**Statement of Requirements (SOR)**

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| --- |
| **STATEMENT OF REQUIREMENTS (SOR)** **SOR # VDOT-211027-01-CAI**  ***CEDAR Operations and Maintenance Services*** |

1. **Date:** *10/27/2021*
2. **Authorized User:** Virginia Department of Transportation
3. **Authorized User Contact Information:**

Inderpreet Mann, Information Technology Division

Virginia Department of Transportation

1401 E. Broad Street

Richmond, VA 23219

(804) 371-0845

Inderpreet.Mann@vdot.virginia.gov

1. **Solicitation Schedule:**

|  |  |
| --- | --- |
| **Event** | **Date** |
| Release SOR | *10/27/2021* |
| Supplier Response Due | *10/28/2021* |
| Award Decision | *10/29/2021* |
| Estimated Project Start Date | *11/01/2021* |

1. **Evaluation and Scoring:**

Supplier’s Response must be submitted in the specified Statement of Work (SOW) format and will be evaluated for format compliance.

Supplier’s Response will be evaluated for technical merit based on its appropriateness to the performance of agency requirements, its applicability to the Commonwealth Agency’s environment, and its effective utilization of Supplier and Commonwealth resources.

Company and project references, other than those requested in #13, may be requested by the Authorized User and used for evaluation and scoring.

1. **Project/Service:**  Information Technology Division: CEDAR Application Maintenance & Operations

This SOR is for support of the CEDAR Application developed by Authorized User, The CEDAR application include the following:

* Facilities Compliance Module
* MS4/TMDL Module
* These systems, their supporting interfaces, and any additional enhancements that the Supplier may develop within the CEDAR application for Authorized User are included in the scope of these work requirements.

1. **Specialty Area:**

Application Development  IT Infrastructure

1. **Contract Type:**

Hybrid Model: Base Fixed Monthly Fee with Optional T&M (Hourly) Component

1. **Introduction:**

**Support Overview**

Authorized User requires assistance in the regular applications and development operations and maintenance of the CEDAR system. Operations and maintenance activities may include break/fix support, application enhancements, database configurations, user interface updates, GIS mapping modifications, report modifications, and inspection survey changes. The support includes, as needed, the requirements documentation, system design updates, application / user interface / database evolution, mapping and report adjustments, as well as testing assistance, deployment collaboration, and the requisite business analysis and project management guidance.

**Definitions:**

These definitions are applicable to this SOR:

* **Bug –** defined as an error, flaw, failure or fault in the CEDAR Application that causes it to produce an incorrect result, causes an unexpected result, behaves in unintended way or operates not as designed.
* **Enhancement –** defined as any product change, improvement or upgrade that increases software or hardware capabilities beyond the original specifications.
* **Minor Enhancement –** defined asa product change, improvement or upgrade that increases software or hardware capabilities beyond the original specifications, however it has limited risk and little or no impact to the applications performance.
* **Hot Fixes –** defined asa code repair or upgrade to an application that must be applied to Production as soon as possible to prevent application performance denigration.
* **Done** – defined as every task has been coded to standards, reviewed, unit tested, integrated with application, documented and meets the Product Owner’s expectation.
* **Finished** – defined as reached an end of an activity, does not requiring more work, no longer doing it or dealing with it.

**Current State**

Authorized User currently maintains numerous enterprise systems for the agency with limited resources and many responsibilities. In order to meet the business needs and mandated requirements for updates to CEDAR, additional support is needed to supplement existing technical staff.

**Business Need**

The CEDAR system has recently been updated with new modules and enhancements. As with any significant change to a system, ongoing operations and maintenance is expected to be necessary in order to support the business needs of the system. As the system is exercised, refinements and efficiencies will be discovered by users for incorporation into their business processes. These refinements and efficiencies should be incorporated as soon as reasonably possible and practical to ensure mandated agency requirements are met and business operations run effectively.

**Project Management and Organizational Structure**

Authorized User typically approaches new project development and ongoing operations and maintenance support with a modified Agile project management approach. Supplier shall utilize the Agile framework to identify, prioritize, and execute fixes, enhancements, and modifications to the CEDAR system. Authorized User (i.e., Information Technology Division / project management role) will provide liaison support and be the primary point of contact with the business unit responsible for administration of the system (i.e., Environmental Division / product owner role).

