

**FRIEDMAN MEMORIAL AIRPORT
REQUEST FOR PROPOSAL (RFP)
REMOTE AIR TRAFFIC CONTROL TOWER (rTWR)**

INSTRUCTIONS: Vendor must complete this cover sheet and attach it with their proposal.

Submit Proposal to:	Friedman Memorial Airport 1616 Airport Circle Hailey, ID 83333	Manager:	Chris Pomeroy chris@iflysun.com (208) 788-9003
Due Date:	July 1, 2021	Time Due:	Mountain Time

OFFEROR INFORMATION

Offeror F.E.I.N.:	_____		
DUNS Number	_____		
Delivery Date:	_____		
Authorized Signature:	_____		
<small>Signature acknowledges acceptance of all terms and conditions of the solicitation.</small>	_____		
Authorized Signatory E-mail:	_____		
Typed/Printed Name and Title:	_____		
Legal Company Name:	_____		
Doing Business As:	_____		
Address:	_____		
City:	State:	Zip:	
Phone Number:	Fax Number:		_____
Contact for Clarifications:	_____		
Title:	_____		
Phone Number:	Fax Number:		_____
E-mail Address:	_____		

The RFP will be posted on the Friedman Memorial Airport website: <https://iflysun.com/business-opportunities-employment/>
Responses shall be submitted to the address shown above.

Background:

The Friedman Memorial Airport (SUN) is a non-hub primary commercial service airport in the City of Hailey/Blaine County, Idaho serving the Wood River Valley and the mountain/resort communities of Bellevue, Hailey, Ketchum, and Sun Valley.

SUN has a single runway, Runway 13/31, with a full parallel taxiway. The airport is situated in a constrained mountain valley bounded by high terrain in three quadrants and is bounded on the east by State Highway 75 with development surrounding the airport. The geography surrounding the

airport results in primarily one-way-in-one-way-out operations, landing Runway 31 and departing Runway 13.

The airport has three major air carriers: Delta, Alaska and United, and supports robust transient General Aviation activity. The airport has an existing Air Traffic Control Tower (ATCT) that is a Federal Contract Tower (FCT) and is in the Federal Contract Tower Program (CTP). The ATCT is critical to the safe and efficient operations into and out of the airport.

The airport's ATCT is currently located within the Runway Object Free Area (ROFA). The airport is operating under a Modification to Standards (MOS) approved by the Federal Aviation Administration (FAA) Airports District Office (ADO) to operate in this configuration. The Airport has been mandated by the FAA's Airports Division to relocate the existing ATCT out of the Runway ROFA as a condition of the MOS. Exacerbating this problem is the fact that the ATCT does not meet the siting requirements of FAA Order 6480.4 nor OSHA/EOSH requirements, and the structure has reached the end of its useful life.

The conditional MOS imposed by the ADO requires the ATCT be moved by 2023. As SUN has aggressively pursued a solution including a legacy ATCT in addition to an rTWR, the FAA has agreed to work with the Airport Authority regarding a possible extension to the 2023 deadline to accommodate an rTWR option if feasible.

A preliminary siting study for a replacement ATCT as part of the 2018 Airport Master Plan Update identified five possible sites for a new legacy ATCT.

A comparative cost analysis between a legacy ATCT located at Site 2 having a cab eye height of 52' and a remote tower was prepared for the Friedman Memorial Airport as part of the alternatives process.

RFP Administrative Information:

1. Purpose:

The Friedman Memorial Airport Authority Board (FMAA) is soliciting proposals from qualified vendors to design and install a remote airport traffic control tower system at SUN to replace the existing legacy ATCT.

2. Electronic Proposal:

Vendors may download the RFP from the Friedman Memorial Airport website:
<https://iflysun.com/business-opportunities-employment/>

3. RFP Amendments:

Any amendments to the RFP will be posted on the Friedman Memorial website:
<https://iflysun.com/business-opportunities-employment/>

4. RFP Submission Deadline:

Proposals **shall** be due July 1, 2021.

5. RFP Submission Requirements:

Vendors shall submit 5 hard copies of the proposal and an electronic version on a thumb drive or other electronic media to: Friedman Memorial Airport, 1616 Airport Circle, Hailey, ID 83333.

