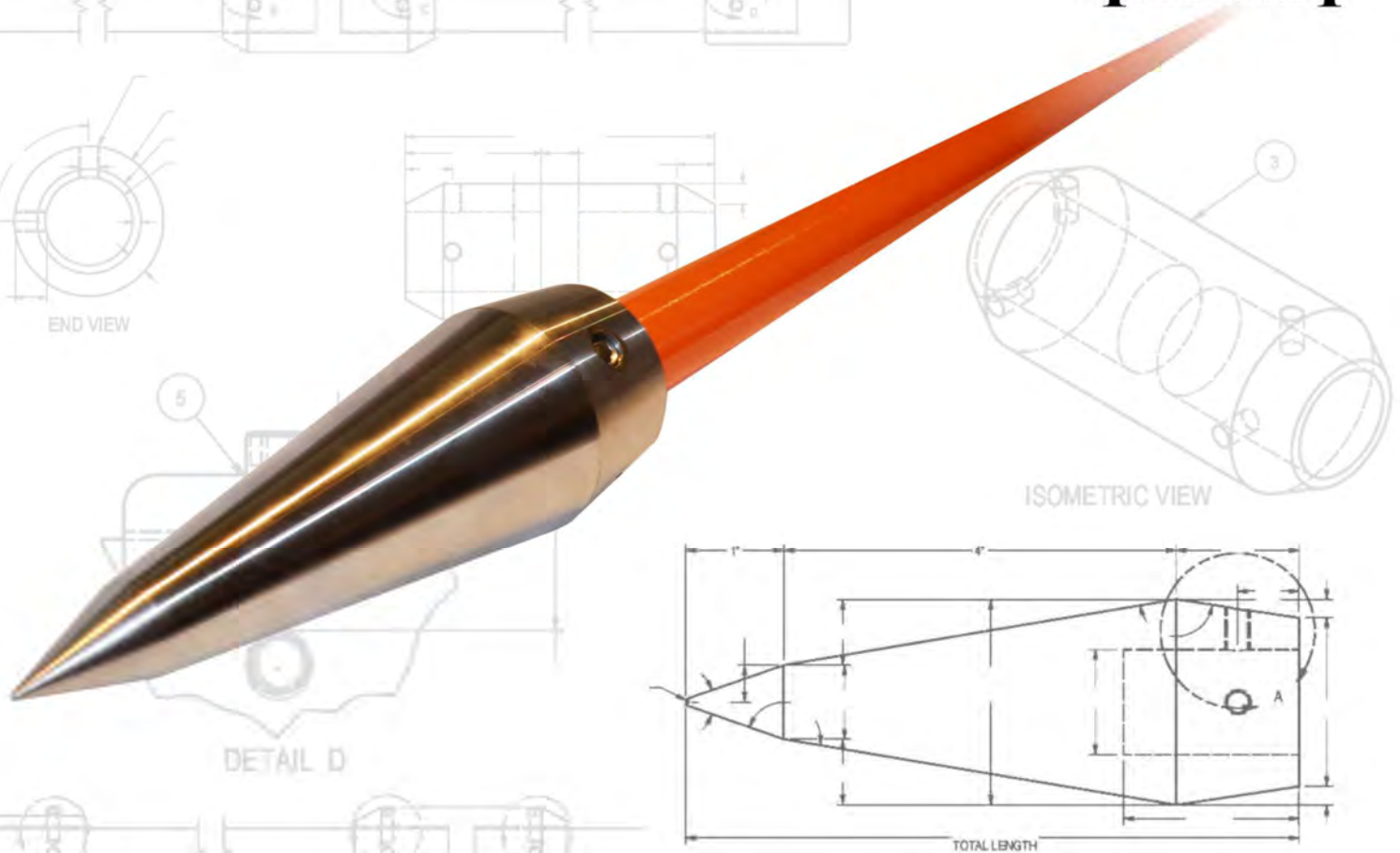


# SIDEWALK BORING TOOL

by **SamsonRiser**™



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## INSTRUCTION MANUAL

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# Contents

Safety .....	2
Components .....	4
Site Preparation .....	5
Operation.....	6
Maintenance.....	8
Warranty .....	9

