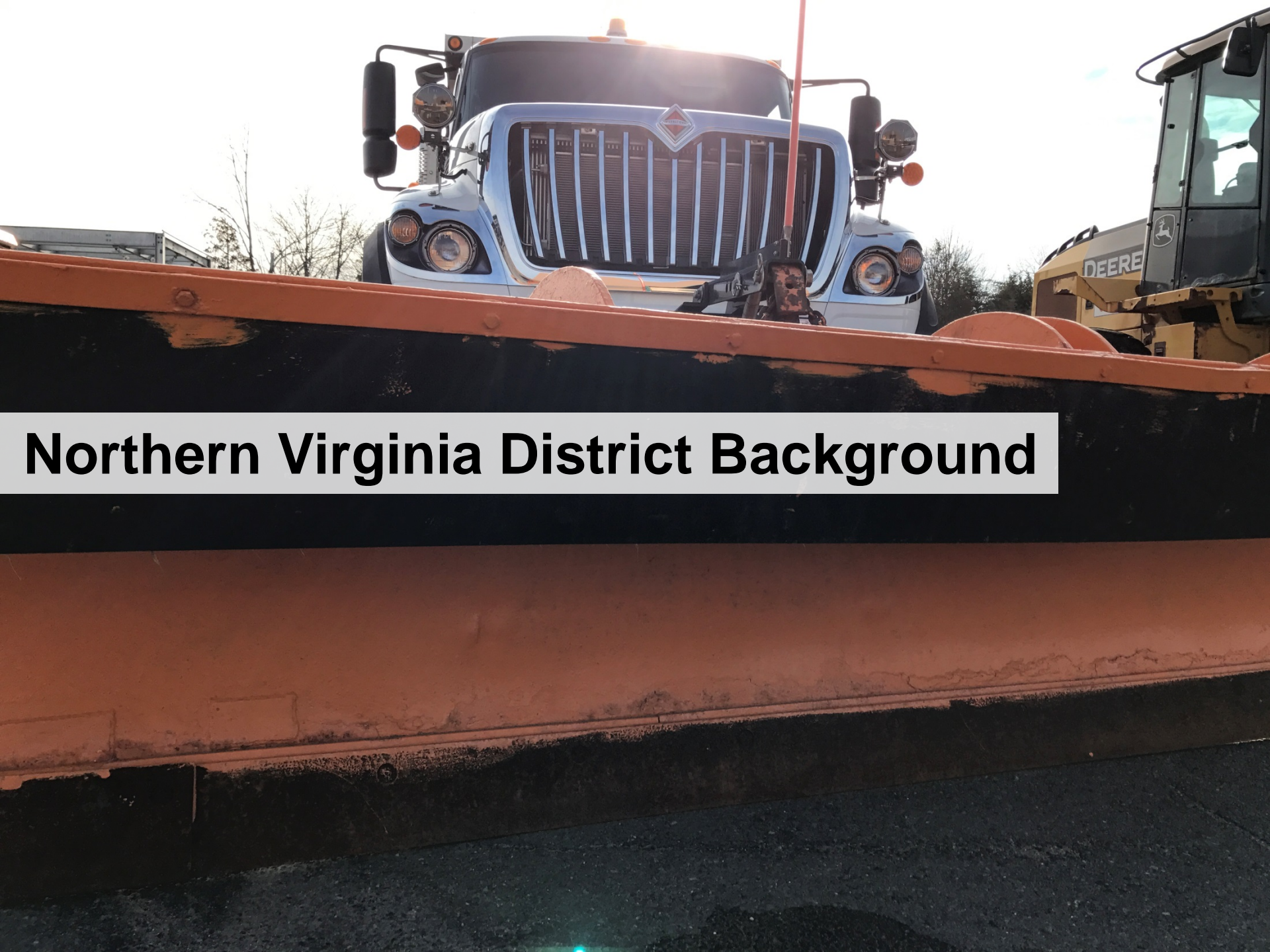




Northern Virginia Snow Briefing Council of Governments (COG)

November 6, 2017

**Lauren Mollerup, P.E., CCM
District Maintenance Engineer**



Northern Virginia District Background

- **Fairfax, Loudoun, Prince William, and Arlington***

** Arlington maintains own network (secondary roads)*

- **Population: 2.2 million**
- **Commuter lots: 24**
- **Bridges/large culverts: 2,000**
- **Traffic signals: 1,400**
- **VDOT employees: 866**



