



Highway Safety for Emergency Responders





TZD – It's not just for the public...



**“I would rather respond to an
armed robbery call then
respond to a call on the
freeway”**

- Wayzata Police Chief Mike Risvold



- **Officer Bill Mathews**
- **Wayzata Police Department**
- **End of Watch Friday, September 8, 2017**

In the past month...

Sept 20th – FIRST truck struck on 35W - 1030am – very close call.

Sept 28th – Woodbury squad struck on 494 - 2am – serious injuries to officer.

Oct 2nd – Worker struck on foot on 94 Maple Grove - 2pm - **killed**

Oct 10th – Mpls TCA struck on foot 1030pm – life changing injuries.

- **Reality:** Responders are faced with the probability of serious incidents on a daily basis from:
- **Drunk, drugged, distracted, drowsy, disturbed,** and just plain dumb drivers...
- **We have no choice other than to train and implement.**
- **Complacency is a KILLER.**

Role call:

- **FD**
 - **PD**
 - **EMS**
 - **Others**
-
- **Metro**
 - **Greater MN**

Traffic Incident Management (TIM)

- Coordinated effort by all responders to accommodate their safety, the victim's safety, the incoming traffic's safety, and overall mobility.
- Get there, do what you need to do, safely and efficiently – and get out!
- SHRP-2 or “Sharps 2” TIM training.

**Today is an overview of the problem,
the training resources available,
some take-aways...**

Training options:

- **Typical MN version of highway safety training runs about 2 hours.**
 - **Customized for audience**
- **Fed's SHRP-2 is 4 hours**
 - **8-12 hours for train-the-trainer**



John McClellan

- **16 years as MNDOT Incident Dispatcher**
 - **Last 9 years as supervisor**
- **19 years total watching PM metro traffic**
 - **Between 10 to 30 crashes per shift x 19 years**
 - **About 50,000+ crashes**

Who am I?

- I'm not a cop
- I'm not a firefighter
- I'm not an EMT

RTMC Dispatch Floor



Our Goal – Awareness of EVERY incident on the Metro Freeway Sys!