If any parts are missing or damaged, or if you have any questions, please reach out to us at:

**[contactus@samsonriser.com](mailto:contactus@samsonriser.com)**

Supplementary videos available at: **[samsonriser.com](http://samsonriser.com)**



# Safety

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## READ ALL INSTRUCTIONS BEFORE USE



The *Sidewalk Boring Tool* is a safe and easy-to-use tool when used properly. To reduce the risk of injury or damage, only use this tool after the following instructions and safety messages have been read and understood. These, however, do not cover all possible situations and common sense is involved in safe use.

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## Call Before You Dig

Always contact your local Utilities Locate service before starting a digging project. In the United States, dial **811** to contact DigAlert. The North America One-Call number is **1-888-258-0808**. In other countries, or for utilities that do not subscribe to the One Call system, consult local utility resources.

- Contact with buried utilities can cause serious injury death
- Only select a bore path that will not intersect buried utilities
- Ensure a safe distance from utilities for any digging

## Personal Protective Equipment

Always wear:

- Safety footwear
- Safety Goggles that comply with ANSI safety standard Z87.1
- Work Gloves
- Hearing Protection
- High visibility clothing when working near traffic
- Any additional personal protective equipment otherwise required

## Sledgehammer Safety

- NEVER use an axe or maul as the driving source, only a sledgehammer
- Wear close-fitting clothing and confine long hair, avoid wearing jewelry
- Ensure a clear swing path before each swing
- Keep non-essential personnel clear
- If a second worker will be guiding the bore path, this must be done with a reach device from outside of the swing path
- Use proper diagonal-swing technique and take breaks as necessary
  - Bend at the knees with a wide stance
  - Keep the weight close to your body
  - Do not lift the hammer head higher than the user's head
  - Let the hammer fall of its own weight
- Only use a sledgehammer of a weight the user can safely wield (8lb is sufficient)

## **Check Equipment Before Use**

Be sure that all components of the *Sidewalk Boring Tool* are in good operating condition. This includes a visual inspection of the tool before use for any structural changes:

- DO NOT use the tool if there are signs of failure, such as cracks, and contact the manufacturer for service
- DO NOT make any modifications to the *Sidewalk Boring Tool* unless specifically recommended by the manufacturer

NOTE: although the bore head is manufactured from heat-treated and stress-relieved steel, it is possible that the tip of the head may be bent or dulled when driving through a difficult obstruction. If this occurs, the tool is still safe to use, but the tip may be reground to restore the tool's ability to drive through rocks and obstacles with exceptional ease (*see page 8*).

Be sure that all additional tools used in the boring operation are in good operating condition. This includes a visual inspection of each tool both before and during use:

- DO NOT use a sledgehammer that has a crack in its handle
- DO NOT use a sledgehammer that has a crack or chip in its head
- Ensure that the sledgehammer head remains securely attached to the handle after each swing

Ensure that the *Sidewalk Boring Tool* is assembled according to the instructions included in this manual before use.

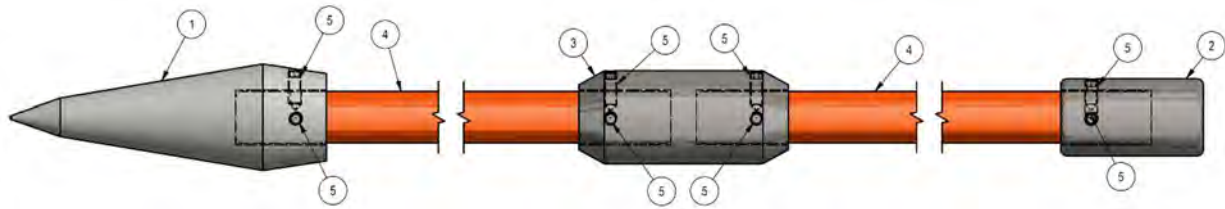
- DO NOT allow the sledgehammer to contact any part of the *Sidewalk Boring Tool* other than the Impact End.

