



Division of Finance & Management
 Office of Air, Rail & Transit
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 dot.sd.gov

TO: South Dakota Aeronautics Commission
FROM: Jack Dokken, Office of Aeronautics
DATE: September 6, 2022
SUBJECT: Bi-partisan Infrastructure Law (BIL) Grant Applications

Airport sponsors are requesting funding from the State Aeronautics Fund for the BIL projects below.

Britton 3-46-0004-017-2022

BIL - Conduct a cultural survey and aquatic resources survey for future development.

Federal Share	\$ 28,800.00
State Share	\$ 1,600.00
Local Share	\$ 1,600.00
Total	\$ 32,000.00

McLaughlin 3-46-0031-014-2022

BIL - Design revenue producing hangar with geotechnical exploration, aquatic resource survey, and documented CATEX.

Federal Share	\$ 67,500.00
State Share	\$ 0
Local Share	\$ 7,500.00
Total	\$ 75,000.00

Sturgis 3-46-0054-021-2022

BIL - Design AWOS-IIIP, aquatic resources survey and cultural survey.

Federal Share	\$ 67,500.00
State Share	\$ 3,750.00
Local Share	\$ 3,750.00
Total	\$ 75,000.00

Vermillion 3-46-0056-018-2022

BIL - Phase I: automated weather observing system, aquatic resources survey and cultural resources survey.

Federal Share	\$ 38,700.00
State Share	\$ 2,150.00
Local Share	\$ 2,150.00
Total	\$ 43,000.00

Project Narrative (Justification)

Cultural Survey & Aquatic Resource Survey for Future Airport Development

The proposed Aquatic Resources Survey and Cultural Survey will establish a strong foundation for proposed future projects at the Airport. These future projects include a fuel system project and revenue producing hangar project which are anticipated to be designed and constructed during 2023 and 2024-2025, respectively.

A Level III Intensive Survey of airport property will be completed by Principal Investigator pursuant to SD SHPO Guidelines, including subsurface testing. The traditional cultural specialists (TCS) will conduct a separate traditional cultural property survey, in conjunction with the archaeologist's cultural resource survey. It is anticipated that the pedestrian survey will be completed with 15 meter or less spaced transects as generally requested by THPO.

The field aquatic resource delineation will be conducted in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (1987 Edition) and Regional Supplement to the Corps of Engineers Wetland Manual: Great Plains Region.

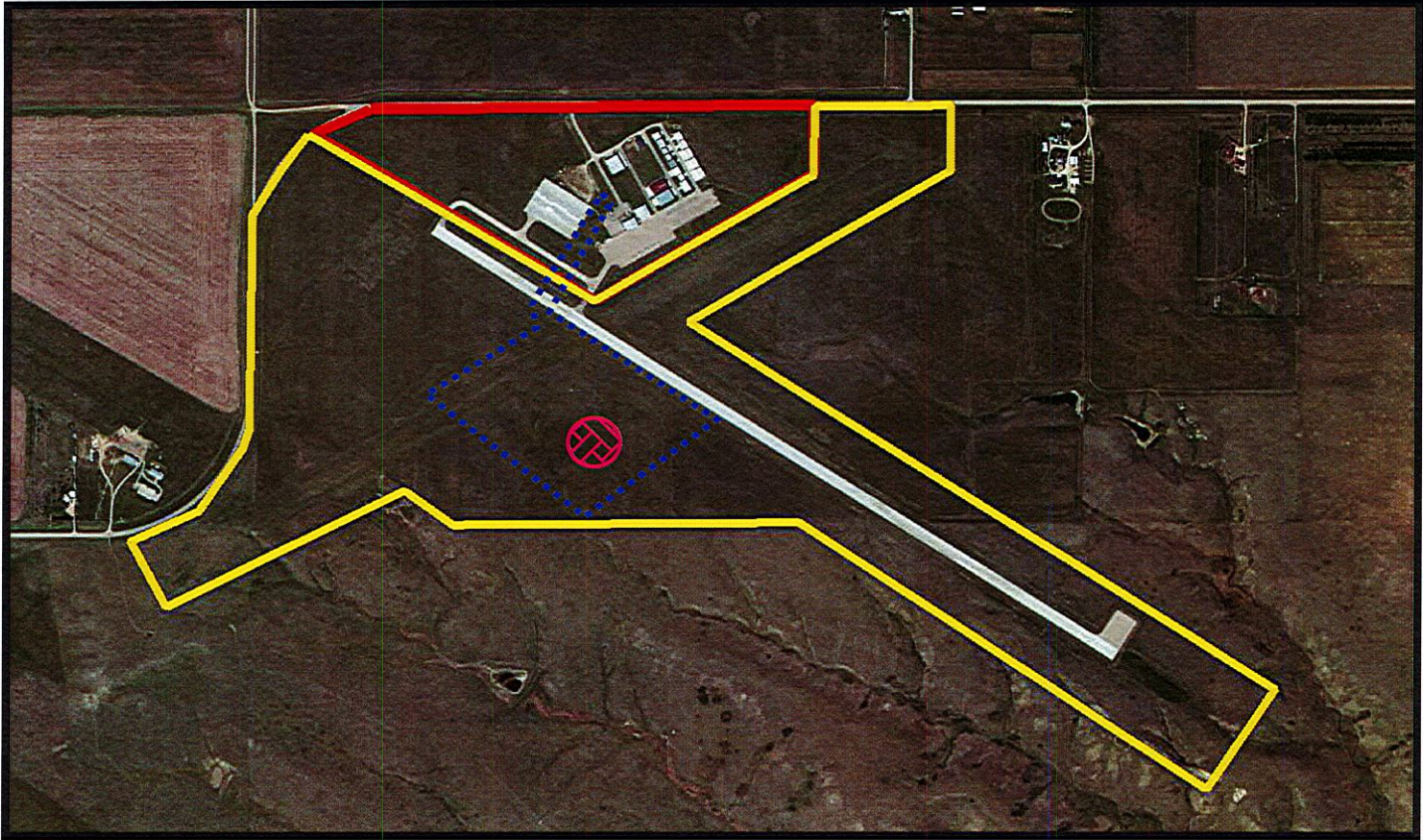
Project Narrative (Justification)

