

# Flagging and Work zone Operations

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- ▶ These materials are intended to assist employers, workers, and others as they strive to improve work zone safety. All of the pictures, video and information in the following presentation are to be utilized for training purposes only. Any individuals or companies named or shown can not be retroactively perused based upon information gained during this presentation as it is being utilized for training and education purposes.

# Work Zone - MVC - 257.79.d(1)

- ▶ "Work zone" means a portion of a street or highway open to vehicular traffic and adjacent to a barrier, berm, lane, or shoulder of a street or highway within which construction, maintenance, public utility work, reconstruction, repair, resurfacing, or surveying is being conducted by 1 or more individuals and that meets any of the following:
  - (a) Is between both of the following:
    - (i) A sign notifying the beginning of work.
    - (ii) An "end road work" sign or, if no sign is posted, the last temporary traffic control device before the normal flow of traffic resumes.

## MVC

### 257.79d(1)

(b) Is between a "begin work convoy" sign and an "end work convoy" sign.

(c) If a moving or stationary vehicle or equipment exhibiting a rotating beacon or strobe light is used, is between both of the following points:

(i) A point that is 150 feet behind the rear of the vehicle or equipment or that is the point from which the beacon or strobe light is first visible on the street or highway behind the vehicle or equipment, whichever is closer to the vehicle or equipment.

(ii) A point that is 150 feet in front of the front of the vehicle or equipment or that is the point from which the beacon or strobe light is first visible on the street or highway in front of the vehicle or equipment, whichever is closer to the vehicle or equipment.

# Traffic Regulators or Flagging

- ▶ What do you need to be certified?
  - ▶ Video - [www.michigan.gov/mdotworkzone](http://www.michigan.gov/mdotworkzone)
  - ▶ Manual



## Traffic regulating

The role of a traffic regulator is crucial to the success of a well-run traffic operation. Traffic regulating is a full-time job. Careless use of the sign or distraction from duty could cause serious injury to yourself, other workers, or the public.

By performing your duty diligently, you can do your part to prevent traffic incidents in your work area.

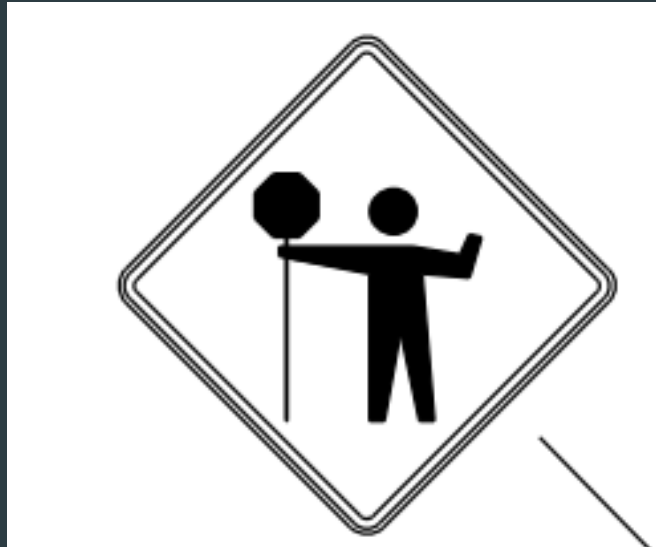
[Traffic Regulator Instruction Manual](#) >



## AFADs Automated Flagger Assistance Devices

# AFADs

- ▶ Specification is posted online - optional use
- ▶ Typical
  - ▶ 115 and 116
  - ▶ Two options
  - ▶ Removal of traffic regulator sign



# AFADs



R10-6b

\*

FOR USE WITH A RED/YELLOW LENS AFAD,  
ELIMINATE SIGN IF A RED/YELLOW LENS AFAD  
WITH A R10-6 SIGN MOUNTED TO THE  
DEVICE IS PROVIDED



