

Cal/Amp® | Lo/Jack®

The LoJack  
Corporation Study  
on Construction  
Equipment Theft

A photograph of a yellow excavator bucket dumping a load of dark, granular material into the bed of a yellow dump truck. The scene is set at a construction site with a cloudy sky in the background. A large red diagonal line separates the text on the left from the photograph on the right.

2016



# About Construction Theft

The construction industry continues to be robust. The U.S. Census Bureau notes a 5% increase in construction spend compared to May 2016<sup>1</sup>. The bottom lines of contractors and rental companies are affected not only by the financial loss of thefts, but the impact on revenue from project delays.

A 2014 National Insurance Crime Bureau (NICB) and National Equipment Register (NER) study<sup>2</sup> indicated that an estimated \$300 million to \$1 billion is lost nationwide due to construction theft and that only 23% of it is ever recovered by law enforcement.

Despite the industry's investment in equipment, no central repository of information exists to document the number of thefts, recoveries and economic impact. Even the FBI notes that they do not track these type of thefts.

“\$1 billion is lost nationwide due to construction theft”

The LoJack Corporation would like to document and report on its compiled statistics from states and communities where construction thefts have occurred, and where police have succeeded in recovering equipment equipped with the LoJack<sup>®</sup> System for Construction and Commercial Vehicles and Equipment (LoJack<sup>®</sup> System)<sup>3</sup>.

1. Source: <https://www.census.gov/construction/c30/pdf/release.pdf> 2. \*NICB: NER / NICB 2014 Equipment Theft Report. (2015, October 1). PDF format. Retrieved from <https://www.nicb.org/newsroom/news-releases/2014-heavy-equipment-theft-report>  
3. Statistics from the 2016 LoJack Corporation Study on Construction Equipment Theft represents an analysis of twelve months of construction equipment recovery data by LoJack Corporation. The data was gathered from January through December 2016 and based on information from LoJack tracked theft reports in LoJack coverage areas (see [www.lojack.com/coverage](http://www.lojack.com/coverage)) where equipment theft was reported and where construction equipment outfitted with a LoJack<sup>®</sup> System helped police to recover the stolen assets.

# 2016 Study Overview: Construction Equipment Theft

During the 12-month period from January through December 2016, LoJack tracked theft reports in LoJack coverage areas ([www.lojack.com/coverage](http://www.lojack.com/coverage)) where equipment theft was reported and where construction equipment outfitted with the LoJack® System led police to recover the stolen assets. In those 29 states:

- In 2016, more than \$6,056,738<sup>1</sup> worth of assets were recovered on construction equipment which had the LoJack System installed. The estimated replacement value would have been \$10,625,044<sup>1</sup>.
- Since the study began, more than \$186,691,193<sup>2</sup> worth of stolen heavy equipment were recovered due to having the LoJack Stolen Vehicle Recovery System installed.

The LoJack data was collected over the past 16 years with 2016 statistics specifically being documented in this study. It illustrates a number of trends that may be useful to law enforcement, equipment owners and equipment renters in the ongoing fight against commercial theft. However, LoJack realizes that the scope of the company's research is only a snapshot and cannot paint a complete picture of construction theft in the United States.

1. 2016 LoJack proprietary theft and recovery data with value of assets determined using information obtained from EquipmentTracker.com, MachineryTracker.com and National Automobile Dealers Association (NADA).

2. LoJack proprietary theft and recovery data with value of total assets determined using information obtained from EquipmentTracker.com, MachineryTracker.com and National Automobile Dealers Association (NADA) from year to year since 2000.



# Most Common Stolen Equipment

Below, the equipment recovery data (ranked by frequency of theft) illustrates the most common types of equipment thieves targeted in 2016<sup>1</sup>. The replacement costs for the equipment recovered in 2016 was almost \$11 million.

