CONGRATULATIONS

EEI would like to recognize the following employees for their milestone anniversaries with the company in 2025.

5 Years:
Natasha Woodlock
Kristen Meehan


40 Years:
Denise Migliorini

DID YOU KNOW?

The Illinois Pollution Control Board (ILPCB) has initiated amendments to Illinois drinking water regulations to align with recent U.S. EPA updates under the Safe Drinking Water Act. These changes impact water utilities statewide, notably in the areas of PFAS and Lead and Copper compliance, and require your attention. Read more at:

ENTERPRISES TRIVIA CHALLENGE

Q: Which of the following is a common type of funding EEI helps communities obtain:

A) Grants
B) Low-Interest Loans
C) STP
D) A and B
E) All of the Above

Submit answers to eei@eeiweb.com by 1/15 to be entered into a drawing for a $50 gift card!

Engineering Enterprises, Inc. (EEI), founded in 1974, is an award winning consulting engineering firm providing services to public agencies and private entities throughout northern Illinois. Our expertise includes water, wastewater, transportation, stormwater, construction management, land surveying, GIS and municipal consulting.

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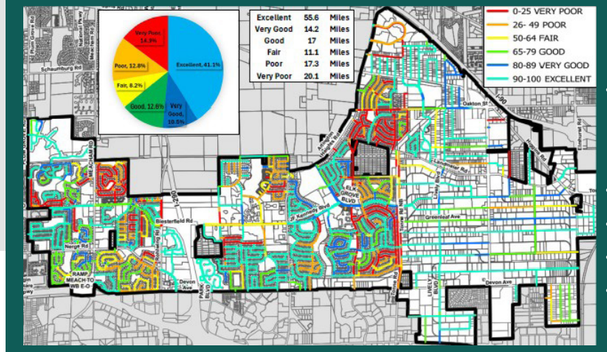
MODERNIZING PAVEMENT MANAGEMENT PROGRAMS

A community's roadway infrastructure is more than just a means of transportation - it's a reflection of the community's commitment to quality of life and economic vitality. Yet, with limited budgets and growing demands, how can communities make the smartest investments in their pavement networks?

Traditional Methods: The Foundation and Its Limits

For decades, Pavement Management Programs (PMPs) have helped federal, state, and local agencies extend the life of their roadways. Traditionally, these programs relied on manual inspections, where field teams assessed pavement distress, severity, and quantity. While this approach provided valuable insights, it was often subjective, inconsistent, and time-consuming. Manual inspections could only cover a fraction of the network each year, and results varied depending on the inspector.



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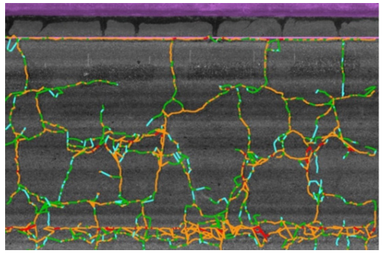
MODERNIZING PAVEMENT MANAGEMENT PROGRAMS

Over the past two decades, technological advancements have transformed pavement management. Today, communities can choose from several assessment methods:

- Manual Inspection remains valuable for targeted reviews but limited by subjectivity and labor intensity.
- Automated Pavement Condition Surveys (APCS) uses specialized vehicles equipped with sensors and cameras to collect data at normal driving speeds, enabling 100% network coverage with minimal traffic disruption.
- AI-Powered Condition Assessment: leverages deep learning and computer vision to analyze images for objective, repeatable detection of pavement distress—faster and more accurately than human inspectors.
- LiDAR Integration creates 3D models of roadways, capturing subtle surface deformations and enhancing data visualization for public engagement.



Benefits and Challenges of AI Integration

AI integration brings several key benefits: objective and consistent results, fast and comprehensive network-wide assessments, enhanced data for decision-making, and improved public transparency. However, challenges remain, such as the need for high-quality input data, the impact of lighting and weather conditions, high initial equipment costs (offset by long-term savings), and the necessity for ongoing validation and expert oversight.

Manual vs. Automated Pavement Condition Assessments

Aspect	Manual	Automated
Data Collection	Visual inspection by field teams; walking or driving surveys	Cameras, sensors, or vehicles collect imagery and sensor data
Coverage	Limited—often samples only a portion of the network each year	Network-wide—can cover 100% of roads quickly
Speed	Slow—can take days or weeks for large areas	Fast—entire networks assessed in hours or days
Objectivity	Subjective—results may vary by inspector	Objective—consistent results using trained AI models
Accuracy	Prone to human error and missed defects	High—AI detects subtle and early-stage distresses
Safety	Inspectors exposed to traffic and field hazards	Safer—reduces need for personnel in hazardous conditions
Cost	Lower initial cost, but higher labor costs over time	Higher initial investment, but lower long-term operational costs
Data Consistency	Inconsistent—depends on inspector experience	Highly consistent—standardized scoring and reporting
Assessment Frequency	Infrequent—limited by staff and budget	Frequent—enables regular or even continuous monitoring
Data Visualization	Manual reports, limited visuals	Automated dashboards, GIS mapping, digital twins
Decision Support	Slower—manual data entry and analysis	Real-time insights, predictive maintenance, and resource optimization
Scalability	Difficult to scale for large or complex networks	Easily scalable to city, county, or state-wide networks
Limitations	Labor-intensive, subjective, limited coverage	Requires quality input data, ongoing validation, and technical oversight

Once pavement condition assessments are complete, communities use software tools such as PAVER to forecast budgets, prioritize projects, and simulate funding scenarios. The output from these programs should serve as a guideline, allowing for strategic grouping of streets to reduce contractor mobilization costs, coordination with utility upgrades, and engagement with policymakers and the public through clear communication and data visualization.

