# 2023 HSIP

## NCTCOG - Regional Safety Advisory Committee

10/27/2023


HELP
#EndTheStreakTX
End the streak of daily deaths on Texas roadways.
TxDOT.gov (Keyword: #EndTheStreakTX)
#EndTheStreakTX Toolkit

# Purpose of HSIP

- *"The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance."*
- Federally-funded, State-administered
- Establish annual safety performance targets for five measures
- If a State doesn't meet performance targets additional annual reporting requirements

Legislated under Section 148 of Title 23, *United States Code* (23 U.S.C. 148) and regulated under Part 924 of Title 23, Code of Federal Regulations (23 CFR Part 924)

# FHWA Oversight

Oversight includes:

- Review and approval of HSIP Guidance Document
- Monthly project letting reports
- Annual assessments of our program
- HSIP Annual Report to FHWA on performance
- HSIP Annual Implementation Plan (if performance is not met)

- Why is this important?
  - TRF ensures TxDOT remains in compliance with FHWA requirements
  - TRF striving to provide more support, flexibility, and transparency

# 2022-2027 Texas SHSP Emphasis Areas

- Roadway & Lane Departure
- Speed Related
- Intersection Safety
- Occupant Protection
- Impaired Driving
- Districted Driving
- Vulnerable Road Users: Pedestrian
- Vulnerable Road Users: Pedalcyclist
- Post-Crash Care
- Younger Drivers
- Older Drivers