R1-7

△

FOR USE WITH A STOP/SLOW AFAD









# Traffic Regulators

## ▶ Temporary Portable Rumble Strips

### ▶ FUSP 812D

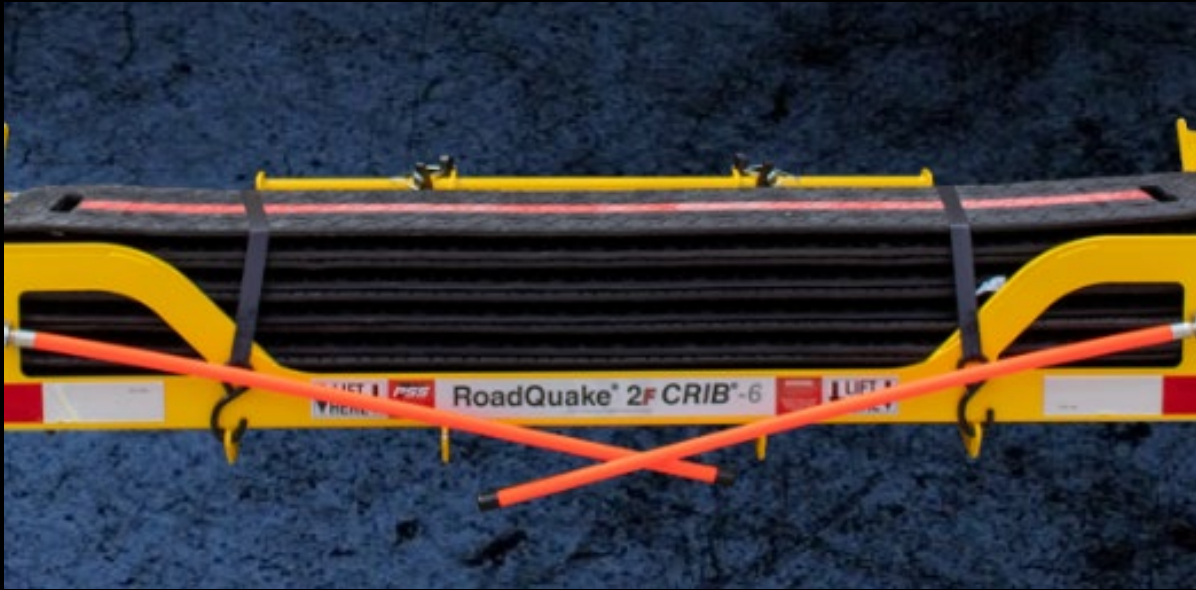
- ▶ Use on all trunkline projects with existing speed limits 45mph or higher where traffic regulating will be in place longer than 4 hours. Optional for local agency and all other truckline projects.
- ▶ Paid for each - per strip

### ▶ If moving in field, consider extending spacing

TCD9: RUMBLE STRIPS ARE TO BE PLACED AS SPECIFIED IN THE CONTRACT. IF NOT SPECIFIED IN THE CONTRACT, PLACE RUMBLE STRIPS AS SHOWN, AND IN ACCORDANCE WITH THE RUMBLE STRIP MANUFACTURER'S RECOMMENDATIONS. AN ARRAY OF RUMBLE STRIPS CONTAINS THREE RUMBLE STRIPS. PLACE THE RUMBLE STRIPS IN THE ARRAY AT A CONSISTENT DISTANCE, BETWEEN 10' AND 20' APART.

# Portable Rumble Strip









Play (k)

0:00 / 1:31

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## SQ3TS Portable Traffic Signal

### System Features

- 30 days battery life
- 520 watts solar
- 100 mph sustained wind load
- 25-year design life (3<sup>rd</sup> party verified)
- Hydraulic mast arm
- Lifting ring for easy signal placement
- Exceeds NEMA TS-5 standards



