Scope of Work: Ohio Statewide Tolling Analysis

Last revised: 9.3.2025

PERIOD OF PERFORMANCE:

All work described herein must be completed and accepted by the Ohio Department of Transportation no later than November 30th, 2026.

OBJECTIVE:

Conduct a statewide tolling analysis that shows where, when, and how Ohio could use tolling, including full-facility charges or managed lanes, to rebuild, widen, and maintain its Interstate system. The study will:

1. Map and segment every Interstate and major Interstate-look-alike into interchange-to-interchange pieces that can serve as potential toll zones.
2. Evaluate potential opportunities by producing sketch-level capital, O&M, and revenue estimates for each segment, logical segment bundles, as well as a statewide roll-up.
3. Score each segment on four consistent factors and recommend applicable tolling approaches (full-facility, managed lane, others).
    - Bridge & Approach Condition
    - Operational Performance
    - Physical / ROW Feasibility
    - Revenue / Funding Potential
4. Lay out the legal and delivery pathways: federal programs (e.g., Section 129, ISRRPP), Ohio statutes, and potential operators (ODOT, OTIC, P3).
5. Evaluate technology and operations requirements, including toll-collection architecture and interoperability with OTIC and other regional systems.

Final study outcomes to include:

- Identification of bridge or pavement reconstruction triggers/needs which make a segment legally and practically ready for toll-backed delivery.
- System-wide/corridor-level revenue insights that illustrate the funding potential of tolling Ohio's Interstate network.

- A prioritized shortlist of candidate corridors, each with order-of-magnitude cost, revenue, and next-step recommendations, to inform ODOT's investment and legislative strategy.

BACKGROUND CONTEXT:

Ohio faces two parallel challenges: (1) a growing need for reliable, peak-period capacity on key corridors, and (2) mounting pressure on traditional highway funding streams.

While Ohio has deployed isolated managed-lane-type treatments (e.g., hard shoulder running projects), ODOT has not undertaken a systematic, network-wide look at where tolling strategies could deliver the greatest operational and potential financial return. This study is expected to fill that gap.

Three recent ODOT efforts set the stage for this study:

- **Active Traffic & Demand Management (ATDM) Study – 2016.** Evaluated operational strategies such as ramp metering, hard-shoulder running, and variable speed limits. Although capital-intensive managed lanes were not modeled in detail, the study flagged several urban freeway segments where recurring congestion and reliability problems persist, potential candidates to revisit for managed-lanes.
- **Alternative Revenue Study – 2022.** Confirmed structural risks to state and federal fuel-tax revenues and evaluated user-fee concepts, including tolling and congestion pricing, as long-term funding options. The report recommended targeted, corridor-level assessments to determine where tolling could be fiscally viable.
- **Strategic Transportation & Development Analysis – 2025**. Identified high-growth corridors where capacity shortfalls may constrain economic development and freight reliability.

This study will bring these findings together using current performance data, engineering constraints, and sketch-level revenue modeling to deliver a list of candidate corridors where tolling approaches could be implemented, along with network-wide revenue potential.

TASK 1: PROJECT MANAGEMENT AND COORDINATION (Lead: Planning)

- **Purpose:** Establish a structure that keeps scope, schedule, and budget on track.
- **Description:** This task will establish operational processes for the study, including a Project Management Plan that further delineates responsibilities, reporting structures, and key decision-making processes. This will include development and

maintenance of a detailed schedule that will guide execution of each task. Bi-weekly coordination meetings will be held between the ODOT project team and consultant team. Meeting documentation and monthly progress reports will be provided.

  - **ODOT Responsibilities:** overall project oversight; approve PMP, schedule, deliverables and invoices.
  - **Consultant Responsibilities:** draft and maintain PMP and schedule; facilitate meetings; keep decision & risk logs; prepare progress reports and invoices.

