

Interstate-80 Winter Operations Coalition

Jim McGee MPA
September 25, 2012
Reno, NV



*Changing Traffic Incident Management by Training a
Nation of Responders...*

Rural Traffic Incident Management Training in Nebraska

Jim McGee MPA
Nebraska DOR
October 16, 2012



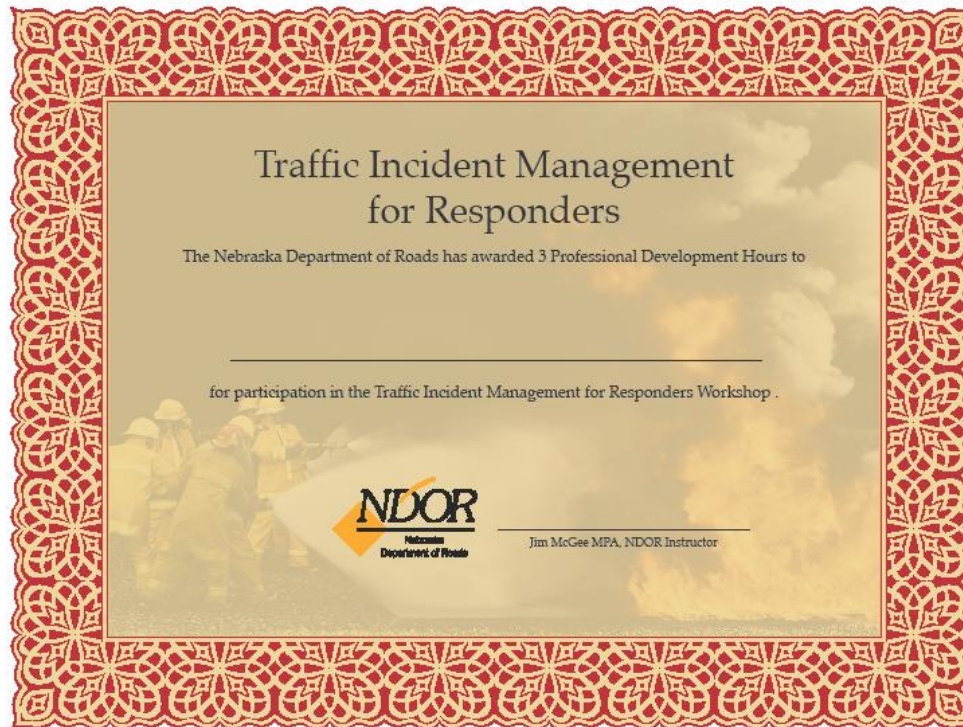
10/2/2012

Rural Traffic Incident Management Training
in Nebraska



Nebraska Traffic Incident Management for Responder Workshops

Ogallala, Thedford, North Platte, Hershey, Plattsmouth, Bennington, Municipal Fire Chiefs, Nebraska Fire School, Training Academies, NDOR, UN-Omaha



10/2/2012

Rural Traffic Incident Management Training
in Nebraska



What are TIM core competencies?

Primary core competencies:

Those shared or similar actions typically taken by at least three on-scene responder groups.

- ❑ Every incident responder active in that incident management phase—regardless of responder type—should know how to implement these core competencies.
- ❑ Using emergency responder vehicles to create a safe work area scene and wearing appropriate high-visibility protective apparel are primary core competencies.

Secondary core competencies:

Those actions that a specific responder group performs that all other responder groups should understand and be aware of.

- ❑ These competencies are interdependent.
- ❑ Individual responders may not need to know how to actually implement them.

Discipline-specific competencies:

- ❑ Those that only one responder group performs are of such a critical nature that it is necessary for all disciplines to be aware of their existence and performance
- ❑ Hazardous materials (hazmat) cleanup is an example

FHWA

TIM Workshop for Mid-Level Managers, SHRP-2



Changing Traffic Incident Management by Training a Nation of Responders...

SHRP 2 National TIM Responder Training

Paul Jodoin

Federal Highway Administration





National Fire Protection Association

The authority on fire, electrical, and building safety

1091 Standard for Traffic Control Incident Management Professional Qualifications

The draft NFPA standard identifies the minimum job performance requirements (JPRs) necessary to perform Temporary Traffic Control (TTC) duties at emergency incidents at or near an active roadway.