Total lanes miles: 13,585

- Interstate: 727 • Primary: 1,736
Secondary: 11,046**
- Gravel: 318 • Frontage: 78**
- Subdivision streets: 16,000**



18 maintenance headquarters

Arlington:1 • Fairfax: 9 • Loudoun: 4 • Prince William: 4



2017-2018 Snow removal budget
\$84.9 million



Pieces of equipment: 4,500
(mostly contracted)

Materials at start of season

Salt: 120,000 tons • Sand: 25,000 tons

Brine: 250,000 gallons





Contractor vehicles are inspected and fitted for A-frames and spreaders

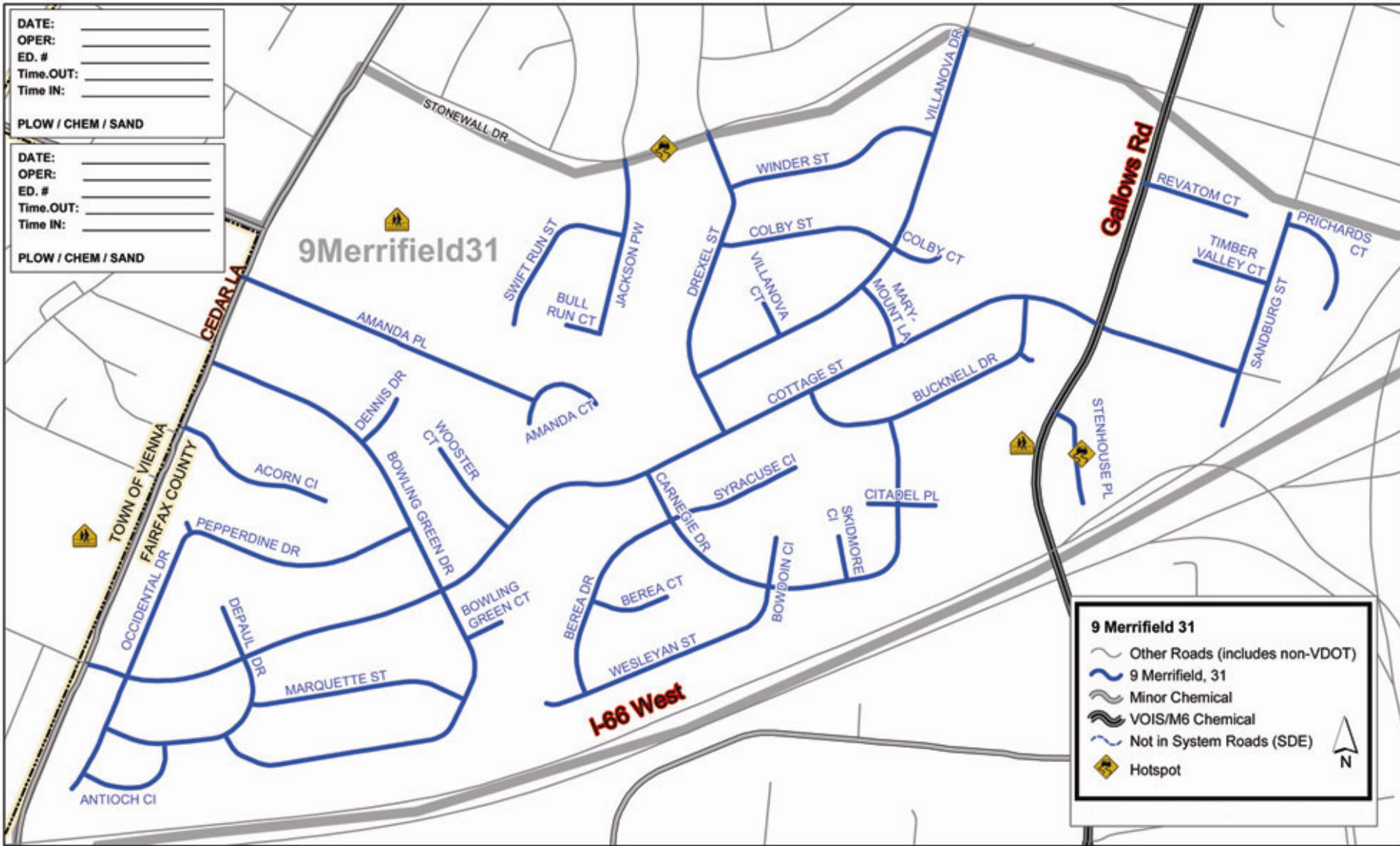
The district is divided up into 626 snow maps

