**Project Overview and Objectives**

The Government of Alberta (“GoA”) has embarked on transforming the work of government to deliver simpler, more efficient, and better services for the citizens of Alberta, thereby ensuring that the needs of Albertans are effectively met in the digital age. The Province has a strategic role within government to drive efficiencies, innovation and modernization. As part of this role, the Province is expanding the GoA’s digital delivery of services with the view of simplifying and providing better user experiences with interactions with the GoA. The Digital Design and Delivery Division (“3D”), formerly the Digital Innovation Office (“DIO”), is the Province’s new centre for digital delivery. It was established to maximize capability and confidence in modern digital practice by ensuring service quality and value through standards and controls. This includes utilizing human-centred design approaches together with agile methodology and modern data practices.

3D is currently working with the Ministries of Justice, Advanced Education, Indigenous Relations, Seniors, Community and Social Services, Children’s Services, and Service Alberta and Red Tape Reduction. 3D may establish working relationships with other Ministries throughout this engagement.

The Province requires up to thirty-three (33) Full Stack Developers to work with 3D on service innovation, program review and digital transformation projects across the GoA. The Full Stack Developers will work as part of cross-functional program review or product delivery teams. These teams, led by GoA product owners and 3D work collaboratively and collectively participate in a full range of activities including: field research, backlog definition and refinement, and sprint planning and execution. Digital transformation projects review the current state of services, identify future opportunities, and then deliver new services that are efficient, effective and affordable.

The Full Stack Developer(s) will participate in and contribute to a team’s shared understanding on a number of project issues including the related software ecosystem, the project team working agreement, and any current service implementation. They will also work to develop functionality in the provision of services to the public by the GoA.

**Service Scope and Deliverables**

Subject to the terms of the SOW, it is anticipated that the Full Stack Developer(s) will be required for one (1) year; however, the Province may extend a SOW for up to a further two (2) years on the same terms and conditions.

The Full Stack Developer(s) will be required on a full time basis, working across two (2) to three (3) projects. Time, location and frequency of work will vary depending on the needs of the particular project. At the end of each year of a SOW’s term, it is expected that the Full Stack Developers will have worked 1,960 hours, unless otherwise agreed upon with the Province. However, a Full Stack Developer may be required to work fewer or more hours depending on the nature and needs of their work.

Services and project deliverables should evolve as the work progresses, in response to emerging user and business needs, as well as design and technical opportunities. However, the following must be delivered (iteratively) over the course of the project:

* Participate and contribute to project research and discovery:
  + Contribute to field research and user interviews; and
  + Lead technical discovery and deliver related Artifacts such as diagrams and documentation.
* Provide solution design and development services related to:
  + Detailed solution designs based on shared understanding from discovery;
  + Completion of features for the continued development of exemplar projects that meet the needs of the product owners and improve the experience of Albertans;
  + Functional and non-functional defect discovery and resolution; and
  + Enhancements to solution code quality, tooling, and documentation for improved maintainability.
* Collaborate with frontend designers to deliver solutions aligned to a consistent look and feel.
* Advise and inform product owners on technical efforts and implementation options to facilitate frequent delivery.
* Support solution deployment and launch for limited and general availability.
* Contribute to a platform of user-centric services through:
  + Focus on reuse in solution design and implementation; and
  + Direct contribution to reusable common components and capabilities.
* Sustain ongoing development through onboarding of technical team members, maintaining technical documentation, adopting and improving team development and quality practices and processes.

The Province and the Contractor shall determine changes to Services and Materials as required. The Province and the Contractor will determine changes to Services and Materials through the Artifacts.

**Estimated SOW Duration**

|  |  |
| --- | --- |
| Estimated start date: | February 12 , 2024 |
| Estimated end date: | February 11, 2025 |
| Maximum duration of each extension | Twenty-four (24) months |

At the Province’s discretion, the SOW may be extended for up to an additional twenty-four (24) months, on the same terms and conditions, including pricing.

The Province will indicate the actual start and end dates of the SOW upon execution of the SOW with the successful Pre-Qualified Contractor.

**Location of Work**

Remote.

Must reside in Canada.

