Independent Review

Computer-Aided Dispatch and Records Management System (CAD/RMS)

For the

State of Vermont, Agency of Digital Services (ADS) and Department of Public Safety (DPS)

Submitted to the
State of Vermont, Office of the Chief Information Officer (CIO)

January 15, 2021

Updated Final Version

Prepared by:
Doug Rowe, PMP®, Principal
Philip Huntley, PMP®, Project Manager
Paige Streeter, Senior Consultant
Berry Dunn McNeil & Parker, LLC (BerryDunn)
100 Middle Street, PO Box 1100
Portland, Maine 04104-1100
207.541.2330, drowe@berrydunn.com
207.541.2315, phuntley@berrydunn.com
207.541.4900, pstreeter@berrydunn.com

Table of Contents

1 Executive Summary

The State of Vermont (State) retained BerryDunn to conduct this Independent Review (IR) for the State's Department of Public Safety (DPS) to evaluate the viability of, and provide a recommendation to proceed or not proceed with, a new statewide computer-aided dispatch and records management system (CAD/RMS). For all Information Technology (IT) activities over $1,000,000, State statute requires an IR by the Office of the Chief Information Office (CIO) before the project can begin. Alternatively, the CIO may request an IR. This IR began on September 18, 2020, and is projected to conclude by January 15, 2021.

The subject of review is the planned replacement CAD/RMS, which the State commenced by issuing a Request for Proposals (RFP) to the public safety vendor market. In scope is the replacement of the State's current Motorola CAD/RMS. Additionally, the State requested that the replacement vendor provide:

- Professional services for project management to manage the implementation of the technology solution
- Professional services to perform technical work in support of the implementation
- Professional services for maintenance and support of the implemented technology

The State also retained BerryDunn to provide procurement advisory services, which includes contract review assistance. At the time of BerryDunn's initial review, the State and CrossWind have not yet determined the contract negotiation timeline. As of January, 2021, the State has a final draft agreement with Crosswind with internal approvals as well as a verbal agreement.

Although BerryDunn does not recommend a no-go decision regarding the project, there are several important details missing from the CrossWind proposal that must be addressed before BerryDunn would suggest that the project progress to the contracting stage. BerryDunn recommends that the State issue a formal Request for Clarification (RFC) to CrossWind that will obtain more detail regarding the proposed implementation approach (e.g., configuration). Furthermore, BerryDunn recommends that the State confirm the open decisions regarding the scope of the contract (e.g., stakeholders, legacy data migration) to help ensure CrossWind has the necessary information to tailor the project approach and scale the agreement before entering negotiations.

1.1 Cost Summary

Table 1.1 includes a summary of the costs. More detail can be found in Section 5: Acquisition Cost Assessment and Section 10: Impact Analysis on Net Operating Costs.

Table 1.1: Cost Summary

IT Activity Life Cycle	Cost and Funding Source
Total New Life Cycle Costs (including implementation costs, operating costs, and State labor) (5 Years)	Cost: $5,492,934.14 Funding Source: State Fund
Total Implementation Costs	Professional Services: $900,000.00 State Labor: $150,000.00 IR: $19,500.00 **Total: $1,069,500.00** Funding Source: State Fund
New Annual Operating Costs Over 5 Years (total life cycle costs, less total implementation and State labor costs)	$4,423,434.14 Funding Source: State Fund
Current Annual Operating Costs Over 5 Years (total life cycle costs, not including State labor costs of $200,000)[1]	$2,482,650.00 Funding Source: State Fund
Difference Between Current and New Operating Costs (not including implementation costs and State labor costs)	$2,482,650 Increase in Five-Year Life Cycle (less the current annual costs of CAD/RMS systems for which costs were not provided)
Funding Source(s) and Percentage Breakdown of Multiple Sources	State Fund

1.2 Disposition of IR Deliverables

Table 1.2 includes a summary of the IR findings as elaborated later in the report.

[1] Please note that the current annual operating costs are based on numbers reported by the State for current Spillman and Valcour users, and may not reflect costs that all jurisdictions pay for current CAD/RMS systems. Some jurisdictions use other CAD/RMS systems for which BerryDunn was not provided with any data related to costs for those such vendors. .

Table 1.2: IR Deliverables

Deliverable	Highlights From the IR Include Explanations of Any Significant Concerns
Acquisition Cost Assessment	BerryDunn found that the acquisition costs for the CrossWind Valcour product represent reasonable prices for the scope of the contract. However, BerryDunn has significant concerns about the remaining items for the State and CrossWind to confirm. More specifically, before the State executes a contract with CrossWind, BerryDunn strongly recommends that the State confirm the scope of the contract in relation to: • Data Conversion (while this issue existed at the time of initial review, updates have been made as reflected in the risk register below) • Interfaces (while this issue existed at the time of initial review, updates have been made as reflected in the risk register below) • Training (while this issue existed at the time of initial review, updates have been made as reflected in the risk register below) • Testing (while this issue existed at the time of initial review, updates have been made as reflected in the risk register below) The key items pending confirmation might result in increased professional services fees.
Technology Architecture and Standards Review	During interviews with the State, participants reported confidence in the technology architecture of the CrossWind products. CrossWind reported in its proposal compliance with Federal and State security mandates, specifically noting compliance with the Federal Bureau of Investigation (FBI) Criminal Justice Information Services (CJIS) requirements. The State reported a need to review with CrossWind the proposed Service-Level Agreement (SLA) to make the necessary adjustment to comply with the State's standard SLA language. The State reportedly found the Recovery Time Objective (RTO) and Recovery Point Objective (RPO) in CrossWind's proposed disaster recovery approach satisfactory. BerryDunn found the CrossWind disaster recovery plan sufficient. BerryDunn observed that CrossWind's proposal aligns with the ADS Strategic Plan of January 2020. However,

Deliverable	Highlights From the IR Include Explanations of Any Significant Concerns
	BerryDunn recommends the State obtain written compliance from CrossWind. Similarly, BerryDunn observed CrossWind's compliance with the online training material availability requirements of Section 508 Amendment to the Rehabilitation Act of 1973, but BerryDunn recommends the State obtain CrossWind's written compliance with State and Federal requirements.
Implementation Plan Assessment	CrossWind's proposed implementation methodology included key phases from Enterprise Project Management Office (EPMO) project standards. However, BerryDunn identified gaps in the vendor's detailed work plan. The core gaps related to: • System configuration and workflow setup • Testing • Interface development • Data conversion • Training CrossWind included a generic plan to guide future conversations with the State about the final scope of training. However, the State should confirm the necessary professional services to meet the training needs of State stakeholders. Moreover, the State should formally request clarification on the CrossWind implementation plan in terms of the gaps BerryDunn identified. While CrossWind described post-implementation services during interviews with BerryDunn, CrossWind did not sufficiently describe deployment services (e.g., system configuration). For that reason, the State should examine additional CrossWind implementation details to confirm the services meet the State's needs. The State will need to provide additional information to CrossWind to more accurately scale implementation services in the contract (e.g., planned State resources, confirmed stakeholders).
Cost-Benefit Analysis	Although the State procuring the CrossWind product will create a $293,176.79 increase in the five-year life cycle operating costs compared to the current environment, the intangible benefits justify a modern CAD/RMS. More specifically, the State evaluated CrossWind to confirm

Deliverable	Highlights From the IR Include Explanations of Any Significant Concerns
	the ability of the system to support officer and citizen safety. Moreover, the State evaluated CrossWind's ability to support a secure integrated criminal justice network to promote more informed policing and public safety strategies. BerryDunn does not have concerns about the cost-benefit analysis. BerryDunn also does not have concerns about funding based on State-provided documentation (e.g., IT Activity Business Case [ABC] form) and State feedback reported during interviews.
Analysis of Alternatives	The State conducted an objective review of vendor proposals using impartial weighting criteria. The State reported that the alternatives vendors proposed financially or technically unsustainable products. Moreover, the State found the functionality CrossWind proposed aligned most closely with State and project goals. BerryDunn does not have concerns about the State's evaluation approach.
Impact Analysis on Net Operating Costs	The State appropriately forecasted financial resources to fund the project, and estimated the costs of the new system within a reasonable margin of error. The line items the State budgeted did not directly align with the CrossWind proposal due to CrossWind's cloud-based software fees. The net impact on operating cost would include a $293,176.79 increase across the five-year life cycle. The costs also will not reach a breakeven point due to the cumulative subscription fees. However, BerryDunn does not have concerns about the impact on net operating costs due to the results of the cost-benefit analysis.

1.3 Identified High Impact and/or High Likelihood of Occurrence Risks

Table 1.3 provides a summary of each high impact and/or high likelihood of occurrence risks, including risk probability, impact, and overall rating. A complete Risk Register, detailing all three risks, is included in Attachment 2 – Risk Register.

Table 1.3: Project Risk Summaries and Ratings

Risk ID	Risk Description	Risk Likelihood/ Probability	Risk Impact	Overall Risk Rating
1	Insufficient project schedule	High	High	High

Risk ID	Risk Description	Risk Likelihood/ Probability	Risk Impact	Overall Risk Rating
2	Limited detail on system setup and workflow configuration	High	High	High
3	Exclusion of legacy data migration	High	High	High
4	Limited testing-approach information	High	High	High
5	Partially identified stakeholders and participating agencies	High	High	High
6	Undefined interfaces	High	High	High
7	Proposed vendor project team concerns	High	High	High
8	Missing proposal information on State project team structure and time commitments	High	High	High
9	Generic training plan	Low	High	Medium
10	Limited deliverable descriptions	High	Medium	Medium

1.4 Other Key Issues

BerryDunn did not identify additional issues as part of the IR. However, BerryDunn emphasizes the importance of clarifying gaps and ambiguities in the vendor proposal before entering contract negotiations. BerryDunn captured the gaps and ambiguities from the CrossWind proposal in this IR report, more specifically within Attachment 2 – Risk Register.

