



PREVENTING METAL THEFT

SDPD Crime Prevention

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Appendix – Use of Cameras in Preventing Metal Theft

This paper suggests some measures that can be taken to prevent metal theft from construction sites, telecommunication sites, and commercial and residual properties. An Appendix suggests how cameras can be used at all sites.

CONSTRUCTION SITES

This section lists various measures that builders, i.e., prime contractors, and their subcontractors can take to prevent and deal with theft at construction sites. The site superintendent, who works for the builder, should be responsible for site security. He or she would develop a site security plan and see that it is followed. Some elements of a plan are suggested below.

BUILDERS

Personnel

These measures are aimed primarily at preventing theft by people who work on the site.

- Hire reliable and trustworthy subcontractors. Check their references and make sure they are insured, bonded, and licensed.
- Require subcontractors to conduct background investigations on each employee that will work in on the site. They should also require that employees pass alcohol and drug tests during their employment. Subcontractors should be prohibited from substituting a cleared employee with one that is not cleared, or subcontracting any of the services it agreed to provide.
- Hire reliable and trustworthy security guards. A builder can hire its own security personnel or subcontract with a security company for security services.

Vehicle parking

- Issue parking passes for all vehicles allowed to park on the site.
- Require that the passes be displayed on the dashboard when the vehicle is on the site.
- Have visitors park their vehicles off the site.

ID badges and visitor control

- Require everyone on the site to wear a badge. Issue photo ID badges to workers.
- Post signs to direct visitors to the site superintendent's office to register. Give visitors a dated badge to be worn on the site. Ask them to return their badges to the office when they leave the site.
- Have workers to stop anyone without a badge, and tell that person to go to the office to register and get a visitors badge.

Security checks and reports

- Conduct searches of worker's lockers, subcontractor's vehicles, and other places where stolen items might be hidden.
- Check the whole site at the end of each workday to make sure everything is put away and secure, alarms are set, and cameras are working.
- Have workers report suspicious persons or activities on and near the site. The report should contain good description of the persons, activities, and vehicles involved.
- Have workers report all vehicles parked on the site without a parking pass. The report should contain a description of the vehicle, i.e., make, model, license number, markings, etc., and its location on the site.
- Have someone check that all supplies delivered to the site are secured immediately. Supplies should arrive just before they are needed. The longer they are stored on site the greater risk of theft.

Working with the SDPD

- Call **911** regarding crimes in progress and other emergencies. Call the SDPD at **(619) 531-2000** or **(858) 484-3154** for non-emergencies. Report all suspicious persons and activities on the site. Provide good descriptions of them and their vehicles.
- File a Letter of Agency with the SDPD Division where the project is located if there have been repeated thefts, burglaries, vandalism, etc. This Letter authorizes the SDPD to act as your agent and enter the site to ask unauthorized persons to leave, and if they refuse to do so or return thereafter, to enforce any law violations on the property. The form for this Letter must be filled out on the SDPD website in the following steps and filed by clicking on Email Form on the bottom left. You can skip the first step if you know what SDPD Division covers your property.
 1. Go to www.sandiego.gov/police/pdf/2013policecitywidemap.pdf to find out what SDPD Division covers the neighborhood in which your property is located.
 2. Go to the Forms page on the SDPD website at www.sandiego.gov/police/forms/forms and click on Trespass Authorization/Letter of Agency Form.
 3. Click RESET FORM to get the start and expiration dates. The Letter must be renewed every 12 months.
 4. Use the drop down menu to enter the Police Division.
 5. Fill in the blue blanks on the form.
- In addition to filing a Letter of Agency as described above, a contractor facing continuing crime problems on the site can submit a Citizen Request Form by going to the Forms page on the SDPD website at

www.sandiego.gov/police/forms/forms, clicking on Citizen Request Form, filling out the Form online with as much information as possible about the problem, and then clicking on the Submit Request button at the bottom of the Form. You can use this Form to request additional patrol and/or to report criminal activity at a specific address. It will be sent to the responsible Division for review and response as appropriate.

- Provide the SDPD with a map of the site that shows all finished and unfinished streets, and entrances to the site. Include street addresses where they exist.
- Notify the SDPD of planned deliveries of appliances, fixtures, and other things that might attract thieves.
- Request frequent patrols of the site.

Signs

Signs can't prevent theft but they may deter thieves.