## **Wheeled and Tracked Loaders 36%**

Loaders, whether on wheels or tracks, are used to shovel or move material (dirt, demolition debris, etc.) around job sites or piles into dump trucks. Estimated replacement cost: \$77,404.07<sup>2</sup>

## **Towables 35%**

This class of equipment is towed to locations via truck hitch or on a trailer – hence “towables.” These items are typically generators, air compressors, light towers, cement mixers and welders. Towables are often rented and have a high market value, even in the residential market (such as generators). Estimated replacement cost: \$22,737.40<sup>2</sup>

## **Skid Steer Loaders 15%**

This type of construction equipment is small yet versatile and easily moved between job sites. There are typically more than one per location if the project is large enough. These specialty vehicles have a range of powered attachments, such as a small crane, forklift, hole auger and other landscaping tools. Estimated replacement cost: \$36,532.71<sup>2</sup>

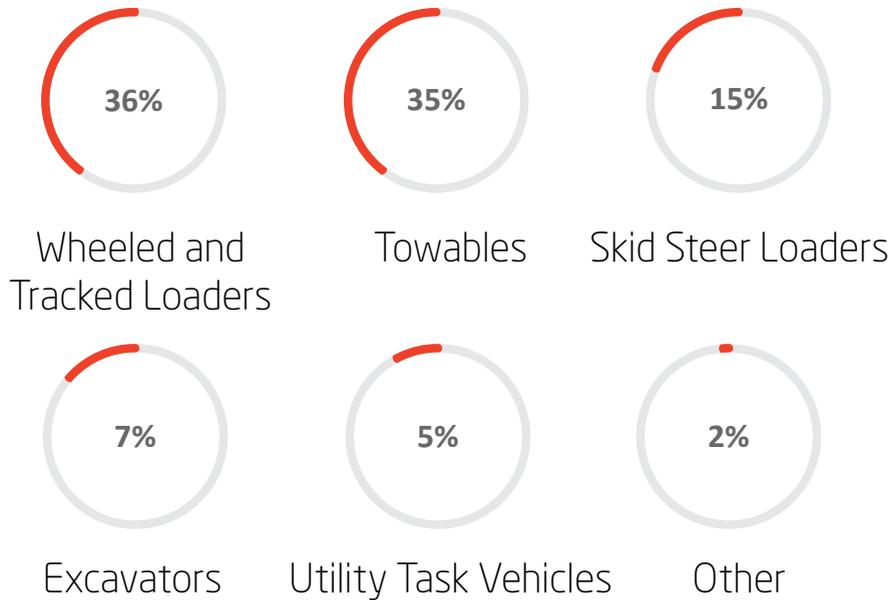
## **Excavators 7%**

As the name suggests, excavators are typically used to dig holes; however, they can be outfitted with attachments to move heavy items or perform specialty tasks like brush clearing or demo. It consists of two parts, a driving

base with a cab for the operator and the boom arm. This equipment (regular and mini) is seen on sites ranging from mining to construction to basement waterproofing. The smaller versions are often rented to small contractors or homeowners. Because of their many uses, they are common targets for thieves. Estimated replacement cost: \$44,980.38<sup>2</sup>

### UTV 6%

Utility Task Vehicles are used for more than getting from point A to point B. UTVs can be equipped with front-mount attachments. There are even after-market kits to convert the tires to tracks. Obviously, their demand in the residential market as well as construction fuel the risk of being stolen. Estimated replacement cost: \$11,308.67<sup>2</sup>



1. Source: 2016 Lojack proprietary theft and recovery data. Percentages are rounded to the nearest whole. 2. 2016 Lojack proprietary theft and recovery data with value of assets determined using information obtained from EquipmentTracker.com, MachineryTracker.com and National Automobile Dealers Association (NADA). Estimated replacement cost was determined by averaging the value of equipment recovered.vv

