

Eigenspace is a full-service civil engineering consultancy focusing on municipal and land development projects in the Greater Edmonton area. Our highly motivated and experienced team is committed to maintaining professional and attentive relationships with our clients, focusing on providing value-added services and cost-effective solutions that ensure continued project successes.

The core members of the Eigenspace team have a combined 45 years of engineering experience on a wide variety of civil infrastructure projects, primarily specializing in residential, commercial, and industrial greenfield, brownfield, and infill development projects. Our team has celebrated numerous successes in managing and completing a variety of workflows, and a brief summary of our services follows:

## PROJECT FEASIBILITY/INITIATION ANALYSIS

- Due diligence analysis, including the review of existing site conditions, infrastructure connections, and existing reporting (e.g. environmental, geotechnical, etc.) to identify potential issues of concern early in the project lifecycle.
- Reporting on any opportunities available to reduce the risk/impact of the identified issues, including recommendations to modify or procure additional reporting to improve the overall feasibility analysis
- Preparation of Class 4 cost estimates (-30% to +50% confidence level) for the overall project/land parcel, including background research into applicable cost sharing agreements, municipal infrastructure assessments, and boundary condition assessments.

## URBAN PLANNING PROCESS INTEGRATIONS

- Engineering review and input into urban planning processes, including the review of existing planning reports, providing input into the preparation of planning amendments, and the analysis of potential infrastructure cost changes associated with changes to high level planning documentation
- Review of planning/subdivision conditions proposed by the municipal authority, including providing recommendations/strategies that work to ensure that these conditions do not adversely affect the project/parcel's desired development order.
- Preparation of technical reports including Neighbourhood Design Reports (NDRs), Hydraulic Network Analyses (HNAs), and other technical documentation required to support the different stages of planning processes such as ASP, NSP, and subdivision levels of planning submissions.

## DESIGN ENGINEERING

- Completion of engineering infrastructure design work, including the detailed engineering design of surface drainage systems, water and sewer networks, local and collector roadways, stormwater management facilities, storm outfalls, and other municipal infrastructure
- Production of the civil design drawing set, including submission to municipal reviewers and addressing of comments provided by municipal and utility stakeholders
- Preparation of Class 2 estimates (-15% to +20% confidence level) for use in contractor bidding / pricing processes
- Submission of documents and coordination required to secure a project servicing agreement (or equivalents) from the supervising municipality

## CONSTRUCTION/PROJECT DELIVERY

- Coordination of site activities during project delivery, including providing construction layout survey, inspection of installed infrastructure, coordination of municipal inspections, and chairing of site meetings
- Management of field design changes that arise due to client, contractor, or utility inspector requests and coordination of drawing revisions (redlines) associated with these changes
- Real-time monitoring and management of project construction costs, including providing recommendations on unanticipated scope change proposals

## PROJECT CLOSEOUT

- Coordination of construction completion and final acceptance inspections with municipal and utility stakeholders
- Preparation and submission of record drawings and supporting documentation required to obtain construction completion and final acceptance certificates
- Negotiation of reductions to developer letters of credit/bonds based upon completed municipal improvements

## SPECIALTY SERVICES

- Third-party/"second opinion" engineering review of existing deliverables and processes for the purpose of identifying options to address existing issues/risks delaying project progress
- Investigation of critical process failures during site construction/project delivery to identify the sequence of events leading up to the issue's occurrence and providing recommendations on workflows (including potential cost impacts) intended to resolve the critical issue
- Maintenance of positive relationships with municipal/utility reviewers and stakeholders intended to ensure that routine issues are resolved quickly and efficiently
- Deep integration and coordination with adjacent disciplines and consultants, including geotechnical, environmental, electrical/communications, and structural teams.

Eigenspace prides itself on aggressively adapting to changing market conditions and we embrace the adoption of new processes and workflows. Our experienced team is fully capable of developing custom tailored solutions for our clients. Please contact us to find solutions to your complex problems.



S. Obaid Rizvi, M.Sc., P.Eng.  
Senior Managing Director  
[obaids.rizvi@eigenspace.ca](mailto:obaids.rizvi@eigenspace.ca)



Hooman Vafakhah, M.Sc., P.Eng.  
Engineering Program Manager  
[hooman.vafakhah@eigenspace.ca](mailto:hooman.vafakhah@eigenspace.ca)



Joshua R. Schmaltz, MEng., P.Eng., PMP, ENV SP  
Engineering Program Manager  
[joshua.schmaltz@eigenspace.ca](mailto:joshua.schmaltz@eigenspace.ca)