**Every incident – Pin down on
camera and triage.**

- What can we do to make it safer?**
- How can we help clear it**



Freeway Incident Response Safety Team (F.I.R.S.T.) Dispatch



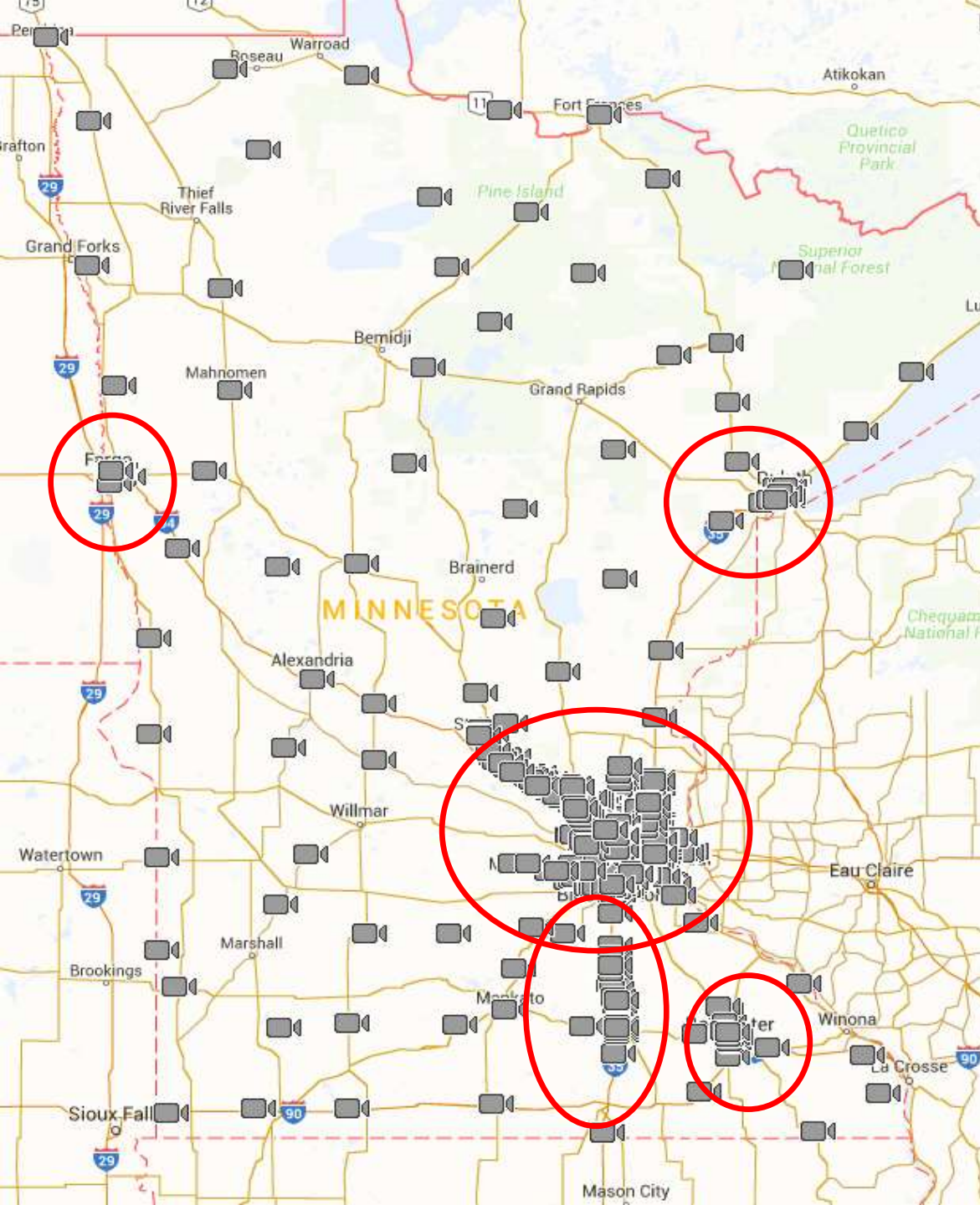
$\frac{3}{4}$ ton pickups



www.511mn.org

YES - THERE IS AN AP FOR THAT!

- * 511mn.org
- * Smartphone App:
Google or Apple store
 - 511mn (Castle Rock)



Where does this info come from?

- **Requirements for DOT's for traffic control**
- **Daily incident management & response / traffic cameras / FIRST / traffic management**
- **Doing this training since 2003 / Feedback from responders**
- **Family member in the business**

These are best practices!



Not the gospel!

Rural vs. Urban



RUSH HOUR IN SCOTLAND

- **Yes there are differences between Urban & Rural traffic!**
- **HUGE deal in Metro due to population**
- **You know how big a deal is in your area.**
 - **Weekday commuters**
 - **Summer cabin migration**
 - **Farmers, timber, industrial, frack sand, etc.**
- **Key safety issues the same:**
 - **Speed, Distraction, Tailgating, Alcohol/Drugs**
 - **Big trucks!!**
- **More similarities in safety tactics than differences.**

Traffic can be like flowing water

- Sometimes it's fast, sometimes it's slow.
 - Creek vs. River
 - Gentle vs. Raging
 - Surprises lurking
- It will always keep coming
- Better to channel or divert then just dam & forget.

Overall goals – all responders

- Respond to who's asking for help
- Safety for your crew & yourself
- Safety for all the rest of the drivers
 - “Public” in public safety
- Not screw up traffic any more than necessary

The only thing certain



You have a 100% chance of not being hurt if you aren't out there...

Otherwise: It's about adjusting probabilities

Is what it is....

- You are more likely to be **hit** in the lane than on the shoulder
- The more lanes you block:
 - More likely you'll get hit – esp in freeflow.
 - More likely you'll cause another crash
- You will need to block lanes to:
 - Protect a scene that can't be moved
 - Provide a protected area for workers that need to be in the lanes
 - Restrict traffic to lower speeds (CAREFUL)



#1 Responder Safety....



Nationally:

- Motor vehicle crashes are the leading cause of *traumatic* death to **Firefighters!**
- More **Police Officers** are killed in motor vehicle crashes than in shootings.



