

# **SPECIAL HAULING VEHICLES (SHV) + NEW WEIGHT-RESTRICTION SIGNAGE AT BRIDGES INFORMATION BRIEF**

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Fall 2019

# Welcome

## Questions during the presentation?

- Send your question via the live-chat option
- Email your question to [jonathan.mallard@vdot.virginia.gov](mailto:jonathan.mallard@vdot.virginia.gov)

Questions will be addressed at the end of the presentation. If we aren't able to answer a question today, we will get the answer and follow up after the meeting.

All questions and answers will be posted on [www.virginiadot.org/trucking](http://www.virginiadot.org/trucking).

# Advancements in Vehicle Design & What it Means for DOTs

- **Vehicles developed to carry heavier legal loads**
  - Freight vehicles: special hauling vehicles (SHV)
  - Emergency vehicles (EV)
- **VDOT modified bridge design practices in 2007**
- **SHVs becoming widespread**
- **FHWA mandates**
  - SHV legal weight standards: 23 CFR Part 650, Subpart C
  - EV legal weight standards: (FAST Act) Pub. L. 114-94. Section 1410

## Typical Hauling Vehicles



## Special Hauling Vehicles



Four Axles



Five Axles



Six Axles



Seven Axles

## Emergency Vehicles



Two Axles



Three Axles

Heavier and/or more concentrated loads



# What VDOT is doing:

- **Evaluating all bridges for SHVs and EVs**
  - **Virginia's bridge inventory**
    - 21,213 bridges
    - 100+ years old to under 1 year
    - Average age 50 years
  - **Final deadline for evaluations - Dec. 31, 2022**
- **Will install weight limit signs where needed, as the need is identified**
- **Continuing to work with localities**

# Impacts

- **Safety is always VDOT's top priority**
- **Industry impacts**
  - **May need to revise routes to avoid structures/bridges with weight restrictions**
    - Resources to identify impacts
    - Truck Web tool
- **Possible mitigation**
  - **Structural upgrades**

# Examples of Signage

- **Signs show familiar icons/visuals**
- **Drivers distinguish by axle count and gross vehicle weight**
- **Drivers must obey all weight-restriction signs**