Best Practices for PMP Implementation

To maximize the value of modern PMP tools, communities should:

1. Set Clear Goals: Define what success looks like—improved PCI scores, reduced maintenance costs, or enhanced public satisfaction.
2. Use Data-Driven Decision Trees: Select treatments based on objective data, not just tradition or convenience.
3. Coordinate with Other Projects: Align pavement work with utility upgrades or other infrastructure projects to minimize disruption and costs.
4. Leverage Software Tools: Programs like PAVER help forecast budgets, prioritize projects, and simulate different funding scenarios.
5. Group Projects Strategically: Bundling nearby streets can reduce contractor mobilization costs.
6. Engage Policymakers and the Public: Use data visualizations and clear communication to build support for PMP investments.

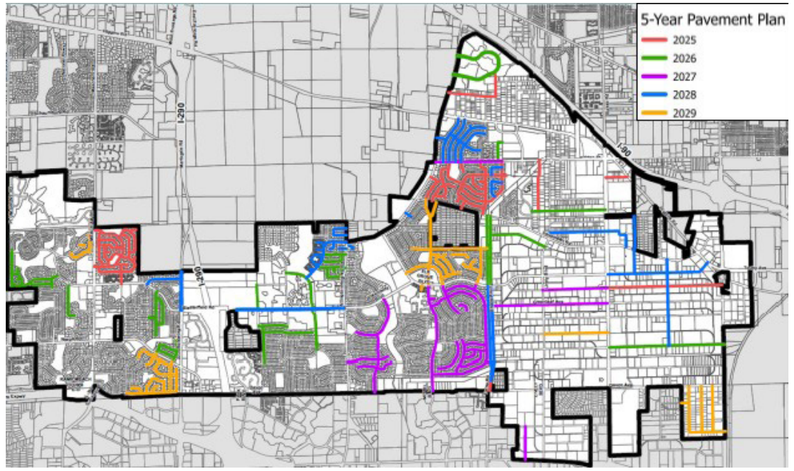
Local Success and Expert Support in Northeastern Illinois

EEI has helped communities throughout Northern Illinois in developing and updating PMPs for over 20 years. By integrating new technology and leveraging our expertise in local street design and maintenance, EEI enables municipalities to make smarter, more transparent decisions, delivering better roads for less.

Conclusion

Modern Pavement Management Programs, enhanced by AI and automation, empower communities to optimize their annual street maintenance plans. The key is combining cutting-edge technology with thoughtful planning and experienced guidance. Contact EEI to schedule a consultation and learn more about cost-effective pavement management and lead your community into the future.

-Chris Ott, PE, Project Manager
cott@eeiweb.com | (630) 466-6757



L² LEADERSHIP LOOKOUT

Brad Sanderson, PE, Chief Operating Officer

THE STRATEGIC IMPORTANCE OF SOFT SKILLS FOR LEADERSHIP AT ENGINEERING ENTERPRISES, INC. (EEI)

At EEI, our engineers are entrusted with designing and maintaining critical infrastructure for multiple communities across northern Illinois. Our leadership responsibilities extend beyond technical expertise to include stakeholder engagement, team management, and public communication. As our projects grow in complexity and impact, developing strong soft skills is a strategic priority for EEI leaders.

Evolving Leadership Demands

EEI's work on public infrastructure—such as water main replacements, roadway reconstruction and water/wastewater treatment facility improvements—requires navigating logistical challenges, regulatory compliance, and community engagement. Our Project Managers guide multidisciplinary teams, mediate between contractors and agencies, and represent EEI's projects to municipal clients and the public. Success in these areas depends on the ability to lead people and manage relationships, not just technical proficiency.

Communication Excellence

Clear, effective communication is fundamental at EEI. Our engineers routinely translate technical concepts for non-technical audiences, foster transparency, and build trust with stakeholders. Soft skills training enables our staff to communicate complex information succinctly and confidently, ensuring alignment among team members, municipal officials, and the communities we serve.

Collaboration Across Disciplines

EEI projects often demand collaboration among professionals from different disciplines. Our staff brings together diverse viewpoints and helps teams reach agreement, using soft skills to guide group interactions, resolve disagreements, and encourage creative solutions that benefit our client's interests.

Adaptability and Emotional Intelligence

Infrastructure initiatives at EEI must adapt to changing regulations, budgets, and client's needs. Our Project Managers navigate uncertainty, support their teams through challenges, and maintain morale during setbacks. Adaptability is essential for sustaining project momentum and achieving long-term success for our clients.

EEI's Commitment to Soft Skills Development

EEI actively promotes soft skill development through internal training, mentorship, and knowledge sharing. Our recruitment emphasizes strong written and verbal communication skills, and our culture encourages lifelong learning and professional growth. By prioritizing soft skills, EEI empowers its employees to drive transformative projects and deliver lasting value to the clients we serve.

At EEI, effective leadership requires more than just technical know-how. By prioritizing the growth of soft skills, EEI equips its employees to communicate clearly, work collaboratively, and remain flexible, enabling them to deliver infrastructure projects that make a positive impact on communities.