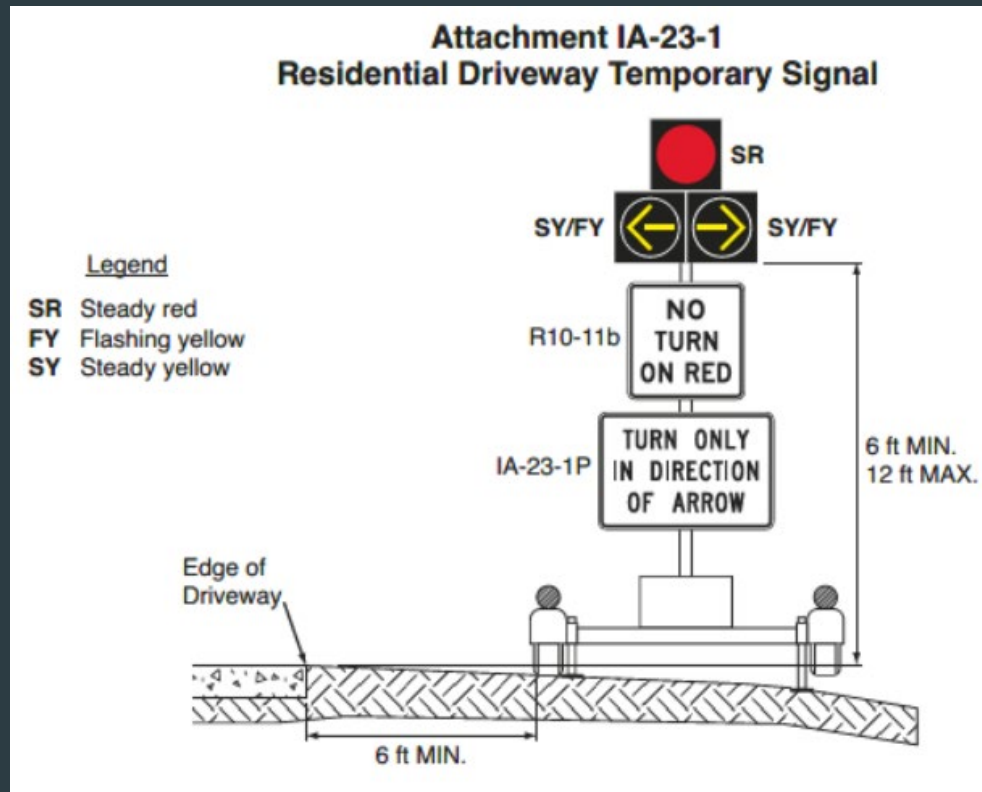
## SQ2 Portable Traffic Signal

### System Features

- 3-5 days battery life
- 130 watts solar (optional) to extend run time
- 4 signals per system (MUTCD compliant)
- NCHRP TL-3 Crash tested
- Deploys in minutes
- Cost effective vs flagging
- Exceeds NEMA TS-5 standards



