



VIRGINIA HIGHWAY SAFETY PROGRAM BEHAVIORAL AND INFRASTRUCTURE INVESTMENT PLAN

Commonwealth Transportation Board

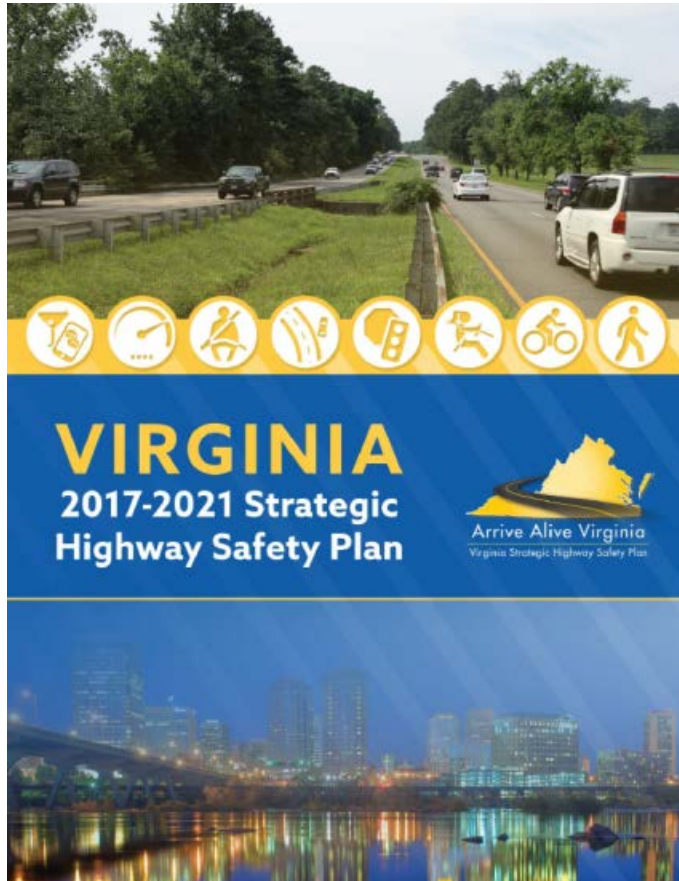
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December 7, 2021

ARRIVE ALIVE VIRGINIA

Virginia Strategic Highway Safety Plan (SHSP)



Vision

Toward Zero Deaths

Mission

Save Lives and Reduce Injuries
through 4E's of:



http://www.virginiadot.org/info/resources/SHSP/VA_2017_SHSP_Final_complete.pdf

2017-2021 SHSP Emphasis Areas

Emphasis Areas

Roadway Departure
Intersections
Impaired Driving
Occupant Protection
Speed
Young Drivers
Pedestrians
Bicyclists

Special Safety Areas

EMS
Connected / Autonomous
Vehicles
Data

Will bring NEW 2022-2026 Plan to CTB in January 2022



TREDS 3-Year Data Comparison: Jan. 1 through Oct. 31					
Category	2021	2020	2019	% Change vs. 2020	% Change vs. 2019
Fatalities - All crashes	796	709	690	12.27%	15.36%
Serious Injuries - All Crashes	5,945	5,699	6,097	4.32%	-2.49%
Fatalities+Serious Injuries	6,741	6,408	6,787	5.20%	-0.68%
Alcohol Related *	211	242	227	-12.81%	-7.05%
Speed Related	382	345	293	10.72%	30.38%
Unrestrained	275	288	245	-4.51%	12.24%
Distracted	95	100	100	-5.00%	-5.00%
Motorcycle	95	81	86	17.28%	10.47%
Pedestrian	94	90	101	4.44%	-6.93%
Bicycle	14	8	11	75.00%	27.27%
Moped	10	9	10	11.11%	0.00%
Total Vulnerable Road Users ^	213	188	208	13.30%	2.40%
Teen Driver Involved (Teen Drivers Only)	86 (36)	61 (18)	57 (21)	40.98% (100%)	50.87% (71.42%)
Mature Driver Involved (Mature Drivers Only)	190 (118)	144 (102)	165 (114)	31.94% (15.68%)	15.15% (3.50%)
Large Truck Involved	50	58	42	-13.79%	19.05%
Work Zones	25	10	17	150.00%	47.06%

* Alcohol related fatalities are likely higher due to time associated with receiving final lab results.

^ Vulnerable Road Users include: Pedestrians, motorcyclists, bicyclists, and moped riders.