## **SAVE THESE INSTRUCTIONS FOR REFERENCE**

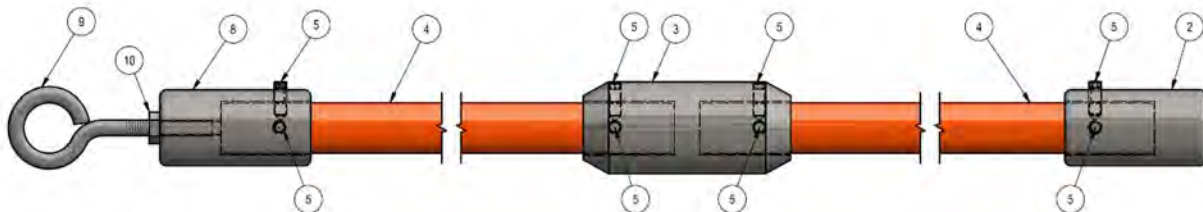
Keep this manual with the equipment at all times.  
This manual must accompany the tool in the case of resale.

# Components

## Boring Setup



## Retrieval Setup



No.	Description	No.	Description
1	Boring Head	5	Set Screw
2	Impact End	8	Pullback Tool
3	Shaft Coupler	9	Eye Bolt
4	Shaft	10	Eye Bolt Nut

## Also Included in Kits

- 3/16" Allen Wrench
- Paper clip (for cleaning out dirt)

## Additional Tools Required

- Shovel
- Sledgehammer (standard 8lbs recommended)
- Blocks or Rake (for guiding the *Sidewalk Boring Tool*)

## Optional Tools

- Bubble Level (if bore angle is important)
- Cable Pulling Sock and screw-pin anchor shackle (if reverse feeding pipe/conduit)

# Site Preparation

## 1. Create Bore Plan

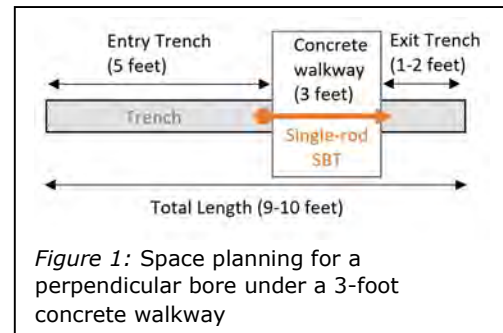
- Entry Trench: 5 feet
- Exit Trench:
  - 1-foot if feeding the pipe through the entry trench
  - 2-foot if using the Pullback tool and feeding pipe through the exit trench
- Environmental space for swinging the sledgehammer.

Shortest bore path: perpendicular to the edge of the sidewalk

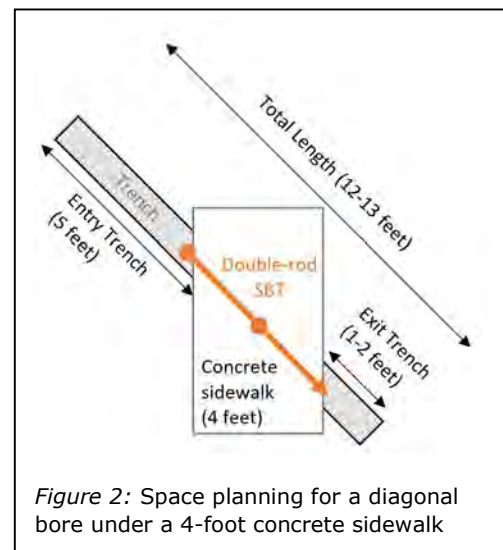
- a single 3-foot shaft is able to bore under most walkways in this fashion (*Figure 1*).

Maximum bore length: use Shaft Coupler to connect 2 shafts for a bore up to 6-feet long.