6. Proposal Document Ownership:

All proposal documents will be the property of the Friedman Memorial Airport.

- 7. Proprietary Information:** All materials submitted in response to this RFP will become public record, subject to inspection after an “Intent to Award” notice is issued. Any material requested for treatment as proprietary and/or confidential must be clearly identified and easily separable from the rest of the proposal. Such request must include justification for the request. The request will be reviewed and either approved or denied by the Friedman Memorial Airport. If denied, the vendor will have the opportunity to withdraw its entire proposal, or to remove the proprietary restrictions. **NEITHER COST NOR PRICING INFORMATION NOR A TOTAL PROPOSAL WILL BE CONSIDERED PROPRIETARY.**

SUBMISSION OF CONFIDENTIAL/PROPRIETARY INFORMATION: The Friedman Memorial Airport neither requests nor encourages the submission of confidential/proprietary information in response to this RFP. Information submitted will be open for public inspection. However, written requests for confidentiality can be submitted to the Friedman Memorial Airport Manager, provided that the submission must be in STRICT accordance with the following procedures. Adherence to these procedures will remain the SOLE RESPONSIBILITY of the vendor.

PROCEDURES FOR SUBMISSION OF CONFIDENTIAL/PROPRIETARY INFORMATION:

- A. Written request for confidentiality shall be submitted, by the vendor, with the proposal documents.
- B. The written request will be enclosed in an envelope marked “REQUEST FOR CONFIDENTIALITY,” and attached to the cover of the ORIGINAL copy of the offeror’s proposal which contains all original signed pages.
- C. The written request must state SPECIFICALLY IDENTIFIED BY PAGE NUMBER what elements of the proposal are to remain confidential. The request must also IDENTIFY THE BASIS for the claim of confidentiality, amounting to more than a recitation of a SPECIFIC State or Federal statute.
- D. Confidential/propriety information MUST be readily IDENTIFIED, MARKED and SEPARATLY PACKAGED from the rest of the proposal. Co-mingling of confidential/propriety information and other information is NOT acceptable.
- E. Upon request, the Friedman Memorial Airport Manager will make a written determination as to the apparent validity of any request for confidentiality and such written determination will be sent to the offeror.

- F. Proposals determined to be at variance with this procedure may be declared non-responsive by the Friedman Memorial Airport Manager and given no further consideration.

8. Rejection of Proposals:

The Friedman Memorial Airport reserves the right to reject any and all proposals and to cancel the RFP at its sole discretion.

9. Oral Presentation/Site Visits: (OPTIONAL)

Vendors *may be* asked to make oral presentations either at the Friedman Memorial Airport Office or FMAA meeting, via teleconference, and/or to make their facilities available for a site inspection, if applicable, by the evaluation committee. Any requested oral presentation and/or site visit will be solely for the benefit of the evaluation committee, to assist them in making a final proposal selection, and will be at the proposing vendor's expense. If invited to make a presentation, the vendor should be prepared to participate and to answer any possible questions of clarification related to the RFP requirements or the proposal submitted in response to this RFP solicitation.

10. Project Cancellation:

The Friedman Memorial Airport, at its sole discretion, may elect to cancel the project prior to construction, vendor procuring, assembling or production of remote tower components, at which time the vendor will be compensated for work done to date. The Airport will inform the vendor of its intent to stop work two weeks in advance of secession of work.

11. Evaluation Criteria:

Evaluation of the individual proposals will be made by an evaluation committee to determine the merit of each proposal received in accordance with the evaluation criteria defined herein. The recommendations of this group will be forwarded to the FMAA for review and approval.

- a. Failure of the vendor to provide in their proposal any information requested in this RFP may result in disqualification of the proposal and shall be the responsibility of the proposing individual or firm.
- b. During the evaluation process, discussions may be conducted with vendors who submit proposals determined to be reasonably susceptible of being selected for award. It will be the recommendation of the evaluation committee if such discussions are warranted.
- c. The evaluation committee will recommend the vendor whose proposal is most responsive to the Airport's needs and determined to support the best interests of the Airport, while within the available resources. The specifications within this RFP represent the minimum performance necessary for response.
- d. Specific evaluation criteria are outlined in item 10 below **Submission Requirements**.