- **Deliverables:**
  - Project Management Plan defining roles and responsibilities
  - Detailed project schedule aligning with key milestones
  - Bi-weekly coordination meetings including agendas, minutes, and action logs
  - Monthly progress reports and invoicing

TASK 2: ADVISORY COMMITTEE (AC) & INTER-AGENCY ENGAGEMENT (Lead: Planning, Support: External Affairs)

- **Purpose:** Create a standing Advisory Committee (AC) made up of relevant ODOT Divisions/Districts to steer the study, vet technical assumptions, and provide iterative review of all draft deliverables. On-going external engagement as needed.
- **Description:** At project kick-off the consultant will assist ODOT in finalizing the AC roster and drafting procedures that spell out membership, meeting cadence, review protocols, and escalation procedures. The AC will convene virtually periodically throughout the project to examine interim technical memoranda, confirm data sources, and advise on policy considerations. Agendas and advance reading packets will be distributed at least one week prior to each session; meeting minutes and a running comment log will be issued within five business days. Between formal AC meetings, the consultant will prepare briefing decks and talking points for ad-hoc external sessions with MPOs/RTPOs, OTIC leadership, members of the General Assembly or others.

  - **ODOT Responsibilities:** designate AC members; secure meeting holds/venues; co-facilitate the sessions.

- **Consultant Responsibilities:** draft the AC procedures; maintain meeting calendar; prepare agendas, presentation materials, minutes, and the comment log; and produce external briefing materials and facilitate ad-hoc external engagements as needed.

- **Deliverables:**
  - Facilitation of Advisory Committee meetings
  - AC meeting agendas, slide decks, minutes, and running comment log
  - Materials for briefings with MPOs, RTPOs, OTIC and elected officials

TASK 3: NETWORK IDENTIFICATION & SEGMENTATION (Lead: Planning)

- **Purpose:** Define the study network and universe of interchange-to-interchange segments to be scored.
- **Description:** Using ODOT's statewide travel demand model, Streetlight, INRIX/NPMRDS probe data, network designations (such as ODOT's Strategic Transportation System) and/or other data layers, the consultant will identify a study network primarily comprising Interstates and interstate look-alikes. The network will be split into logical segments between successive full interchanges (FHWA 'logical termini'), ensuring that operations, condition, and revenue data align in later tasks.
  - **ODOT Responsibilities:** supply base GIS and model files; vet segmentation logic.
  - **Consultant Responsibilities:** perform GIS processing; document methodology.

- **Deliverables:**
  - Corridor Network Definition Memo
  - GIS layer of segmented network for analysis

TASK 4: BRIDGE & APPROACH CONDITION ANALYSIS (Lead: Planning, Support: Engineering)

- **Purpose:** Identify interchange-to-interchange segments where upcoming bridge reconstruction, stand-alone bridge rehabilitation, or major pavement/widening projects create an urgent, statutory opportunity to activate tolling and finance

improvements and to group segments into 3-4 year construction bundles for potential phasing and financing.

- **Description:** This task will develop a quantitative "Rehabilitation Score" that highlights segments where imminent pavement or bridge renewal could inform prioritization. The consultant will first assemble and quality-check the latest pavement condition ratings, bridge inspection data, and ODOT's ten-year major-rehabilitation program. Working with ODOT SMEs, the team will establish threshold triggers and normalize metrics. Each corridor segment will then be scored to reflect both the urgency and magnitude of its rehabilitation need. Results will be documented in a technical memo that also documents potential construction bundles and flags bridge-only versus widening activation paths.

    - **ODOT Responsibilities:** Provide PCR, bridge, and rehab-program datasets; validate scoring thresholds and unit-cost assumptions.
    - **Consultant Responsibilities:** Perform data QA/QC, scoring, cost-curve development, mapping, and memo preparation.
- **Deliverables:**
    - Condition & Rehabilitation Memo
        - Including potential segment bundles and maps
    - GIS layers & heatmaps of Rehabilitation Scores
    - Spreadsheet of per-mile rehab cost assumptions

TASK 5: OPERATIONS SUITABILITY ANALYSIS (Lead: Planning Support: Operations)

