

## INTRODUCTION TO SERVICES

Value Engineering LLC (VE) is a civil engineering firm specializing in designs that safely accommodate motorized and non-motorized users of the transportation system, effectively maintain traffic in construction zones, and demonstrate innovation. In addition to engineering excellence, VE has the added advantage of being a nimble small business with DBE certification in Michigan, and pending DBE certification in Ohio and Kentucky.

## PAST PERFORMANCE

Value Engineering is proud to be the engineering firm of choice for a range of clients from small businesses to state departments of transportation. The firm's diverse staff experience includes:

### Mega Projects

- Texas DOT - I-35 mobility improvements in Austin, TX, and I-35 Express in Dallas, TX.
- Central Texas Regional Mobility Authority - MoPac (Loop 1) Improvement Project (Express Lane).
- I-696, Oakland County, MI - Rehabilitation from Lahser Road to Dequindre Road.

### MDOT Highlights

- Hayes State Park - pavement rehabilitation design.
- I-275 Reconstruction, Ford Road to 5-Mile Road, Wayne County, MI - pavement marking design
- I-94 Modernization (Detroit)
  - Roadway design for reconstruction of service drives and cross streets at I-94 and Burns, Concord, and Cadillac avenues
  - Construction engineering and inspection.

### Alternative Delivery Methods

- I-405 Design-Build (Los Angeles, CA).
- I-69 Reconstruction Design-Build in SW Michigan.
- Missouri Safe-n-Sound Design-Build.
- MoPac Improvement Project Design-Build (Austin, TX).
- Airport Parkway Project PPP (Jackson, MS).

## COMPANY STATEMENT

Value Engineering's mission is to create transportation solutions that make a positive impact on people's lives and to transform communities through innovative transportation engineering solutions. Our team of innovators and community changers — planning, construction, and engineering professionals — is committed to dependably delivering high-quality, cost-effective, and sustainable solutions for a wide range of transportation projects. We create collaborative relationships with our clients and stakeholders to ensure our projects are seamlessly integrated into the communities we serve, respecting local contexts, and promoting equity, inclusivity, and environmental sustainability.

### Michigan Prequalifications:

**Design - Roadway** ◇ **Design - Traffic: Pavement Markings** ◇ **Design - Traffic: Work Zone Maintenance of Traffic**





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# ENGINEERING SERVICES CAPABILITY STATEMENT ROADWAY DESIGN

Value Engineering's experienced staff has designed projects throughout Michigan, across the country, and even internationally. Its collaborative approach ensures outstanding results for clients and facility users in diverse contexts.

## FEATURED PROJECTS: BRIDGES OVER I-94

### APPROACHES AND SERVICE ROADS AT BURNS, CADILLAC, AND CONCORD AVENUES

**Before - Cadillac Ave.**



**Under Construction - Cadillac Ave.**



Value Engineering designed approaches, service drives, and cross streets at I-94 and Burns, Concord, and Cadillac avenues in a developed urban area within Detroit. Project roadway work included:

- Roadway vertical and horizontal geometric design for the cross street and service drives affected by changes in bridge geometry.
- Driveway entrance design for affected locations.
- Determination of ROW impacts and grading limits.
- Assessment of utility impacts and conflicts.
- Utility conflict coordination.
- Drainage design to accompany new roadway geometry
- Development of project quantities and engineering cost estimates.

**Burns Ave. Bridge Approaches**



**Burns Ave. Service Drive Intersection**



## OTHER ROADWAY DESIGN PROJECTS IN THE VE/VE STAFF PORTFOLIO

**W.J. Hayes State Park Rehabilitation:** Log plans, typical cross-sections, details, specifications, proposal documents, calculating quantities, as well as engineering estimates of probable cost. The VE team also identified ways to minimize the time of construction and impacts to customers.

**I-94 Reconstruction from Michigan Ave to M-60, Jackson County, MI:** Design plans for Dearing Rd freeway interchange reconstruction.

**US-12 Reconstruction Quincy, MI:** Design plans, specifications, and cost estimates, environmental permit docs, and performed utility coordination for 2 miles of reconstruction through downtown Quincy, including a "road diet" section.

**M-294 Beadle Lake Road Rehabilitation, Battle Creek, MI:** Design, pavement marking, and maintenance of traffic (MOT) plans, specifications, quantities, and cost estimates.

**M-37 CPM Resurfacing, Battle Creek, MI:** Log project designs for CPM mill and HMA overlay.

**US-12 at Fremont Road Safety Project, Coldwater, MI:** Roadway design, pavement marking improvements, quantities and cost estimates.

**I-405 Sepulveda Pass Widening Project, Los Angeles:** Civil and MOT design for the northern segment including geometric design in a highly constrained corridor with wildlife crossings.

