

CERTIFIED

ESCORT VEHICLE

OPERATOR HANDBOOK

OVERSIZE LOAD



North Carolina Department of Transportation

May 2017



Certified
Escort Vehicle
Operator Handbook





Certified
Escort Vehicle
Operator Handbook

May 2017

Presented by:
**North Carolina
Community College System**

Sponsored by:
**North Carolina
Department of Transportation**

**Oversize/Overweight
Permit Unit**

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**STATE OF NORTH CAROLINA
CERTIFIED ESCORT VEHICLE OPERATOR HANDBOOK**

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Certified
Escort Vehicle
Operator Handbook





Chapter One



Certified
Escort Vehicle
Operator Handbook

State of North Carolina
ESCORT VEHICLE OPERATOR
CERTIFICATION PROGRAM

Program Basics

Required Equipment

Optional Equipment



State of North Carolina Escort Vehicle Operator Certification Program

PROGRAM BASICS

Escort car services benefit all parties involved in the transportation of over-dimensional loads: the manufacturers themselves, the trucking companies transporting the load, the general motoring public, and all other drivers and pedestrians on our highways. This is accomplished by, among other ways:

1. Increasing overall safety of the traveling public;
2. Increasing the safety of the people involved in the movement of the over dimensional load.
3. Preventing damage to the highway system;
4. Preventing damage to the load being transported;
5. Preventing or minimizing delays to the normal traffic flow;
6. Reducing accident/loss rates thereby holding down insurance costs;
7. Encouraging uniform escort operations.

Above all else, we must remember that:

Your safety, the safety of your crew, and the safety of the motoring public are more important than any transporting operation being performed.

General Requirements

The North Carolina Department of Transportation (NCDOT) administers a program to certify Oversize-Overweight load escort vehicle drivers as required by G.S. 20-119, and detailed in 19A NCAC 02D.0644. The program includes instruction in safe and effective escort skills, examination that documents course comprehension, and a system of recognizing drivers certified by this or another state. General requirements are that an escort driver must be:

1. Certified by another state's approved program, or
2. A North Carolina law enforcement officer, or
3. A person who meets one of the following requirements:
 - a. Is at least 21 years of age, or
 - b. Is at least 18 years of age with a Class A commercial driver license,
4. Possesses a valid driver license without restrictions other than for use of corrective lens and has a driving history without conviction of driving while impaired or reckless driving in the previous 12 months;
5. Has successfully completed an NCDOT oversize-overweight escort vehicle operator course with certification exam score of at least 75 percent (75%) correct and has received consequent certification by the Department.



Revocation of Certification

Certification shall be revoked during its effective period for any of the following:

1. Failure to maintain a valid driver license without restrictions other than for corrective lens;
2. Conviction of driving while impaired;
3. Conviction of reckless driving; or
4. Evidence of unsatisfactory performance while engaged in the duties of oversize-overweight escort vehicle driver.

If certificate is revoked under this section, subsequent certification as an oversize-overweight load escort vehicle operator shall require reapplication, satisfaction of program prerequisites, and requalification through the training program.

Revocation of Certification – Appeal Process

An individual whose certificate is revoked may within 15 days following notification of the adverse action make a written appeal to the Secretary of Transportation for review of the revocation. A NCDOT official shall review circumstances surrounding the revocation and make a recommendation. The Secretary may set aside or affirm the loss of the oversize-overweight load escort vehicle certification. The individual appealing will be advised of the final disposition of the action within 21 days following the receipt of the appeal.

How to Become Certified

For an information package, contact the NCDOT Oversize/Overweight Permit Unit:

North Carolina Department of Transportation
Oversize/Overweight Permit Unit
750 N. Greenfield Parkway
Garner, NC 27529
919-814-3700; 888-221-8166

The one-day training and testing workshop is conducted by the North Carolina Community College System. The workshop is offered periodically throughout the year at locations throughout the state.

What the Certification Training and Testing Program will entail

The workshop will consist of four main parts:

- Escort Driver Requirements
- Skills Training
- Testing
- Defensive Driving

A minimum score of 75 percent (75%) on the test given at the end of the workshop will be required.



Testing and Certification Fees

A company check or money order made payable to The North Carolina Community College System in the amount determined by the college system.

Notification of Test Results; Re-testing

The workshop instructor will grade the test and notify the Permit Unit of the scores. The applicant must submit a copy of their certified driving record to the Permit Unit. If all requirements of the program are met, a certification will be mailed by the Permit Unit within ten business days.

Effective Dates and Enforcement

After July 1, 2003, all drivers operating escort vehicles must be certified.

Change of Address or Name; Replacement Certificates

If you have a change of name or address, or your Escort Driver Certificate is lost, stolen, or destroyed, you may be issued a new certificate by contacting the NCDOT Oversize/Overweight Permit Unit.

Expiration and Renewal

Certificates will be valid for four years from the date of issue. At least two months before expiration date, contact the NCDOT Oversize/Overweight Permit Unit (see Appendix B) to obtain procedure for renewal.



STATE OF NORTH CAROLINA RULES FOR OVERSIZE/ OVERWEIGHT VEHICLES AND ESCORT VEHICLES

A vehicle is oversize/overweight if any of the following conditions exist:

Width is greater than eight feet six inches (8'6").

Height is greater than thirteen feet six inches (13'6").

Weight is greater than 20,000 lbs. (single axle), 38,000 lbs. (tandem axle) Or gross weight greater than the maximum allowable weight according to the federal bridge law.

Length is greater than 40 feet for single vehicle.

Length is greater than 60 feet for a truck/trailer combination.

Length of semi-trailer is greater than 48-foot when traveling on all roads in North Carolina.

Length of semi-trailer is greater than 53-foot when traveling on non-restricted North Carolina primary (NC, US and Interstate) routes.

OS/OW Loads Requiring an Escort

An escort driver is required if stated on the OS/OW permit. Generally, one or more escorts are required when: (See NCDOT Publication E-9)

1. Front escort for width in excess of 12' for all over-width permitted movement on two lane/two way traffic highways and as a rear escort on multi-lane highways or as determined and stated on the permit documented by issuing agent.
2. Front pole car escort vehicle equipped with a height pole indicator for overheight in excess of fourteen feet five inches (14'5") for entire route of travel.
3. Rear escort for length in excess of 110'. Front and rear escorts are required for overall length in excess of 150'.
4. Escort for excessive overhang.
5. Front Escort required for weights in excess of 149,999 pounds.
6. Multiple escorts may be required for a combination of over-dimensions.
7. Additional escorts may be required for any vehicle/vehicle combination with individual consideration of width, length, height, weather, geographical location or route of travel as determined by issuing agent.

Special Rules: 16' Wide Mobile Homes

16' wide mobile homes are a special extension of oversized permitting rules. While each permit will specifically list the special requirements, in general requirements will include:

1. Travel times: Monday through Saturday only (plus holiday restrictions), with hours limited to 9 a.m. until 2:30 p.m.
2. All escort vehicle operators are required to obtain an approved escort certification prior to performing the duties of an oversize, overweight load escort vehicle operator in North Carolina.



Placement - the vehicle is to travel an average distance of 300' to 500' from the permitted vehicle whichever is appropriate for the geographical location.

Size/Weight - a truck (single vehicle) of not less than a one-quarter ¼ ton rated local capacity but not more than 17,000 pounds GVWR or a passenger vehicle of not less than 2,000 pounds gross weight. Escort vehicle is not authorized to tow a trailer.

Identification - shall display placards or identification signs measuring at least 8" x 12" providing escort company's or individual's name and telephone number and shall be displayed on the right and left side of each escort vehicle.

Radio - two way radio contact with power unit of mobile/manufactured combination.

Headlamps - must be burning during all movement on North Carolina highways.

Flashing Amber Bar Light(s) - mounted on top of the escort vehicle extending the full width of the vehicle's roof. The use of multiple bar lights will require the lights to be mounted continuously on the roof and connected at the base of the light.

Clear Lens Strobe Lights - mounted in the front of the vehicle (either in grill, mounted with signal lights etc.), operating while performing the duties of an escort vehicle.

Yellow Banner - bearing the legend "Oversize Load" or "Wide Load" including the width of the load with 10" x 1½" black brush stroke lettering (Ex: "Oversize 16' Load") mounted on top of the escort vehicle.

Red or Orange Flags - 18" X 18" mounted on top of the vehicle on each side of the banner.

No Passengers - or PETS, No one other than a certified escort vehicle operator will be allowed to travel in the escort vehicle.

Special Rules: Superloads

Superloads are a special category of permitted loads. Specific instructions will be dictated on the permit—read it carefully. A superload is defined as:

- Weight in excess of 132,000 pounds gross weight on seven or more axles
- Weight on four or more axle grouping 68,000 pounds
- Weight in excess of allowable weight over low limit/posted bridge
- Width in excess of 15 feet (excluding mobile homes).

Special Rules: Escorts for Superloads

- Front escort for permitted loads more than 12 feet wide on two-lane/two-way traffic highways and to move as a rear escort on multi-lane highways or as determined and stated on the permit document by issuing agent.



- A total of three escorts for permitted loads in excess of 15 feet in width, one of which must be from the NC State Highway Patrol.
- Rear escort required for permitted loads exceeding 110 feet in length or rear overhang greater than 14 feet.
- Front Escort required for weights in excess of 149,999 pounds
- Additional escort required as determined by issuing agent.

EQUIPMENT – REQUIRED

1. **Vehicle:** Escort vehicle shall be a truck of not less than one-quarter (¼) ton-rated load capacity but not more than 17,000 pounds GVWR or a passenger vehicle of not less than 2,000 pounds gross weight. Escort vehicles are not permitted to pull a trailer of any kind.
2. **Signs/Banners:** Yellow, 18 inches high, to be mounted on bumper or roof bearing the legend "WIDE LOAD" or "OVERSIZE LOAD" in black 10" x 1½" brush stroke lettering visible from the front or rear bumper as required by location of the escort vehicle. The banner shall extend the entire width of the escort vehicle or bumper.
3. **Flashing Amber Light(s):** Rotating or strobe, positioned on top of the escort vehicle, visible for at least 500 feet in all directions by approaching traffic.
4. **Head Lamps:** Escort vehicle head lamps must be burning at all times during movement.
5. **Height Pole Indicator:** Required for front escort vehicle for overheight moves in excess of fourteen feet, five inches (14'5").
6. **Radio:** Two-way radio contact with driver of oversize/overweight load and other escort driver(s).
7. **Stop/Slow Paddle:** The sign shall be at least 18"x18" with 6 inch high letters, octagonal, and should be mounted on a rigid handle. For more visibility, a 24"x 24" sign size or a high-intensity flashing stop/slow paddle may be used.
8. **Vest/High visibility clothing:** Shall wear an approved safety vest, shirt, or coat while flagging. Approved colors are orange, yellow, yellow-green, or fluorescent versions of these colors.
9. **Channelization devices:** At least three bi-directional retroreflective triangles, with minimum 17 inch arm length and minimum arm width of 2 inches.
10. **Identification of escort vehicle:** Sign showing name, address and phone number of company and/or owner of escort vehicle must be displayed on each side of escort vehicle. Sign shall be a minimum of 8" x 12" and be readily legible during daylight hours from a distance of 50 feet.
11. **Fire extinguisher:** Minimum five lb., Type "BC" or "ABC". It is recommended to use an extinguisher with a metal head, as plastic heads lose pressure more easily.
12. **Certification:** Escort vehicle operators must carry their certificate card while escorting a permitted load.
13. Equipment required for special 16' wide mobile home escorts requirements, special rules for 16' wide mobile homes.



