

An introduction to safety and protective measures for Work Zones



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# **Defensive Driving-** BASICS

- Smith System recommended all fleets
- 5 Keys:
  - Aim High in Steering
  - Get the Big Picture
  - Keep Your Eyes Moving
  - Make Sure THEY SEE YOU



– ALWAYS Leave Yourself An OUT!

These Keys are Universal- apply in all driving situations including work zones, backing, parking

### **Defensive Vehicle Positioning**

- In many situations we can DECREASE our exposure to traffic if we work a little harder to protect ourselves
- Use upstream <u>warning signs</u>, i.e. 'Work Zone Ahead', flares, Blue Light to protect your backside
- Look for safest place to park your vehicle
- Avoid parking on **paved surfaces** whenever possible
- Use police detail to warn motorists
- Always use strobes and vehicle mounted devices for warning. Remember, these devices <u>DO NOT</u> replace signs
- Deploy cones immediately. NEVER take your eyes off oncoming traffic
- ALWAYS leave yourself an OUT
- All parked vehicles, place cone at rear





## **Two** Basic WZ Concerns

- 1) Traffic going by the work zone
- 2) Operations inside the work zone
- Fatal work zone accidents are roughly evenly divided between the two
- Protective choreography specific to each
- Complexity, length and intensity of work determines level of control







- <u>'All projects and works on highways, roads and</u> streets SHALL have a traffic control PLAN' (MOT)
- FDOT Roadway and Traffic Design Standards, January 2000
- Reference Manual on Uniform Traffic Control Devices, Part IV
- Must comply with all elements- "equal or greater, NEVER LESS! "
- Specific limits and requirements for work zone duration
- Florida requires MOT training and certification for persons who will design, supervise, install and maintain Traffic Control Devices.
- New FDOT MOT training required for persons involved with Incident Response

# High Visibility Required!

- ANSI Standard- Class III high visibility APPAREL required 50 mph+
- Class II apparel 25 to 50 MPH
- 2 inch reflective trim for night work
- Must be visible from sides, through full range of body motion. <u>KEEP GARMENTS CLOSED!</u>
- Supplement with hard hat, accessories.
- Tip: Use fluorescent spray paint to add square inches of high vis to visual profile



### Leading Cause of Work Zone Accidents Entering and Leaving!



- <u>ALL vehicles in work zone MUST have strobe</u> or beacon- no exceptions
- <u>Signal intentions</u> well in advance- be sure following motorists see you. Protect your rear
- When exiting, <u>allow sufficient distance for</u> <u>acceleration</u> to traffic speed- avoid causing oncoming motorists to brake
- Use a spotter when lines of sight are impaired
- Use good lane discipline to merge back into traffic
- <u>Do NOT try to 'beat' traffic. Be conservative</u>

## 2<sup>nd</sup> Leading Cause of WZ Accidents: Struck By, Caught Between

 TC Plan should consider machinery equipment use in the WZ



- Loading & unloading operations- plan for safe areas
- Maintain clear zone around moving equipment.
  Protect swing radius
- Be sure operator sees YOU- NEVER assume!
- Do not approach moving equipment or vehicles
- All persons on the ground- vest, hat, boots!





# Night Work

- Use reflectorized materials, keep vests clean
- Double check warning signs for clarity
- Supervise TCD's, verify & maintain
- Use flares, Blue Lights police details when necessary- very effective for motorist attention
- Avoid aiming lights into oncoming traffic
- Be sure crews are well rested- fatigue leads to mistakes, errors, poor judgment

Control Operations Inside the Work Zone



- Designate parking area, short and long term
- All vehicles on <u>ONE SIDE</u> of roadway only
- NOTHING and NO ONE gets behind the <u>TMA</u>
- <u>Designate a spotter</u> for tight situations- use a signal device to alert
- <u>Remain alert</u> for errant vehicle intrusion into WZ
- <u>ALWAYS leave yourself an 'OUT'</u>









#### Defensive Driving Practice

#### •<u>Use roof mounted WARNING LIGHTS to alert</u> following drivers - Make SURE THEY SEE YOU!

- •Examples include: Sudden stops, hard brake & turning, irregular vehicle positioning, tailgating drivers, congested intersections, inattentive drivers.
- •Whenever you're not **ABSOLUTELY CERTAIN** the driver behind you is watching you- **USE YOUR WARNING LIGHTS!**
- •ALL vehicle is work zone MUST have strobe light
- •Make sure THEY SEE YOU!
- •Use warning lights <u>'liberally'</u> to protect your vehicle!
- •Remember- the human eye is attracted to LIGHT
- •Even a momentary flash of the lights will attract attention

#### •Take NO chances.



### Incident Response Safety Advisory

- •Minimize direct exposure to traffic.
- •When working incidents, stay away from traffic lanes.

NEVER assume motorists are watching out for YOU!

- •Remain in protected areas as much as possible.
- ALWAYS leave yourself an "OUT"
- •Plan your escape route!
- •NEVER turn your back on traffic!
- •NEVER get behind a TMA!







### Incident Response Safety Reminders

- Approach <u>all incidents</u> with <u>CAUTION!</u>
- Reference: Florida incident where a vehicle involved in a secondary crash was found to be carrying large quantity of <u>LIVE AMMUNITION</u>!
- We can never know for certain what may be encountered during incident response! <u>Use extra caution !</u>
- Remember our <u>Industrial Hygiene and Hazardous Materials</u> <u>Awareness</u> training! LOOK for indicators of danger
- Observe closely, maintain safe distances, use protective gear, avoid contact with unknown articles, debris, foreign substances and unidentifiable materials. Wash or sanitize your hands & gear following response
- When in doubt, back off, call for assistance or directions on how to proceed safely.
- Accident scenes can be highly chaotic. Protect yourself, other employees and motorists. <u>Take NO chances!</u>





Safety Advisory Crossing Traffic Lanes ON FOOT!



- Try to AVOID this practice whenever possible by driving as close as practical to the desired location. Park in safe zone, well away from travel lanes and shoulder.
- Wear maximum coverage high visibility garments and hard hat. Spray paint back of work gloves with 'high vis' paint to improve visual profile.
- NIGHT Operations- use full panel reflective vest. Set flares to alert motorists of your presence
- Strategically position vehicle with strobes and arrow board visible to oncoming traffic
- Remain in clear zone avoid becoming obscured to oncoming traffic. Stay visible to traffic. Frontal profile has more square inches of high vis fabric than side. NEVER take your eyes off oncoming lanes!

### Crossing Travel Lanes On Foot- continued

- Position yourself at right angle directly across from area/object to be reached. Avoid walking on paved shoulder, stay on grass or median
- Examine oncoming traffic. Use extreme conservatism when estimating approach speeds.
- LOOK for vehicles obscured by glare, shade, haze, hidden behind other vehicles, etc.
- WALK quickly- NEVER RUN across travel lanes. Running could cause trip and fall! Take small steps.
- Stay in safe zone as much as possibleminimize your exposure

## Summary

- Tell your crews: <u>There WILL BE A TEST</u> on their comprehension of safety information
- Wear <u>High Visibility</u> garments
- Use approved signs & devices, ALWAYS follow MUTCD or MOT



- Actively try to minimize exposure to vehicle and Workers On Foot
- Drive, park and back defensively
- Recognize & reward safe behavior & achievement