

# BARRETO

## MODEL E7TSC

### HYDRAULIC TRACK SOD CUTTER OPERATOR'S MANUAL

#### SOD CUTTER INTENDED USE

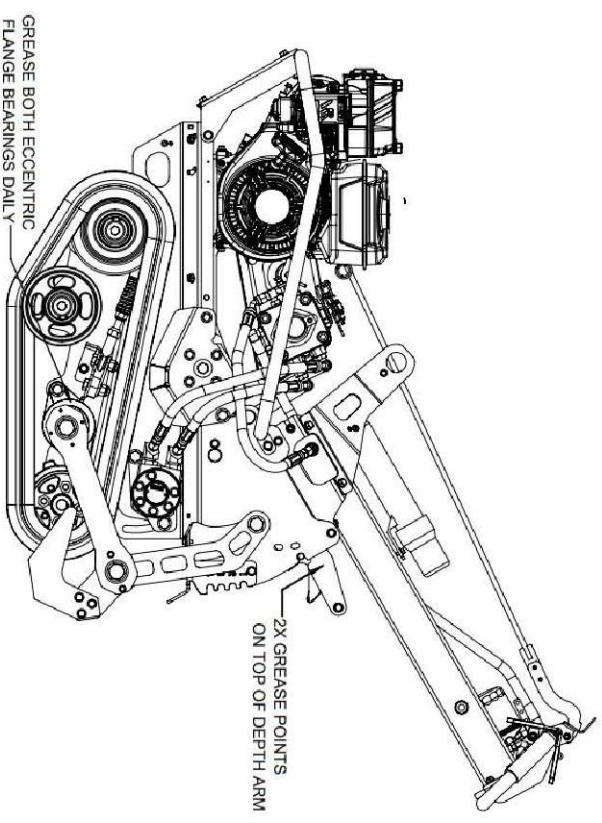
This machine is designed for cutting sod in "normal" ground of reasonably soft dirt. Ground with large stones, high clay content, very hard packed, very dry, or in a frozen condition may be unsuitable for normal sod cutting.

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#### LUBRICATION REQUIREMENTS

Grease at the intervals indicated per the illustration of grease lubrication points. There is also a grease diagram decal on the machine.



## SAFETY MESSAGES

General safety messages are listed in this Safety Messages section. Specific safety messages appear as appropriate in this manual where a potential hazard may occur if procedures or instructions are not followed correctly and completely.


### SAFETY SYMBOL

This is the international safety alert symbol. This symbol is used in combination with a signal word and written message to warn you of a potential for bodily injury or death.

A signal word "DANGER", "WARNING", or "CAUTION" is used with the safety alert symbol.

 **DANGER:** Imminent hazards that, if not avoided, will result in serious personal injury or death.

 **WARNING:** Potential hazards or unsafe practices that, if not avoided, could result in serious personal injury or death.

 **CAUTION:** Potential hazards or unsafe practices that, if not avoided, could result in minor personal injury, product damage, or property damage.

Safety decals with a signal word "DANGER", "WARNING", or "CAUTION" are affixed to the sod cutter near specific hazards.

Read this manual and study ALL decals on the sod cutter before operating machine.


## SAFETY INSTRUCTIONS OVERVIEW


READ SAFETY AND OPERATING INSTRUCTIONS BEFORE OPERATING!

USE COMMON SENSE AND PLENTY OF IT!

The left lever is the track drive control.


**DO NOT TAPE THE LEVERS or bypass this safety feature in any other way.**

 Call before you dig. If you do not call, you may cause an accident, suffer injuries or death, cause interruption of services, damage the environment, and/or incur project delays. Expect to be held liable for any damages caused if you fail to call.

 **DANGER:** Buried electric cables or gas lines can cause serious injury or death if struck with cutter blade. Always determine location of utilities before cutting sod.

 **WARNING:** Fiber optic cables convey laser light that can injure your eyesight.

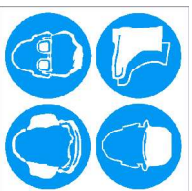
STAY CLEAR of moving parts on the sod cutter.

 **DANGER:** Cutter blade and other moving parts can cut off arms, legs, or fingers. Contact with the cutter blade while in operation can cause serious injury or even death.


