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MEMORANDUM FOR FILE

FROM: James P. Holland, Deputy Director for Compliance

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SUBJECT: Redaction of "Environmental Assessment for the Liberty Center Phase I," for the South Dakota Ellsworth Development Authority, dated June 11, 2021

The subject report, "Environmental Assessment of the Liberty Center Phase I for the South Dakota Ellsworth Development Authority, June 11, 2021," was prepared for the Office of Local Defense Community Cooperation's (OLDCC) grantee, the South Dakota Ellsworth Development Authority, under a Defense Community Infrastructure Program award. The Environmental Assessment was prepared to support the grantee and OLDCC in meeting National Environmental Policy Act (NEPA) requirements. In keeping with important public transparency and records management purposes integral to NEPA, OLDCC will make the report available to the public while simultaneously protecting sensitive or controlled information as required by other law and policy.

The subject report was redacted on July 8, 2021 in accordance with 16 U.S.C. §§ 470aa–470mm, the Archaeological Resource Protection Act of 1979. This redaction was performed by Ms. Michelle Volkema, JD, MS, Environmental Project Manager/NEPA Coordinator, Office of Local Defense Community Cooperation, pursuant to §470hh, "Confidentiality of information concerning nature and location of archaeological resources."

RECOMMENDATION: Redact appropriate information in the report and appendix. Affix this memorandum as a cover sheet to the above-referenced report for OLDCC and public files.

COORDINATION: None

Attachments: Redacted "Environmental Assessment for the Liberty Center Phase I," for the South Dakota Ellsworth Development Authority, June 11, 2021

ENVIRONMENTAL ASSESSMENT

FOR THE

LIBERTY CENTER PHASE I

Pennington County, South Dakota

T2N, R9E, Section 17

Prepared For:

Dream Designs International, Inc.

In conjunction with

The South Dakota Ellsworth Development Authority

Quality Services, Inc. *Project #ERSD20003A*

June 11, 2021

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Section 1.0 Purpose and Need for The Action

1.1 Project Background

Dream Designs International, Inc., in conjunction with the South Dakota Ellsworth Development Authority (SDEDA), proposes to construct a mixed-use facility in Box Elder, South Dakota. ***Quality Services, Inc.*** has been contracted by Dream Designs International, Inc. to perform the documentation required under the National Environmental Protection Act (NEPA). Funding has come in part from a Defense Community Infrastructure grant through the Office of Local Defense Community Cooperation under the Department of Defense.

The project, called The Liberty Center, will be constructed in two phases, known as Phase I and Future Phases. This report will encompass the environmental review for Phase I of The Liberty Center (the Project), which consists of a 58,000 square foot building and 273 parking spaces. The purpose of Phase I of the facility is to house a recreation center to serve the Ellsworth Air Force Base and the local community.

Table 1. Legal location of the proposed project.

County	Township	Range	Section	USGS 7.5' Topographic Quadrangle
Pennington	2N	9E	17	Bend, South Dakota 1953, Photorevised 1978

1.2 Purpose and Need

The purpose of the Liberty Center is to address the needs for improving the quality of life and resiliency for military families and local civilians in South Dakota. The proposed action is to construct a multi-use facility just outside the gates of Ellsworth Air Force Base, serving the base and the community of Box Elder. The Liberty Center will serve as a training facility for the Air Force as well as a venue for military ceremonies. The surrounding community will be able to use the facility as a wellness center.

The 58,000-square-foot facility is needed because with the arrival of the B-21 Raider bomber aircraft, a hangar currently used for training on the base will once again be used to house aircraft. Not undertaking the proposed action would leave no place for the Air Force to train for important missions or hold military ceremonies. Members of the community would not have access to a recreation facility in close proximity to the base where many live and work.

An Environmental Assessment (EA) is needed to provide the Liberty Center with an environmental review and documentation to support the decision-making process that led them to the Proposed Action. The purpose of the EA is to analyze any potential impacts to the environmental from the Proposed Action.

Construction activities will include site improvements, outdoor landscaping, infrastructure, and building fabrication.

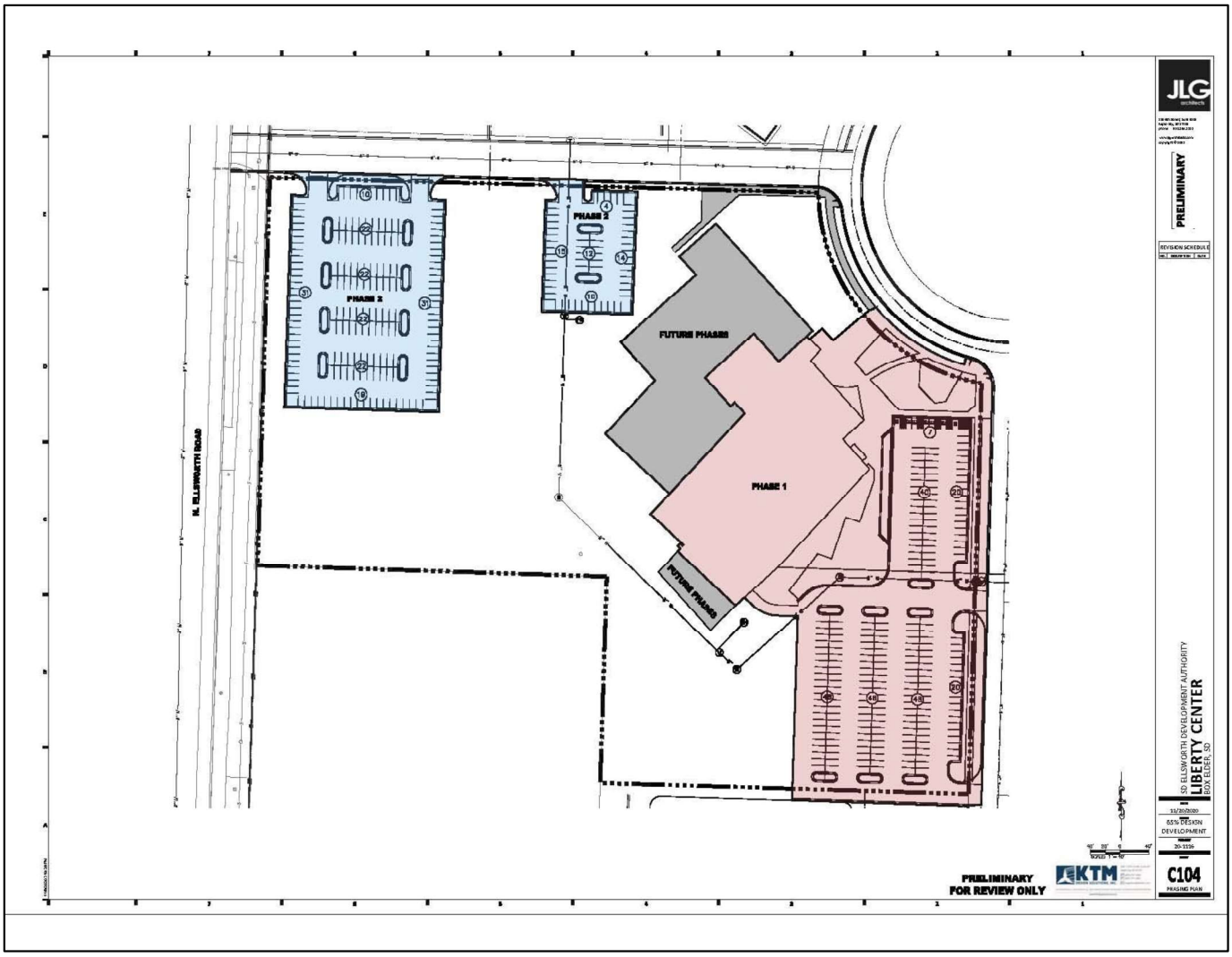

Figure 1. Liberty Center Phasing Plan.
Phase I is shown in pink and Future Phases in purple and blue.

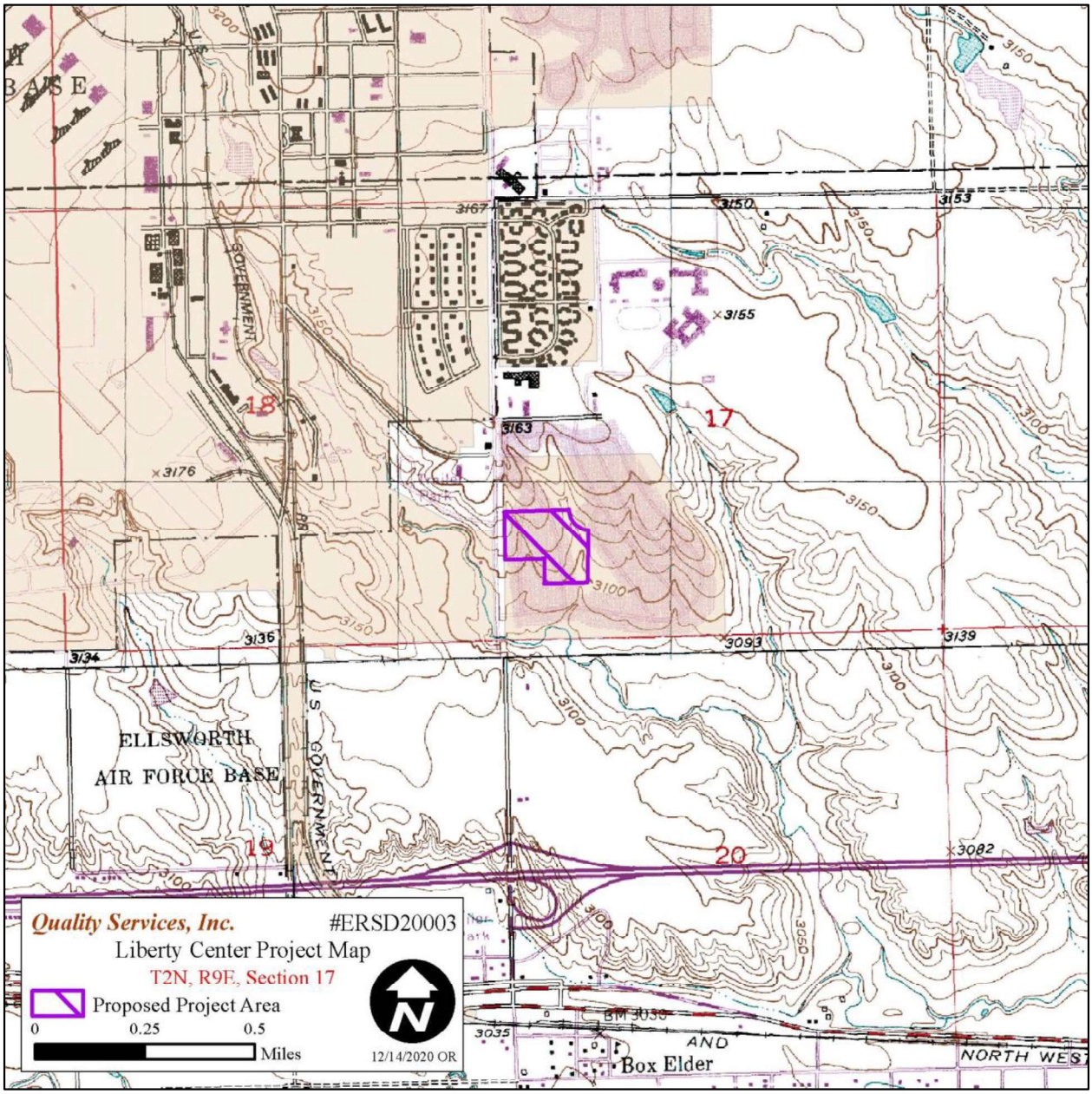

Figure 2. Liberty Center Project Map.
1:24000 scale.

Figure 3. Aerial view of Liberty Center Project.
Footprint shown in yellow includes Phase I and Future Phases.

1.3 Scope of the Environmental Assessment

This EA includes a No Action Alternative, discussion of a separate Alternative 1, and the Proposed Action.

The EA discusses what effects the Proposed Action has on many environmental factors (listed below). This document evaluates potential environmental impacts to the following resources that would likely be affected by construction of a multiuse recreational facility and associated infrastructure. This analysis covers only those items listed below. It does not include any previous construction or demolition of facilities, parking lots, infrastructure, or other non-related construction or demolition.

The following environmental impacts were analyzed within the scope of this environmental assessment: noise, air quality, land use, topography and soils, water resources, biological resources, safety and occupational health, utilities and infrastructure, hazardous materials and wastes, and cultural resources.

Per the National Environmental Policy Act (NEPA), the resource areas that are anticipated to experience either no impacts or negligible environmental impacts are not examined in detail in this document. These environmental resources include coastal zone management, geological resources, environmental justice/protection of children, socioeconomics, and visual resources.

Coastal Zone Management. Pennington County is not within a coastal zone, and therefore the Proposed Action or its Alternatives would have no effect on coastal resources.

Geological Resources. A geotechnical investigation entitled "Geotechnical Exploration and Review, Proposed Liberty Plaza Development Streets" and "Geotechnical Pavement Revision, Proposed Liberty Plaza Development Streets" AET No. 17-21047 were completed in October of 2020. Excavation, placement of fill, and utility requirements will be in accordance with the Standard Specifications and per the geotechnical investigation. No minerals will be mined on the property. Any geologic resources underlying the site would presumably not be disturbed unless these resources were shallow in nature and were disturbed by the site preparation and excavation. Other resources, petroleum deposits, for instance would not be disturbed by the Proposed Action.

Environmental Justice / Protection of Children. Regarding environmental justice issues, no major adverse environmental impacts associated with the projects included in the Proposed Action are anticipated to impact off- or on-base communities. Therefore, no populations (i.e., minority, low-income, or otherwise) would be disproportionately or adversely impacted and no adverse impact regarding environmental justice would result. In general, implementation of the project included in the Proposed Action would not result in increased expose to children to environmental health risks or safety risks such as those associated with the generation, use, or storage of hazardous materials. Standard construction site safety precautions (e.g., fencing and other security measures) would reduce potential risks to minimal levels and any potential impacts to children would be negligible and short-term.

Socioeconomics. The project is located in Box Elder, SD which has a population of 10,154 and has grown by 30 percent since the 2010 census. The Liberty Center will provide increased recreation

opportunities to local residents and newcomers. A shared use facility has the potential to attract people moving to the area who are looking for these types of amenities, thus increasing contributions to the local economy. Access to the facility will be open to all races, ethnicities, and socioeconomic classes. The facility will create jobs and increase tax revenue for the county. Since the land is privately owned and undeveloped, no tribal lands or low-income housing will be impacted by this development. Thus, the Proposed Action will have a positive effect on the socioeconomic status of the surrounding communities.

Visual Resources. The structure will be constructed in a way that existing sightlines from neighboring properties are minimally affected. Similar sightlines will still be available for public use from Liberty Boulevard or North Ellsworth Road.

1.4 Interagency Coordination and Consultation

Interagency Coordination and Consultations

Scoping is an early and open process for developing the breadth of issues to be addressed in an Environmental Assessment (EA) and for identifying significant concerns related to an action. Per the requirements of the Intergovernmental Cooperation Act of 1968 (42 USC § 4231[a]) and Executive Order (EO) 12372, Intergovernmental Review of Federal Programs, federal, state, and local agencies with jurisdiction that could be affected by the Proposed Action will be notified during the initial development of this EA.

Government-to-Government Consultations

EO 13175, Consultation and Coordination with Indian Tribal Governments, directs federal agencies to coordinate and consult with Native American tribal governments whose interests might be directly and substantially affected by activities on federally administered lands. Federally recognized tribes that are historically affiliated with lands in the vicinity of Box Elder have been invited by SDEDA to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation or the interagency coordination process, and it requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations. The cultural resources report conducted for the Liberty Center development found no tribal artifacts.

Other Agency Consultations

Per the requirements of Section 106 of the National Historic Preservation Act (NHPA), and its implementing regulations (36 CFR Part 800), as well as Section 7 of the Endangered Species Act (ESA), and its implementing regulations (50 CFR Part 402), the findings of effect and request for concurrence will be transmitted to the South Dakota State Historic Preservation Officer (SHPO) and the U.S Fish and Wildlife Service (USFWS) – South Dakota.

1.5 Public and Agency Review

NEPA, 40 CFR Part 1506.6 requires public involvement of the Environmental Assessment. Per the OLDCC, CEQ regulations only require a public notice for Environmental Assessments, not a public comment period under normal circumstances. A 30-day public comment period on the draft EA is not required. For the public notice period, the report will be placed on the SDEDA website. The report will also be noticed in the Rapid City Journal on June 12, 2021, Black Hills Pioneer on June 14, 2021, and Native Sun News on June 17 and June 24, 2021. A hard copy will also be available at the Rapid City Public Library. Upon issuing a FONSI, OLDCC will make the FONSI available to the public.