- **Purpose:** Quantify where tolling-strategies could most improve congestion, reliability, safety, and freight movement.
- **Description:** The consultant will work with ODOT to assemble multi-year datasets such as volume-to-capacity, INRIX reliability, truck share, crashes, and forecast volumes for every segment. Consultant will develop methodology for normalizing the metrics, to generate a weighted scoring rubric for an Operations Score that highlights where peak-period breakdowns, truck conflicts, or safety hot-spots are most acute. Results will be documented in a technical memo that outlines key locations and risks. Memo should include heatmaps which visualize the results. The Operations Score will be joined to the Rehabilitation Score (Task 4) so composite heat-maps can be produced in Task 8.

- **ODOT Responsibilities:** Provide access to traffic, safety, and freight data; review scoring framework.
- **Consultant Responsibilities:** clean, conflate and analyze data; calculate scores; create spatial maps and tabular summaries. Produce operations assessment memo, documenting approach and findings.

- **Deliverables:**
  - Operations Assessment Memo
  - GIS layers of operations analysis

TASK 6: PHYSICAL FEASIBILITY ANALYSIS (Lead: Engineering, Support: Planning)

- **Purpose:** Identify physical, structural, and environmental constraints that could hinder tolling implementation/needed capacity expansion.
- **Description:** Leveraging desk-top reviews, secondary data, design plans or other data provided by ODOT, the consultant team, will evaluate corridor features -ROW width, structures, interchange spacing, environmental 'red-flags' - and assign each segment a Feasibility Score. Additionally the consultant team will be responsible for development of per-mile cost estimates for implementation of various tolling strategy infrastructure. Results will be documented in a technical memo.

  - **ODOT Responsibilities:** furnish engineering and environmental source files; verify assumptions.
  - **Consultant Responsibilities:** Conduct physical feasibility analysis, score corridors, develop unit-costs and document findings.

- **Deliverables:**
  - Physical Feasibility memo
  - Pre-treatment, per-mile unit costs
  - GIS layers of feasibility analysis
  - Spreadsheet of per-mile rehab cost assumptions

TASK 7: REVENUE & FINANCIAL POTENTIAL (Lead: Finance, Support: Legal & Planning)

- **Purpose:** Estimate whether potential toll revenue can cover expected capital and O&M costs for each segment, each bundle, and the statewide roll-up.

- **Description:** This task will conduct sketch-level analysis of toll revenue potential using AADT, truck share, diversion elasticities, and toll-rate scenarios aligned to the network segment geometry and potential phasing. The consultant will analyze potential revenue under multiple policy scenarios (e.g., open road tolling, full-lane tolling, dynamic pricing, HOV exemption). Net-present-value revenue will be compared to high-level costs to yield a Revenue Score on a consistent scale. A composite Revenue Score will be produced for every network segment and aggregated by bundle to support Tiering in Task 8. Financial performance will be summarized in a Revenue Potential Memo, including scoring outputs and sensitivity tests. Following completion of task 7, the consultant team will support the development of statewide revenue projections based on implementation assumptions of various project bundle scenarios.
    - **ODOT Responsibilities:** Provide cost assumptions, assist in validating revenue scenarios, and coordinate with OTIC.
    - **Consultant Responsibilities:** Develop financial model assumptions, estimate revenue, and perform scenario-based scoring. Revenue projections of project scenarios

- **Deliverables:**
    - Revenue potential memo
    - GIS layers of financial analysis

TASK 8: TIERING & OVERLAP (Lead: Planning)

- **Purpose:** Integrate the four scores (rehabilitation, operations, feasibility, revenue) and assign corridors to tiers.
- **Description:** The consultant will run a Multi-Criteria Decision Analysis, with weights approved by ODOT, to rank each bundle as Tier 1 (advance), Tier 2 (monitor), Tier 3 (defer). Each segment will be cross referenced against three location types: (1) ATDM 2016 Flag – whether the segment was identified in the Active Traffic & Demand Management Study. (2) STDA 2025 Hotspot – whether the segment overlaps a Strategic Transportation & Development Analysis congestion hotspot. (3) Programmed / Ongoing Projects – whether the segment has an active TRAC/PID project, major rehab, or other project underway. Findings will be summarized in a Tiering & Overlap Memo.

