



System Performance Innovation Wire Theft FACT Sheet

Find Effective Methods to Prevent Wire Theft from Caltrans Infrastructure

Description of the Challenge or Opportunity:

Find Effective Methods to prevent Wire Theft from Caltrans Infrastructure

Understanding the motivation.

- Wire theft from the highway infrastructure has grown exponentially in the past few years. Caltrans spent \$48M in last 7 years in emergency Director's Orders to repair wire theft damages
- Caltrans took the initiative to reinforce its infrastructure with wire theft prevention methods.
 - Methods with multi-layered safeguards must be used in all phases of project delivery, design, construction, maintenance, and operations to achieve expected progress.

Information Regarding the Innovation

Defining the need.

- Keeping the Department infrastructure working efficiently is conforming to our Mission as providing a safe sustainable, integrated and efficient transportation system.
- Implementation of comprehensive multi-layered reinforcements will result in increased protection of our infrastructure, enhanced safety to our employees and travelling public, proper communication to public and significantly saving cost to Caltrans.
- Transportation system gets impacted by wire theft incidents causing outage of highway safety lighting, inoperative pump stations during flood conditions, loss of information on Changeable Message signs due to impaired communication systems, loss of communication from CCTV system to TMC and other damages.
- To achieve progress against wire theft, we initiated a policy and guidelines of effective theft prevention methods, to be used in all District projects.
- The Guidelines were developed using methodology available and the measures practiced by other Local Agencies and other State DOTs.





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Estimating the cost.

- Implementing wire theft preventive methods for new, damaged and existing installations will result in a 13 % cost savings to Caltrans for new construction (when reducing number of pull boxes installed, or using direct burial aluminum conductor, in addition to substantial saving in repairing damaged installations, such as highway lighting by using preventive methods to avoid future theft.

Quantifying the benefits.

- Using wire theft prevention methods will lead to protect the infrastructure, will save \$7M repairs cost annually, reduce Maintenance staff exposure to field hazards, and keep equipment working.

Understanding the risks.

- Provides adequate funds for successful implementation of the wire theft prevention methods and Caltrans employees
- Coordinates with California Highway Patrol to identify the theft, and enhance enforcement.

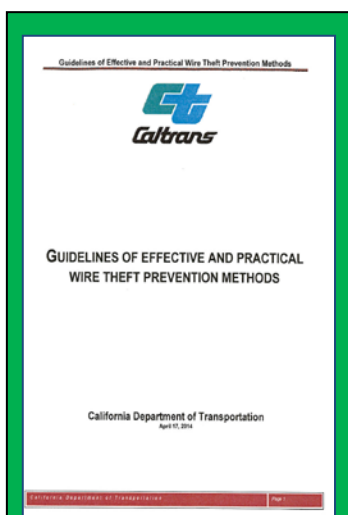
What lessons were learned?

- Wire theft had impacted several facilities leading to increased safety concerns for public

About the Originating Author/Team

- The lead effort is by the Office of Traffic Engineering, Electrical Systems, contact: Theresa Gabriel (916) 654-5039.

Guidelines



Pull Box Inserts

Pull Box Security Screws



Electronic Markers For Buried Pull Box