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## SAFETY INSTRUCTIONS OVERVIEW (continued)

 Wear safety goggles and a hard hat while operating or observing!  
**WARNING:** The cutter blade may throw stones and debris.


 Wear adequate hearing protection while operating or observing.  
**WARNING:** Exposure to loud noise is cumulative and may permanently damage your hearing.  
Wear safety boots and gloves. Wear close-fitting clothing. Contain long hair.

Do not wear jewelry. Wear reflective clothing if you work near traffic.


 Only operate outdoors and avoid breathing engine exhaust and fumes.  
**WARNING:** Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death.


Adequate lighting is required, daylight or artificial, for safe operation of the sod cutter.

Allow adequate side and overhead clearances between the sod cutter and buildings, fences, and trees.

 **WARNING:** Contact with the cutter blade while in operation will cause serious injury or even death. The cutter blade edges are sharp. Avoid contact even when the cutter is not moving.

Avoid inclines if possible.

 **WARNING:** Navigating on any incline increases the danger of the sod cutter losing traction or rolling over, especially if the surface is wet. If you lose control, get out of the way immediately to avoid personal injury. Navigation on inclines should be especially slow and turns very gradual. Refer to the incline diagram in the section, "GROUND TRANSPORT."

 **WARNING:** The weight of the sod cutter or walking near the edge of a trench could cause collapse of the trench wall. If driven along the edge of a trench, the sod cutter could suddenly turn over.


Avoid operating adjacent to drop-offs or embankments.

 **WARNING:** The Sod Cutter is very heavy. **DO NOT** attempt to manually lift it.

Keep away from the tracks to avoid getting crushed.

 **WARNING:** Getting run over by the sod cutter will cause injury.

Always leave the Sod Cutter parked on a level surface.

 **WARNING:** Do not park on an incline. Move the Sod Cutter to a level area.

Do not leave the Sod Cutter unattended with the engine running.

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## SAFETY INSTRUCTIONS OVERVIEW (continued)



Do not operate the Sod Cutter near any source of flammable dust or vapors.

**WARNING:** Sparks from the engine exhaust can cause an explosion or fire in a flammable or explosive atmosphere. Fuel fumes can catch fire or explode.

**WARNING:** Do not operate the Sod Cutter near flames or sparks. Fuel fumes can catch fire or explode.

**WARNING:** Shut off the engine and allow it to cool before refueling. Fuel fumes can catch fire or explode. Do not smoke when refueling. Do not refuel near a source of flames or sparks.

**WARNING:** Do not touch the engine, muffler, or any of the hydraulic components until cool.

**WARNING:** Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.

**WARNING:** Avoid contact with hydraulic fluid.

**WARNING:** When machine is operating, hydraulic fluid is under extreme pressure and can get under skin and burn or poison.

Keep others away. If the job site is near a road or pedestrian path, warn and divert both motorized traffic and pedestrians. As appropriate, use traffic flag personnel, signs, cones, and lighting devices to ensure safety.

Never allow anybody to ride on the sod cutter.

Never lift sod cutter over any person at any time.

**WARNING:** If the Sod Cutter should fall, it would crush anybody under it.

We recommend having a fire extinguisher suitable for petrol fires in the operating area.

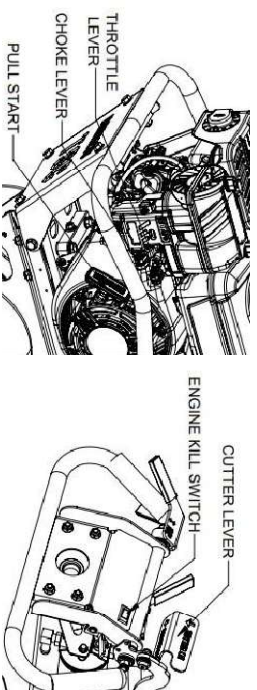
## SOD CUTTER OPERATING INSTRUCTIONS

**READ SAFETY INSTRUCTIONS BEFORE OPERATING!** Both the SAFETY INSTRUCTIONS and OPERATING INSTRUCTIONS are in this manual.