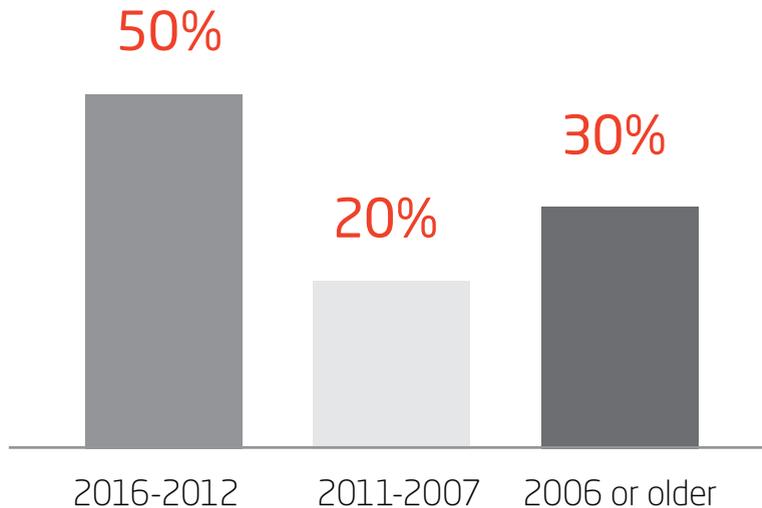


# Model Year Influences Thieves

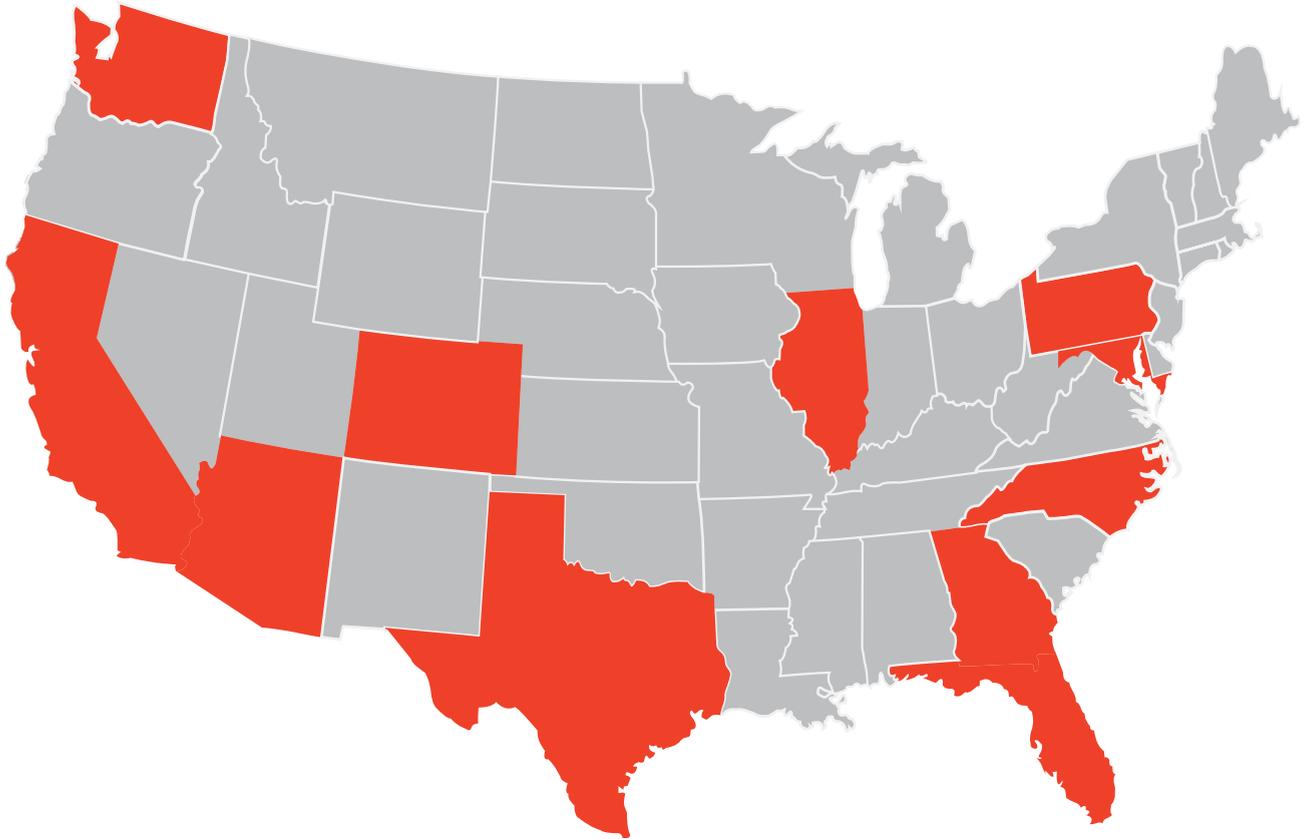
While newer models had a higher risk of theft in 2016, equipment from 2011 and 2006 were of interest to thieves.