EQUIPMENT – OPTIONAL

A true professional will be prepared for many of the unpredictable situations which may arise on the highway. Some equipment which is not mandated but could be very useful:

A. Routine Job and Maintenance Items

1. General tool kit with pliers, wrenches, screwdrivers, etc.
2. Motor oil, coolant, water, windshield fluid, etc.
3. Flashlight, batteries
4. Extra "Oversize Load" sign; hardware for attaching sign.
5. Spare amber light unit.
6. Light bulbs - flashers, turn signals, brake lights, headlights
7. Assorted automotive fuses.
8. Jumper cables, shovel
9. Repair/replacement parts for height pole
10. 25 foot tape measure
11. Extra 28 inch traffic cones
12. Radio - handheld two-way for flagging
13. Extra red flags and materials for attaching to the OS/OW load.

Note: Red Flags are not to be used for flagging traffic.
The stop/slow paddle must be used for traffic.

B. Emergency/Breakdown Items

1. First Aid Kit
2. Latex gloves, CPR breathing shield
3. Aerosol canned tire inflator
4. Cellular phone; numbers if not in 911 area.

C. Personal Items

1. Drinking Water, lunch
2. Medications
3. Maps - local, state
4. Extra clothing, blanket

Note that these items are generally not required by law. However, having these items in your vehicle can reduce your breakdown time and control costs by having them purchased in advance. More importantly, being prepared for routine and emergency situations shows your professionalism and gives you peace of mind, allowing you to focus on your job.

For Convenience, a pre-job checklist is included as Appendix "A".





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Operator Handbook



Chapter Two



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FUNCTIONS & DUTIES

Oversize Load Hazards

Railroad Crossings

Utility Lines

Height Poles

Front and Rear Escort
Responsibilities

Distances Between Vehicles



Functions and Duties of Escort Drivers

“OVERSIZE LOAD” HAZARDS

Each permitted load has its own hazards, depending on whether it is overwidth, overheight, overlength, or overweight. In all cases the permitted load exceeds the optimum design limits of the highway system. It is the responsibility of each escort vehicle operator to know the dimensions of the permitted load in order to avoid endangering the public and the permitted load. Additionally, the escort vehicle operator must know the limitations of the highway on the route selected for transporting the load.

- A. **Overwidth Load Hazards:** Over width loads are of particular hazard to the motoring public since these loads generally impact the adjacent lanes and roadway shoulders. When escorting an over width load, the escort driver(s) must always be aware of road width and any obstructions, such as narrow bridges and narrow or non-existent shoulders.

Frequently the motoring public does not pay much attention to oncoming traffic until it presents an immediate threat. Drivers do not give up what they consider “their lane” very easily. It is the duty of the escorting driver to warn the motoring public that an over width load is using part of “their lane”.

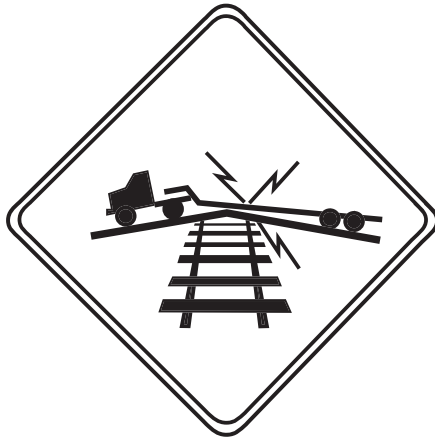
Weather, particularly rain, may soften roadway shoulders to the extent that they are not usable by an over width load. In this case the permitted load is forced to take up and use more of the adjacent oncoming lane. Areas of roadway that frequently “give way” can be noted by the escort vehicle operator when large patches of asphalt are observed in road bed fill areas.

- B. **Overheight Load Hazards:** Loads that are overheight must be verified by the escort vehicle operator prior to departure. Drivers should determine actual load dimensions. This is particularly true for overheight loads that could impact bridge or overpass structures that have a variable clearance, depending on the lane selected.
- C. **Overlength Load Hazards:** Overlength loads are limited to roadways where the load can negotiate curves, interchanges, entrances, and exits to roadways. Overlength loads must be evaluated for railroad crossings to make sure that long loads do not get high-centered. In all cases, it is the safety of the public that determines whether or not a permit is granted.
- D. **Overweight Load Hazards:** Overweight loads represent a traffic hazard due to their reduced speeds. Whenever permitted loads cannot maintain the speed of the surrounding vehicles and there is a backup of traffic, escort vehicles and transport operators shall pull to the roadside periodically to allow traffic to clear.



RAILROAD CROSSINGS

Transporting oversize/overweight loads across railroad tracks can be particularly tricky due to the possibility of becoming stuck on the tracks. Some crossings are marked with this warning sign:



If you see this sign approaching a railroad crossing, **DO NOT ATTEMPT TO CROSS**. Pull over and make alternate plans. Call the NCDOT Permit Office.

If there is no sign as above, you still need to make a visual check to be sure the load can make it across. **IF THERE IS ANY DOUBT, DO NOT ATTEMPT TO CROSS**. Pull over and make alternate plans.

One sign of potential problems is scrape marks on the pavement near the tracks. This indicates other vehicles may have bottomed out while making the crossing.

If you do get stuck on the tracks, follow these Emergency Safety Steps:

- 1. If the truck gets stuck on or stalls within 15 feet of the tracks, get out and get help immediately.**
- 2. Quickly find the nearest phone. Call for help. If you can identify the track operator (see #4), call their 800 number first.**

Norfolk Southern Emergency Number ----- 1-800-946-4744

CSX Emergency Number ----- 1-800-232-0144

Local Police ----- 911

N.C. Highway Patrol ----- 1-800-662-7956

Highway Patrol, cellular phone ----- *HP (*47)



3. **If a train is coming, get out of the truck and run away from the track toward the direction from which the train is coming.** This will help you to avoid flying glass and debris, which is extremely hazardous in the event of a collision.
4. **The most important information you can give to emergency response personnel is the DOT-AAR crossing identification number.** This number is located on the crossbuck signpost, the signal mast, or the control box. Here is an example of an identification number:



If you are unable to find the AAR-DOT crossing identification number, remember to provide as much information as you can about the location of the crossing including the street name or number, city, or county where you are located. Norfolk Southern and CSX have emergency number stickers posted on many of their gates or below the crossbuck signs at crossings not equipped with gates.

No person shall operate or move any crawler-type tractor, crane, or roller or any equipment or structure having a normal operating speed of five or less miles per hour upon or across any tracks at a railroad without first complying with GS 20-142.4

UTILITY LINES ARE HAZARDOUS!

Utility lines must only be lifted, moved, or otherwise touched by a trained employee of the utility company. Do NOT attempt to move a line yourself; call the power, phone, cable, or other utility company. Many fatalities occur every year because of unqualified persons attempting to move lines themselves.

Treat all wires, cables, utility lines as "HOT" – no exceptions!



HEIGHT POLES FOR OVERHEAD MEASUREMENT

The height pole is very important for escort vehicles that have an overheight load with them. This device determines the load clearance for utility lines, traffic signal lights, overpasses, and bridges. Once the height pole has been placed on the escort vehicle, the pole should not be less than three inches above the load height or greater than six inches above the maximum height of the load.

The load driver should tell the escort driver the height of the load. The height pole or other measuring device can be used to check the measurements given to you by the load driver.

Do not climb the oversize load to measure it!

Height poles and associated hardware for attaching to vehicles are not available in stores, so it is up to the escort driver to build one or have one built and attach it to their vehicle.

Height poles should be nonconductive, adjustable, and nondestructive. The poles must be nonconductive in case it comes into contact with any utility wires. Because of the different overheight loads an escort vehicle will have to lead, the height pole needs to be adjustable. Also, the height pole must be nondestructive or easily and cheaply replaced.

The height pole needs to be flexible, but not breakable if it comes into contact with bridges or overpasses. If the pole does bend due to contact with a bridge or overpass, it needs to be able to return to the exact height it was before the hit.

When not escorting a permitted load, the height pole must be stored. The only exception is when the escort driver is checking the route for any possible obstacles.

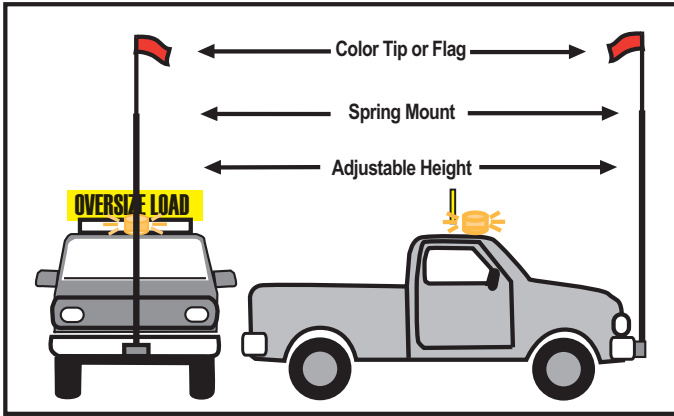
Height pole mounts must be strong enough to withstand the wind and any impacts with utility lines, traffic signals, bridges, overpasses, and any other overhead impacts. The mount must be firm and not affect the pole's position or height.

The lead escort vehicle needs to be well ahead of the load in order to measure any overhead barriers that are on the route and relay any problems or other important information to the permitted load driver. Allow the permitted load driver plenty of time to react to whatever situation is ahead.

Follow these guidelines when measuring overhead barriers:

- Measure bridge lanes from their mid-point.
- Measure overhead utility wires and power lines at their lowest point.
- Measure traffic signals to their side. Avoid hitting them because they are fragile and costly to repair.





GENERAL DUTIES AND RESPONSIBILITIES

General Duties - The purpose of an escort vehicle is to alert the traveling public to the presence or approach of an overdimensional load. Escort drivers are also responsible for assisting the driver of the load and should obey all traffic laws. Specific duties of front and rear escort drivers are given below:

Escort drivers and transporters are NOT exempt from traffic laws and regulations, and Escort drivers do NOT have police powers or permission to operate vehicle as an emergency vehicle while escorting overdimensional loads.

