2025 Excellence in Transportation Award Winner

TRANSPORTATION ACHIEVEMENT AWARD — TRAFFIC ENGINEERING

Transformation of the I-66 / Nutley Street Interchange — Virginia Department of Transportation and RK&K

ITE—A Community of Transportation Professionals (ITE) proudly recognizes the **I-66/Nutley Street Interchange project**, led by the **Virginia Department of Transportation (VDOT) in collaboration with RK&K,** as the recipient of the **2025 Transportation Achievement Award** in the **Traffic Engineering** category. This innovative project delivered a safer, more efficient, and cost-effective interchange solution at a critical junction in Northern Virginia's high-volume transportation corridor.



The Transportation Achievement Awards recognize excellence in the advancement of transportation to meet human needs, by entities concerned with transportation, such as governmental agencies, Tribes, legislative bodies, consulting firms, industry partners, and other organizations. Awards are presented in six categories: Complete Streets, TSMO, Safety, Planning, Traffic Engineering, and Individual.

From Concept to Construction: A Smarter, Safer Solution. Originally envisioned as a Diverging Diamond Interchange (DDI) under the Transform I-66 Outside the Beltway project, the RK&K team proposed an innovative double roundabout interchange as a value engineering alternative. This design reused two existing loop ramps, eliminated the need for a second bridge over I-66 and the WMATA Orange Line, and preserved the existing bridge infrastructure. The resulting design:

- Reduced arterial corridor travel times by 69% in the AM peak and 25% in the PM peak
- Improved intersection operations from LOS D to LOS A/B
- Cut queues on southbound Nutley Street by nearly 1,000 feet during the AM peak hour
- Enhanced eastbound I-66 flow, improving density from LOS E to LOS D with a 6 mph speed increase

Safer for All Users. The new interchange integrates multiple Federal Highway Administration (FHWA) Proven Safety Countermeasures, including roundabouts and grade-separated pedestrian and bicycle facilities. RK&K's design eliminated several at-grade pedestrian crossings originally proposed in the DDI plan, creating a fully separated shared-use path with connections to the I-66 Parallel Trail. This significantly improved safety and accessibility for pedestrians and cyclists while maintaining seamless vehicle throughput.

Safety analysis indicated a projected 60% reduction in injury crashes compared to a signalized alternative, thanks to reduced conflict points and the elimination of traffic signals at ramp terminals.

Innovation Meets Implementation. The roundabout design was not only safer and more efficient—it was also more cost-effective:

- Eliminated the need for a new bridge and multiple retaining/noise walls
- Avoided complex WMATA coordination
- Reduced impervious surface area by over an acre
- Minimized right-of-way needs and eliminated parcel acquisitions

RK&K's solution also introduced traffic calming to match Nutley Street's minor arterial function and suburban context, maintaining appropriate design speeds (30 mph) without compromising regional mobility.

A Model of Traffic Engineering Leadership. The I-66/Nutley Street Interchange stands as a leading example of holistic traffic engineering—integrating operational efficiency, safety, sustainability, and cost savings. The project exemplifies how thoughtful redesign and data-driven evaluation can turn a conceptual challenge into an award-winning infrastructure solution.

ITE congratulates **VDOT (owner), RK&K (designer), FAM Construction (Contractor), and I-66 Express Mobility Partners (Concessionaire)** for their outstanding achievement and commitment to engineering excellence

Acknowledgments:

- **From RK&K: Richard Clifton**, P.E., PTOE, **Stuart Samberg,** P.E, PTOE, PTP, DBIA; **Rakesh Mora**, P.E., PTOE; **Andy Moy**, P.E.; and **Paul Phillips**
- **From FAM Construction**: **Charlie O'Connell**, P.E., **Nancy Smith;** and **Javier Marigil**, P.E.
- **From VDOT: Susan Shaw**, P.E.; **Charlie Warraich**, P.E., DBIA.

Visit here for more information on ITE's Awards Program. Click here to learn more about the I-66 Nutley Street Interchange Project.