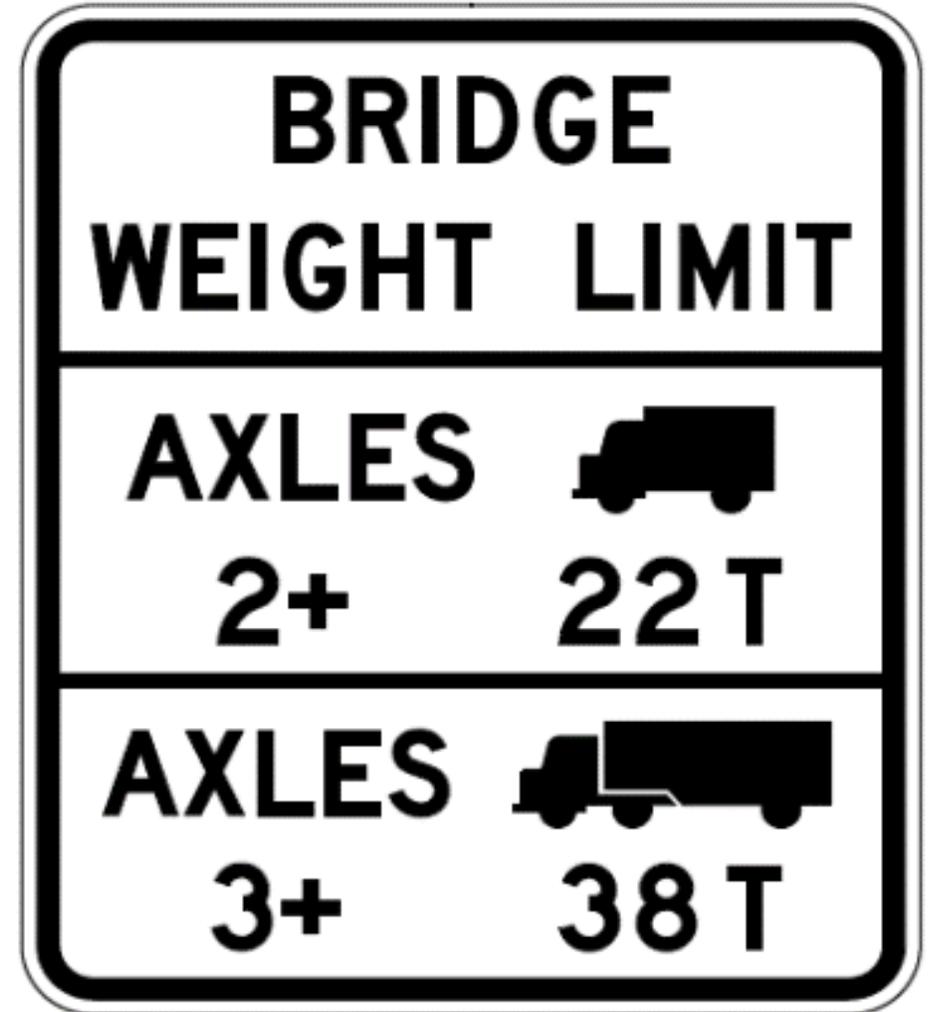
## Examples of Signage

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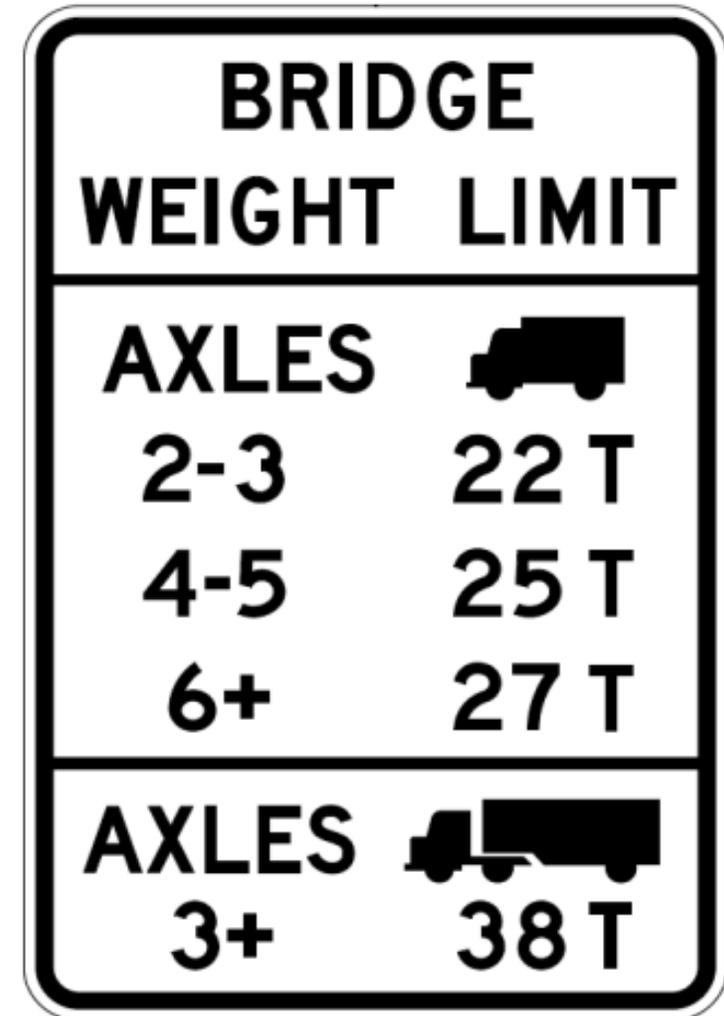
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# Signage Reference Sheet

- Available via the VDOT and DMV websites

VDOT Virginia Department of Transportation
Bridge Weight Restrictions and Signage

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### Understanding Weight Restriction Signs for Bridges in Virginia

Manufacturers are building freight vehicles and emergency vehicles capable of carrying heavier legal loads, and updated federal legal weight standards for bridges take into account these heavier vehicles. Due to these changes, the Virginia Department of Transportation (VDOT) is installing new weight restriction signs at some bridges and culverts beginning in September 2019. Previously existing signage will remain at some bridges.

