evaluates
Safety Performance Targets

**GOHS**
- Georgia Strategic Highway Safety Plan (HSP)
- NHTSA

**GDOT**
- Highway Safety Improvement Program (HSIP)
- FHWA
CRASH FATALITIES
# Number of Fatalities

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<tbody>
<tr>
<td>Traffic Fatalities</td>
<td>1,495</td>
<td>1,292</td>
<td>1,247</td>
<td>1,226</td>
<td>1,192</td>
<td>1,180</td>
<td>1,164</td>
<td>1,435</td>
<td>1,560</td>
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<td>Projected Fatalities</td>
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To maintain the 5-year moving average traffic fatalities under the projected 1,593 (2014-2018) 5-year average by December 2018.

\[ y = 23.057x^2 - 133.98x + 1401.4 \]
To maintain the 5-year moving average traffic fatality rate under the projected 1.33 (2014-2018) 5-year average by December 2018

\[ y = 0.0161x^2 - 0.1048x + 1.2745 \]
SERIOUS INJURY
## Number of Serious Injuries

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<tr>
<td>2008</td>
<td>11,729</td>
<td>12,482</td>
<td>12,483</td>
<td>14,756</td>
<td>15,510</td>
<td>17,040</td>
<td>16,168</td>
<td>19,405</td>
<td>18,900</td>
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<td><strong>Projected Serious Injuries</strong></td>
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<td>2017</td>
<td>21,177</td>
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<td>2018</td>
<td>22,564</td>
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<td><strong>Target</strong></td>
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<td>19,643</td>
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To maintain the 5-year moving average serious traffic injuries under the projected 19,643 (2014-2018) 5-year average by December 2018.
To maintain the 5-year moving average serious traffic injury rate under the projected 16.318 (2014-2018) 5-year average by December 2018.
NON-MOTORIZED FATALITIES & SERIOUS INJURIES
### Number of Non-Motorized Fatalities & Serious Injuries

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<tbody>
<tr>
<td>Non Motorizes</td>
<td>522</td>
<td>528</td>
<td>664</td>
<td>738</td>
<td>878</td>
<td>866</td>
<td>869</td>
<td>1002</td>
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<td>Projected non Motorized</td>
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<td>1116</td>
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<td>1027</td>
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To maintain the 5-year moving average Non-Motorized Fatalities & Serious Injuries under the projected 1027 (2014-2018) 5-year average by December 2018

\[ y = -2.3286x^2 + 79.031x + 588.08 \]

Non-Motorized Injuries & Fatalities by 5 Year Average

- 2012: 650
- 2013: 700
- 2014: 750
- 2015: 800
- 2016: 850
- 2017: 900
- 2018: 950
- 2019: 1000
- 2020: 1050
- 2021: 1100
DATA LIMITATIONS
Current Definitions

GEARS

• Injury Class Code
  – Killed
  – Serious
  – Visible
  – Complaint
  – Not Injured

Hospital Variables

• Injury Severity Score (ISS)
  – Minor
  – Moderate
  – Serious
  – Severe
  – Critical
  – Maximal
CODES Linked Data

Georgia Uniform Vehicle Accident Report

• Serious Injury
• Any injury that prevents the injured person from walking, driving, or normally continuing the activities that the person was capable of performing prior to the accident.

Crash Variables

• Transport
• Vehicle Damage
• Vehicle Type
• Person Type
• Injury Class Code
MMUCC 4th Ed. Suspected Serious Injury Definition

- Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood
- Broken or distorted extremity (arm or leg)
- Crush injuries
- Suspected skull, chest, or abdominal injury other than
- Significant burns (second and third degree burns over 10% or more of the body)
- Unconsciousness when taken from the crash scene
- Paralysis
Serious Traffic-related Injuries Definition

- All pedestrian and bicycle occupants that were coded as serious
- All pedestrian and bicycle occupants that were coded as visible and were transported by EMS
- All other occupants that were coded as serious and transported by EMS
- 50% of all other occupants that were coded visible, transported by EMS, and damage to vehicle (extensive or fire present)
MPO CONSIDERATIONS
Law Enforcement

• Software
  – 17 Current Software Providers

• Training
  – GPSTC
  – Local Training Officer

• Reporting
  – Electronic
  – Paper
  – None
Defined Boundaries

- State
- County
- Law Enforcement Agency
- No MPO Boundaries
- No Electoral Boundaries
- Historic GIS
MPO Targets

MPOs will establish targets for the same five safety performance measures for all public roads in the MPO planning area within **180 days** after the State establishes each target. The targets will be established in coordination with the State, to the maximum extent practicable. **The MPO can either agree to support the State DOT target or establish a numerical target specific to the MPO planning area.** MPOs' targets are reported to the State DOT, which must be able to provide the targets to FHWA, upon request.
MPO Targets

States establish HSIP targets and report them for the upcoming calendar year in their HSIP annual report that is due August 31 each year. MPOs must establish HSIP targets within 180 days of the State establishing and reporting its HSIP targets. Since FHWA deems the HSIP reports submitted on August 31, **MPOs must establish HSIP targets no later than February 27 of each year.**
## Proposed Safety Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>Safety Performance Measure</th>
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<tbody>
<tr>
<td>1,593</td>
<td>Number of Fatalities</td>
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<tr>
<td>1.33%</td>
<td>Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)</td>
</tr>
<tr>
<td>19,643</td>
<td>Number of Serious Injuries</td>
</tr>
<tr>
<td>16.32%</td>
<td>Rate of Serious Injury per 100 Vehicle Miles Traveled (VMT)</td>
</tr>
<tr>
<td>1,027</td>
<td>Number of Non-Motorized Fatalities and Serious Injuries</td>
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