Front Escorts

- Warn oncoming traffic of the presence of the overdimensional load.
- Assist the driver of the overdimensional load by using the two-way radio to provide notification of hazards, obstructions, pedestrians, and other potential problems.
- Check shoulder and alert driver of soft shoulders, ruts, debris, abandoned vehicles, mailboxes, narrowing shoulders, etc.
- Assure the overdimensional driver that the route prescribed on the permit is being followed.
- Watch for construction zones. Lanes may narrow and workers may be close to traffic.
- Locate safe places to allow the overdimensional load and escort vehicles to clear the roadway so traffic following the load can safely pass.
- Warn motorists to stop at the end of narrow structures to permit safe passage of the load through the obstruction.
- Check overhead clearances in the case of overheight loads.
- Flag traffic if necessary.



Rear Escorts

- Know the dimensions of the oversized load.
- Warn traffic approaching from the rear of the presence of an overdimensional load ahead.
- Assist the overdimensional load driver by providing notification of flat tires, objects coming loose from the load and other occurrences the driver may not be aware of.
- Monitor top of overheight loads while passing under bridges, wires, etc.
- Notify the front escort driver and overdimensional load operator of traffic buildup and other delays to the normal flow of traffic.
- Notify the overdimensional load driver of motorists attempting to pass the load.
- Warn motorists to stop at narrow structures and other roadway restrictions to permit safe passage of the load through the obstruction.
- Keep driver informed of your location, particularly when the oversized load is to be maneuvered through curves, turns, bridges, and lane changes.
- Flag traffic if necessary.

DISTANCES BETWEEN VEHICLES

There is no one set distance between escort vehicles and permitted loads; traffic density, road conditions, road type, speed, type of load, and other factors must be taken into consideration. Use judgment to determine the best distance based on the conditions and adjust as necessary. Remember that the lead vehicle needs to give the towing vehicle enough time to slow or stop in the case of an obstructed lane, narrow shoulder, stalled vehicle, etc.

Lead Vehicle

- Generally, a separation of 500 feet to $\frac{1}{4}$ mile, depending on conditions.
- On two-lane, two-way roads, remember that you are warning approaching vehicles of the permitted load behind you and they will need time to react. They are closing the distance very rapidly, therefore, you should try to keep $\frac{1}{4}$ mile (approx. 1,300 feet) feet ahead at highway speeds and lesser amounts as speeds slow.
- Inside cities, towns, and in urban conditions, distances will be shorter due to congestion, speed, signals, and other factors. Use a shorter lead distance, usually less than 200 feet.
- On interstates and multi-lane, divided highways, higher speeds require the larger distances ($\frac{1}{4}$ mile), but clear radio contact must be maintained, and in no case should the separation exceed $\frac{1}{2}$ mile.
- When using the height pole to verify clearances for an overheight load, larger distances may be justified.



Rear Vehicle

- A 3 to 4 second following distance should be maintained. These are 4 second following distances:
 - 25 mph ----- 150 feet
 - 30 mph ----- 175 feet
 - 40 mph ----- 250 feet
 - 50 mph ----- 300 feet
 - 55 mph ----- 325 feet
 - 60 mph ----- 350 feet
- In towns, cities, and in urban conditions, smaller distances may be needed to keep other vehicles from getting between you and the permitted load.





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Chapter Three



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HIGHWAY OPERATIONS

Rules and Regulations

Getting on the Road

Maneuvering the Load

Typical Applications



HIGHWAY OPERATIONS

GENERAL PROCEDURES AND SAFETY PROVISIONS

Sign/Banner size and mounting

Signs/Banners shall be yellow, 18 inches high with black letters bearing the legend "WIDE LOAD" or "OVERSIZE LOAD". The letters shall be at least 10 inches in height and have 1½ inch brush strokes. The sign or banner shall be mounted on front of vehicle for front escort and rear of vehicle for rear escorts. Sign or banner may be roof mounted. Sign/Banner is required to extend the entire width of the escort vehicle or bumper.

Refer to equipment 16' Wide Mobile Home Special Rules Chapter 1.

Allowing built-up traffic to pass

Escort vehicles and transport operators shall monitor trailing traffic and pull to the roadside periodically to allow lines of traffic to clear. Slow to a maximum speed of 25 mph to allow traffic to pass.

Municipalities

The state of North Carolina (NCDOT) does not operate all roads in the state. When travel is planned on non-state maintained highways, the municipality or other authority that operates the road must be contacted. See appendix B for several of the larger municipalities.

Headlights - burning

Towing unit and escort vehicles must burn headlamps during highway movement of permitted loads.

Holiday travel

Permitted vehicles cannot travel on the following holidays: **Independence Day and Thanksgiving Day** (from noon on the weekday before the holiday until noon on the weekday after the holiday), **Christmas Day** (from noon on December 22 until noon on December 26).

Nighttime travel

Transportation of a permitted load is prohibited between sunset and sunrise, unless otherwise stated on permit.

Removal or cover of banners, signs, and amber lights

Banners, signs, and flags should be removed from escort vehicle after job and before driving while not escorting a load. Turn off amber lights.

Passengers and pets

The escort vehicle operator should travel alone, no passengers or animals. This helps to minimize distractions and allows full attention to the job. The only exception is a passenger with an approved escort vehicle operator certification.



Use of Electronic Devices

Escort vehicle operators are prohibited from the use of any electronic devices except to communicate hazard-related information to the vehicle being escorted. This includes all electronic devices such as cell phones, tablets, computers, MP3 players, video players or any non-factory installed device not used for routing.

Speed Limits

Escort vehicles and oversize loads must travel at a speed safe for conditions and not exceed the posted maximum speed, or speed as stated on permit.

Emergency 4-Way Flashers

Not to be used unless speed is less than 40 mph or less than posted minimum speed.

Weather Conditions

Travel should cease if weather conditions do not permit safe movement. Permits are not valid when visibility is less than 500 feet, highway is covered with ice or snow, wind gusts exceed 25 mph, or travel conditions are considered unsafe by the Division of Highways or law enforcement having jurisdiction.

Convoy Travel

Is NOT authorized. Permitted vehicles owned or leased by the same company or permitted vehicles originating at the same location shall travel at a distance of not less than 2 miles apart.

Warning: A citation WILL be issued for traveling in a convoy!

GETTING ON THE ROAD

Prior Driving of Route

It is the responsibility of the permittee to check the proposed route and detour when necessary. If you are unfamiliar with the route and are escorting an especially large or overheight load, it is a good idea to pre-drive the route you will be taking. Issuance of a permit does not guarantee clearances (overhead and width) along the route.

Pre-Trip Activities

Good planning and preparation can mean the difference between a good day and a bad one. Professionals will recognize that their vehicles, equipment, mapping, and communication are all essential for success. Take a few minutes to make sure everything is ready to go.

1. Check Permitted Load

- A. Flags properly installed- the flags should be attached to the corners of the load and on any overhangs.
- B. Signs/banners properly installed- the sign or banner should be placed on the roof so that it is visible from the front and the back. Nothing should be obscuring it.



- C. Flashing light installed, working- a minimum 5 inch diameter base and 4 inch lens height; visibility a minimum of 500 feet by approaching traffic in all directions.
- D. Measurements confirmed- double check the measurements of the load before starting.

2. Check Escort Vehicle

- A. Required equipment: make sure you have all the required equipment described in Chapter One of this manual.
- B. Starting at the front bumper of the escort vehicle, check the following items while walking around it:

Height pole	Signs/Banners
Turn Signals	Headlights
Radiator Level	Oil Level
Coolant, wiper fluid level	Hoses, belts
Wheel lugs (tight)	Tire Inflation
Exhaust System	Suspension
Tarps and Lashings	Emergency Reflective Devices
Fire Extinguisher(s)	First Aid Kit
Hard Hat and Vest	License Plate, Stickers
Stop and Turn Signals	Stop/Slow Paddle
Flashing Amber Lights(s)	Full or nearly full gas tank
4-way flashers	Mirrors
Horn	

- C. Make sure all items are securely stored away on escort vehicle.

3. Communication equipment and procedure:

Primary and backup channel(s)
Phone numbers if cell phones are available
Check batteries, adapter cords, etc
Manner of communication: when and how much talk does the driver want?

4. Trip Planning

- A. Verify permitted route - permit does not guarantee route.
- B. Identify locations requiring extra caution: bridges, RR crossings, intersections, work zones, etc., and develop a plan for safe passage.

A pre-trip checklist is included in the manual as appendix A



HIGHWAY OPERATIONS

Two-Lane One Car Escort

The lead escort vehicle shall be in operating mode - headlights on, amber lights flashing, and banner or sign installed properly. Under most conditions, the escort vehicle should be in front of the oversize load, with a separation of about 500' to ¼ mile. Distance will change with speed and weather conditions. The escort vehicle should never be more than ½ mile ahead of the load. The escort vehicle operator should always drive on the right side of the highway unless trying to clear an obstacle. When there is only one escort, the escort vehicle operator may need to move from the lead to the rear in order to check the load and “coach” the load driver through curves, bridges, narrow streets, or any other obstacles.

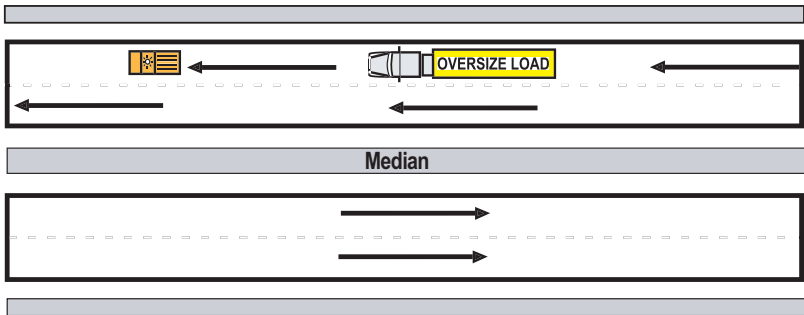


Fig. 1: Two-lane, one car escort

Two-Lane Two-Car Escort

When there are two cars escorting a load, the lead escort needs to follow the same guidelines as described above except that the vehicle no longer needs to move to the rear because an escort is already there.

The rear escort vehicle should be in operating mode as described above. The rear escort vehicle operator must keep an eye on the load and contact the load driver by radio if there are any problems. The rear escort vehicle needs to maintain a following distance of 3 to 4 seconds. This distance will increase if there are adverse weather conditions. The rear escort vehicle operator must also drive on the left hand side of right lane even with the left side of the load. The load driver will be driving with the right front fender even with the edge line (white line) unless there are obstacles on the shoulder. The rear escort driver must never get into the load driver's blind spot. It is the responsibility of the rear escort driver to tell the load driver and lead escort driver of any vehicles that will be passing.