12. Submission Requirements:

The contents of a submittal response to this RFP shall constitute a binding offer and will become contractual obligations of the successful vendor. Acknowledgment of this condition shall be indicated by the vendor's signature on its proposal or by an officer of the vendor legally authorized to execute contractual obligations.

The proposal will be evaluated by a committee selected by the FMAA based on the following required information, and **shall not exceed a total of 50 pages**:

- a. RFP Administrative Documents:
 1. Signed RFP by person with full authority to submit on behalf of the firm and execute a contract with the Friedman Memorial Airport.
 2. W-9
- b. Executive Summary.
- c. Firm Qualifications:
 1. Remote tower experience:
 - i. Similar projects worldwide
 - ii. Remote tower projects in the United States
 2. Experience working with FAA
 3. Key personnel resumes
 4. Firm capabilities, qualifications, experience of the organization and staff to successfully implement a remote tower system that will be certified by the FAA to deliver Class D airspace services.
 5. Firm references
- d. Project Understanding:
- e. Project Approach:
 1. Project team – The vendor **shall** provide the names and responsibilities of its proposed team.
 2. The vendor **shall** demonstrate its ability to commit the necessary resources to design, implement and test the remote tower at the Friedman Memorial Airport to meet the project schedule.
 3. Proposed project timeline.
- f. Technical Approach:
 1. Site report
 2. Facility layout
 3. Console design
 4. Display configuration
 5. Visual cameras - type and number
 6. IR camera(s) – type and number
 7. PTZ cameras – type and number
 8. Spares – number and type
 9. Processors/servers – number
 10. Equipment racks – number
 11. Network design
 12. Track-base surveillance system architecture
 13. Raw and processed bandwidth requirements
 14. Etc.
- g. Cost Proposal:

1. Itemized remote tower component cost breakdown:
 - i. Airfield infrastructure
 - ii. Remote tower equipment – servers, displays, etc.
 - iii. Track-based equipment – servers, displays, etc.
2. Federal Contract Tower equipment included in the latest FCT Minimum Equipment List (MEL)
3. Labor costs –By employee classification, hours, and hourly rate
4. Non-labor costs
5. Recurring costs:
 - i. System operation and maintenance pre-certification.
 - ii. Anticipated annual ongoing operation and maintenance post certification to include system technical refresh.
 - iii. License agreement, if applicable.
 - iv. Any other anticipated annual costs required to ensure the remote tower system maintains operational readiness.
- h. Compliance/Traceability matrix – The vendor **shall** provide a matrix demonstrating compliance or non-compliance with each required “**Shall**” in the proposal together with explanations, where necessary.

13. RFP Scoring

AVAILABLE POINTS FOR SCORING	SCORING CRITERIA
5 POINTS	<p>ADMINISTRATIVE DOCUMENTS & COMPLETENESS OF PROPOSAL</p> <ul style="list-style-type: none"> • The proposal has all the required documents required in Item 10 above “Submission Requirements.” • The Executive Summary demonstrates an overall understanding of the project and the vendor’s capabilities. • The proposal is both adequate and complete as defined through this RFP. • The proposal does not contain errors. • The proposal inspires confidence in the production of a high-quality product, solicited under this RFP.
25 POINTS	<p>FIRM QUALIFICATIONS & RESUMES</p> <ul style="list-style-type: none"> • Personnel are qualified, capable, and able to perform the tasks required to design and implement an rTWR solution at SUN. • Vendor has sufficient staff resources that are experienced, qualified, and knowledgeable to successfully complete the project on time and within the budget proposed. • Demonstrated experience including work with government agencies on similar projects. • The vendor evidences the ability of the firm to respond quickly when circumstances demand including the ability to be on-site when needed.