DATE: _____
OPER: _____
ED. # _____
Time.OUT: _____
Time IN: _____

PLOW / CHEM / SAND

DATE: _____
OPER: _____
ED. # _____
Time.OUT: _____
Time IN: _____

PLOW / CHEM / SAND



9 Merrifield 31

- Other Roads (includes non-VDOT)
- 9 Merrifield, 31
- Minor Chemical
- VOIS/M6 Chemical
- Not in System Roads (SDE)
- Hotspot

N

Planning for winter weather



- **Forecast reviews** with National Weather Service (weather.gov/washington/winter) and Iteris
- **Mobilization plan** determined, including if incident command will be activated



Weather Forecast	Mob. Level	Response Plan	SALT Application Rate*	Applied Lane Miles		Equipment Required based on VDOT single axle truck carrying 12,000 lbs**			
							Liquid	Salt	Total
Precipitation: 20% or Greater Accumulation: Ice/Snow Possible Ambient or Pavement Temp: 30-36	Anti Ice	Treatment of Critical Structures & Locations	Application Liquid: 50 gal/l/mi Application Salt: 325 lbs/l/mi	Ffx	853	Ffx	13	13	26
				PW	250	PW	13	7	20
				Lou	610	Lou	9	5	14
				Int	300	Int	8	16	24
				District	2,013	District	43	41	84
Precipitation: 20-49% or greater Accumulation: Snow Possible Ambient or Pavement Temp:30-36	Skeleton Crews	Spot Treatment of Critical Structures & Locations Respond to Icy Conditions As Needed	325 lbs/l/mi				Liquid	Salt	Total
				Ffx	853	Ffx	13	54	67
				PW	570	PW	13	14	27
				Lou	610	Lou	9	23	32
				Int	300	Int	2	24	26
District	2,333	District	37	115	152				
Precipitation: 20-49% or greater Accumulation: Snow Possible Ambient or Pavement Temp:30-36	1	Springfield Interchange, Spot Treatment of Other Critical Structures & Locations	325 lbs/l/mi				Liquid	Salt	Total
				Ffx	853	Ffx	13	207	220
				PW	570	PW	13	18	31
				Lou	610	Lou	9	51	60
				Int	300	Int	3	42	45
District	2,333	District	38	318	356				
Precipitation: 50-100% Chance Accumulation: Up to 1 inch of snow Ambient or Pavement Temp: 25-29	2	Light Salting Operation; Limited Work in Subdivisions. Includes Cold Spot Treatment in Subdivisions & Gravel Roads.	400 lbs/l/mi				Liquid	Salt	Total
				Ffx	3,200	Ffx	13	424	437
				PW	2,630	PW	13	125	138
				Lou	1,831	Lou	9	91	100
				Int	1,894	Int	3	82	85
District	9,555	District	38	722	760				
Precipitation: 50-100% chance Accumulation: Up to 2 inches of snow or up to 1/10 inch of ice Ambient or Pavement Temp: 20-24	3	Salting Operation; Potential for Plowing; Includes Cold Spot Treatment in Subdivisions & Gravel Roads	475 lbs/l/mi				Liquid	Salt	Total
				Ffx	8,024	Ffx	13	898	911
				PW	3,507	PW	13	340	353
				Lou	2,547	Lou	9	226	235
				Int	1,894	Int	3	122	125
District	15,972	District	38	1,586	1,624				
Precipitation: 50-100% chance Accumulation: Up to 6 inches of snow or up to 1/4 inch of ice Ambient or Pavement Temp: 15-19	4	Salting/Plow Operation; Includes Plowing Subdivisions & Sanding as Necessary	550 lbs/l/mi				Liquid	Salt	Total
				Ffx	8,024	Ffx	13	1,715	1,728
				PW	3,507	PW	5	615	620
				Lou	2,547	Lou	9	428	437
				Int	1,894	Int	7	223	230
District	15,972	District	34	2,981	3,015				
Precipitation: 50-100% chance Accumulation: More than 6 inches of snow or more than 1/4 inch of ice Ambient or Pavement Temp: 10-14	5	Salting/Heavy Plow Operation; Includes Plowing Subdivisions & Sanding as Necessary. ALL RERSOURCES ARE DEPLOYED!	625 lbs/l/mi				Liquid	Salt	Total
				Ffx	8,024	Ffx	13	2,286	2,299
				PW	3,507	PW	13	773	786
				Lou	2,547	Lou	9	797	806
				Int	1,894	Int	11	500	511
District	15,972	District	46	4,356	4,402				