1.5 Recommendations

This section represents recommendations initially made during BerryDunn's initial review. Since the initial review was submitted in November of 2020, the State has provided updates that address many of the below recommendations. Those updates are reflected in the risk register below. Although BerryDunn does not recommend a no-go decision regarding the project, BerryDunn recommends that the State issue a formal RFC to CrossWind that will obtain more clarity regarding the proposed implementation approach (e.g., configuration). Furthermore, BerryDunn recommends that the State confirm the open decisions regarding the scope of the contract (e.g., stakeholders, legacy data migration) to help ensure CrossWind has the necessary information to tailor the project approach and scale the agreement before entering negotiations. More specifically, BerryDunn made the following recommendations during the initial review, that the State confirm the following items through a RFC to CrossWind before entering negotiations:

- **Configuration.** CrossWind did not adequately describe the implementation configuration approach and services.

- **Training.** CrossWind has not yet tailored the training plan to align with the specific needs of the State.
- **Testing.** CrossWind did not adequately define the approach to prepare for, facilitate, and resolves issues with State testing.
- **Interface Setup.** CrossWind described the ability to establish interfaces, but did not explain the ability for Valcour to interface with the third-party applications the State described in the RFP.
- **Preferred State Project Team.** CrossWind has not yet described the preferred project team structure at the State, which prevents the State from confirming resources for the implementation.

Additionally, BerryDunn initially recommended that the State confirm the following decisions to help ensure CrossWind has sufficient information to tailor the contract:

- **Stakeholders.** The State has not yet confirmed all involved State stakeholders on the project.
- **Data Conversion.** The State has not yet confirmed if the project will require legacy data migration services from CrossWind.
- **Interfaces.** The State has not yet confirmed the list of required interfaces to include in the project.
- **Project Team.** The State has not yet committed resources to support the engagement.

The open items not only inform the final project approach and timeline, but also the costs of the implementation and ongoing maintenance fees. For that reason, the State should confirm the items prior to negotiations to help establish the most accurate implementation approach, pricing, and agreement terms.

Independent Reviewer Certification

I certify that this Independent Review Report is an independent and unbiased assessment of the proposed solution's acquisition costs, technical architecture, implementation plan, cost-benefit analysis, and impact on net operating costs, based on the information made available to BerryDunn by the State.

1/15/2021

Independent Reviewer Signature **Date**

1.6 Report Acceptance

The electronic signatures below represent the acceptance of this document as the final completed Independent Review Report.

E-SIGNED by Helen Tanona
on 2021-01-19 21:58:01 GMT

January 19, 2021

ADS Oversight Project Manager **Date**

E-SIGNED by John Quinn
on 2021-01-20 14:41:54 GMT

January 20, 2021

State of Vermont Chief Information Officer **Date**

2 Scope of this Independent Review Report

2.1 In-Scope

The scope of this document is fulfilling the requirements of Vermont State Statute, Title 3, Chapter 45, §2222(g):

The Secretary of Administration shall obtain independent expert review of any recommendation for any information technology initiated after July 1, 1996, as information technology activity is defined by subdivision (a)(10), when its total cost is $1,000,000 or greater or when required by the State Chief Information Officer.

The IR Report includes:

- A cost assessment, including acquisition, cost-benefit, and operating cost components
- A technology architecture review
- An Implementation Plan assessment
- A security assessment
- An analysis of alternate providers

This IR was developed using the following schedule:

- Tuesday, September 22: Facilitate the Pre-Kickoff Introductory meeting (BerryDunn)
- Friday, October 2: Facilitate the Project Kickoff (BerryDunn)
- Friday, October 2: Facilitate the Implementation Plan Review meeting (BerryDunn)
- Monday, October 5: Facilitate the Technology Architecture Review meeting (BerryDunn)
- Monday, October 5: Facilitate the Preferred Vendor Review and Analysis of Alternatives meeting (BerryDunn)
- Monday, October 5: Facilitate the Cost Analysis meeting, including:
    - Acquisition Cost Assessment
    - Cost-Benefit Analysis
    - Impact Analysis on Net Operating Costs (BerryDunn)
- Tuesday, October 13: Facilitate the interview with the preferred vendor(BerryDunn)
- Tuesday, October 13: Submits the draft Risk Matrix to the State for review (BerryDunn)
- Week of October 19: Provide feedback on the draft Risk Matrix (State)
- Friday, October 16: Deliver draft IR Report for State review (BerryDunn)

- Friday, October 23: Review the draft IR Report and provide feedback to BerryDunn
- Monday, October 26: Revise the draft IR Report and Risk Matrix, and then submit final draft to the State (BerryDunn)
- Monday, November 2: Present findings to the State CIO and Secretary of ADS John Quinn and DPS Commissioner Mike Schirling (BerryDunn)
- Friday, December 18: Discuss updates to the IR Report with the State

2.2 Out-of-Scope

During the initial review period, the State and CrossWind do not have a draft contract; therefore, this report does not offer input or analysis regarding the upcoming contract and its related elements. After the initial review, BerryDunn was provided a copy of the contract between the State and Crosswinds. This report has been updated to reflect the most salient updates.

3 Sources of Information

3.1 IR Participants

Table 3.1 includes a list of stakeholders that participated in fact-finding meetings and/or communications.

Table 3.1: IR Participants

Name	Organization	Participation Topic(s)
Tim Charland	Enforcement and Safety, Vermont Department of Motor Vehicles	Project Kickoff Implementation
Jim Cronan	Peace Administrator, Vermont State Police (VSP)	Project Kickoff Implementation
Craig Gardner	Sargent, Vermont State Police (VSP)	Project Kickoff Implementation
Karen Hango	Business Analyst, ADS	Project Kickoff Implementation
Michelle Hunt	Vermont State Police (VSP)	Project Kickoff Implementation
Jeff Barton	Deputy Chief, Colchester Police Department	Project Kickoff Implementation
Kelly Nolan	Project Manager, ADS	Project Kickoff Implementation Cost Analysis Preferred Vendor Technical Architecture Preferred Vendor Interview
Kim Prior	IT Manager, ADS/DPS	Project Kickoff Implementation Technical Architecture
Helen Tanona	Portfolio Manager for ADS	Project Kickoff Implementation Technical Architecture Preferred Vendor Cost Analysis

Name	Organization	Participation Topic(s)
		Preferred Vendor Interview
Darwin Thompson	IT Director for ADS, embedded within DPS	Project Kickoff Implementation Cost Analysis Preferred Vendor Technical Architecture Preferred Vendor Interview
Betty Wheeler	ADS System Administrator Assigned to Public Safety	Project Kickoff Implementation Technical Architecture
Michael Schirling	Commissioner, DPS	Project Kickoff
Richard Hallenbeck	Director of Administration/Finance, State of Vermont	Project Kickoff Cost Analysis
Alastair Gee	Procurement Manager, DPS	Project Kickoff
Mark Combs	Chief Technology Officer, ADS	Project Kickoff
Christopher Herrick	Deputy Commission, DPS	Project Kickoff
Nathan Harvey	State of Vermont	Project Kickoff
Matthew Birmingham	State of Vermont	Project Kickoff
Scott Carbee	Chief Information Security Officer, ADS	Project Kickoff
Kristi McClure	Chief Data Officer, ADS	Project Kickoff
Lucas Herring	ADS IT Director, embedded in Department of Corrections (DOC)	Project Kickoff
Jeffrey Loewer	State of Vermont	Project Kickoff
Jared Lamere	State of Vermont	Project Kickoff
Mandy White	State of Vermont	Project Kickoff
Nicole Koenig	CrossWind (preferred vendor)	Preferred Vendor Interview
David Wellington	CrossWind (preferred vendor)	Preferred Vendor Interview

Name	Organization	Participation Topic(s)
Chris Knudsen	CrossWind (preferred vendor)	Preferred Vendor Interview

3.2 IR Documentation

Table 3.2 below includes a list of the documentation used to compile this IR.

Table 3.2: IR Documentation

Document Name	Description	Source
CAD RMS RFP_20190916 Final	State-submitted CAD/RMS Modernization RFP	Helen Tanona and Kelly Nolan
CAD-RMS-Vendor-Functionality Oct 6	Vendor's response to State functional requirements	Helen Tanona and Kelly Nolan
CrossWind CAD RMS RFP Response	Vendor's RFP Response	Helen Tanona and Kelly Nolan
DPS CAD RMS Charter Final 08312020 Signed	State's CAD/RMS Modernization Project Charter	Helen Tanona and Kelly Nolan
IR SOW RFP – DPS CAD RMS FINAL	State's RFP for IR services for CAD/RMS Modernization project	Helen Tanona and Kelly Nolan
IT ABC_DPS CAD RMS Modernization 20190725_Signed	State's business case and cost analysis for CAD/RMS Modernization project	Helen Tanona and Kelly Nolan
Public Safety Modernization Strategy 01-21-2020_0	State's public safety modernization strategy	Helen Tanona and Kelly Nolan
Valcour CAD RMS Functionality and Price Comparison CrossWind	Vendor's response to project pricing and available functionality	Helen Tanona and Kelly Nolan

4 Project Information

4.1 Historical Background

The State DPS is soliciting vendors for a CAD/RMS implementation to support users across six department divisions: the VSP, the Vermont Emergency Management (VEM) Vermont Crime Information Center (VCIE), Radio Technology Services (RTS), the Vermont Forensics Lab (VFL), and the Division of Fire Safety (DFS). The State intends to use the CAD/RMS to collect, store, search, analyze, and share data related to the detection and prevention of crime, the location of missing persons, and assistance during State/local emergencies.

The State has used the current solution since 1991, and its contract expires June 30, 2021. The State intends to implement a single Software-as-a-Service (SaaS) model CAD/RMS to support statewide justice and public safety, emergency and disaster management, and intelligence agencies.

Prior to the issuance of the CAD/RMS RFP to market, the State developed and approved an IT Business Case and Cost Analysis (IT ABC) document on July 25, 2019. The State then issued the RFP to market on September 16, 2019, and received proposal responses on November 12, 2019. The State selected its preferred vendor in September 2020, at which time it initiated the search and acquisition of IR services.

4.2 Project Goal

The State desires to procure and implement a statewide CAD/RMS to facilitate data sharing across its law enforcements entities. The State intends to adopt the National Information Exchange Model (NIEM) data-sharing framework.