The VDOT Support Manager(s) and the Vendor Support Manager own day-to-day management of the CEDAR Application solution and are the main VDOT points of contact.

VDOT will appoint up to one support manager.

More specifically:

* Supplier will appoint a vendor support manager;
* The vendor support manager will report to the VDOT support manager;
* VDOT support manager will escalate issues needing Supplier attention to vendor support manager, who will escalate within Supplier’s organization as needed;
* Vendor support manager will copy other applicable VDOT support manager(s) on all communications with VDOT staff.

**Project Complexity**

This project is estimated to be of low complexity and risk.

1. **Scope of Work:**

**Scope Part A: Base Level Operations and Maintenance Support**

The Supplier will perform recurring support activities as outlined in the chart below. These activities will define the base level operations and maintenance support which will be provided by the Supplier for a fixed monthly fee over the entire period of performance.

|  |  |
| --- | --- |
| **Select Services Requested** | **Services Description** |
|  | Level 1 Application Help Desk Support   * End User Call Support * Application Level Security Administration (Add/Disable access for system users) * End User Help and Training * End User guidance on frequently used resolutions or work arounds |
|  | Level 2 Application Help Desk Support   * Request type identification, classification, and prioritization * Problem identification * Problem resolution coordination |
|  | System Level:   * Periodic Database backups * Period log file clean up * Database reorganization/re-indexing * Review and manage system memory * Disaster Recovery restoration * Backups * Monitoring of system performance * Minor system upgrades due to fixes or end of life (EOL) issues * Process and system documentation * Review, analyze system health * Schedule needed system updates (upgrades, patches, etc.) |
|  | Incident Management (Break/Fix)   * Root Cause Analysis (RCA) * Defect resolution * Service Failure Resolution |
|  | Minor Enhancements (see definition following chart)   * Fix or improved functionality * Continual Service Improvement |
|  | Release Management |
|  | Data Maintenance   * Update data to correct data issues caused by application defects/failures and/or user error |
|  | Operational and Management Reporting |
|  | Other: Define other base support activities |

**Base Level Support: Monthly Cap on Hours**

Authorized User anticipates that on average, 140 hours per month will be needed to provide support.

**Core and Off Hours Support:**

Generally, support will be delivered during regular business hours, 8:00 am to 5:00 pm Monday through Friday. Exceptions are:

* If application issues are experienced during weather emergencies, VDOT may reach out for support after hours or on holidays or weekends
* Vendor may be needed from time-to-time to be on-call during software promotion occurring after hours.
* Critical components that require vendor assistance may require after hours support
* If the Vendor does not perform as outlined in this section, withholdings will be assessed.

**Support Activities:**

* + Expert advice regarding maintenance and operation of the platform, systems and future direction of enhancements.
  + Root cause analysis of issues reported.
  + Resolution of **bugs**.
  + Development of minor enhancements.
  + Update of custom enhancements or configurations to be compatible with new interim releases of CEDAR Application.
  + Supplier will develop solutions for bugs and minor enhancements directly in the DEV environment.
  + Supplier will provide custom promotion scripts or pre-build code publish for promotion to Test, UAT and Production environments, with promotion to be done by Authorized User.
  + Generally, Supplier will group bug resolution, minor enhancements and compatibility updates into the planned maintenance releases targeted for December 2021 and May 2022.
  + Each maintenance release will include a period of user acceptance testing (UAT) where Authorized User will confirm if the solutions address the bug or requirements in scope of the release. In support of the UAT Supplier will provide (if needed) a test plan, UAT scripts, job aids and tester training. Supplier will be available during UAT to explain the resolution, train the testers if necessary, and address any issues identified. If a bug discovered in UAT is substantial enough to prevent Authorized User from completing testing, the UAT period will be extended for the same amount of time that Authorized User was prevented from testing.
  + Vendor will provide written documents/job aids in an acceptable format to the Business User Support person listed in the contract for all software changes Bugs and Enhancements for each application. The Business User Support person, in its sole discretion, may waive this requirement on a case by case review.
  + For critical bugs as identified by Authorized User, Supplier will develop interim hot fixes that will be developed in DEV with promotion in lower environments to follow until production deployment is completed.
  + Any bug or minor enhancement as done/finished as part of the services will not be accepted by the Authorized User until they meet the definition of done/finished.
  + Attendance at bi-weekly one-hour system support team meetings
* Bugs deemed **critical** will be resolved within five business days
  + Critical defined as Severity Levels I and II noted in Section 10 below
* **Non-critical bugs and** **minor enhancements** will be in the next maintenance release unless VDOT agrees to a later release at its sole discretion. If the Vendor does not perform as outlined in this section, withholdings will be assessed.