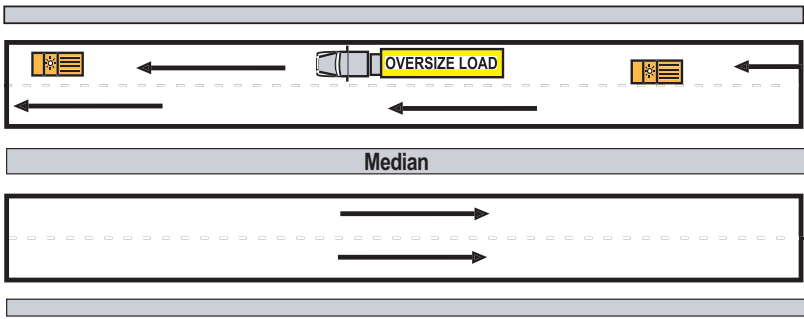


Fig. 2: Two-lane, two-car escort

Passing a Slower Vehicle

The lead escort vehicle operator must inform the permitted load driver and any other escort vehicle operators of the slow-moving vehicle. It is the responsibility of the lead escort driver to make sure that all of the following vehicles have enough clearance to get past the slow moving vehicle. The slow moving vehicle must not get caught between the load and an escort vehicle.

Extreme caution must be taken when passing a slower vehicle with an "Oversized Load."

When the permitted driver confirms his/her intention to pass the slow-moving vehicle, the rear escort vehicle will move into the lane to the left to block following traffic from passing. This allows the load to move into the passing lane. Once the rear escort vehicle is in position, the operator will radio to the load driver which way to move and how many lanes. The rear escort operator will radio the load driver to move back into the right lane once the load has cleared the slower vehicle.

The permitted load driver should never move into another lane or back into the right lane until the rear escort operator has radioed that it is okay.

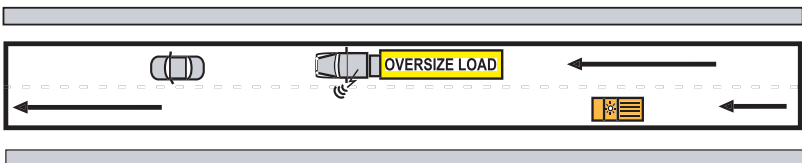
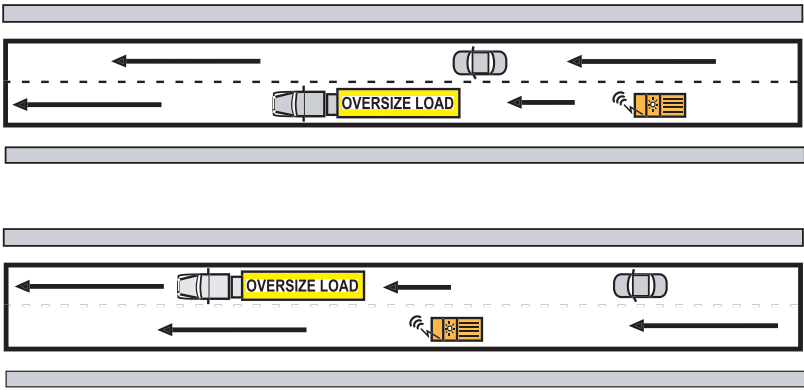


Fig. 3: Permitted driver radios escort vehicle operator(s) of intentions to pass slow-moving vehicle





Figs. 4 and 5: Rear escort vehicle operator radios to permitted driver:
 1) "you are clear to move left one lane" to pass and then,
 2) "move back right one lane."

Passing an Obstruction on Shoulder

If there is an obstruction on the shoulder that could impact the load, the lead escort vehicle operator must let the load driver and other escort vehicle operators know by radio how far off of the white line the obstruction is in feet. For example, "There is a car on the shoulder, two feet off of the edge line. Move one lane left." The lead escort vehicle should move to the left and stay there until the load has passed the obstruction.

The rear vehicle escort operator must move one lane to the left as soon as the lead escort vehicle operator has radioed the message about the obstruction. Once the rear escort driver has blocked traffic from passing, the load driver must be notified by radio that it is clear to move to the left and pass the obstruction. When it is clear, the rear escort driver will notify the load driver to move back to the right lane.

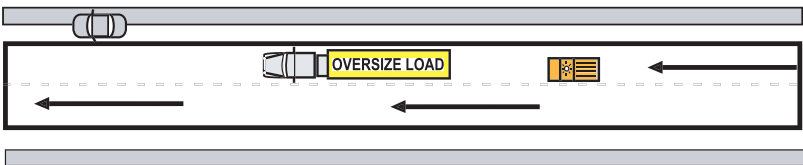


Fig. 6: Passing an obstruction on the shoulder – Lead vehicle has informed permitted load of hazard on shoulder. Rear escort vehicle checks or permitted vehicle to move left.



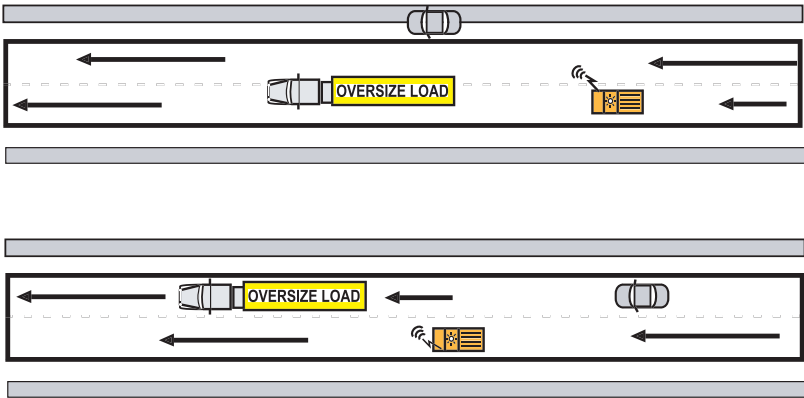


Fig. 7: Passing an obstruction on shoulder. Rear escort vehicle operator informs permitted driver when
 1) it is "clear to move one lane left" and
 2) it is "clear to move right, one lane, clear."

Two-Lane Bridge, Two-Way Traffic

When an "Oversized Load" must cross a two-lane bridge with two-lane traffic, traffic must be stopped to allow the load to pass through. The front and rear escort operators must control the traffic.

The lead escort vehicle operator must go on across the bridge to stop traffic. Wait until there is a break before attempting to stop traffic. Position your escort vehicle at an angle with your STOP sign displayed outside of the window. Do not hold the sign outside of your window with the vehicle moving. Be ready to move in case the traffic coming at you does not stop. Once you have stopped traffic, radio the permitted load driver and the rear escort vehicle operator that it is clear to cross after the last car passes. Be sure to include the color and make of the last car.

Useful Hints

- Inform other truckers with your CB radio that the bridge will be shut down.
- Get attention of a distant motorist by flashing high-beam headlights on and off.
- Use your emergency flashers with your sign and amber lights in order to signal motorists of the obstacle.
- If oncoming traffic is not going to stop, radio the load driver about the situation. You may have to wait several minutes before traffic will stop. Be patient!



The rear escort vehicle and permitted load may cross the bridge once the lead escort vehicle operator has said that it is clear and the last car has crossed the bridge. The rear escort vehicle will “coach” the load driver across the bridge. The rear escort vehicle operator will need to make sure that the load driver has enough clearance on both sides of the load and above if the load is overheight and the bridge is covered.

The rear escort vehicle operator should stop traffic behind the escort vehicle and the permitted load so that they do not hit the lead escort vehicle on the other side. If a vehicle goes around the rear escort vehicle the load driver and lead escort vehicle operator must be told immediately. The traffic that has been stopped behind the rear escort vehicle may proceed as soon as the load has cleared the bridge.

The oversized load should drive in the center of the road while crossing the bridge. The oversized load should not move until the lead and rear escort vehicle operators have said it is clear.

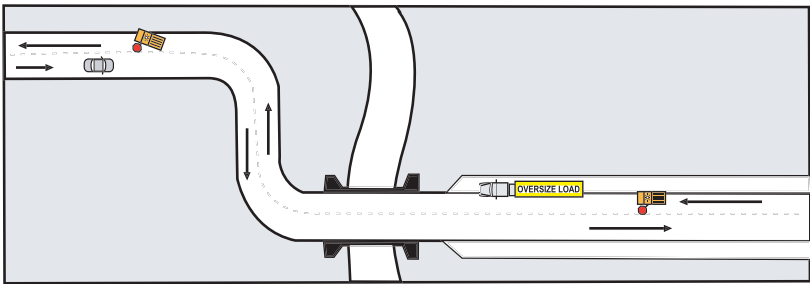


Fig. 8: Two-lane bridge, two-way traffic – Lead escort vehicle must cross bridge, proceed to open spot, and stop oncoming traffic. Permitted load waits until lead driver radios that it is safe to cross.



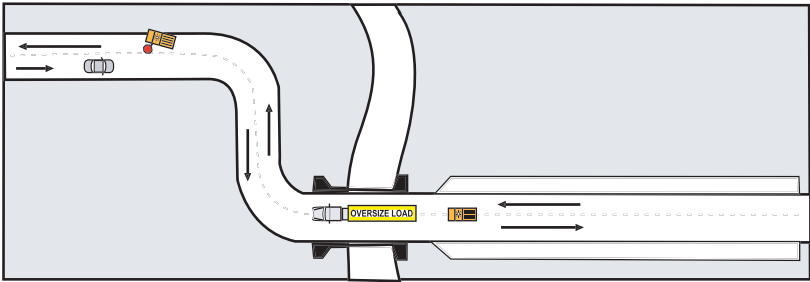


Fig. 9: Lead escort driver gives radio signal that they have traffic stopped and it is okay for permitted load to cross bridge.

Multi-Lane Bridge, One-Way Traffic

The lead escort vehicle operator will let the team know about the obstacle and advise the load driver to move left. The rear escort vehicle operator will move left to block traffic from passing the load.

The rear escort vehicle operator will radio the load driver to say it is all clear and to move left. The rear escort vehicle will move to the right and let the load driver know when he/she has cleared the bridge.

The load driver will drive in the center of the road once the lead and rear escort vehicles have radioed that it is clear and they are in position. The load driver will be "coached" by the rear escort vehicle operator. Once the load has cleared the bridge, move back into the right lane.

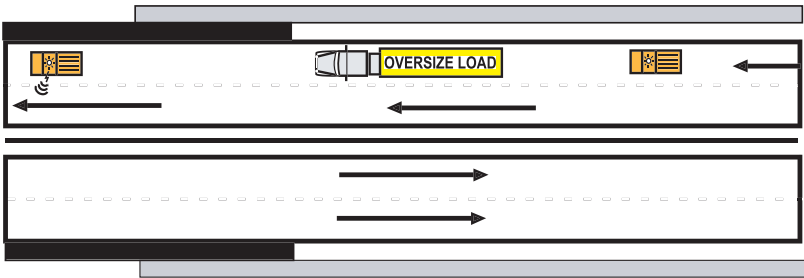


Fig. 10: Multi-lane bridge, one-way traffic – lead escort vehicle operator requests permitted load driver to "move left one lane."