The State's primary objectives, as noted in the RFP, are as follows:

- Enhance the safety of citizens, law enforcement, fire safety, and first responders
- Reduce overall response times
- Enhance the reliability, availability, accuracy, security, and quality of data
- Reduce unnecessary work placed on communications dispatchers
- Improve reporting and incident management tools
- Improve the coordination of police, fire, and emergency management resources
- Improve the cost effectiveness of Public Safety Answering Point (PSAP) operations
- Improve the interoperability of available applications
- Improve public safety productivity
- Improve the efficiency and effectiveness of Public Safety operations

- Leverage technology systems for maximum operational effectiveness
- Employ public safety industry best practices and standards
- Improve the quality of work products
- Improve internal and external operational and administrative communication
- Eliminate redundant and repetitive actions
- Provide user-friendly software applications
- Provide an accurate and efficient means to access and retrieve data
- Provide flexibility to accommodate emerging technologies and future expansion

4.3 Project Scope

The State includes the following within the scope of the CAD/RMS implementation:

- A technology solution (the CAD/RMS) that addresses all required business needs
- Project management services to manage the CAD/RMS implementation
- Technical work support services to assist with the technological components of the implementation
- Maintenance and support services following solution go-live

4.4 Major Deliverables

Table 4.1 provides a summary of the deliverables, descriptions, and frequency, as articulated in CrossWind's proposal.

Table 4.1: Project Deliverables and Frequency Proposed by the Vendor

Deliverable	Description	Frequency
Approved ABC Form *(Phase 1)*	The State develops and approves a business case and cost analysis document.	Once
IR *(Phase 1)*	The State hires a third-party to perform an IR or overall project viability.	Once
Hold a kickoff meeting *(Phase 2)*	CrossWind hosts a kickoff meeting with the State.	Once
Develop a Project Charter *(Phase 2)*	The Project Charter provides basic information about the project. It includes: a scope statement (what is in and out of scope); a list of project deliverables; a high-level project timeline; key roles and responsibilities; and known risks,	Once

Deliverable	Description	Frequency
	assumptions and/or constraints. Signoff by the State is required.	
Develop a Project Management Plan *(Phase 2)*	The Project Management Plan will dictate specifics on how the contractor project manager will administer the project, and will include the following documentation: 1. Change Management Plan (will dictate how changes will be handled, including any service-level terms on over/under estimates) 2. Communication Management Plan (will dictate what will be communicated, to whom, and how often) 3. Requirements Management Plan (will dictate the approach for gathering, approving, and maintaining requirements) 4. Human Resources Management Plan (will dictate what resources will be assigned to the project, for how long, under what allocation, who they report to, and how to handle changes to the resource plan) 5. Procurement Management Plan (will dictate how the vendor[s] will interact with the project and expectations regarding vendor relations with State resources) 6. Quality Management Plan (will dictate the quality controls over the work being done on the project, as well as determine key performance indicators—this document is not limited to deliverables) 7. Risks and Issues Management Plan (will dictate how risks and issues will be managed over the course of the project)	Once

Deliverable	Description	Frequency
	8. Scope Management Plan (will dictate how the scope will be maintained to prevent “scope creep”)	
Develop roles and responsibilities matrix *(Phase 2)*	CrossWind will identify the project team members, their roles, and their resource requirements.	Once (unless updates are required)
Establish a communications matrix/plan *(Phase 2)*	CrossWind will establish a communication plan/schedule for project team meetings.	Once (unless updates are required)
Project Schedule *(Phase 3)*	CrossWind will develop a project schedule using Microsoft Project.	Once (unless updates are required)
Project Budget and Billing Cycle (if requested by the State) *(Phase 3)*	CrossWind will develop a project budget using Microsoft Excel if requested by the State.	Once (unless updates are required)
Requirements Documentation *(Phase 4)*	CrossWind will collect, document, and verify State requirements. CrossWind will lead requirements fact-finding sessions with the State.	As needed
Business Process Analysis (if needed) *(Phase 4)*	CrossWind will schedule and conduct business analysis discovery work sessions if required.	As needed
System Architecture Design *(Phase 4)*	CrossWind will document the system architecture for the CAD/RMS, including interfaces, and will deliver the design to the State.	Once
Staging and Production System *(Phase 4)*	CrossWind will stand up a staging system.	
Training Classes and Documentation *(Phase 4)*	CrossWind will develop a Training Plan in conjunction with the State.	
Fully Executed Testing Plan and Test Cases *(Phase 4)*	CrossWind will develop a description of the testing approach, participants, sequence of testing, and testing preparations. CrossWind will develop specific test cases for the State. Test cases tie back to the project requirements (to ensure each one is met).	Once/as needed

Deliverable	Description	Frequency
Weekly Status Reports *(Phase 4)*	Provides an update on the project health, accomplishments, upcoming tasks, risks, and significant issues.	Weekly
Issues Log *(Phase 4)*	A log of open and resolved/completed issues. Issues outlined by their impact, owner, date of occurrence, and remediation strategy.	Updated as needed
Change Management Plan and Change Request (as needed) *(Phase 4)*	Change Management Plan (will dictate how changes will be handled, including any service-level terms on over/under estimates).	Once/as needed
Other tasks needed regarding project oversight *(Phase 4)*	N/A	As needed
Software Support and Maintenance Agreement in place *(Phase 5)*	N/A	Once
Project Closeout Reporting *(Phase 5)*	This report will include all the lessons learned, project metrics, and a summary of the project's implementation and outcome in operation.	Once
Lessons Learned *(Phase 5)*	CrossWind and State project teams will convene to share lessons learned throughout the project.	Once

4.5 Project Phases and Schedule

Table 4.2 is a summary of CrossWind's proposed project phases and originally proposed start and completion dates.

Table 4.2: Vendor Proposed Project Phases

Project Phase	Estimated Start Date	Estimated Completion Date
1. Project Exploration	Pre-July 2020	6/30/2020
2. Project Initiation	7/1/2020	7/8/2020
3. Project Planning	7/8/2020	7/15/2020
4. Project Execution	7/15/2020	3/31/2021
5. Project Closing	4/1/2021	4/1/2022

Note: The project timeline was developed using an anticipated start date of July 1, 2020. The project is still in Phase 1: Project Exploration; therefore, CrossWind and the State will need to

adjust the project timeline to accommodate the actual notice to proceed (NTP) date. BerryDunn calls to attention Risk #1 (Insufficient project schedule) regarding the proposed timeline.

Update: The State provided BerryDunn with a final draft of the Crosswinds contract in January of 2021. The below table represents the updated timeline as provided by Crosswinds.

Table 4.3: Updated Proposed Timeline

Milestone	Expected Start/Duration Days
Contract Signing	Day 0
Initial Installation – Pilot Only	Day 31
List of Participating Agency contacts	Day 31
Additional Server Installation	Day 31- Day 92
Basic Training	Day 93
Broad Installation/Gap Analysis	Day 93
Module/update Training	Day 154
Implementation, including Go-Live	Day 182
Operations, including ongoing Training, Support and Maintenance	Year 1 - Year 5

5 Acquisition Cost Assessment

Table 5.1 includes a summary of total implementation costs reported to BerryDunn during this IR. Please see Attachment 1 – Life Cycle Cost-Benefit Analysis for a breakdown of the total implementation costs.

Table 5.1: Acquisition Cost Assessment

Acquisition Costs	Cost	Comments
Hardware	$0.00	The CrossWind-hosted model reportedly does not require the State to purchase hardware from or through CrossWind.
Software	$0.00	The CrossWind-hosted model does not include software costs. The State will pay the recurring subscription fee when maintenance begins.
Implementation Services	$900,000.00	CrossWind implementation services costs account for: • Project management • Development • Implementation, deployment, and integration • Training CrossWind did not identify a fee for the following: • Requirements development • System design • System testing • Defect removal • Quality management
ADS EPMO Project Oversight and Reporting	$5,000.00	The dollar amount is based on State projections.
ADS EPMO Project Manager for Implementation	$80,000.00	The dollar amount is based on State projections.
ADS EPMO Business Analyst for Implementation	$20,000.00	The dollar amount is based on State projections.
ADS Enterprise Architect Staff for Implementation	$20,000.00	The dollar amount is based on State projections.

Acquisition Costs	Cost	Comments
ADS Security Staff for Implementation	$20,000.00	The dollar amount is based on State projections.
Other ADS IT Labor for Implementation	$5,000.00	The dollar amount is based on State projections.
Telecom	$0.00	No comment.
IR	$19,500.00	No comment.
Total One-Time Acquisition Costs	**$1,069,500.00**	

1. **Cost Validation:** Describe how you validated the acquisition costs.

   - Hardware costs came from the CrossWind proposal.
   - Software costs came from the CrossWind proposal.
   - Implementation services costs came from the CrossWind proposal.
   - Professional services costs came from the CrossWind proposal.
   - BerryDunn's IR cost came from the State's agreement with BerryDunn ($19,500.00).

   Cost Comparison: How do the acquisition costs of the proposed solution compare to what others have paid for similar solutions? Will the State be paying more, less or about the same?

   The State has a specific scope for the project based on the planned user count, requested services, and stakeholder demographic. For that reason, peer comparisons might not accurately assess the reasonableness of the vendor costs. However, the State received multiple vendor proposals. Based on the competitive bids, the CrossWind proposal represents a reasonable price for the scope for engagement and deployment model.

2. **Cost Assessment:** Are the acquisition costs valid and appropriate in your professional opinion? List any concerns or issues with the costs.

   The acquisition costs are valid and appropriate based on CrossWind's solution and proposed implementation methodology. However, during the initial review period BerryDunn identified several gaps in key cost components that the State and CrossWind should confirm before contract execution. More specifically, BerryDunn identified pending costs in the areas of interfaces, data conversion, and training. At the time of the initial review the costs were pending because the State had not yet formalized the scope of the implementation services and tasks. Updates to the above gaps have been identified below in the risk register.