1.6 Decision To Be Made

This document evaluates the environmental consequences from implementing the construction of a multiuse recreational facility in Box Elder, SD. The facility is needed to directly contribute to enhancing the quality of life for all families within Ellsworth Air Force Base (EAFB), the City of Box Elder, and its surrounding communities. NEPA requires that environmental impacts be considered prior to the final decision on a proposed project. If significant impacts are identified, SDEDA will implement best management practices (BMPs) and/or mitigation measures to reduce the impacts below the level of significance, undertake the preparation of an Environmental Impact Statement (EIS) addressing the proposed action, or abandon the proposed action.

Preparation of an environmental assessment must be accomplished prior to a final decision regarding the proposed project and must be available to inform decision makers of potential environmental impacts of selection the proposed action or any of the alternatives.

Section 2.0 Description of the Proposed Action and Alternatives

2.1 Introduction

The SDEDA has identified representative projects to carry forward for environmental analysis that are related to the different categories of activities considered and geographic areas associated with the city and have the greatest likely potential for adverse impacts. Analyses focuses on these projects to provide a context by which a comparative analysis can be made, not only for implementation of those projects identified in the Proposed Action but not specifically analyzed, as well as any future development activities that are similar in scope to those analyzed in the EA. Any additional projects or future activities proposed must be evaluated on their own merit under NEPA guidelines to determine their environmental impact and appropriate level of NEPA analysis.

2.2 Description of The Proposed Action and Alternatives

Proposed Action. This report addresses potential adverse and beneficial environmental issues that could result from the implementation of proposed construction within the City of Box Elder. Implementation of the Proposed Action would result in long-term employment opportunities, increased recreational activities for the community, and increased revenue for the City. However, construction-related ground-disturbing activities would have the potential to result in short-term, temporary, construction-related impacts that require analysis in accordance with National Environmental Policy Act (NEPA). In addition to the Proposed Action, Council on Environmental Quality (CEQ) regulations require an assessment of potentially effective and reasonably feasible alternatives for implementation of the Proposed Action. Additionally, CEQ regulations stipulate that the No-Action Alternative must be analyzed to assess any environmental consequences that may occur if the Proposed Action is not implemented.

Details related to the project including: Proposed Action, Alternative 1, and No-Action Alternative, are provided below.

2.3 Selection Standards for Project Alternatives

The scope and location of the project and, where applicable, their alternatives, have undergone extensive review by ***Quality Services, Inc.***, local government agencies, and supporting Department of Defense specialty staff.

Potential alternatives to the project included in the Proposed Action were each evaluated based on three universal selection standards, which were applied to all alternatives. Each project description, Proposed Action and Alternatives provides details regarding how these universal selection standards apply to specific project requirements.

Standard 1: Planning Constraints - Planning constraints are man-made or natural elements that can create significant limitations to the operation or construction of buildings, roadways, utility systems, and other facilities. These constraints, when considered collectively with the site's capacity opportunities, inform the identification of potential areas for development, as well as those areas that can be redeveloped to support growth. These standards address compatibility with site operational aspects, natural and built resources, land use compatibility, and largely dictates the location/placement of a proposed facility.

Natural – Natural constraints include environmental and cultural resources within Box Elder. These resources provide positive aesthetic, social, cultural, and recreational attributes that substantially contribute to the overall quality of life.

Built – Built constraints are related to the condition, functionality, or effectiveness of infrastructure systems, facilities, and other man-made improvements.

Land Use Compatibility – Land use compatibility constraints are associated with land use designations (e.g., administrative, recreation, etc.) and ensuring that planning considerations account for compatibility between proposed and existing uses (e.g., recreational uses may not be compatible with the surrounding areas).

Standard 2: City Capacity Opportunities - This refers to the capabilities of the City's existing facilities/infrastructure to meet existing and future needs. This standard largely drives the scope of the facility/infrastructure development and/or improvement and requires that proposed facility/infrastructure development and improvements support the following aspects: City Operations, Built infrastructure, and Quality of life.

Standard 3: Sustainability Development Indicators - This refers to the ability to operate into the future without a decline in the natural and man-made systems that support it, creating a sustainable site. This standard generally drives the scope of the facility/infrastructure development and/or improvement and supports sustainability of the project through consideration of the following: energy, water, wastewater, air quality, facilities space optimization, and natural/cultural resources.

2.4 Proposed Action and Alternatives

CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. "Reasonable alternatives" are defined as those alternatives that could also be utilized to meet the purpose of and need for the project included in the Proposed Action.

The NEPA process is intended to support flexible, informed decision-making; the analysis provided by this document and feedback from the public and other agencies will inform decisions made about whether, when, and how to execute the project included in the Proposed Action. Among the alternatives evaluated is a No-Action Alternative. The No-Action Alternative analyzes the consequences of not

undertaking the project included in the Proposed Action and will serve to establish a comparative baseline for analysis.

The scope, location, and objectives are included in the Proposed Action and are described below. These descriptions also include reasonable and practicable alternatives for projects where multiple viable courses of action exist. Those alternatives are assessed relative to the universal selection standards and project-specific selection standards, where applicable. Alternatives that met all three selection standards were considered reasonable and retained for consideration. Alternatives that did not meet one or more of the standards were considered unreasonable and are not carried forward for consideration.

The following provides a detailed description of the proposed construction project included in the Proposed Action. For vicinity and location of the proposed project, refer to Figures 2 and 3.

Facility Construction Project

For the single construction project included in the Proposed Action, it is anticipated that all construction equipment would be brought on-site and would remain on-site for the duration of their use. Best management practices (BMPs) to minimize environmental impacts (e.g., soil stockpiling, use of silt berms/fences, watering of exposed soils), preparation of management plans (e.g., Stormwater Pollution Prevention Plan [SWPPP], Erosion Control Plan, and Stormwater Management Plan [SWMP]), and worker training programs would be implemented as required by appropriate permitting efforts during construction. Upon completion, all disturbed areas not supporting new facilities or pavements would be revegetated to the extent possible with native plant species. Design and construction of the new facility would comply with applicable codes and laws.

Project: Construction of Multiuse Facility (FY2021)

Under the Proposed Action, a new 58,000 square foot multi-use recreational facility will be constructed on privately owned land on Liberty Boulevard just outside Ellsworth Air Force Base in Box Elder, South Dakota. The Liberty Center will serve as a training facility for the Air Force as well as a venue for military ceremonies. The community will be able to use the facility as a wellness center.

Funding for the facility has come from a combination of $3.2 million in state appropriations, a $6.3 million Defense Community Infrastructure grant through the Office of Local Defense Community Cooperation under the Department of Defense, $2 million in tax increment financing run through Pennington County and $1.1 million from the SDEDA.

Alternatives Considered but not Carried Forward for Detailed Analysis: Alternative Location. Alternatives that included the construction of a new facility in a different location were not carried forward for analysis due to the limitations of the DOD grant.

Alternatives Considered for this Project: No-Action Alternative. Under the No-Action Alternative, the Air Force would continue to train in the hangar that is currently used. However, with the arrival of the B-21 Raider bomber aircraft that will be stored in the hangar, there would be no space to

accommodate training. This lack of space directly impacts the mission of the Air Force in that airmen and women would not have adequate facilities to train in and be prepared to carry out their duties. The public would not have access to a public recreational facility in Box Elder, and there would be no dedicated building space available to carry out military ceremonies. Nevertheless, the No-Action Alternative has been carried forward for further analysis, consistent with CEQ regulations, to provide a baseline against which the impacts of the project can be assessed.

Section 3.0 Affected Environment

3.1 Scope of the Analysis

This section describes relevant existing environmental conditions at the proposed Liberty Center site and the surrounding region of Box Elder and Pennington County. This information will be used to identify anticipated environmental impacts associated with the implementation of the project included in the Proposed Action (see Section 4, Environmental Consequences).

Per guidelines established by NEPA, CEQ regulations, 32 CFR Part 989, the Environmental Impact Analysis Process (EIAP), the description of the affected environments and the associated impact analyses in this EA focus on only those aspects potentially subject to impacts because of the implementation of the Proposed Action. Section 1.3, Scope of the Environmental Assessment, provides an explanation and summary of resource areas eliminated from detailed analysis.

The project alternatives include the following (described in Section 2.2.3): the Proposed Action and the No Action Alternative.

Sections 3.2 through 3.11 discuss the affected environment for each resource evaluated in the EA.

3.2 Noise

3.2.1 Definition of the Resource

Sound is defined as a particular auditory effect produced by a given source, for example the sound of rain on a rooftop. Noise and sound share the same physical aspects, but noise is considered a disturbance while sound is defined as an auditory effect. Noise is defined as unwanted or disturbing sounds that interfere with communications, pose a threat to human health, or are irritating (USEPA 2015). Noise can be identified without difficulty, be persistent or temporary, be predictable or random, and involve varying sources and frequencies. Human response to noise depends upon the source, characteristics of the sound source, distance between the source and the receptor, sensitivity of the receptor, and the time of day. Affected receptors can be specific (e.g., schools, churches, hospitals) or broad areas (e.g., nature preserves, designated districts).

3.2.2 Noise Metrics

Sound, within the range of human hearing, can vary in intensity by more than one million units. Therefore, a logarithmic scale, known as the decibel scale, is used to quantify sound intensity and to compress the scale to a more manageable range. Sound is characterized by both its amplitude (i.e., how loud it is) and frequency (i.e., pitch). The human ear does not hear all frequencies equally. In fact, human hearing organs of the inner ear deemphasize very low and very high frequencies. "A-weighted"

decibels (dBA) are used to reflect this selective sensitivity of human hearing by putting more weight on the range of frequencies where the average human ear is most sensitive, and less weight on those frequencies we do not hear as well. The human range of hearing extends from approximately 3 dBA to around 150 dBA. Considering this range, it is important to understand that to the human ear, an increase in noise levels of 10 dBA is perceived to be twice as loud. Day-Night-Average Noise Level (DNL) is a cumulative exposure metric that describes noise over a 24-hour period that adds an artificial 10 dBA to nighttime (10 p.m. to 7 a.m.) noise events occurring due to the drop in community background noise during this timeframe. DNL is a useful descriptor for noise because it averages ongoing, yet intermittent, noise and it measures total sound energy over a 24-hour period (MAFB, 2019).

3.2.3 Noise Regulations

The federal government established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. One such regulation is the Noise Control Act of 1972, which serves "to promote an environment for all Americans free from noise that jeopardizes their public health and welfare" (USEPA 1974). The Federal Interagency Committee on Noise has developed land use compatibility guidelines for noise. These guidelines provide the maximum DNLs that are compatible with various land uses.

The Noise Control Act of 1972 established that the Occupational Safety and Health Administration (OSHA) must set workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable level to which workers can be constantly exposed is 115 dBA, and exposure to this level must not exceed 15 minutes within an 8-hour period.

The State of South Dakota provides regulations for highway traffic and construction noise in the South Dakota Department of Transportation's noise policy (SDDOT, 2020). This policy implements the noise standards of the Federal Highway Administration. The State of South Dakota sets no additional standards on noise.

The City of Box Elder provides regulations on noise within Chapter 44, Article III. of the Code of Ordinances, City of Box Elder, South Dakota. Noise is regulated in Section 44 by the city in Accident Potential Zones. The Liberty Center will lie outside of all Accident Potential Zones (City of Box Elder, 2020).

3.2.4 Ambient Noise Levels

Ambient noise is defined as the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources, near and far. Noise level is dependent upon the surrounding environment (e.g., nearby airports, heavy traffic, open space) and the density of people. Most individuals are exposed to sounds reaching 50 to 55 dBA or higher each day. Table 2 below displays noise levels in dBA, common sounds associated with that level, and the effect that noise level typically has on humans.

Table 2. Noise Levels and Human Resources

Noise Level (dBA)	Common Sounds	Effect
10	Just Audible	Just Audible
30	Soft Whisper (15 ft)	Very Quiet
50	Light Auto Traffic (100 ft)	Quiet
60	Air Conditioning Unit (20 ft)	Intrusive
70	Noisy Restaurant or Freeway Traffic	Difficulty Using Phone
80	Alarm Clock (2 ft)	Annoying
90	Heavy Truck (50 ft) or City Traffic	Beginning of Hearing Damage (8 hrs)
100	Garbage Truck	Very Loud
110	Pile Drivers	Very Annoying
120	Jet Take-Off (20 ft) / Auto Horn (3 ft)	Beginning of Pain
140	Carrier Deck Jet Operation	Unbearable Pain

* Source: USEPA, 1981

3.2.5 Construction Sound Levels

Construction can cause increases in sound levels well above the ambient level. A variety of different sounds are generated by graders, pavers, trucks, welders, and other equipment and work processes depending on the type of construction activity that is occurring. Table 3 lists sound levels associated with common type of construction equipment. Construction equipment usually exceeds the ambient sound levels by 20 to 25 dBA in an urban environment and up to 30 to 25 dBA in a quiet suburban area.

Table 3. Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) 50ft from Source
Air Compressor	81
Backhoe	80
Compactor	81
Concrete Mixer	85
Concrete Pump	82
Crane Mobile	83
Dozer	83
Generator	81
Grader	85
Loader	85
Paver	89
Pile Driver (Impact)	101
Truck	88

*Source: FHWA, 2006

3.2.6 Description of the Affected Environment

The ambient noise environment around the proposed construction site is dominated by aircraft operations and automobile traffic. Ellsworth Air Force Base supports daily military aircraft operations, including heavy bombing aircraft such as the B-21 Raider and fighter planes such as the P-61 Black Widow. The noise generated by these operations is a dominant characteristic of the baseline noise environment at, and in the vicinity of, the proposed site. Vehicles from nearby Interstate 90 also contribute to the ambient noise environment. Vehicles consists of passenger vehicles, delivery trucks, and semi-trucks. Considering the aircraft operations and vehicle traffic in and adjacent to the proposed site, the ambient sound environment is likely to resemble an urban atmosphere.

3.3 Air Quality

3.3.1 Definition of the Resource

In accordance with federal Clean Air Act (CAA) requirements, the air quality in a region or area is measured by the concentration of criteria pollutants in the atmosphere. The measurement of these "criteria pollutants" in ambient air are expressed in units of parts per million (ppm), milligrams per cubic meter (mg/m3), or micrograms per cubic meter (ug/m3). Overall air quality in each location is determined by the concentration of various pollutants and particulates in the atmosphere. Regional air quality results from the types and quantities of atmospheric pollutants and pollutant sources in an area, in addition to other factors including surface topography and the prevailing meteorological conditions.

Ambient Air Quality Standards. Under the CAA, the U.S. Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for six "criteria air pollutants" to protect public health and welfare. These standards represent the maximum allowable ambient concentrations of the six criteria pollutants as shown in Table 3 at the end of this subsection.

These "criteria air pollutants include ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), particulate matter equal or less than 2.4 microns in diameter (PM2.5), particular matter equal to or less than 10 microns in diameter (PM10), and lead (Pb)". The primary NAAQS sets limits to public health, including sensitive populations such as children, the elderly, and individuals suffering from respiratory disease, with an adequate safety margin. The secondary NAAQS sets limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. In addition, the USEPA regulates Hazardous Air Pollutants (HAPs) through the National Emission Standards for Hazardous Air Pollutants (NESHAP) program rules (USEPA 2020).

The South Dakota Department of Agriculture and Natural Resources (SDDANR) Air Quality Program's primary responsibility is protecting the health and welfare of South Dakota's citizens from the harmful effects of air pollution. SDDANR monitors ambient air quality in South Dakota to confirm it meets or exceeds the standards required by the state per South Dakota Administrative Code (SDAC) Chapter 33-15-02, Ambient Air Quality Standards and by the NAAQS. To address this responsibility, the SDANR

owns and operates a network of ten ambient air quality monitoring sites stationed throughout the State of South Dakota.

3.3.2 Criteria Air Pollutants

Air quality is affected by stationary sources (e.g., industrial development) and mobile sources (e.g., motor vehicles). Air quality at a given location is a function of several factors including the quantity and type of pollutants emitted locally and regionally, as well as the dispersion rates of pollutants in the region. Primary factors affecting pollutant dispersion include wind speed and direction, atmospheric stability, temperature, the presence or absence of inversions, and topography. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly.

Carbon Monoxide (CO). CO is a colorless, odorless, poisonous gas produced by incomplete burning of carbon in fuel. The health threat from CO is most serious for those who suffer from cardiovascular disease, particularly those with angina and peripheral vascular disease. CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain. At very high levels, which are unlikely to occur outdoors but are possible indoors or in other closed environments, CO can cause dizziness, confusion, unconsciousness, and death (https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#Effects).

Airborne Lead (Pb). Airborne lead can be inhaled directly or ingested indirectly by consuming lead-contaminated food, water, or non-food materials such as dust or soil. Fetuses, infants, and children are most sensitive to lead exposure. Lead has been identified as a factor in high blood pressure and heart disease. Exposure to lead has declined dramatically in the last 35 years because of the reduction of lead in gasoline and paint, and the elimination of lead from soldered canned goods. Levels of airborne lead have decreased 98% between 1980 and 2014 (https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution#how).