**SERVICE AREA: Full Stack Developer**

**Will you be able to pass a City Police Clearance check?**

**Available Date to Start:**

A Response should be completed within the specified 1,250 characters. Information in the Response such as references to website addresses where additional information can be found submitted with the Response will not be considered.

Where a project example is requested as part of a mandatory requirement or desirable provision, please include details of the project activities, work products, and project outputs. Please also indicate the proposed resource’s specific contributions.

1. **MANDATORY REQUIREMENTS (24%)**
2. Experience working as a Full Stack Developer in a cross-functional team delivering products/assignment deliverables. A Response must list and describe, at least, one (1) project and the proposed resource’s roles, responsibilities, and contributions to the project. (1,250 characters)

|  |
| --- |
|  |

1. Experience working on production applications using modern application frameworks and frontend JavaScript frameworks. A Response must list and describe, at least, one (1) project and the proposed resource’s roles, responsibilities, and contributions to the project. (1,250 characters) – emphasis on Angular and React and MS Stack. See below \*Tech Stack comments/notes.

|  |
| --- |
|  |

1. **DESIRABLE PROVISIONS (36%)**
2. Experience developing on unfamiliar technology stacks and/or adapting to a new team and project. A Response should list and describe, at least, one (1) project. (1,250 characters)

|  |
| --- |
|  |

1. Experience creating digital products using human-centred, service design and user research. A Response should list and describe, at least, one (1) project. (1,250 characters)

|  |
| --- |
|  |

1. Experience incrementally transforming existing legacy systems into modern digital services across multiple releases. A Response should list and describe, at least, one (1) project. (1,250 characters)

|  |
| --- |
|  |

1. **PROJECT EXAMPLES (30%)**

***Two (2) project/assignment examples must be provided for each proposed resource, which exemplify/demonstrate the proposed resource’s expertise in the selected service area. Questions 1 through 5 must be answered for each project example. The Evaluation Team must be able to determine which project any given answer relates to. Where the answer to a Question is the same for both projects, this must be clearly stated. It is strongly preferred that a Pre-Qualified Contractor use the below formatting when answering the Questions.***

1. Provide an overview of the project/assignment the proposed resource or the proposed resource’s team was engaged in that demonstrates expertise in the selected service area and role.

|  |
| --- |
| **Example 1:**  **Example 2:** |

1. Describe the sector(s) (i.e. public, private or other) the project/assignment served.

|  |
| --- |
| **Example 1:**  **Example 2:** |

1. Identify the project/assignment size in dollar value (i.e. less than $100,000, less than $500,000, less than $1,000,000 or greater than $1,000,000).

|  |
| --- |
| **Example 1:**  **Example 2:** |

1. Describe the approach for the design, development, mitigation of risk and delivery of the project/assignment, including any special considerations with respect to methodology or processes. In providing a response consider quality assurance and communication across the cross functional team.

|  |
| --- |
| **Example 1:**  **Example 2:** |

1. Provide a list of specific skills, tools and/or technology used within the project/assignment.

|  |
| --- |
| **Example 1:**  **Example 2:** |

1. **PROPOSED PRICING (10%)**

The Pre-Qualified Contractor must propose in-person and remote Fixed Hourly Rates in Canadian funds for completing the Services identified in the SOW during the initial term and any optional extension periods. Note that rates must be inclusive of all expenses.

|  |
| --- |
| **Requested Rate** |

1. **REFERENCES**

Three (3) references, for whom similar work has been performed, must be provided. The most recent reference should be listed first. Reference checks may or may not be completed to assist with scoring of the proposed resource.

**Reference #1:**

|  |  |
| --- | --- |
| Client Organization: |  |
| Contact Person: |  |
| Street Address: |  |
| Telephone #: |  |
| Email Address: |  |

**Reference #2:**

|  |  |
| --- | --- |
| Client Organization: |  |
| Contact Person: |  |
| Street Address: |  |
| Telephone #: |  |
| Email Address: |  |

**Reference #3:**

|  |  |
| --- | --- |
| Client Organization: |  |
| Contact Person: |  |
| Street Address: |  |
| Telephone #: |  |
| Email Address: |  |

The Province reserves the right to contact the stated and other references without providing prior notification to the Pre-Qualified Contractor.