14 MN Responders killed in last 20 years

10 struck on foot / 4 in vehicles



- 1997 Minneapolis Fire – FF struck
- 1997 Minneapolis PD – Ofc struck (died 2010)
- 1999 Hinckley EMS – EMT struck
- 2000 State Patrol – Trooper struck
- 2002 Boyd Fire – POV crash
- 2002 Esko Fire – FF struck
- 2003 St Cloud Fire – FF struck
- 2005 Roseau EMS – ambulance crash
- 2005 Lino Lakes PD – Officer struck
- 2006 Melrose Fire – POV crash
- 2007 Minneapolis PD – Officer struck
- 2009 Ramsey Co – Reserve struck
- 2017 Wayzata – Officer struck
- 2017 Brooklyn Center – ambulance crash



- **2010 Clearwater FF struck – severe leg injuries**
- **2011 Savage PD officer squad crash – severe head injury**
- **2013 E694-Silver Lk – MNDOT worker struck, H&R, broken leg.**
- **2013 S94-Dowling – MNDOT worker struck – serious injuries**
- **2013 Vesta - FF run over by rig, severe leg injuries (2 kids killed in fire).**
- **2014 Buffalo – Allina rig hit – medics serious inj, other driver killed.**
- **2014 N35W-Cliff – MNDOT worker struck – severe head injury**
- **2015 – Carver - Deputy serious injury head on crash.**
- **2015– 280/Energy - UM PD officer struck – hit by drunk**
- **2015 – E94 / Riverside – tow driver hit – serious injuries**
- **2016 – W694/Long Lake – tow driver hit by drunk – serious injuries**
- **2017 - East Bethel – Flagger struck by 19YO – critical condition**
- **2018 – Little Canada – Fire chief & RCSO deputy squads hit by semi**
- **2018 – Edina – Squad rear ended on 169**
- **2018 – Woodbury – Squad rear ended on 494 – serious injuries.**
- **2018 – Minneapolis – Traffic control agent hit – serious injuries H&R**

DOT/PW fatalities

- 2012 N35W/42 – 2 contractors **killed** – struck by car.
- 2016 American Blvd / 3rd Ave – Bloomington
PW worker **killed** – struck by car - suicidal
DK female.
- 2018 East 94 & CR 81 – core boring crew
struck- worker **killed**.

3 basic safety principles

1. Protect those on foot

- Something metal between you & traffic

2. Provide a clear path for incoming traffic

- **SHOW** them where to go – don't let them guess!
- Advance warning, cones/flare buffer, good parking.

3. Prevent secondary incidents

- Demobilizing a priority, light discipline, advance warning for queue.

Why do they keep crashing?

- **Distraction – physical (texting) & mental (daydreaming/cellphones)**
 - Change blindness & Inattention blindness
- **Excessive speed**
- **Tailgating**
- **Drunk, drugged, drowsy, dumb.**
- **Age**
- **Luck**
- **Combination of above.**

Emergency Traffic Control basics

**Standard lighting announces presence
but doesn't give instruction.**

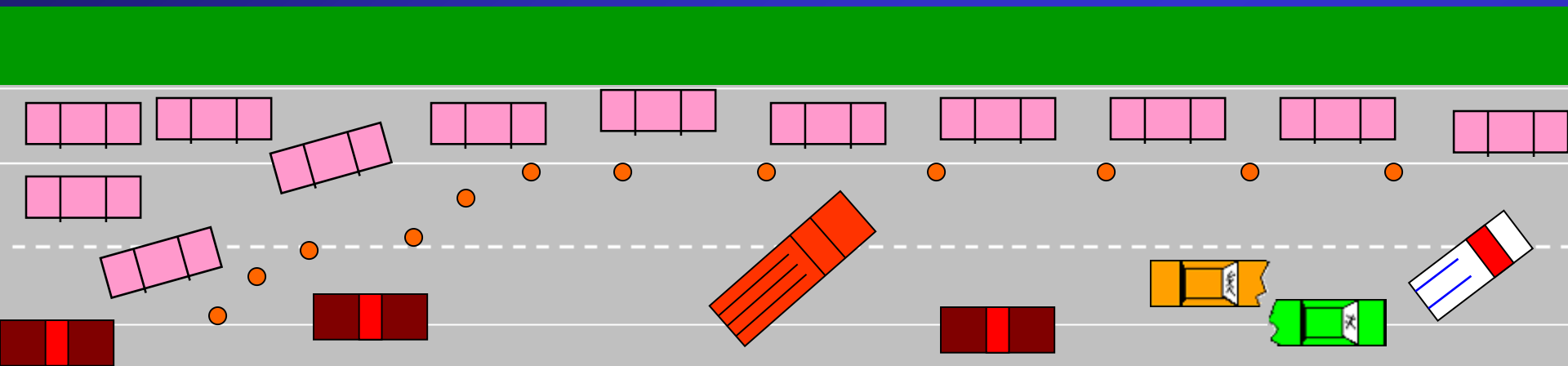


VS.