Nitrogen Dioxide (NO2). NO2 is a highly reactive gas that can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Repeated exposure to high concentrations of NO2 may cause acute respiratory disease in children. Because NO2 is an important precursor in the formation of O3 (or smog), control of NO2 emissions is an important component of overall pollution reduction strategies. High airborne concentrations of NO2 and NOx interact with water, oxygen, and other chemicals in the air to produce acid rain, which can be damaging to crops and ecological systems. The primary sources of NO2 in the U.S. are fuel combustion emissions, including transportation and power generation (https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2).

Ozone (O3). Most of the ground-level (or terrestrial O3) is formed because of complex photochemical reactions in the atmosphere involving volatile organic compounds (VOCs), nitrogen oxides (NOx), and oxygen. O3 is a highly reactive gas that damages lung tissue, reduces lung function, and sensitizes the lung to other irritants. Although stratospheric O2 shields the Earth from damaging ultraviolet (UV) radiation, terrestrial O2 is a highly damaging air pollutant and is the primary source of smog.

In March 2008, the USEPA published a new standard for 8-hours ozone and revoked the 1-hour NAAQS for O3 in most areas. During the review of NAAQS for O3, the USEPA revised the existing 8-hour threshold to a level of 0.075 parts per million (ppm) from the previous level of 0.08 ppm. On 26 October 2015, the USEPA published in the Federal Register, Regulation Identification Number (RIN) 2060-AP38, Volume 80, Number 206, a proposed new rule revising the NAAQS for ground-level O3 (USEPA, 2020). As of 28 December 2015, the primary and secondary NAAQS for O3 has been revised to a level of 0.070 ppm from the previous level of 0.075 ppm.

Particulate Matter (PM2.5 and PM10). Particulate matter (PM) is a mixture of tiny particles that vary greatly in shape, size, and chemical composition, and can be comprised of metals, soot, soil, and dust. PM10 includes larger, coarse particles, whereas PM2.5 includes smaller, fine particles. Sources of course particles include crushing or grinding operation and dust from paved or unpaved roads. Sources of fine particles include all types of combustion activities (e.g., motor vehicles, power plants, wood burning) and certain industrial processes. Exposure to PM2.5 and PM10 levels exceeding the current standards can results in increased lung- and heart-related respiratory illness. The USEPA has concluded that finer particles are more likely to contribute to health problems than those greater than 10 microns in diameter.

Sulfur Dioxide (SO2). SO2 is emitted primarily from stationary source coal and oil combustion, steel mills, refineries, pulp, and paper mills, and from non-ferrous smelters. High concentrations of SO2 may aggravate existing respiratory and cardiovascular disease; asthmatics and those with emphysema or bronchitis are the most sensitive to SO2 exposure. SO2 also contributes to acid rain, which can lead to the acidification of lakes and streams and damage trees.

Hazardous Air Pollutants (HAPs). The USEPA designated approximately 187 compounds as HAPs based on their toxicity and use throughout various industries. The SDDANR does not currently monitor for HAPs.

Table 4. National and State Ambient Air Quality Standards (NAAQS) – 40 CRF Part 50

Pollutant	Primary / Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead (Pb)	Primary and secondary	Rolling 3-month	3 (1)	Not to be exceeded
Nitrogen Dioxide (NO2)	Primary and secondary	Annual	53 ppb	Annual Mean
	Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
PM10	Primary and secondary	24-hour	3	Not to be exceeded more than once per year on average over 3 years
PM2.5	Primary	Annual	12 µg/m3	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m3	Annual mean, averaged over 3 years

Pollutant	Primary / Secondary	Averaging Time	Level	Form
PM2.5	Primary and secondary	24-hour	35 µg/m3	98th percentile, averaged over 3 years
Ozone (O3)	Primary and secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Sulfur Dioxide (SO2)	Primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 ug/m3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards
will be addressed in the implementation rule for the current standards.

(4) The previous SO2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area which is not yet 1 year since the effective date of the designation under the current (20-10) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO2 standards or is not meeting the requirements of a SIP call under the previous SO2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

(5) Source: https://www.epa.gov/criteria-air-pollutants/naaqs-table

Key: µg/m³ - micrograms per cubic meter; CO – carbon monoxide; Mg/m³ – milligrams per cubic meter; NO_2 – nitrogen dioxide; O_3 – ozone; Pb – lead; PM_{10} – particulate matter less than 10 microns; $PM_{2.5}$ – particulate matter less than 2.5 microns; Ppm – parts per million; SO2 – sulfur dioxide

*Source -USEPA, 2020

The Menu of Control Measures (MCM) provides state, local, and tribal air agencies with the existing emission reduction measures as well as relevant information in developing emission reduction strategies, plans, and programs to assure they can attain and maintain the National Ambient Air Quality Standards (NAAQS). The MCM is a living document that can be updated with newly available or more current data as it becomes available. The MCM can be accessed at: https://www.epa.gov/air-quality-implementation-plans/menu-control-measures-naaqs-implementation. Due to the size of the document, it is not provided in its entirety here.

Attainment Versus Nonattainment. USEPA classifies the air quality in an air quality control region (AQCR), or in subareas of an AQCR (e.g., counties), according to whether the concentrations of the criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are therefore designated as either "attainment," "nonattainment," "maintenance," or "unclassified" for each of the six criteria pollutants. Attainment means that the air quality within an area is better than the NAAQS; nonattainment indicates that the criteria pollutant levels exceed NAAQS; maintenance indicates that an area was previously designated nonattainment but is now attainment; and unclassified means that there is not enough information to appropriately classify an area, so the area is considered to be in attainment. In accordance with the CAA, each state with nonattainment areas must develop a State Implementation

Plan (SIP), which is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS.

Should the state and local air agencies fail to develop adequate SIPs, then the USEPA will develop a Federal Implementation Plan (FIP) to remedy the state's failure. To be re-designated to attainment, the area must show thorough monitoring and modeling that the pollutant levels are consistently meeting the NAAQS and have been maintained for 10 consecutive years. During this time, the declared area is in transitional attainment, also known as maintenance.

General Conformity. The general conformity rule applies only to significant federal actions in nonattainment or maintenance areas. This rule requires that any federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS.

Greenhouse Gas Emissions. Greenhouse gases (GHG) are gaseous emissions that trap heat in the atmosphere. These emissions occur from natural processes and human activities. Human- caused GHGs are produced primarily by the burning of fossil fuels and through industrial and biological processes. The most common GHGs emitted from human activities include carbon dioxide (CO2), methane, and nitrous oxide. Although GHGs are not currently regulated under the CAA, the USEPA has clearly indicated that GHG emissions and climate change are issues that need to be considered in future planning.

Under 40 CFR 93, the USEPA issued conformity regulations that mandate the Federal government does not engage, support, or provide financial assistance for licensing, permitting, or approval of any activity that does not conform to an approved SIP or Federal Implementation Plan. This rule applies to all Federal actions except for those projects requiring funding or approval from the U.S. Department of Transportation (DOT), the Federal Highway Administration (FHA), the Federal Transit Administration, or the Metropolitan Planning Organization; such projects must instead comply with the conformity rules established by the U.S. Department of Transportation. The General Conformity Rule establishes conformity as a process in which economic, environmental, and social aspects of transportation and air quality planning are considered. This rule applies to any Federal action that results in direct or indirect emissions for criteria pollutants that exceed the rates specified in 40 CFR 93.153(b)(1) and (2) in a nonattainment or maintenance area. Global climate change is a transformation in the average weather of the Earth, which can be measured by changes in temperature, wind patterns, and precipitation. Scientific consensus has identified human-related emission of greenhouse gases (GHGs) above naturals levels as a significant contributor to global climate change (U.S. Climate Change Science Program [USCCSP] 2009). GHGs trap heat in the atmosphere and regulate the Earth's temperature. They include water vapor, CO2, methane (CH4), nitrous oxide (N2O), ground-level O3, and fluorinated gases such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). The functionally equivalent amount or concentration of CO2 is used as the reference for measuring global warming potential. Equivalent CO2 is a unit of measurement for describing GHG concentration.

Carbon Dioxide (CO2). CO2 is a GHG that enters the atmosphere through the burning of fossil fuels (e.g., oil, natural gas, and coal), solid waste decay, and trees and wood products and because of chemical reactions (e.g., manufacture of cement). The largest source of CO2 emissions in the U.S. is from fuel combustion, including transportation emissions. CO2 can be removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of photosynthesis and the biological carbon cycle. However, in areas where CO2 concentration ratios exceed the intake capabilities by plants, this gas contributes to negative GHG effects.

Methane (CH4). CH4 is a GHG that is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.

Nitrous Oxide (N2O). N2O is a GHG that is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Fluorinated Gases. Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6), CFCs, and HCFCs are synthetic GHGs with high CO2s factors that are emitted from a variety of industrial processes. HFCs, PFCs, and SF6 are sometimes used as substitutes for ozone- depleting fluorinated gases (i.e., CFCs, HCFCs, and halons). HFCs, PFCs, and SF6 are typically emitted in smaller quantities and while these substances do not deplete ozone, they are potent GHGs and are referred to as high global warming potential gases (MAFB 2021).

3.3.3 Description of The Affected Environment

As defined in 40 CFR 81.335, Pennington County is designated as attainment/unclassifiable for all criteria pollutants. South Dakota is one of a handful of states in the U.S. that meets all ambient air quality standards. According to USEPA AirData, ambient-level criteria pollutant concentrations for monitoring stations in South Dakota did not exceed the primary NAAQS during 2020 (USEPA 2020).

Regional Climate

Box Elder lies in the Semiarid Pierre Shale Plains ecoregion in the western portion of South Dakota, on the eastern edge of the Black Hills. Box Elder has a semi-arid continental climate that is characterized by a wide temperature range and frequent weather changes. Temperature ranges from a monthly average of 23.5 degrees Fahrenheit (°F) in January to a monthly average of 72.5°F in July. The average annual temperature is approximately 46°F. Summers are short, with May through July being the wettest months of the year. Normal precipitation is approximately 18 inches per year. Winters are long with an average of 29 inches of snowfall annually.

Winds in Box Elder vary significantly throughout the course of the year. The windier part of the year lasts for 8.3 months, from September 25 to June 4, with average wind speeds of more than 9.5 miles per hour. The windiest day of the year is March 25, with an average hourly wind speed of 12.3 miles per hour. The predominant average hourly wind direction in Box Elder varies throughout the year. The

wind is most often from the north for 3.4 months, from March 17 to June 28. The wind is most often from the south for 2 days, from June 28 to June 30, and for 1.9 months, from July 2 to August 29. The wind is most often from the west for 5.6 months, from September 28 to March 17. (www.weatherspark.com, 2021).

3.4 Land Use

3.4.1 Definition of the Resource

Land use refers to a set of real property classifications that describe the human activity or natural conditions within a property. Land use descriptions are typically codified into local zoning laws. The local control and lack of a national standard or uniform terminology for describing land use categories leads to definitions that vary for each land use category among jurisdictions. There is a wide variety of land use categories resulting from human activity. Chapter 153: Zoning Regulations of the City of Box Elder ordinances uses the following general land use classifications: Agricultural District, Open Space or Floodway District, Park Land District, Public Land District, General Residential, General Commercial District, Highway Service District, General Light Industrial District, and Heavy Industrial District. (City of Box Elder 2020).

Two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. Compatibility among land uses fosters the societal interest of obtaining the highest and best uses of real property. When necessary, the location and extent of a Proposed Action must be assessed to determine potential effects on a project site and adjacent land use properties. A Proposed Action must follow any applicable land use or zoning regulations. Other important factors to consider are the land use of the project site, the proximity and classification of adjacent land use types, and the duration and permanence of the activities associated with an action (MAFB, 2021).

3.4.2 Description of the Affected Environment

Surrounding Off-Site Land Use

The Liberty Center project site is located in the northeast portion of Box Elder, South Dakota, just northeast of the runway for the Ellsworth Air Force Base. To the north of the project site lies vacant land zoned as a General Commercial District. To the east lies agricultural land. Valley Village mobile home park is located to the south, in land zoned as General Residential. Prairie Ridge golf course is to the west on land zoned as a Public Land District. To the north of the golf course lies the Terrace on the Greens mobile home park on land zoned as a General Residential District and a shopping center zoned as a General Commercial District. Figure 4 shows the current land use on and near the project site.

On-site Land Use

The project site is currently zoned as a Highway Service District. The city of Box Elder's zoning ordinances permitted uses for this district include all those permitted in the General Commercial District, which includes recreational facilities (City of Box Elder Zoning Regulations Chapter 153.1).

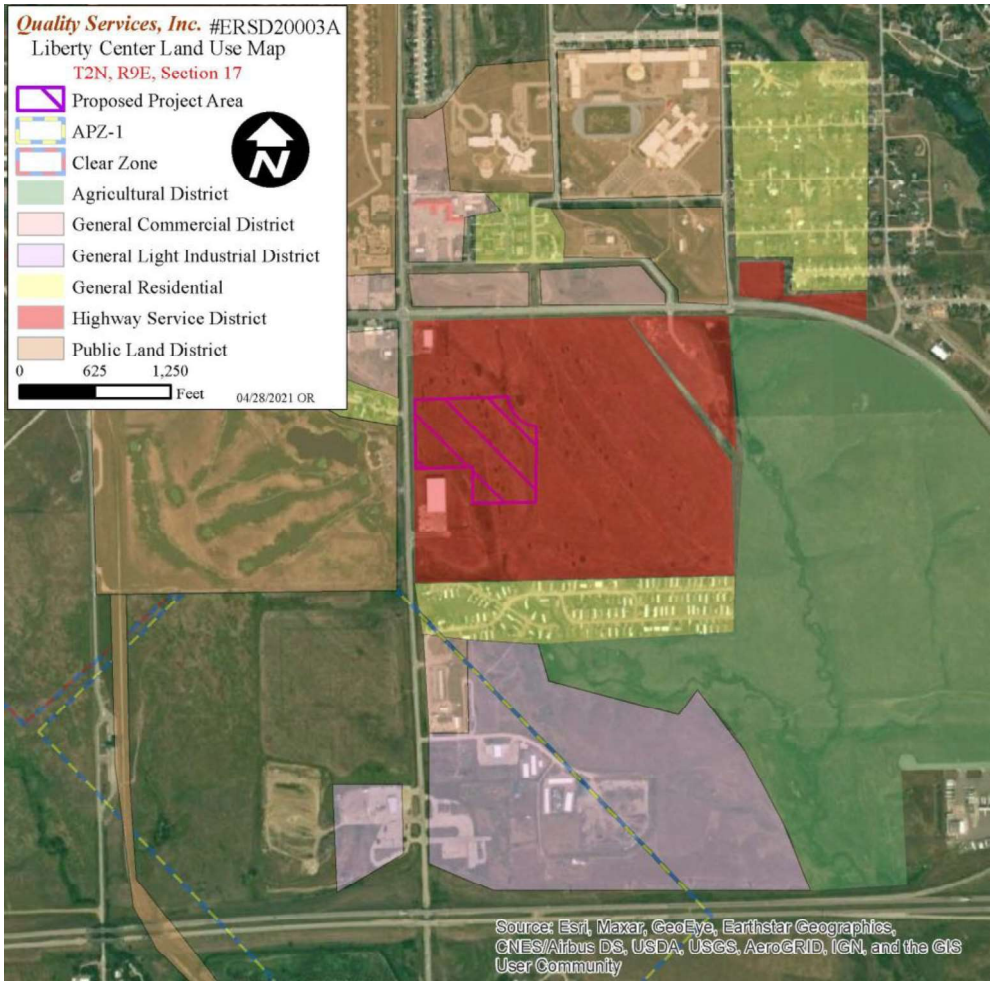

Figure 4. Liberty Center Current Land Use Map

3.5 Topography and Soils

3.5.1 Definition of the Resource

Earth's surface and subsurface materials comprise the geologic resources dealt with in this report. Within a given ecoregion, these resources typically are described in terms of geology, topography/physiography, and soils. As indicated in Section 3.1, only topography and soils are described below.

3.5.2 Description of the Affected Environment

Topography/Physiography. The project area is located within the Semiarid Pierre Shale Plains of the Northwestern Great Plains ecoregion, which is characterized by rolling plains of shale, sandstone, and siltstone with occasional buttes and badlands. This region has mixed short grass prairies watered by erratic precipitation. Native grasslands are present in areas of steep or broken topography (Bryce et al. 2018). The site of the Proposed Action is located on vacant, undeveloped land with gentle slopes. A slight depression runs north to south through the eastern edge. Elevation in this area is 3103 feet above sea level. The highest part of the project area is the northern portion, at 3155 feet above sea level. The land gradually slopes down to 3092 feet above sea level at the southern end and 3125 feet above sea level on the eastern edge. The project area holds no areas of standing water.

