

# Case Study

## City of Loveland, Colorado



UPStealth Battery Backup Systems inside existing cabinets



Bill Hange  
P.E., PTOE - City of Loveland, Colorado



UPStealth sits inside data center rack, keeping the Traffic Operation Center functioning

### Boom Town Loveland, Co. Picks ZincFive's UPStealth Battery Backup System to Keep Traffic Moving and its Data Center Powered

**Challenge:** Loveland, Colorado often tops US "best of" lists, including the nation's number one Boom Town. This beautiful gateway to Rocky Mountain National Park near Estes Park is no longer a secret. Jobs, redevelopment and record setting park attendance are drawing millions to and through Loveland, via US 34, which intersects with I-25, halfway between Denver and Cheyenne, Wyoming. That means, more people, more traffic congestion and greater safety risk when the area's weather extremes—tornadoes, floods and snow—knock out utility power to traffic systems.

Loveland recognized the importance of battery backup systems/uninterruptible power supplies as a way of protecting people and traffic technology. Initially the city deployed the traditional lead-acid systems.

**Turning Point:** The Traffic Engineering Division determined it was spending too much time and money maintaining lead-acid batteries and the toxic nature of lead-acid became a growing environmental concern. Inspired by the city's many green initiatives, Loveland's Traffic Management team applied for and was awarded a Federal Highway Grant to purchase new traffic signal cabinets and the environmentally safe and maintenance free alternative to lead-acid, ZincFive's UPStealth® Battery Backup Systems.

**Solution:** Long life, product support and no worry about environmental harm, all played a part in Loveland's decision to start deploying the UPStealth. Loveland began by identifying the highest volume highway intersections in the city, then reviewing the history of power interruptions that would cause the greatest safety and congestion concerns. Staff organized and directed a major deployment project that, at the time, included 42 of the 93 traffic signal locations. New traffic signal cabinets at 29 signalized intersections incorporated the UPStealth. Thirteen other signalized intersections received new units inside

Loveland, Colorado finds a nickel-zinc solution to its challenges of increased congestion, wily weather extremes and safety concerns about lead-acid batteries.

"Our goal is to have all our signals and other ITS devices, such as variable message signs and remote weather information systems, backed up using the nickel-zinc, UPStealth."

#### Bill Hange

P.E., PTOE - City of Loveland, Colorado City Traffic Engineer

UPStealth NEMA Battery Panel



UPStealth 170 Inverter/Controller



existing signal cabinets. With grants driving the bulk of the city's upgrades, the nickel-zinc UPStealth is now required with construction of all new traffic signals and rebuilds. The goal is to have all signals and other Intelligent Transportation System devices such as variable message signs and remote weather information systems backed up by nickel-zinc UPStealth Battery Backup Systems.

**Results:** The Traffic Engineering Division says the UPStealth Battery Backup Systems are performing even better than expected and in all weather extremes. A large power outage during work hours, one block from the Traffic Operation Center and in the epicenter of downtown development, was a great test: All traffic signals protected by the UPStealth, kept running without interruption during the outage. The communications hub for ITS field systems, the Traffic Operations Center, is also protected by the nickel-zinc UPStealth. The Traffic Operation Center houses a climate-controlled room of file servers and fiber optics switches for the Trafficware/Naztec central traffic signal system server, video traffic surveillance cameras and security. All of those systems remained live with no need to call IT or reboot any of the operations. In another example, a surprise spring snowstorm up in Estes Park compromised power all over Loveland. Every traffic signal protected by nickel-zinc battery backup remained operating.

---

*"The UPStealth battery backup systems are performing great and are an important part of our city's Intelligent Transportation System plan. The life of these units may prove to be even longer than anticipated—a great surprise to have."*

### **Bill Hange**

P.E., PTOE – City of Loveland, Colorado

---



**ZincFive**

**ZincFive, Inc.**

20170 SW 112th Ave.  
Tualatin, Oregon 97062

info@zincfive.com

503.399.3517