

pproximately 15 years ago, Danville, Illinois, Public Works Director Doug Ahrens realized that in order to complete infrastructure work and demolition necessary to move the city forward, municipal employees were going to have to complete a larger percentage of the work rather than contracting the jobs to the private sector.

For decades, Danville thrived as home to a large number of manufacturing companies. As industry moved out of the city, the tax base, infrastructure, former manufacturing sites, and hundreds of homes that once belonged to factory employees, all deteriorated.

Today, the city is making a comeback due, in large part, to a concentrated effort to improve the infrastructure by repairing streets, updating utilities, and demolishing blighted buildings. Because of budget constraints, city crews are completing much of the work. To make this happen, Danville is hiring young people with construction experience to plan the projects and operate machines to complete the work.

"You can't just pick up these processes. You have to understand construction management and project management to develop these processes to make this work," says Ray Garcia, deputy director of operations, Department of Public Works.

Garcia, a Danville native, had a career as a construction manager for a large commercial contractor before being hired by the city five years ago. He is expanding the scope of work completed by city crews. "They brought me in to take it to the next level," Garcia says.

Dave Ruwe serves as construction and maintenance manager. He has a commercial construction and engineering background, and is vital to the department's success.

Department crews demolish 25 to 50 blighted buildings annually. "There is a new emerging, changing city," Garcia says. "Part of what we're doing is cleaning up the Riverfront District. We dropped four old commercial structures in one night."

DPW street work includes concrete patching, chip sealing and the other types of construction and



repairs. "We do a lot of work in conjunction with infrastructure projects. We'll do base removal and replacements. We repair base and sewer and sanitary failures that are adjacent to a project," Garcia says.

City crews team with contractors on projects such as asphalt overlays. "A contractor will run the paver, we'll do the remainder of the work. We'll do the shoveling, finish rolling, and other jobs," Garcia says. "Our guys do the prep work to minimize the cost of the infrastructure."

No Going Back

Public Works crews take a "holistic" approach and will complete concrete work such as curbs, sidewalks, storm sewers, that typically aren't included in an overlay. "We have the resources to identify any other issues that need to be addressed," Garcia says. "We do things like televising of storm and sanitary sewers in the area, so that right after an infrastructure improvement is made, we're not out there digging up the road," Garcia says.

Crews even do some small paving projects. "We rent that equipment. We don't need it every day," Garcia states.

Working construction has improved the department's street maintenance. "If you don't understand how it was built, how are you ever supposed to understand how to maintain it?" Garcia states.

The department hires people who are experienced machine operators and know how to get the most out of machines. "You can spend the money on a machine

and it can be a lawn ornament, or we can use it every day to its utmost capacity," Garcia says.

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Machines are carefully selected to help the department reach its maintenance and construction goals. "We identify what our construction needs are. We also

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RAY GARCIA
DEPUTY DIRECTOR OF OPERATIONS
DEPARTMENT OF PUBLIC WORKS



understand our skill level, so we don't buy a piece of equipment that we don't have the skill level to use. Then, we match that to our budget," Garcia states.

Mayor Scott Eisenhauer and the Danville City Council approve machine acquisitions based on staff recommendations.

DPW Cat machines include:

- 308E2 CR Hydraulic Excavator Garcia called this the most versatile machine in the department's fleet. "It has the reach and power of a 420 Backhoe Loader, with the versatility of a mini excavator. We're able to stay small, which is really helpful especially when working on busy roadways." Using the limited radius excavator for street work, enables the department to close a single lane instead of two. The machine weighs less than 20,000 pounds, and can be pulled by a municipal dump truck. "We don't have to call on, or pay for, a lowboy," Garcia says.
- A mowing attachment enables

- the department to cut grass on steep slopes, while the excavator stays on the roadway.
- 320E LR Hydraulic Excavator The machine is outfitted with a demolition grapple for demolition work. "With compact radius swing machines, we're able to keep a safe working distance from adjacent structures or utilities such as power lines and power poles," Garcia says. "The operator knows that if the tracks fit in the space, he can still swing the machine." When working in traffic, the machine is often able to work without a flagger, reducing staff necessary to complete a job.
- 299D2 XHP Compact Track Loader – The machine is used for both demolition and road work. High Flow hydraulics are utilized to handle heavier road work attachments, including an asphalt paving attachment for patches and small paving jobs. Broom and asphalt paving attachments increase versatility of the department's compact loaders.

- 279D Compact Track Loader –
 The loader is mounted with a
 PC10 Cold Planer. This machine
 is also used for demolition, site
 restoration and mowing.
- 420F IT Backhoe Loader –
 Used primarily for road work,
 including removing material to
 prepare for concrete patching
 and truck loading.
- CB24B Compactor A smaller roller used for compaction of patches and smaller asphalt paving jobs.

Altorfer Cat delivers parts, and provides call-on-demand service to keep machine uptime high. The dealership has kept projects moving ahead by providing replacement machines when city-owned equipment is being repaired. "We don't have a lot of pieces of equipment. If a machine goes down, we can't just go to our yard and get another," Garcia says.

While improving infrastructure, the department never loses sight of maintenance work. "At the end of the day, we are still the guys that plow snow," Garcia says. ®