High Visibility

Background Material Minimum 450 in²
Retro reflective/Combined-Performance Material Minimum Width 1.97 in Minimum Area 201 in²

The Vest shall have contiguous areas of retro reflective or combined-performance material encircling the torso – placed in a manner to provide 360° visibility



TIM for Responders/ Fire School McGee 2012



NRF

Key Documents in National Response Framework (NRF):

NRF:

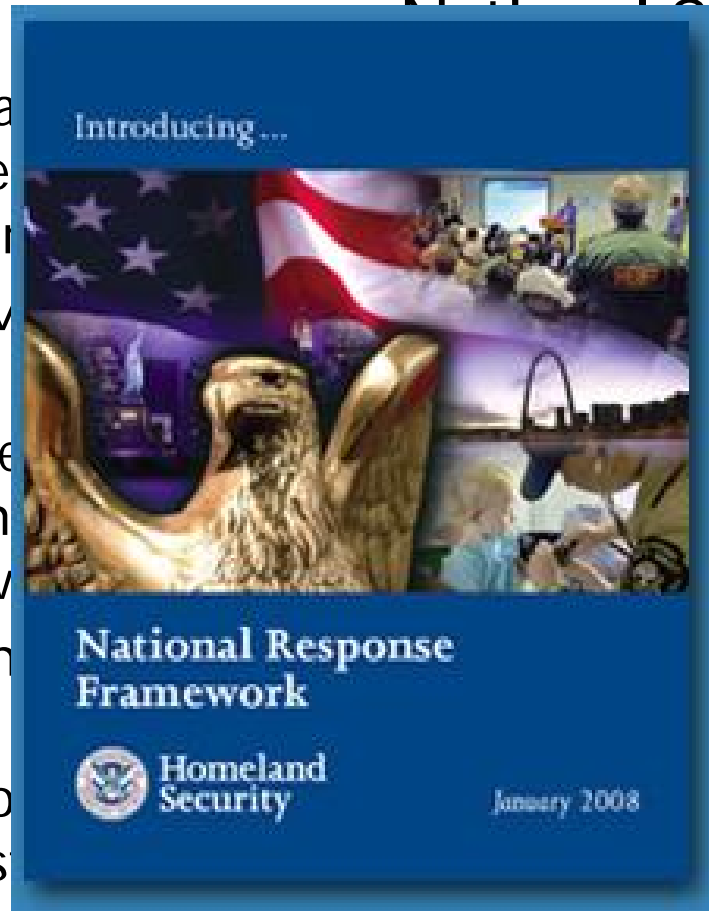
- ❑ Delineates our National response doctrine, responsibilities, and

National Incident Management System (NIMS):

- ❑ Establishes a systematic approach for managing incidents nationwide

ESF, Support, and Incident Annexes:

- ❑ Provide concept of operations, procedures, and strategies for achieving response objectives.



Strategy for Security:

The National Business Guidelines, include the Planning

Partner Guides:

a ready reference for roles and actions for tribal, State, and private-response partners.

What is a traffic incident?

Definition contained in
MUTCD Part 6I:

A traffic incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes normal flow of traffic.



What is Traffic Incident Management?

TIM consists of:

- ❑ Planned and coordinated multi-disciplinary process to **prepare for, mitigate**, detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible.
- ❑ Effective TIM reduces the duration and impacts of traffic incidents and improves the safety of motorists, crash victims and emergency responders.



What Differences: Rural and Urban Traffic Incident Management?