- Used to bore under walkways up to 6 feet wide, or under a standard 4-foot sidewalk on a 45° angle (*Figure 2*)



*Figure 1*: Space planning for a perpendicular bore under a 3-foot concrete walkway



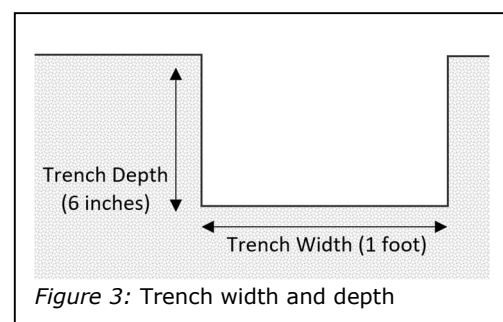
*Figure 2*: Space planning for a diagonal bore under a 4-foot concrete sidewalk

## 2. Dig Trenches

- Trench Width: 1 foot
- Trench Depth: 6 inches

Although a trench of any depth can be used, we recommend a depth of at least 6 inches to protect the concrete from inadvertent damage (*Figure 3*).

If sandy soil is causing the bore tunnel under the concrete to collapse, the pullback tool can be used to reverse-feed the pipe through the exit trench (see page 7). We do not recommend boring too close to the concrete with the intent of avoiding tunnel collapse.



*Figure 3*: Trench width and depth



# Operation

## 1. Assemble Tool

- NOTE: Ensure parts are clean of dirt
- Insert shaft into the Impact End
- Use 3/16" Allen Wrench to LIGHTLY tighten the two Set Screws in Impact End
- Repeat for Boring Head (Figure 4)
- DO NOT overtighten Set Screws. They are designed so that their hold is not based on tightness, and over-tightening will increase the risk of the screws seizing in place
- DO NOT use the Shaft Coupler to attach an additional shaft at this stage

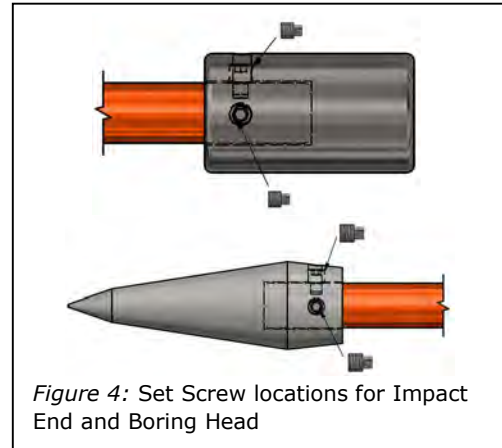


Figure 4: Set Screw locations for Impact End and Boring Head

## 2. Prepare to Bore

- Place *Sidewalk Boring Tool* into trench with Impact End Set Screws facing upwards
- Using blocks or a rake, prop up middle of tool shaft at the desired depth (Figure 5)
  - ⚠ NEVER hold the shaft by hand when sledgehammer is being used
- Set boring head into the soil wall by hitting the Impact End a few times with sledgehammer
- Optionally use a level to establish bore angle

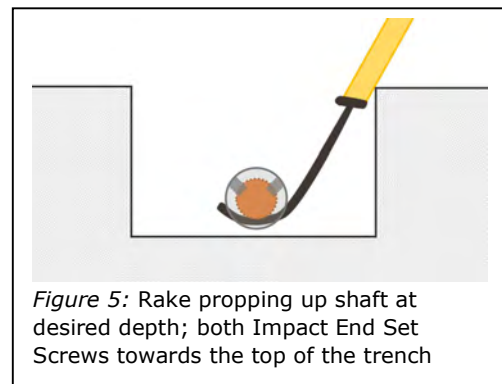


Figure 5: Rake propping up shaft at desired depth; both Impact End Set Screws towards the top of the trench

## 3. Boring

- Use sledgehammer to hit the Impact End and drive the *Sidewalk Boring Tool* along the planned bore path under the concrete (Figure 6)
  - ⚠ Keep guide outside of swing path and remove when no longer needed