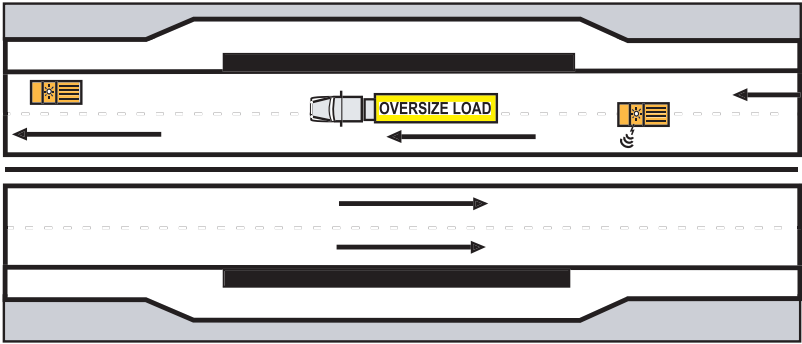


Fig. 11: Multi-lane bridge – Rear escort vehicle operator informs permitted load driver that it is “clear to move one lane left.” The escort vehicle operator moves over the center line to keep other vehicles from attempting to pass permitted load.

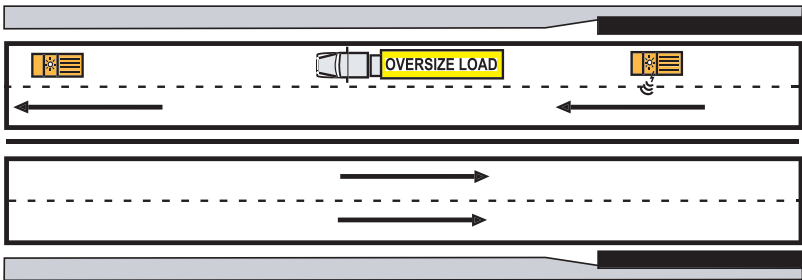


Fig. 12: Rear escort vehicle operator radios to permitted load driver that it is “clear to move one lane right” after bridge has been crossed.

Interstate Interchanges and Clover Leafs

The front and rear escort vehicle operators are responsible for guiding the “Oversize Load” through an interchange. The operators must keep the load from being damaged or crashing into merging traffic.

The lead escort driver must remain close to the load when entering an interchange. The lead escort vehicle must enter at a low speed and be able to warn traffic that an “Oversize Load” will be merging. The lead escort vehicle needs to be able to enter the highway at a regular speed and continue to use caution.



The rear escort vehicle operator must monitor the swing of the load and make sure that it is not going to hit any roadside obstructions. The rear escort vehicle operator must relay any important information about this to the lead escort driver. The rear escort vehicle should enter the highway first and radio the lead escort driver and load driver when it is clear to move one lane left. While merging onto the freeway, the rear escort driver should keep other motorists from getting between it and the permitted load.

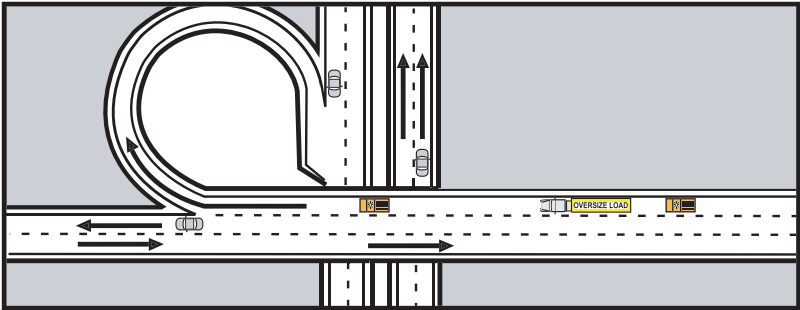


Fig. 13: Interchanges and cloverleafs – Stay close to the permitted load.

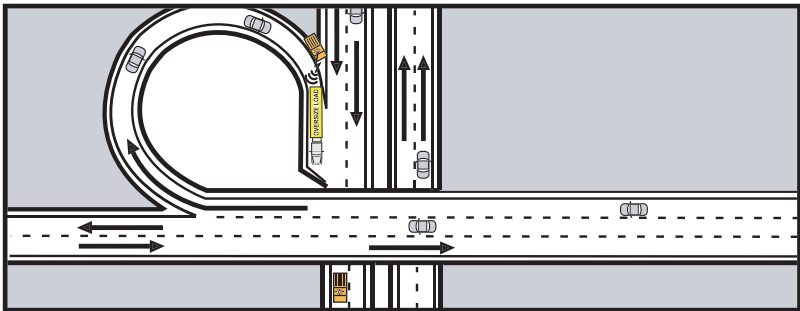


Fig. 14: Rear escort vehicle monitors clearances.



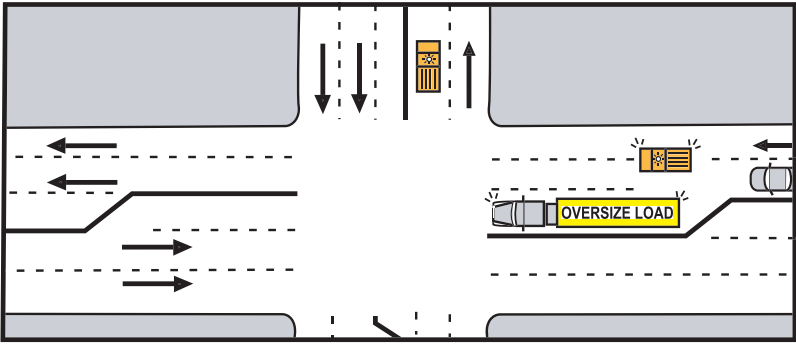


Fig. 16: Right turn at intersection – Lead escort vehicle proceeds through intersection to warn motorists of wide turns.

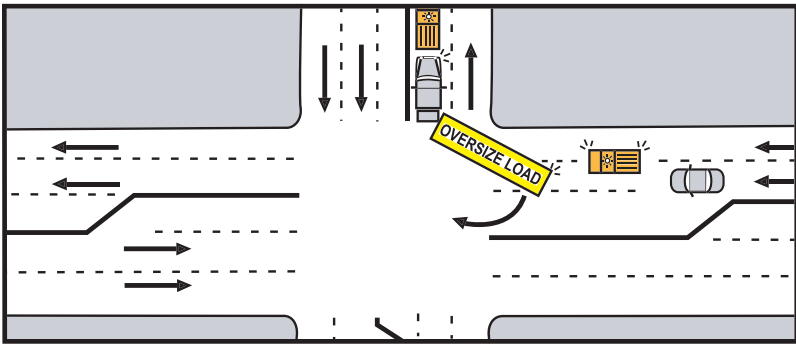


Fig. 17: Permitted vehicle swings wide as rear escort vehicle monitors.

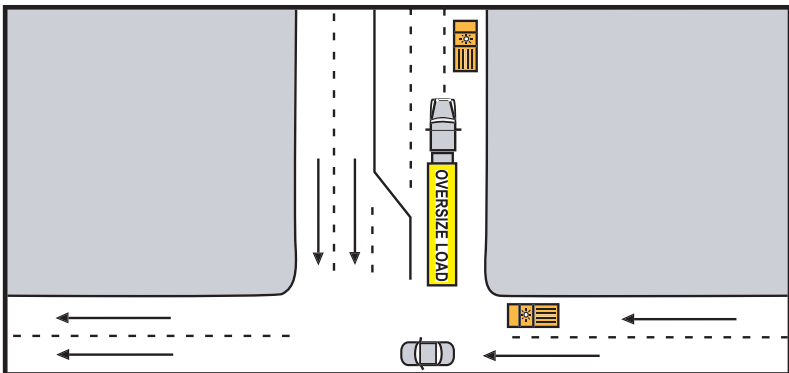


Fig. 18: Lead escort vehicle moves to right lane as "oversize" load clears intersection.



Driving Through Town and City Streets

There are many hazards that will be faced when escorting a permitted load through a town or city. If the load is overheight, low utility wires, lights, and signs that hang over the streets are all obstacles that the load driver and escort vehicle operator should be aware of at all times. Other potential hazards while driving through a town or city include pedestrians, car doors being opened from parked cars on the street, and motorists trying to get around you at an intersection or another part of the road.

Extreme caution must be taken when making certain movements on a town or city street. The public is not aware of the drastic movements that have to be made in order to avoid some of the hazards. For example, you may have to drive on the wrong side of the road in order to get around traffic lights, signs, and other overhead obstacles.

The lead escort vehicle must look out for overhead hazards when escorting an overheight load. The lead escort vehicle operator should run the height pole at the same place where the peak of the load will be. Sometimes the load may split between an obstacle such as traffic lights without hitting them. Other times, the load will have to drive around an obstacle. If this is the case, the lead escort vehicle operator must stop oncoming traffic far enough from the signal so that the load can clear all of the lights. Try to remain with the load. If the lead escort vehicle makes it through an intersection and the load does not, then the lead escort vehicle should pull safely off to the right and wait until the signal changes. Do not leave the load so far behind that it is unsure if it can pass through intersections cleanly.

The rear escort vehicle operator is responsible for many things while escorting through town and city streets. The rear escort vehicle operator must watch the tail swing, manage lanes, control the traffic behind the permitted load, and watch the overhead obstacles. If the load must go around signal lights or dodge a wire, and it involves getting onto the wrong side of the road, then the rear escort vehicle operator must hold traffic until the load is back in the proper lane of travel. Do not let traffic pass while the load is moving under obstacles because something could fall and a pedestrian or motorist could get hurt.

The rear escort vehicle operator must be in a position where the wires and traffic signals can be seen. You must notify the load driver to stop immediately if the load is about to hit something. The rear corner of the load on the side that has the peak is usually the best place to be. The rear escort vehicle operator needs to see the traffic signal in order to tell the load driver which way to move and if the light changes. You need to obey the traffic signals. If the rear escort vehicle operator has to stop at the intersection, the operator



must tell the load driver and the lead vehicle operator by radio. The rear vehicle operator must also keep an eye on the traffic behind the load. If there is a long line, the rear operator must let the load driver and lead operator know. A decision must be made on the best way to allow the traffic to pass. If traffic is backed up too much, a motorist may get impatient and make a dangerous move.

The oversize load should drive on the lane divider line when driving on town or city streets. Motorists will not be able to pass if you are taking up both lanes and you can lessen the chances of hitting parked cars. An overheight load driver should watch the height pole on the lead escort vehicle to see if it hits any of the overhead obstacles. The load driver should contact the lead escort vehicle if any motorists come between the load and the lead escort. If the rear escort vehicle gets stopped at an intersection, the load driver should slow down and wait for the rear escort to get back into position so that the back of the load is protected.