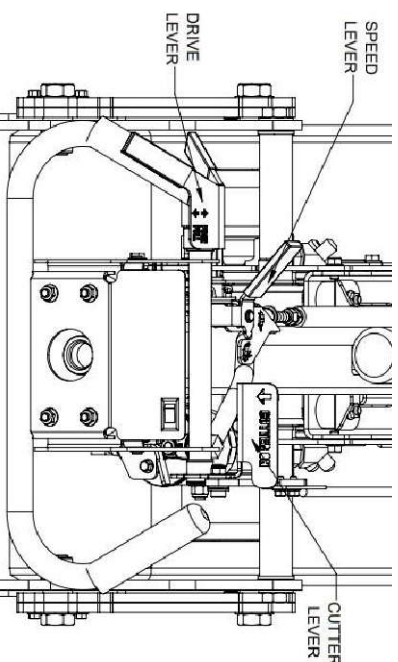
Be sure that the engine oil and fuel and the machine hydraulic fluid are all at proper levels before starting the engine.

STUDY AND UNDERSTAND CONTROLS BEFORE BEGINNING OPERATION.

### CONTROLS



1. **IGNITION (KILL) SWITCH:** There are two ignition switches. One switch is located on the control panel with the other sod cutter controls for your convenience. The other is located on the engine. The Vanguard engine uses a combination throttle lever/ignition switch. If the throttle lever is pushed completely toward the red STOP portion of the throttle decal, it will shut down the engine. Refer to the ENGINE START UP PROCEDURE.



2. TRACK DRIVE CONTROL:

- Pushing the variable drive lever forward against the handlebar will cause the machine to move forward.
- Pulling the variable drive lever back against the handlebar will cause the machine to move backward.
- Slow speed is required for sod cutting.

NOTE: Be sure the operator understands that the machine should not cut sod in reverse or at a fast speed.

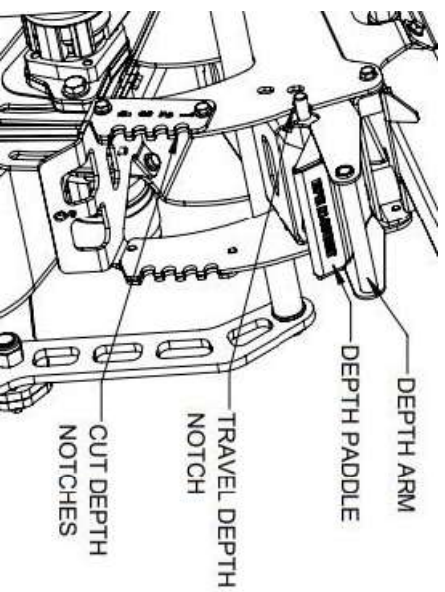
- 3 DRIVE SPEED: The arrow on the speed lever should be directed at the desired speed setting. Speed setting cannot be changed while the machine is in motion.

- RABBIT = Fast Speed (Travel Speed)
- TURTLE = Slow Speed (Cutting Speed)

- 4 CUTTER BLADE CONTROL: To cut, pull the cutter lever back toward the operator to engage the cutter blade. Push lever forward away from the operator to disengage the cutter blade.

- 5 DEPTH ADJUSTMENT: To adjust cut depth, hold the depth arm, and squeeze the depth paddle to unlock the depth arm from a notch. Lower or raise the depth arm and release the depth paddle into the desired notch.

NOTE: The highest notch is used for transporting the machine. Do not transport with the blade down.



## VANGUARD ENGINE CONTROLS

**CHOKE:** Use to aid starting the engine when it is cold.


**IGNITION SWITCH:** There are two ignition switches. One switch is located on the control panel with the other sod cutter controls for your convenience. The other is located on the engine. The Vanguard engine uses a combination throttle lever/ignition switch. If the throttle lever is pushed completely toward the red STOP portion of the throttle decal, it will shut down the engine. Refer to the ENGINE START UP PROCEDURE.

**THROTTLE:** Use this to adjust engine speed. Refer to the ENGINE START UP PROCEDURE

**FUEL SHUT-OFF:** The throttle lever also shuts off the fuel when the engine is in the red STOP position.



## ENGINE START UP PROCEDURE

 Only operate the sod cutter outdoors and avoid breathing engine exhaust and fumes.  
**WARNING:** Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death. Avoid any areas or actions that expose you to carbon monoxide.