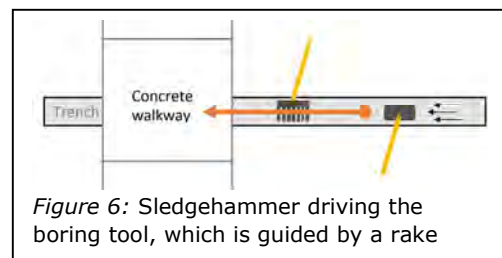


Figure 6: Sledgehammer driving the boring tool, which is guided by a rake

### OPTIONAL – Add Extension

- Once the Impact End of the first shaft is near the concrete edge, detach the Impact End
- Use the Shaft Coupler to attach ONE additional shaft using the above assembly guide (Figure 7)
- Attach Impact End to second shaft and continue driving tool until bore is complete

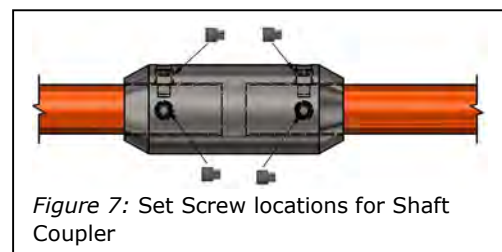


Figure 7: Set Screw locations for Shaft Coupler

## 4. Remove Tool and Insert Pipe

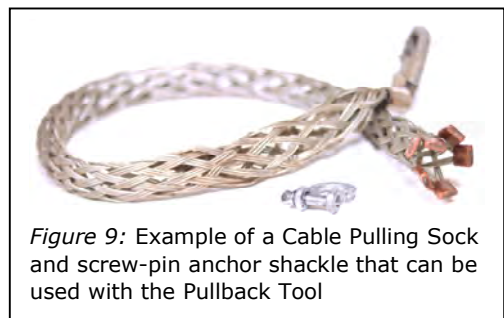
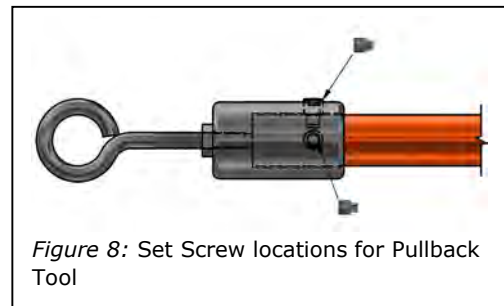
- NOTE: the bore tunnel produced by this tool can accommodate a pipe, or combination of pipes, with an exterior diameter less than 1.9 inches. Maximum recommended pipe diameters are:
  - 1¼” PVC (SCH 40 and 80)
  - 1¼” ABS (SCH 40 and 80)
  - 1¼” Polyethylene
- Based on the soil type and how well the bore tunnel resists collapse, there are two methods that can be used to install pipe into the bore tunnel
  - Not recommended for used on frozen ground

Entry Trench: loamy/clay soil that resists collapse

- Drive the tool until the Set Screws in the Bore Head are accessible in the exit trench
- Remove the Bore Head
- Pull the shaft backwards towards the entry trench (removing the second shaft and Shaft Coupler when accessible, if applicable) and remove the tool from the trench
- Lay the pipe for installation into the trench and guide it by hand through the bore hole

Reverse-Feed Exit Trench: for sandy/gravelly soil prone to collapse

- Drive the tool until the Set Screws in the Bore Head are accessible in the exit trench
- Remove the Bore Head and attach the optional Pullback Tool using the assembly guide (*Figure 8*)
- Using a screw-pin anchor shackle, attach a Cable Pulling Sock of the appropriate diameter (not included, *Figure 9*) to the Pullback Tool
- Place the Cable Pulling Sock over the pipe to be installed on the exit-side of the bore
- Pull the shaft backwards towards the entry trench (removing the second shaft and Shaft Coupler when accessible, if applicable), pulling the pipe through bore tunnel at the same time
- Remove the sock from the now-installed pipe



Installation videos available at: [samsonriser.com](http://samsonriser.com)



# Maintenance

The robust design of the *Sidewalk Boring Tool* means only limited maintenance is required to maintain peak performance and usability.