40 POINTS	<p>PROJECT UNDERSTANDING AND APPROACH</p> <ul style="list-style-type: none"> • Proposal evidences effective past performance by the firm to successfully complete similar projects (including design, implementation, administrative capability, management efficiency, etc). • Demonstrated experience working with Federal, State, and Local Agencies. • Proposal inspires confidence that a quality product will be produced. • The proposal meets the SUN rTWR requirements and goals. • The proposal is complete, creative, and unique. • The proposed amount of work for subcontracting appears reasonable. • The proposal evidences ability by the firm to respond and complete tasks in a timely manner as defined in issued task orders. • The proposal evidences ability of firm to respond quickly when circumstances demand.
30 POINTS	<p>PRICING/COST PROPOSAL</p> <ul style="list-style-type: none"> • <u>The proposal reflects a task-by-task budget developed:</u> <ul style="list-style-type: none"> ○ To provide best value to SUN. ○ To be fair, reasonable, efficient, and cost-effective. • <u>The budget provided:</u> <ul style="list-style-type: none"> ○ Is of sufficient detail to permit evaluators to determine individual costs associated with airfield infrastructure, rTWR equipment components, and ongoing O&M costs. ○ Presents the two add-alternates as clearly stand-alone items.

14. Scope, Operational Concept, System Requirements, Facility Requirements, Insurance requirements:

- a. **Scope of Work and Operational Concept– Exhibit A**
- b. **System Requirements – Exhibit B**
- c. **Facility Requirements – Exhibit C**
- d. **Insurance Requirements- Exhibit D**

Note: The task descriptions in Exhibits A, B and C are intended as a framework from which the selected vendor can provide all vendor program management, systems engineering, system test, evaluation, implementation, training, delivery, installation, integrated logistics support, and operational support necessary for the Friedman Memorial Airport’s Remote Tower system to be accepted and certified into the NAS by the FAA. Insight and creative ingenuity as to how best to achieve the objectives and overall needs of the Friedman Memorial Airport should be reflected in the submitted proposal including a description of remote tower efforts that can *realistically* be

accomplished within the time constraints and funding available. Proposals MUST present the vendors' current thinking assessment and approach in sufficient detail to demonstrate to the evaluation committee an understanding of the problem and the soundness of their approach for accomplishing the Friedman Memorial Airport's Remote Tower Project objectives.

15. RFP Schedule:

ACTIVITY	DATE	TIME
1. RFP Date Published	June 1, 2021	N/A
2. Pre-Proposal Meeting, if determined necessary	TBD	TBD
3. Vendor questions deadline*	June 11, 2021	5:00 P.M.
4. Response to vendor questions	June 18, 2011	5:00 P.M.
5. Proposal submission deadline	July 1, 2021	5:00 P.M.
6. Vendors notified of interview, if appropriate	TBD	TBD
7. Oral interviews, if required	TBD	TBD
8. Selected Vendor notification	TBD	N/A
9. Execute contract	TBD	N/A

* No questions accepted after this date

16. CONTRACT:

The successful vendor **shall** execute a formal contract with the Friedman Memorial Airport. The contract will incorporate the RFP, standard contract terms, Friedman Memorial Airport Special Provisions, any published addenda, and the response of the successful vendor. Any contract resulting from this RFP may not be modified, amended, extended, or augmented except through an authorized contract modification executed by the parties hereto, and any breach or default by a party shall not be waived or released other than in writing signed by the other party. The Friedman Memorial Airport reserves the right to eliminate or exclude aspects of the successful proposal which may be determined by the Friedman Memorial Airport to be unnecessary, or those aspects the Friedman Memorial Airport decides to assume itself or let out by separate contract.

Exhibit A

SCOPE OF SERVICES AND OPERATIONAL CONCEPT

Friedman Memorial Airport (SUN)

Scope of Services

The Scope of Services is outlined below:

1. The vendor **shall** design, build, and install the remote tower system components required to support VFR Class D airspace airport traffic control.
2. The vendor **shall** design and construct the airfield infrastructure required to support the remote tower system.
3. The vendor **shall** attend all meetings with the client, client's representative, and FAA during the design, construction, and installation process to assure certification and acceptance of the remote tower system by the FAA to provide VFR Class D Airspace services.
4. The vendor **shall** host and record all project meetings to include but not be limited to:
 - a. Project kickoff meeting.
 - b. Site survey.
 - c. Preliminary design review (PDR).
 - d. Critical design review (CDR).
 - e. Technical interchange meeting (TIM).
 - f. Factory acceptance test (FAT).
 - g. Site acceptance test (SAT).
 - h. Other meetings required to assure system acceptance and certification.
5. The vendor **shall** provide an anticipated project schedule of activities to include but not be limited to duration of each activity and anticipated date for final acceptance and system certification.
6. The vendor **shall** propose a schedule that defines key critical points prior to construction of airfield infrastructure that would permit discontinuance of the project at the discretion of Friedman Memorial Airport.