**Which is why using cones, flares, and
good placement are necessary.**

Components of Emergency Traffic Control (Example Divided Highway)

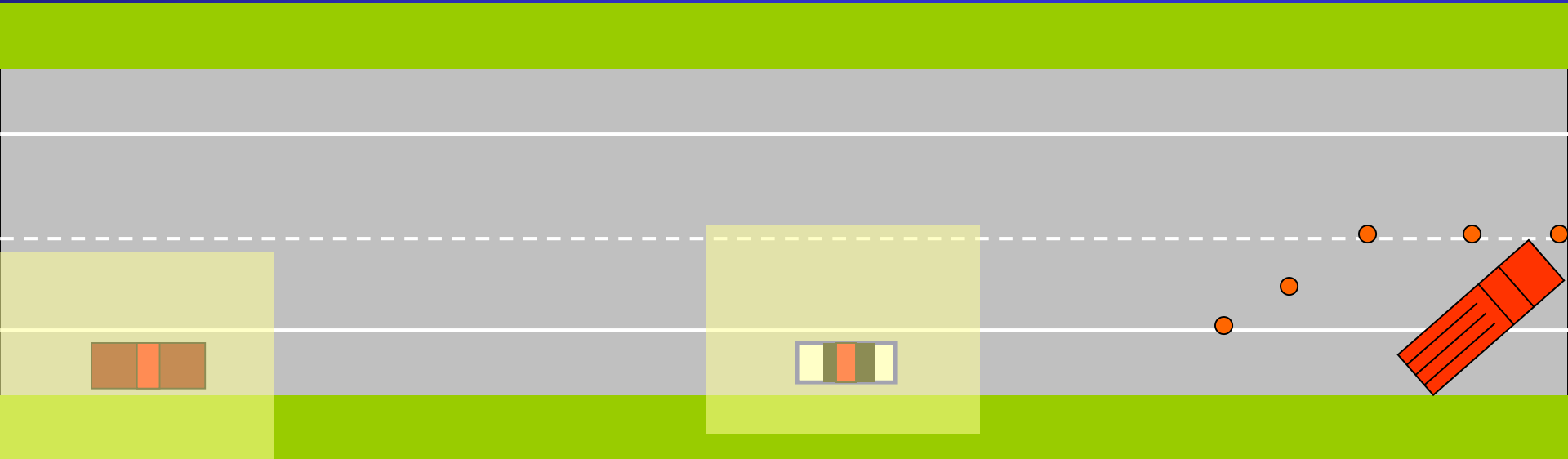


Advance Warning	Transition Area	Buffer Space	Shadow Vehicle	Roll Ahead Space	Work Space	Staging Area
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1. Number of cones – 30 vs 5?

2. ETC sets up in the reverse of WZ!

Advance Warning



Squad(s) parked on shoulder in straight away 5 to 15 seconds before fastest traffic reaches scene

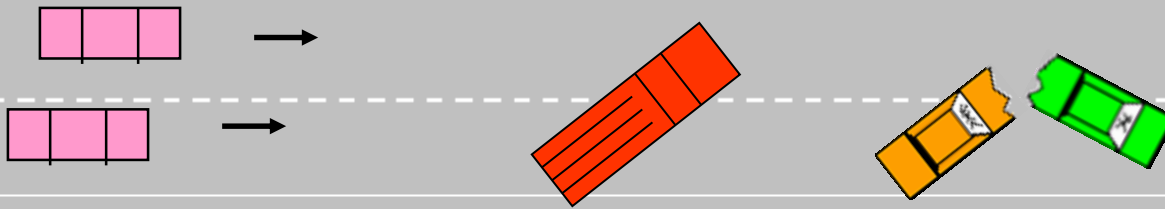
Portable Signage

- 48” x 48” for highway speeds
- NCHRP350 crash tested support
- Mounted minimum 1 ft above ground.
- Flourescent pink is ok!
- Must be retro-reflective (not mesh)



**Parking,
positioning
& blocking.**

Park with a purpose



- **Protect where you will be working on foot.**
- **Park your rig between you and incoming traffic (upstream / before incident)**
- **If possible, leave a channel for traffic flow**

- **Law enforcement:**
 - **Move it or dust for prints?**
 - **Passenger side approaches**
 - **Push bumpers**
 - **Rolling slow downs**
 - **Intersection traffic direction**
 - **Using pre-emption & putting lights in 4 way stop**
- **EMS - Where to park if:**
 - **You're the first one there**
 - **You are NOT first one there**