Soils. Soils in the project area include the Nunn loam with 6 to 9 percent slopes, Nunn-Urban land complex, 0 to 3 percent slopes, and the Kyle clay with 6 to 9 percent slopes. Urbanland are soils that have been completely disturbed by urbanization. Nunn soils are well drained grayish brown and pale brown clay loams forming in loess and mixed alluvium on terraces, alluvial fans, and drainageways. Kyle soils are well drained grayish brown clay that forms in clay shale on uplands with slow permeability (Soil Survey Staff 2020). The entire site was reviewed using the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) Web Soil Survey tool (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx) (Soil Survey Staff, 2020).

Figure 5. Overview of project area facing southwest
E. Celentano 11/24/2020.

3.6 Water Resources

3.6.1 Definition of the Resource

Water resources are any of the range of natural or manmade waters that occur on Earth and are of potential use to humans and the environment. Water resources relevant to the Liberty Center location include groundwater, surface water, floodplains, and wetlands. Evaluation of water resources examines the quantity and quality of the resource and its demand for use for various purposes.

Groundwater systems are sources of water that result from precipitation infiltrating the ground surface. An aquifer is a permeable geological formation that stores or transmits water to wells and springs. When groundwater is close to the ground surface, it can contribute to inflow to streams, rivers, lakes, ponds, or wetlands. This exchange between surface water and groundwater is an important feature of the hydrologic (water) cycle. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. Groundwater quality and quantity are regulated under several programs. The Federal Underground Injection Control regulations, authorized under the Safe Drinking Water Act (SDWA), require a permit for the discharge or disposal of fluids into a well. The Federal Sole Source Aquifer regulations, also authorized under the SDWA, protect aquifers that are critical to water supply.

Surface water is generally classified as streams (ephemeral, intermittent, or perennial), springs, wetlands, natural and artificial impoundments (ponds and lakes), and constructed drainage canals and ditches. Storm water is also an important component of surface water systems because of its potential to introduce sediments and other contaminants that could degrade lakes, rivers, and streams. Waters of the United States are protected under the Clean Water Act (CWA), Section 404, administered by the USEPA and the U.S. Army Corps of Engineers (USACE). In general, Waters of the United States include navigable waters and tributaries and adjacent wetlands. Other water bodies can be jurisdictional on a case-by-case basis. All encroachment (e.g., excavating, draining, or filling) into waters of the United States and wetlands requires a permit from the federal government and/or the state. Section 3.6 provides a discussion of wetland habitat occurring within the action areas and adjacent wetlands that might be affected by the actions being considered. In addition to Section 404 of the CWA, Section 401 establishes federal limits, through the National Pollutant Discharge Elimination System (NPDES), on the amounts of specific pollutants that are discharged to surface waters to restore and maintain the chemical, physical, and biological integrity of the water. The NPDES program regulates the discharge of point (end of pipe) and nonpoint (storm water) sources of water pollution and requires a permit under Section 402 for any change in the quality or quantity of wastewater discharge or storm water runoff from construction sites where one or more acres would be disturbed (MAFB, 2021).

The Federal Emergency Management Agency (FEMA) defines a floodplain or flood-prone area as “any land area susceptible to being inundated by water from any source” (FEMA, 2020). Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters.

Floodplains provide a broad area to spread out and temporarily store floodwaters. This reduces flood peaks, velocities, and the potential for erosion. In a natural vegetated state, floodplains slow the rate at

which the incoming overland flow reaches the main water body (Wright, 2007). Risk of flooding is typically related to local topography, the frequency of precipitation events, the size of the watershed above the floodplain, and upstream development. The flood potential evaluated by FEMA defines 100-year and 500-year floodplains. The 100-year floodplain is the area that has a 1 percent chance of inundation by a flood event each year, while 500-year floodplains have a 0.2 percent chance of inundation each year. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety. EO 11988, Floodplain Management, requires federal agencies to determine whether a Proposed Action would occur within a floodplain. This determination typically involves consultation of FEMA Flood Insurance Rate Maps, which contain enough general information to determine the relationship of the project area to nearby floodplains. EO 11988 directs federal agencies to avoid floodplains to the maximum extent possible wherever there is a practicable alternative.

Wetlands are a type of surface water and an important natural system and habitat because of their diverse biologic and hydrologic functions. Wetlands have several hydrologic functions, including water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, storm water attenuation and storage, sediment detention, wildlife habitat provision, and erosion protection. As previously discussed, Waters of the United States, which include wetlands, are protected under Section 404 of the CWA. In addition to requiring issuance of a 404 permit for wetland fills, Section 401 of the CWA also requires that South Dakota provide water quality certification for any 404-permit issued. South Dakota relies on Section 401 water quality certification as its primary form of state-level wetlands regulation. The Section 401 program is administered by the South Dakota Department of Agriculture and Natural Resources (SDDANR). In making certification decisions, the SDDANR is primarily concerned with the construction and environmental disturbance requirements pertaining to soils, surface waters, and fill materials.

3.6.2 Description of the Affected Environment

Western Pennington County, from the Wyoming-South Dakota state line eastward to Rapid City is part of the Black Hills uplift with a core area of ancient (Precambrian) granite, schist, quartzite, etc. (forming crystalline aquifers) surrounded by a stacked sequence of sedimentary layers (forming sedimentary aquifers). The rock units in these areas are of different geologic ages and formed by very different geologic processes, but they provide water resources that supply home sites and towns within the Black Hills and across the prairies to the east.

For much of the county east of Rapid City, where Box Elder is located, the Inyan Kara aquifer is the first to be encountered in water wells, the depth of which increases eastward. The geology of the eastern flank of the Black Hills consists of a stacked group of sedimentary formations overlying the Precambrian basement. All of these formations extend from the surface, which is the recharge area for the aquifers, to greater and greater depths to the east beneath the prairies.

Beneath the prairies east of Rapid City, the shallowest aquifer is the Inyan Kara Group. The Fall River Formation, the top unit of the Inyan Kara Group, is reached at a depth of 3,100 feet in city wells at Wall

in eastern Pennington County. The other formations would be present at successively greater depths beneath the Inyan Kara Group (South Dakota School of Mines 2016).

Surface Water

The Liberty Center will be located within the Lower Boxelder Creek watershed. This watershed has a total drainage area of 22,475 acres. The Lower Boxelder Creek watershed lies within the larger Cheyenne River drainage basin. The area in this basin is very diverse. It includes part of the Black Hills and Badlands, rangeland, irrigated cropland, and some mining areas. The Cheyenne River originates in Wyoming, flows through the southern Black Hills, and enters Lake Oahe near the center of the state.

The Cheyenne River basin is home to deposits of natural uranium, historic uranium mining, and current exploration drilling. For the most recent 2018 reporting cycle, there were no exceedances to surface water quality standards for any parameters associated with past uranium mining or current explorations. The Cheyenne River water quality continues to be generally poor due to both natural and agricultural sources. Most of the Cheyenne River drainage basin contains highly erodible soils. The landscape contributes considerable amounts of eroded sediment during periods of heavy rainfall. During normal or lower flow periods, the upper Cheyenne often exceeds irrigation water quality standards for specific conductance and sodium adsorption ratio. Most segments of the Cheyenne River are nonsupporting for E. coli bacteria and Total Suspended Solids. Segments below the Fall River have approved Total Maximum Daily Loads for bacteria. No assessment or implementation projects are currently ongoing in the Cheyenne River basin (South Dakota Department of Agriculture and Natural Resources 2018).

Surface water in Box Elder is comprised of open sheet flow channels such as ditches and concrete valley gutters, intake points such as catch basins, and underground concrete pipes (SDDANR 2014). Surface water in agricultural fields may run off into manmade irrigation ditches, roadside ditches, or stock ponds.

Floodplains

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) map number 46103C0389H indicates the majority of the project is located in Zone X, which is an area of minimal flood hazard outside of the 500-year floodplain. A small linear strip of Zone AE, a 100-year floodplain, runs north to south through a portion of the project area. This floodplain averages less than 50 feet wide and is associated with an ephemeral tributary of Box Elder creek

Wetlands

Wetlands are areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species (US EPA). Wetlands have several hydrologic functions, including water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, stormwater attenuation and storage,

sediment detention, wildlife habitat provision, and erosion protection. Waters of the United States, which include wetlands, are protected under Section 404 of the CWA.

In addition to requiring issuance of a 404 permit for wetlands fills, Section 401 of the CWA also requires that South Dakota provide water quality certification for any 404-permit issued. South Dakota relies on Section 401 water quality certification as its primary form of state-level wetlands regulation. The Section 401 program is administered by the SDDANR – Division of Water Quality. In making certification decisions, the SDDNAR is primarily concerned with the construction and environmental disturbance requirements pertaining to soils, surface waters, and fill materials (SDDANR, 2020).

According to the National Wetlands Inventory (NWI), a tributary of Box Elder Creek runs north to south through the project area. A review of historic aerial imagery dating back to 1997 revealed that this tributary and its associated branches do not hold water under normal environmental conditions, and only flow in response to storm events. A site visit on November 24, 2020 revealed no wetland hydrology indicators or hydric vegetation. Thus, because the tributary is an ephemeral stream, it is not a jurisdictional wetland under Section 404 of the Clean Water Act. Should the US Army Corps of Engineers require a permit for working in or near this ephemeral stream, the appropriate permit will be acquired, and any potential impacts will be mitigated.

3.7 Biological Resources

3.7.1 Definition of the Resource

Biological resources are any biotic component of an ecosystem with any actual or potential use or value for humanity. This includes the habitats in which they exist (e.g., grasslands, forests, and wetlands). Protected and sensitive biological resources include listed [threatened or endangered], proposed, and candidate species under the Endangered Species Act (ESA; 16 U.S.C. 1536 as designated by the U.S. Fish and Wildlife Service (USFWS); state listed threatened or endangered species; and migratory birds. Critical habitats include those areas designated by the USFWS as critical habitats protected by the ESA and sensitive ecological areas as designated by state or federal rulings. Sensitive habitats also include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, crucial summer, and winter habitats).

Federal agencies must ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species through the ESA (16 U.S.C. Section 1536). The ESA prohibits any action that causes a "take" of any listed species. "Take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect or attempt to engage in any such conduct." An "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future.

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712) as amended, and EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires Federal agencies to minimize or avoid impacts on migratory birds listed in 50 CFR 10.13.

In South Dakota, the Department of Game, Fish and Parks (GFP) is involved in many aspects of species recovery. The state's endangered species law describes the responsibilities of state agencies for listing and recovering state threatened or endangered species. GFP also partners with the U.S. Fish and Wildlife Service to help recover federal listed species found in the state.

Status Reviews have been drafted by GFP's Wildlife Diversity Program for all state threatened or endangered species to summarize what is known about the species in the state, to identify delisting or downlisting goals if current knowledge allows that step, and to list monitoring and research needs.

South Dakota's Wildlife Action Plan is focused on the needs of species identified as species of greatest conservation need, which include nearly all of South Dakota's state and/or federal listed threatened or endangered species. Any sampling or collecting of any species listed as a state threatened or endangered species requires a state endangered species authorization.

3.7.2 Description of the Affected Environment

Vegetation. According to the USFWS, there are no federally listed threatened, endangered, or candidate plant species that may occur or have historically occurred in Pennington County, South Dakota.

Vegetation on site consists of mixed short prairie grasses including Switchgrass (*Panicum virgatum*), Western Wheatgrass (*Pascopyrum smithii*), Needle-and-thread grass *(Hesperostipa comata*), Little Bluestem (*Schizachyrium scoparium*), and Sideoats grama *(Bouteloua curtipendula*). Canopy cover was almost non-existent, with a few Russian Olive (*Elaeagnus angustifolia*) and Eastern cottonwood trees (*Populus deltoides*) scattered throughout the western half of the project area. Vegetation has been disturbed by a dirt two-track road running east to west on the southern portion of the project site. No communities of hydric vegetation were seen on site.

Wildlife. Wildlife found in and around Box Elder are associated with the eastern edge of the Black Hills region, mixed short grass prairies, prairie riparian corridors, or urban environments. White-tailed deer (Odocoileus virginianus), coyotes (*Canis latrans*), antelope (*Antilocapra americana*) along with other small mammals including squirrels, rabbits, and mice are found in and near Box Elder.

Avian Wildlife. Avian species potentially occuring or near Pennington County include: Swainson's hawk (Buteo swainsonii), red-tailed hawk (Buteo jamaicensis), bald eagle (Halaieetus leucocephalus), golden eagle (Aquila chrysaetos), burrowing owl (Athene cunicularia), Northern goshawk (Accipter gentilis), short-eared owl (Asio flammeus), long-eared owl (Asio otus, prairie falcon (Falco mexicanus), northern saw-whet owl (Aegolius acadicus), red-shouldered hawk (Buteo lineatus), broad-winged hawk (Buteo platypterus), ferruginous hawk (Buteo regalis), and common nighthawk (Chordeiles minor), (ebird.org, 2021). These raptors typically avoid urban areas and generally were not documented in

residential or urban areas. It is not uncommon to see turkey vultures, an occasional owl, or hawk closer to the center of Box Elder.

Migratory birds, as listed in 50 CFR 10.13, are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712), as amended, and EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds. Most birds occurring in the Box Elder area are migratory birds such as waterfowl coming up and down either the Mississippi Flyway or the Central Flyway migration corridors in the Spring and Fall. The project site does not have any standing water, nesting, or foraging habitat for migratory birds and thus the Proposed Action should not affect these birds.

Threatened and Endangered Species. The ESA protects species listed as endangered or threatened by the USFWS. ***Quality Services, Inc.*** carefully reviewed (on December 11, 2020) the US Fish and Wildlife Section 7 Consultation website for a list of species and critical habitat that may be present within the project area and received an official species list through the IPaC process (consultation tracking number (06E14000-2021-SLI-0115). The list identified a total of four species potentially present within the project areas and no critical habitats (table 5, below). A description of each species, their preferred habitat, and presence on the project site is discussed below.

Table 5. Federally listed species identified in Pennington County.

Common Name	Scientific Name	Federal Status	Habitat Possible in Action Area?	Listed species affected?	Effect on listed species?
Northern long-eared bat	*Myotis septentrionalis*	Threatened	Species **not present**	n/a	n/a
Least tern	*Sterna antillarum*	Endangered	Species **not present**	n/a	n/a
Red knot	*Calidris canutus rufa*	Threatened	Species **not present**	n/a	n/a
Whooping crane	*Grus americana*	Endangered	Species **not present**	n/a	n/a

Northern Long-Eared Bat: This species hibernates in caves, mines, or tunnels, and typically spends the summer inhabiting old-growth forests, roosting in cavities or under the bark of trees and snags. Northern long-eared bats have also been known to roost in buildings. Spring migration from hibernacula to these summer habitats occurs from March through May, and fall migration occurs from August through October. This species is not known to be a long-distance migrant, averaging 35 to 55 miles between hibernacula and summer habitat. However, distances of over 150 miles have been recorded (USFWS 2015). The project area and surrounding parcels of land are entirely devoid of forests and suitable hibernacula. Thus, it is not likely this species is present in or near the project area.

Least Tern: This species typically nests on sandy shores and sandbars of rivers and large reservoirs. Terns may also occasionally nest on industrial sites, sand pits, and even rooftops, provided they are near water bodies with abundant fish for foraging. Preferred nest sites are sand or gravel islands with little or

no vegetation (USFWS 2013). As no rivers or large water bodies with sandbars or sandy shores are located nearby, this species is unlikely to be present in or near the project area.

Red Knot: This species is known only as a passage migrant in South Dakota, with breeding grounds in northern Canada and a wintering range along the Gulf Coast and further south into South America. In North America, this species typically migrates along coastal pathways, but some populations are known to migrate through the interior United States. These inland migrants are thought to utilize saline lakes as stopover sites in the northern Great Plains region, though sightings have also been observed along the Missouri River in North Dakota. Sightings in South Dakota, however, are sporadic and rare, but are also concentrated along the Missouri River and further east, where prairie lakes are much more common (USFWS 2014). There are no suitable lakes situated close enough to the proposed project area for this species to be affected by the project.

Whooping Crane: The whooping crane is known to migrate over South Dakota along the Missouri River drainage area. Stopover habitat utilized by this species includes wetlands and small lakes with good horizontal visibility. As with the red knot, there are no suitable habitats for this species in the project area.

Figure 6. Overview of project area facing north.
E. Celentano 11/24/2020.

3.8 Safety and Occupational Health

3.8.1 Definition of the Resource

Safety and occupational health are defined as the conditions, risks, and preventative measures associated with a facility and its ability to potentially affect the health and safety of facility personnel or the general public. OSHA, USEPA, and the National Fire Protection Agency issue standards regarding personnel training, preventative controls, and other occupational health and safety matters.

Construction Safety

Construction site safety requires adherence to regulatory requirements imposed for the benefit of employees. It includes implementation of engineering and administrative practices that aim to reduce risks of illness, injury, death, and property damage. The health and safety of onsite workers are safeguarded by numerous regulations designed to ensure compliance with standards issued by the Federal Occupational Safety and Health Administration (OSHA), USEPA, and state occupational safety and health agencies. These standards specify health and safety requirements, the amount and type of training required for industrial workers, the use of personal protective equipment, administrative controls, engineering controls, and permissible exposure limits for workplace stressors (MAFB, 2021).