Operational Concept

The remote tower system **shall** without "direct" visual observation of the airport surface or the local Airspace provide air traffic controllers sufficient sensory data sufficient to support VFR ATCT operations from a remote location.

The system **shall** employ a variety of existing and developing sensor technologies including but not limited to optical visual and infra-red (IR) cameras and track-based surveillance (radar) to provide air traffic controllers located in the remote non-traditional ATCT facility with an out-of-the-window view of airport surface movement area and local airspace. The remote tower system **shall** be capable of certification by the FAA to provide Class D VFR ATCT services.

The remote airport traffic system **shall** display to the air traffic controller visual and track based traffic on the airport surface and in the Class D airspace. The surface component will consist of a system of video/IR cameras that will display to the air traffic controller a comprehensive picture of the airport surface. Track based data consisting of position, altitude, velocity, and identification for aircraft operating in the local Class D airspace will be displayed to the air traffic controller based on primary and/or secondary surveillance sources.

The system to be deployed at (SUN) will consist of the following:

1. **Airport Optical (Visual and IR) Surveillance System** – The airport video surveillance system **shall** consist of a 360° video camera array augmented by an additional, camera array(s), as necessary, strategically located to afford the controller an unobstructed view of the airport surface, local airspace, and approach/departure paths. Camera mast location and height will be determined based on a detailed site survey by the vendor. The visual system **shall** include fixed and/or moveable zoom cameras along the approach/departure path of Runway 13 and 31. The airport surface camera array shall encompass the airport movement area and shall provide the ability to detect non-cooperative targets. The video system shall provide a 360° view of the local airspace to support and augment airborne target location and verification. The video system **shall** be capable of detecting, designating, and tracking non-cooperative targets within the airport movement area and local airspace. The video system **shall** have the ability to associate radar or manually created tag information of a specific visual target and display that data and target location on the visual display. The video system **shall** include the ability to provide enhanced video display of a selected area within the designated situational awareness area of the airport by means of a controller taskable pan-tilt-zoom (PTZ) camera(s). The camera display and automation system **shall** be capable of being certified to provide “runway separation”.
2. **Local Airspace Surveillance** – Track based surveillance **shall** be proposed as an add-alternate capable of providing situational awareness to the controller in the Class D Airspace from the FAA’s System Wide Information Management (SWIM) system. Non-Federal ADS-B receivers **shall** be integrated into the track-based automation. Up to 25± vehicle squitters shall be provided to support airport surface situational awareness. The final number of vehicle “squitters” will be determined after final vendor selection. The vendors should price the vehicle “squitters” in increments of, 1-10, 1-15, 1-20, 1-25.

Note: At present the FAA does not have a non-Federal track-based display approved for use in FCT as a situational awareness tool. In preparing their proposals the vendor **shall** indicate the developmental costs for this system as a separate line item.

3. **Supporting Remote Airport Traffic Services Equipment** – The vendor **shall** provision the remote tower facility with all the equipment meeting the requirements and capabilities included in the FCT minimum Equipment list (MEL). This **shall** include all required commercial communications.

4. **FAA Equipment:** The vendor **shall** coordinate with the FAA to provide a flight data input/output (FDIO) device, direct communication with the overlying radar facility and all FTI communications as required. The airport **shall** be responsible for executing a reimbursable agreement with the FAA as required.

