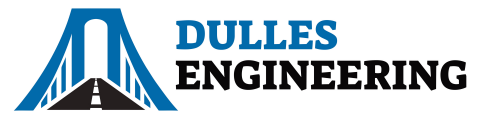


Dulles Engineering, Inc.

Capability Statement



Geotechnical Engineering · Materials Testing · Special Inspections

Company Overview

Established in 2017, Dulles Engineering, Inc. (DE) is a trusted DMV-area provider of geotechnical engineering, construction materials testing, and special inspection services. Operating an AASHTO-accredited laboratory in Sterling, Virginia, we deliver field and lab capabilities under one roof and support projects of every size and complexity across Washington, D.C., Maryland, and Virginia. As a certified SWaM, DBE, and MBE firm, DE strengthens prime teams while delivering precise, timely, and actionable results.

Core Competencies

Geotechnical Engineering

Subsurface investigation (SPT borings), foundation & slope stability analysis, geotechnical reports, excavation support & trench protection design, DCP testing, and instrumentation & monitoring.

Materials Testing & Field Inspection

Soil, asphalt, aggregates, concrete, masonry, and structural steel – backed by an AASHTO-accredited in-house laboratory.

Special Inspections (IBC Ch. 17)

Structural steel welding and high-strength bolting; rebar placement and cast-in / post-installed anchors.

What Sets Us Apart

AASHTO-accredited lab, integrated geotech + lab + field inspection from one firm, and certified DBE/MBE/SWaM that strengthens prime teams' participation goals.

Pavement & Specialized Testing

Full Depth Reclamation (FDR), Job Mix Formula (JMF); LWD, FWD, IRI, skid resistance, Windsor Probe, rebound hammer.

Structural Integrity Testing

Crosshole Sonic Logging (CSL) and Thermal Integrity Profiler (TIP) for deep foundations and shafts.

Quality Control / QA Management

Full-lifecycle construction QC, field and environmental inspection, and detailed documentation and reporting.

Service Area

Serving the entire DMV (Washington, DC, Maryland, and Virginia) region. Active on VDOT, DDOT, MDOT, FHWA, and MWAA programs.

Key Personnel

Ali Dar, P.E. – President & Principal · 35 years experience

Gangadhar Arrola – Project Manager

Sumit Saha – Project Manager

Yizhou Li – Project Manager

Shresta Wosti – Project Manager

Amir Zahed – Project Manager

Hari Kumar Reddy Yarrapureddi – Project Manager

Ahmad Shahi – Project Manager

Sruthi Saini – Lab Manager

NAICS Codes

541330 Engineering Services · 541350 Building Inspection · 541380 Testing Laboratories



Accreditations and Certifications

- Cement and Concrete Reference Laboratory (CCRL)
- AASHTO Materials Reference Laboratory (AMRL)
- U.S. Army Corps of Engineers Materials Testing Center (USACE-MTC)
- Washington Area Council of Engineering Laboratories (WACEL)

AASHTO-accredited (R18) across soil and concrete – including T99/T180 (Proctor), T22/C39 (compressive strength), T88/D422 (hydrometer), D4318 (Atterberg limits), T310/D6938 (nuclear density), T119/C143 (slump), and T152/T196 (air content), among 35+ accredited methods.

Laboratory Testing Capabilities

- **Soil & Aggregate:** Sieve analysis, moisture content (D2216), specific gravity (D854), Atterberg & shrinkage limits (D4318/D427), hydrometer (D422), % finer No. 200 (D1140), organic content (D2974), pH (G51), Standard & Modified Proctor (D698/D1557), CBR (D1883), soil permeability, USDA textural analysis.
- **Advanced Geotechnical:** Triaxial (UU, CD, CU), direct & residual shear (D3080), consolidation (D2435), unconfined compression (D2166), constant/falling-head permeability (D2434/D5084), FDR mix design.
- **Concrete & Asphalt:** Compressive strength (cylinders, cores, mortar/grout), chloride-ion permeability, asphalt bulk specific gravity and core density.
- **Corrosion & Chemical:** Laboratory resistivity, chloride content (D512), sulfate content (D516). Structural Integrity (field): Crosshole Sonic Logging (CSL), Thermal Integrity Profiler (TIP).

Our Clients



Featured Projects

I-64 Gap Widening – Segments A, B & C

Client: Shirley Contracting / Allan Myers–Wagman JV

Dulles Engineering provides construction QC services across all three segments of the I-64 Gap Widening program, part of a plan to widen I-64 from four to six lanes over roughly 30 miles between Hampton Roads and Richmond. DE's scope includes field and environmental inspections, materials testing, structural integrity testing, and Full Depth Reclamation (FDR) with Job Mix Formula (JMF) development.

DC Water – Potomac River Tunnel

Client: CBNA Halmar Clean Rivers JV

Dulles Engineering provides construction quality control services on the Potomac River Tunnel, a deep sewer tunnel projected to cut combined sewer overflows into the Potomac River by 93%. DE's scope covers field and environmental inspections, materials testing, and structural integrity evaluation of the project's shafts using Crosshole Sonic Logging (CSL).