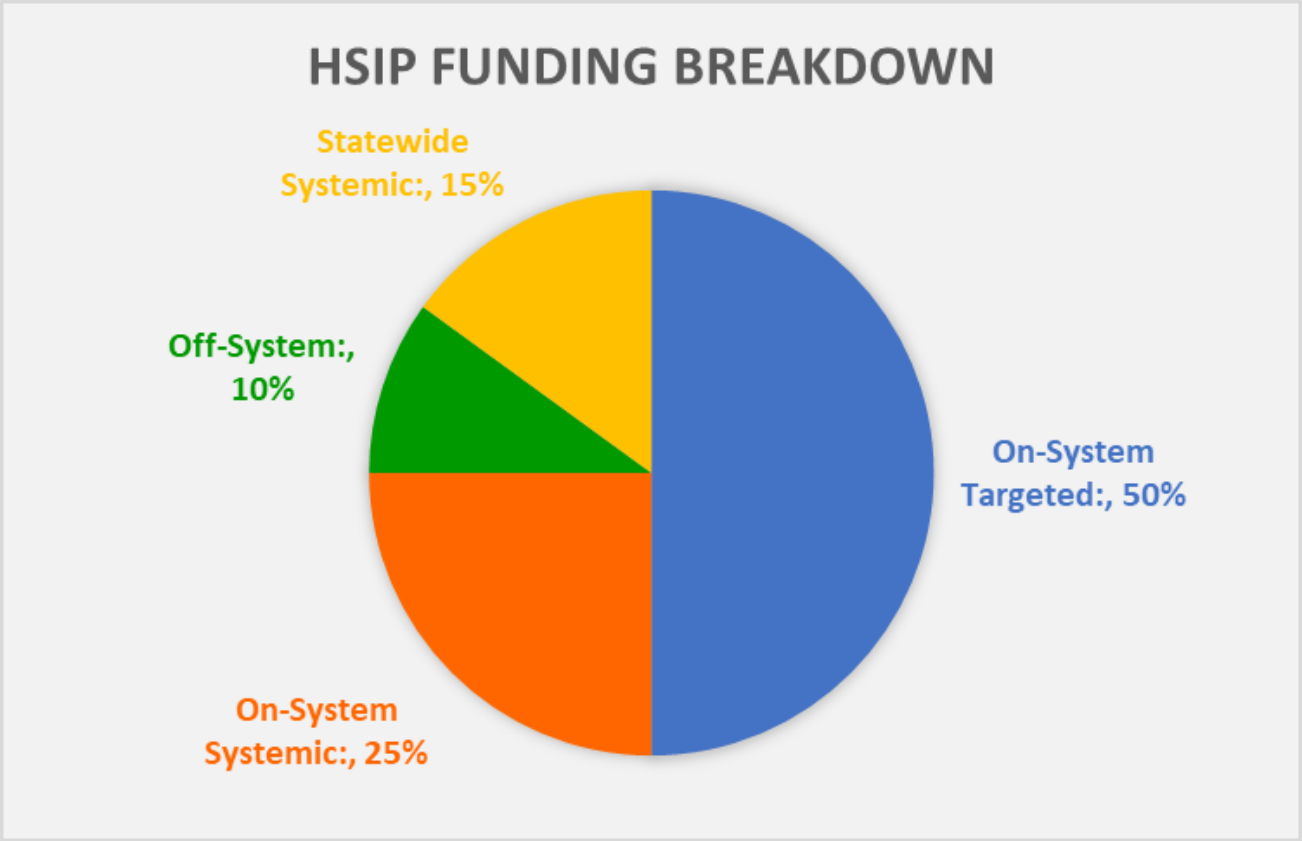
# 2023 HSIP Program - Timeline

| Agenda Item | May | June | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2024 HSIP Program Announced 10/2/23 | | | | | | ▲ | | | | | |
| District FY 24-27 Submittals Due 12/15/2023 * | | | | | | ▬ | ▬ | ▲ | | | |
| Project selections confirmed by 03/15/24 | | | | | | | | ▬ | ▬ | ▬ | ▲ |

*District Submittals Include

- Confirm FY 24 – FY 26 projects already approved for scope, schedule, & estimate for both on and off system
- Submit additional projects to fill in your funding gaps for FY 24 – FY 26
- Submit all projects for FY 27

# Funding


HSIP FUNDING BREAKDOWN
Statewide Systemic:, 15%
Off-System:, 10%
On-System Targeted:, 50%
On-System Systemic:, 25%

# Funding

| FY 24 | |
|---|---|
| **Total:** | **$387,421,639** |
| On-System Targeted: | $193,710,819 |
| On-System Systemic: | $96,855,410 |
| Off-System: | $38,742,164 |
| Statewide Systemic: | $58,113,246 |

| FY 25 | |
|---|---|
| **Total:** | **$395,987,128** |
| On-System Targeted: | $197,993,564 |
| On-System Systemic: | $98,996,782 |
| Off-System: | $39,598,713 |
| Statewide Systemic: | $59,398,069 |

| FY 26 | |
|---|---|
| **Total:** | **$404,723,927** |
| On-System Targeted: | $202,361,963 |
| On-System Systemic: | $101,180,982 |
| Off-System: | $40,472,393 |
| Statewide Systemic: | $60,708,589 |

| FY 27 | |
|---|---|
| **Total:** | **$387,592,013** |
| On-System Targeted: | $193,796,007 |
| On-System Systemic: | $96,898,003 |
| Off-System: | $38,759,201 |
| Statewide Systemic: | $58,138,802 |

## Targeted Selection Method

- High crash locations and clusters.
- Each eligible targeted project is subjected to a benefit-cost analysis. The formula used for this purpose is the Safety Improvement Index (SII).
- The SII is the ratio of the annual savings in preventable crash costs that have occurred at a location to the cost of constructing the proposed improvement.
- Each countermeasure has a specific Crash Reduction Factor, which represents the percentage reduction in crash costs or severity of the applicable crash types that can be expected as a result of the improvement.

## Systemic Approach

- A systemic approach involves implementing improvements based on high-risk roadway features.
- This approach broadens traffic safety efforts by considering risk and crash history when identifying where to make low-cost safety improvements.
- Identifies a “problem” based on systemwide data, such as urban pedestrian crashes. These crashes are often spread across the network with few or no locations experiencing a “cluster” of crashes.
- Systemic projects are not location specific but rather across a network such as a corridor or region.

# Approved Systemic Safety Countermeasures:

## Intersections

- Urban/Rural intersection improvements
- Two-Way Left-Turn Lanes (TWLTLs/Continuous Turn Lanes)
- Dedicated right and left turn lanes
- Signal head back plates with reflective borders
- Close Median Openings (Crossovers)

## Roadway Lane Departure

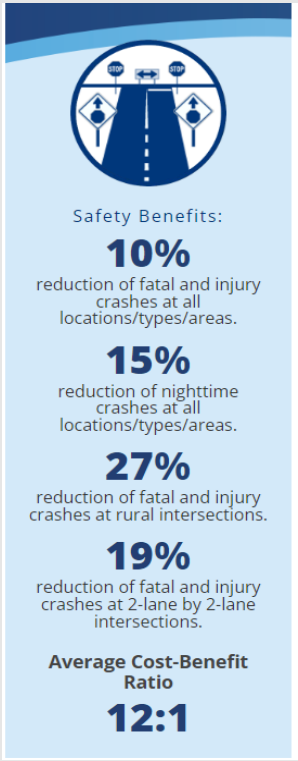
- Roadway widening
- Safety lighting
- Enhanced Delineation on Curves
- Median Barrier