- Post NO LOITERING signs that cite Cal. Penal Code Sec. 647(h). In this subdivision "loiter" means to delay or linger without a lawful purpose for being on the property and for the purpose of committing a crime as opportunity may be discovered.
- Post NO TRESPASSING signs that cite Cal. Penal Code Sec. 602. After a Letter of Agency has been filed as suggested above, you can post NO TRESPASSING signs stating that a Letter has been filed with the SDPD. The sign would have the address of the property, the name and phone number of the property owner or manager, and the non-emergency SDPD phone number to report suspicious activities. That number is **(619) 531-2000** or **(858) 484-3154**. The signs should be at least 18 by 24 inches in size, have a font visible from the nearest public street, not be accessible to vandals, and be posted on the entrances and spaced evenly on the boundaries of the property. A sample sign is available by clicking on View a Sample Sign on the Forms page of the SDPD website at www.sandiego.gov/police/forms/forms.
- Unless cameras are monitored all the time, camera signs should use phrases like RECORDED VIDEO SURVEILLANCE IN USE or ALL ACTIVITIES ARE RECORDED TO AID IN THE PROSECUTION OF CRIMES COMMITTED ON THE PREMISES. Don't use words like SECURITY, PROTECTION, or MONITORING because they can give people a false expectation of an immediate security response when an incident occurs or that they and their property are somehow being protected by the cameras.

Site surveillance

Cameras alone can't prevent theft but if their imagery can be accessed by an off-site security company, crimes can be observed in real time and **911** called to dispatch a SDPD unit to deal with them. This procedure reduces SDPD reaction time and eliminates false alarms.

- Install cameras to cover all street entrances to the site, buildings or homes under construction, and storage areas for vehicles, equipment, and material. Buildings or homes under construction and storage areas should be well lighted at night. Cameras at the street entrances should record all vehicles and people entering and the leaving the site at night and other times when no work is going on. Cameras at buildings or homes under construction and storage areas should record all people and vehicles approaching them. Cameras should be able to read vehicle license plates.
- Have one or more security guards at the site at night and other times when no work is going on. They should patrol around or through the site at random. Or have a security patrol drive around or through the site at random times.
- Ask the residents and businesses in the area to contact the SDPD if they notice any activity on the site at night and other times when no work is going on.

Site access control

- Enclose the site with a temporary fence.
- Install temporary gates at all street entrances. Limit vehicle access to the site, preferably through one gate. Close and lock all gates at the end of the workday. Use a high tensile-strength chain and a matching security lock on the gates.

High-security storage areas

- Establish one or more high-security storage areas on the site for vehicles, sheds, containers, trailers, valuable material, uninstalled building fixtures and appliances, scrap material drop boxes, and flammable or otherwise dangerous material.
- Install bright lights and cameras in these areas.

Buildings or homes under construction

- Delay installation of fixtures and appliances until shortly before people move in.
- Keep finished buildings and homes locked, alarmed, and covered by cameras until they are occupied.

SUBCONTRACTORS

Vehicle, material, and equipment protection

- Park vehicles in front of shed, container, and trailer doors at the end of each workday so the doors cannot be opened until the vehicles are moved.
- Install anti-theft devices on vehicles, e.g., fuel cutoffs, hydraulic bypasses, track locks, alarms, etc. Lock oil and gas tank caps where possible.
- Store equipment, tools, valuable material, etc. in sheds, containers, or trailers. Lock them all at the end of each workday.
- Rent containers and trailers with doors that have built-in or external shields to protect padlocks from bolt cutters and drills. Padlocks should be located in these shields and not on external hasps where they are exposed to these tools. If padlocks cannot be shielded, use hidden-shackle padlocks with high-security hasps.
- Install burglar alarms in sheds, containers, and trailers, and put alarm company stickers on the doors. Also put on stickers stating that **RECORDED VIDEO SURVEILLANCE IN USE** or **ALL ACTIVITIES ARE RECORDED TO AID IN THE PROSECUTION OF CRIMES COMMITTED ON THE PREMISES**.
- Unload delivery trucks and store their loads before the end of each workday. Never leave a loaded truck overnight to be unloaded the next day.
- Remove equipment and materials from the site when they are no longer needed. Do not store them on the site.
- Have workers check out and return all equipment and tools they use during the day.
- Do not leave things in remote areas on the site or near the perimeter fence.
- Check that all vehicles and storage sheds, containers, and trailers are locked at the end of the workday.

Key controls

- Establish a key control system and designate someone to be in charge of it.
- Keep keys locked up when not in use. Avoid use of common equipment keys.
- Do not leave keys in unattended equipment or locks. Do not leave padlocks locks in the open position.