Some reasons for theft include resale opportunity, valuable parts or organized crime. Equipment value may be affected by asset age, less wear-and-tear (engine hours, mileage, tread, tire wear, etc.), mechanical updates and market demand.

In 2016, 50% of the equipment taken was five years or newer. This typically means that owners are taking a big hit as they are still making payments on their purchase.



Source: 2016 Lojack proprietary theft and recovery data. Percentages are rounded to the nearest whole.



■ States with highest number of equipment thefts<sup>1</sup>

# Top States for Equipment Theft

A Dodge Data & Analytics report showed for commercial and multifamily housing construction the top twenty metropolitan statistical areas (MSAs) in 2016 (ranked on the dollar amount of project starts)<sup>2</sup>. The top five MSAs for ongoing construction were: New York, Los Angeles, Chicago, Washington DC and Dallas-Fort Worth.

The LoJack proprietary theft and recovery data<sup>3</sup> mirror some of the above top construction project MSAs list for the occurrence of equipment theft. Many of these states have active ports or have access to the borders, which could make it easier to sell the stolen items. Based on LoJack's theft and recovery data, the states with the highest number of equipment thefts were:

“Many of the high theft risk states have active ports or access to the country's borders”

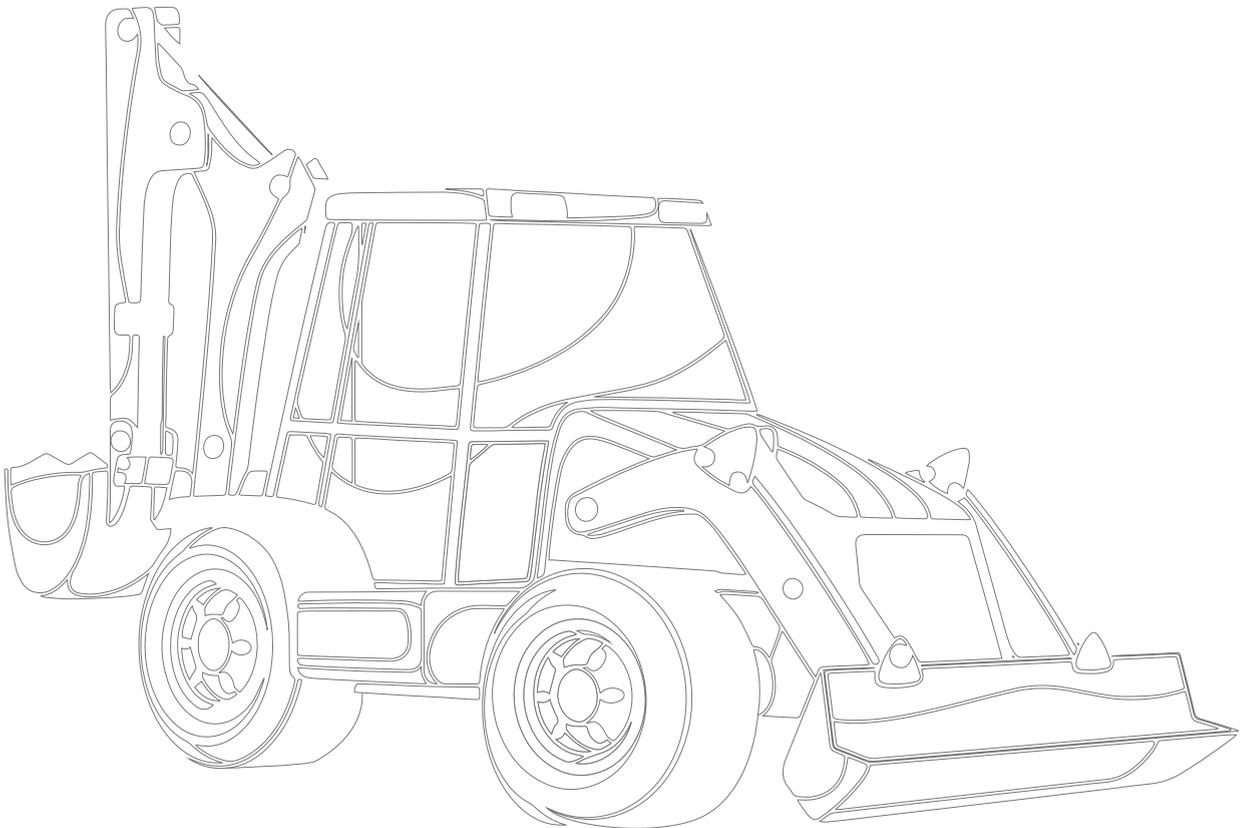
- |               |                   |
|---------------|-------------------|
| 1. California | 7. Illinois       |
| 2. Texas      | 8. Maryland       |
| 3. Florida    | 9. North Carolina |
| 4. Georgia    | 10. Pennsylvania  |
| 5. Arizona    | 11. Washington    |
| 6. Colorado   |                   |

1. 1. California, 27%; Texas, 23%; Florida, 16%; Georgia, 5%; Arizona, 4%; Colorado, Illinois, Maryland, North Carolina, Pennsylvania, Washington, 3% 2. Dodge Data & Analytics. (2017, March 8). Commercial and Multifamily Construction Starts in 2016 Rise in Most of the Top U.S. Metropolitan Areas [Press release]. Retrieved July 27, 2017, from <https://www.construction.com/news/commercial-and-multifamily-construction-starts-in-2016-rise-in-most-of-the-top-us-metropolitan-areas>  
3. Source: 2016 LoJack proprietary theft and recovery data.

# Equipment Theft is Localized

While there is organized crime in the mix, construction asset theft tends to be local in nature. It continues to happen on local job sites in metro areas that share state borders.