3.8.2 Description of the Affected Environment

The Liberty Center will be located within the city limits of Box Elder, SD, and less than a half mile from Ellsworth Air Force Base. The project location is not within the security gates of Ellsworth AFB. Access is not limited except as prevented or controlled by site construction fencing and access control. The City of Box Elder provides emergency services including fire, law enforcement, and other emergency response services, but not force protection. Therefore, in the absence of a situation necessitating force protection, emergency situations are responded to quickly.

The project will be built on ground that will be graded to level ground. No other buildings or structures that need to maneuvered around during construction are present on the land parcel. Extreme temperature fluctuations between seasons, light to moderate precipitation, and occasional severe weather in South Dakota all present challenges with respect to site personnel and worker safety.

The project area is located within a half mile of an airport. A review of the 2008 Air Installation Compatible Use Zone Study for Ellsworth Air Force Base showed that the project site is located outside of all Accident Potential Zones (APZ II, APZ I, and CZ). The project is located in noise zones 75-79 decibels and 70-74 decibels. Land Use Compatibility Guidelines from the Federal Interagency Committee on Urban Noise document *Air Installations Compatible Use Zones* state that commercial land use, and construction, is suitable in these zones.

Construction Safety

All contractors performing construction activities are responsible for following safety regulations and worker's compensation programs and are required to conduct construction activities in a manner that does not pose any risk to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and availability of Safety Data Sheets (SDS). Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplace operations; to monitor exposure to workplace chemicals (e.g., asbestos, lead, hazardous materials), physical hazards (e.g., noise propagation), and biological agents (e.g., infectious waste); to recommend and evaluate controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures (MAFB, 2021).

The project will be a new construction, and thus asbestos from demolition or old building materials possibly containing asbestos, lead or other chemicals will not be a concern. All contractors performing construction activities are required to notify the project manager/architect immediately and cease construction activities upon encountering any suspected hazardous materials for further evaluation, testing, or analysis.

3.9 Utilities and Infrastructure

3.9.1 Definition of the Resource

Utilities and infrastructure are privately, publicly or cooperatively owned lines, facilities or systems necessary to support the functions and operations of a community or establishment. In this case, the establishment is the Liberty Center, a 58,000 square foot multiuse facility.

3.9.2 Description of the Affected Environment

The following are utility and infrastructure items that will be utilized by the project:

Transportation. The Liberty Center will be accessed primarily through North Ellsworth Road and Liberty Boulevard. The Liberty Center property lies within the larger Liberty Plaza future planned development. Plans for the Liberty Plaza development are to add additional side streets off these roads leading to the Liberty Center, with a roundabout northeast of the Liberty Center.

Power. Black Hills Energy is the electric provider for The Liberty Center project location. Power lines will be buried underground and originate from the utilities right of ways adjacent to the existing streets and/or the two new proposed roadways.

Domestic Water. The Liberty Center will use a city water supply through the City of Box Elder. An 8" water main, valves, and appurtenances will run north to south on the east side of the project area

adjacent to the parking lot. Additional 8" water mains will run north to south on the western side of the Liberty Center before turning east and connecting to the main on the eastern side of the building. These mains will provide potable water and fire protection.

Wastewater. Sanitary sewer services will be provided through the City of Box Elder. An 8" main will run adjacent to the city water supply main, between the water supply main and the parking lot. The Liberty Center will have effluent run through a service line directly tied into a manhole located within the right-of-way.

Stormwater. Rainfall run-off generated on the project site will be directed by sloped pavement and roof leaders where it is collected by storm inlet structures placed at various locations and intervals across the developed site and conveyed by storm piping of varied diameters and slopes. A regional detention pond is planned to be built on the southern edge of the land parcel and will serve to hold excess runoff.

Communications. Communications, including telephone, data, and cable television, will be supplied by Vast Broadband, Midco, and Century Link. Buried cables will be installed within the project footprint at standard depths approved by the construction team.

Solid Waste. Solid waste will be collected through the City of Box Elder and Sander Sanitation. During construction, debris and waste will be collected in commercial dumpsters and brought to an approved disposal facility. Post construction, waste will be collected on a weekly basis and transported to the City of Box Elder Solid Waste Facility.

3.10 Hazardous Materials and Wastes

3.10.1 Definition of the Resource

"Hazardous materials" are defined by 49 CFR 171.8 as "hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions" in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105-180.

The Resource Conservation and Recovery Act (RCRA) defines a hazardous waste in 42 U.S.C. Section 6903 as a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

A) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

B) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

3.10.2 Description of the Affected Environment

Hazardous Materials. No known hazardous materials are currently managed or stored at the site of the Proposed Action.

Hazardous Wastes. No known hazardous wastes are located or managed at the site of the Proposed Action.

Aboveground and Underground Storage Tanks. Aboveground (AST) and underground storage tanks (USTs) are subject to regulation under RCRA, 42 U.S.C. 6901, and 40 CFR 280. No underground or aboveground storage tanks are currently located at the site and none are proposed.

Polychlorinated Biphenyls. Polychlorinated biphenyls (PCBs) are a group of chemical mixtures used as insulators in electrical equipment such as transformers and fluorescent light ballasts. Federal regulations govern items containing 50 to 499 ppm PCBs. No suspected PCB sources are located at the site.

Radon. Minot is in Federal USEPA Radon Zone 2, where the predicted average indoor radon screening level is 2 to 4 picocuries per liter (USEPA, 2010). There are currently no structures at the site but once constructed the facility should be tested for radon or construction should include a radon management system to evacuate radon gas from the facility.

Pests. There currently are not concerns related to pests or pesticides at the site. When operational there may be use of pesticides, insecticides, and herbicides at the site. Groundskeeping and maintenance will likely be conducted by a private landscaping company. Pest control chemicals used on the grounds are likely to be stored off-site when not in use.

No Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites are in the vicinity (within ½ mile) of the Proposed Action.

3.11 Cultural Resources

3.11.1 Definition of the Resource

Cultural resources can be defined as physical evidence or place of past human activity: site, object, landscape, structure; or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it.

Archaeological resources include areas where prehistoric or historic activity measurably altered the environment or deposits of physical remains (e.g., arrowheads, bottles) discovered therein. Architectural resources include standing buildings, districts, bridges, dams, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for inclusion in the National Register of Historic Places (NRHP), an inventory of culturally significant

resources identified in the U.S.; however, more recent structures, such as Cold War-era resources, may warrant protection if they have the potential to gain significance in the future. Traditional cultural resources can include archaeological resources, structures, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that Native Americans or other groups consider essential for the persistence of traditional cultural (MAFB 2020).

The National Historic Preservation Act of 1966 (P.L. 89-665) as amended, and its implementing regulations (36 CFR Part 800) describe the procedures for identifying and evaluating historic properties, assessing the effects of Federal actions on historic properties, and consulting to avoid, reduce, or minimize adverse effects. These procedures are commonly referred to as the Section 106 review process. As part of the Section 106 process, agencies are required to consult with State Historic Preservation Office (SHPO).

Historic properties refer to cultural resources that meet specific criteria for eligibility for listing on the NRHP; historic properties need not be formally listed on the NRHP. Section 106 does not require the preservation of historic properties but ensures that the decisions of Federal agencies concerning the treatment of these places result from meaningful considerations of cultural and historic values and of the options available to protect the properties. The Proposed Action is an undertaking as defined by 36 CFR Part 800.3 and is subject to requirements outlined in Section 106.

Consultation with federally recognized tribes for proposed activities that could significantly affect tribal resources or interests is required by DODI 4710.02 (14 September 2006), within which the DOD Annotated Policy on American Indians and Alaska Natives (27 October 1999) is a component, and EO 13175, Consultation and Coordination with Indian Tribal Governments.

3.11.2 Description of the Affected Environment

Local History: The Historic Period 1800 – 1950

Although smaller trading operations under the control of the Missouri Company were present in the Dakotas and the Middle Missouri during the late 18th century, the purchase of the Louisiana Territory in 1803 and arrival of Lewis and Clark in 1804 signaled the beginning of the Historic Period and full-scale interaction between Native American groups and Euro-Americans. Euro-American fur traders and trappers were the first to enter the region after Lewis and Clark, and the Missouri River became an increasingly important trading locale.

In the early half of the 19th century, permanent settlements of forts and trade posts began to be set up along the Missouri River. The first trading fort was set up by the Missouri Company in 1794 and focused on trapping beaver and otter; this industry did not shift focus to buffalo robes until around 1815 (Hanenberger et al 2004). By 1840, buffalo were the most sought-after skins in the fur trading business (Hanenberger et al 2004).

Conflicts between the tribes and Euro Americans also escalated. Although once considered “Indian Territory,” the United States looked to the west for expansion and settlement. During the 1800s, several

treaties aimed at acquiring these Indian lands. While lands cessations were small at first, these could not keep up with the influx of migrants to these areas. Hoping to curtail the growing hostilities between the Northwestern tribes and the American frontier, the Fort Laramie Treaty of 1851 was signed between the United States and the Lakota, Arapaho, Cheyenne, Crow, Assiniboine, Mandan, Arikara, and Shoshone.

This "Great Treaty" and others, however, did little to assuage the conflicts since they were often breached or altogether ignored. In the 1860s, several tribes declared war on the Americas. The United States reacted by establishing several forts in the region.

The second "Great Treaty," the Fort Laramie Treaty of 1868, established the Great Sioux reservation in middle South Dakota, and all lands east of the Missouri River were ceded and officially opened for settlement.

Only a few years later, expansion ambitions to the west of the Missouri River again threatened the tribal lands. Political attempts focused at breaking up the Great Sioux Reservation. Two key events accomplished this. The General Allotment Act of 1887, or Dawes Act, allotted 160 to 320 acres to tribal families. The tracts of land were intended to "encourage" the Native Americans to take up farming in order to assimilate them into American economy and society. Surplus reservation lands were then available to be sold to non-Indian settlers. Under fear and broken promises, the state of South Dakota also officially divided the Great Reservation in the five present-day reservations of Standing Rock, the Lower Brule, the Rosebud, the Pine Ridge, and the Cheyenne River Reservations. The National Historic Landmark Wounded Knee in the White River Badlands is the site of the last armed conflict between Native Americans and United States government troops, fought on December 29, 1890. Following this, most areas to the west were completely opened for settlement.

Ranchers, Farmers, Miners, and entrepreneurs from all over the U.S. began to settle South Dakota in the late 19th century. Most sites that are assigned to the historic period are associated with ranching, farming, railroad, and/or industrial activities. There are several hundred historic period sites on file within the South Fork Cheyenne archaeological region. These site types include dumps, depressions, foundations, well/cisterns, farmsteads, non-farm ruins, artifact scatters, cairns, schools, railroads, cabins, monuments, industrial sites, burials, earthworks, dams, and roads.

The project is in the South Fork Cheyenne archeological region within the Cheyenne River drainage basin. The South Fork Cheyenne archaeological region encompasses the South Fork of the Cheyenne River drainage basin in the southwestern portion of South Dakota with the exception of the Black Hills, southeastern Pennington County, and Shannon County (Winham and Hannus 1991: 28-2). This area consists of southeastern Meade County, and portions of Pennington, Custer, and Fall River Counties (Winham and Hannus 1991: 28-2). The area is characterized by rolling grasslands broken by deeply-entrenched stream channels (Winham and Hannus 1991: 28-2).

Cultural Resources Records Review

Quality Services, Inc. conducted a records search for previous inventories, and previously recorded archeological and historic period resources with the South Dakota State Historic Society on November

16, 2020. The National Register of Historic Places (NRHP) and National Historic Landmark online databases were also checked. Results are listed in the table below.

Table 6. Cultural resources within one mile of the project area.

ID#	Name/ Type	NRHP	Potential Effect & Relationship to Project
55703	Readiness Building	***Not Eligible***	Out of APE
55704	Flight Simulator Building	***Eligible***	**No Effect** – Out of APE
55705	A.C. Warehouse Misc. (Bass Supply)	***Eligible***	**No Effect** – Out of APE
55727	Warehouse	***Eligible***	**No Effect** – Out of APE
55728	Pumphouse-Bulk Storage	***Eligible***	**No Effect** – Out of APE
55729	Pumphouse-Bulk Storage Tank	***Eligible***	**No Effect** – Out of APE
55730	Pumphouse-Tank Car Unloading	***Eligible***	**No Effect** – Out of APE
55731	Warehouse	***Eligible***	**No Effect** – Out of APE
55732	Deep Well Pump House & Tower	***Not Eligible***	Out of APE
55733	Warehouse	***Eligible***	**No Effect** – Out of APE
55734	Storage Ammo & Shop	***Eligible***	**No Effect** – Out of APE
55737	P.X. Service Station	***Eligible***	**No Effect** – Out of APE
55738	Control Building	***Eligible***	**No Effect** – Out of APE
55739	PWTP Secondary Treatment Building	***Not Eligible***	Out of APE
55740	Bowling Alley	***Eligible***	**No Effect** – Out of APE
55741	Base Chapel	***Eligible***	**No Effect** – Out of APE
55742	Building	***Eligible***	**No Effect** – Out of APE

ID#	Name/ Type	NRHP	Potential Effect & Relationship to Project
55746	Admin Office	***Eligible***	**No Effect** – Out of APE
55747	Alert Hanger	***Not Eligible***	Out of APE
39PN2043	Railroad	***Eligible***	**No Effect** – Out of APE
39PN3236	Foundation	***Not Eligible***	Out of APE
PN00000663	Bridge 52-485-275	***Not Eligible***	Out of APE
PN00000664	Bridge 52-486-275	***Not Eligible***	Out of APE
PN00000665	Bridge 52-490-275	***Not Eligible***	Out of APE
PN00000900	Box Elder School	***Eligible***	**No Effect** – Out of APE

Cultural Resources Survey & Results

Quality Services, Inc. archeologists Elizabeth Celentano, Lina Ramirez, and Mandy Woods conducted a cultural resource inventory of the proposed Liberty Center Development project area on November 24, 2020. The project area was located using a global positioning system (GPS) application, aerial and topographic maps, and project information provided by the client. Field investigation consisted of visual inspection, photography, and subsurface testing to determine the potential effects of the proposed project.

Pedestrian inventory of the project area was conducted in 15 meter transects. Total area surveyed was 111.62 acres. The project area is a vacant field with rolling hills and deep stream channels. Four two-track trails crossing through the area. Disturbances from tree removal, erosion, livestock use, and transmission line construction and maintenance are visible. Wooden fence posts are also present in the project area. One crushed historic can with no context and modern refuse were observed during the survey. No cultural resources were observed.

Ground surface visibility ranged from zero to 70 percent with prairie grasses, shrubs and scattered trees covering the ground surface. Four subsurface tests were conducted in the project area. Brown clay loam with a large amount of gravel were observed in tests number 1 and 3. Glass shards and a can pull tab were observed in brown silt loam in subsurface test 2. Dark brown loamy sand was observed in subsurface test 4. No cultural resources were encountered.

Due to previous disturbances, ***QSI*** determined there to be a low potential for intact buried cultural resources in most of the project area. No further work is recommended. No cultural resources will be

affected by the proposed project. In the unlikely event that cultural resources are located during development, it is recommended that the South Dakota State Historic Preservation Office (SHPO) be contacted immediately.

A determination of no historic properties within the APE was recommended and submitted to the South Dakota SHPO. The South Dakota SHPO concurred with this recommendation on March 25, 2021. A map showing the inventory area, previous inventories, and cultural resources in the surrounding area is below. The full cultural resources report can be found in the Appendix.

Resources of Traditional, Religious, or Cultural Significance to Native American Tribes

The cultural resources inventory completed on the project area did not find any resources of traditional, religious, or cultural importance. A Lakota tribal liaison participated in the cultural resources review that found no tribal artifacts during the survey. No tribes objected to the construction of the Liberty Center and the project is not located on tribal lands. The South Dakota SHPO concurred with the finding of no historic properties, including no tribal resources, in the project area. Native American tribes who may have historically been affiliated with this area include the Cheyenne River Sioux Tribe, the Crow Creek Sioux Tribe, the Flandreau Santee Sioux Tribe, the Lower Brule Sioux Tribe, the Oglala Sioux Lakota Tribe, the Rosebud Sioux Tribe, the Sisseton Wahpeton Oyate Tribe, and the Standing Rock Sioux Tribe.