The new weight-restriction signage includes visuals that are familiar to commercial vehicle drivers. Drivers will distinguish weight restrictions by axle count and gross vehicle weight (see typical examples on page 2).

Weight restriction signs for bridges and other structures are in place to keep motorists safe and to maintain the integrity of the structure. An overweight vehicle could damage a bridge or cause it to fail, leading to serious injury or death. Per Virginia law, it is illegal for an overweight vehicle to cross a bridge or culvert, and doing so could result in significant fines.

*It is the driver's responsibility to know the weight rating of their vehicle.*

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### Bridges Maintained by Other Entities

VDOT maintains most bridges and culverts statewide. However, some structures are maintained by cities, towns, counties or toll road operators. VDOT works with these entities to promote consistent signage statewide, but it is possible that some signs may vary. Drivers must obey all weight-restriction signs.

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### Vehicle Types

	
A <b>Single-Unit Vehicle</b> is any vehicle with a trailer permanently attached to the tractor, regardless of the number of tires, axles or axle configuration.	A <b>Multi-Unit Vehicle</b> is any combination of tractor and trailer that can be easily separated. These vehicles are also sometimes referred to as truck-tractor, semitrailers or combination vehicles.

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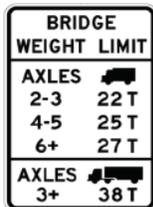
### Additional Information

To learn more about trucks, legal weight for different vehicle types and hauling on Virginia roads, visit [www.dmv.virginia.gov/commercial](http://www.dmv.virginia.gov/commercial) or [www.virginiadot.org/info/trucking-main.asp](http://www.virginiadot.org/info/trucking-main.asp).

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### Typical Weight-Restriction Signage

SIGN	APPLICATION
	All vehicles, including attached trailers
	<p>Single-unit vehicles with 2+ axles, any configuration Examples: cars, pick-up trucks, panel vans, box trucks, moving trucks, flat-bed trucks, buses, dump trucks, concrete trucks, crane trucks, etc.</p> <p>Combination vehicles with 3+ axles Examples: tractor-trailers/semitrailers, cars towing boats or trailers, pick-up trucks with fifth wheel trailers, flatbed trucks with trailers, etc.</p>
	<p>Single-unit vehicles with 2 - 3 axles, any configuration Examples: cars, pick-up trucks, panel vans, box trucks, moving trucks, flat-bed trucks, buses, dump trucks, concrete trucks, crane trucks, etc.</p> <p>Single-unit vehicles with 4 - 5 axles* Examples: dump trucks, concrete trucks, crane trucks, etc.</p> <p>Single-unit vehicles with 6+ axles* Examples: dump trucks, concrete trucks, crane trucks, etc.</p> <p>Combination vehicles with 3+ axles Examples: tractor-trailers/semitrailers, cars towing boats or trailers, pick-up trucks with fifth-wheel trailers, flatbed trucks with trailers, etc.</p> <p><small>*Movable axle configurations apply only if the axle is lowered. For example, a truck with four lowered axles and two raised axles must abide by the weight restrictions for four-axle trucks.</small></p>

Note: The number of axles shown on each silhouette is not to be interpreted as the only possibility for that particular vehicle. Signage may or may not include the word 'bridge.'

# Ongoing VDOT Activities

- **VDOT will identify potential acute impacts to special hauling vehicles and the economy**
- **VDOT will prioritize bridge structural repairs based on feedback, recognizing limited resources**
- **VDOT Districts are communicating with local stakeholders about specific impacts**
- **Installation of new weight-restriction signs begins this fall**

# Resources

- To learn more about trucks, legal weight for different vehicle types and hauling on Virginia roads, visit [www.dmv.virginia.gov/commercial](http://www.dmv.virginia.gov/commercial).
- For information regarding VDOT's efforts and materials used during this discussion, visit [www.virginiadot.org/trucking](http://www.virginiadot.org/trucking).
- **Programmatic Questions**
  - **Chris Williams, Assistant Division Administrator, Structure and Bridge**
    - [Christopher.Williams@vdot.virginia.gov](mailto:Christopher.Williams@vdot.virginia.gov)

# Resources

- [www.virginiadot.org/trucking](http://www.virginiadot.org/trucking)