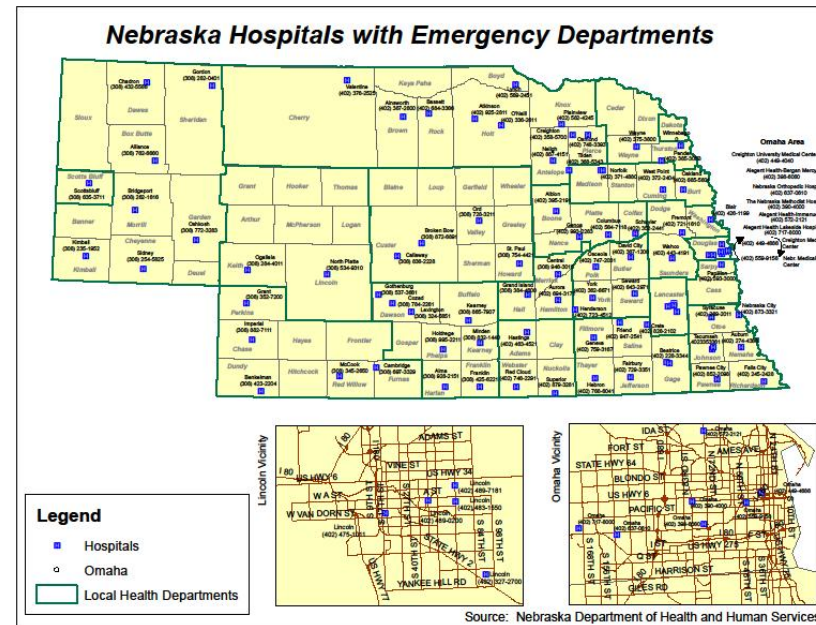
Mostly the same issues; however...

- Remoteness
- Golden Hour
- Delayed incident detection and response
- Long distances
- Multi-state corridors
- Communications issues
- Commercial freight volume
- Volunteer Responders
- Lack of mass care housing, medical services, food
- TIM training opportunities are nights and week ends for rural volunteer responders!**



Engineering, Education, Enforcement and EMS

- Highway safety professionals have long utilized engineering, education and enforcement approaches.
- The 4th “E” –EMS- is less familiar.
- Overall risk of death was 25% lower when provided at Level 1 Trauma Center
- Counties with coordinated systems for trauma care have rates as much as 50% lower than counties without trauma systems.

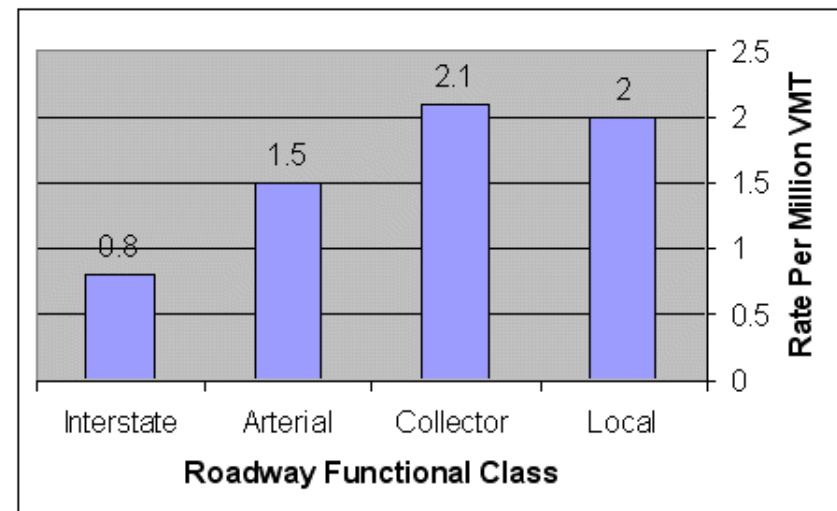


*Changing Traffic Incident Management by
Training a Nation of Responders...*

Rural Facts



- ❑ 23% of the USA population live in rural areas but rural crashes account for 55% of all traffic fatalities
- ❑ 2-lane county roads are the most dangerous
- ❑ Typical crashes are off-road, 1-car accidents, young victims
- ❑ Golden Hour: Delayed discovery, stabilization, and transport complicated by long distances



Rural Fact:

The Golden Hour is Critical in Rural America!

- ❑ Response time has a well-documented relationship to likelihood of crash survival.
- ❑ For seriously injured patients, arrival at the hospital within the “golden hour” after the crash is considered a strong predictor of patient outcome.

Changing Traffic Incident Management by Training a Nation of Responders...





