

Easy-to-follow steps...

## How to Size a Trench Shield

You'll need several important dimensions, along with knowledge of the type of soil you'll be working in when making the decision about the minimal-size trench shield to use.

Copy this pocket-size work sheet below to correctly determine the safest and most cost-efficient trench shield for your job.

### TO SIZE A TRENCH SHIELD

#### Depth of trench \_\_\_\_\_

(Refer to Depth Certification Chart)

#### Soil Condition \_\_\_\_\_

(Refer to Depth Certification Chart)

Type A (25#) \_\_\_\_\_

Type B (45#) \_\_\_\_\_

Type C (60#) \_\_\_\_\_

Hydrostatic \_\_\_\_\_

#### Outside Pipe Diameter \_\_\_\_\_

(Shield should be 12" wider than the pipe's outside diameter)

#### Pipe Length \_\_\_\_\_

(Shield should be 2'-4' longer than the pipe)

#### Bucket Widths \_\_\_\_\_

(For inside the shield, 12" less than the shield.)

(For outside the shield, 4" more than the shield.)

#### Machine's Lift Capacity \_\_\_\_\_

(1.5 times the shield weight at a 20' radius at grade.)

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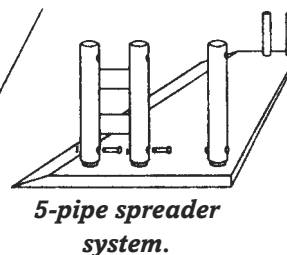
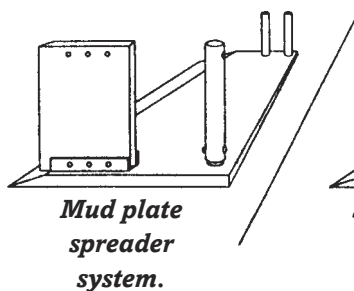
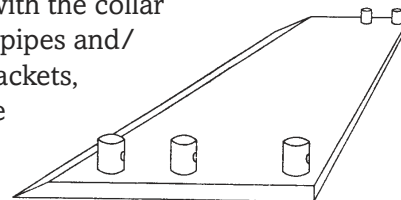
www.trenchsafety.com

## Maximize Safety and Productivity When You Use Trench Shields

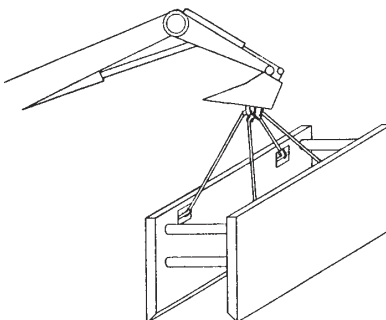
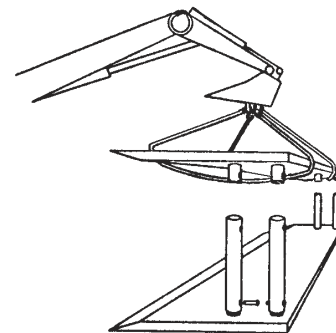
Following the proper procedures when assembling and using trench shields greatly increases worker safety and productivity. The steps below are provided to help you and your field crews get the most out of the trench shields you install.

### ASSEMBLY

Lay one side panel flat on the ground, with the collar sockets pointing up. Place the spreader pipes and/or plates onto the collars, or into the brackets, and pin them in place. Be sure to secure the pins with the keepers. A minimum of two spreader units (pipes and/or plates) are required at each end of each shield.



Next, lower the second sidewall panel onto to the upright spreaders, then pin and secure with keepers.

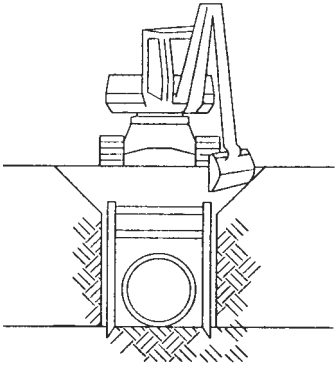


Stand the trench shield upright, and it is ready for installation.