## Weight, Height or Width Restrictions at Bridges and Tunnels

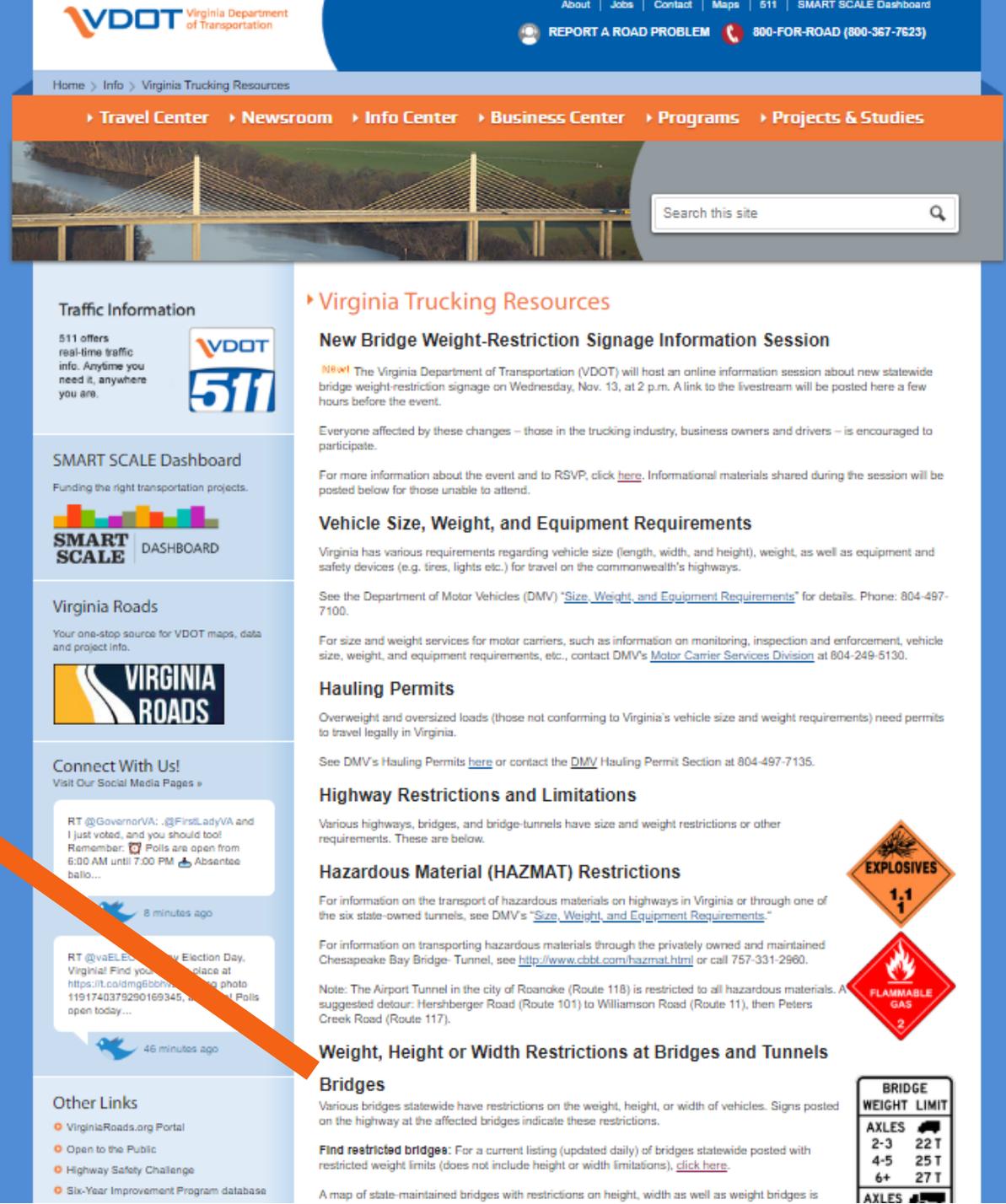
### Bridges

Various bridges statewide have restrictions on the weight, height, or width of vehicles. Signs posted on the highway at the affected bridges indicate these restrictions.

