

INCIDENT FACTS

REPORT #:

71-183-2019

REPORT DATE:

June 3, 2019

INCIDENT DATE:

August 28, 2017

VICTIM:

23 years old

INDUSTRY:

Site preparation contractors

OCCUPATION:

Equipment operator/spotter

SCENE:

Construction job site of sewer installation project.

EVENT TYPE:

Struck by/crushed



View from excavator cab. The spotter was in the trench to the right in the operator's blind spot.

[For a slideshow version, click here.](#)



This narrative is an alert about the serious traumatic injury of a worker and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or the cause of the injury. Developed by WA State Fatality Assessment and Control Evaluation (FACE) Program and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. The FACE Program is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH grant# 5U60OH008487). For more information visit www.lni.wa.gov/Safety/Research/FACE.

Spotter Crushed between Excavator Bucket and Trench Box

SUMMARY

A 23-year-old construction worker was severely injured when he was pinned between the bucket of an excavator and a trench box. He was spotting the lowering of a sewer pipe.

He had worked two years for his employer, a site preparation contractor and been an equipment operator for eight years.

On the day of the incident, he was working with a crew to install underground sewer pipes at a community college. The crew consisted of an excavator operator and three ground workers. This was the first day that the victim and the operator worked together.

The excavator operator stacked two trench boxes into a 20-by-5-foot trench that was 14 feet deep. At their pre-task meeting they decided that the pipelayer would be inside the trench box and the two other workers

would be outside on either side acting as spotters while the operator lowered the pipe into it. The worker on the left side of the trench, as viewed from the excavator's cab, rigged the pipe to a sling suspended from the bucket. He helped guide the pipe as the operator raised the excavator's boom and slowly swung the pipe from the left toward the trench box.

When the suspended pipe was over the trench, the two spotters steadied it. As the operator began to lower the pipe, the victim was standing next to the box watching the pipe descend. As he was doing his, the bucket pinned the middle of his body against the top of the box. He suffered severe crushing injuries to his abdomen.

State investigators found that the victim was standing in the area of the excavator bucket's swing and that he was in the operator's blind spot behind the bucket. The normal practice for this company was to remove the bucket when hoisting loads. In addition, the crew reported there was sense of urgency to get the job done quickly.

REQUIREMENTS

Keep away from the range of the shovel's swing and do not stand in the line with the swing of the dipper (commonly known as the bucket) during operation or moving of shovel.

See [WAC 296-155-77100\(3\)\(d\)](http://www.wa.gov/wac/296-155-77100(3)(d))

RECOMMENDATIONS

FACE investigators concluded that, to help prevent similar occurrences:

- Pre-plan a job task to ensure safety of the crew. For example, in this case the task could have been accomplished by having only one spotter/signal person and no one in the trench.
- Ensure all ground workers are aware of the excavator's swing areas and blind spots when hoisting materials and stay outside of these areas.
- Before hoisting materials, review and confirm communication signals between the equipment operator and workers on foot.

RESOURCES

Preventing Injuries When Working with Hydraulic Excavators and Backhoe Loaders (NIOSH)
www.cdc.gov/niosh/docs/wp-solutions/2004-107



The "x" indicates the location of the victim.