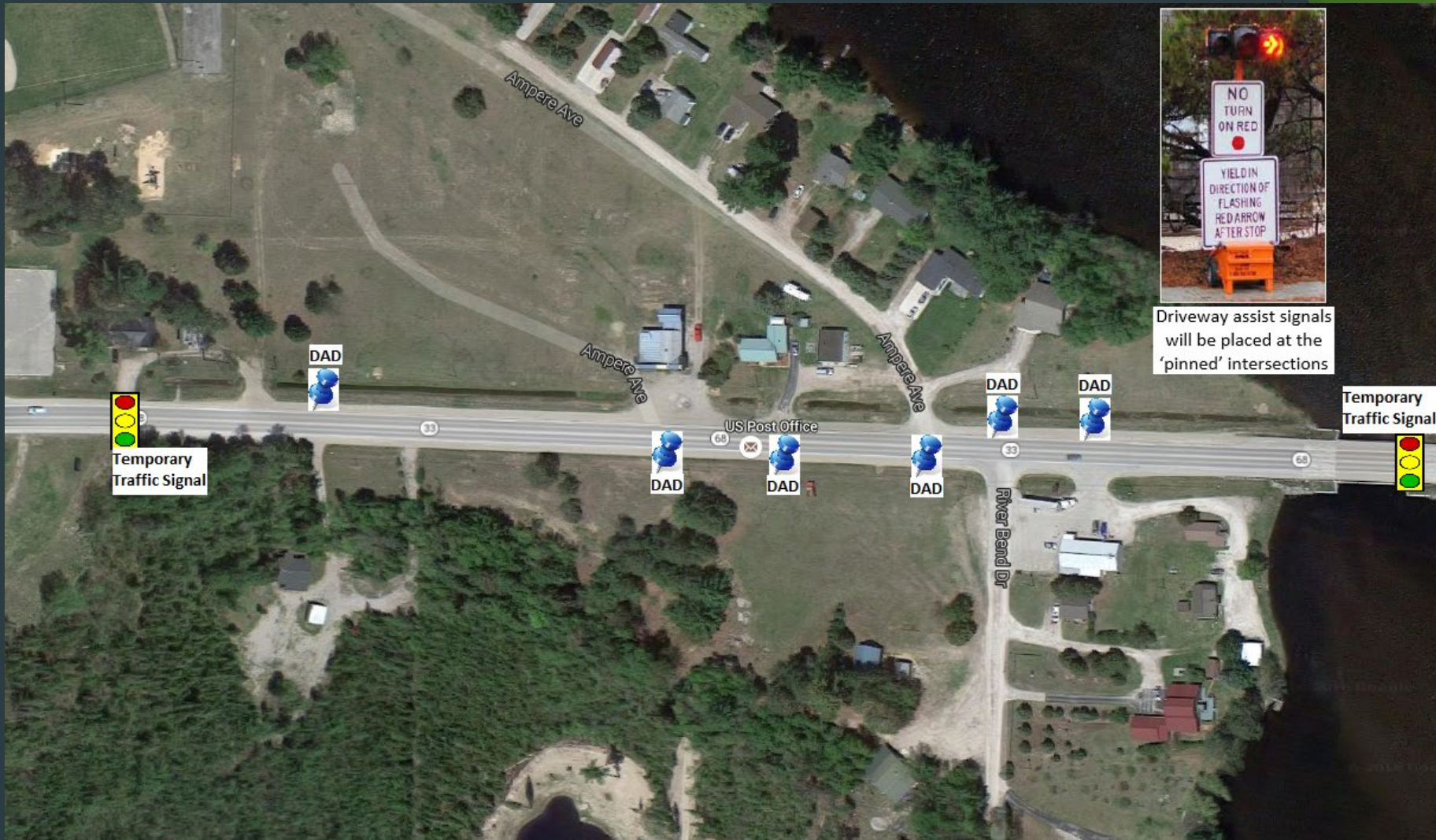
# The Device Formally known as DADs



# RDTs

## Residential Driveway Temporary Signal



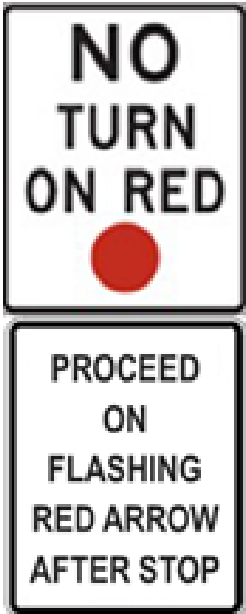
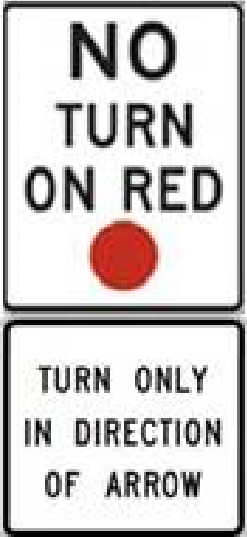





Driveway assist signals will be placed at the 'pinned' intersections

Temporary Traffic Signal

Temporary Traffic Signal

**Table 9. Total observations and legal movement rate for vehicles exiting McDonald's driveway, by sign**

						Total
Total Exiting Vehicle Observations	298	103	351	285	209	1246
% Legal Movements	58%	64%	66%	72%	72%	66%
% Safe Movements	92%	92%	92%	93%	98%	93%

# The Top 12 States To Live In

Indicated By Yellow

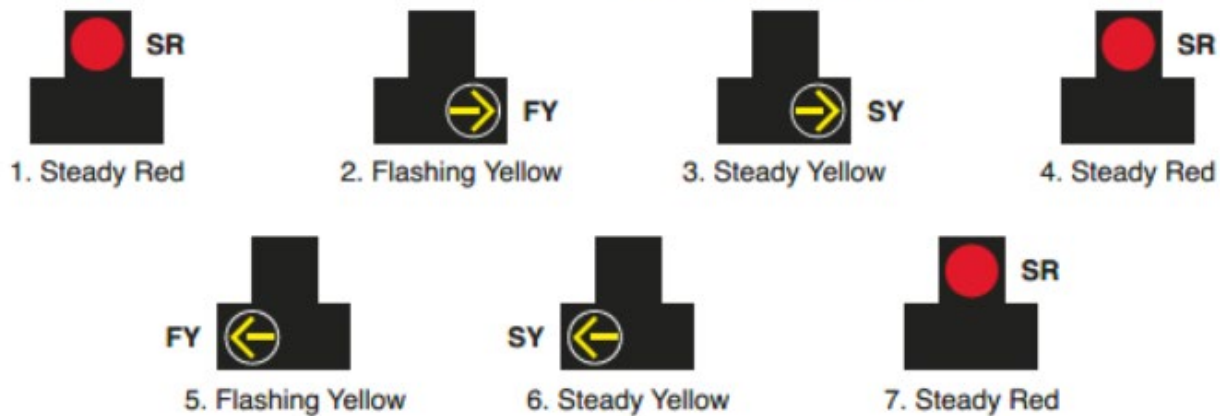


# Can you use RTDS (DADS)?

- Under Interim Approval for Optional Use of Residential Driveway Temporary Signal (IA-23)
  - As of January 8 2025
  - Limited to residential driveways



## Attachment IA-23-3 Phasing Sequence



### Legend

- SR Steady red
- FY Flashing yellow
- SY Steady yellow

# What is a Secondary Closure?

- ▶ Its not when they turn the lights on after last call ...



# What is a Secondary Closure

- ▶ It is an additional notice that is in place to prevent drivers that are not paying attention, or just don't respect work zone or roadway signs.