Tapers & Channelizers



Taper

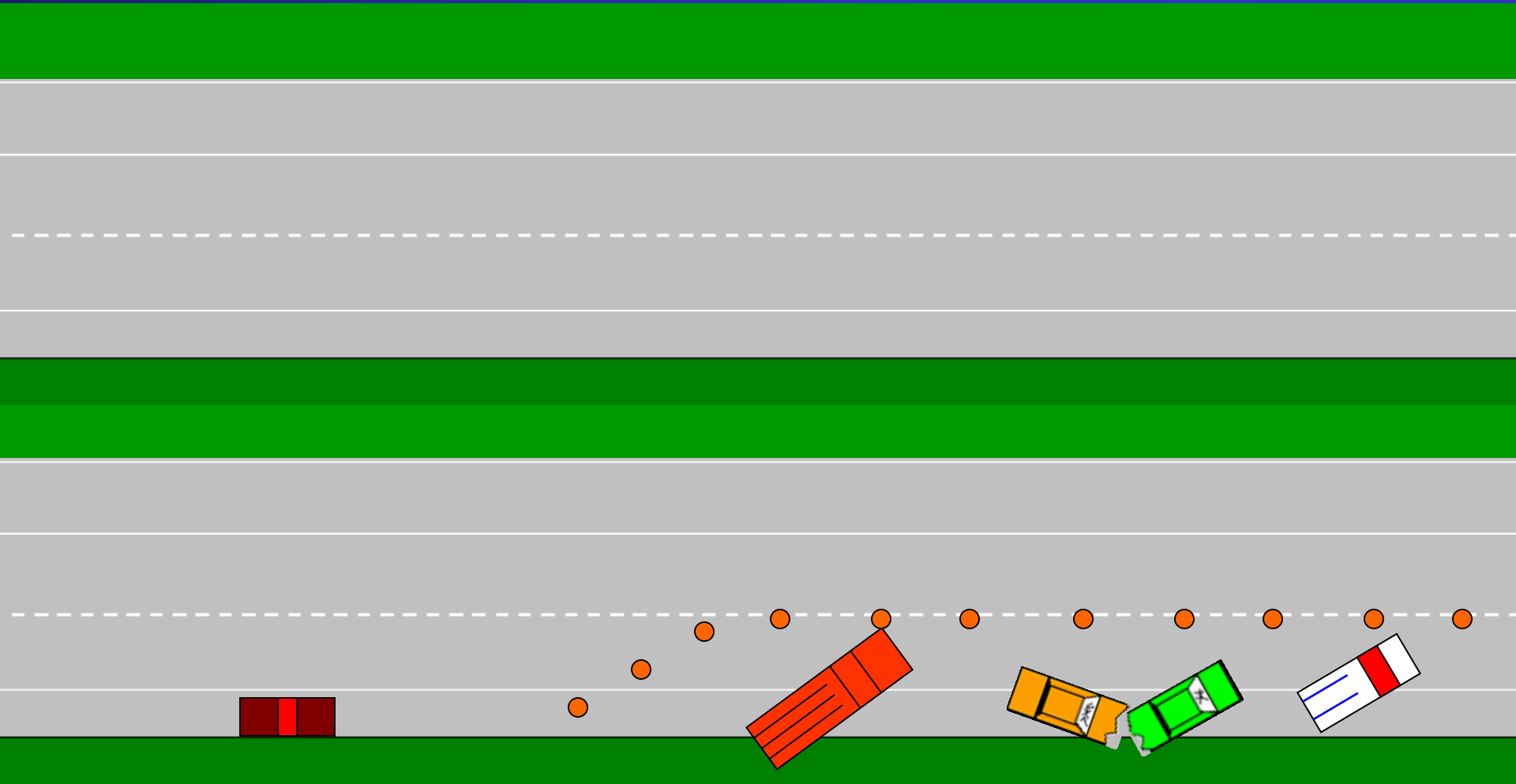
- Tells traffic you're not moving
- Points them the direction you want them to go
- If they hit something, it's soft & cheap – instead of your stuff.