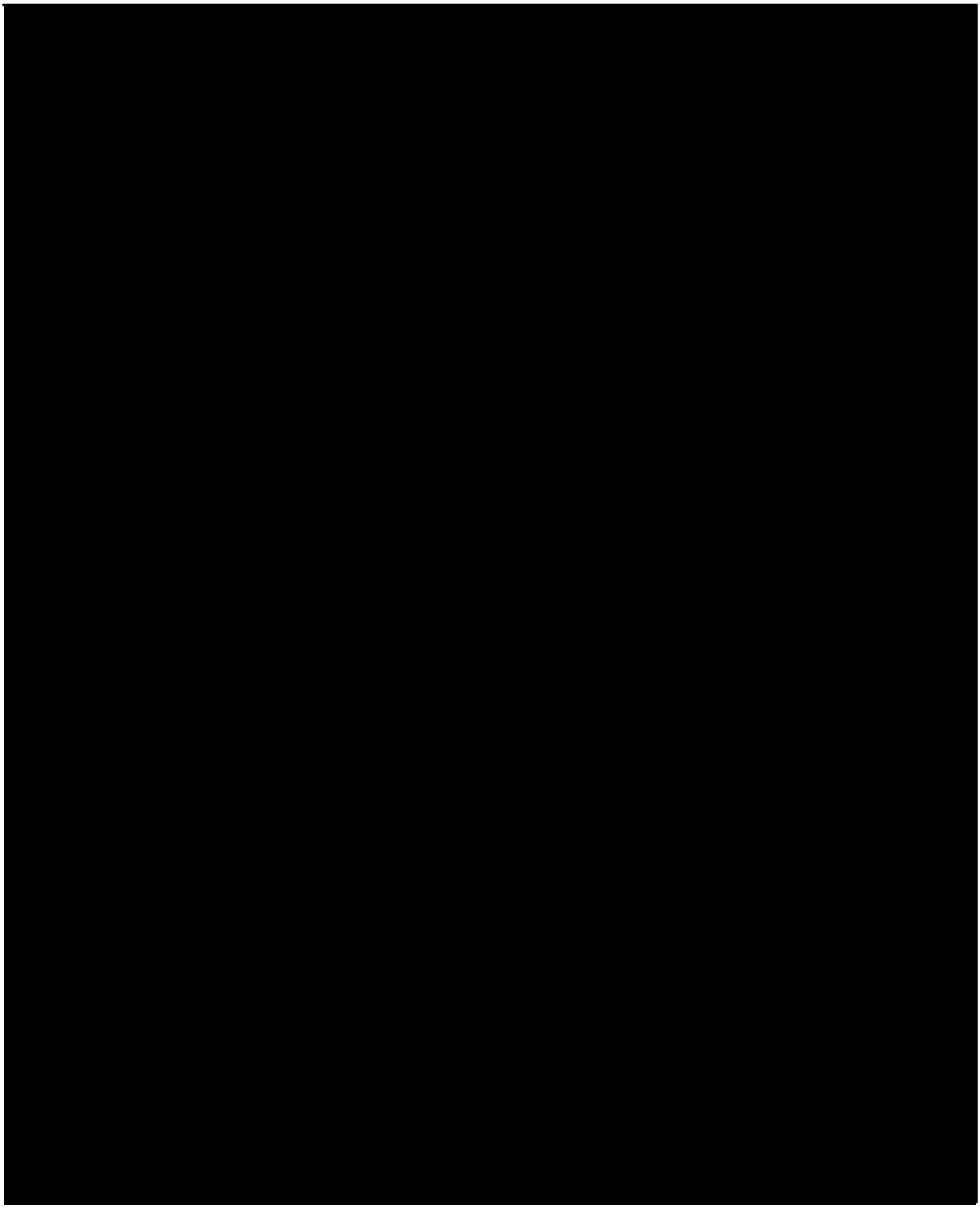

Figure 7. Liberty Center Development Project.
USGS 7.5' Ellsworth Air Force Base, South Dakota topographic quadrangle 1978.

Section 4.0 Environmental Consequences

4.1 Introduction

The following section presents the environmental consequences that could occur from the Proposed Action and No Action Alternatives. The Proposed Action and No Action Alternative were evaluated for their potential effects on physical and cultural resources in accordance with CEQ guidelines at 40 CFR Section 1508.8.

The Proposed Action is to construct a multiuse recreational facility that can also be used for military ceremonies. The No Action Alternative would consist of the site remaining undeveloped.

The impact analysis includes consideration of both short-term and long-term effects and direct and indirect effects of the Proposed Action and No Action Alternative. Some impacts could be considered either adverse (causing harm or unfavorable conditions) or beneficial. Also taken into consideration is the relative intensity of an impact, which considers the sensitive or rarity of a resource (such as critical ecological areas or creating a public safety risk).

As discussed in Section 3.1, the resource areas not carried forward for environmental analysis in this EA are: coastal zone management, geologic resources, socioeconomics/environmental justice, and visual/aesthetic resources. These resource areas were not analyzed because an initial evaluation determined that no effects, or clearly insignificant effects, would occur.

4.2 Noise

4.2.1 Environmental Consequences

In conformance with NEPA regulations, the resource areas that are anticipated to experience either no impacts or negligible noise impacts and are not examined in detail in this EA. The proposed project follows noise abatement and control measure because it is not in a noise sensitive area (24 CFR 51.101). Noise associated with construction activities will be short-term and will be controlled using Best Management Practices (BMPs).

A review of the 2008 Air Installation Compatible Use Zone Study for Ellsworth Air Force Base showed that the project is located in noise zones 75-79 decibels and 70-74 decibels. Land Use Compatibility Guidelines from the Federal Interagency Committee on Urban Noise document *Air Installations Compatible Use Zones* state that commercial land use is suitable in these noise zones.

Construction noise will be a short-term impact that will be controlled by BMPs. Noise impacts would be mitigated to the greatest extent feasible. Construction noise will be within applicable city, state, and federal codes. Thus, construction noise is not expected to have an impact to project or surrounding areas. Noise reducing BMPs would include:

- Outfit all construction equipment with a recommended muffler in good working order;
- Ensure that construction activities are not conducted during early morning or late evening hours; and
- Minimize engine and heavy machinery idling.

4.3 Air Quality

4.3.1 Environmental Consequences

Evaluation Criteria

The environmental consequences to local and regional air quality conditions near a proposed federal action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. Specifically, the impact in NAAQS "attainment" areas would be considered significant if the net increases in pollutant emissions from the federal action would result in any one of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard,
- Expose sensitive receptors to substantially increased pollutant concentrations,
- Represent an increase of 10 percent or more in an affected AQCR emissions inventory, and/or
- Exceed any evaluation criteria established by a SIP or permit limitation.

There are no regulatory thresholds of significance for GHG emissions; however, CEQ has released the Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions, which suggests that 27,563 tons per year (tpy) (25,000 metric tpy) of CO2-equivalent is a meaningful reference point for when to consider GHG emissions in NEPA documentation.

4.3.2 Proposed Action

During and after construction, the Proposed Action would generate minor temporary and permanent air pollutant emissions. The temporary emissions would be related to construction of the facility and the associated earthwork to the site. Specifically, construction would result in short-term emissions of criteria pollutants as combustion products from construction equipment and other construction materials (paints, asphalt, etc.); these emissions would be restricted to the active construction period.

Construction activities would also generate particulate matter emissions as fugitive dust from ground-disturbing activities. Fugitive dust emissions would be greatest during initial site- preparation activities and would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions. Appropriate fugitive dust-control measures would be employed during construction activities to suppress emissions.

All emissions associated with construction activities would be temporary in nature. There would be negligible new operational emissions associated with the Proposed Action. Per the South Dakota Air Pollution Control Regulations under South Dakota Administrative Code [SDAC 34A-1-6], the air construction permit threshold for stationary fuel combustion sources is 10 million British Thermal Units (BTUs) per hour.

It is not expected that emissions from construction of the facilities associated with the Proposed Action would contribute to or affect local or regional attainment status with SDDANR. Likewise, it is assumed the temporary emissions from construction of the Proposed Action would have a negligible contribution towards the South Dakota statewide GHG inventory.

Because Pennington County is in an area classified as an attainment/unclassifiable area for all criteria pollutants, General Conformity Rule requirements are not applicable. The Proposed Action would generate emissions below de minimis levels. In addition, the Proposed Action would generate emissions well below 10 percent of the emissions inventories for the Rapid City Area air quality monitoring station, and the emissions would be short-term. Therefore, the construction activities associated with the Proposed Action would not result in significant impacts on air quality in Box Elder or on regional or local air quality.

Long-term increases to emissions would be related to heating and cooling of the facility and emissions from visitor's vehicles being used for transportation. Very minor offsite impacts would be associated with these long-term increases. No increase would be significant enough to impact the overall air quality and attainment in the surrounding community of Box Elder or in South Dakota.

4.3.3 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented, and the Liberty Center would not be constructed. No impact on air quality would be expected in this alternative.

4.4 Land Use

4.4.1 Environmental Consequences

Evaluation Criteria

To evaluate the effects on land use, a Proposed Action's compatibility with existing conditions and the degree of land use sensitivity in areas affected are used. The primary effect would be if the proposed land use change would conflict with existing or proposed adjacent land uses or is incompatible with the City of Box Elder Zoning Regulations Chapter 153.1.

4.4.2 Proposed Action

The Proposed Action is compatible with current land use designations in the City of Box Elder Zoning Regulations. The project site is currently zoned as a Highway Service District. The city of Box Elder's zoning ordinances permit uses for this district include all those permitted in the General Commercial District, which includes recreational facilities (City of Box Elder Zoning Regulations Chapter 153.1).

The Proposed Action will be compatible with surrounding land uses and would not preclude the viability or continued use and occupation of existing land uses in Box Elder. Surrounding residential areas would benefit from having close access to a community recreation center. Therefore, the Proposed Action would not result in any adverse impacts on land uses within Box Elder, nor would the Proposed Action result in any impacts on the compatibility of adjacent land uses.

4.4.3 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented, and the Liberty Center would not be built. The existing land use would remain as a designated Highway Service District. The No Action Alternative would be inconsistent with the long-term goals for growth of the City of Box Elder.

4.5 Topography and Soils

4.5.1 Environmental Consequences

Evaluation Criteria

When evaluating potential effects of a Proposed Action on topography and soils, protection of topographic features and minimization of soil/sediment erosion are considered. Typically, adverse effects can be avoided or minimized if proper construction techniques, best management practices, erosion-control measures, and structural engineering design are incorporated into project development.

4.5.2 Proposed Action

Topography/Physiography. No long-term adverse impacts would be expected on the natural topography and physiography of the region because of construction modifications associated with the Proposed Action. Modification of existing site topography is expected because of site grading, excavation, and filling to accommodate the building foundation and infrastructure. Impacts would be expected to be negligible because of the size of the structure and associated infrastructure relative to the site area and size of adjacent areas of similar topography. The topographic features located onsite are not unique to the area.

Soils. Minor short- and long-term adverse impacts would be expected upon commencement and completion of the Proposed Action. The short-term impacts would occur during initial construction

activities when vegetation is cleared, and the earth is bare. Impacts would be anticipated to be minor, as the soils within the vicinity of the proposed project area have been previously disturbed and the soil types found on the project area are not unique or rare. Best management practices (BMPs), as well as a stormwater pollution prevention plan (SWPPP) would be implemented during construction, and an approved stormwater management plan (SWMP) would address site runoff and indirectly sediment discharges from the site.

Upon completion of the Proposed Action, minor long-term impacts on soils would be expected. Impervious surfaces would increase because of conversion from vegetated field to building and parking areas. An increase in impervious surfaces would increase stormwater runoff. The site will adhere to the South Dakota Department of Agriculture and Natural Resources' (SDDANR) General Construction Stormwater Permit requirements, as well as the City of Box Elder's Stormwater Rules and Regulations. The SDDANR's permit rules apply during construction and the city requirements relate to long-term runoff rate (and indirectly sediment) control. Runoff reduction will be attenuated using a detention ponds that is planned for construction on the southern end of the larger Liberty Plaza development.

4.5.3 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented and no effect to the site's topography and soils would be expected.

4.6 Water Resources

4.6.1 Environmental Consequences

Evaluation Criteria

An impact to water resources would be considered significant in implementation if the action would: 1) reduce water availability to or interfere with the supply of existing users; 2) create or contribute to the overdraft of groundwater basins or exceed decree annual yields of water supply sources; 3) adversely affect surface or groundwater quality; 4) threaten or damage unique hydrologic characteristics; or, 5) violate established laws or regulations that have been adopted to protect or manage water resources, including management plans adopted by the City of Box Elder.

4.6.2 Proposed Action

Surface Water. As described in Section 3.6, Water Resources, the Liberty Center will be located within the Lower Boxelder Creek watershed that drains into the larger Cheyenne River Basin.

The proposed construction and demolition activities associated with the Proposed Action could potentially result in soil erosion or airborne dust that could affect storm water conveyance systems (e.g., open channels, catch basins, etc.) and other surface waters in Box Elder that ultimately drain to the Cheyenne River. However, because of the considerable distance between the proposed project site and

potential receiving waters, grading impacts on surface waters at the Liberty Center location are unlikely to cause substantial adverse impacts on surface water quality. The Contractor would need to file a Notice of Intent (NOI) with the SDDANR and Pennington County and would prepare a site-specific SWPPP that includes BMPs to reduce the potential for soil erosion and prevent contaminant-laden stormwater from leaving the construction site. In addition, implementation of existing nonpoint pollution requirements, spill prevention, control, and countermeasures (SPCC) Plan procedures, and best management practices (BMPs) – such as silt fencing and vegetation-based erosion control measures (refer to Section 4.6.3, Proposed BMPs) – would minimize short-term construction-related impacts. Long-term operations of the proposed facilities would not adversely impact surface water in Box Elder or the Cheyenne River basin.

Groundwater. The Inyan Kara aquifer is the first to be encountered in water wells in Box Elder where the Liberty Center will be located. There is an estimated 84.7 million acre-feet of recoverable water in storage in the Inyan Kara aquifer (USGS Water-Resources Investigations Report 03-4049). The depth to ground water is approximately 19-24 feet below surface level. The use of heavy equipment and trucks during the construction phase of this project brings with it the potential for accidental release of petroleum, oil, and lubricants (POLs). Due to the depth of the groundwater and the limited POLs associated with the Proposed Action, potential impacts due to construction site spills will be insignificant.

Implementation of the Proposed Action would result in a net increase of impermeable ground surface and associated loses in available areas, groundwater, percolation, and recharge from the site. Consequently, implementation of the Proposed Action would result in minor negative impacts to regional groundwater recharge.

Floodplains. As previously stated, the majority of the Proposed Action is located in Zone X, which is an area of minimal flood hazard outside of the 500-year floodplain. A small linear strip of Zone AE, a 100-year floodplain, runs north to south through a portion of the project area. The Zone AE floodplain in the project area averages less than 50 feet wide and is associated with an ephemeral tributary of Box Elder creek. The ephemeral nature of this tributary means this flood plain does not carry high volume flows.

To maintain the functionality of this floodplain, a permit has been obtained from the City of Box Elder to re-route the floodplain into a channelized drainage approximately 400 feet to the west of the Liberty Center. This drainage will handle any runoff that would have been carried by the original tributary and flow in the same direction. A regional retention pond will also be installed at the southern end of the land parcel as part of the larger Liberty Plaza development. Thus, both volume and flow direction in the floodplain will be maintained and the project will have no adverse effect on floodplains. The master grading plan for the project site is located in the appendix and a FIRM panel showing the location of the floodplain in the project area is below.

Wetlands. According to the National Wetlands Inventory (NWI), a tributary of Box Elder Creek runs north to south through the project area. A review of historic aerial imagery dating back to 1997 revealed that this tributary and its associated branches do not hold water under normal environmental conditions,

and only flow rarely in response to storm events. A site visit on November 24, 2020 revealed no wetland hydrology or hydric vegetation in the ephemeral tributary. Thus, because the tributary is an ephemeral stream, it is not a jurisdictional wetland under Section 404 of the Clean Water Act. Should the US Army Corps of Engineers require a permit for working in or near this ephemeral stream, the appropriate permit will be acquired and any potential impacts will be mitigated. Since the wetlands shown on the NWI are non-jurisdictional, there will be no adverse effect to wetlands.