Additional Comments on Acquisition Costs:

6 Technology Architecture and Standards Review

1. **State's IT Strategic Plan:** Describe how the proposed solution aligns with each of the State's IT Strategic Principles:

    1) Leverage successes of others, learning best practices from outside Vermont
    2) Leverage shared services and cloud-based IT, taking advantage of IT economies of scale
    3) Adapt the Vermont workforce to the evolving needs of state government
    4) Apply enterprise architecture principles to drive digital transformation based on business needs
    5) Couple IT with business process optimization, to improve overall productivity and customer service
    6) Optimize IT investments via sound Project Management
    7) Manage data commensurate with risk
    8) Incorporate metrics to measure outcomes

    The State might leverage the experience and user group of CrossWind to adopt best practices in public safety operations. While the State hosts a consortium of public safety representatives from within Vermont to identify mission-critical software needs, the State can use the software development requests from current and future CrossWind customers to expand system functionality internally. Furthermore, the State identified the vendor-hosted platform as a key selling point to help modernize the State through cloud-based IT. Similarly, the adoption of cloud-based IT might help the State reallocate technical resource assignments. The CrossWind system might also help the State become more proactive in terms of policing and public safety efforts. If CrossWind has analytic tools to measure activity across the State, then the State could better assign public safety resources for safer and faster response times to calls for service (CFS).

    While the State measured the capabilities of the CrossWind system against State needs, CrossWind and the State will need to emphasize the importance of a structured implementation methodology. BerryDunn identified several areas of the CrossWind implementation plan that CrossWind should further develop to help increase a successful system build, test, and training process. CrossWind also reported in its proposal the security within the system to protect data at rest and in transit in a CJIS-compliant manner. The State and CrossWind should include a visioning and goal-setting workshop as part of project planning to create critical success factors (CSFs) for the implementation. The CFS will help the State and CrossWind measure the result of implementation against the goals and objectives.

2. **Sustainability:** Comment on the sustainability of the solution's technical architecture (i.e., is it sustainable?).

BerryDunn considers the CrossWind technical architecture sustainable based on the hosted nature of the environment. More specifically, a cloud-based system might relieve the State of some CAD/RMS hosting duties. Similarly, the hosted environment might limit the State's ownership of hardware to operate the new CAD/RMS. Additionally, CrossWind reported in the proposal, and during interviews with BerryDunn, the company's focus on product development. The focus on product development shows a growing lifespan of the product. For that reason, the system is sustainable. Furthermore, the cloud-based solution meets the vision of the State.

3. **Security:** Does the proposed solution have the appropriate level of security for the proposed activity it will perform (including any applicable State or Federal standards)? Please describe.

   CrossWind reported compliance with the State and Federal standards for security, including CJIS standards set by the FBI. Additionally, CrossWind described a Valcour Governance Board (VGB) in its proposal. The VGB reportedly meets on a quarterly basis to review the governance policy, security standards (e.g., CJIS), and operational issues impacting the Valcour community, which would include the State upon contract execution.

   CrossWind detailed additional security measures within its proposal to highlight:

   - The inherent two-factor authentication of Valcour
   - The role-based access controls in Valcour to support varying degrees of organizational hierarchy
   - The audit trail Valcour creates to document user activity

4. **Compliance with the principles enumerated in the ADS Strategic Plan of January 2020 (**https://digitalservices.vermont.gov/sites/digitalservices/files/documents/ADSStrategicPlan2020.pdf**)**

   CrossWind did not report compliance with the principles enumerated in the ADS Strategic Plan of January 2020. However, BerryDunn found that CrossWind's proposed principles outlined the Strategic Plan in relation to IT modernization through a cloud-based system, Vermonter experience through citizen engagement portals, and cybersecurity through compliance with CJIS requirements. The State should obtain written compliance from CrossWind.

5. **Compliance with the Section 508 Amendment to the Rehabilitation Act of 1973, as amended in 1998:** Comment on the solution's compliance with accessibility standards as outlined in this amendment. Reference: http://www.section508.gov/content/learn

   BerryDunn found that CrossWind's proposed training resources (i.e., online materials) align with the Act. However, the State should obtain written compliance from CrossWind

6. **Disaster Recovery:** What is your assessment of the proposed solution's disaster recovery plan; do you think it is adequate? How might it be improved? Are there specific actions that you would recommend to improve the plan?

   CrossWind described its disaster recovery model in the RFP response, reporting the two locations for the Valcour Vermont installation. CrossWind's formal disaster recovery plan indicated the planned RTO and RPO, and the State reported satisfaction with the RTO and RPO during interviews with BerryDunn. CrossWind also outlined the site designation plan for the primary site and secondary mirror site that includes MySQL and Redis. In addition, CrossWind specified the plan to recover from a National Law Enforcement Telecommunications System (NLETS) server failure and a total NLETS site failure. BerryDunn considers the disaster recovery plan adequate by reason of the specificity in CrossWind's plan and the confidence of the State in the RTO and RPO thresholds.

7. **Data Retention:** Describe the relevant data retention needs and how they will be satisfied for or by the proposed solution.

   In response to the State's RFP inquiry about data retention, CrossWind reported that Valcour has five data stores. MySQL, a relational database, provides the primary data store location. CrossWind also proposed Redis to store key values in order to streamline data entry. Furthermore, CrossWind proposed Memcached to store transient data; Elasticsearch for historical text searching; and a remote syncing program to retain attachments. Based on the proposed data retainage and backup procedure outlined in its proposal, CrossWind has a sufficient data retention plan. However, the State should verify that CrossWind's data retention thresholds align with State and Federally-mandated reporting retention needs.

8. **Service-Level Agreement:** What are the post-implementation services and service levels required by the State? Is the vendor proposed service-level agreement adequate to meet these needs in your judgement?

   CrossWind outlined its SLA within its proposal. BerryDunn discussed the CrossWind SLA with the State during project interviews, and the State reported a plan to revisit the SLA during contract negotiations. The approach will allow the State to reconcile State service requirements with the vendor's standard terms. BerryDunn identified the SLA as a risk, and recommends that the State and CrossWind confirm the SLA terms prior to contract execution.

9. **System Integration:** Is the data export reporting capability of the proposed solution consumable by the State? What data is exchanged and what systems (State and non-State) will the solution integrate/interface with?

   CrossWind includes an advanced analytics dashboard as part of its proposal to meet reporting needs. However, CrossWind did not describe export capabilities of the system within the proposal. The State and CrossWind should review the reporting needs of the State to confirm that Valcour supports the requirements. In terms of data exchange, CrossWind reported that the Valcour suite has integrations to limit duplicate data entry and to create a seamless experience across the system. CrossWind did not name in its proposal the interfaces associated with the project. The State identified potential external system interfaces in the RFP. However, CrossWind references in its proposal the ability to established third-party exchanges but did not name the software systems. The State and CrossWind should identify all required interfaces, the business, and technical basis for the exchange, and the timeline for interface development before contract execution.

Additional Comments on Architecture:

7 Assessment of Implementation Plan

1. The reality of the implementation timetable.

   CrossWind proposed a 10-month implementation that accounts for all key phases of the project. Although CrossWind incorporated the key phases and deliverables within the proposed implementation timeline, the proposed project duration appears aggressive due to the size and scope of the implementation. More specifically, CrossWind's proposed implementation schedule might not factor the availability of State project resources to participate in key implementation activities, such as testing and training on the software. Furthermore, CrossWind might not have accounted for build activities in the implementation timeline to supplement the initial discovery and gap assessment as part of project planning. Similarly, CrossWind did not include time for data conversion activities. The State has not made a formal decision about migrating legacy data. If the State deems migration of legacy data as part of the project scope, CrossWind will need to account for the activity in the project schedule.

2. Readiness of impacted divisions/departments to participate in this solution/project (consider current culture, staff buy-in, organizational changes needed, and leadership readiness).

   During interviews with the State, participants reported operational and technical skill sets to support the project. However, the State has not formalized a project team to support the deployment. The State also reported varying degrees of preparedness (or buy-in) for the project. For that reason, State leadership should further convey the ways in which the new system will address tactical and strategic needs of end users. State leadership has already cultivated an enthusiasm for the project and clarity in vision for the implementation, so State leadership should communicate the excitement and vision to end users to help support ubiquitous enthusiasm across the agencies. The State also reported a vision for cultural and organizational changes, particularly to the IT staffing structure. The State indicated that the hosted platform could allow the State to reallocate resources to projects based on the proposed CrossWind CAD/RMS support model.

   In order to fully determine the readiness of divisions and departments, the State requires more information in terms of CrossWind's expectations of the State. CrossWind did not report the recommended State project team structure, nor did the vendor report the level of effort required from State project team members during the deployment. If CrossWind provides a breakdown of planned hours for State resources during the project, then the State will be able to more accurately assess the State project team's ability to support deployment activities.

3. Do the milestones and deliverables proposed by the vendor provide enough detail to hold the vendor accountable for meeting the business needs in these areas?

CrossWind's proposed implementation deliverables align with the EPMO standard project approach. However, CrossWind did not fully elaborate on the components of the implementation deliverables. In order to help ensure the project deliverables align with State expectations, CrossWind will need to further explain the contents of each deliverable.

A. Project Management

CrossWind proposed an executive project manager (EPM) and a project manager to lead the implementation for the State. CrossWind noted in its proposal that the project manager "plans and coordinates the resources required to deploy a project." The brevity of the project role creates ambiguity that poses a risk to the project. Although CrossWind outlines additional professional services for project management, CrossWind did not provide full detail into the services and associated deliverables. Similarly, CrossWind provided an overview of technical services as part of the project, but the services lack detail to help the State understand technical-task ownership during deployment.

B. Training

CrossWind provided an overview of the training classes involved in comparable implementations. Additionally, CrossWind estimated the participant count for each training class. Because the State does not currently have a defined project team and confirmed scope of involved stakeholders, CrossWind should plan to tailor the training plan to the State's needs in terms of resources and timeline.

The State emphasized during interviews with BerryDunn the importance of CrossWind facilitating successful end-user training (EUT), and also the need for CrossWind to create knowledgeable in-house trainers through a train-the-trainer (TTT) program. Based on the State's need for EUT and TTT, CrossWind should verify the formal training plan includes a sufficient number of courses for all project stakeholders.

C. Testing

CrossWind alluded to testing within its proposal. The testing will include functional testing, support for user acceptance testing (UAT), and system-level performance testing. However, in its description of the testing phase, CrossWind only notes that the State and test team will create a test plan and test cases for the project; it does not detail the plan. System testing represents a sensitive phase in the implementation. The testing phase not only allows the State to verify system functionality before training, but also cultivate buy-in from end users that the product operates as planned. For that reason, the State and CrossWind should further define the logistics for testing. The logistics include not only the ownership of testing tasks, but also the process of resolving system defects.