## Pedestrian

- Safety lighting at urban intersection
- Installation of attachments to existing concrete barrier systems to deter prohibited pedestrian crossings on divided highways
- Uncontrolled crossing locations
- Median and crossing islands in urban and suburban areas

# Example District Systemic Countermeasures: Intersection

Urban/Rural intersection improvements

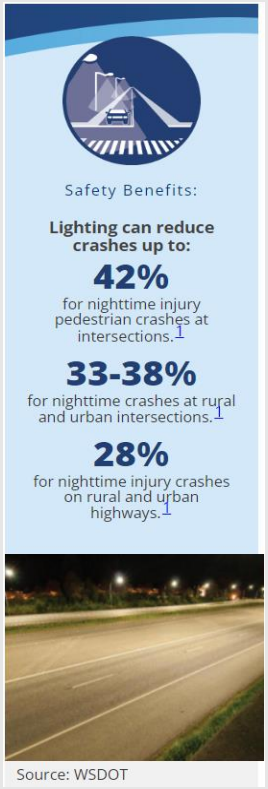



Backplates with Retroreflective Borders


Dedicated right and left turn lanes

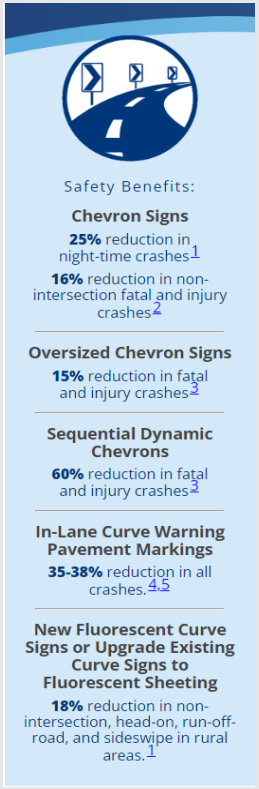
# Example District Systemic Countermeasures: Roadway Lane Departure

Safety lighting

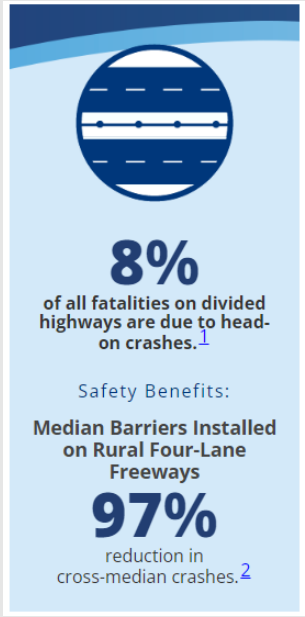



Source: WSDOT

Enhanced Delineation on Curves

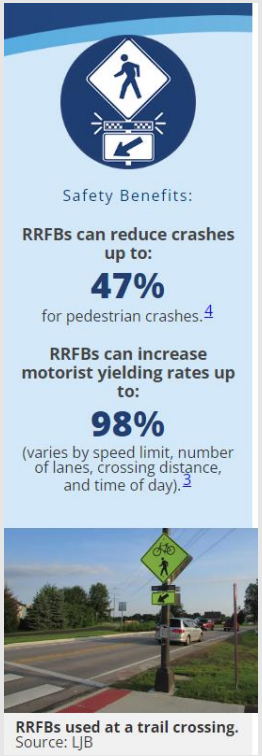



Median Barrier



# Example District Systemic Countermeasures: Pedestrian

Rectangular Rapid Flashing Beacons




**RRFBs used at a trail crossing.** Source: LJB

Median and crossing islands in urban and suburban areas


Pedestrian Hybrid Beacons


**Example of PHBs mounted on a mast arm.** Source: FHWA

# Off-System Projects

## G-Match

- List of Approved G-Match Work codes can be found on SharePoint
- TRF is continuing our efforts to encourage local participation in the HSIP program.
- In accordance with 23 USC §120(c)(1): Federal share payable, Increased Federal Share for Certain Safety Projects, TRF and FHWA have evaluated the HSIP countermeasures for eligibility for 100% federal funding for construction dollars
- All projects must conform to the guidelines for HSIP projects, e.g., meeting minimum SII
- Safety Engineering will consider off-system projects a priority for this increased share.