Channelizer

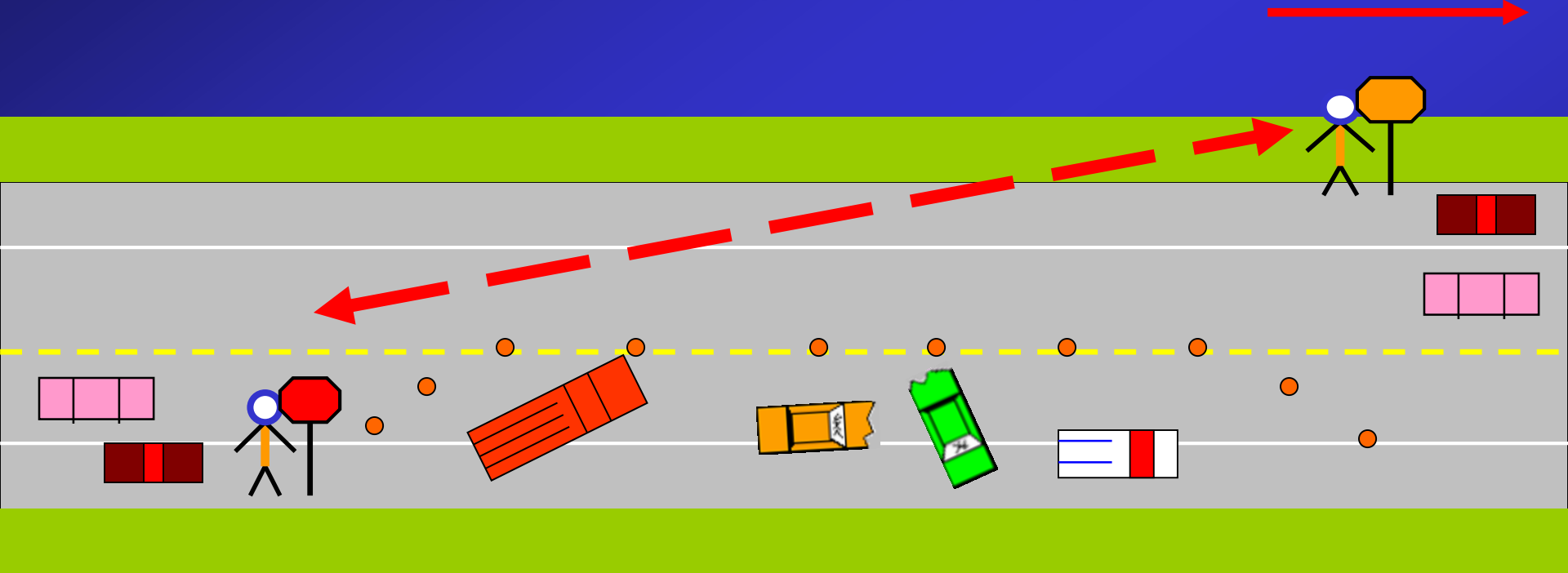
- Decorative fence around boundary
- Reminds traffic to stay in their lane
- Reminds your folks not to walk in traffic.

2 lane highway – divided 1 lane blocked



← Post advanced warning ahead of scene

1 Lane Highway One Lane Blocked



← Post advanced warning ahead of scene →

**Response & Scene
safety is not just about
protecting yourself
from the public!**

169.17 EMERGENCY VEHICLE.

The speed limitations set forth in sections 169.14 to 169.17 do not apply to an authorized emergency vehicle responding to an emergency call. Drivers of all emergency vehicles shall sound an audible signal by siren and display at least one lighted red light to the front, except that law enforcement vehicles shall sound an audible signal by siren or display at least one lighted red light to the front.

This provision does not relieve the driver of an authorized emergency vehicle from the duty to drive with due regard for the safety of persons using the street, nor does it protect the driver of an authorized emergency vehicle from the consequence of a reckless disregard of the safety of others.

High viz clothing



High Viz

Federal OSHA requirement!

PD – lots of exceptions

FD – a couple exceptions

EMS – Pretty much only if it's Ebola.

Class 2 vest or class 3 jacket

ANYTIME exposed to traffic – not just freeway!



**But I don't want
to!!!**



If something bad happens to you:

- **Could impact criminal charges**
- **Could impact civil recourse**
- **Could impact your workers comp!**

Final words

- **We all have specific jobs to do on scene**
 - **Yours might be different**
- **Coordinate**
- **Communicate**
- **Cooperate**
- **Goal – Everyone goes home in one piece at end of the shift**

Questions?

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 - **651-234-7025**