Interstate-80 is Mainly Rural



Western Interstate-80

- California: 199 miles
- Nevada: 410 miles
- Utah: 196 miles
- Wyoming: 402 miles
- Nebraska: 455 miles
- Iowa: 306 miles

www.ndortraveler.mobi





Decision Support Briefing Highlight



National Weather
Service Severe
Weather Webinars

What	Where	Timing	Impacts
Severe Weather (Moderate Risk)	Central and Eastern Nebraska, Western Iowa (Mainly north of I-80)	4 PM to 4 AM	Main Risk is Large Hail and Damaging Winds
Large Hail and Isolated Tornadoes	Central and Northeastern Nebraska	4 PM to 10 PM	Large Hail greater than 2" Isolated Supercell Tornadoes (5% risk)
Damaging Winds and Heavy Rainfall	Eastern Nebraska and Western Iowa	4 PM to 4AM (primarily in the evening)	60 to 80 MPH winds Bow Echo Structure Rain creating flash flooding

Rural Corridor Operations Connect the DOTs



Western I-80 TMCs are hundreds of miles apart in:

- Omaha
- Cheyenne
- Salt Lake City
- Reno
- Rancho Cordero

Shortening Incident Duration is Critical in Both Urban and Rural America

- ❑ Reduces chances of secondary crashes
- ❑ Reduces responder exposure to danger
- ❑ Reduces risk

There are 3 Types of Safe, Quick Clearance:

1. Driver Removal Quick Clearance
2. Authority Removal Quick Clearance
3. Move Over/Slow Down Laws



Secondary Crashes

- ❑ Approximately 20% of all roadway crashes are “secondary” crashes !
- ❑ Secondary crashes are often worse!
- ❑ The likelihood of a secondary crash increases for each minute the primary incident continues to be a hazard.
- ❑ Causes include the dramatic change in traffic conditions, including the spreading of queue length, and the substantial drop in traffic speed, as well as rubbernecking.

- Rural incident management programs can prevent secondary incidents by reducing the duration of traffic incidents, and by publicizing the incident using changeable message signs and traveler information systems.

Secondary Crash Kills Maryland Family on Nebraska I-80

September 9, 2012

Cheyenne County Attorney Paul Schaub says a Maryland family riding in separate cars were killed Sunday in the second accident near the Potter interchange on I-80,

The driver of the 2010 Ford Mustang hit by the semi driven by manslaughter suspect was Christopher Schmidt, 30, Gaithersburg, MD.

Schmidt was killed along with his wife and two children, who were in the Toyota Corolla in front of him that was pushed underneath a semi in the fiery crash. They are 28 year old Diana Schmidt, two year old Connor Schmidt and 3 year old Samuel Schmidt.

Authorities say Diana Schmidt was 30 weeks pregnant.

The 36 year old truck driver, from Rivergrove, Illinois, has been charged with multiple counts of manslaughter and motor vehicle homicide stemming from the deaths of the Schmidt family.

The accident occurred when traffic backed up on the interstate for several miles following the fatal collision of two semis in the westbound lanes around 4:20 a.m. near the Potter interchange.

Authorities say the truck driver never slowed down and did not have his CB on where warnings were being issued by truckers about the stalled traffic ahead.

27 year old Keith Johnson of Big Lake, Minnesota, was killed in the first accident.



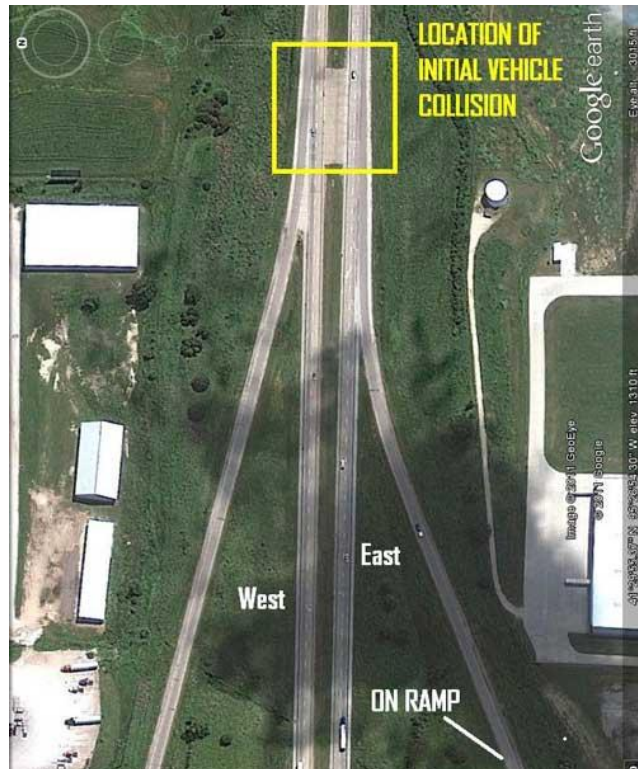
Contributors to Safety Risks and Increased Congestion During Incidents