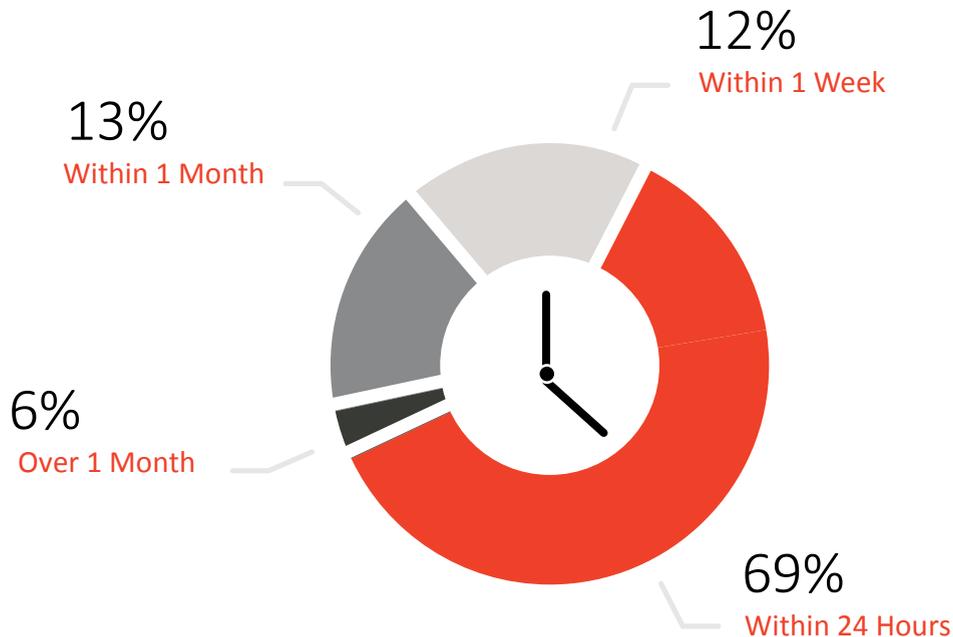
Based on the 2016 LoJack data, in almost 97% of the stolen and recovered cases, the equipment was retrieved in the same state. In a few cases, recovery occurred in an adjacent state.



# Recovery Within a Day was Common

The faster equipment is recovered, the less likely it is to be damaged or sold. In 2016, of the recovered construction equipment installed with the LoJack® System, 69% were recovered within 24 hours or less after being reported to law enforcement as stolen.

Note that a longer recovery time period may be a result of a required police investigation or if the construction equipment is outside the LoJack coverage area. Not all of the construction equipment is recovered.

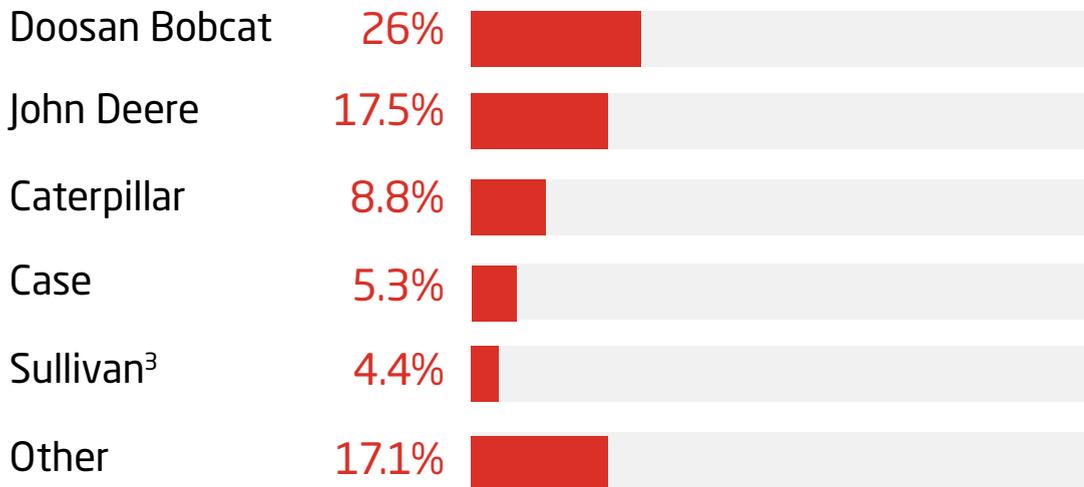


1. Source: 2016 LoJack proprietary theft and recovery data. Percentages are rounded to the nearest whole.

# Top Manufacturers Stolen

The 2016 KHL Yellow Table<sup>1</sup> indicated Caterpillar was the top worldwide manufacturer of construction equipment. John Deere ranked seventh while Doosan Infracore was eighth. Rankings were based on share of global industry sales.

The Lojack theft and recovery data partially mirrors the KHL Yellow Table and below are the top five most common manufacturers of the stolen equipment in 2016<sup>2</sup>.