**Find restricted bridges:** For a current listing (updated daily) of bridges statewide posted with restricted weight limits (does not include height or width limitations), [click here](#).

A map of state-maintained bridges with restrictions on height, width as well as weight bridges is available upon request to [vdotmapfiles@vdot.virginia.gov](mailto:vdotmapfiles@vdot.virginia.gov). The mapping is updated bi-annually.

BRIDGE WEIGHT LIMIT	
AXLES 	
2-3	22 T
4-5	25 T
6+	27 T
AXLES 	
3+	38 T



# Resources

- [www.virginiadot.org/trucking](http://www.virginiadot.org/trucking)
- Live spreadsheet shows all bridge weight restrictions once signs have been installed

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District	Jurisdiction	Route	Route Name	VA Struc No.	Fed Struc Id	Crossing	Type	Year Built	Year Recnst (State)	Year Recnst (Fed)	Deck Cond	Super Cond	Sub Cond	Culvert Cond	NBI	Func Obslt	Struc Defic	Last Inspected	Weight Posting Status	Single Sign - Single Unit Vehicle - Posted Capacity (in tons)	Dual Sign - Single Unit Vehicle - Posted Capacity (in tons)	Dual Sign - Combination Unit Vehicle - Posted Capacity (in tons)	Responsibility	Structure Length (FT)	Structure Width (FT)	Avg Daily Traffic	Road System	Report Date
Bristol	Tazewell County	00770	ASCUE ROAD	6233	0018681	INDIAN CREEK	Bridge	1932	0	-1	5	5	6	N	Y	FO		7/17/2018	Posted	0	27	40	VDOT	53.0999984741211	21	283	Secondary	10/28/2019
Bristol	Dickenson County	00083	ROUTE 0083	1049	0005818	BRANCH	Bridge	1941	0	-1	5	5	6	N	N	FO		1/15/2019	Posted	0	27	40	VDOT	12.1000003814697	26.6000003814697	5628	Primary	10/28/2019
Bristol	Wythe County	00052	FORT CHISWELL RD.	1014	0019539	GLADE CREEK	Bridge	1932	1950	1950	5	5	6	N	Y			3/4/2019	Posted	0	27	40	VDOT	22	36	2738	Primary	10/28/2019
Bristol	Lee County	00604	ROUTE 604	6353	0010779	BRANCH	Bridge	1932	0	-1	6	6	5	N	N			12/8/2017	Posted	0	27	40	VDOT	8.89999961853027	19.3999996185303	61	Secondary	10/28/2019
Bristol	Washington County	00694	STONYBROOK ROAD	6250	0019123	BRANCH	Bridge	1932	0	-1	4	4	5	N	N	SD		7/8/2019	Posted	0	27	40	VDOT	13	26.2000007629395	396	Secondary	10/28/2019
Bristol	Washington County	00726	CHESTNUT MTN. RD	6283	0019164	STREAM	Bridge	1937	0	-1	7	6	5	N	N	FO		10/10/2018	Posted	0	14	23	VDOT	20	18	177	Secondary	10/28/2019
Bristol	Norton	00000	MAIN AVENUE SW	8000	0022441	BENGES BRANCH	Bridge	1932	0	-1	4	4	6	N	Y	SD		3/20/2019	Posted	0	27	40	City	23	25.8999996185303	2431	Urban	10/28/2019
Bristol	Washington County	00058	JEB STUART HWY	1081	0018881	STRAIGHT BRANCH	Bridge	1950	0		6	6	5	N	N			6/15/2018	Posted	0	27	40	VDOT	22	27.2999992370605	674	Primary	10/28/2019
Bristol	Lee County	00616	ROUTE 616	6014	0010807	WALLENS CREEK	Bridge	1932	0	-1	6	6	5	N	Y	FO		5/8/2019	Posted	0	23	34	VDOT	85	14.1000003814697	247	Secondary	10/28/2019
Bristol	Wythe County	00734	ASBURY CHURCH RD	6076	0019779	CRIPPLE CREEK	Bridge	1932	0	-1	6	5	6	N	Y	FO		10/1/2018	Posted	0	19	28	VDOT	42	15	120	Secondary	10/28/2019



# Questions?

**Thank you  
for joining us.**