- Careless, inattentive, and impaired drivers
- Failure to establish proper TTC devices around the incident scene
- Improper positioning of the response vehicle within the Traffic Incident Management Area
- Inappropriate response vehicle lighting
- Low visibility condition
- Lacking situational awareness





Every Day of the Week...



Scene of firefighter's death on I-80 in Iowa.
Situational Awareness is critical! Know what is going on around you.

- ...there are 38,000 responders on the scene at traffic incidents.
- ...there are 38,000 responders at risk of serious injury or death.



Death in the line of duty...



A summary of a NIOSH fire fighter fatality investigation

March 5, 2012

Responders should receive proper training, and have:

- adequate staffing
 - sufficient equipment
 - appropriate procedures in place for responding to and operating at a roadway emergency incident.
 - Standard operating guidelines include guidance on identifying and maintaining a safe location while working in or near moving traffic.
 - Establish pre-incident plans and agreements** regarding traffic control incident management at roadway incidents with other public safety agencies...
- High-visibility chevrons and reflective markings are applied to all apparatus to enhance conspicuity while parked at emergency scenes and during emergency response.
 - Motorists should be attentive at all times while operating a motor vehicle, especially when approaching and driving through a traffic incident management area, so that they avoid striking emergency responders, other vehicles, and/or traffic control devices.

Rural TIM Tools

Intelligent Transportation Systems and Real Time System Management, Rural District Operations Centers

▣ The capability to monitor, in real-time, the traffic and travel conditions of the major highways and to share data with State and local governments and with the traveling public:

- Lane blocking events
- Road weather
- Construction
- Travel Time

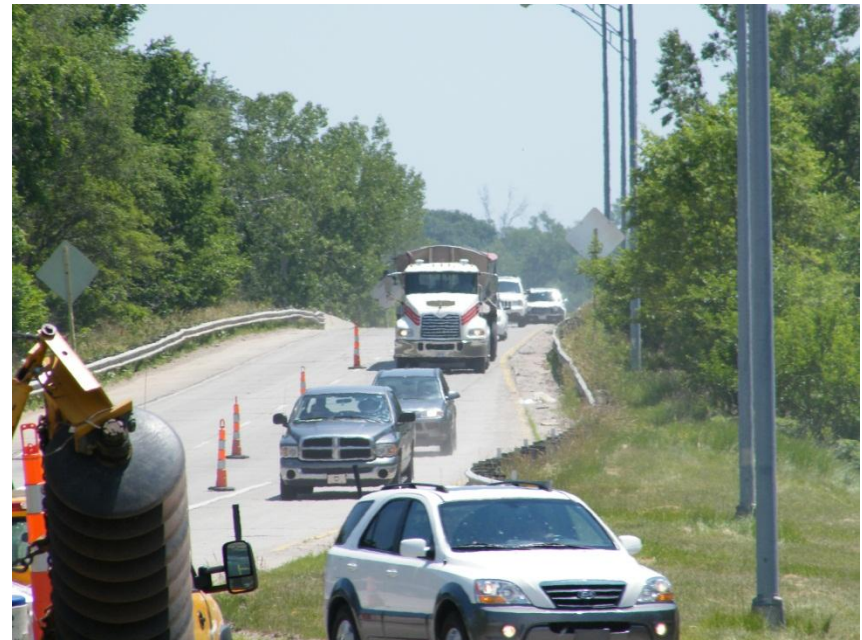


Accident Stages

Motorist Information

Informing road users and establishing a well-defined path to guide road users through the incident area protects the responders and helps in moving road users past or around the incident.