Design Revenue Producing Hangar with Geotechnical Exploration and Aquatic Resources Survey and Preparation of a Documented CATEX

The McLaughlin Municipal Airport is currently in need of a new hangar to meet the current demands for aircraft storage and to increase airport revenue. Currently there are only 4 hangars at the airport, these hangars are in varying states of repair, and are all occupied by a tenant. There has been vested interest from 2 local pilots and several transient users for the airport to have the capability to provide additional storage for aircraft for both temporary and/or long-term circumstances. Constructing a new hangar will allow users to rent the space for their aircraft. The hangar would be owned by the City of McLaughlin and would be rented out to pilots to allow them to store their aircraft inside while using the airport. By collecting rent from the proposed hangar, the City would be able to have another source of income from the airport. Having more space available for plans will also bring more traffic to the airport. In order for aircraft to use the proposed hangar, access to the existing hangar taxiways will be included in the design. The sketch on the following page provides a location of the proposed hangar as well as a possible haul route and staging area for the project.

Included with the design of the hangar is a geotechnical exploration of the proposed hangar site. This exploration provides vital information about the type of soils present at the proposed hangar site. In order to properly design the foundation for the proposed hangar, geotechnical exploration is essential. Different types of soils have different effects on building foundations; so properly identifying key soil properties of the existing site will allow the best possible building design to be completed.

This project also includes an aquatic resource survey of 7 acres at the McLaughlin Municipal Airport. The field delineation will be conducted in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (1987 Edition) and Regional Supplement to the Corps of Engineers Wetland Manual: Great Plains Region.



LEGEND

-  Proposed AWOS Location
-  Aquatic Resources Survey Limits
-  Previously Completed Cultural Survey
-  Cultural Survey to be Completed

2022 BIL Project - Sturgis Municipal Airport

Design for AWOS III-P w/ cultural resources survey and aquatic resources survey

<p>416 Production ST.N. Abilene, TX 79602 Phone: 605.225.1112 Fax: 605.225.3199 bob@helmsandassociates.com</p>	<p>Project No. _____ Sheet No. _____</p> <p>I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota. Registration No. _____</p>
 <p>Helms & Associates CIVIL ENGINEERS & LAND SURVEYORS</p>	
<p>2022 BIL Project Sturgis Municipal Airport</p>	
<p>Drawn By: _____ Check By: _____ Print No: _____ Draw No: _____ V.P. No: _____ Date: _____</p>	
<p>OF</p>	

Project Narrative (Justification)