D. Design

CrossWind accounted for requirements gathering, business process analysis, and system design within Phase 4 (Project Execution) of the implementation. CrossWind provided sufficient detail regarding requirements gathering and business analysis, which will result in a system architecture design document that includes planned interfaces to third-party applications.

E. Conversion (If Applicable)

CrossWind did not propose data conversion services. Although the State outlined in the RFP the intent for the vendor to lead legacy data migration tasks, the State did not confirm the inclusion of conversion in the project scope, nor did the State identify the quantity and type of data elements for migration. However, CrossWind did report experience with converting agencies from Motorola to the Valcour suite. The State should factor CrossWind's experience with converting agencies using a Motorola CAD/RMS when confirming the inclusion or exclusion of legacy data migration.

F. Implementation Planning

CrossWind provided sufficient information regarding the project exploration, initiation, and planning phases to structure the implementation. CrossWind proposed a planning phase to develop the project management plan, as well as a roles and responsibilities matrix. Furthermore, CrossWind proposed a project kickoff meeting as part of initiation to orient stakeholders to the engagement. CrossWind also proposed developing the project schedule, inclusive of key milestones and task durations, and the budget as part of the planning phase.

G. Implementation

CrossWind's implementation plan lacked detail about the system setup, testing, and training phases. CrossWind did not outline the plan to incorporate findings from the design phase into the system configuration decisions. The State will require sufficient time to confirm configuration decisions before entering into the system. Alternatively, if CrossWind plans to conduct the configurations based on the State's decisions, then CrossWind should plan time for the activity. Although CrossWind reported that the CrossWind project manager will complete weekly status calls and reports, CrossWind did not fully outline the approach to define the testing and training plans.

4. Does the State have a resource lined up to be the project manager on the project? If so, does this person possess the skills and experience to be successful in this role in your judgement? Please explain.

Based on BerryDunn's findings during interviews with the State, the State employs many knowledgeable resources who are familiar with the existing system and familiar with the CrossWind system. The State has formally identified a resource to fulfill the State project manager responsibilities that CrossWind requires.

8 Cost-Benefit Analysis

1. Analysis Description: Provide a narrative summary of the cost-benefit analysis conducted. Be sure to indicate how the costs were independently validated.

BerryDunn conducted a cost-benefit analysis that incorporated data from the CrossWind proposal, the DPS Project Charter, and the IT ABS CAD/RMS Modernization form. The documents BerryDunn analyzed as part of the cost review include current and projected costs as reported by the State and CrossWind. Each cost figure was independently validated through the following methods:

- Hardware costs: BerryDunn found the $0.00 cost of hardware using CrossWind's proposal.
- Annual licensing costs: BerryDunn found the $884,686.83 average annual cost of the SaaS license using CrossWind's (which will include all local and state jurisdictions) updated price proposal dated December 14, 2020.
- Other costs:
    - Implementation services: BerryDunn found the $900,000.00 cost for implementation services including initial implementation as well as professional services cost in years one through five, but not including State labor costs, using CrossWind's proposal.
    - Current solution costs: BerryDunn found the $496,530.00 annual cost for the current solution (only including current Spillman and Valcour users) until fiscal year (FY) 2021 using the State's Current User Cost Spreadsheet dated December 18, 2020.
    - Telecom costs: BerryDunn found the $0.00 cost for Telecom using CrossWind's proposal.
    - Hosting Fees: BerryDunn found the $0.00 cost for hosting fees using CrossWind's proposal.
- Personnel costs:
    - BerryDunn found the $19,500.00 cost for the IR using the BerryDunn's contract with the State.
    - BerryDunn found the $150,000.00 cost for State labor to operate and maintain the CrossWind solution using the IT ABC form.

A detailed breakdown of these costs appear in Section 11: Attachment 1 – Life Cycle Cost Benefit Analysis. Overall, the projected life cycle cost for the new CAD/RMS ($1,5,492,934.14 [which includes implementation costs, operating costs, and State labor costs]) represents a $2,810,293.14 increase, as opposed to the existing life cycle cost

for the current system ($2,682,650.00 [which includes $496,530 in annual operating costs plus $200,000 in State labor]), over a five-year life cycle. This figure; however, does not include the current annual costs for current CAD/RMS systems outside of Spillman and Valcour. The actual increase to the existing life cycle cost is therefore likely less than $2,810,293.14.

2. Assumptions: List any assumptions made in your analysis.

BerryDunn conducted a cost-benefit analysis that incorporates data from the CrossWind proposal, the DPS Project Charter, and the IT ABS CAD/RMS Modernization form. The documents BerryDunn analyzed as part of the cost review include current and projected as reported by the State and CrossWind.

For the purpose of impact analysis of net operating costs, BerryDunn applied the following assumptions:

- The State will purchase the package as CrossWind proposed without optional add-on products.
- The State will purchase the professional services that CrossWind proposed, which excludes additional training support and legacy data migration services.
- The State agrees with the proposal and pricing assumptions CrossWind identified in the proposal.
- The planned State labor costs will remain the same.

3. Funding: Provide the funding source(s). If multiple sources, indicate the percentage of each source for both Acquisition Costs and ongoing Operational Costs over the duration of the system/service life cycle.

The State will use State funds to cover the costs of acquisition and operational costs over the duration of the system/service life cycle.

4. Tangible Costs and Benefits: Provide a list and description of the tangible costs and benefits of this project. It is “tangible” if it has a direct impact on implementation or operating costs (an increase = a tangible cost, and a decrease = a tangible benefit). The cost of software licenses is an example of a tangible cost. Projected annual operating cost savings is an example of a tangible benefit.

Tangible Costs:

- Overall, the projected life cycle cost for the new dispatch system ($5,492,934.14 [which includes implementation costs, operating costs, and State labor costs]) represents a $2,810,293.14 increase, as opposed to the existing life cycle cost for the current system ($2,682,650.00 [which

includes operating costs and State labor costs]), over a five-year life cycle.

- At the time of BerryDunn's initial review, CrossWind proposed ongoing professional services across the five-year life cycle ($160,000), in addition to the $283,675.00 initial implementation cost. The State does not currently pay professional services to the existing vendor, so the State would have increase of $160,000.00 for professional services in the five-year life cycle. As of January, 2021, there are no longer additional, annual professional services fees. Instead, those fees are included in either the $900,000 implementation costs or the annual licensing fees.

Tangible Benefits:

- Upon contract completion with the current vendor (FY 2021), the State would no longer have to pay the $496,530.00 per FY for the current CAD/RMS (totaling $2,482,650 over the next five years).

5. Intangible Costs and Benefits: Provide a list and descriptions of the intangible costs and benefits. Its "intangible" if it has a positive or negative impact but is not cost related. Examples: Customer Service is expected to improve (intangible benefit) or Employee Morale is expected to decline (intangible cost).

- **Intangible Benefits:**
  - **Improved Public Safety.** The implementation of a modern CAD/RMS will likely improve officer response time, incident trend mapping to support proactive protective measures, and increased bandwidth for an answering point to protect citizens.
  - **Improved Citizen Engagement.** CrossWind discussed in its proposal the development of a public-facing community portal. The portal might help increase citizen engagement (e.g., report submission, crime activity maps). Similarly, CrossWind tools that connect the State employees with citizens while minimizing in-person contact might assist the State mitigate risk with COVID-19 restrictions.
  - **Improved Integrated Criminal Justice Network.** The consolidation of a statewide CAD/RMS might assist the State with sharing critical criminal justice information (CJI). The enhanced and secure data-sharing measure might improve operations with the availability of data through integrated justice networks.
  - **Reduction in State-Required Support Efforts.** A cloud-based technology system might allow State technology and business staff to avoid time-consuming efforts to remedy system issues. Instead, a clear SLA with a new vendor will require less time from the State to fix system

errors, and provide more time for staff to proactively configure the system according to the State's preference.

- **Intangible Costs:**
  - **Resistance to New System.** In addition to requiring additional time for State employees to support the implementation efforts, staff might experience fear or uncertainty with the implementation of a new system. Furthermore, staff might become frustrated with an unfamiliar system or any initial errors during the early phases of the implementation.
  - **Public Perception.** The high cost associated with the implementation of a new public safety system places a large degree of pressure on the success of the deployment. If the public discovers any initial errors with the new system that impact public safety, citizens might voice concern about the value or purpose of the newly deployed software.

6. Costs vs. Benefits: Do the benefits of this project (consider both tangible and intangible) outweigh the costs in your opinion? Please elaborate on your response.

Based on the analysis of the costs and benefits, BerryDunn considers that the benefits outweigh the costs. The State could use the new technology system to establish the strategic goals of the organization, notably the need for increased citizen safety, increased officer safety, and integrated justice network. Although the new system has higher life cycle costs based on the financial projections, the flexibility and support in a cloud-based system might return the investment to the State by reducing the State technical resource commitment to support the existing CAD/RMS.

7. IT ABC Form Review: Review the IT ABC form (Business Case/Cost Analysis) created by the Business for this project. Is the information consistent with your IR and analysis? If not, please describe. Is the life cycle that was used appropriate for the technology being proposed? If not, please explain.

The IT ABC form created for the project had reasonable financial projections. However, the State underestimated the costs for professional services during implementation, budgeting $200,000.00 while CrossWind proposed $283,675.00 for deployment. Similarly, the State did not budget for the ongoing professional services CrossWind proposed. The State line-item cost forecasting did not align with CrossWind proposed costs. However, the State opened the opportunity to bidders with on premise and hosted deployments, so the line-item cost forecasts did not exactly crosswalk to CrossWind subscription fees. Nonetheless, the State had an accurate overall cost projection for the project. At the time this review was updated, the State renegotiate the terms of their contract with Crosswinds and the fees referenced in this section are no longer applicable.

Additional Comments on the Cost Benefit Analysis:

9 Analysis of Alternatives

1. Provide a brief analysis of alternative solutions that were deemed financially unfeasible.

   The State received seven proposals in response to the RFP. Three of the responding vendors were not ultimately considered by the State's scoring committee primarily due to cost. A fourth vendor was not considered because a hosted solution was not proposed. As a result, the State shortlisted Tyler Technologies (Tyler) and Motorola Solutions (Motorola) in addition to CrossWind. The State evaluated the financial elements of the competing vendor proposals, and the State identified the alternative vendor costs as unfeasible. The State also combined the cost considerations with additional evaluation metrics to identify CrossWind as the preferred vendor.