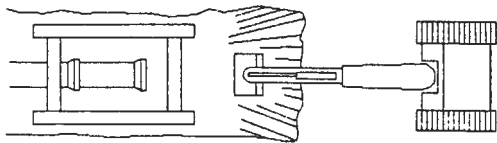
“HOW TO USE TRENCH SHIELDS” FROM PAGE 1

**USING A TRENCH SHIELD IN STABLE SOIL**

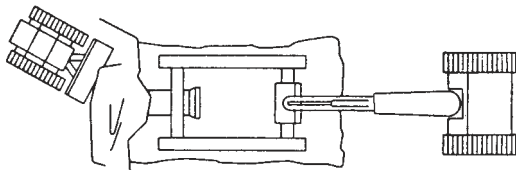
Excavate to grade slightly wider than the trench shield. Excavate the walls of the trench vertically to a minimum of 18" below the top of the shield. Slope the soil above the shield according to OSHA regulations. Lower the shield into the trench.



Excavate in front of the shield as the work progresses.

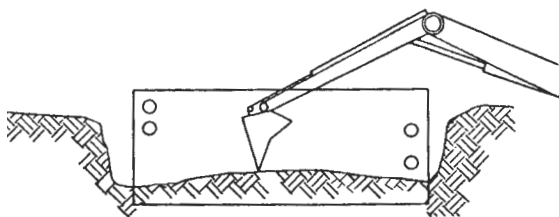


Pull the shield forward by the top front spreader pipe, or with the pulling eyes. (Be sure to use the pulling eyes when the spreaders are wider than 72", or when the soil pressure on the sides of the shield is severe enough to cause the spreader to deflect.

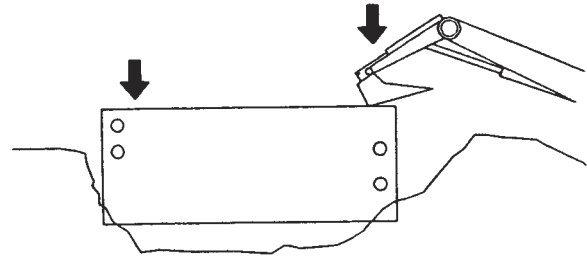


**USING A SHIELD IN UNSTABLE SOIL**

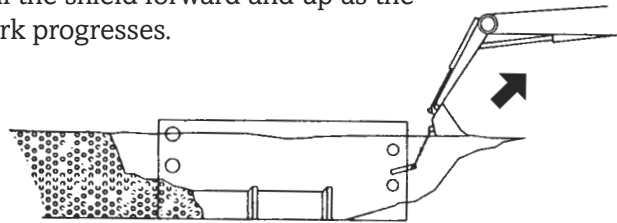
Excavate until the soil begins to crumble beyond the desire trench width. Place the shield on the line of the excavation.



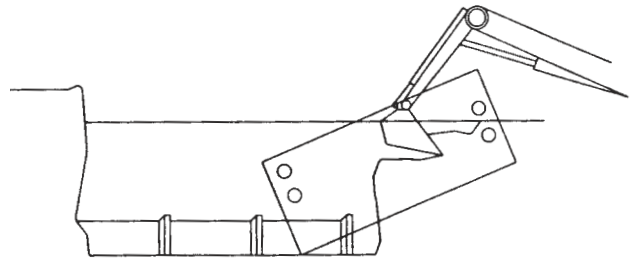
Press down on the corners of the shield until the top reaches grade.



Pull the shield forward and up as the work progresses.



Excavate the soil inside the shield and again press the shield down to grade.



SEE “HOW TO USE TRENCH SHIELDS” ON NEXT PAGE...

**Excavation Safety News**

Published by  
**TrenchSafety and Supply, Inc.**  
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*This newsletter provides a brief overview of safety regulations and systems. It is not intended to provide specific legal or engineering advice. Please refer to OSHA CFR29, Part 1926, Subpart P, “Excavation and Trenches,” and to other governmental regulations, and to manufacturers’ instructions for specific information.*

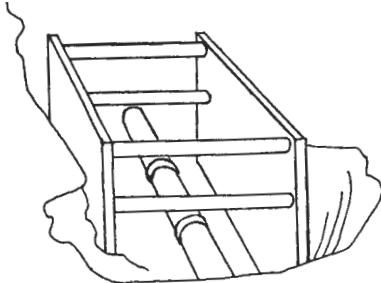
*Construction techniques and equipment usage must be in accordance with all governmental regulations and manufacturers’ instruction. All orders placed with TrenchSafety are subject to the terms, conditions, and warranty limitations contained in TrenchSafety’s Rental and Sales Agreements.*