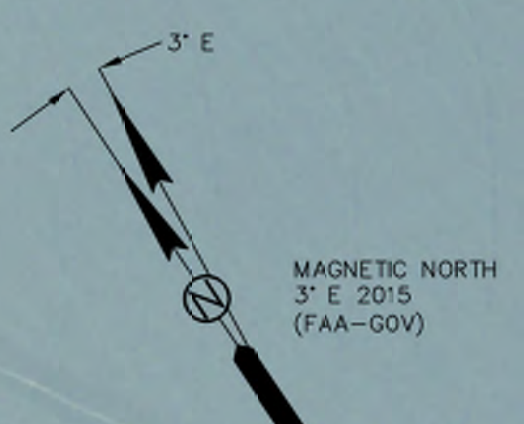
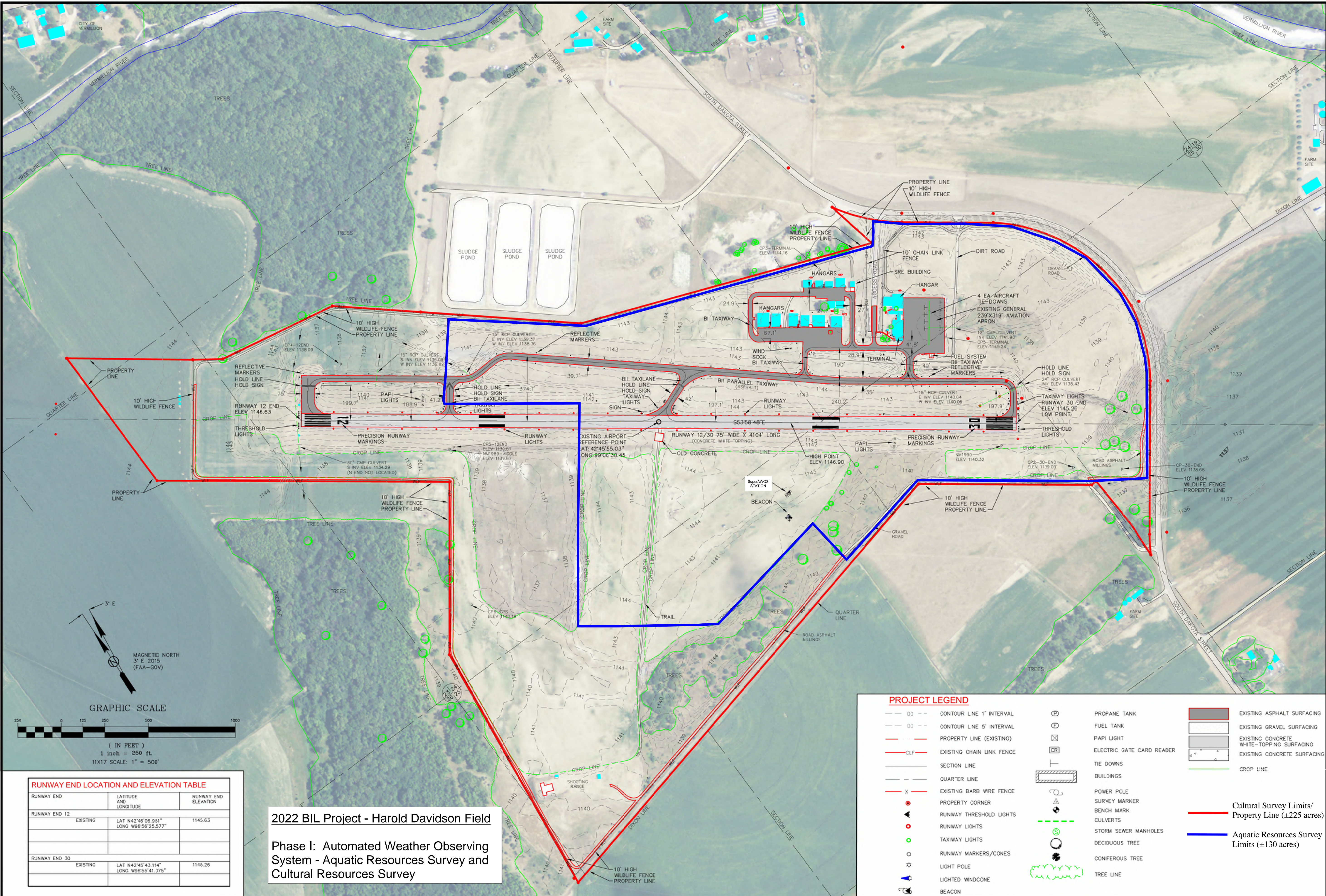
Design AWOS III-P with Aquatic Resource Survey and Cultural Survey

The purpose of this design is to provide the City of Sturgis with the Automated Weather Observation System (AWOS III-P). Design of an AWOS III-P would allow for future installation of the AWOS III-P system and would provide pilots with detailed weather information needed to more effectively and safely operate in and out of the airport. AWOS III-P will provide pilots with the visibility, cloud ceiling, wind velocity, and direction, as well as the type of precipitation if it is raining or snowing. Sturgis Municipal Airport has an average of 41 operations/day at the airport according to AIRNAV, updated May 19, 2022. Users have expressed great interest in onsite certified weather reporting equipment.