A few days
before a storm

SALT BRINE
←

240-000083-N
CHLORIDE, MAGNESIUM, LIQUID
UOM-GAL →

USE CAUTION

DRIVERS MUST EXERCISE DUE
DILIGENCE DURING THE LOADING
AND UNLOADING OF MATERIAL
REMAIN WITH THE VEHICLE AND
STAY ATTENTIVE WATCHING FOR LEAKS

DANGER

CONFINED SPACE
ENTER BY
PERMIT ONLY

VIRGINIA DEPARTMENT OF TRANSPORTATION
Sodium Chloride Deicing (23%) Solution

Health
Irritant to sensitive skin and eyes.
Ingestion may cause vomiting
and stomach irritation. Extensive
exposure may cause vomiting, edema
and/or elevated blood pressure.

Flammability
Nonflammable.
Product can be used to smother fires.

A worker wearing a white hard hat and a high-visibility yellow and orange vest with a 'VDDOT' logo is seen from behind, looking at a large white industrial tank. A prominent red sign with black text reads 'PRE-STORM TREATMENT'. The tank has several valves and pipes. The background shows a cloudy sky and a building.

PRE-STORM TREATMENT

- Applied when pavement temps are above 20 degrees, and event does not begin as rain
- Anti-icing treatment most effective during first hour of weather event

- **2,150 lane miles of interstates and major roads including bridges, ramps, and overpasses are treated with brine and/or liquid magnesium chloride.**





**KEEP
BACK
100 FT**

Mobilization begins

- **Contractors report, load, and stage trucks in the assigned areas before predicted storm arrival**
- **If 2"+ are forecasted, residents may see trucks begin to stage in neighborhoods.**



- **Small events:** 12-18 hours before forecasted start
- **Large events:** 18-24 hours before forecasted start





Residents should:

- **Monitor forecasts** closely
- **Plan to telework** and adjust commutes
- **Stay off roads to give plows room**
- **Ensure enough gas, wiper fluid, proper tires, food, water and medicine**
- **Park in driveways** or on odd-numbered side of the street
- **Please be patient**

Stay informed:

- virginiadot.org/novaemergency One-stop shop for links to news releases, Twitter feed, status updates, VDOT Plows, customer service, FAQs and other resources
- [@vadotnova](https://twitter.com/vadotnova) for updates
- 511virginia.org for road conditions and traffic cameras
- vdotplows.org for status of subdivisions once 2" have fallen

The storm begins





Crews work interstates, major roads and main subdivision roads in priority order.

Interstates (66/95/395/495)

High-volume routes (Routes 1, 7, 28, 50, etc.)