2. Provide a brief analysis of alternative technical solutions that were deemed unsustainable.

   Only the Tyler, Motorola, and CrossWind proposals were able to meet the 35 functional elements identified by the State. The State considered the alternative solutions unsustainable in comparison to CrossWind due to concerns about the data management model, on-premise deployment, and system security. CrossWind was the only vendor to propose a SaaS model. Based on the State's strategic plan to identify viable, hosted technology platforms, CrossWind had the software model that best aligned with the State's goals.

3. Provide a brief analysis of alternative technical solutions where the costs for operations and maintenance were unfeasible.

   The State did not break down the analysis of cost to examine at the cost of acquisition, cost of operations, and cost of maintenance separately. Instead, the State considered cost as a whole and weighed it as 25% of the analysis. The State did not identify the alternative solutions as unfeasible in terms of costs for operations and maintenance. Instead, the State identified that CrossWind offered sustainable and feasible pricing coupled with a desirable hosted platform that moved CrossWind into the preferred vendor status.

10 Impact Analysis on Net Operating Costs

1. Insert a table to illustrate the Net Operating Cost Impact.

   Table 10.1, on the following page, illustrates the impact on net operating costs over five years.

Table 10.1: Life Cycle Costs in FY

Impact on Operating Costs	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	5-Year Totals
Professional Services (Non-Software Costs)						
Current Costs	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Projected Costs	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Software Acquisition, Maintenance, Support, and Licenses Costs						
Current Costs	$496,530.00	$496,530.00	$496,530.00	$496,530.00	$496,530.00	**$2,482,650.00**
Projected Costs	$850,000.00	$867,000.00	$884,340.00	$902,026.80	$920,067.34	**$4,423,434.14**
Other Costs (Annual State Labor)						
Current Costs	$40,000.00	$40,000.00	$40,000.00	$40,000.00	$40,000.00	**$200,000.00**
Projected Costs	$30,000.00	$30,000.00	$30,000.00	$30,000.00	$30,000.00	**$150,000.00**
Baseline Annual Current Costs (inclusive of Professional Services, Software Acquisition, and Annual State Labor)	$536,530.00	$536,530.00	$536,530.00	$536,530.00	$536,530.00	**$2,682,650.00**
Baseline Annual Projected Costs (inclusive of Professional Services, Software Acquisition, and Annual State Labor)	$880,000.00	$897,000.00	$914,340.00	$932,026.80	$950,067.34	**$4,573,434.14**
Cumulative Current Costs (inclusive of Operating Costs and State Labor)	$536,530.00	$536,530.00	$536,530.00	$536,530.00	$536,530.00	**$2,682,650.00**
Cumulative Projected Costs (inclusive of Implementation, Operating Costs and State Labor)	$880,000.00	$897,000.00	$914,340.00	$932,026.80	$950,067.34	**$4,573,434.14**
Net Impact on Professional Services	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Impact on Operating Costs	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	5-Year Totals
Net Impact on Software Acquisition, Maintenance, Support, and Licenses Costs	($353,470.00)	($370,470.00)	($387,810.00)	($405,496.80)	($423,537.34)	**($1,940,784.14)**
Net Impact on State Labor Costs	$10,000.00	$10,000.00	$10,000.00	$10,000.00	$10,000.00	**$50,000.00**
Net Impact on Operating Costs	($343,470.00)	($360,470.00)	($377,810.00)	($395,496.80)	($413,537.34)	**($1,890,784.14)**

2. Provide a narrative summary of the analysis conducted and include a list of any assumptions.

   BerryDunn conducted a cost analysis that incorporated data from the CrossWind proposal, the DPS Project Charter, and the IT ABS CAD/RMS Modernization form. The documents BerryDunn analyzed as part of the review include current and projected costs as reported by the State and CrossWind.

   For the purpose of impact analysis of net operating costs, BerryDunn applied the following assumptions:

   - The State will purchase the package as CrossWind proposed without optional add-on products.
   - The State will purchase the professional services that CrossWind proposed, which excludes additional training support and legacy data migration services.
   - The State agrees with the proposal and pricing assumptions CrossWind identified in the proposal.
   - The planned State labor costs will remain the same.

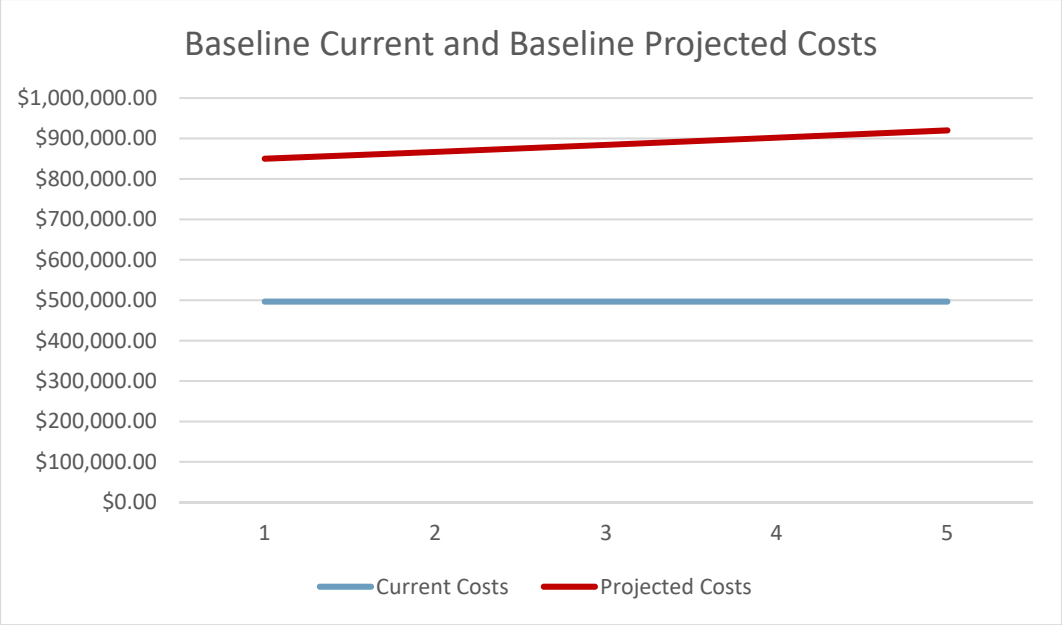
3. Explain any net operating increases that will be covered by Federal funding. Will this funding cover the entire life cycle? If not, please provide the breakouts by year.

   The State does not intend to expend Federal funding to cover costs of the new CAD/RMS. Instead, the State intends to cover the one-time and recurring costs associated with the new CAD/RMS through State funds.

4. What is the break-even point for this IT Activity (considering implementation and ongoing operating costs)?

   This IT activity does not have a break-even point, primarily as a result of the increased ongoing operating costs associated with a vendor-hosted system. The State will expend most one-time fees on vendor professional services, which will result in a cost decrease at Year 2. However, the costs do not break even with the annual rise in hosted fees. See Figure 10.1 on the following page.

Figure 10.1: Baseline Current and Baseline Projected Costs



11 Risk Assessment and Risk Register

This section describes the process for development of a Risk Register; including the following activities:

A. *Ask the Independent Review participants to provide a list of the risks that they have identified and their strategies for addressing those risks.*

B. *Independently validate the risk information provided by the State and/or vendor and assess their risk strategies.*

C. *Identify any additional risks.*

D. *Ask the Business to respond to your identified risks, as well as provide strategies to address them.*

E. *Assess the risks strategies provided by the Business for the additional risks you identified.*

F. *Document all this information in a Risk Register and label it Attachment 2. The Risk Register should include the following:*

- ***Source of Risk**: Project, Proposed Solution, Vendor or Other*
- ***Risk Description**: Provide a description of what the risk entails*
- ***Risk ratings to indicate**: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)*
- ***State's Planned Risk Strategy**: Avoid, Mitigate, Transfer or Accept*
- ***State's Planned Risk Response**: Describe what the State plans to do (if anything) to address the risk*
- ***Timing of Risk Response**: Describe the planned timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)*
- ***Reviewer's Assessment of State's Planned Response**: Indicate if the planned response is adequate/appropriate in your judgment, and if not, what would you recommend?*

Additional Comments on Risks:

The risks identified during this IR can be found in Attachment 2 – Risk Register.

12 Attachment 1 – Life Cycle Cost-Benefit Analysis

Table 12.1 on the following page reflects a five-year life cycle cost analysis for CrossWind's solution.

Table 12.1: Life Cycle Analysis[2]

Description	Initial Implementation	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	
	FY21	FY21	FY22	FY23	FY24	FY25	Total
Software							
Enterprise Application: License Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Maintenance &/or License Fee Add-ons	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Subscription Cost	$0.00	$850,000.00	$867,000.00	$884,340.00	$902,026.80	$920,067.34	**$4,423,434.14**
Software Total	**$0.00**	**$850,000.00**	**$867,000.00**	**$884,340.00**	**$902,026.80**	**$920,067.34**	**$4,423,434.14**
Implementation Services							
Implementation Payment #1	$400,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$400,000.00**
Implementation Payment #2	$250,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$250,000.00**
Implementation Payment #3	$250,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$250,000.00**
Project Management	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**

[2] The cost projections are based on a CrossWind draft final contract provided to BerryDunn in January of 2021. BerryDunn acknowledges that the projected costs straddle fiscal years. Based on the final implementation schedule, the cost allocations might spread across fiscal years 2021 and 2022.