TELECOMMUNICATIONS SITES

Telecommunications sites typically have one or more antenna towers and an equipment room or shelter.

Site Access Control

- Install a security fence or wall around the site with appropriate security gates or doors. Fencing is preferred so the antenna tower, equipment shelter, and any people on the site can be seen from outside the site.
- The horizontal bars on the fence should be located only at the top and bottom on the inside of the fence to make climbing difficult. The fence and gate should be at least 8 ft high.
- Wrought-iron gates that are opened on the inside by a lever arm or knob should have shields on them and the adjacent fencing to prevent a person from reaching in to open them. These shields can be solid plastic or metal, or open-metal mesh. Gates with lever-arm locks should also have a cylindrical shield around the arm to prevent a person from opening the gate by inserting a thin wire with a hook at one end through, over, or under the gate to rotate the arm and thus open the gate. Gates with locks that have beveled latches should also have a

latch guard to prevent a person from inserting a thin piece of metal or anything else between the frame and the gate to push in the latch. The guard should be centered on the latch and extend at least 12 inches above and below it. A deadbolt lock would not have this problem. Gates with padlocks should use ones that are shielded or have a hidden-shackle that cannot be drilled out or cut with bolt cutters.

- Wrought-iron gates that are opened on the inside by a push or press bar should have a solid metal or plastic shield on the inside of the gate that extends at least two feet above and below the bar. The shield should be designed to prevent a person from opening the gate from the outside with a coat-hanger wire that is shaped into a U, inserted through the gate above and below the bar, and pulled against the bar to open the gate. The shield will also prevent a person from reaching in and depressing the bar. Another shield should be installed around the bar. It will prevent the use of the wire and anything else to depress the bar. The gate should also have a latch guard if it has a beveled latch.

Equipment Shelter and Antenna Tower Access Control

- Build the shelter with strong walls and roof, e.g. concrete masonry.
- Install a steel door that cannot be opened with a pry bar, drill, or other tool. Also install a security screen outside the door.
- Install bright lights and cameras in this area.
- Install a security fence around the tower like the one around the site. Install a similar security gate.

Wiring

- Use fiber-optic cable instead of copper wire.
- Use copper-clad steel or anti-theft shielded copper wire where possible.

Alarms

While they don't prevent break-ins or damage, an audible alarm tells a thief that the officers will eventually show up. This limits the time a thief spends on the site and the amount of damage that can be done.

- Install an audible burglar alarm in the equipment shelter.
- Tell its security company to call **911** first when an alarm occurs, and then notify it. This protocol reduces SDPD reaction time.
- On notification of the **911** call, someone from the telecommunications company should go to the site to let the officers in to investigate the alarm. If the thief gets over the fence or wall and into the equipment shelter, there may not be any sign of a break in and officers will leave the scene. In the meantime the thief could be in the shelter.

COMMERCIAL AND RESIDENTIAL PROPERTIES

Backflow Preventers

Commercial irrigation and domestic water backflow preventers are being stolen for their brass and copper fittings. The following can be done to prevent these thefts:

- Paint the device. Paint is a deterrent because painted metal is a little less valuable. If copper is painted black it can look like worthless plastic tubing.
- Camouflage the device. Fake rocks work well. Just make sure there is a one-foot clearance around the device.
- Hide the device. Paint it green and place it in a bush or hedge. This is a low-cost measure.
- Use a device with plastic parts. They won't be stolen because they are worthless.
- Enclose the device in a protective cage. Secure the cage to its base with a padlock that is hard to cut or else the thieves will steal the cage too.
- Install a locking-cable system with shielded-shackle locks and a concrete foundation.

Painting also informs the scrap dealer to question the seller for proof of ownership. And it can also be used to identify the owner. This would deter the thief from going to a scrap dealer who complies with the California

Business and Professions Code sections that attempt to limit the ability of a thief to convert stolen metals into immediate cash. Unfortunately, there are some rogue dealers who buy scrap metal and don't follow the law. Etch or paint some identifying words or numbers on pieces of metal that might be stolen. Or use metal products with serial numbers and other identifying symbols etched on them. This will also enable you to identify your metal if it is recovered.

Air Conditioners

The amount of copper in most air conditioners is never worth much to a thief. But it will cost you a great deal to replace the damaged unit.

- Enclose units on the ground in protective cages. Secure the cages to their bases with padlocks that are hard to cut or else the thieves will steal the cages too.
- Spray copper tubing with a florescent orange or green paint.
- Etch copper tubing with some identifying symbols.

