A 55 year old male employee was fatally injured when a section of the tree he was removing fell and hit the ladder he was standing on which knocked him to the ground. A homeowner had contracted with a person (Ferrante Clemmons) to contour the home's yard for drainage, build a masonry wall and expand a concrete driveway. In addition, another person (Jeremy Brittenum) was on site to do grading work, straw, and seeding the lawn. The homeowner also wanted a tree removed from the back yard and asked the concrete man to do it; to which he declined. The other person on site stated that he would remove the tree for extra money.

It was decided to remove the tree in sections rather than to fell it; so the day before the accident, Mr. Brittenum had cut most of the limbs and branches off the tree with help from a laborer he hired to assist on the ground. On the morning of the accident, Mr. Brittenum started to cut the tree trunk and began feeling uncomfortable. About the same time this was happening, the concrete man returned to the site to check on his employee (James Clemmons) who was erecting a masonry wall under/in the vicinity of the tree being cut. He stopped the work and asked Mr. Brittenum to have a professional crew cut the tree because he did not think Mr. Brittenum had the proper tools to finish the job. Mr. Brittenum was adamant that the tree could be removed and asked James Clemmons (concrete man's helper) if he would finish removing the tree if he was provided the equipment for \$100; to which he agreed.

The victim then positioned a 22' Werner Aluminum Telescoping Multi-Position Ladder at a height of approximately 14' above the ground. He climbed and secured himself to the extension ladder and the tree by wrapping a Secure-it 14' Tow Rope with steel forged hooks around his waist twice, running the strap in-between the side rails and ladder rungs, wrapped the strap around the 18" diameter tree trunk, and secured the strap with the attached hooks.

The top 13' 5" of the tree trunk had two large branches attached to the trunk. One of the branches was 2' 2" down from the top of the tree trunk and was 16' 9" long. The second branch was 4' 4" from the top of the tree trunk and was 8' long. The men tied a 1" twisted Nylon Rope 28 inches above where the victim was going to cut the tree trunk. They then secured the 1" nylon rope to a skid steer operated by Mr. Brittenum to keep the trunk under tension. Witnesses stated that they were trying to make the tree trunk fall away from the house.

After securing himself to the ladder and tree, the victim started the chainsaw and began cutting the top section of the tree trunk 14' from the base of the tree. Witnesses stated that he held the chainsaw with his right hand with his arm extended above his head. Witness stated he had his left arm hugging the tree. The tree trunk was cut at a 20 degree angle in the southeast direction.

When the 13' 5" top section began to fall, the angle cut slid the log forward off the stump, causing displacement and resulted in the log falling backwards. When the log fell backwards, it hit the victim on the ladder, breaking the tow strap, and knocked him off the ladder. The victim, the log, and the ladder fell 14' to the ground below.

Since Mr. Brittenum hired the victim away from the other employer on site to finish the tree job, TOSHA considered Mr. Brittenum dba New Creations the employer at the time of the accident.

## Citation(s) as Originally Issued

A complete inspection was conducted at the accident scene. Some of the items cited may not directly relate to the fatality.

## <u>Citation 1 Item 1</u> Type of Violation: Serious \$4000

TCA 50-3-105(1): The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees:

In that an employee was exposed to a 14 foot fall hazard while standing on a ladder leaned against a tree using a chain saw to remove the top section of the tree trunk.

Among other methods, one feasible and acceptable means of abatement would be to follow ANSI Zl33-2012 (Standard for Arboricultural Operations - Safety Requirements) and Husqvarna 450 Rancher II Operator's Manual.

## <u>Citation 1 Item 2</u> Type of Violation: Serious \$4000

TCA 50-3-105(1): The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees:

In that an employee was exposed to being struck by the top section of the tree trunk being removed with a chain saw while cutting a large section of tree trunk.

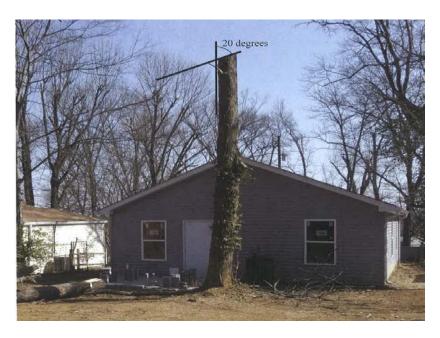
Among other methods, one feasible and acceptable means of abatement would be to follow ANSI Z175.1-2012 (Standard for Internal Combustion Engine Powered Hand-Held Chain Saw Safety and Environmental Requirements), ANSI 2133-2012 (Standard for Arboricultural Operations - Safety Requirements) and Husqvarna 450 Rancher II Operator's Manual.

## Citation 1 Item 3 Type of Violation: Serious \$900

29 CFR 1910.135(a)(l): The employer did not ensure that each affected employee wore a protective helmet when working in areas where there is a potential for injury to the head from falling objects:

In that the employer failed to ensure that employees wore a protective helmet (hard hat) when exposed to the struck-by hazard of falling tree limbs while performing manual tree removal.

This photo shows the tree trunk was cut with one straight cut at a 20 degree angle while under tension with a rope and bobcat.



This photo shows the location where the victim (red arrow), log (blue arrow), and chain saw (green arrow) fell. Metro police took the picture at the time of the accident when first responders arrived at the scene.



This photo shows the skid steer that was used to keep the tree trunk under tension. The employees tied a 1 inch twisted Nylon Rope 28 inches above where the victim cut the tree trunk. The employees then secured the 1 inch nylon rope to a skid steer to keep the trunk under tension. The tree trunk cut under tension caused the trunk to barber chair and contributed to the tree log spring back hitting the victim.