1. Turn the handlebar controls IGNITION switch on.
2. Ensure cutter lever is in the off position (forward)
3. If the engine is cold, close the CHOKE. After the engine starts, move the choke to half open. After about 30 seconds to a minute, the choke can be opened completely. To restart a warm engine, leave the choke in the open position.
4. Move the THROTTLE to about 1/3 of the way back. This increases throttle. It is located above choke.
5. Pull start cord located on engine recoil.

When the engine starts, open the CHOKE (turn choke off) after the engine warms up.

**COLD WEATHER OPERATIONS:** Before operating in cold weather, refer to the Engine Owner's Manual for recommended engine oil. Do not spray starting fluid into the air cleaner as engine damage could result. If the machine is operated at temperatures below +32°F (0°C) then changing the hydraulic fluid to ISO 46 is recommended. If you do not want to change the hydraulic fluid but want to operate the machine at temperatures below +32°F (0°C), then do the following:

- Warm up engine at a low speed.
- Gradually increase engine speed to half throttle, allowing **30 minutes for the hydraulic fluid to warm up.**

Reduce the engine speed if the hydrostat whines. Noise may indicate a lack of hydraulic fluid flow that could damage the hydrostat. For frequent starts below 18°F consult your dealer or the factory.

## GETTING STARTED

1. Ensure cutter blade lever is in the off position (forward).
2. Start and warm up the engine.
3. Set the speed lever to the desired speed.
4. Navigate the Sod Cutter to the starting position.

## CUTTING PROCEDURE

1. Have engine at full throttle.
2. Lift the back of the machine and adjust cut depth to the desired setting then set the back of the machine back down.
3. Engage the Cutter Lever by pulling the lever back towards the operator.
4. Ensure the Speed Lever is in the SLOW speed position.
5. Apply downward pressure onto the handlebars while driving forward. This will allow the blade to cut under the sod.
6. Lift the rear of the machine while driving forward with the cutter on to allow the machine to cut its way out of the sod.

**Note:** The cutter blade will shut off and cannot be engaged when the machine is reversing. The Sod Cutter is not designed to cut in reverse.

## SOD CUTTING TIPS

Ensure the lawn is watered before cutting. This will allow the machine to cut sod more easily and prolong the life of the blade.

Initially set the cut depth to a shallow position and increase depth as needed to ensure minimal soil removal.

## SHUT DOWN PROCEDURE

1. Always leave the Sod Cutter parked on a level surface.

**WARNING:** Do not park on an incline. Move the sod cutter to a level surface.

2. Unless loaded on a trailer, lower the cutter blade to the ground.
3. Reduce the ENGINE THROTTLE to idle.
4. Move the IGNITION SWITCH to the OFF position to stop the engine.



Shut off the engine and allow it to cool before refueling.

**WARNING:** Fuel fumes can catch fire or explode. Do not smoke or allow flames or sparks in the area.

Do not touch the engine, muffler, or any of the hydraulic components until cool.

**WARNING:** Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.

## GROUND TRANSPORT OF THE SOD CUTTER

Raise the depth arm.

**WARNING:** Contact with the cutter blade while in operation will cause serious injury or even death.

**WARNING:** The cutter blade is sharp. Avoid contact even when the blade is not moving.

- Use the DRIVE LEVER to control travel direction. The DRIVE LEVER must be pushed and held to move the sod cutter forward. The DRIVE LEVER must be pulled to reverse.
- Pushing the Drive Lever forward causes the machine to move forward.
- Pulling the Drive Lever back causes the machine to move backward.
- If you are not experienced operating a Sod Cutter, a slow ground speed is recommended for your safety. Use the speed lever in the slow setting for transport speed.
- To steer the machine, while driving, lift the rear of the machine so it pivots on the track rollers and direct the front of the machine in the desired direction.

Keep away from the tracks to avoid getting crushed.