Multiple Behaviors: Jan. 1 through Oct. 31					
Category	2021	2020	2019	% Change vs. 2020	% Change vs. 2019
Speed + Unrestrained	187	197	151	-5.08%	23.84%
Alcohol + Unrestrained *	103	129	116	-20.16%	-11.21%
Alcohol + Speed *	124	134	113	-7.46%	9.73%
Speed + Unrestrained + Alcohol *	68	82	65	-17.07%	4.62%

* Alcohol related fatalities are likely higher due to time associated with receiving final lab results.

Speed Related Fatalities: Jan. 1 through Oct. 31

Category	2021	2020	2019	% Change vs. 2020	% Change vs. 2019
Interstate Only	74	71	55	4.23%	34.55%
Non-interstate Only	308	274	238	12.41%	29.41%
Age 15-20	42	29	37	44.83%	13.51%
Age 21-35	141	136	96	3.68%	46.88%
Age 36-50	74	67	62	10.45%	19.35%
Age 51-65	62	69	54	-10.14%	14.81%
Age 66 & Over	44	36	39	22.22%	12.82%

* Alcohol related fatalities are likely higher due to time associated with receiving final lab results.

Alcohol Related Fatalities: Jan. 1 through Oct. 31

Category	2021	2020	2019	% Change vs. 2020	% Change vs. 2019
Interstate Only	27	30	24	-10.00%	12.50%
Non-interstate Only	184	212	203	-13.21%	-9.36%
Age 20 & Under	21	20	14	5.00%	50.00%
Age 21-35	75	99	83	-24.24%	-9.64%
Age 36-50	55	58	61	-5.17%	-9.84%
Age 51-65	51	55	50	-7.27%	2.00%
Age 66 & Over	9	10	19	-10.00%	-52.63%

Unrestrained Fatalities: Jan. 1 through Oct. 31

Category	2021	2020	2019	% Change vs. 2020	% Change vs. 2019
Interstate Only	53	58	44	-8.62%	20.45%
Non-interstate Only	275	285	237	-3.51%	16.03%
Age 15-20	36	25	25	44.00%	44.00%
Age 21-35	102	98	78	4.08%	30.77%
Age 36-50	59	66	55	-10.61%	7.27%
Age 51-65	42	59	47	-28.81%	-10.64%
Age 66 & Over	29	35	36	-17.14%	-19.44%

Virginia Highway Safety Plan Overview: Investing in Behavioral Countermeasures in FFY2022

Occupant Protection Grants



\$3.9M

Alcohol Grants



\$15.9

Speed Grants



\$2.9 M

Pedestrian Grants



\$680K

Motorcycle Grants



\$287K

Teen Driver Grants



\$1.2M

Drugged Driving Grants



\$1M

Distracted Driving Grants



\$0

Va does not qualify for NHTSA Distracted Grants \$


Virginia Highway Safety Improvement Funds: 3-year Investment Proposal (FY2022-24)

Occupant Protection




\$4.0M

Impaired Driving



\$8.15M

Speed




\$4.5M

Pedestrian & Bicycles



\$3.5M

Motorcycle



\$2.75M

Teen Driver



\$800K

Mature Drivers



\$1.8M

Distracted Driving



\$4.5M

Va does not qualify for
NHTSA Distracted Grants \$



Virginia Highway Safety Improvement Funds: Occupant Protection Proposals

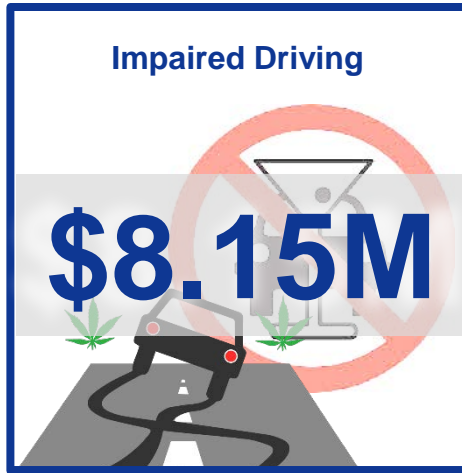


<https://youtu.be/LWXyyTmBjxs>

Expand the “Local Heroes” Messaging Campaign:

- Create new video
- Add Counties and Cities
- Expand media buy

FY2022: \$1M
FY2023: \$1.5M
FY2024: \$1.5M



Virginia Highway Safety Improvement Funds: Impaired Driving Proposals

Create new media campaign to focus on drunk and drugged driving:

- Expand the “Drive Sober or Get Pulled Over” campaign
- Create new Drugged Driving messaging