Description	Initial Implementation	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	
	FY21	FY21	FY22	FY23	FY24	FY25	Total
Requirements	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Design (Architect Solution)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Development (Build, Configure or Aggregate)/Testing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
System Testing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Defect Removal	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Implement/Deploy or Integrate	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Quality Management	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Training	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Total Professional Services	**$900,000.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$900,000.00**
State Labor Costs							
ADS EPMO Project Oversight & Reporting	$5,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$5,000.00**
ADS EPMO Project Manager for Implementation	$80,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$80,000.00**

Description	Initial Implementation	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	
	FY21	FY21	FY22	FY23	FY24	FY25	Total
ADS EPMO Business Analyst for Implementation	$20,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$20,000.00**
ADS Enterprise Architect Staff for Implementation	$20,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$20,000.00**
ADS Security Staff for Implementation	$20,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$20,000.00**
Other ADS IT Labor for Implementation	$5,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$5,000.00**
Total State Labor Costs	**$150,000.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$150,000.00**
Total Implementation Services	**$1,050,000.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$1,050,000.00**
Telecom							
Bandwidth	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Total Telecom	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Hardware							
Computing Hardware	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Storage and Backup Hardware	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**

Description	Initial Implementation	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	
	FY21	FY21	FY22	FY23	FY24	FY25	Total
Network Hardware	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Facilities/Data Center	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Total Hardware	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Hosting							
Hosting Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Total Hosting	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Totals							
Implementation and State Labor Costs	$1,050,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$1,050,000.00**
BerryDunn IV&V	**$19,500.00**						**$19,500.00**
Total Implementation	$1,069,500.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$1,069,500.00**
Total Life Cycle Operating Costs	$1,069,500.00	**$850,000.00**	**$867,000.00**	**$884,340.00**	**$902,026.80**	**$920,067.34**	**$5,492,934.14**
Total Life Cycle Costs to be paid with Federal funds	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total Life Cycle Costs to be paid with State funds	**$1,069,500.00**	**$850,000.00**	**$867,000.00**	**$884,340.00**	**$902,026.80**	**$920,067.34**	**$5,492,934.14**

13 Attachment 2 – Risk Register

Data Element	Description
Risk #	Sequential number assigned to each risk to be used when referring to the risk.
Risk Probability, Impact, Overall Rating	Two-value indicator of the potential impact of the risk if it were to occur, along with an indicator of the probability of the risk occurring. Assigned values are high, medium, or low.
Source of Risk	Source of the risk, which may be the Project, Proposed Solution, Vendor, or Other.
Risk Description	Brief narrative description of the identified risk.
State's Planned Risk Strategy	Strategy the State plans to take to address the risk. Assigned values are: Avoid, Mitigate, Transfer, or Accept.
State's Planned Risk Response	Risk response the State plans to adopt based on discussions between State staff and BerryDunn reviewers.
Timing of Risk Response	Planned timing for carrying out the risk response, which may be Prior to Contract Execution or Subsequent to Contract Execution.
Reviewer's Assessment of State's Planned Response	Indication of whether BerryDunn reviewers feel the planned response is adequate and appropriate, and recommendations if not.

Risk #: 1	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal			
Risk Description: Insufficient project schedule. The preferred vendor proposed a 10-month implementation. Due to the scope of the project and the number of involved agencies, a 10-month implementation schedule likely does not afford the State and the preferred vendor sufficient time to install the product, and then build and configure, test, and train on the new system. Although the implementation schedule in the preferred vendor's proposal is tentative, it will be important for the State and the preferred vendor to confirm a project schedule that includes sufficient and achievable durations to help with a successful deployment. The State interview participants noted that the alternative vendors proposed comparable implementation schedules. For that reason, the scope of the RFP might have not fully articulated the scale of the project, which means the State and the vendor will need to confirm all factors that influence project phase durations.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State agrees the 10-month schedule is not feasible if considering implementation for all Vermont law enforcement and partners. The State will work with Crosswind, State technologists, user SMEs and financial professionals during contract development to			

Risk #: 1	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
identify a phased schedule that will likely cover at least 18 months. The State expects VSP to move first, followed closely by local agency Valcour users, followed by the remainder of Spillman users. The State intends to execute a pilot with a subset of VSP including dispatch as an initial deliverable. Key to understanding the schedule is defining milestones, gaps, key deliverables, gates, and the phases that get the State to adoption statewide. Each phase will have a mutually agreeable, specific definition of "done" with discrete acceptance criteria. The State expects deliverables throughout the five-year contract reflecting various production milestones ranging from initial deployment of a minimum viable product (perhaps more appropriately minimum viable configuration) extending through implementation in the last law enforcement unit. The last law enforcement unit may currently be a Spillman user reluctant to move to Valcour or a business unit not currently using CAD/RMS.			
Timing of Risk Response: Prior to contract negotiation.			
Reviewer's Assessment of State's Planned Response: BerryDunn considers the State's risk response to be adequate however the State may consider a timeline of at least 24 months to include all the local stakeholders.			
January 2021 Update: The timeline in the final draft contract provided to BerryDunn in January of 2021 allows for an 18-month timeline.			

Risk #: 2	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal			
Risk Description: Limited detail on system setup and workflow configuration. The preferred vendor did not describe the approach for the State to define settings and workflow configuration in the system. While the State prefers a commercial off-the-shelf (COTS) solution rather than customized software to streamline system support services, COTS solutions require customer configuration to tailor the product to a specific client environment. The preferred vendor proposed a phase committed to discovery—specifically, fact-finding and a technology gap assessment—of the State's current operating environment, so it will be important for the State and the preferred vendor to inject configuration decisions from the discovery sessions into the system. Furthermore, the State and the vendor should confirm the roles and ownership of the configuration tasks.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State will use business analysis resources from the EPMO. The EPMO will partner with Crosswind and appropriate SMEs to accomplish gap analyses and provide results to a configuration team. The configuration team will include state employees and Crosswind staff. The State agrees this team is not fully defined, and the State will do so in collaboration with Crosswind in the near term. Roles, responsibilities, and deliverables will be detailed in the contract.			
Timing of Risk Response: Prior to contract execution.			

Risk #: 2	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Reviewer's Assessment of State's Planned Response: The State's response only addresses a portion of the described risk. The State should ensure that the contract include specific tasks associated with the configuration process.			
January 2021 Update: The State's planned risk response is being implemented and will be ongoing.			

Risk #: 3	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal and interviews with the State			
Risk Description: Exclusion of legacy data migration. The preferred vendor did not propose data conversion as part of the implementation. The State clarified in the RFP that the preferred vendor would lead data migration activities. Nonetheless, the preferred vendor only proposed an associated rate for conversion, and would not consider the activity part of the implementation tasks until the State confirms inclusion of legacy data migration. Due to the importance of leveraging legacy data to promote officer and citizen safety (e.g., maintaining records on a dangerous premise or person), the State and the preferred vendor should confirm the need to include data conversion before executing the contract. Because the preferred vendor might associate a fee and additional project time to support data conversion activities, the State and the preferred vendor will need to confirm the scope of conversion if the State proceeds with purchasing vendor services to migrate legacy data.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State will not rely on Crosswind to lead the data conversion effort. State developers and data experts will lead conversion activities. The State expects Crosswind to provide the appropriate translation template(s) or schema and a means to import structured and unstructured data in to the Valcour application. The State agrees availability of premise and person history is critical for officer and public safety. The State will be solely responsible for deciding what data to migrate as well as the schedule. The State see this process occurring during implementation for priority data and operations as we continue to understand current data requirements. The State will outline the data cleansing and conversion process, roles and responsibilities in the contract.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is acceptable if the State decides to migrate legacy data. Additionally, the State should ensure that the contract clearly describes CrossWind's role in data conversion activities, including associated costs.			
January 2021 Update: It is BerryDunn's understanding that legacy data will not be migrated.			

Risk #: 4	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal			
Risk Description: Limited testing approach information. The preferred vendor referenced a testing plan within the proposal. However, the preferred vendor did not fully elaborate on the scale of the testing. For example, the preferred vendor did not clarify if the agency would conduct unit testing or facilitate a mock go-live in addition to support of the State's UAT activities. Due to the number of agencies participating in the project, the State and the preferred vendor should confirm the scope of testing activities, and also afford sufficient time for representatives from participating agencies to verify system functionality. System verification through testing not only confirms the system operates as intended, but also increases trust and buy-in from project stakeholders. Similarly, the preferred vendor did not clarify in the proposal the approach for resolving testing issues. For example, the State could request contract language indicating that the preferred vendor will review State testing results before troubleshooting the issues. Furthermore, the preferred vendor did not include stage-gate thresholds to formally enter and exit the testing phase. The State and the preferred vendor should clarify the testing entrance and exit criteria to help ensure the system runs successfully before training personnel on the product.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State expects a comprehensive test plan as an early deliverable following discovery and gap analyses. The State expects discovery to lead to a comprehensive list of user stories/requirements that will each be appropriately documented and tested with results and mitigation. The State agrees this is critically important to ensure system functionality as well as a necessary step in organizational change management. The State expects an early pilot to contribute to this effort. The State will schedule the pilot as a contract deliverable targeting the VSP and Dispatch.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response plan is appropriate; however, BerryDunn recommends that the State clarify and confirm CrossWinds involvement in the UAT planning, execution, and closure.			
January 2021 Update: The final draft contract shows that there will be a deliverable specifically for the test plan, test cases, testing, and test case resolution.			

Risk #: 5	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal and interviews with the State			
Risk Description: Partially identified stakeholders and participating agencies. Although the State outlined in the RFP the agencies planning to participate in the project, the State has not confirmed the final representative agencies. Until the State fully defines the participating agencies, the preferred vendor cannot accurately scale the implementation to meet the needs of the State. For example, the			

Risk #: 5	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
preferred vendor might need to increase the time for discovery, testing, and training to account for additional stakeholders not defined in the RFP. Similarly, the State will not have the ability to fully account for organizational change management (OCM) strategies until the State confirms the agencies and individuals who will participate in the project. During interviews with the State, the participants referenced an executive board that could confirm the stakeholders for the engagement prior to executing the contract. The State should engage the executive board to define the project participants and associated agencies.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State expects every Law Enforcement Agency (LEA) in the State at any level of government who has a need to use a CAD/RMS to participate and implement the Crosswind Valcour application. Currently, two governance boards exist. One for the Spillman CAD/RMS and one for the Valcour CAD/RMS. The State intends to merge these boards and make decisions related to who transitions and when. The State agrees this governance process is a prerequisite to fully solidifying and managing the scope of this project, and OCM depends on a finalized scope and schedule.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate; however, the State may consider that the governance merger exercise would occur after contract execution as opposed to prior to contract execution.			
January 2021 Update: BerryDunn was provided with a comprehensive list of agencies that will use Crosswinds solution, however, a list of stakeholders was not provided. The State has identified the stakeholders independent of the contract and has provided that information to Crosswinds. The list of stakeholders continues to evolve.			