- will reduce the likelihood of secondary crashes
- will preclude using the local road system.
- Your DOT can assist



Incident Command System

Features and Principles

Disciplines

- Fire and rescue
- Law enforcement
- Dispatch
- Emergency Management Agency
- DOT
- Towing and recovery
- Media

ICS Benefits

- Common terminology
- Consistent organizational structure
- Consistent position titles
- Integrated Communications
- Common incident facilities
- Roles and Responsibilities

*Changing Traffic Incident Management by
Training a Nation of Responders...*

Traffic Incident Management Area

❑ Advance Warning Area

❑ Transition Area

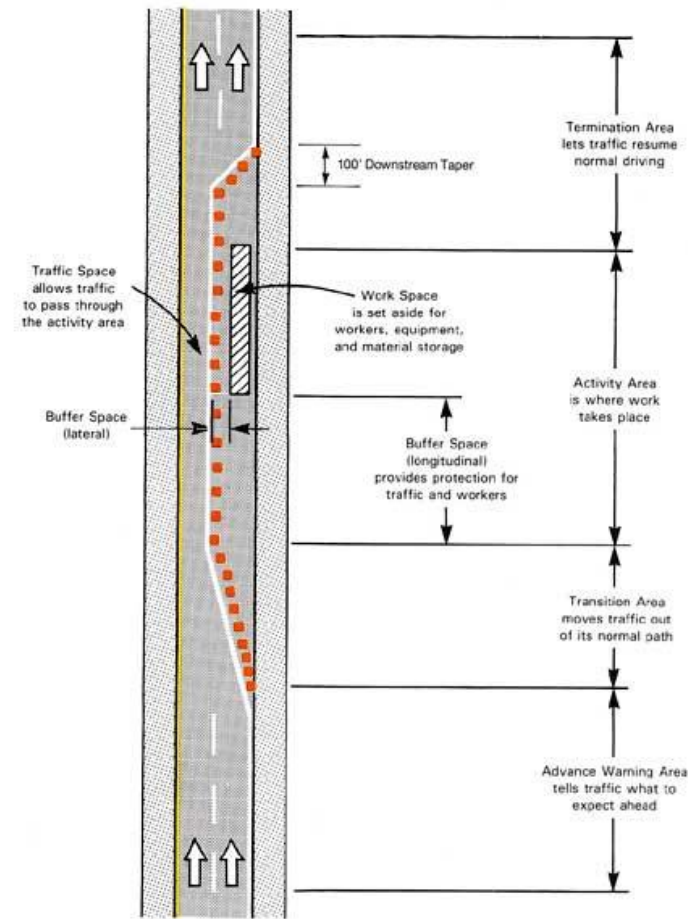
❑ Buffer Space

❑ Traffic Space

❑ Activity Area

❑ Work Area

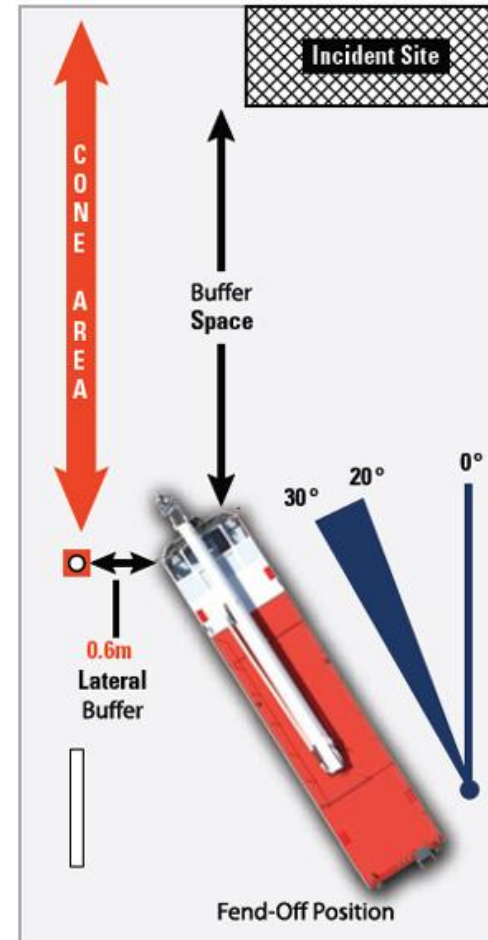
❑ Termination Area

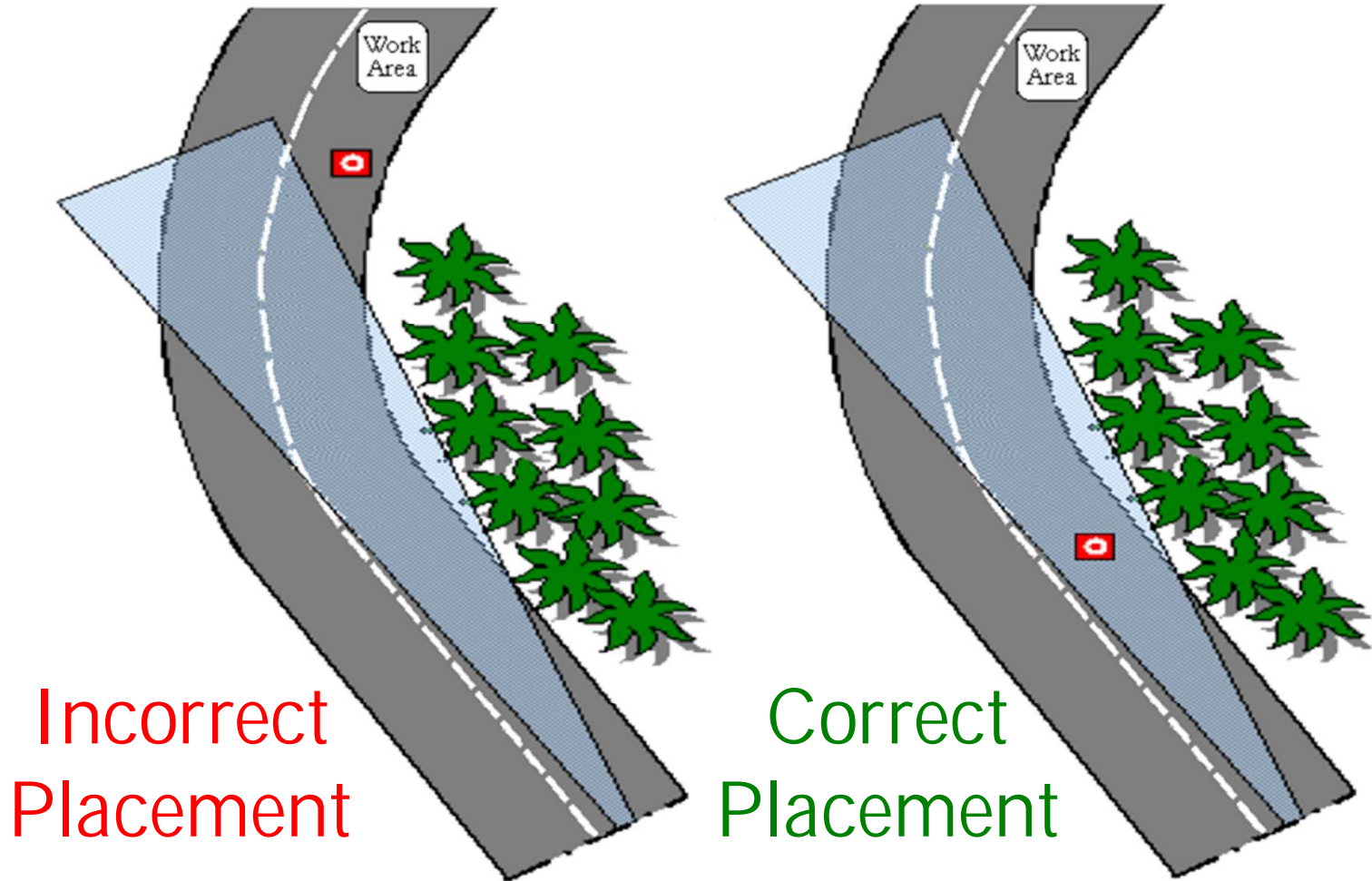


Traffic Control Device

Linear/Block Tactical Positioning

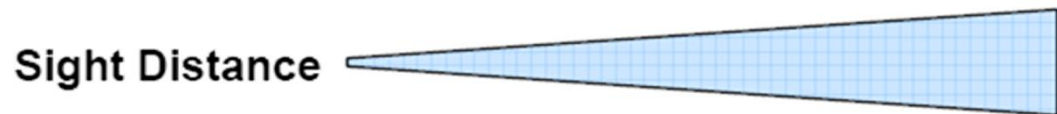
- ❑ **Block Positioning:** This means that incident responder vehicles are positioned at angles that create a protected work area for responders and vehicle occupants.
- ❑ **Linear Positioning:** This means that incident responder vehicles are positioned in a straight line at the incident scene.