    - **ODOT Responsibilities:** approve weighting scheme; supply project status database; validate overlay matches.

- **Consultant Responsibilities:** run MCDA; develop overlay cross-walk; prepare maps, tables, and memo.

- **Deliverables:**
  - Tiering & Overlap Memo with composite scores, ATDM/STDA/project flags, and tier assignments
  - Master cross-walk spreadsheet linking each segment to its three overlay indicators
  - GIS layers and heat-maps presenting composite scores and overlay flags

TASK 9: FINAL REPORT & DOCUMENTATION (Lead: Planning)

- **Purpose:** Compile study findings into actionable products for executives, legislators, and partner agencies.
- **Description:** The consultant will synthesize the eight preceding tasks into a Draft and Final Statewide Tolling Analysis Report. In addition to the technical memoranda, corridor scores, and stakeholder feedback, the report will contain dedicated content related to:
  - Legal & Institutional Pathways – summary of federal programs (ISRRPP, SEP-15, Value Pricing Pilot), Ohio statutory authority, required legislative or rule changes, and delivery structures (ODOT, OTIC, P3). Include a Section 129 bridge-trigger checklist for every Tier 1 bundle and an ISRRPP option summary.
  - Technology & Operations Requirements – description of all-electronic toll-collection architecture, back-office systems, cybersecurity considerations, and interoperability requirements with OTIC and neighboring Electronic Toll Collection (ETC) systems.

  An executive summary and briefing deck will be prepared to support leadership and legislative presentations. All spatial data and scoring outputs will be packaged in a final file geodatabase.

  - **ODOT Responsibilities:** Review and approve report content, support dissemination to leadership and external audiences.
  - **Consultant Responsibilities***:* Prepare draft and final report documents, presentation materials, executive summaries and final file geodatabase.

- **Deliverables:**

  - Draft and Final Ohio Statewide Tolling Analysis Report

- Executive summary and presentation materials for stakeholders and policymakers
- Final file geodatabase with all spatial data collected and generated.

TASK 10: STRATEGIC COMMUNICATIONS SUPPORT *(If Authorized)*

(Lead: Planning, Support: Communications)

Purpose: Provide on-call strategic communications support to assist ODOT leadership in briefing executive stakeholders (to potentially include the Governor's Office, General Assembly, and agency executives) on the study's findings and implications.

Description

Following completion of the Final Report, the consultant will be available on an as-needed basis to support high-level briefings, legislative meetings, and stakeholder engagements. This may include developing tailored presentation materials, talking points, FAQs, and visual aids that translate technical findings into accessible, policy-relevant messages. The consultant will also assist with message alignment across internal and external audiences and provide rapid-response support for emerging questions or requests.

ODOT Responsibilities

- Identify briefing opportunities and audiences; coordinate scheduling and internal approvals; review and approve all materials.

Consultant Responsibilities

- Develop and refine briefing decks, talking points, and supporting visuals; prepare tailored materials for specific audiences; provide on-call support for meetings and engagements;

Deliverables

- Tailored briefing decks and talking points for executive and legislative audiences
- Visual aids and summary materials (e.g., one-pagers, FAQs)

Summary of Deliverables

- Task 1: Project Management and Coordination
  - Project Management Plan (PMP) defining roles and responsibilities
  - Detailed project schedule aligned with key milestones

    - Bi-weekly coordination meeting materials (agendas, minutes, action logs)
    - Monthly progress reports and invoicing

- Task 2: Advisory Committee (AC) & Inter-Agency Engagement
    - Facilitation of Advisory Committee meetings
    - AC meeting agendas, slide decks, minutes, and running comment log
    - Materials for briefings with MPOs, RTPOs, OTIC, and elected officials

- Task 3: Network Identification & Segmentation
    - Corridor Network Definition Memo
    - GIS layer of segmented corridors for analysis