Risk #: 6	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal and interviews with the State			
Risk Description: Undefined interfaces. The State defined a list of potential interfaces with third-party systems in the RFP, but the preferred vendor did not specifically name third-party interfaces in the proposal. Instead, the preferred vendor referenced the ability to develop interfaces from a technical standpoint. Due to potential costs for developing and/or establishing interfaces with third-party systems, the State and the preferred vendor should clearly define the systems requiring interfaces along with the business and technical elements of the exchange. In addition to the costs associated with the interface development, the preferred vendor might need to adjust the implementation schedule to account for the third-party exchanges. Moreover, the State and the preferred vendor will need to define the resource expectations (e.g., task ownership) to establish the required interfaces. Finally, the State should set expectations with the preferred vendor about interfaces the State requires by go-live versus the interfaces the State deems acceptable to be ready after go-live.			

Risk #: 6	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State does not require Crosswind Valcour to interface with any systems that they do not currently interface with prior to initial rollout. The State expects to continuously evaluate data sharing opportunities which will lead to integration/interfacing requirements over the life of the contract.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: BerryDunn understands the State's position on the risk, however, BerryDunn recommends that the State obtain confirmation on the known (existing) interfaces within the CrossWind contract to further confirm cost, scoping, and timeline considerations.			
January 2021 Update: A table of current interfaces was included in the January 2021 final draft contract. There may be other interfaces in the future that will be discussed throughout the project, if needed.			

Risk #: 7	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal and interviews with the State			
Risk Description: Proposed vendor project team concerns. The preferred vendor proposed a project manager who is a subcontractor. Although the preferred vendor reported that the subcontracted project manager has several years of experience working with the State, including experience on a major eTicket project, subcontractors can pose a risk in terms of limited integration with the primary vendor culture and limitations in product understanding that full-time employees with the primary vendor possess. The State should fully vet the subcontractor skills sets before executing an agreement with the planned vendor project manager. Similarly, the preferred vendor did not clearly propose a technical team to support the engagement. While the preferred vendor did name technically oriented resources in the proposal, the preferred vendor did not align the resources with specific roles on the engagement. The State and the preferred vendor should ensure clarity around the vendor resources assigned and committed to the project. Furthermore, the State should inject language in the executed vendor contract to permit State-initiated resource change requests in the case a vendor resource negatively impacts the project.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The vendor project and technical team will be detailed in the contract. Standard State of Vermont contract language describes the process by which the State would require a substandard performer be removed from the project and the vetting process for a replacement.			
Timing of Risk Response: Prior to contract execution.			

Risk #: 7	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Reviewer's Assessment of State's Planned Response: The State's response is appropriate.			
January 2021 Update: Additional detail about the proposed vendor team was provided in the updated final contract. The language did not include a process by which the State would require a substandard performer be removed from the project, although the process for a replacement was included.			

Risk #: 8	Risk Likelihood/Probability: High	Risk Impact: High	Overall Risk Rating: High
Source of Risk: Preferred vendor proposal and interviews with the State			
Risk Description: Missing proposal information on State project team structure and time commitments. The preferred vendor did not define the preferred State project team structure to support the implementation. Although the vendor is responsible for assembling a team to lead the vendor activities, the State will need an equally organized team to address State-owned implementation tasks. The preferred vendor did request a fully committed State project manager in the proposal, but the preferred vendor should also recommend a State team structure that involves technical and business leads. Moreover, the preferred vendor should also forecast the number of hours the vendor expects from the State team. By projecting the implementation hours from State resources, the preferred vendor will help the State project team balance daily duties with implementation responsibilities.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State will collaborate with Crosswind and build the contract to fully define the State and vendor team. Roles and responsibilities will be outlined in a responsible, accountable, consulted, informed (RACI) matrix, and the State will translate this into the estimated hours required by the State team. The State team is standing up as we speak and will include law enforcement, finance, technology, project management, business analysis, and the appropriate sponsorship/leadership commitment.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate.			
January 2021 Update: The State has identified project team members and the RACI matrix will be included in the project as a deliverable.			

Risk #: 9	Risk Likelihood/Probability: Low	Risk Impact: High	Overall Risk Rating: Medium
Source of Risk: Preferred vendor proposal and interviews with the State			
Risk Description: Generic training plan. The preferred vendor proposed a generic training plan, which included EUT and TTT models for implementation. The preferred vendor also proposed a			

Risk #: 9	Risk Likelihood/Probability: Low	Risk Impact: High	Overall Risk Rating: Medium
generic post-go-live training plan, referencing online materials for the State to leverage. Although the generic training plan provides insight to the class structure, the preferred vendor did not tailor the plan to account for all involved State resources. The State and the preferred vendor should confirm the count of stakeholders who will undergo EUT and TTT models to help confirm the pricing and timeline for training. During the training discussions with the preferred vendor, the State should acknowledge the minimum and maximum class sizes to help account for a sufficient number of trainings in the vendor's plan. Moreover, the State and the preferred vendor should confirm the approach for creating in-house training via the TTT program. The State interview participants noted the importance of creating knowledgeable in-house State trainers, which might require additional pre-go-live and post-go-live vendor-led TTT classes to generate the most knowledgeable State instructors.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State requires Crosswind to deliver a formal training plan based on State requirements. This is a negotiation item and will be reflected in the contract.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate. BerryDunn acknowledges that the actual submission of a formal training plan would occur after contract execution.			
January 2021 Update: There are details about training included in the January 2021 final draft contract, including a training plan. The training plan remains somewhat generic, but the details will be fleshed out in later deliverables. The State is developing internal teams for training.			

Risk #: 10	Risk Likelihood/Probability: Low	Risk Impact: Medium	Overall Risk Rating: Medium
Source of Risk: Preferred vendor proposal			
Risk Description: Misaligned SLA. The preferred vendor proposed a standard SLA based on its terms. The State acknowledged the preferred vendor's proposed SLA structure, and intends to counter with the State's preferred SLA terms. The State and the preferred vendor should reconcile the SLA to align with the State's expectations regarding support.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State requires Crosswind to deliver an SLA reflecting State requirements. This is a negotiation item and will be reflected in the contract. The SLA will be a contract addendum.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate.			
January 2021 Update: New SLA language was provided in the January 2021 final draft contract.			

Risk #: 11	Risk Likelihood/Probability: High	Risk Impact: Medium	Overall Risk Rating: Medium
Source of Risk: Preferred vendor proposal			
Risk Description: Limited deliverable descriptions. The preferred vendor outlined deliverables that align with ADS' EPMO project process. However, the preferred vendor did not fully articulate the components of the deliverables. To help ensure the preferred vendor deliverables align with State expectations, the State and the preferred vendor should expand on the details of the project artifacts.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State agrees. All deliverables will be fully described in the contract along with acceptance criteria and acceptance process.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate. BerryDunn recommends that each deliverable have a cost associated with it, and that a hold back percentage is formalized in the contract as a performance measure.			
January 2021 Update: A description of deliverables was provided in the January 2021 final draft contract.			

Risk #: 12	Risk Likelihood/Probability: Medium	Risk Impact: Medium	Overall Risk Rating: Medium
Source of Risk: Interviews with the State			
Risk Description: Reconciling network connection tools. The State interview participants noted that the preferred vendor proposed a product called SoftToken, which provides two-factor/advanced authorization. Although the State might opt in to SoftToken, the State should reconcile its existing two-factor authentication (2FA) and multi-factor authentication (MFA) tools. The reconciliation effort will help ensure the State is not paying for two products offering the same function without a business case that justifies the products operating concurrently.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State agrees and will not use the vendor's authentication tools unless needed. The State will decide after technical review and the architectural assessment by the Office of the CTO. This applies to any vendor tools.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate.			
January 2021 Update: The State expects to use the Valcour 2FA tool. A decision about how the Valcour and State tools interplay will be forthcoming. The Valcour tool comes at no additional cost.			

Risk #: 13	Risk Likelihood/Probability: Medium	Risk Impact: Medium	Overall Risk Rating: Medium
Source of Risk: Interviews with the State			
Risk Description: Ambiguity regarding security compliance with VSP operations. The State noted that the VSP has unique security requirements in term of accessing physical locations with secure data and accessing technology systems with protected information. The State team reported that the preferred vendor's proposal did not fully explain the user security levels, which prevents the State from verifying alignment between the State's security expectations and the security capabilities in the preferred vendor's system. The State should review the VSP security requirements with the preferred vendor to help ensure the proposed system will accommodate VSP needs.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State agrees. Law enforcement professionals including VSP are obviously sensitive to unauthorized access to data. The State believes the Valcour product meets these security requirements and will validate during an A-Z security assessment led by the Chief Information Security Officer (CISO) in collaboration with CJI experts and law enforcement subject matter experts.			
Timing of Risk Response: Prior to contract execution.			
Reviewer's Assessment of State's Planned Response: The State's response is appropriate.			
January 2021 Update: The State expects the criminal justice information will be protected and has addressed this with Valcour directly.			

Risk #: 14	Risk Likelihood/Probability: Medium	Risk Impact: Medium	Overall Risk Rating: Medium
Source of Risk: Preferred vendor proposal, DPS CAD/RMS Charter, and interviews with the State			
Risk Description: Lack of clarity around vendor change management services. In the DPS CAD/RMS Charter, the State acknowledged the need for OCM strategies to increase stakeholder acceptance of the new system. Although the State accounted for the risk by planning to roll out OCM classes to project stakeholders, the preferred vendor had ambiguous information about change management. Instead of proposing OCM services, the preferred vendor proposed a change management approach focused on managing scope adjustments to the system and project. During interviews, State participants did not confirm the expectations around OCM and project change management services from the preferred vendor. If the State expects the preferred vendor to provide OCM services, the State and the preferred vendor will need to review and update the professional services to include OCM activities.			
State's Planned Risk Strategy: Mitigate.			
State's Planned Risk Response: The State EPMO will provide OCM services.			
Timing of Risk Response: Prior to contract execution.			

Risk #: 14	Risk Likelihood/Probability: Medium	Risk Impact: Medium	Overall Risk Rating: Medium
Reviewer's Assessment of State's Planned Response: The State's response is appropriate.			
January 2021 Update: The State is responsible for OCM and will now be managed through the ADS/DPS.			