Exhibit B

REMOTE TOWER SYSTEM REQUIREMENTS

Friedman Memorial Airport (SUN)

Remote Tower System:

The remote tower system:

1. **Shall** have individual local, ground and supervisor controller working positions.
2. The vendor is encouraged to propose innovative display configurations that would economize control room/remote tower facility space requirements and support more efficient remote tower operations.
3. **Shall** have a distributed camera system: *
 - a. 360° HD camera array
 - b. 220°± HD secondary camera array(s) with an approach/departure path PTZ or fixed zoomable camera.
4. The camera enclosures **shall** have an environmental housing with internal heating elements.
5. The remote tower system **shall** have an integrated signal light gun slaved to a PTZ camera controlled via a pointing device, mouse, joystick, keyboard, etc.
6. The signal light gun PTZ camera **shall** automatically track a target, as well as be controlled via a pointing device such as a mouse, joystick, keyboard, etc.
7. The remote tower **shall** have two optical PTZ cameras in addition to the signal light gun PTZ camera.
8. The remote tower system **shall** have one or more infra-red (IR) camera(s) supporting IR tracking of non-cooperative targets.
9. The optical and IR automation system **shall** be provided with “hot” swap-over redundant servers.
10. Camera masts **shall** be connected to the remote tower facility via a closed fiber optic system.
11. Vendor **shall** provide the necessary camera and display spares.
12. The remote tower system **shall** have the capability of recording video and track-based display data for replay at a later date and store the data for 45 days.
13. The remote tower system **shall** have the capability of recording voice communications (local, ground, emergency frequency, shout line, etc.) on separate channels for replay at later date and store the recordings for 45 days.
14. The remote tower system **shall** have onsite and remote monitoring and maintenance capability that displays and records system status, error messages, event logs, system latency, etc.
15. The remote tower video and track-based monitoring system **shall** provide real time alerts to the controllers of any system anomalies such as image freezing, latency, data/service interruptions, system reboots, etc.
16. The remote tower system **shall** meet all requirements of the most recent version of the FAA Remote Tower Order.

17. The remote tower system **shall** meet the Reliability, Maintainability, and Availability (RMA) design assurance level of the most current Remote Tower Requirements.
18. The vendor **shall** provide all required FAA documentation to include but not limited to the following:
 - a. Operator training material.
 - b. System operation and maintenance (O&M) material.
 - c. As-built system record drawing.
 - d. Component warranties.
 - e. Etc.
19. The vendor **shall** provide a draft ongoing O&M contract proposal for 5 years to include:
 - a. Estimated annual fee for O&M.
 - b. Remote maintenance and monitoring.
 - c. System technical refresh.
 - d. Etc.

* See Attached Exhibit E “Conceptual Camera Layout”.

Camera array locations **shall** be sited based on the most recent camera siting criteria.

Visual Surveillance System:

Video (visual and IR) System:

1. The video system **shall** provide uninterrupted video surveillance of the local airspace and airport movement area.
2. The video system **shall** allow a controller to digitally zoom any segment of the 360° panoramic view from video displays located at the local, ground or supervisor working positions to visually acquire an airborne target at a distance of 3 nm.
3. The camera system **shall** provide a zoomable view of the approach/departure corridor for each runway for 3 nm.
4. The video cameras **shall** have a vertical field of view that minimizes the “zone-of-invisibility” above the 360° panoramic view and/or provide overlapping distributed camera views.
5. The video display **shall** provide configurable graphical overlays of airfield areas of interest such as runways, taxiways, connectors, hold short lines, construction areas, navaid sensitive areas, etc.
6. The human machine interface (HMI) **shall** support manipulation of multiple insets and views on the video displays via a mouse, keyboard with hot keys, or joystick, etc.
7. The camera array system **shall** provide a 360° view of the local Class D airspace via an individual display at each controller and supervisor position. The system may include a panoramic video wall.
8. The video system **shall** have the ability to alert the controller of a latency between the camera and the display greater than 1.5 seconds.
9. The camera system **shall** have the ability to alert the controller should the displayed image freeze for a period greater than 5 seconds.
10. The video system **shall** operate day or night.
11. The video system **shall** operate in low visibility weather conditions.
12. The camera system **shall** have a frame rate of not less than 25 frames per second.

13. There **shall** be a method to remotely clean foreign objects from the camera lens.
14. The system **shall** include PTZ cameras that can be operated by the controllers via a mouse, joystick or keyboard or other input device with capability to zoom in on selected areas on the airport or aircraft in the local area.
15. The PTZ camera **shall** support up to 25 adaptable preset positions.
16. The PTZ cameras **shall** support target detection and automatic tracking,
17. The video surveillance system **shall** incorporate infra-red (IR) capability presented to the controllers via a configurable human-machine-interface (HMI) as a picture-in-a-picture.
18. The video and track-based displays system **shall** display an accurate airport map at each working position, local, ground and supervisor.
19. The video system **shall** employ the latest video compression algorithm.
 - The video system **shall** support a graphical user interface (GUI).