The western half of the State has certified weather observation stations with ASOS's at Rapid City Regional, Custer County, Pine Ridge, Philip, and Winner. Although the ASOS's weather stations are helpful to pilots, the need for certified weather stations at Sturgis Municipal Airport is necessary. The surrounding airports have a vast variation in elevation. The closest airfields with AWOS III are Black Hills Airport-Clyde Ice Field (SPF) and Rapid City Regional Airport (RAP). SPF is 18 nm away and is 678 feet higher in elevation. RAP is 26 nm away and is 51 feet lower in elevation. The proposed Design AWOS III-P would be beneficial to the Sturgis Municipal Airport and the surrounding airfields in the region.

A Level III Intensive Survey of airport property will be completed by Principal Investigator pursuant to SD SHPO Guidelines, including subsurface testing. The traditional cultural specialists (TCS) will conduct a separate traditional cultural property survey, in conjunction with the archaeologist's cultural resource survey. It is anticipated that the pedestrian survey will be completed with 15 meter or less spaced transects as generally requested by THPO.

The field delineation will be conducted in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (1987 Edition) and Regional Supplement to the Corps of Engineers Wetland Manual: Great Plains Region.



RUNWAY END LOCATION AND ELEVATION TABLE		
RUNWAY END	LATITUDE AND LONGITUDE	RUNWAY END ELEVATION
RUNWAY END 12		
EXISTING	LAT N42°46'06.951" LONG W96°56'25.577"	1145.63
RUNWAY END 30		
EXISTING	LAT N42°45'43.114" LONG W96°55'41.075"	1145.26

2022 BIL Project - Harold Davidson Field
Phase I: Automated Weather Observing System - Aquatic Resources Survey and Cultural Resources Survey

PROJECT LEGEND

--- 00 ---	CONTOUR LINE 1' INTERVAL	⊕	PROPANE TANK	▬	EXISTING ASPHALT SURFACING
--- 00 ---	CONTOUR LINE 5' INTERVAL	⊕	FUEL TANK	▬	EXISTING GRAVEL SURFACING
---	PROPERTY LINE (EXISTING)	⊗	PAPI LIGHT	▬	EXISTING CONCRETE WHITE-TOPPING SURFACING
-CLF-	EXISTING CHAIN LINK FENCE	⊗	ELECTRIC GATE CARD READER	▬	EXISTING CONCRETE SURFACING
- - -	SECTION LINE	⊕	TIE DOWNS	---	CROP LINE
- - -	QUARTER LINE	⊕	BUILDINGS	---	
- X -	EXISTING BARB WIRE FENCE	⊕	POWER POLE	---	
●	PROPERTY CORNER	⊕	SURVEY MARKER	---	
▲	RUNWAY THRESHOLD LIGHTS	⊕	BENCH MARK	---	
○	RUNWAY LIGHTS	⊕	CULVERTS	---	
○	TAXIWAY LIGHTS	⊕	STORM SEWER MANHOLES	---	
○	RUNWAY MARKERS/CONES	⊕	DECIDUOUS TREE	---	
★	LIGHTED WINDCONE	⊕	CONIFEROUS TREE	---	
⊕	BEACON	⊕	TREE LINE	---	

--- Cultural Survey Limits/Property Line (±225 acres)
--- Aquatic Resources Survey Limits (±130 acres)

No.	Revisions	By	App.	Date
1	BISMARCK ADO. BRIAN SCHUCK REVIEW			6-2017

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota. Registration No.

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 Email: terryh@helsmassociates.com

Helm & Associates
 CIVIL ENGINEERS & LAND SURVEYORS

Drawn By: CDH	Checked By: MAS
Proj. No: A-5875	DWG. No: 5875-01
VP. No: Sheet3	Date: 10/2016

Project Narrative (Justification)

Phase I: Automated Weather Observing System - Aquatic Resources Survey and Cultural Resources Survey

The proposed Aquatic Resources Survey and Cultural Survey will establish a strong foundation for proposed future projects at the Airport. These future projects include an Automated Weather Observing System (AWOS) III-P and partial parallel taxiway reconstruction project which are anticipated to be designed and constructed during 2023 and 2024-2025, respectively.

The purpose of the Phase I: AWOS project is to pilots with detailed weather information needed to more effectively and safely operate in and out of the airport. An AWOS III-P will provide pilots with the visibility, cloud ceiling, wind velocity, and direction, as well as the type of precipitation if it is raining or snowing. Harold Davidson Field has an average of 79 operations/week at the airport according to AIRNAV, updated May 25, 2021. Users have expressed great interest in onsite certified weather reporting equipment.

A Level III Intensive Survey of airport property will be completed by Principal Investigator pursuant to SD SHPO Guidelines, including subsurface testing. The traditional cultural specialists (TCS) will conduct a separate traditional cultural property survey, in conjunction with the archaeologist's cultural resource survey. It is anticipated that the pedestrian survey will be completed with 15 meter or less spaced transects as generally requested by THPO.

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