- Task 4: Bridge & Approach Condition Analysis
    - Bridge & Rehabilitation Memo
    - GIS layers & heatmaps of Rehabilitation Scores and programmed rehab locations
    - Spreadsheet of per-mile rehab cost assumptions

- Task 5: Operations Suitability Analysis
    - Operations Assessment Memo
    - GIS layers of operations analysis

- Task 6: Physical Feasibility Analysis
    - Physical Feasibility Memo
    - Pre-treatment, per-mile unit costs
    - GIS layers of feasibility analysis

- Task 7: Revenue & Financial Potential
    - Revenue Potential Memo
    - GIS layers of financial analysis

- Task 8: Tiering & Overlap
    - Tiering, Overlap & Flagging Memo with composite scores, ATDM/STDA/project flags, and tier assignments
    - Master cross-walk spreadsheet linking each segment to overlay indicators
    - GIS layers and heatmaps showing composite scores and overlay flags

- Task 9: Final Report & Documentation
    - Draft and Final Ohio Statewide Tolling Analysis Report
    - Executive summary and presentation materials
    - Final file geodatabase with all spatial data collected and generated

- Task 10: Strategic Communications Support (if authorized):

- Tailored briefing decks and talking points for executive and legislative audiences
- Visual aids and summary materials (e.g., one-pagers, FAQs)

Summary of Consultant Responsibilities:

- Task 1: Project Management and Coordination
  - Draft and maintain the Project Management Plan (PMP) and project schedule
  - Facilitate bi-weekly coordination meetings
  - Maintain decision and risk logs
  - Prepare monthly progress reports and invoices

- Task 2: Advisory Committee (AC) & Inter-Agency Engagement
  - Draft Advisory Committee procedures
  - Maintain AC meeting calendar
  - Prepare meeting agendas, presentation materials, and meeting minutes
  - Maintain the comment resolution log
  - Produce external briefing materials
  - Prepare materials for ad hoc external engagements (e.g., MPOs/RTPOs, OTIC, General Assembly)

- Task 3: Network Identification & Segmentation
  - Perform GIS processing of candidate corridors
  - Document segmentation methodology

- Task 4: Bridge & Approach Condition Analysis
  - Conduct a condition and rehabilitation analysis Perform data QA/QC,
  - Assign condition scores to segments
  - Document findings in a Condition & Rehabilitation Analysis memo

- Task 5: Operations Suitability Analysis
  - Clean, conflate, and analyze multi-year operations, safety, and freight data
  - Calculate segment-level operational scores
  - Create spatial maps and tabular summaries
  - Produce the Operations Assessment Memo

- Task 6: Physical Feasibility Analysis
  - Conduct physical feasibility analysis (ROW, structures, interchanges, environmental constraints)
  - Assign feasibility scores to segments
  - Develop pre-treatment, per-mile unit cost estimates
  - Document findings in the Physical Feasibility Memo

- Task 7: Revenue & Financial Potential
    - Develop financial model assumptions
    - Estimate toll revenue for multiple policy scenarios
    - Perform scenario-based revenue scoring
    - Prepare the Revenue Potential Memo
    - Support statewide revenue projections after Task 7 based on implementation assumptions

- Task 8: Tiering & Overlap
    - Run Multi-Criteria Decision Analysis (MCDA) to generate composite corridor scores
    - Develop overlay cross-walk against ATDM flags, STDA hotspots, and programmed projects
    - Prepare maps, tables, and the Tiering, Overlap & Flagging Memo
    - Produce master crosswalk spreadsheet linking each segment to overlay indicators

- Task 9: Final Report & Documentation
    - Prepare draft and final versions of the Ohio Statewide Tolling Analysis Report
    - Create executive summary and briefing/presentation materials
    - Compile final file-geodatabase with all spatial data used and created

- Task 10: Strategic Communications Support (if authorized):
    - Develop and refine briefing decks, talking points, and supporting visuals; prepare tailored materials for specific audiences; provide on-call support for meetings and engagements;