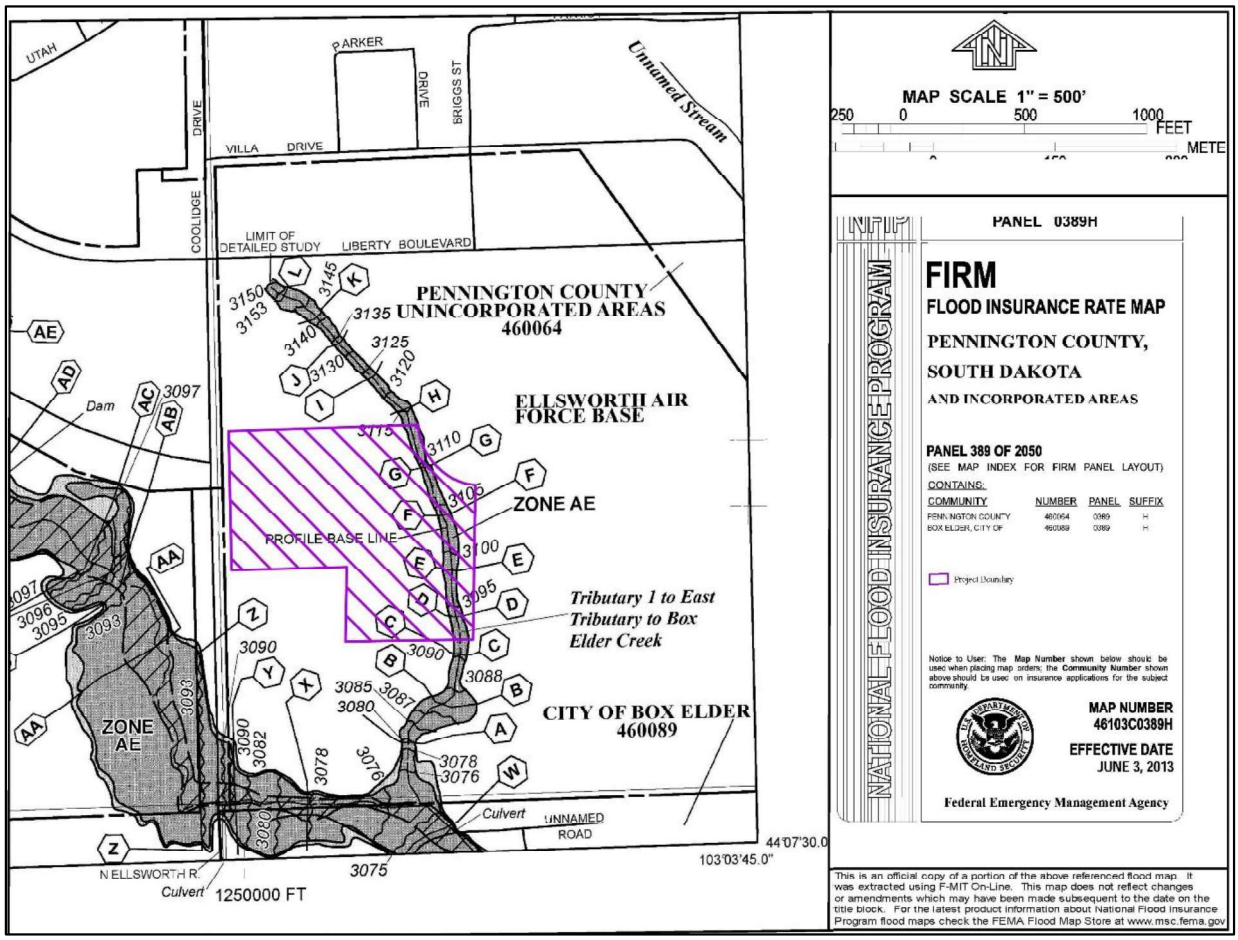

Figure 8. Flood Insurance Rate Map of Pennington South Dakota with project area shown.

Figure 9. NWI-indicated wetlands on project area.

4.6.3 Proposed BMPs

BMPs, although not required to reduce potential adverse impacts to less than significant levels, would be implemented to further reduce adverse impacts on water resources because of the Proposed Action. The following BMPs would be implemented to control storm water and wastewater during construction activities:

- Temporary collection and containment systems would be provided for site generated wastewater, stormwater, and industrial wastewater during the construction phase of the proposed projects as needed.
- The total amount of ground disturbance would be minimized, and vegetation cover would be preserved to the extent practicable.
- Soil erosion would be controlled by covering exposed soils, if practicable, whenever the construction area is idle.
- Silt fencing, compost berms, filter socks, or other similar measures for managing storm water runoff would be installed.
- Inlet protection, such as berms or geo-fabrics, would be installed in locations where runoff would enter the major drainage ways.
- The project's general contractor would notify the NPDES program of any changes to the stormwater/industrial wastewater facility which may result in discharging new or different pollutants, or an increased quantity of pollutants.
- Care would be taken to avoid spills of any materials that may have an adverse effect on groundwater quality. All spills would be promptly reported to the NDDEQ and appropriate remedial actions would be performed.
- Tracking and depositing sediment off-site would be minimized to the maximum extent practicable by removing sediment from construction vehicles before they leave the site.
- Construction equipment would be serviced and refueled away from surface water resources on the site, and all chemicals and petroleum products would be stored and contained away from water resources (MAFB 2020).

4.6.4 No Action Alternative

Under the No-Action Alternative the site would not be developed, and the structure would not be built. There would be no impacts to water resources.

4.7 Biological Resources

4.7.1 Environmental Consequences

Evaluation Criteria

The potential level of impact on biological resources is based on the following factors:

1. The value and importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource.
2. The duration of the ecological ramifications.
3. The proportion of the resources that would be affected relative to its occurrence in the region.
4. The sensitivity of the resource to the proposed activities.

A significant impact on a biological resource would be if the alteration were to cause a violation of the laws and regulations pertaining to that resource, if species or habitats of high concern are adversely affected over relatively large areas, or if disturbances cause reductions in population size or distribution of a species of special concern.

Ground disturbance and noise associated with construction activities might directly or indirectly cause impacts on biological resources. Direct impacts from ground disturbance were evaluated by identifying the level of disturbance and the type of habitat present. Mortality of individuals, habitat removal, and damage or degradation of habitats are impacts that might be associated with ground-disturbing activities. Noise associated with a Proposed Action could be disruptive to wildlife but given the location of the proposed development (in-fill in existing urban area), a temporary increase in noise during construction would not have a noticeable effect.

4.7.2 Proposed Action

Vegetation. In areas of direct construction and ground disturbance, permanent impacts on vegetation are expected in. Some of the vegetation within the Proposed Action has been modified already with two track dirt roads. The City of Box Elder or a private landscaping firm will maintain the grassed and treed areas of the site. Professional landscaping will be completed around the building. Some of the area would be converted to impervious surfaces (paving or buildings). In these areas, vegetation will be permanently impacted. Vegetation at the edges of the Proposed Action may be temporarily disturbed but would be restored prior to final construction completion. The short mixed prairie grasses found on the project site are prolific throughout the region, and thus the impact of the Liberty Center is not significant compared to the regional occurrence of the grasses.

Wildlife. The Proposed Action would have short-term, minor, direct impacts on any wildlife present due to disturbances (e.g., noise and motion) from construction activities and heavy equipment use. A temporary increase in noise levels within the project area from construction equipment would likely not be noticeable given the proximity to other urban developed areas (Interstate 90). Therefore, no long-term, adverse impacts on wildlife would be expected because of temporary construction disturbances. The lack of hydrology and lack of tree and shrub cover within the Proposed Action area does not provide significant habitat for wildlife. Small common species, such as mice, pocket gophers, other small mammals, and birds, may be present but would leave the area when construction commences.

Threatened and Endangered Species and Critical Habitat. As stated in Section 3.7.2, none of the federally listed threatened or endangered species in Pennington County are known to occur at the Proposed Action site. Therefore, no impacts on federally listed or state recognized species would be expected. The lack of suitable habitat on the project site means there is no expected use of the site by migratory bird species in any observable or significant measure. There is no critical or significant habitat present on the Proposed Action site. Short-term, negligible to minor, adverse impacts on species of conservation priority, like those discussed for wildlife, would be expected because of disturbances from construction activities.

4.7.3 No Action Alternative

Under the No Action Alternative, the SDEDA would not implement the Proposed Action and would not construct the Liberty Center. The No Action alternative would not impact biological resources.

4.8 Safety and Occupational Health

4.8.1 Environmental Consequences

Evaluation Criteria

Any increase in safety risks would be considered an adverse effect on safety and occupational health. If the following were to occur, a Proposed Action could have a significant effect with respect to health and safety:

- Substantial increase in risks associated with the safety of construction personnel, contractors, or the local community.
- Substantial hindrance of the ability to respond to an emergency.
- Introduction of a new health or safety risk for which the city is not prepared or does not have adequate management and response plans in place.

4.8.2 Proposed Action

Construction Safety. Construction inherently increases the risk of a safety related incident because of the type of work performed in a variety of environments (outdoor, below ground, elevated platforms, etc.) Short-term, minor, adverse impacts to safety would be expected. However, all construction contractors would be required to follow and implement OSHA standards to establish and maintain safety procedures. All building materials will be compliant with South Dakota building codes. Any chemicals stored on site will be stored in approved containers with appropriate labels. The facility will have fire alarms and fire hydrants installed in accordance with South Dakota health and safety laws. Handicap accessible ramps for building access and designated handicap parking spaces will also be installed. Construction activities associated with the Proposed Action would not pose new or unacceptable safety risks to site personnel or activities at the site. Following completion of construction, no long-term, adverse impacts on safety would be expected.

4.8.3 No Action Alternative

Under the No Action Alternative, the contractor would not implement the Proposed Action and the Liberty Center would not be built. Existing conditions would remain the same, as described in Section 3.8.2, and no impacts to health and safety would occur.

4.9 Utilities and Infrastructure

4.9.1 Environmental Consequences

Evaluation Criteria

Infrastructure impacts are based on the possibility of affecting the functionality of a system's operational service. Impacts could be considered significant if the Proposed Action resulted in unavailable capacity of a utility, long term interruption, or violation of a permit condition.

4.9.2 Proposed Action

Transportation. Local roadways could be minorly impacted by operational by-products of construction and building processes. Construction activities, mobilization of equipment or delivery or disposal of materials could cause temporary road closures or detours.

Power. Minor impacts, at best, related to electrical service or larger infrastructure.

Natural Gas. No impacts to natural gas facilities are anticipated.

Water, Wastewater, and Stormwater. Temporary, short term and generally scheduled impacts are possible during construction. For example, variable water system pressures and flows might be experienced. Bypass pumping of wastewater or stormwater is possible but not expected.

Other Utilities. Short term utility service interruptions are possible during the construction phase of any project. The effect of this type of impact would be minor and temporary in nature and generally occur prior to the finished facility being in use.

4.9.3 No Action Alternative

Under the No Action Alternative, the existing conditions would remain the same and the Liberty Center would be constructed.

4.10 Hazardous Materials and Wastes

4.10.1 Environmental Consequences

Evaluation Criteria

If a Proposed Action resulted in noncompliance of the site with applicable federal or state regulations, or increased the amount of waste generated or procured beyond any applicable permits, procedures, or capacities, impacts on hazardous materials or hazardous wastes would be considered significant.

Impacts that disturbed or created contaminated sites resulting in negative effects on human health or the environment would also be considered significant.

4.10.2 Proposed Action

Hazardous Materials. No long-term storage or use of hazardous materials are expected associated with the Proposed Action. Should any hazardous materials or waste be stored on site, they will be stored in approved containers and labeled appropriately. Additionally, no household hazardous waste drop-off facilities are anticipated at this location. The facility will not manufacture any chemicals or hazardous materials. Best management practices will be implemented including material management, spill control practices, spill response, and spill notification.

Short-term, minor impacts would be expected during construction of the Proposed Action. Construction activities would require the use of certain hazardous materials such as paints, welding gases, solvents, preservatives, and sealants. It is anticipated that the quantity of products containing hazardous materials used during the Proposed Action would be minimal, and their use would be per manufacturer's directions and short in duration. Contractors would be responsible for the management and use of hazardous materials and petroleum products during construction. Hazardous materials associated with the operation of the facility would be handled and tracked in accordance with applicable federal and state regulations. No long-term, direct, or indirect, adverse impacts would be expected.

Hazardous Wastes. The proposed construction activities would generate minor quantities of hazardous waste and would not be expected to exceed the capacities of existing hazardous waste disposal facilities. Hazardous wastes generated during construction would be the responsibility of the contractor for proper storage, transport, and disposal.

Aboveground and Underground Storage Tanks. No impacts are expected as there are no above ground or below ground storage tanks at or adjacent to the Proposed Action site. If an abandoned tank is located during construction, the contractor should notify an appropriate environmental professional and/or the SDDANR to inspect the tank and surrounding soils for evidence of contamination. Tank removal, clean-up, or remediation activities needed will be determined after inspection by the appropriate parties.

Polychlorinated Biphenyls. No impacts are expected, as there is no existing electrical infrastructure on-site. New construction will be free of PCB-containing materials.

Radon. Short-term, negligible adverse impacts could be expected. Minor emission increases due to ground disturbances during construction could occur. The structure should be tested prior to occupancy and if radon concentrations exceed acceptable levels, a radon mitigation system should be retrofitted into the facility.

Pesticides. No impacts from pesticides would be expected. The Proposed Action would not significantly alter pesticide or herbicide application areas. Any future pesticide or herbicide applications would be per the manufacturer's directions and any applicable federal, state, or local regulations.

4.10.3 No Action Alternative

Under the No Action Alternative, the Liberty Center would not be constructed. There would be no change in hazardous materials, hazardous wastes, ASTs, USTs, PCBs, radon, and pesticides.

4.11 Cultural Resources

4.11.1 Environmental Consequences

Evaluation Criteria

Cultural resources would be impacted by actions that change culturally valued elements of a resource or restrict access to cultural resources. Effects might be direct or indirect; short or long term; and minor, moderate, or major in magnitude. Examples of direct effects include ground disturbance at an archaeological site or the visual effect of new construction on the historic setting of a resources. An example of an indirect effect would be construction of a road that increases public access to an archaeological site, potentially resulting in looting or damage. Minor effects might be noticeable but are localized and do not affect character-defining features of NRHP-eligible or listed resources. Moderate effects are measurable or perceptible and change one or more character-defining features of a resource; however, the effect does not diminish the resource's overall integrity or jeopardize eligibility of NRHP listing. Major effects are substantial, noticeable, and permanent; these effects change one or more-character defining features and diminish the resource's integrity to the extent it is no longer eligible for NRHP listing (MAFB 2021).

4.11.2 Proposed Action

As stated in Section 3.11.2, ***Quality Services Inc.*** conducted a cultural resources inventory of the project area and determined there to be a low potential for intact buried cultural resources in most of the project area. A determination of no historic properties within the APE was recommended and submitted to the South Dakota SHPO. The South Dakota SHPO concurred with this recommendation on March 25, 2021.

The cultural resources inventory completed on the project area did not find any resources of traditional, religious, or cultural importance. A Lakota tribal liaison participated in the cultural resources review that found no tribal artifacts during the survey. No tribes objected to the construction of the Liberty Center and the project is not located on tribal lands. The South Dakota SHPO concurred with the finding of no historic properties, including no tribal resources, in the project area. No cultural or tribal resources will be affected by the proposed project. In the unlikely event that cultural resources are located during development, it is recommended that the South Dakota State Historic Preservation Office (SHPO) be contacted immediately.

4.11.3 No Action Alternative

Under the No-Action Alternative, the Liberty Center multiuse recreational facility would not be built. With the arrival of the B-21 Raider bomber aircraft, a hangar currently used for training on the base would once again be used to house aircraft. Not undertaking the proposed action would leave no place for the Air Force to train for important missions or hold military ceremonies. Members of the community would not have access to a recreation facility in close proximity to the base where many live and work. No effects on known archaeological resources, architectural resources, and resources of traditional, religious, or cultural importance would occur because none are present, and ground disturbing activities would not take place.

5.0 List of Preparers

This EA has been prepared by ***Quality Services Inc.***, a full-service archaeology and environmental consulting firm located in Rapid City, South Dakota, under direction of the South Dakota Ellsworth Development Authority.

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APPENDIX I. CULTURAL RESOURCES INVENTORY REPORT

CULTURAL RESOURCE INVENTORY OF THE

LIBERTY CENTER HOUSING PROJECT

Pennington County, South Dakota

T2N, R7E, Section 17

By Lina Ramirez, Mandy Woods & Sydney Boos

Jana Morehouse, editor

Quality Services, Inc. *Project #ERSD20003*

December 15, 2020

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Abstract

On November 24, 2020, ***Quality Services, Inc.*** (***QSI***) performed a cultural resource inventory for Dream Design International, Inc.'s proposed Liberty Center Development project. A total of 111.62 acres were inventoried. No cultural resources were identified in the records search or during pedestrian inventory within the proposed project area. The area is not a high probability for buried cultural resources based on soils, topography, and current disturbance.

A determination of no historic properties affected is recommended.

In the unlikely event that cultural resources are located during development, it is recommended that the South Dakota State Historic Preservation Office (SHPO), Dream Design, Inc., the Department of Defense, and ***QSI*** be contacted immediately.

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Introduction

Dream Design International, Inc. proposes to develop vacant land near the intersection of North Ellsworth Road and Liberty Boulevard in Box Elder, South Dakota. The project, known as the Liberty Center Development, is located on land administered by Department of Defense (DoD). This cultural resource inventory was conducted in order to comply with DoD requirements for Lease Proposals, as part of a National Environmental Policy Act (NEPA) review. It was conducted to fulfill the requirements of Section 106 of the National Preservation Act of 1966 (P.L. 89-665) as amended, and 36 CFR Part 800 which serves to implement the Act. The Area of Potential Effect (APE) is defined as the land parcels which may be impacted by any future developments.

Location

The project consists of 111.62 acres of federally administered land in Box Elder, South Dakota.