**M-199 Geometric Improvements, Sheridan Township, MI:** Roadway and permanent pavement marking plans, including quantities and cost estimates.

**M-20 and 11-Mile Road at US-131, Mecosta Township, MI:** Ramp improvements project log, typical cross sections, horizontal layout with pavement marking design, quantities, and cost estimates.



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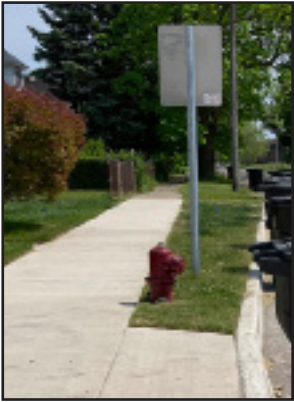
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## ENGINEERING SERVICES CAPABILITY STATEMENT NON-MOTORIZED AND ADA

Whether the project calls for new non-motorized routes and connections, updated ADA facilities, or pedestrian/bicycle accommodations and detours during construction, Value Engineering combines knowledge and depth of experience with nimble thinking to create safe, integrated solutions.

### FEATURED PROJECT: I-94 MODERNIZATION

#### SIDEWALK AND ADA CURB RAMP RECONSTRUCTION AT THE CONCORD, CADILLAC, AND BURNS AVENUE BRIDGES



During the modernization of I-94 in Detroit, Value Engineering (VE) designed bicycle and pedestrian facility upgrades on local roads and overpasses. Part of the challenge was to upgrade those facilities in a way that provided continuity and connections to the communities surrounding I-94 — neighborhoods that have long been divided by the interstate.



### FEATURED PROJECT: GALLUP PARK, ANN ARBOR B2B TRAIL IMPROVEMENTS



Value Engineering designed a shared-use-path in Gallup Park, Ann Arbor. The path winds along the Huron River and is a segment of the 35-mile ADA-accessible B2B (Border to Border) Trail system.

### OTHER NON-MOTORIZED PROJECTS IN THE VE PORTFOLIO

#### Trails, Paths, Bicycle Routes

- 183A Phases 1 & 2, Cedar Park & Leander, TX: Shared use path redesign along a 5-mile tollway extension project to correct the sidewalk, intersection treatments, and shared use path during construction to meet ADA policy and AASHTO standards.
- I-405 Sepulveda Pass Widening, Los Angeles: Design of non-motorized facilities to meet ADA standards in an area with extreme terrain and geometric constraints and wildlife crossings.

- Manchester Shared Use Trail (Phase 1): Design of a shared-use path. This included restriping the segment of M-52 and adding advanced signing for the mid-block non-motorized crossing.

#### Sidewalks and ADA Curb Ramp Upgrades

- US-12 in Clinton
- M-50 in Brooklyn
- Hayes Park (owned by the Dept. of Natural Resources)
- M-37 in Battle Creek
- M-294 in Emmett Twp

Value Engineering has performed maintenance of traffic design for some of Michigan's highest volume freeways, striking a careful balance between passenger and worker safety and minimizing delays. Designing MOT solutions in complex environments is a specialty, and VE is sought out by other contractors. This careful process includes computing user delay and cost of user delay for various lane configurations and staging schemes.

### FEATURED PROJECT: I-69 RECONSTRUCTION, LAPEER COUNTY SEGMENT I: M-24 TO LAKE GEORGE ROAD



For this high volume international trade route, VE developed staging typical cross sections, staging plans, MOT details, temporary pavement markings, temporary guardrail, temporary crossovers, temporary drainage, and MOT signing (both standard and special). VE computed and verified plan quantities.

### OTHER MAINTENANCE OF TRAFFIC PROJECTS IN THE VE PORTFOLIO

#### Interstate

- I-69 Lapeer- Segment 2: Newark Road to the county line (HMA Overlay). Similar to the project featured above, VE developed staging typical cross-sections, staging plans, MOT details, temporary pavement markings, temporary guardrail, and MOT signing (both standard and special). VE computed and verified plan quantities.
- I-94 Modernization Freeway Segment 3, service drives and crossroads from Burns Ave. to Conner Street. VE's work includes a transportation management plan (TMP), maintaining traffic special provision (MTSP), staging plans, staging typical cross sections, detour plans, non-motorized detour plans, and computation and verification of quantities and cost estimates. Challenges include:

- Coordinating with DDOT and SMART on bus routes to ensure the bus impacts during construction are mitigated and necessary detour routes and advance temporary signing utilized.
- Maintaining access and paying special attention to business and residential driveways whose major access is via the route that is being rebuilt.

#### Non-Interstate

- US-131 Rehabilitation from the railroad to north of Shaver Road: MOT and pavement marking design. MOT design included MOT concepts, staging typical cross sections, staging plans, the TMP, the MTSP, MOT details, and workzone mobility analysis. Quantities were computed using the PQS and verified.