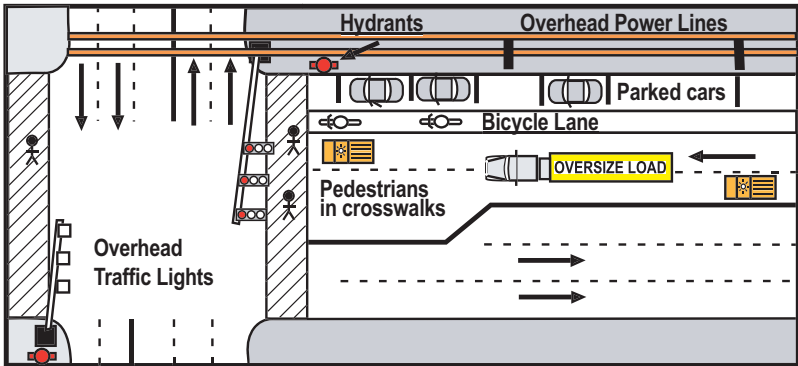


Fig. 19: Driving through town and city streets presents many more hazards than rural areas.





Certified
Escort Vehicle
Operator Handbook





Chapter Four



Certified
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Operator Handbook

BREAKDOWNS AND EMERGENCY OPERATIONS

Equipment

Flagging

Emergency Operations



ACCIDENTS AND EMERGENCY OPERATIONS

WHAT TO DO

If you or one of your crew is involved in an accident and not seriously hurt, you need to act to prevent further damage or injury. The basic steps to be taken at any accident are:

- Protect the area.
- Notify authorities.
- Care for the injured.

The first thing to do at an accident scene is to keep another accident from happening at the same spot. To protect the accident area:

- If your vehicle is involved in the accident, try to get it to the side of the road. This will help to prevent another accident and allow traffic to move.
- If you are stopping to help, park away from the accident. The area immediately around the accident will be needed for emergency vehicles.
- Put on your flashers.
- Set out reflective triangles to warn other traffic. Make sure they can be seen by other drivers in time for them to avoid the accident.

Put out a call on your CB or cell phone for help. If time is critical, wait until the accident scene has been properly protected, then phone or get somebody to phone police or 911. Try to determine exactly where you are (mile markers, exits, landmarks, etc.) so you can give the location correctly.

If a qualified person is at the accident and helping the injured, stay out of the way unless asked to assist. Otherwise, do the best you can to help any injured parties. Here are some simple steps to follow in giving assistance:

- Don't move a seriously injured person unless the danger of fire or passing traffic makes it necessary.
- Stop heavy bleeding by applying direct pressure to the wound.
- Keep the injured person warm.

REPORTING AN ACCIDENT

Report to police authorities as quickly as possible any accident where a person has been killed or injured or a vehicle or other property has been damaged. Report immediately any damage to stop signs, warning signs, traffic signals, etc.

- When all involved parties are able, exchange information: Get name and address of other driver or drivers
- Get name and address and policy number of the insurance company(ies) of the other owners/drivers. Always carry your own insurance information when driving.



- Make a reasonable effort to find the owner or caretaker of an unattended vehicle or other unattended property, which may be damaged. If you cannot find the owner or caretaker, you must leave a note that can be easily found at the scene of the accident. This information should include the driver's name, address, driver license number, license plate number, date and time of accident, and an estimate of the property damage. In addition, report the accident in writing within 24 hours to the Highway Patrol or Police Department of the municipality involved.

FLAGGING

An escort driver must periodically stop or control traffic in order to permit loads to enter the highway, go through narrow sections, change tires, etc.

Flagging traffic is a **NORMAL** part of operations – proper equipment and procedures must be used.

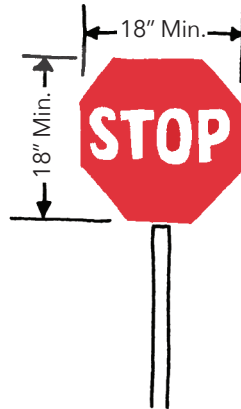
Basic Functions of Flagging

- To protect the lives of workers.
- To guide traffic safely.
- To avoid unreasonable delays to motorists.
- To answer questions courteously and intelligently.

Flagging Equipment

The STOP/SLOW paddle is your main traffic control device. The sign shall be at least 18" x 18" with 6" high letters, octagonal, and should be mounted on a rigid handle. For portability, a 1' handle may be used, but if mounted on a long staff, a 7' mounting height is recommended.

To make the paddle more visible, a 24" x 24" sign size or a high-intensity flashing STOP/SLOW paddle may be used.



You shall wear an approved safety vest, shirt, or coat while flagging. Approved colors are orange, yellow, yellow-green, or fluorescent versions of these colors.

A brightly colored hat will also make you more visible.



Appearance

To assure motorist respect, your appearance is critical.

- All flaggers should maintain a clean, neat appearance.
- Drivers should report to work wearing proper attire.
- Transistor radios, walkmans, and books are not permitted.
- Safe and appropriate footwear should be worn.



Signals

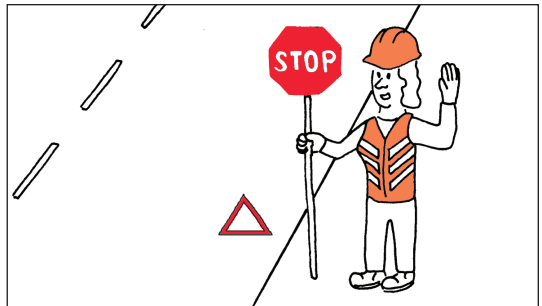
Stopping Traffic

Stand in a safe position on the shoulder facing traffic. NEVER stand in the path of oncoming traffic and never turn your back on traffic.

Hold the paddle away from your body with the STOP sign facing traffic and the sign on or near the edge of the pavement. Raise your free hand with the palm exposed to the approaching vehicle and make eye contact with the driver.

Change to STOP only if an approaching vehicle has plenty of distance to gradually stop.

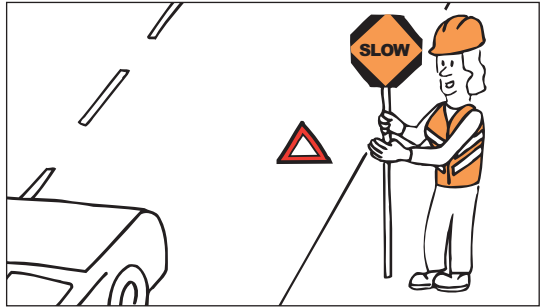
Avoid screeching halts.



Releasing Traffic/Closed Lane

Standing on the shoulder of the closed lane with your paddle turned to STOP, you must wait for an "all clear" signal from the other flagger before you release your traffic.

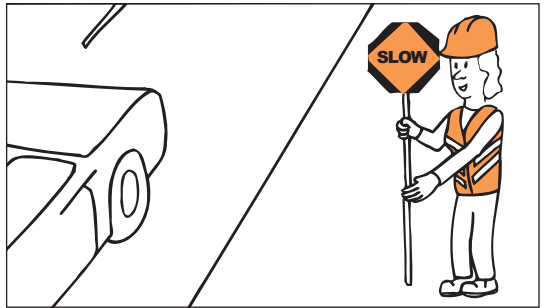
Once the "all clear" is received, you may release your traffic by turning the paddle to show the SLOW sign. Then with your free arm, signal drivers to proceed into the open lane. Be direct and point to the open lane.



Releasing Traffic/Open Lane

Standing on the shoulder of the open lane with your paddle turned to STOP, wait for the "all clear" signal. Once the signal is received, you may release your traffic.

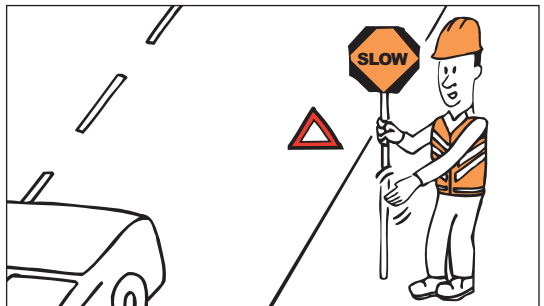
First take a step or two back from the edge of the pavement and turn the paddle to SLOW. Then, with your free arm, signal drivers to proceed in the open lane. Be direct and clear with your hand signal.



Slowing Traffic

Stand on the shoulder facing traffic.

With the SLOW sign showing, slowly raise and lower your left arm with the palm facing down in front of your paddle.



FLAGGING OPERATIONS

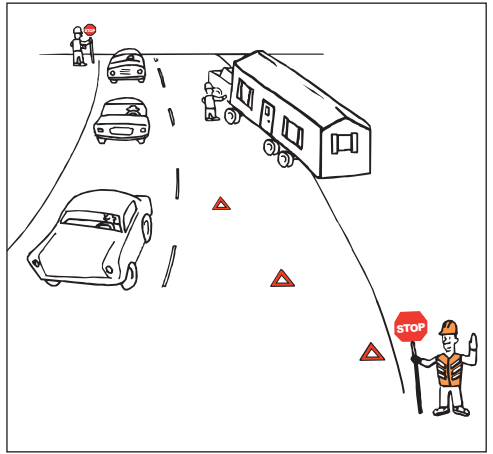
Two-Flagger

This operation uses a flagger on each end of the stretch of road needing traffic control. This is the most common method of flagging traffic. One flagger should be designated as the lead flagger for coordinating the operation.

To be effective, flaggers must always be able to communicate with one another.

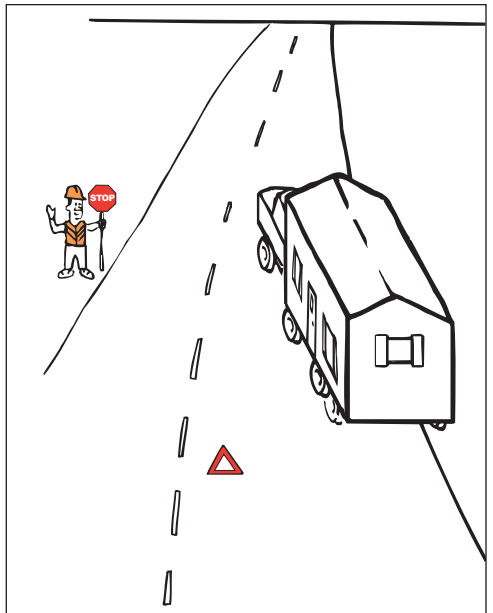
Communication can be maintained by:

- Visual contact - effective when flaggers are close enough so they can read each other's STOP/SLOW paddles and see each other's "all clear" signals.
- Two-way radio - the best means of communication, even when there is visual contact.
- Flag carrying - the driver of the last vehicle passes a flag/token from one flagger to the other.



Single Flagger

When only a short, straight stretch of a low-volume road needs to be controlled, a single flagger may sometimes be used. The flagger must be visible to both directions of traffic. Standing on the shoulder opposite to the disabled OS/OW load, the flagger directs traffic with the STOP/SLOW paddle.