# Why have them in place?

- ▶ Safe System Approach
- ▶ TZD
- ▶ To make sure everyone goes home at the end of the work shift.
- ▶ CFR 630 Subpart K











# Current Options

- ▶ TMA - Truck Mounted Attenuators
- ▶ Temporary Barrier Wall
- ▶ Water Filled Barrier Wall
- ▶ Equipment
- ▶ Vehicles
- ▶ Materials
- ▶ Other ideas ....

# TMA's





# Equipment



# I-94 Eastbound - East of I-75 on Ramp



# On Ramp to WB I-94



# Archer Guard

Positive Mobile Protection for Work Zones

**MASH**

TL-1, TL-2, TL-3

**DHS**

SAFETY Act Certified

**DOT**

FHWA Eligible

**25-YR**

Lifetime Warranty

**GSA**

Contract Holder

100% American-Made | Sell | Rent | Service

# Company History

20+ years of crash-tested barrier innovation

- 2005 Meridian founded to support U.S. military with the Archer 1000 barrier for battlefield force protection
- 2008–2010 Designed Archer Beam Gate for mobile checkpoint and perimeter control
- 2011–2013 Extensive crash testing on Archer 1200 barrier; awarded Safety Act Certification by DHS
- 2014–2019 Crowded-space protection at live events; launched Archer 1200 mobile barrier; won GSA contract
- 2020–Present Launched Archer Guard for work zone safety; expanded rental division

# Current Solutions Fall Short

What is deployed today — and why it is not enough

## K-Rail / Jersey Barriers

Require heavy equipment to place. Not mobile — cannot move with crews. Designed for lane separation, not worker protection.

## Water-Filled Barriers

Do not stop vehicles at speed. Not crash-tested to safety standards. Delineation only — no positive protection.

## TMAs / Attenuators

Require a dedicated truck and driver. Protect only one approach direction. High cost per deployment hour.

**These are the standard in an industry where the rate of deaths and injuries continues to grow.**



# Archer Guard: The Solution

Stops vehicles — not just marks the zone

## Kinetic energy absorption

Connected barriers surround the vehicle upon impact and drag it to a controlled stop.

## Replaces outdated equipment

Direct replacement for K-rail, water-filled barriers, and cones. Operates standalone or pairs with a TMA.

## Built for mobility

Each unit has wheels and can be repositioned by one person — no power, no heavy equipment, no anchoring.

Deployment	5 minutes
Crew required	1 person
Power required	None
Post-impact	Reusable, zero maintenance
Warranty	25 years
Made in	USA — American steel



# Key Capabilities

Core features that differentiate Archer Guard

## Rapid Deployment

Deploys in under 5 minutes for tapers, shoulders, and unmanned or constrained work zones

## One-Person Operation

One person can deploy two Archer Guard systems without power or heavy equipment

## Modular Configuration

Adapts to any lane configuration — bridges, highways, on/off ramps, and active roadwork

## Reusable After Impact

Designed for repeated use with zero maintenance between deployments

## Kinetic Energy Absorption

Advanced technology brings vehicles to a controlled stop, reducing severity for workers and motorists

## Trailer Kit Available

Purpose-built trailer transports up to six units; one-person loading and unloading



# Testing & Certification

Independently tested. Federally certified.

## MASH TL-1, TL-2, TL-3

Crash-tested to the Manual for Assessing Safety Hardware at all three test levels for controlled vehicle stopping

## FHWA Eligible

Meets DOT requirements for mobile barriers in active traffic environments nationwide

## Safety Act Certified

Certified by the U.S. Department of Homeland Security under the SAFETY Act for anti-terrorism applications

Additional Standards: ASTM, PAS 68, and IWA 14 tested. Over 20 years of crash testing across military, event, and infrastructure applications.



[Watch the MASH TL-3 crash test](#)

**The most crash-tested mobile barrier system on the market.**



# Deployment Scenarios

One system. Every work zone.

## Bridges

Secures bridge repairs without traffic disruption on two-lane structures

## Highways

Protects crews on active highway lanes during construction, maintenance, and incident response

## On/Off Ramps

Fully seals ramp closures, preventing unauthorized access to active work areas

## Active Roadwork

Moves with rolling crews — pothole repair, striping, utility work — repositioned in minutes





## Next Steps

How to evaluate Archer Guard for your organization

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1

### Schedule a Live Demonstration

See Archer Guard deployed and repositioned in under five minutes

2

### Review Integration Options

Evaluate how Archer Guard fits your current safety and procurement framework

3

### Contact Us

[betterbarriers.com/work-zones](https://betterbarriers.com/work-zones) | (434) 529-6903

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