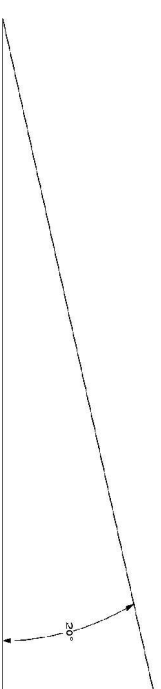
**WARNING:** Getting run over by the Sod Cutter will cause injury.

**WARNING:** Never allow anybody to ride on the Sod Cutter. Never make sudden changes in speed or direction. Use extra caution on soft or uneven ground. Avoid operating adjacent to drop-offs or embankments.

**WARNING:** Avoid inclines if possible. Never use on any incline exceeding the angles shown below.

**WARNING:** Navigating on any incline increases the danger of the Sod Cutter losing traction or rolling over, especially if the surface is wet. If you lose control get out of the way immediately to avoid personal injury. Navigation on inclines should be especially slow and turns very gradual.

A 20° maximum incline is allowed. Vanguard engines have an Oil Alert system that will automatically stop the engine if tipped more than 20°.



## ROAD TRANSPORT OF THE SOD CUTTER

### The BEST way to transport the Sod Cutter over roads is with the **BARRETO E3X4DGT TRAILER**.

Refer to the following checklist before towing:

- Towing vehicle should have a 2" (5cm) ball. Be sure it is in good repair and securely fastened to the vehicle.
  - Securely fasten the hitch to the ball by tightening the hitch nut. Attach the safety chains as pictured below.
  - Cross the chains under the trailer tongue to prevent it from dropping to the ground if the trailer comes loose.
  - Allow only enough slack in the chains to permit proper turning of the vehicle. Do not let the chains drag on the ground or be drawn up too tight. Slack strength should hold the tongue and coupler off the ground with the trailer loose.
  - Attach the safety chain to the towing vehicle in such a way that it cannot come off accidentally.
  - Check the hitch-to-ball connection after driving a few blocks and re-tighten if necessary.
- Always exercise extreme caution and allow extra clearance while towing a trailer.
- DRIVE SAFELY!**

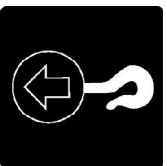


### LOADING PROCEDURE: T7SC onto the **Barreto E3X4DGT trailer**:

1. Position the tow vehicle and attached trailer on level ground.
2. Unlatch the tilt bed trailer and lower it to the ground.
3. Line up the sod cutter with the rear of the trailer. The front of the machine should be toward the trailer.
4. Throttle the engine down and move control speed lever to the slow setting. The drive lever will allow variable speed in forward. Slowly drive the sod cutter forward onto the trailer bed.



**WARNING:** Navigating on the inclined trailer bed or ramps increases the danger of the sod cutter tracks losing traction, especially if the bed surface is wet. Stay out of the way to avoid personal injury if you lose control.



5. Drive the Sod Cutter onto the trailer in the forward direction.
6. The trailer will tilt when the machine is passing by the trailer wheels.
7. Shut off the engine at the throttle lever to also close the incorporated fuel shutoff valve. Refer to the **SHUT DOWN PROCEDURE** for details.
8. Secure Sod Cutter to the trailer with straps on the front and back to the tie down points on the body.

### UNLOADING PROCEDURE: T7SC from the **Barreto E3X4DGT trailer**:

1. Position the tow vehicle and attached trailer on level ground.
2. Remove all chains or straps connecting the Sod Cutter to the trailer D-rings.
3. Start the engine using the **ENGINE START UP PROCEDURE**.
4. Unlatch the tilt bed trailer pin.
5. Using the drive lever, slowly reverse the machine until the trailer tilts to the ground.
6. Carefully drive the Sod Cutter slowly backward and down the ramp/trailer.

## OPERATOR PREPARATION

Each operator must:

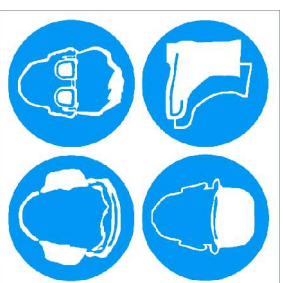
- Become familiar with the controls and operation of the sod cutter, preferably under the supervision of an experienced operator.
- Be 18 yrs. of age or older and be mentally and physically capable of operating the Sod Cutter safely.
- Have studied the **SAFETY AND OPERATING INSTRUCTIONS** in this manual.