Incorrect Placement

Correct Placement



Traffic Control Device 



A night scene of a road construction site. In the center, a large piece of machinery, possibly a paver or similar equipment, is illuminated by several bright, white work lights. The scene is dark, with the primary light source being the machinery's lights, which create a strong glare and cast long shadows. The background shows a dark road and some distant lights.

Minimize Lights

- Avoid glare to motorists
- Turn off unnecessary lights
- Emergency vehicle lighting:
- Provides warning only and provides no effective traffic control
- Can be confusing and distracting to drivers
- Use amber instead of red

Systematic Re-opening of Travel Lanes



Incident clearance is the process of removing incident debris and fuel spill contents that may hinder the normal traffic flow.

There are 2 types of clearance:

1. Roadway clearance
2. Incident scene clearance

The typical order of responder departure is:

- EMS
- Fire and rescue
- Towing and recovery
- Law enforcement
- NDOR

Alternate Routing

www.tim.ne.gov



NDOR
Nebraska
Department of Roads

Nebraska Statewide Interstate
and Expressway Alternate
Route Study

Prepared by:
URS
With:
HDR

October 2007

Alternate Route Map

NECTAR
Nebraska Expressway
Alternate Routing
Application

Closing

Better Rural TIM programs & training will result in:

- ❑ Safe clearance of the Nation's roadways
- ❑ Reduction of the risk of death or injury to responders or motorists
- ❑ Reduction of secondary incidents
- ❑ Rapid clearance of incidents, reducing the impact on congestion & the potential for secondary crashes
- ❑ Clearly defined responder roles
- ❑ Better use of resources
- ❑ TIM being a "core mission" among transportation, law enforcement & fire/rescue
- ❑ FHWA serves as the National leader bringing about this vision
- ❑ Changing Traffic Incident Management by Training a Nation of Responders...



Thank you!

*Changing Traffic Incident Management by
Training a Nation of Responders...*

Jim McGee MPA

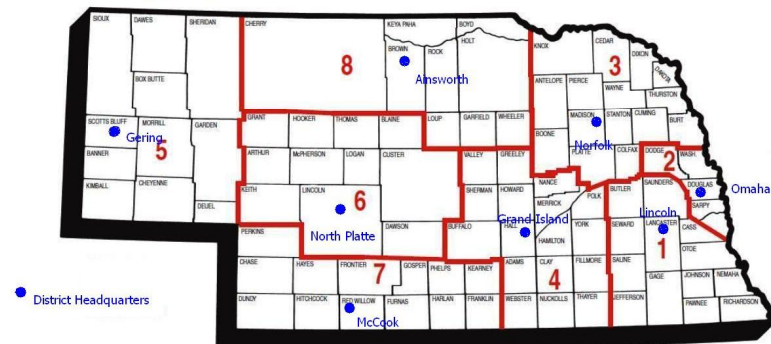
Nebraska DOR

Jim.McGee@Nebraska.gov

402-610-0074

Nebraska ♦ Department ♦ of ♦ Roads District Engineers

Richard Ruby District 1 Lincoln (402)471-0850 FAX (402)471-3401	Timothy W. Weander District 2 Omaha (402)595-2534 FAX (402)595-1720 or (402)595-2406	Kristine L. Winter District 3 Norfolk (402)370-3470 FAX (402)370-3473	Wesley Wahlgren District 4 Grand Island (308)385-6285 FAX (308)385-6289	Craig R. Lind District 5 Gering (308)436-6587 FAX (308)633-6614	Gary Thayer District 6 North Platte (308)345-8031 FAX (308)535-8034	Kurt Vosburg District 7 McCook (402)345-8490 FAX (308)345-8492	Mark Kovar District 8 Answorth (402)387-2471 FAX (402)387-1498
--	--	--	--	--	--	---	---



www.tim.ne.gov