Video Tracking System:

1. The video tracking system **shall** be capable of detecting, designating, and tracking via adaptable symbology (box, circle, triangle, etc.) non-cooperative targets on the airport surface and in the local airspace.
2. The video tracking function **shall** be capable of detecting and tracking cooperative and non-cooperative targets with a visual cross section of 0.5 M² within the airport movement area.
3. The camera tracking system **shall** have a 95% probability of detection.
4. The video tracking system **shall** be capable of associating target and tag data from the track-based surveillance system and display the target designator and data on the visual display system.
5. The video tracking system **shall** support manual tagging of non-cooperative targets.
6. The video tracking system may incorporate IR tracking capability of cooperative and non-cooperative targets.

Airspace/Surface Track-based Surveillance (Add Alternate):

Track-Based Surveillance System: A track-based system utilizing a combination of data from SWIM, non-Federal ADS-B receivers and vehicle “squitters” should be proposed as an **add-alternate**. The proposed track-based system **shall** meet the following minimum requirements:

1. The track-based automation platform **shall** accept and display processed data from the FAA SWIM, non-Federal dual-link ADS-B receivers, and vehicle “squitters”.
2. The track-based system **shall** have a latency not greater than 1.5 seconds (latency \leq 1.5 seconds).
3. The track-based system **shall** provide departure and arrival flight plan information.
4. The track-based display **shall** have the capability of visually differentiating arriving and departing aircraft via configurable symbology (shape, color, etc.).
5. The track-based surveillance system **shall** provide seamless coverage of the local airspace out to no-less-than 25 nm from the airport reference point.
6. The track-based system **shall** detect, track, and designate via adaptable symbology (box, circle, triangle, etc.) cooperative targets in the airspace and on the airport surface.

7. The target-based system **shall** be integrated into the video system to permit target designators and data tags to be shown on the video displays.
8. The target designators and data tags **shall** be presented as a smoothed track on the video display.
9. The track-based surveillance system **shall** have an update rate not more than 2 seconds.
10. The system **shall** have a system latency of not more than 1.5 seconds from detection to display.
11. The track-based surveillance system **shall** be certified to provide situational awareness to the controller in the remote tower facility.
12. The track-based surveillance system **shall**, at a minimum, be capable of detecting cooperative targets in the local Class D airspace and displaying position, altitude, velocity, and identification.
13. The track-based surveillance system **shall** be capable of associating target and tag data with the video tracking system and display the target designator and data tag on the visual display system.
14. The track-based displays **shall** be configured to display target and tag data that mimics the FAA's STARS displays.
15. Local, ground and supervisor positions **shall** have access to the track-based displays.
16. The track-based system **shall** display an accurate map of the airport with approach fixes and VFR reporting points.
17. The track-based system **shall** support display of range rings in 5 nm increments out to 25 nm and display the airport Class D limits (4 nm) as a differentiable range ring from the airport reference point
18. The track-based system **shall** have the ability to turn on and off graphically depicted geographical and man-made obstacles within the Class B airspace on the track-based display.

Exhibit C

REMOTE TOWER FACILITY REQUIREMENTS

Friedman Memorial Airport (SUN)

Remote Tower Facility (Add Alternate):

The vendor **shall** propose remote tower facility alternatives to include but not be limited to constructing a new facility, rehabilitating an existing building on the airport and/or designing, siting and constructing an interim/temporary facility which may be relocated and/or repurposed at a future date. These alternatives will be presented as an add alternate. The Friedman Memorial Airport, at its sole discretion, may elect to add design and construction of the remote tower facility to the contract.