**\* Tech stack comments / notes:**

**Stack will be dependent on assigned project(s).**

**Examples of some of the Tech Stacks that have been used in past projects:**

* New projects: Front end, React, Angular, and Vue. React and Angular are the most popular. React used most on new projects. Backend,.net and or node.
* Other project stacks insclude: .Net 5, MS SQL Server, BootStrap, OpenShift   
  .Net Core, Razer Pages, HTML/SCSS, Javascript, Google Maps. Azure SQL Server, Azure App Service  
  .NET Web API/SQL Server  
  Angular/.NET Web API/SQL Server  
  Angular/Typescript, Node.js, MongoDB, AWS Cloud hosted Frontend  
  Auth: Keycloak  
  Authentication and Authorization: Keycloak and Azure AD  
  Back-end: .Net Core Web API, and qpdf  
  Backend: .Net Core Web API, OpenShift, qpdf, AWS S3, OpenShift, moving to AWS  
  Backend: .Net Core Web API; SQL Server;  
  Backend: C#, .NET 5, Rabbit MQ,  
  Backend: C#, .NET 5, Web APIs, SQL Server, xUnit, Mosquitto Server, MQTT Message Queue  
  Backend: C#/.NET 5, SQL Server, RabbitMQ Hosting: Openshift On-Prem  
  Backend: C#/.NET, SQL Server  
  Backend: Python/Django, Redis, MSSQL DB (at MDC), Keycloak, OpenShift  
  Collaboration: Miro, Teams, Zoom, Jira, Confluence  
    
  Content Management: Leveraging Strapi (Headless CMS).  
  Custom Application: Azure App Services (Website & Web Application hosting), Azure Functions, Azure Service Bus, Redis, .NetCore5, Angular, NGXS, Azure containers, Google maps   
  Data Management: Snowflake, Purview catalog  
  Data Orchestration: AirFlow leveraging Azure hosted Astronomer managed service, SSIS  
  Database: PostgreSQL  
  Database: Relational AzureSQL, NoSQL CosmosDB, PostgreSQL  
  Database: S SQL DB (hosted in MDC/ Protected Services). Pending migration to PostgreSQL  
  DB: MS SQL DB (hosted in MDC/ Protected Services)  
  DB’s: PostgreSQL, SQL Server  
  Deploying to Openshift but in the process of moving to Azure.  
  DevOps: leveraging GitHub, Terraform, Azure CLI, Yarn  
  Django/Python/Sql Server  
  Frontend: Angular + Material  
  Frontend: Angular + Material, Kendo UI, NGXS  
  Front-end: Angular + Material, Kendo UI, NGXS  
  Frontend: Angular, Material, NGRX, Jest  
  Frontend: Electron, Vue + Vuetify, Keycloak  
  Frontend: Vue.js 3, Pinia, Sass  
  Frontend: Vue3 (Traffic Tickets)  
  Hosting: OpenShift  
  Hosting: OpenShift, moving to AWS   
  Identity: MyAlbertaDigitalID, KeyCloak, OpenIDConnect, Azure Active Directory, Provincial Education Directory (PED), Security Authentication Markup Language (SAML), JavaScript web Token (JWT)  
  Infrastructure: deployed assets will focus on Azure cloud native rather than virtual machines  
  Keycloak authentication.  
  Language: Typescript, C#, Python, Node, other  
  MADI/MADI B/KeyCloak  
  MongoDB, Ngnix, NestJS, Apollo, TypeScript, Angular, GraphQL, Keycloak, OpenShift (on-prem)  
  Nest.js for APIs  
  node 14 LTS, Angular 12, NGXS for angular state management, nestjs for the api, MSSQL and keycloak for authentication  
  Platform Application: TBD – MS Dynamics and Service Now are available  
  React Front End, C# backend, with a MSSQL DB  
  React, Express/NodeJS, MongoDB, Postgres, Redis  
  React/Graph QL/Sql Server  
  Source Control: GitHub, Nx mono repository <https://github.com/GovAlta/dio-ae-digital>  
  Testing: Cypress, BrowserStack, OWASP Zap, Artillery  
  UI: Angular + Material, NGXS;  
  Web Server: nginx on OpenShift