1. Doyle, M. G. (2016, March 28). KHL: Global construction equipment market down 16.2%; Cat retains no. 1 spot. [i]Equipment World[/i]. Retrieved August 11, 2017, from <http://www.equipmentworld.com/khl-global-construction-equipment-market-down-16-2-cat-retains-no-1-spot/> 2. Source: 2016 Lojack proprietary theft and recovery data. Percentages are rounded to the nearest whole.

3. Sullivan Air Compressors

# Top Months for Theft

The 2016 study showed that January and May were the top months for construction equipment theft. This could be due to more unattended job sites in the winter or the restart of work in the northern climates. More thefts overall did occur between January and and June.



Source: 2016 Lojack proprietary theft and recovery data.

# Ways to Protect Your Construction Assets

The information from this study and others highlight why construction theft is troubling for the industry and law enforcement. It is important to implement processes, physical restraints and technology solutions in order to protect your construction equipment and vehicles.

## Process And Restraint



- Create inventory records
- Secure machine identifiers in various locations on the equipment
- Hire security over long weekends and holidays to watch the jobsite



- Properly vet and screen employees as well as verify authorized personnel including drivers
- Lock up keys, perhaps even off site
- Control jobsite access points



- Circle larger equipment around smaller assets
- Chain pieces to each other
- Invest in lighting, fencing and cameras

## Technology Solutions

Asset telematics provides access to various types of information useful during a suspicious event. Location mapping gives visibility to the fleet. Defining geozones allows for alerts to be sent when an asset goes in or out of a specified area.

The wired telematics device CAN bus transmits ignition on/off data and the software determines if this information falls outside of normal parameters, such as time of day. This virtual monitoring helps to secure your construction fleet.

*“Technology alerts are valuable during and after an event”*

Technology is also important during recovery. The hidden devices are difficult to find and remove. And, as with telematics, location data makes it easier pinpoint. With the LoJack® System for Construction and Commercial Vehicles and Equipment (LoJack® System), there is the additional benefit of having law enforcement immediately notified once a theft has been made known.



# Selected LoJack Recovery Stories

## Unscheduled Light Rental

In Arizona, the manager of a construction equipment rental company contacted the Glendale Police Department to report that a 2011 Wacker light tower was stolen from one of their customers under rental contract. The equipment had been secured in a fenced area of the job site when it was stolen. Twelve minutes later, the helicopter crew and patrol officers from the Phoenix Police Department picked up the silent LoJack System signal.

The officers were able to locate the stolen equipment in the back yard of a residence, approximately three miles from the theft location. They recovered the Wacker light tower in good condition. A suspect is under investigation.

## Thieves Took a Gamble

These thieves took a gamble and lost. Sometimes what happens in Vegas, doesn't stay in Vegas. The owners of a 2011 Melroe Bobcat S175 skid steer contacted the Las Vegas Metropolitan Police Department (LVPD) to report that their construction equipment was stolen from a job site. LVPD verified the theft and entered the vehicle information into the state and federal crime computers which automatically activated the LoJack® System.

The deputies were able to observe the stolen Bobcat in a side yard. After conducting an investigation at the location, they made contact with the occupant of the residence. Deputies received permission to enter the yard and recover the stolen Bobcat. A follow-up investigation is being conducted.

# Conclusion

This report is a 12-month snapshot of LoJack's 2016 construction theft and recovery data. It indicates that construction equipment continues to be a target for thieves. They know the items can be taken with relatively minimal effort at times. Without a federally mandated registration system in place, recovery of stolen items can be more difficult as owner verification can be limited.

Note: The LoJack Corporation will release theft and recovery data and analyze trends annually. LoJack has over 30 years in tracking and recovering vehicle and equipment assets.

To learn more about asset telematics and recovery, please visit:

- <http://www.calamp.com/assetoutlook>
- <http://www.lojack.com/Construction-Commercial-Vehicles>



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