# Examples of potentially eligible projects include (G-Match):

- Traffic control signalization
- Traffic circles (also known as "roundabouts")
- Pavement markings
- Installation of traffic signs, traffic lights, guardrails, impact attenuators, or concrete barrier end-treatments

# Examples of potentially eligible projects include (G-Match):

| WC | Safety Countermeasure - Description | Definition | G? |
|---|---|---|---|
| 101 | Install Warning/Guide Signs | Provide advance signing for unusual or unexpected roadway features where no signing existed previously. | Yes |
| 107 | Install Traffic Signal | Provide a traffic signal where none existed previously. This does not include the installation of flashing beacons. | Yes |
| 108 | Improve Traffic Signals | Improve existing intersection signals to current design standards. | Yes |
| 110 | Install Pedestrian Signal | Provide a pedestrian signal at an existing signalized location where no pedestrian phase exists, but pedestrian crosswalks are existing, or in conjunction with Refer to W.C. 403 for installation of pedestrian crosswalks. | Yes |
| 111 | Interconnect Signals | Provide a communication link between two or more adjacent signals in a corridor. Specify all signalized intersections to be included in the interconnection. | Yes |
| 113 | Install Delineators | Install post-mounted delineators to provide guidance. | No |
| 114 | Install School Zones | Place school zones to include flashers, signing and/or pavement markings where none existed previously. Refer to W.C. 403 for pedestrian crosswalk markings. | Yes |
| 118 | Replace Flashing Beacon with a Traffic Signal | Replace an existing flashing beacon at an intersection with a traffic signal. | Yes |
| 119 | Install Overhead Signs | Install overhead advance regulatory, warning or guide signing for unusual or unexpected roadway features where no signing existed previously. | Yes |
| 122 | Install Advanced Warning Signals (Intersection - Existing Warning Signs) | Provide flasher units in advance of an intersection where none previously existed but where advance warning signs already exist. | Yes |
| 123 | Install Advanced Warning Signals (Curve- Existing Warning Signs) | Provide flasher units in advance of a curve where none previously existed. Advance warning signs already exist. | Yes |
| 124 | Install Advanced Warning Signals and Signs (Intersection) | Provide flasher units and signs in advance of an intersection where none previously existed. | Yes |
| 125 | Install Advanced Warning Signals and Signs (Curve) | Provide flasher units and signs in advance of a curve where none previously existed. | Yes |
| 128 | Install Advanced Warning Signs (Intersection) | Provide signs in advance of an intersection where none previously existed. | Yes |
| 130 | Install Advanced Warning Signs (Curve) | Provide signs in advance of a curve where none previously existed. | Yes |
| 131 | Improve Pedestrian Signals | Bring existing pedestrian signal units into conformance with current standards. | Yes |
| 132 | Install Advance Warning Signals and Signs | Provide flasher units and signs in advance of hazard where none previously existed. | Yes |
| 133 | Improve School Zone | Improve an existing school zone by upgrading signing, pavement markings or signals. | Yes |
| 136 | Install LED Flashing Chevrons (Curve) | Install LED flashing chevrons on curve to provide guidance. | Yes |
| 137 | Install Chevrons (Curve) | Install chevrons on curve to provide guidance. | Yes |
| 138 | Install Flashing Yellow Arrow | Improve existing intersection signals by adding a flashing yellow arrow indication and install the LEFT TURN YIELD ON FLASHING YELLOW ARROW (R10-17T) sign. Refer to W.C. 108 for improvement of traffic signal. | Yes |
| 139 | Install Surface Mounted Delineators on Centerline | Install surface mounted delineators on centerline. | Yes |
| 140 | Wrong Way Driver Warning Signs | Provide warning signs to warn wrong way drivers at freeway entrances. | Yes |

- G-Match List could be found in TRF Sharepoint Documents (link sent in email for this year's call)
- Unchanged from last year