FY2022: \$1.5M

FY2023: \$1M

FY2024: \$1M

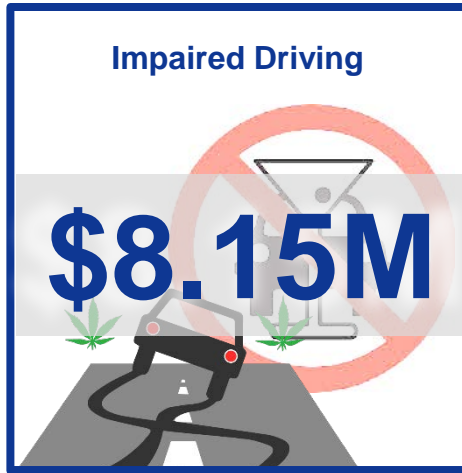
Expand the SoberRide Program:

- Make available in a wider area of the Commonwealth

FY2022: \$1M

FY2023: \$1.15M

FY2024: \$1.15M



Virginia Highway Safety Improvement Funds: Impaired Driving Proposals (cont.)

Request NHTSA Administered Impaired Driving Program and Law Review

- States that conduct an IDR experience a greater reduction in overall fatalities than states that do not (NHTSA).

FY2022: \$1M

Widely publicize sobriety check points:

- Evaluations of statewide campaigns in CT and WV showed a greater reduction in alcohol-related fatalities and overall DUI when checkpoints were publicized

FY2022: \$250K

FY2023: \$500K

FY2024: \$500K



Virginia Highway Safety Improvement Funds: Distracted Driving Proposals



Create new media campaign to focus on distracted driving:

- New creative utilizing focus groups.
- Coordinate with law enforcement utilizing Click It or Ticket model

FY2022: \$1.5M

FY2023: \$1.5M

FY2024: \$1.5M



Virginia Highway Safety Improvement Funds: Mature Drivers Proposals



- Expand GrandDriver Car Fit Program
- Expand GrandDriver Testing Centers
- Expand GrandDriver Paid Media Campaigns


FY2022: \$600K

FY2023: \$600K

FY2024: \$600K

Motorcycle

\$2.75M



Virginia Highway Safety Improvement Funds: Motorcycle Proposals



Create new motorcycle messaging campaign and expand media buy impressions and time windows

FY2022: \$750K

FY2023: \$1M

FY2024: \$1M



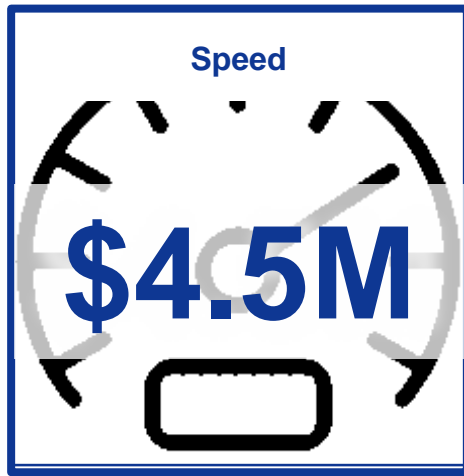
Virginia Highway Safety Improvement Funds: Teen Driver Proposals



In coordination with the Supreme Court, create a video to be used by judges during their new driver licensing ceremony.

- Requested by judges

FY2022: \$800K



Virginia Highway Safety Improvement Funds: Speed Proposals

Create new media and law enforcement campaign, similar to “Click or Ticket”, for speed related:

- Va received IIHS/GHSA grant to perform pilot program in urban location (Richmond).
- Implement statewide following review of pilot.
- Assess MD pilot (rural location) and implement as indicated.

Coordinate DMV and VDOT speed data projects to provide law enforcement on interstate and non-interstate roads new tools to assist with the deployment and allocation of scarce resources in an effort to curb speeding.

FY2022: \$1.5M

FY2023: \$1.5M

FY2024: \$1.5M



Virginia Highway Safety Improvement Funds: Pedestrian/Bicycle Proposals

Expand the “Shattered Lives” program statewide.

- Currently only offered in the NoVa area.
- Expand messaging to other regions of the Commonwealth experiencing Increased pedestrian and bicycle fatalities