Made passable, then bare pavement where possible





Subdivisions

Main roads made passable, then remaining streets and cul-de-sacs



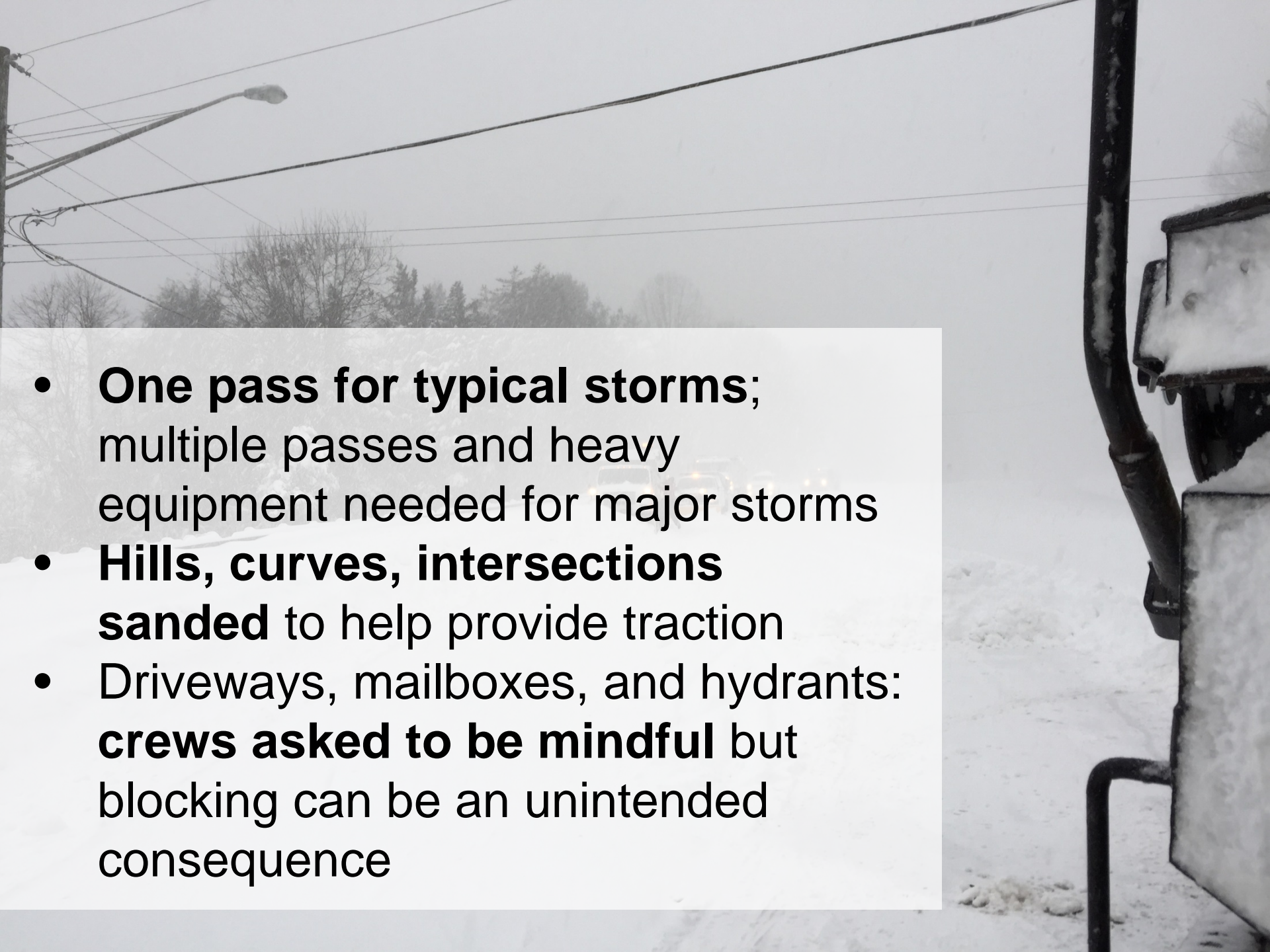
What does “passable” mean?

- **An 8- to 10-foot path** cleared for emergency vehicle access
- **Drivable with extreme caution**
- Road remains **snow-packed**, will **not be curb-to-curb or bare pavement**

Passable lane goals:

- 2-4" of snow: 24 hours
- 4-6" of snow: 48 hours
- 6"+ of snow: 72+ hours

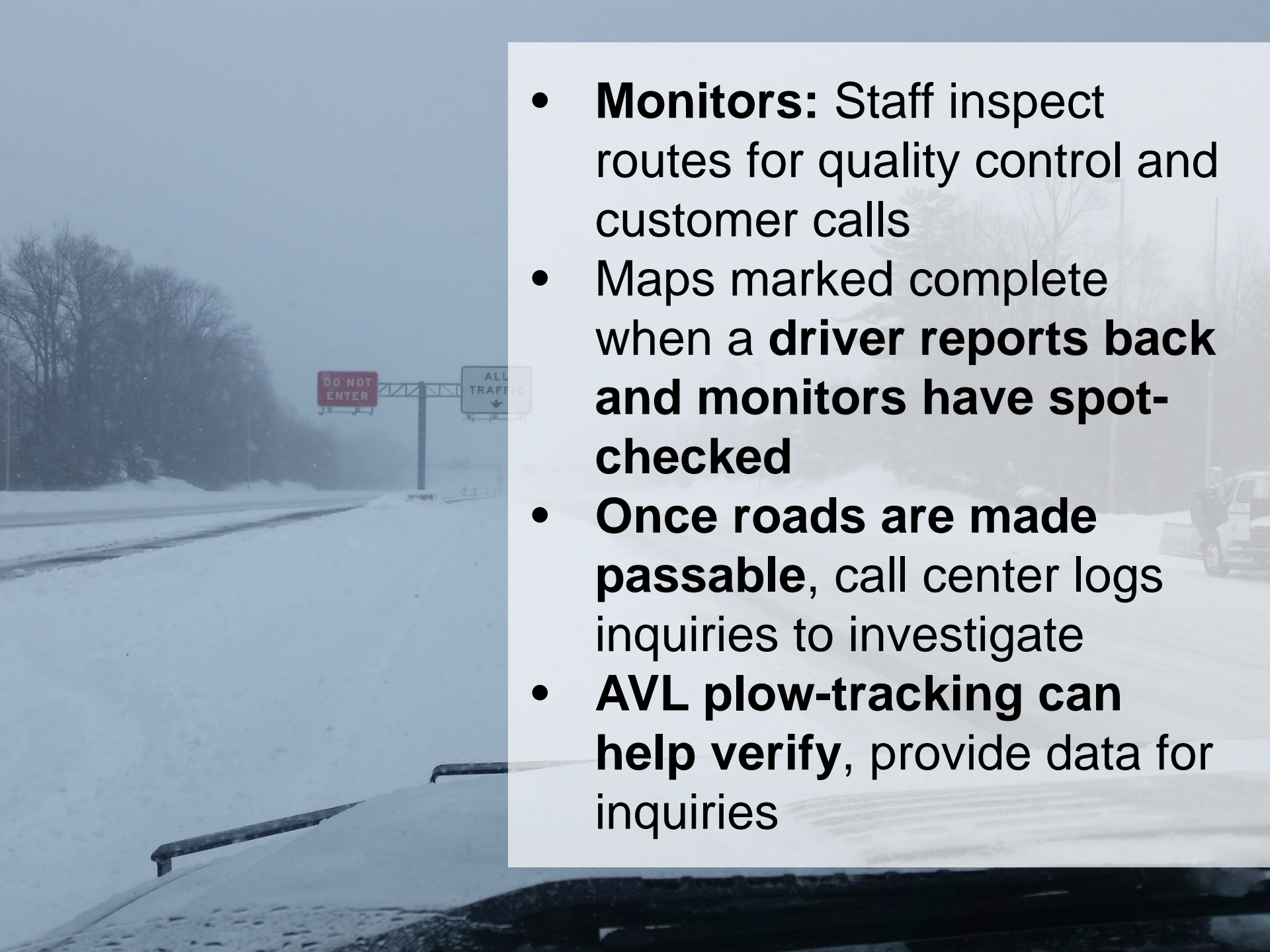


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- A photograph of a snowy street scene. In the foreground on the right, a snowplow is partially visible, its blade and frame covered in snow. The street is covered in a layer of snow, with some tire tracks visible. In the background, there are utility poles with power lines, a street lamp, and bare trees under a grey, overcast sky. A semi-transparent white box containing text is overlaid on the left side of the image.
- **One pass for typical storms;** multiple passes and heavy equipment needed for major storms
 - **Hills, curves, intersections sanded** to help provide traction
 - Driveways, mailboxes, and hydrants: **crews asked to be mindful** but blocking can be an unintended consequence



Additional priorities:

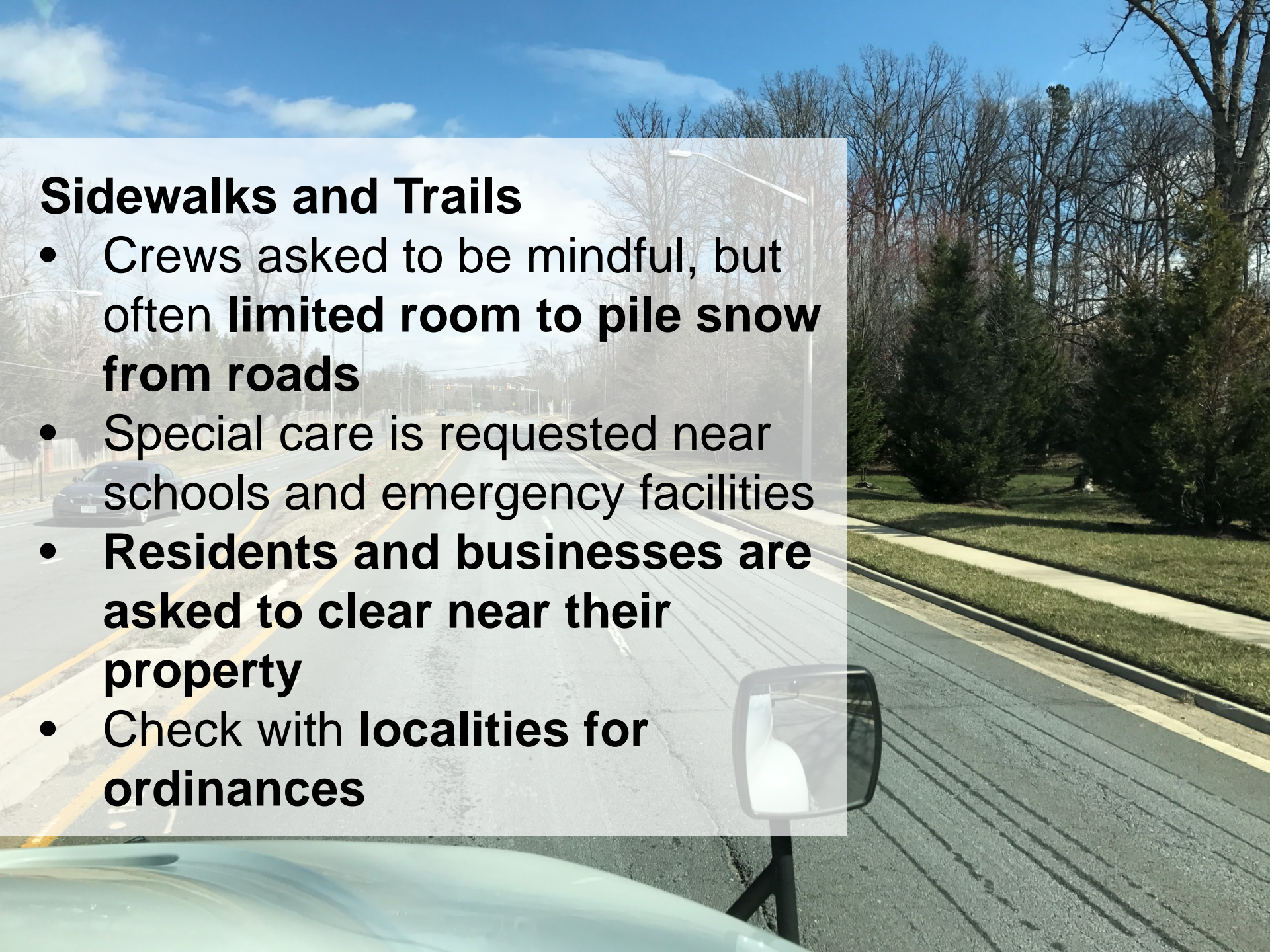
- Getting the roadways **as safe as possible**
- **Shoulders, ramps, turn lanes, intersections**
- **12,000** park-and-ride spaces



- **Monitors:** Staff inspect routes for quality control and customer calls
- Maps marked complete when a **driver reports back** and monitors have **spot-checked**
- **Once roads are made passable**, call center logs inquiries to investigate
- **AVL plow-tracking can help verify**, provide data for inquiries

Sidewalks and Trails

- Crews asked to be mindful, but often **limited room to pile snow from roads**
- Special care is requested near schools and emergency facilities
- **Residents and businesses are asked to clear near their property**
- Check with **localities for ordinances**



After the storm





- **Demobilization takes hours**
- **Trucks must be offloaded of materials and spreaders removed**
- **Residents may see trucks queued around area headquarters**

**Area headquarters
crews restock
materials continuously**





Customer Service Center

- my.vdot.virginia.gov or 800-FOR-ROAD (367-7623) to report safety concerns
- **Please wait a few days after storm ends** to report roads as “missed.” Once drivers have completed maps, calls will be mapped and sent to local areas to revisit.

Questions?



1G
IFTA
OK

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