Catalytic Converters

These are worth \$100 to \$150 to thieves but cost about \$1000 to replace. Here are some ways to deter and prevent their theft, which typically happen to high-clearance vehicles that are parking for long periods of time in large parking lots at shopping centers, mass-transit centers, and businesses.

- At shopping centers, park close to the building entrance or an access road with a lot of traffic. Park in a well-lighted area at night.
- At home, park in your garage. If you don't have a garage or can't park in it, park in your driveway under motion-detection activated lights.
- At a business, park in a fenced area that's busy during the day and is secured at night. Park low-clearance vehicles around those with high clearances.
- Install an alarm that's triggered by the slightest motion.
- If your converter is bolted on, have the bolts welded shut.
- Install an anti-theft device that will prevent the converter from being removed.
- Etch your license plate or some other identification number on the converter.

Appendix – USE OF CAMERAS IN PREVENTING METAL THEFT

Camera Installation

Because cameras are susceptible to damage by criminals attempting to hide their actions, measures should be taken to make them less vulnerable. Here are some possibilities.

- Mount cameras on high sturdy poles.
- Use damage-resistant cameras.
- Use armored conduits for electrical cables.
- Install cameras where they are within the field of view of at least one other camera.
- Use cameras with video analytics that can detect blocking, defocusing, and other tampering.

Camera System

Cameras are usually used just to record persons and activities in their fields of view. They can be wired or wireless. They can record continually, when motion is detected, at specified times, or on an alarm. After a crime occurs the imagery can be reviewed for usable evidence. Any camera system that is installed should be designed to provide high-quality, color imagery of persons and activities on the premises in any lighting condition for use by the SDPD in investigating crimes. And it should have backup power for at least 12 hours in the event of a power failure. Camera imagery should enable clear and certain identification of any individual on the premises. Cameras should be able to read vehicle license plates. Recordings should be kept in a secure place for at least 30 days.

Camera Types and Use

Cameras can be analog or digital, viz. closed-circuit television (CCTV) or Internet Protocol (IP). Imagery from both can be stored and viewed remotely over the Internet. Camera imagery can be used in several ways. In one, recorded imagery is stored for use in future crime investigations. In another, imagery is used as it is being recorded to report and deal with crimes in progress. However, because it is unrealistic to expect someone to monitor cameras all the time, the monitoring might be done at random times or when an alarm or alert condition occurs. Monitoring at random times is usually adequate for dealing with conditions that exist for several hours, e.g., illegal lodging. Monitoring when an alarm or alert condition occurs is necessary for dealing with incidents that could occur at any time and last a few minutes, e.g., a vehicle entering a construction site at night or other times when no work is going on.

Recording on Alarms and Alert Conditions

Alarms can be triggered by motion in an area covered by cameras. Either CCTV or IP cameras can be used to record on alarms. Alert conditions include vehicles entering an area, an unattended object, objects that have moved or are missing, etc. Programmable IP cameras with video-analytics software, so-called “smart” cameras, are needed to record when specific conditions occur. They have other advantages over CCTV cameras. These include higher resolution, better video quality, and video encryption.

Monitoring on Alarms and Alert Conditions

If the site has a 24/7 security guard, cameras and various alarms can be installed and monitored on site. If the monitoring is done at an off-site security company or on a web-enabled mobile device, the imagery would be accessed over a secure, password-protected Internet link. If a crime in progress is seen, **911** would be called and the dispatcher given the details. This will lead to a higher call priority and a faster response than would occur for an unverified alarm call. Also, the dispatcher can relay real-time information to officers en route to the site. This will enable them to make better, more-informed tactical decisions in dealing with the suspects. Officers might even arrive in time to arrest them. If something suspicious is seen, the SDPD non-emergency number, **(619) 531-2000** or **(858) 484-3154** would be called. Or the on-site guard or a security company car could be called to investigate before the SDPD is called. For activities that don't trigger alarms, “smart” IP cameras would be used to record unusual or suspicious activities in and around the site. Those activities can be defined by various alert conditions that can be set by day of the week and time of the day. When an alert condition occurs, the imagery would be viewed to see what's happening so appropriate actions can be taken.

Signs

Unless cameras are monitored all the time, signs should use phrases like **RECORDED VIDEO SURVEILLANCE IN USE** or **ALL ACTIVITIES ARE RECORDED TO AID IN THE PROSECUTION OF CRIMES COMMITTED ON THE PREMISES**. Don't use words like **SECURITY**, **PROTECTION**, or **MONITORING** because they can give people a false expectation of an immediate security response when an incident occurs or that they and their property are somehow being protected by the cameras.