Year 1: \$1M

Year 2: \$1.25M

Year 3: \$1.25M



Virginia Highway Safety Improvement Funds

Behavioral Programs Proposal Summary


Emphasis Area	Type of Action	Highway Safety Improvement Action	\$ FY2022	\$ FY2023	\$ FY2024	Total \$ FY2022-24	Total \$ by Emphasis Area
Occupant Protection	Education & Outreach	Expand the Current "Local Heroes" messaging campaign	\$1,000,000	\$1,500,000	\$1,500,000	\$4,000,000	\$4,000,000
Impaired Driving	Safety Programs	Expand the Sober Ride program statewide	\$1,000,000	\$1,150,000	\$1,150,000	\$3,300,000	
Impaired Driving	Education & Outreach	Publicize Sobriety Check Points*	\$250,000	\$500,000	\$500,000	\$1,250,000	
Impaired Driving	Program Analysis	NHTSA-administered Alcohol-Impaired-Driving Assessment and Law Review*	\$100,000	\$0	\$0	\$100,000	
Impaired Driving	Education & Outreach	Create New Media Campaigns to Fight Drunk and Drugged Driving*	\$1,500,000	\$1,000,000	\$1,000,000	\$3,500,000	\$8,150,000
Speed	Education & Outreach	Statewide Speed Messaging Media and Outreach Campaign with Coordinated Enforcement & Speed Data Pilot*	\$1,500,000	\$1,500,000	\$1,500,000	\$4,500,000	\$4,500,000
Distracted Driving	Education & Outreach	Distracted Driving Media Campaign*	\$1,500,000	\$1,500,000	\$1,500,000	\$4,500,000	\$4,500,000
Motorcycles	Education & Outreach	Expand the Motorcycle Safety Media Messaging in Virginia	\$750,000	\$1,000,000	\$1,000,000	\$2,750,000	\$2,750,000
Ped/Bike	Education & Outreach	Enhance and Amplify Pedestrian and Bicycle Safety Media Campaigns	\$1,000,000	\$1,250,000	\$1,250,000	\$3,500,000	\$3,500,000
Teen Driving	Safety Programs	Juvenile Licensing Ceremony Video*	\$800,000	\$0	\$0	\$800,000	\$800,000
Mature Drivers	Safety Programs	Expand GrandDriver Car Fit Program	\$200,000	\$200,000	\$200,000	\$600,000	
Mature Drivers	Safety Programs	Expand GrandDriver Testing Centers	\$200,000	\$200,000	\$200,000	\$600,000	
Mature Drivers	Education & Outreach	Expand Virginia GrandDriver Paid Media	\$200,000	\$200,000	\$200,000	\$600,000	\$1,800,000
* New Program		Totals	\$10,000,000	\$10,000,000	\$10,000,000	\$30,000,000	\$30,000,000

Potential # of lives saved with behavioral investment: 64 per year

Original VDOT Systemic Infrastructure Plan

8 Proven Safety Countermeasures

High-visibility Backplates



Up to 15% crash reduction

Flashing Yellow Arrow

	Steady Red Arrow Drivers turning left must stop and wait (except where permitted by law).
	Steady Yellow Arrow Stop, if you can do so safely.
	Flashing Yellow Arrow Proceed with left turn after yielding to oncoming traffic and pedestrians.
	Steady Green Arrow Proceed with left turn.

Up to 20% crash reduction

Curve Signs



Up to 40% crash reduction

Pedestrian Crossings



Up to 56% crash reduction

Unsignalized Intersections



Up to 10% crash reduction

Shoulder Wedge



Up to 20% crash reduction

Centerline Rumble Strips



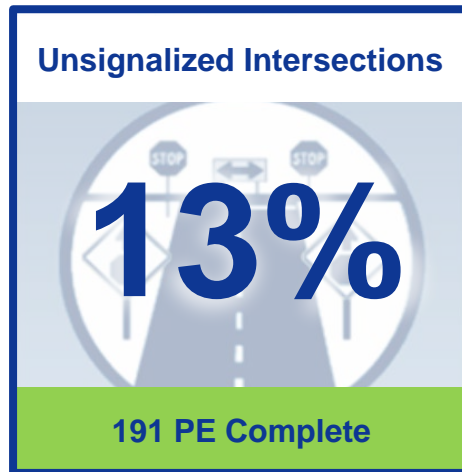
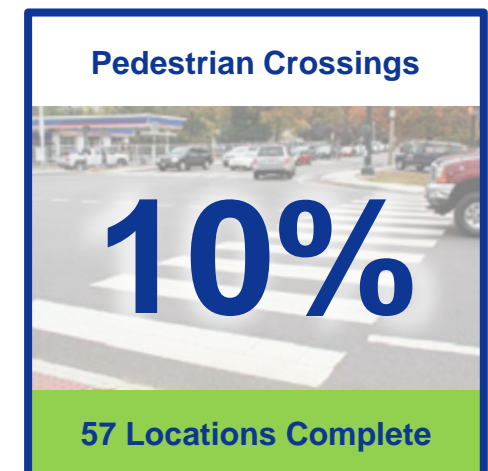
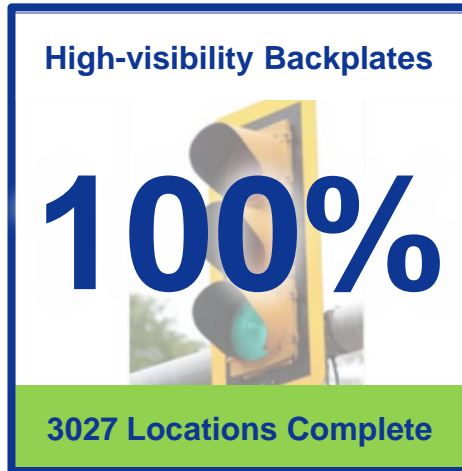
Up to 60% crash reduction