The remote tower facility **shall**:

1. Meet all of the applicable Federal Contract Tower (FCT) Minimum Facility Requirements.
2. Meet all the provisions of the FAA FCT Program Minimum Equipment List (MEL) facility requirements such as:
 - a. Remote tower control with card key access.
 - b. Secured (card key and keypad) control room.
 - c. Lockable manager's office.
 - d. Restroom(s).
 - e. Break room.
 - f. Training room.
 - g. Equipment/server room.
 - h. Communications room with separate commercial and FAA/FTI DMARC.
 - i. Fire control room.
 - j. Storage room.
 - k. Etc.
3. Meet or exceed the FAA equipment grounding and bonding provisions contained in FAA Order 19E.
4. Be secured and require programable card key access.
5. Provide individual controller positions for local, ground and supervisor.
6. Provide a dedicated backup generator and transfer switch designed to support all essential remote tower systems.
7. Provide an Uninterrupted Power System (UPS) for critical remote tower systems to include but not be limited to video(visual/IR) automation system, track-based surveillance system, video displays, critical systems that when power is lost requires a system re-boot, etc. The vendor is encouraged to propose innovative display configurations that would economize control room/remote tower facility space requirements and support more efficient remote tower operations.

Exhibit D

PROVISION FOR REQUIRED INSURANCE

Friedman Memorial Airport (SUN)

The Vendor shall obtain, and always maintain during the term of this agreement, insurance in the following kinds and amounts:

1. Workers' Compensation Insurance in accordance with current Idaho State Statutes. Employer's Liability Insurance with limits at a minimum of \$500,000 each accident, and \$500,000 each disease.
2. Commercial General Liability at a minimum of \$1,000,000 Each Occurrence, \$1,000,000 Personal Injury, \$2,000,000 Products/Completed Operations, and \$2,000,000 General Aggregate. The Policy shall be written on an Occurrence form. The Friedman Memorial Airport shall be included as an Additional Insured by the vendor.
3. Commercial Automobile Liability shall cover all owned, non-owned, and hired vehicles with a minimum of \$1,000,000 combined single limit bodily injury and property damage. The Policy **shall** include the Friedman Memorial Airport as an Additional Insured.
4. Professional Liability Insurance (Errors & Omissions Insurance) at a minimum of \$1,000,000 Each Claim and \$1,000,000 Annual Aggregate.
5. Umbrella or Excess Liability Insurance with a minimum limit of \$1,000,000. The Policy shall be written on an Occurrence form.. The Excess Liability shall include the Friedman Memorial Airport as an additional insured.
6. Valuable Papers Policy and Electronic Data Processing Insurance. Coverage amounts must be sufficient to assure the restoration of any plans, drawings, field notes, computer equipment, data systems, information storage media or other similar data related to the work covered by this contract, to include expense related to loss or destruction, until the final submission by the vendor or Sub-contractor has been made and accepted by the State of Colorado.
7. If the vendor requires insurance from a Sub-contractor acting independently from the vendor on the contract, that Sub-contractor shall be required to include the Friedman Memoria Airport as an Additional Insured on their Commercial General Liability, Commercial Auto Liability, Pollution Legal Liability (if applicable) and Umbrella or Excess Liability policies.
8. All Certificates of Insurance shall state that the insurers will endeavor to provide the Friedman Memorial Airport with 30 days advance notice of Cancellation. Certificates

evidencing continued coverage of any expiring policies shall be automatically forwarded to the Friedman Memorial Airport for the duration of the project.

9. The vendor will require all insurance policies secured and maintained by the vendor to provide that each carrier will waive all rights of recovery under subrogation against the Friedman Memorial, its agencies, institutions, organizations, officers, agents, employees and volunteers.
10. All policies evidencing the insurance coverages required hereunder shall be issued by insurance companies Rated "A-VIII" or better by A.M. Best.
11. The vendor shall provide certificates showing insurance coverage required by this contract to the Friedman Memorial Airport within 7 business days of the effective date of the contract, but in no event later than the commencement of the services or delivery of the goods under the contract. No later than 15 days prior to the expiration date of any such coverage, the vendor shall deliver the Friedman Memorial Airport certificates of insurance evidencing renewals thereof. At any time during the term of this contract, the Friedman Memorial Airport may request in writing, and the vendor shall thereupon within 10 days supply to the Friedman Memorial Airport, evidence satisfactory to the Friedman Memorial Airport of compliance with the provisions of this section.

**ANY AND ALL POLICY EXCLUSIONS MUST BE DISCLOSED AS PART OF
INSURANCE SUBMITTAL DOCUMENTATION.**