**Base Level Support: Definition of Minor Enhancements**

A minor enhancement to the CEDAR application logic, user-interface, database objects, GIS maps, inspection surveys, reports, or other printed output will be determined if it is work that can be accomplished within 1 month

**Base Level Support: Core and Off-Hours Support**

Authorized User anticipates that most work can be performed during core hours.

**Base Level Support: Agency Processes and Standards**

Supplier will work with Authorized User (VDOT ITD), which will assign tasks to the Supplier. This contact will be tracked via email correspondence, augmented with the use of a Teams site to track status.

**Base Level Support: Deliverables**

Supplier will provide completed application software code and/or database code incrementally checked in to Authorized User’s repository. Supplier will provide requirements documentation in the form of defined user stories (title, description, acceptance criteria, estimated duration of work), updates to maintenance and operations guide, User guide, and test scripts Supplier will provide other development support for GIS mapping (i.e., Esri JavaScript), inspection surveys (i.e., Survey123), and reports (i.e., Crystal Reports).

**Base Level Support Service Level Agreements (SLAs)**

The following are the support levels and associated response times expected with the SLA:

**Severity Level I - Critical Business Impact *-*** Must be fixed immediately and requires immediate action. Problems that dramatically interfere with reasonable use of the application or a catastrophic problem that causes complete inability to use the CRM solution across a significant portion of VDOT’s production environment (e.g. crash or hang, missing critical functionality, jeopardizes data integrity, product integrity or security issues This level applies to critical bugs.

**Severity Level II - Serious Business Impact *–*** Must be fixed in a relatively short period of time. Problems that seriously interfere with reasonable use of the application, however a work around does exist but is awkward, difficult to perform or impacts performance. VDOT is experiencing significant or degraded loss of service from the CRM solution (e.g. overall performance deviates from the goal greater than 10%, increase change of application failure, failure to recognize and report significant error conditions). This level applies to critical bugs.

**Severity Level III - Minor Business Impact** – Needs to be fixed in a reasonable timeframe. A medium-to-low impact problem that limits the ability to use a major functionality of the application where an easy workaround exists; or that limits the ability to use a non-critical functionality of the system.

**Severity Level IV - No Business Impact or Enhancement Request** – Needs to be addressed in next maintenance release or enhancement request; are cosmetic in nature and which do not affect normal application use. The CRM application is in full working mode; application work is not being impeded at this time. These are issues of minor functionality defects, informational requests, or product enhancement requests.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Severity Level** | **Acknowledgement (email or call)** | **Service Issue (in Scope Part A Services Table above)** | **Initial Response** | **Subsequent Response** |
| **I** | **4 Hours** | **Incident Management (Break/Fix), Data Maintenance** | **1 hour** | **Hourly updates.** |
| **II** | **4 Hours** | **Incident Management (Break/Fix), Data Maintenance** | **2 business hours** | **Every 4 hours during Core work hours or as agreed by Authorized User.** |
| **III** | **4 Hours** | **Incident Management (Break/Fix), Data Maintenance** | **1 business days** | **As needed by Authorized User** |
| **IV** | **4 Hours** | **Incident Management (Break/Fix), Data Maintenance** | **Address in maintenance release planning** | **As needed by Authorized User** |

* For Sev I and II bugs, defect resolution is expected as soon as possible but must be within 5 business days. Other incidents bugs and enhancements will be addressed in next quarterly release.
* If the Vendor does not perform as outlined in this section, withholdings will be assessed.