Edgeline Rumble Strips



Up to 50% crash reduction

Original VDOT Systemic Plan – Progress to Date



Systemic Project Benefits

Systemic safety projects improve safety by installing lower-cost, high-return countermeasures at many locations on the road network that have similar risk factors.

All initiatives are proven FHWA countermeasures

In Virginia, expected to be up to 9 times more effective at reducing fatalities and serious injuries per HSIP dollar as compared to spot projects.

New Virginia Highway Safety Program Infrastructure Investment Plan - FY 2022 - 2027

Local Systemic Projects

Flashing Yellow
High-Visibility Backplates
Pedestrian Crossings
Curve Signage
Unsignalized Intersections
Road Diets

\$58M Investment

Expanded Flashing Yellow Arrow



\$13.5M - Up to 195 locations

New VDOT Pedestrian Crossings



\$20M - Up to 200 locations

2-lane Rural Roads



\$74M - Up to 100 miles
Up to 50% crash reduction

Spot Projects



\$22M Investment

New Highway Safety Infrastructure Investment Plan – Funding & Schedule

November 2021 Plan - Existing Budget + \$10M per Year	Source	HSIP Funding Through FY 27 (\$M)	Previous / FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	Schedule (Calendar Year)	
	Original Systemic Plan									
	High-Visibility Backplates (VDOT) ¹	15.2	15.2							Completed 2021
	Flashing Yellow Arrows (VDOT) ²	11.8	11.8							Completed 2021. Cost decreased by \$5.2M
	Curve Delineation (VDOT) ³	25.4	17.4	8						Complete 2024. Cost decreased by \$4.6M
	Pedestrian Crossings (VDOT) ⁴	34.1	16.8	15.5	1.8					Complete 2025
	Unsignalized Intersection (VDOT) ⁵	24.1	16.7	6.8	0.7					Complete 2024
	Shoulder Wedge (VDOT) ⁶	Maintenance funds								Resurfacing Cycle - 15 yr
	CL Rumbles - Primaries (VDOT) ⁷	7.8	6.6	0.4	0.4	0.4				Complete by 2030
	Edge Rumbles - Primaries (VDOT) ⁸	33.2	20.9	5					7.3	Complete by 2030
New Investment Plan										
Local Systemic Projects (Local) ⁹	58.2			10	10	18.6	19.6		TBD depending on local funding applications	
Expanded Flashing Yellow Arrows (VDOT) ¹⁰	13.5			13.5					Complete 2027	
New Pedestrian Crossings (VDOT) ¹¹	20			5		10	5		Up to 200 Locations funded. Complete 2028	
Two-Lane Rural Roads (VDOT) ¹²	73.9	10	10	5	10.6	22.1	16.2		Up to 1,000 Miles funded. Completion TBD	
Spot Projects (VDOT) ¹³	22						11	11	Schedule TBD	
Total	339.2	115.35	45.7	36.4	21	61.7	59.1			

LEGEND

PE & CN

PE

CN

RED = Update from Original

New Highway Safety Infrastructure Investment Plan Highlights

- **Accelerate rumble strips to complete 5 years early, by 2030**
- **New initiatives are proven countermeasures with good return on investment**
- **Local systemic projects – localities can apply for funding in 2023**
- **Expanded flashing yellow - up to 195 traffic signals needing upgrades**
- **New Pedestrian Crossings - up to 200 new crossings on PSAP corridors**
- **2-Lane Rural Roads – up to 1000 miles of improvements on higher risk roads**
- **Spot projects – return of funding for high return on investment projects**
- **Retain flexibility to move funding between initiatives to address surpluses and shortfalls**

New Highway Safety Infrastructure Investment Plan

Next Steps

- **Continue to deliver, and accelerate as possible, first systemic plan items**
- **Begin scoping and preliminary engineering for new items in Infrastructure Investment Plan**
- **During 2022, outreach to localities to get them ready to apply for FY2024 funding for systemic projects on locality-owned roads**
- **Begin assembling after data for performance monitoring as items are completed**

Thank you!

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