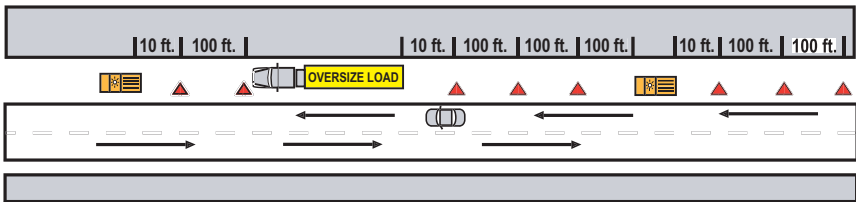
SETTING UP TRAFFIC CONTROL FOR DISABLED VEHICLES

In the case of an accident, breakdown, flat tire, etc., it may be necessary to divert traffic in one or more lanes. Several examples of set-ups are shown, although every situation will have its own circumstances.

General points to remember are:

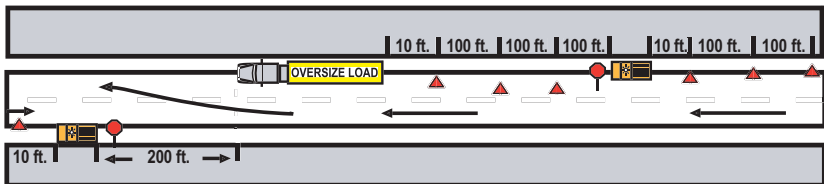
- Give approaching traffic as much advance warning as possible. This can be accomplished by using reflective triangles, flares, cones and, more importantly, your own vehicle with its amber light. Drivers given enough warning will in general attempt to cooperate and safely move past the scene.
- If flagging, ALWAYS have an escape route. Stand on the shoulder of the road, not in the lane of traffic.
- Use the STOP/SLOW paddle to control traffic.
- Call 911 or appropriate phone numbers as soon as possible. If the rig or accident is blocking a lane of traffic, tell them to notify NCDOT (or local municipality).
- Have the non-injured and all movable persons get as far from the roadway as possible, away from traffic.

Typical Disabled Vehicle/Emergency Response Setups



Two-lane, two-way highway with disabled vehicle more than 2' off the shoulder

- Keep amber light and emergency flashers on to provide advance warning.

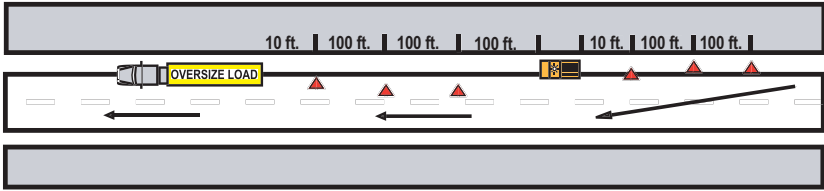


Two-lane, two-way highway with lane encroachment (two-flagger operation)

- Call 911 and NCDOT or local municipality (operator of road) for assistance.



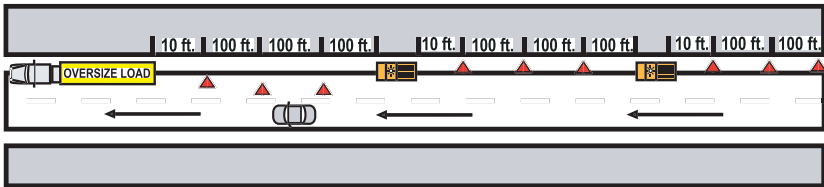
- Use as much channelization (cones, triangles, etc.) as possible.
- When flagging traffic, stand on shoulder of road, not in lane of traffic.
- Have escape route planned.
- Move non-essential persons away from traffic as far as possible.



Multi-lane highway, one lane blocked off.

One Escort Vehicle

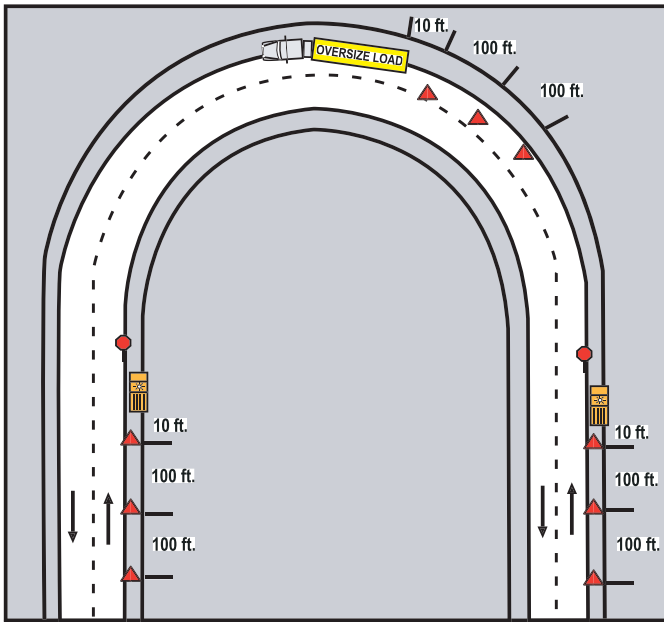
- Multi-lane roads usually mean higher speeds and traffic volumes; treat this as a TEMPORARY setup
- Call NCDOT or municipality operating the roadway ASAP
- DO NOT attempt to repair or tow vehicles until more help (NCDOT or NC Highway Patrol) arrives.
- Stay clear of roadway after triangles have been set up.
- Keep amber lights and emergency flashers on.



Two Escort Vehicles

- Multi-lane roads usually mean higher speeds and traffic volumes; treat this as a TEMPORARY setup
- Call NCDOT or municipality operating the roadway ASAP
- DO NOT attempt to repair or tow vehicles until more help (NCDOT or NC Highway Patrol) arrives.
- Stay clear of roadway after triangles have been set up.
- Keep amber lights and emergency flashers on.





**Disabled Vehicle on a Curve, Hill, or
Obstructed-View Section of Road (Two-flagger operation)**

Flaggers should be able to communicate with radios; if radios do not work, a baton, flag or other object must be carried by the last car released to proceed past the disabled vehicle.

EMERGENCY SITUATION RESPONSE

If the permitted load or escort vehicle have to stop on the highway because of an emergency and traffic is not flowing properly, the vehicle warning signals must be turned on immediately until warning devices have been properly placed. Warning devices must be in place within ten minutes after the load and escort vehicles have stopped. The proper ways to display the warning devices are explained in the Federal Motor Carrier (FMC) Safety Regulations handbook. Excerpts from paragraphs section 392.20 through 393.95 are below:



FMC Subpart C – Stopped Commercial Motor Vehicles

Sec. 392.20 Unattended commercial motor vehicles; precautions.

No commercial motor vehicle shall be left unattended until the parking brake has been securely set and all reasonable precautions have been taken to prevent the movement of such commercial motor vehicle.

Sec. 392.22 Emergency signals; stopped commercial motor vehicles.

- (a) **Hazard warning signal flashers.** Whenever a commercial motor vehicle is stopped upon the traveled portion of a highway or the shoulder of a highway for any cause other than necessary traffic stops, the driver of the stopped commercial motor vehicle shall immediately activate the vehicular hazard warning signal flashers and continue the flashing until the driver places the warning devices required by paragraph (b) of this section. The flashing signals shall be used during the time the warning devices are picked up for storage before movement of the commercial motor vehicle. The flashing lights may be used at other times while a commercial motor vehicle is stopped in addition to, but not in lieu of, the warning devices required by paragraph (b) of this section.
- (b) **Placement of warning devices**

(1) **General rule.** Except as provided in paragraph (b)(2) of this section, whenever a commercial motor vehicle is stopped upon the traveled portion or the shoulder of a highway for any cause other than necessary traffic stops, the driver shall, as soon as possible, but in any event within 10 minutes, place the warning devices required by Sec. 393.95 of this subchapter, in the following manner:

- (i) One on the traffic side of and 4 paces (approximately 3 meters or 10 feet) from the stopped commercial motor vehicle in the direction of approaching traffic;
- (ii) One at 40 paces (approximately 30 meters or 100 feet) from the stopped commercial motor vehicle in the center of the traffic lane or shoulder occupied by the commercial motor vehicle and in the direction of approaching traffic;
- (iii) One at 40 paces (approximately 30 meters or 100 feet) from the stopped commercial motor vehicle in the center of the traffic lane or shoulder occupied by the commercial motor vehicle and in the direction away from approaching traffic.



(2) Special rules

- (i) Fusees and liquid-burning flares. The driver of a commercial motor vehicle equipped with only fusees or liquid-burning flares shall place a lighted fusee or liquid-burning flare at each of the locations specified in paragraph (b)(1) of this section. There shall be at least one lighted fusee or liquid-burning flare at each of the prescribed locations, as long as the commercial motor vehicle is stopped. Before the stopped commercial motor vehicle is moved, the driver shall extinguish and remove each fusee or liquid-burning flare.
- (ii) Daylight hours. Except as provided in paragraph (b)(2)(iii) of this section, during the period lighted lamps are not required, three bidirectional reflective triangles, or three lighted fusees or liquid-burning flares shall be placed as specified in paragraph (b)(1) of this section within a time of 10 minutes. In the event the driver elects to use only fusees or liquid-burning flares in lieu of bidirectional reflective triangles or red flags, the driver must ensure that at least one fusee or liquid-burning flare remains lighted at each of the prescribed locations as long as the commercial motor vehicle is stopped or parked.
- (iii) Business or residential districts. The placement of warning devices is not required within the business or residential district of a municipality, except during the time lighted lamps are required and when street or highway lighting is insufficient to make a commercial motor vehicle clearly discernible at a distance of 500 feet to persons on the highway.
- (iv) Hills, curves, and obstructions. If a commercial motor vehicle is stopped within 500 feet of a curve, crest of a hill, or other obstruction to view, the driver shall place the warning signal required by paragraph (b)(1) of this section in the direction of the obstruction to view a distance of 100 feet to 500 feet from the stopped commercial motor vehicle so as to afford ample warning to other users of the highway.
- (v) Divided or one-way roads. If a commercial motor vehicle is stopped upon the traveled portion or the shoulder of a divided or one-way highway, the driver shall place the warning devices required by paragraph (b)(1) of this section, one warning device at a distance of 200 feet and one warning device at a distance of 100 feet in a direction toward approaching traffic in the center of the lane or shoulder occupied by the commercial motor vehicle. He/she shall place one warning device at the traffic side of the commercial motor vehicle within 10 feet of the rear of the commercial motor vehicle.
- (vi) Leaking, flammable material. If gasoline or any other flammable liquid, or combustible liquid or gas seeps or leaks from a fuel container or a commercial motor vehicle stopped upon a highway, no emergency warning signal producing a flame shall be lighted or placed except at such a distance from any such liquid or gas as will assure the prevention of a fire or explosion.



Sec. 392.24 Emergency signals; flame-producing.

No driver shall attach or permit any person to attach a lighted fusee or other flame-producing emergency signal to any part of a commercial motor vehicle.