## Clean out Dirt

Before and after each use, ensure dirt is cleared out from areas where different tool components join. This can be done with small tools, such as an unfolded paper clip (*Figure 10*) or a flat-head screwdriver. These areas include:

- Allen key sockets in Set Screws
- Inside shaft-seats of Bore Head, Impact End, and Shaft Coupler
- Shaft ends
- Screw Threads and Shaft Holes (if needed)
  - ⚠ DO NOT use lubricants as they will attract dirt



Figure 10: Cleaning out sockets in Set Screws with an unbent paper clip

## Regrind Bore Head

Although the bore head is manufactured from heat-treated and stress-relieved steel, it is possible that the tip of the head may be bent or dulled when driving through a difficult obstruction.

If this occurs, the tool is still safe to use, but the tip may be reground to restore the tool's ability to drive through hard soils, rocks, and obstacles with ease (*Figure 11*).



Figure 11: Used Bore Heads with original tip (left) and with a reground tip (right)

## Rust

The heat-treated and stress-relieved steel used to manufacture the *Sidewalk Boring Tool* was specifically chosen for its strength and use in this application. However, similar to high-strength knives, this steel is not completely stainless and can rust. Such rust will not inhibit the performance of the tool and is not a cause for concern. Care should be taken to ensure the tool is dry for storage after use.

# Warranty

## Two (2) Year Limited Warranty

SamsonRiser warrants each new *Sidewalk Boring Tool* of our own manufacture to be free from defects in material and workmanship, under normal use and service for a period of TWO (2) years from the date of original retail purchase.

Subject to the conditions and limitations described below, this product, if returned to SamsonRiser with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. SamsonRiser will bear the cost of any repair or replacement and any costs of labour relating thereto. SamsonRiser will be responsible for the cost of shipping the repaired or replaced product to the Buyer within the United States or Canada.

### **This Warranty is subject to the following conditions and limitations:**

- a) A bill of sale verifying the purchase and the purchase date must be provided;
- b) A written authorization is first obtained from SamsonRiser prior to the return of any parts;
- c) This warranty will not apply to any parts that are worn, broken or that have become inoperative due to abuse, misuse, accidental damage, neglect, or lack of proper installation, operation or maintenance (as outlined in the instruction manual);
- d) This warranty will not apply to normal wear and tear, or rust, or to expendable parts that may be supplied with the product and that are expected to become inoperative or unusable after a reasonable period of use;
- e) This warranty will not apply to routine wear or deformation of the Boring Head tip, nor the regrinding of this tip;
- f) This warranty will not apply to routine maintenance and consumable items, including, but not limited to, cleanings and adjustments;
- g) This warranty will not apply where damage is caused by repairs or alterations made or attempted by those other than SamsonRiser;
- h) This warranty will not apply to any product that was sold to the Buyer as a reconditioned or refurbished product (unless specified otherwise in writing);
- i) This warranty will not apply to any part if it has been damaged by, or its performance negatively affected by, any part supplied from anywhere other than SamsonRiser, including DIY shafts;
- j) This warranty will not apply to normal deterioration of the exterior finish, including, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and
- k) This warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under that product manufacturer's warranty, if any.

### **Additional Limitations**

This warranty applies only to the original purchaser, and cannot be transferred. This warranty and any possible liability of SamsonRiser hereunder is in lieu of all other warranties, express, implied, or statutory, including, but not limited to, any warranties of merchantability or fitness for a particular purpose. No person is authorized to give any other Warranty, or to assume any additional obligation on SamsonRiser's behalf unless made in writing, and signed by an officer of SamsonRiser.

Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, but not limited to, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product. The parties agree that the Buyer's sole and exclusive against SamsonRiser, whether in contract or arising out of warranties, representations, instructions, or defects shall be for the replacement or repair of defective parts as provided herein. In no event shall SamsonRiser's liability exceed the purchase price of the product.

Equipment and accessories not of our manufacture are warranted only to the extent of the original Manufacturer's Warranty and subject to their allowance to us, if found defective by them.

### **Notice to Buyer**

This warranty gives you specific legal rights, and you may have other rights, which may vary from location to location. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable legislation.

SamsonRiser  
**contactus@samsonriser.com**