**Escalation Process:**

Should there be any disputes related to this contract, the Authorized User and the Subcontractor’s team will work, in good faith, to come to a resolution. If those parties cannot come to an agreement, the VDOT Contract Administrator (CAI) will be engaged to mediate a resolution. If those parties do not reach a consensus, Authorized User and Subcontractor executives, will be engaged to render a final decision.

There will be an escalation process defined in more detail in the SOW.

**Scope Part B: Optional Time and Materials Support Services (Check One):**

No additional T&M services outside of the base level support will be needed

Authorized User requires additional T&M support services as defined below.

Application support activities that fall outside of the scope of the pre-defined base level support will be delivered on a Time and Materials (T&M), or hourly basis. Supplier will bill for actual hours worked at a single blended rate for all resources. The Supplier will propose the blended rate in their response.

**Scope of T&M Services:**

Additional support services that may be required is listed below. Business need and scope of work will be defined for these if and when the need arises.

* Minor and Major enhancements (that fall outside of the scope of the base level support)
* Data Cleanup
* GIS Services
* System needs analysis
* System architecture review
* System discovery
* Emergency deployments outside the scope of base level support
* Turnover/transition planning

**Documentation Requirements for T&M Services**

Supplier shall provide updates to existing documentation in a manner consistent with application development projects. Documentation updates may be needed for:

* Requirements (in the form of user stories)
* Maintenance & Operations Deployment guidelines
* Test Scripts
* Status Reports

1. **Period of Performance:**

The period of performance for application operations and maintenance services shall be twelve (12) months.The Authorized User may elect to extend the services for additional two years, but the total maximum term for a SOW and any extensions thereto may not exceed three years.  The price of the fixed monthly fee for the base level services for the renewal period shall not exceed five percent (5%) of the base price of the original SOW.

1. **Place of Performance:**

Authorized User’s Location \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Supplier’s Location \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized User’s and/or 1221 E Broad Street or 115 South 15th Street

Supplier’s Location Richmond, Virginia 23219, or other locations as needed

1. **Project Staffing:**
2. **Supplier Personnel** (Check One)**:**

The roles listed in the table below represent the minimum Supplier personnel requirements for this engagement. The Supplier shall provide resumes for all proposed personnel.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Key Personnel (Y/N)** | **Years of Experience** | **Certifications** | **References Required (Y/N)** |
| Support Manager | Y | 10 | - | N |
| GIS Developer | Y | 5 |  | N |
| Business Analyst | Y | 5 |  |  |
| Developer | Y | 10 | - | N |

* Indicated staff are not intended to be full-time.
* They should be available on an as-needed basis.
* Supplier will replace unsatisfactory performers at the request of Authorized user

Supplier shall propose the roles and skillsets of the resources needed to deliver the scope of work for both the base level support and T&M services as defined in this SOW. Supplier shall provide resumes for all proposed personnel.

1. **Authorized User Staff**

The roles listed in the table below represent Authorized User’s staff and the estimated time each will be available to work on the project.

|  |  |  |
| --- | --- | --- |
| **Role** | **Description** | **% Project Availability** |
| VDOT Support Manager | Project management and oversight | 10% |
| Application Developer | Technical reference knowledgeable about system | 5% |
| Business Staff |  | As Needed |

1. **Milestones and Deliverables:**

The minimum required milestones and deliverables and the estimated completion date for each deliverable are listed in the following table. In addition, interdependencies between deliverables are noted for deliverables that have no stand-alone value or functionality. Such interdependencies will allow the Authorized User to seek recovery of amounts paid for previously accepted deliverables if the Supplier fails to deliver subsequent deliverables that meet the requirements.