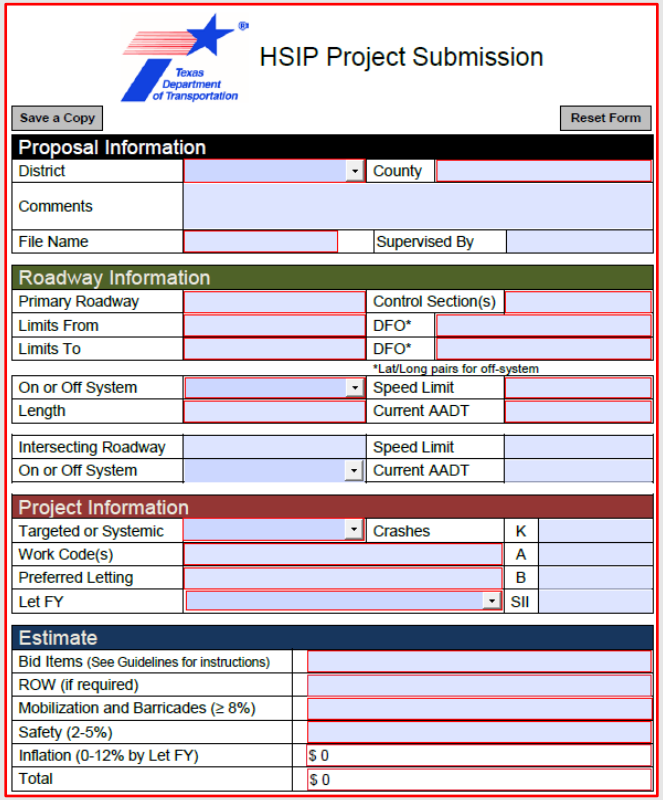
# Submission Information – Box.com

## Project Submittals

- Submittal Form/Cover Page
- Location Information and Map
- Scope of Work
- Cost Estimate from TxC
- SII Report/Crash Data *(Targeted Projects only)*
- Supplemental Information *(Typical Sections, Layouts, etc.)*
- Selection Method *(Targeted vs Systemic) (On cover sheet)*
- *TxC Entering Requirements*

# Submission Information – Cover Page

**All fields must be filled out as best as possible**



HSIP Project Submission

Texas Department of Transportation

Save a Copy | Reset Form

**Proposal Information**

| | | | |
|---|---|---|---|
| District | | County | |
| Comments | | | |
| File Name | | Supervised By | |

**Roadway Information**

| | | | |
|---|---|---|---|
| Primary Roadway | | Control Section(s) | |
| Limits From | | DFO* | |
| Limits To | | DFO* | |
| | | *Lat/Long pairs for off-system | |
| On or Off System | | Speed Limit | |
| Length | | Current AADT | |
| Intersecting Roadway | | Speed Limit | |
| On or Off System | | Current AADT | |

**Project Information**

| | | | | |
|---|---|---|---|---|
| Targeted or Systemic | | Crashes | K | |
| Work Code(s) | | | A | |
| Preferred Letting | | | B | |
| Let FY | | | SII | |

**Estimate**

| | |
|---|---|
| Bid Items (See Guidelines for instructions) | |
| ROW (if required) | |
| Mobilization and Barricades (≥ 8%) | |
| Safety (2-5%) | |
| Inflation (0-12% by Let FY) | $ 0 |
| Total | $ 0 |

# 2023 HSIP Program - Reminders

Submit Program in TxDOTCONNECT by **December 15, 2023**

## Perform Field Evaluations

- Ensure work need and scope
- Assists with complete and accurate estimates
- Submit only the highest priority projects

## Work with Planning Office

- Ensure work isn't already scheduled
- Coordinate letting dates with compatible work before submitting

## Preferred Letting Date

- Ensure the FY chosen is deliverable

# 2023 HSIP Program - Reminders

## Estimates

- TRF uses the estimate to compare at PS&E time
- Only work types programmed can be part of safety project
- Use district average bid prices

## Confirm Programmed Projects

- Review and confirm current scope, schedule, & estimate for all FY 23, FY 24, and FY 25 projects in the “Programmed Projects” grid of the Traffic Safety page in TxDOTCONNECT

## Review Process

- District submits program to “Statewide” review in TxDOTCONNECT
- TRF will review projects and schedule a District HSIP Workshop to discuss
- TRF will add comments, then return the program to the district for updates
- Repeat as needed
- TRF will Program projects into the UTP and funding lines will show Approved in September 2023.
- TRF will coordinate with FIN to approve FY23 funding lines on a case-by-case basis