**PERSONAL PROTECTION:** For safety, Sod Cutter operator should wear personal protection equipment. Keep observers at a safe distance.

Wear safety eye goggles and a hard hat while operating or observing!

**WARNING:** The cutter blade may throw stones and debris. Wear safety boots and gloves. Wear close-fitting clothing. Contain long hair. Do not wear jewelry. Wear reflective clothing if working near traffic.

Wear adequate hearing (ear) protection while operating or observing.  
**WARNING:** Exposure to loud noise is cumulative and may permanently damage your hearing.



Declared vibration emission value in accordance with EN 12096: the average measured vibration emission value is 5.5 m/s<sup>2</sup>. The uncertainty in the measurement given a 95% confidence interval is 1.1 m/s<sup>2</sup>. Safety gloves help to isolate the hands from the vibration, keep them warm and dry, maintain blood circulation, and make operators less susceptible to vibration induced injury.

Hearing protection devices do not all provide the same level of protection. Those that completely surround each ear are better than earplugs. It is important to select a device that is adequate and appropriate for your specific work environment since the peak noise level varies. A local environmental noise specialist may help you to determine the level of hearing protection required.


## CONTACT WITH UNDERGROUND UTILITIES

After LOCATING UNDERGROUND UTILITIES and performing the WORK SITE ASSESSMENT, accidental cutter blade contact with a buried utility might still occur. If it does, stop cutting and call the proper authorities for help.

If you cut a wire or cable, assume that you do not know what kind it is. It may be electrical or any one of several communication lines: telephone, television, or fiber optic. In any case, do not touch it or even look at the ends of it. Stop cutting and call the proper authorities for help. Do not cut any more until the appropriate utility company has assessed the situation, taken appropriate action, and informed you that it is safe to proceed.

If you strike a pipe, it could be gas, oil, petroleum, water, or sewer. In any case, stop cutting, shut off the engine, and evacuate the area immediately. **Call the proper authorities for help.**


**Electrical wires or cables:** If you think that you may have severed electrical wires, stop cutting and call the proper authorities for help. Keep yourself and other people away from the area.

 **DANGER:** An electric shock could kill you. Assume that any severed wire or cable is HOT with voltage and do not touch it!

**Gas lines:** If you think that you may have struck a gas line, shut off the engine and evacuate the area immediately. Call the proper authorities for help.

 **DANGER:** A gas explosion could kill you. Sparks will likely occur from the cutter blade scraping the metal pipe. If gas leaks out an explosion could easily occur.

**Fiber optic cables:** If you think that you may have severed a fiber optic cable, do not touch or even look at the ends of it.

 **WARNING:** Fiber optic cables convey laser light that can injure your eyesight. Call the proper authorities for help.

## WORK SITE ASSESSMENT

Examine the work area for any conditions or obstructions that may inhibit sod removal or create a safety hazard for the operator or others. Use the information in this manual combined with good judgment to identify any hazards to avoid.



In addition to calling to DETERMINE LOCATION OF UNDERGROUND UTILITIES (see previous section for details), the operator and/or job foreman should visually inspect the work site. Look for electrical drop boxes, notices of underground placements, manhole covers, recent trenching activity, any evidence of possible underground placements, banks, overhangs, drop-offs, rocks, tree limbs, wire, uneven terrain, any existing trenches or holes and toxic ground conditions.

Only operate the Sod Cutter outdoors and avoid breathing engine exhaust and fumes.



**WARNING:** Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death.

Do not operate the Sod Cutter near any source of flammable dust or vapor.

**WARNING:** Sparks from the engine exhaust can cause an explosion or fire in a flammable or explosive atmosphere. Fuel fumes can catch fire or explode.

Allow adequate side and overhead clearances between the sod cutter and any objects such as buildings, fences, and trees.

Adequate lighting is required, daylight or artificial, for safe operation of the sod cutter.

Keep others away. If the job site is near a road or pedestrian path, warn and divert both motorized traffic and pedestrians. As appropriate, erect barriers, use traffic flag personnel, signs, cones, and lighting devices to insure safety.