Supplier should provide all deliverables in electronic form, using the following software standards (or lower, convertible versions):

| **Deliverable Type** | **Format** | **Estimated Completion Date** |
| --- | --- | --- |
| System Documentation   * User stories * Designs * System Maintenance and Operation guides * User Guide updates | MS Office Compatible | As part of delivery |
| Maintenance Releases  To include:  - coded or configured solution  - test plan if needed  - UAT scripts if needed  - tester training if needed  -Deployment guides and scripts |  | November 2021 and May 2022 or as amended by Authorized user. |
| Support Services |  | Ongoing throughout SOW. |
| Bi-Weekly reports |  | First day of the week looking back previous 2 weeks. |
| Bi-Weekly Support Team Meeting |  | Every other week. |

1. **Travel Expenses:**

No travel will be required for this engagement

Travel must be included in the total fixed price of the solution

Travel should be invoiced separately (with prior Authorized User approval). Supplier should provide estimate of total travel expenses in their SOW response.

1. **Payment:**

Payment for fixed price monthly support services will be based on successful completion and acceptance of deliverables. Payment for additional T&M support services will be based on actual hours worked and approved by Authorized User.

1. **Acceptance Criteria:**

The Support Manager will have 10 business days from receipt of the deliverable to provide Supplier with the signed acceptance receipt.

Final acceptance of services provided under the SOW will be based upon acceptance of monthly deliverables for base level support and approval of hours worked on T&M basis.

1. **Project Roles and Responsibilities:**

| **Responsibility Matrix** | **Supplier** | **Authorized User** |
| --- | --- | --- |
| Project Planning and Management |  |  |
| Application Module Installation, Implementation to Prod environment |  |  |
| Documentation |  |  |
| Application Module User Acceptance Testing |  |  |
| First Level Support |  |  |
| Infrastructure Support |  |  |
| Business Expertise |  |  |
| Support Services as described above | ✔ |  |

1. **Criminal Background Checks and Other Security Requirements:**

Supplier shall adhere to all of VITA’s standard security requirements, which can be referenced at: [https://www.vita.virginia.gov/it-governance/itrm-policies-standards/](https://covgov.sharepoint.com/sites/pwa-vdot/Kurt.Robohm/AppData/Local/Microsoft/Windows/INetCache/tuw93671/AppData/Local/Microsoft/Windows/Temporary%20Internet%20Files/Content.Outlook/8TYRKUXN/~ce_2bb08f4cd8384d60a%20(2).xls) or a successor URL(s).

Criminal Background Checks Required?

YES

NO

1. **Reporting:**

**Weekly or Bi-weekly Status Update**

The weekly/bi-weekly status report, to be submitted by Supplier to Authorized User, should include: accomplishments to date as compared to the project plan; any changes in tasks, resources or schedule with new target dates, if necessary; all open issues or questions regarding the project; action plan for addressing open issues or questions and potential impacts on the project; risk management reporting.

**Other(s)** (Specify) Vendor will provide status report on a monthly basis to be submitted by Supplier to Authorized User, should include: accomplishments to date; any changes in tasks, resources or schedule with new target dates, if necessary; all open issues or questions regarding the project; action plan for addressing open issues or questions and potential impacts on the project; risk management reporting.

1. **Federal Funds:**

Project will be funded with federal grant money

Project will be funded with federal ARRA funds

No federal funds or ARRA funds will be used for this project

1. **Training and Documentation:**
2. **Training is:**

Required as specified below

Not Required

Training Requirements:

1. **Documentation is:**

Required as specified below

Not Required

Documentation Requirements:

Vendor should provide updated documentation depicting any changes to data flows.

1. **Additional Terms and Conditions:**

The services to be provided are subject to the following additional provisions:

1. Effective July 1, 2020, the Code of Virginia requires contractors with the Commonwealth who spend significant time working with or in close proximity to state employees to complete sexual harassment training.  As a result of the new code, VITA and the Department of Human Resource Management (DHRM ) are requiring that all contractors working through the CAI contract complete DHRM's "Preventing Sexual Harassment" training.  This training is available as either a short video or a written transcript on the DHRM website: <https://www.dhrm.virginia.gov/public-interest/contractor-sexual-harassment-training>. The selected Supplier must agree that any assigned resource will complete the training.
2. The Supplier must agree to comply with the requirements of Governor Northam’s Executive Directive 18, “Ensuring a Safe Workplace” and the Supplemental Contractor Guidelines regarding COVID vaccination and masking requirements. The Directive and Guidance can be reviewed at the following links:

**ED#18**: <https://www.governor.virginia.gov/media/governorvirginiagov/executive-actions/ED-18-Ensuring-a-Safe-Work-Place.pdf>

**Interim Guidance**: <https://www.dhrm.virginia.gov/docs/default-source/covid-19/interim-guidance-on-ed-18-contract-workers-8-13-21-final.pdf>None

1. **Scheduled Work Hours:**

Normal business hours

1. **Facility and Equipment to be provided by Authorized User:**

None

**SOR Appendix 1**

**TMDL Backlog Support Items**

The following table describes the current list of backlog support items however the backlog is subject to change and will be benchmarked at the start of O&M services.

Details of the backlog items are currently stored in GeoDecisions’ Jira instance.

|  |  |
| --- | --- |
| **Issue Key** | **Card Name** |
| CT-799 | VDOT - Qualifying Criteria (Street Sweeping) - Missing the read-only list of Street Cleaning Practices underneath the question 'Is the route swept by one of the following schedules?' |
| CT-484 | Total Reductions in Chesapeake Bay Watershed - Independent of DEQ Annual Report |
| CT-804 | INTERNAL - The following reports should be cumulative through the selected time period |
| CT-606 | VDOT - Crediting Info (Existing BMP Retrofits) - Hide conditional Retrofit Type sections until the Retrofit Type has been populated |
| CT-680 | VDOT - Crediting Info (Land Cover Conversion) - River Basin should be read-only from the River Basin on the BMP Info tab |
| CT-770 | VDOT - Phone Numbers on Inspection Reports are formatted as numbers |
| CT-782 | INTERNAL - BMP Details Report Template Issues |
| CT-802 | VDOT - Inspections don't have breadcrumbs to navigate back to the Inspections grid |
| CT-805 | VDOT - Hide 'pan to feature' button when BMP has no shape |
| CT-833 | VDOT - Reductions Table Report Issues |
| CT-834 | INTERNAL - BMP Summary Report Issues |
| CT-835 | VDOT - DEQ Annual Report Issues |
| CT-836 | INTERNAL - Spend Plan Expenditure Report Issues |
| CT-837 | INTERNAL - BMP-Level Budget Summary Report Issues |
| CT-838 | INTERNAL - Inspection Report Issues |
| CT-839 | INTERNAL - Credit Analysis Report Issues |
| CT-847 | VDOT - User should be able to generate the BMP Details and BMP Summary Reports from the BMP Admin Actions menu |
| CT-716 | VDOT - BMP Summary Report Feedback |
| CT-803 | VDOT - Inspections Form - Address field isn't displaying any data |
| CT-849 | Phone number is diplayed as "0" both on the pdf and form |
| CT-851 | Filter options are not ordered properly. This on all filters for the Permit Cycle. |
| CT-852 | Random date label on the report |
| CT-854 | Only 1 set of dates is displaying. |
| CT-855 | There is an extra page after each page in the report |
| CT-857 | The list of Qualifying Street Sweeping Practices should be formatted as a table, as the current arrangement makes it not legible when word wrapping occurs. |
| CT-859 | The list of Qualifying Street Sweeping Practices contains multiple grammatical issues. SCP-2: *passes* should say *pass* SCP-7 and SCP-8: *Monthly otherwise* is missing the period at the end of both statements. |
| CT-863 | When I cancel a report I am prompted by the unsaved changes modal. This makes no sense, as I am not changing anything. |
| CT-866 | If two or more images/attachments within a form share a name, they will generate an error or display the wrong image on opening. |
| CT-868 | Corrective action field is cut off in the report and does not display everything from CEDAR |
| CT-869 | Address does not populate in Construction Oversight inspection, but it does in Post construction. Also, not sure where this address is pulling from? |
| CT-872 | Time on inspection date is incorrect in the generated report. Defaulting to 12 AM for all |
| CT-874 | Contractors show up 4 times Q1-Q4 Forecast do not display in the report What is the estimated cost There is an extra page in the reprot Title of report is lable "BMP Budget Summary"- should match the UI label. |
| CT-875 | The report is missing the tables on the right hand side of the report provided by TMDL |