Sec. 392.25 Flame-producing devices.

No driver shall use or permit the use of any flame-producing emergency signal for protecting any commercial motor vehicle transporting Division 1.1, Division 1.2, or Division 1.3 explosives; any cargo tank motor vehicle used for the transportation of any Class 3 or Division 2.1, whether loaded or empty; or any commercial motor vehicle using compressed gas as a motor fuel. In lieu thereof, emergency reflective triangles, red electric lanterns, or red emergency reflectors shall be used, the placement of which shall be in the same manner as prescribed in Sec. 392.22(b).

Sec. 393.95 Emergency equipment

Three bidirectional emergency reflective triangles that conform to the requirements of Federal Motor Vehicle Safety Standard No. 125, Sec. 571.125 of this title; or at least 6 fusees or 3 liquid-burning flares. The vehicle must have as many additional fusees or liquid-burning flares as are necessary to satisfy the requirements of Sec. 392.22.

(3) Supplemental warning devices. Other warning devices may be used in addition to, but not in lieu of, the required warning devices, provided those warning devices do not decrease the effectiveness of the required warning devices.

- (g) Restrictions on the use of flame-producing devices. Liquid-burning flares, fusees, oil lanterns, or any signal produced by a flame shall not be carried on any commercial motor vehicle transporting Division 1.1, 1.2, 1.3 (explosives) hazardous materials; any cargo tank motor vehicle used for the transportation of Division 2.1 (flammable gas) or Class 3 (flammable liquid) hazardous materials whether loaded or empty; or any commercial motor vehicle using compressed gas as a motor fuel.





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Chapter Five



Certified
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**ESCORT VEHICLE
OPERATION AND
DEFENSIVE DRIVING**



ESCORT VEHICLE OPERATION AND DEFENSIVE DRIVING

INTRODUCTION TO SAFE AND DEFENSIVE DRIVING

Escort vehicle operation involves many risks. It is managing those many risks that is so important. The definition of risk is the chance of any injury, damage or loss to property. These are the factors most frequently associated with vehicle escort operations and incidents.

Driver Inattention and Fatigue

Cell phones, radio, talking to passenger

Speeding

Unsafe and imprudent speed for safe driving conditions

Disregard of Traffic Control Devices and Signs

Inattention to traffic control devices and signs

Driving while impaired

Impaired driving, prescription and unlawful drugs, alcohol

Unsafe vehicle movements and failure to yield right of way

Inattention to other vehicles, backing, unsafe start and yield right of way

Vehicle Safety Violations

Equipment defects, safety restraints, tire traction, brakes and steering

MANAGING RISK AND SAFE VEHICLE ESCORT OPERATIONS

Risk is always present during any vehicle escort operation driving task.

Perceived Risk differs from actual risk.

Risk can be shared by more than one vehicle escort operator.

Risk can be altered by one or more vehicle escort operators.

Factors to Reduce Risk During Vehicle Escort Operations

- **Risk can be reduced** by defensive and safe driving operations at all times.
- **Risk can be reduced** by making sure all escort vehicles are properly maintained.
- **Risk can be reduced** by all vehicle escort operators being properly trained.
- **Risk can be reduced** by all vehicle escort operators communicating with each other and the load transporters, law enforcement personnel and the North Carolina Department of Transportation Oversize/Overweight Permit Unit.



SEEING/SCANNING & SAFE ESCORT VEHICLE OPERATIONS

- A. Establishing a safe and visual lead between other vehicles while driving.
- B. Seeing and checking from behind the vehicle using a proper sequence of mirror and head checks.
- C. Checking to the sides, looking in both directions, looking both ways at intersections to be absolutely sure the path is clear of vehicles, trains and pedestrians.
- D. Compensating for driver, vehicle and environmental factors to improve seeing while operating a motor vehicle.

COMMUNICATION AND TRAFFIC CONTROL DEVICES

- A. Road signs and traffic control devices communicate to all vehicle operators of the hazards and warnings of roadways and highways.
- B. Other vehicle operators communicate to each other to warn of roadway emergencies and roadway hazards.
- C. Aggressive driving by other vehicle operators communicate the risk of their aggressive driving behavior to you warning you.
- D. Law enforcement personnel and state laws communicate to us about the risk of not operating a motor vehicle safely.

ADJUSTING SPEED AND DEFENSIVE DRIVING

- A. **Accidents and speed** - operators have to adjust their speed well below the posted speed limit in many cases to drive safely.
- B. **Visibility and speed** - what you can see and what you can't see should influence your choice of speed.
- C. **Traffic and speed** - operators should be aware of traffic conditions that could influence safe speed for driving.
- D. **Environmental conditions and speed** - roadway and pavement surfaces and tire traction limitations should determine the speed of the operator. Speed limit means the maximum speed under ideal conditions.

MARGIN OF SAFETY AND DEFENSIVE DRIVING

- A. **Following distance** - the vehicle escort operator can best control the space in front of their vehicle by using safe and prudent following distances.
- B. **Blind spots and hazards on the sides** - correct lane positioning of the escort vehicle enables you to minimize dangers from the left or right side.
- C. **Safety and tailgating** - defensive driving and safe following distances will reduce tailgating accidents and hazards.
- D. **Safe passing** - and determining a margin of safety distance between other vehicles and objects will reduce lane passing accidents and hazards.



DRIVING EMERGENCIES AND VEHICLE ESCORT OPERATIONS

- A. **Mechanical failures** - vehicle escort operators should be able to safely and properly change a tire and determine basic mechanical failures on their vehicle.
- B. **Skidding and accident avoidance** - vehicle escort operators can best avoid accidents and skidding by not hydroplaning and by using proper braking, steering and by decreasing their vehicle speed.
- C. **Hydroplaning and driving emergencies** - antilock braking systems (ABS) brakes, will reduce the vehicle from hydroplaning, in addition to proper steering and by reducing speed.
- D. **Restraint system** - safety belts and restraints can help prevent an accident and when combined with safe vehicle escort operations can also protect you in an accident. Proper seat and head positioning is also a factor.

VEHICLE ESCORT OPERATOR AND DEFENSIVE DRIVING

- A. **Fatigue and safe vehicle operations** - vehicle escort operators should have proper rest and sleep before operating any vehicle or performing any task.
- B. **Emotions and safe vehicle operations** - a vehicle escort operator can be affected by emotions that can impair safe vehicle operations and judgment
- C. **Alcohol and drugs** - consuming any alcohol or drugs is extremely dangerous before and during any vehicle operation or escort vehicle operation.





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Appendices



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Escort Vehicle Checklist

Contact Information



Appendix A

ESCORT VEHICLE OPERATOR'S CHECKLIST

Complete prior to each day's activity

Driver's (Escort Veh.) Name _____ State of License _____ Make/Model of Escort Veh _____ License Plate # _____ Exp. Date of License Plate _____	Driver license # _____ Expiration Date _____ Vehicle Color _____ State of License Plate _____ Company Name _____ Driver's Certification # _____ Date of Expiration _____
EQUIPMENT (REQUIRED)	EQUIPMENT (OPTIONAL)
Vehicle	Vehicle
Car or	Tires (including spare): Check inflation, tread
Two-Axle Truck	Jack and Lug Wrench
17,000 Max G.V.W.R.	Check Wheel Lugs
2,000 lb. Min V.W.	Washer Fluid, Coolant, and Oil Levels
Headlights	Check Hoses, Belts, and Exhaust System
High Beam	Check Hoses, Belts, and Exhaust System
Low Beam	Check Suspension
Turn Signals, Brake Lights	Full Gas Tank
Emergency Flashers	Check Horn
Rear View Mirrors	Equipment
Escort Business Identification Sign	Extra Amber Light
Equipment	3 - 28" orange cones
18" or 24" Stop/Slow Paddle	Flashlight with Red Nose Cone
Emergency Reflective Devices	Extra Batteries, Flashlight, Radio, Phone
3 Triangles or	Extra "OVERSIZE LOAD" Sign/Banner
6 Fusees or	High Visibility Hard Hat
3 Liquid Flares	First Aid Supplies
	25' Tape Measure, Tool Kit, Shovel
	Tarps and Lashings
	"Slow Vehicle" if needed
	Personal Items
	Extra Clothing and Toiletries for long trips
	Blanket
	Business License
	Lunch, Drinking Water
	Cash/Credit Card
	Local/State Maps
	Medications
	Rain Gear
	All Items Secured and Stored
	Radios
	Cell Phone
High Visibility Vest/Jacket	
Fire Extinguisher (min 5 lb.; BC or ABC)	
Non-Conductive Height Pole (if overheight)	



Appendix B

CONTACT INFORMATION

NCDOT Oversize/Overweight Permit Unit

750 N. Greenfield Parkway
Garner, NC 27529

----- (919) 814-3700
----- (888) 221-8166

Toll-free calls

(single-trip permit)-----1 (888) 574-6683
(administrative/annual permit/superload permit) -----1 (888) 221-8166

Local calls

(single-trip permit)----- (919) 733-7154
(administrative/annual permit/superload permit) ----- (919) 814-3700
Fax Requests:----- 1 (888) 222-8347 or (919) 662-4320, 662-4318

State Highway Patrol, Enforcement Section

Troop A ----- Greenville ----- (252) 758-5300
Troop B ----- Fayetteville ----- (910) 486-1058
Troop C ----- Raleigh ----- (919) 733-3911
Troop D ----- Greensboro ----- (336) 334-5621
Troop E ----- Salisbury ----- (704) 639-7595
Troop F ----- Newton ----- (828) 466-5504
Troop G ----- Asheville ----- (828) 298-4253
Troop H ----- Monroe ----- (704) 283-8559

Municipalities, Traffic Services

Asheville ----- (828) 259-5943
Greensboro ----- (336) 373-2569
Cary ----- (919) 462-3833
Greenville ----- (252) 329-4315
Chapel Hill ----- (919) 968-2755
High Point ----- (336) 883-3229
Charlotte ----- (704) 336-3893
Jacksonville ----- (910) 938-5220
Concord ----- (704) 920-5363
Raleigh ----- (919) 890-3430



Durham-----	(919) 560-4366
Rocky Mount-----	(972) 972-1121
Fayetteville -----	(910) 433-1660
Wilmington -----	(910) 341-7888
Gastonia-----	(704) 866-6761
Winston-Salem-----	(336) 727-2707

Also, contact local Police Departments within municipalities.

Railroad Emergency Numbers

Norfolk Southern-----	1 (800) 946-4744
CSX -----	1 (800) 232-0144
N.C. Highway Patrol-----	1 (800) 662-7956
N.C. Highway Patrol (cell phone)-----	*HP (*47)





**Oversize/Overweight Permit Unit
Transportation Mobility and Safety Division
North Carolina Department of Transportation**

919 814-3700 Office • 919 662-4320 Fax
1-888-221-8166 Toll Free

750 N. Greenfield Parkway
Garner, NC 27529