# 2023 HSIP Program – Guidelines Additional Information

## Scope vs Overrun

- Scope change is work added to or removed from approved work codes
- Overrun is increased cost, but work remains the same as submitted
- Scope changes must be submitted and approved prior to PS&E
- Overruns are approved at time of PS&E

## Scope changes resulting in cost increases will impact district budget

## Change Orders

- Change order during construction
- Change order additional work into an existing project – LIMITED and case by case basis

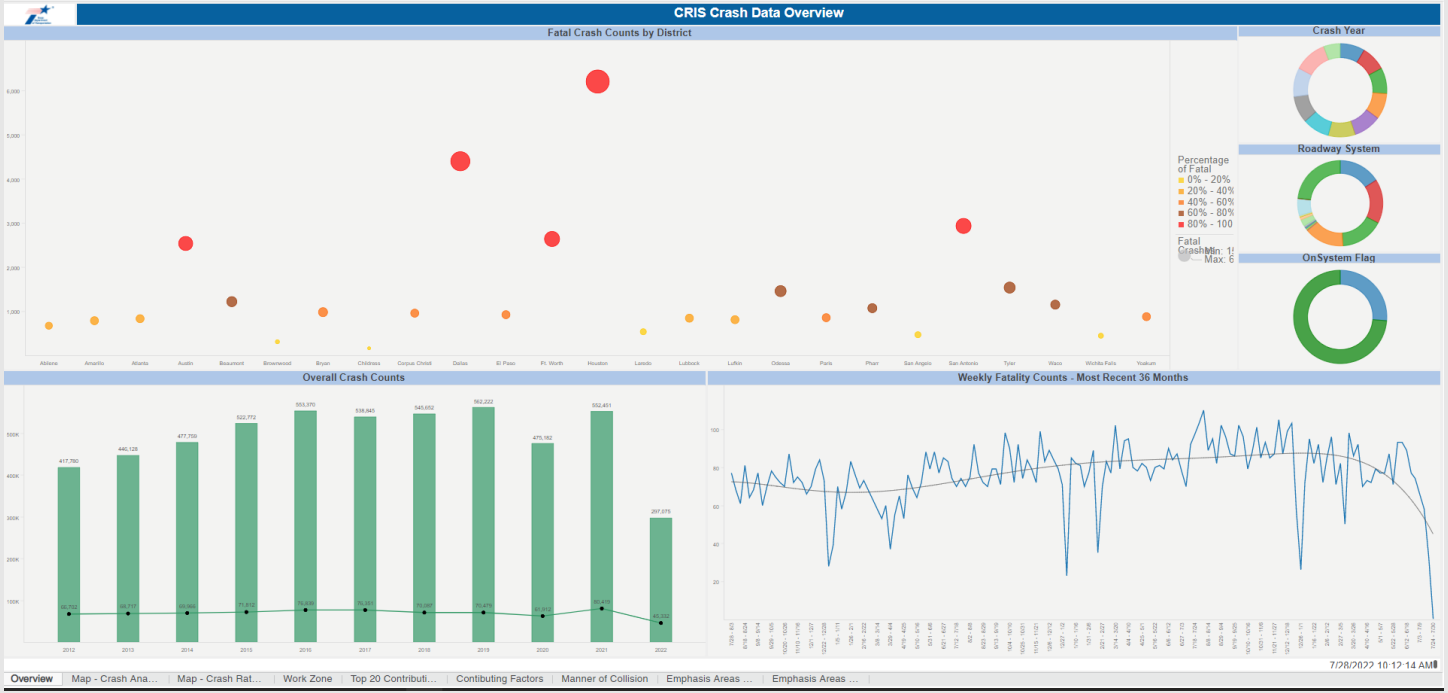
## Change orders will not impact district budget

## Notify TRF-Safety about any changes made to any project.

- Approval required to move project from one FY to another FY

# Tools: Crash Data & Analysis Dashboard Page

https://tntoday.dot.state.tx.us/TRF/Pages/CRIS-Dashboard-Page.aspx



# Tools

## How to Documents

- How to calculate SII.docx
- How to find DFO's (new CRIS).docx
- AFA Guidance
- How to input funding lines in TxDOTCONNECT

## CAVS Data

- CAVS Data has been updated and placed in the 2023 HSIP Program folder in SharePoint
- Off-System files may be shared with your local jurisdictions

TRF Sharepoint – Tools found here.