Transform I-66 Outside the Beltway

Client: FAM Construction

Dulles Engineering provided construction quality control services on the \$3.7 billion Transform I-66 Outside the Beltway program, a VDOT public-private partnership reshaping Northern Virginia's I-66 into a multimodal corridor. DE's scope included field and environmental inspections, materials testing, and specialized pavement testing – Lightweight and Falling Weight Deflectometer, IRI, Windsor Probe, skid resistance, Critical Condition Index, and rebound hammer.

Frederick Douglass Memorial Bridge

Client: South Capitol Bridge Builders

Dulles Engineering provided construction quality control services on the \$442 million Frederick Douglass Memorial Bridge in Washington, D.C., which replaced the aging South Capitol Street Bridge with a 1,445-foot, three-arch structure designed for a 100-year lifespan. DE's role included field and environmental inspections and materials testing throughout construction.

Additional Project Experience



Fairfax County Parkway – South Widening (Route 286)

Client: Shirley Contracting Co.

Dulles Engineering provides construction quality control services on the Fairfax County Parkway South Widening, which widens approximately two miles of Route 286 from four to six lanes between Route 123 (Ox Road) and Nomes Court along a corridor carrying roughly 83,000 vehicles per day. DE's scope includes field and environmental inspections and materials testing to verify compliance with VDOT specifications.

Route 29 Widening – Fairfax County

Client: Shirley Contracting Co.

Dulles Engineering provides construction quality control services on the \$94.4 million Route 29 Widening project in Fairfax County, Virginia, which widens a 1.5-mile section of Route 29 from four to six lanes between Union Mill Road and Buckleys Gate Drive to relieve congestion along one of the county's busiest corridors. The project also includes intersection upgrades, sound walls, and shared-use paths. DE's scope includes field and environmental inspections and materials testing.

Route 1 Widening & I-95 Improvements

Client: Shirley Contracting Co.

Dulles Engineering provides construction quality control services on the \$42 million Route 1 Widening and Ramp Improvements project near the I-95 Exit 126 interchange, which widens Route 1 to six lanes and adds dual left-turn lanes for access to I-95 northbound and southbound. The project also includes a new auxiliary lane on I-95 northbound and new noise barrier walls, with work continuing through September 2027. DE's scope includes field and environmental inspections and materials testing.

Dulles International Airport Access Highway Rehabilitation

Client: Fort Myer Construction Co. - MWAA

Dulles Engineering provided quality control services on the rehabilitation of the key roadways serving Washington Dulles International Airport, including pavement repairs, structural enhancements, and erosion and sediment control. DE's scope included materials testing and structural integrity testing, along with Full Depth Reclamation (FDR) using hydraulic cement and Job Mix Formula (JMF) development.

AWS Data Centers – Virginia

Client: Amazon Web Services

Dulles Engineering provides structural special inspections across steel and concrete construction for AWS's Virginia data center program. For steel, DE oversees field welding, high-strength bolting, and inspection of structural steel and welding materials; for concrete, DE inspects cast-in bolts, post-installed anchors, reinforcing steel placement, and rebar welding.

Balls Ford Road Interchange

Client: Lane Construction

Dulles Engineering provided construction quality control services on the \$109 million Balls Ford Road Interchange, a grade-separated interchange at Route 234 with a relocated four-lane Balls Ford Road and a new bridge over the Norfolk Southern Railroad. The project was completed on time and under budget. DE's scope included field and environmental inspections and materials testing.

IAD E-Line Sanitary Sewer System Improvements

Client: Stacy Witbeck / Anchor Construction JV - MWAA

At Washington Dulles International Airport, Dulles Engineering provided engineering and geotechnical services for MWAA on 4,900 LF of new 36-inch PVC sanitary sewer and 3,800 LF of rehabilitation. DE's scope included geotechnical investigation (SPT borings, seismic surveys, lab testing), excavation support and trench protection design to 23.25 feet, and utility protection SOPs, with all designs meeting AASHTO LRFD, OSHA 1926, and NDS standards.

Northstar Boulevard – Phase 1

Client: Shirley Contracting Co.

Dulles Engineering provided construction quality control services on the \$90 million Northstar Boulevard Phase 1 project, constructing approximately 7,500 feet of new four-lane median-divided arterial roadway with turn lanes at U.S. Route 50, Dulles West Boulevard, and Arcola Mills Drive. DE's scope included field and environmental inspections and materials testing.

Boundary Channel Drive at I-395 Interchange

Client: Shirley Contracting Co.

Dulles Engineering provided construction quality control services on the \$20 million Boundary Channel Drive project, which created a half-mile shared-use path and sidewalk linking the Mount Vernon Trail to the Pentagon and Long Bridge Park. DE's scope included field and environmental inspection for contaminated soil and materials testing.

Dulles Metrorail – Phase I & II

Client: Metropolitan Washington Airports Authority (MWAA)

Dulles Engineering provided quality control services and specialized testing on the Silver Line design-build – Phase I (Dulles Airport to Wiehle Avenue) and Phase II (Wiehle Avenue to Tysons), extending Metrorail service across Northern Virginia to Washington Dulles International Airport.