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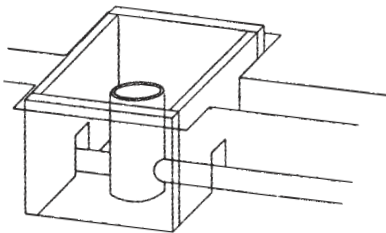
### **USING SHIELDS FOR POINT REPAIRS, OR TIE-INS**

Center the shield over the work area. Lay back the soil at the ends of the shield according to OSHA regulations, or use the manufacturer’s end plates.



### **USING 4-SIDED SHIELDS**

When using shields during manhole work, install the proper end panels, or lay the soils at the ends back according to OSHA regulations.



*Did you know...*

## **Continuing Education Credits May Be Available**

If you have a water or wastewater license, most states will award you continuing education credits for attending TrenchSafety’s “Competent Person” and “Confined Space” training sessions.

We offer classes on both topics regularly throughout the Mid-South. We’ll even come to your facility and present the classes just for your employees.

Check the upcoming schedule on page 4.

To enroll your staff members, you can go to our web site, [www.trenchsafety.com](http://www.trenchsafety.com), or you can call us toll-free, (800) 865-5801.

The coming winter months are an excellent time to get your teams “up-to-speed” on current training topics, and prepared for your busy spring, which is just around the corner.

## **TrenchSafety Solutions...**

TrenchSafety recently supplied 12 of the square shields shown below to a large utility company. The shields were vital to the construction of footings for cross-country electrical transmission towers.



Each box was 8 feet high, and 10 feet square. The side panels were pinned together at the corners to provide the four-sided protection.



Even though these footings were not terribly deep, they were deep enough to require protection, because of the soil type and depth.



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***Editor's Note:** In response to numerous requests, the following article is reprinted from the very first issue of Excavation Safety-News, published in the Fall 1994.*

## Who IS Responsible for Jobsite Safety?

The OSHA law says **every employer**. Period. A few details may prove helpful.

### **WHAT IF YOU'RE THE GENERAL (PRIME) CONTRACTOR?**

The prime contractor, according to OSHA, "assumes all obligations" and "in no case...shall be relieved of overall responsibility for compliance with the requirements of the part for all work to be performed under the contract." This includes work being done by all subcontractors at your job sites.

### **WHAT IF YOU'RE A SUBCONTRACTOR?**

Again, the law states, "with respect to subcontracted work, the prime contractor and any subcontractor...shall be deemed to have joint responsibility." Subcontractors "of any tier" are responsible for the safety of workers involved in their part of a job.

### **WHO CAN BE FINED?**

The general contractor, the subcontractor, and even the owner of the project are subject to enforcement and fines when it can be shown they "could have had (such) knowledge with the exercise of reasonable diligence." The OSHA standard says: "Where joint responsibility exists, both the general (prime) contractor and his subcontractor or subcontractors, regardless of tier, shall be considered subject to the enforcement provisions of the Act."

*Get your staff signed up during the "Winter Slowdown"...*

## Safety Training Classes now Filling for the New Year

### **"COMPETENT PERSON" TRAINING**

#### **2006**

- Tuesday, Jan. 17 – Memphis
- Tuesday, Jan. 24 – North Little Rock
- Wednesday, Feb. 8 – Fayetteville, Ark.
- Tuesday, Feb. 21 – Memphis
- Tuesday, Feb. 28 – North Little Rock
- Tuesday, Mar. 21 – Memphis
- Tuesday, Mar. 28 – North Little Rock

### **"CONFINED SPACE" TRAINING**

#### **2006**

- Tuesday, Apr. 11 – North Little Rock
- Tuesday, May 16 – Memphis

### **"10-HOUR SAFETY PROGRAM FOR ROADWAY CONTRACTORS"**

#### **2006**

- Tuesday & Wednesday, Feb. 14-15 – Memphis
- Tuesday & Wednesday, Mar. 14-15 – North Little Rock
- Tuesday & Wednesday, Apr. 4-5 – Memphis
- Tuesday & Wednesday, Apr. 18-19 – North Little Rock

**Space is limited!** Contact us **today** to register and reserve classes for your staff.

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