Table 1. Location of project.

Township	Range	Section(s)	USGS 7.5' Topographic Quadrangle
2N	9E	17	Bend, South Dakota 1953, Photorevised 1978

Figure 1. Project location within South Dakota.

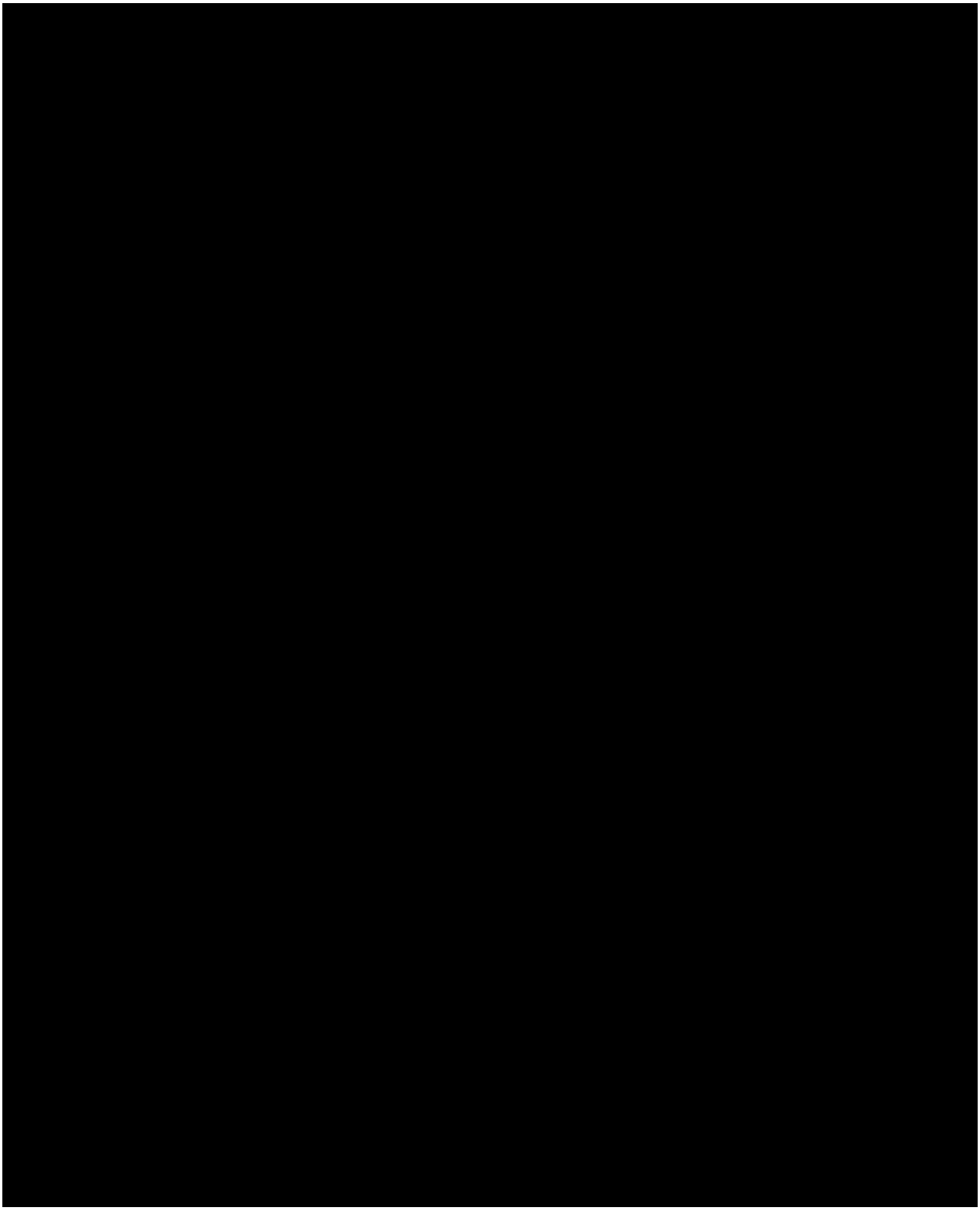

Figure 2. Liberty Center Development Project, 1:24,000.
USGS 7.5' Bend, South Dakota topographic quadrangle 1953, photorevised 1978

Environmental Overview

The project area is located within the Semiarid Pierre Shale Plains of the Northwestern Great Plains ecoregion. This region consists of semiarid rolling plains of sandstone, silt, and shale with occasional badlands and buttes. Vegetation is chiefly mixed short prairie grasses with native grasslands remaining in areas of steep or broken topography (Bryce et al. 1996).

Soils

According to the NRCS Web Soil survey (Soil Survey Staff 2020), three soil types (Nunn-Urbanland complex, Nunn loam, and Kyle clay) are present in the project area. Urbanland are areas heavily disturbed by urbanization. Nunn soils consists of well drained grayish brown and pale brown clay loam forming in loess and mixed alluvium on terraces, alluvial fans, and drainageways. Kyle soils are grayish brown clays that are well drained with slow permeability that form in clay shale on uplands.

Figure 3. Overview of project area facing southwest.
E. Celentano 11/24/2020.

Culture History Overview

The South Fork Cheyenne archaeological region encompasses the South Fork of the Cheyenne River drainage basin in the southwestern portion of South Dakota with the exception of the Black Hills, southeastern Pennington County, and Shannon County (Winham and Hannus 1991: 28-2). This area consists of southeastern Meade County, and portions of Pennington, Custer, and

Fall River Counties (Winham and Hannus 1991: 28-2). The area is characterized by rolling grasslands broken by deeply entrenched stream channels (Winham and Hannus 1991: 28-2).

The First Americans c. 15,000 B.P.

Between 25,000 to 11,000 years ago, bitter cold temperatures during the late Wisconsin glaciation caused water to become trapped in advancing ice sheets. The result was a drop in world sea levels that effectively exposed low-lying landmasses, and the original immigrants to the Americas are believed to have arrived by means of an exposed land bridge connecting Siberia with Alaska.

The pathway for further migration south is still under debate. Since the 1950s, conventional understanding was that an "ice-free corridor" existed between the Cordilleran and Laurentide ice sheets as they retreated north when warmer temperatures returned around 15,000 years ago. Without this pathway, many scholars felt that migration into the New World would have been impossible due to the existing glaciers. However, a "growing body of evidence indicates that pathway between the great glaciers of the Last Ice Age was closed – in fact, the way south may have been blocked until the centuries after the dawn of Clovis" (Dixon 2000).

Another recent and popular hypothesis is that Early Americans migrated to the New World via a Pacific Ocean coastal route. Recent work by archeologists and paleontologists has shown that the Northwest coast of North America was not always covered by ice as once thought (Dixon 2000; Dixon and Heaton 2000). In fact, there is evidence that ancient life existed along this coast for tens of thousands of years. Jim Dixon and Tim Heaton's excavation of the coastline has uncovered a continuous record of caribou, fox, and bear bones dating back 50,000 years (Dixon and Heaton 2000). Furthermore, the western coastline was likely more extensive during ice ages. Sea levels were significantly lowered as much of the earth's water was trapped in glacial ice. This, along with the isostatic effects on land masses from the weight of the glaciers, would have exposed substantial tracts of land along coastline providing a route further south.

Archeological sites dating to such antiquity are extremely rare, and only a handful of these sites exist in the Americas. The most notable and intensely investigated site is the Monte Verde site in Chile, South America (Dillehay 1997). This site contained wooden huts, hearths, a wish-bone-shaped structure, and several bone and stone artifacts that date to between 14,050 and 13,600 years ago [cal]. Other sites include the Chesrow Complex in Southeastern Wisconsin (Overstreet 1993, 2000), the La Sena and Jensen site in central Nebraska (Holen 1994, 1995; Holen and May 2002), the Meadowcroft Rockshelter site in southwestern Pennsylvania (Adovasio et al. 1978; Adovasio and Page 2002), sites from the Old Crow Basin in Canada's Yukon Basin (Bonnichsen 1979; Irving et al. 1989), and the Cactus Hill Site in southern Virginia (Dixon 1999; Monastersky 2000; Adovasio and Page 2002).

Although many of these sites have not received complete scientific acceptance, the archaeological evidence appears to support regional adaptation underway 12,000 years ago, and the Early Americans emphasized the local environments for subsistence, which included both a variety of floral and faunal resources (Dixon 1999). Furthermore, both genetic and linguistic studies are providing mounting evidence that there were multiple migrations of people, and they

were not of a shared, single biological or cultural stock (e.g., Schurr and Wallace 1999; Nichols 1990). In other words, the first Americans were likely made up of several people and cultures that migrated from the Old World, and they adapted to many different environments in several different ways.

Clovis, Folsom, & Paleo-Indian c. 13,400[cal]-7600 B.P.

Towards the end of the Wisconsin glaciation, the Plains environment harbored big-game species such as the mammoth and Ice-age bison adapted to the periglacial environment and the seasonal extremes of the times. During this time a new culture, named Clovis after the early archaeological excavations in Clovis, New Mexico, began in the Americas. Based on the lack of any definite occurrence of the Clovis material culture, such as the Clovis projectile point, north of the ice sheets or in the Artic, Clovis is believed to be the first truly indigenous North American culture.

The Clovis tradition people likely lived in highly mobile small bands of people armed with a shared tool kit that included the diagnostic fluted lanceolate Clovis point, a diagnostic crescent moon-shaped biface, gravers, a variety of end scrapers, and a blade-technology with cutting and scraping tools made from the blades. The discovery of kill sites in the western United States have tended to emphasize a lifeway based on specialized hunting of now extinct Ice-age big-game animals such as mastodons and mammoths. However, more recent research has convincingly demonstrated that this type of subsistence was not a widespread important role in Clovis subsistence, and the Clovis people appear to have emphasized a variety of flora and fauna (Anderson and Sassaman 1996; Griffin et al. 1988; Bryan 1991).

Archaeological manifestations associated with the Clovis time period are rare and usually consist of isolated surface-find projectile points. Well known in Plains archaeology, the Lange-Ferguson site in Shannon County is the only Clovis site to be investigated in the State to date (Hannus 1994). This Clovis site is a mammoth kill/butchery locality with direct evidence for the use of mammoth bone tools in the butchering process. No Clovis sites have been found in the South Fork Cheyenne archaeological region to date. However, a site containing a Goshen component (39FA1277) has been found and recorded within the South Fork Cheyenne region. The Goshen cultural complex is an early Paleo-Indian cultural complex that is known to date to about 11,000 B.P. and is thought by many Plains archaeologists to represent a transitional culture between Clovis and Folsom (Frison 1991: 45). It may be suggested that Goshen is a transitional culture between Clovis and Folsom given the fact that some Goshen sites have been found associated with mammoth remains whereas it appears that by Folsom times mammoth had become extinct (Frison 1991: 45). At the lowest level of Kaufman cave in northern Wyoming, a Goshen point was found in direct association with a broken mammoth scapula (Frison 1991: 74). In addition, Goshen points are typologically and morphologically neither Clovis nor Folsom but do retain characteristics of each (Frison 1991: 45). Goshen points demonstrate a pressure flaking technology and final edge retouch like Folsom but are basally thinned and not fluted (Frison 1991: 45).

The Younger Dryas cold snap characterized by a worldwide cold interval followed Clovis times and lasted between 11,000 and 9650 B.C. [cal]. As a drier climatic regime resulted in the retreat

of spruce forest and the expansion of grassland on the northern plains, many of the Ice-age megafauna died. Bison, however, became well adapted to this environment and the size and mobility of the herds likely increased significantly. Similar to the landscape today, in the Black Hills proper pine forests characterized this area while grasslands surrounded the Hills at the lower elevations.

During this time period, the Folsom complex emerged. This complex is known to date from about 11,000-10,000 B.P. and is easily identified by well-made lanceolate points fluted entirely up to their tips, and the people relied heavily on the bison herds and other big game for subsistence. Bamforth (1988) hypothesizes that as bison herds grew in size; this food resource became more predictable. Folsom groups reacted by using regular and preferred locations, engaging in communal hunts, and concentrating into larger social groups. As evidenced by their specialized point production, this may have led to greater social complexity from Clovis to Folsom.

Like Clovis, Folsom archeological remains are rare and are typically surface finds. No Folsom sites have been reported or recorded within the South Fork Cheyenne archaeological region.

Following and partly overlapping the Folsom period around 10,500 to 9,000 B.P. in addition to a climatic shift more similar to modern times, many regional adaptations appeared in North America. Many Plains archaeologists refer to this period as the Middle Paleo-Indian period (see Frison 1991). This period includes the Alberta, Hell Gap, and Agate Basin cultural complexes. These groups continued to emphasize a subsistence based on bison hunting and were involved in massive bison drives that probably required intimate knowledge of the landscape and several people. Beginning at about 9,000 B.P. and continuing on to about 8,000 B.P., it appears that Plains groups began to develop a hunting/gathering subsistence mode that was focused on a more generalized resource base. “There is an abrupt change from the stemmed projectile points with transverse pressure flaking of the Middle Paleo-Indian period to the lanceolate style with parallel-oblique flaking that followed” (Frison 1991: 66). This period is referred to as the Late Paleo-Indian period (9,000-8,000 B.P.) and several variations of parallel-oblique flaked, unfluted, lanceolate point forms existed including the Jimmy Allen, Frederick Allen, Pryor Stemmed, Lovell Constricted, Angostura, Lusk, and many others. In addition, the Cody complex is known to date to the Late Paleo-Indian period and includes finely made stemmed spear points such as the Scottsbluff and Eden types. The use of local stones for tool manufacture and the limited distribution of the projectile point types relative to earlier times may suggest that cultural boundaries also were present to some degree.

Four sites (39FA11, 39FA833, 39FA1074, and 39FA1452) have been recorded within the South Fork Cheyenne archaeological region that date to the Paleo-Indian period. Of these four sites, one is associated with the Eden cultural complex (39FA1452), one is associated with the Jimmy Allen cultural complex (39FA11), one is types as a Paleo-Indian artifact scatter (39FA833), and one is an isolated find consisting of a single parallel-oblique flaked lanceolate projectile point (39FA1074).

Plains Archaic c. 7600 B.P. to 1500 B.P.

The Plains Archaic is defined by a marked subsistence focus on broad based hunting and gathering whereas the preceding Paleo-Indian period is thought to have been focused primarily on big game hunting. A marked increase of groundstone tools such as manos and metates used for processing and grinding plant material is evident in the archaeological record and reflects a major subsistence shift to a more generalized subsistence base (Frison 1998). While this lifeway existed to some degree in the late Paleo-Indian times, it was not as widespread. Frison (1998) writes that the term 'Archaic,' in one sense of the word, is meant to denote an adaptation dominated by hunting and gathering rather than a cultural time period. In fact, many Plains groups continued the Archaic lifestyle well into historic times, and Archaic temporal periods are defined much more by changes in projectile point styles rather than significant changes in lifeways.

Early Plains Archaic c. 7600 to 5000 B.P.

The Early Plains Archaic coincides with an extremely warm and dry climatic episode known as the Hypsithermal or Altithermal. Though the effects of this episode on plants, animals, and people are still debated, Frison (1998) suggests that severe droughts caused plant communities to shift to higher elevations; and, as a result, many Early Plains Archaic people occupied foothill-mountain areas. Frison (ibid.) points to the presence of several Early Archaic sites in low elevation intermontane settings in addition to Early Plains Archaic bison kill sites in the Wyoming Black Hills as mounting evidence for this hypothesis on the human response to the Altithermal. In addition, very few Early Archaic sites have been found on the plains proper and bison remains dramatically decrease in Altithermal aged deposits, reflecting the almost desert like conditions that were thought to exist on the plains during the Early Archaic (Frison 1998:272). Size diminution of bison has been a gradual process throughout the Holocene, and there is some indication of a slight acceleration of this trend through the Altithermal (Frison 1998: 272).

Habitation features, known as pit house features, also first appear during this time (Frison 1991:83). They date toward the end of the Late Archaic period and extend into the Middle Archaic. These features "usually appear as deep, circular stains; sometimes with central post molds… others are oval with multiple post molds along the long axis" (Sundstrom 1996: 2c-16). Cache pits, fire pits, and grinding stone are commonly found in the pit houses. Most of these features are found in the intermountain basins of the northern plains. The presence of these fairly significant habitation features may be associated with some level of sedentism.

Relative to the Paleo-Indian times, Early Archaic bison kill sites are typically small consisting of only 10-20 bison. Hunting strategies included the use of arroyo traps and jumps (much later in the period) and probably required small groups or bands to accomplish. However, many sites such as the Spring Creek site in south-central Nebraska and the Coffey site in northern Kansas contain much more small game and plant remains than large herbivores. Certainly, this is an indication of the more generalized resource base.

Other than groundstone implements, the Early Archaic also included the arrival of a new type of projectile point. These projectile points are distinctly side notched although there are many regional variations of this form. The technological innovation of notching offered a much stronger binding to the foreshaft of a spear while reducing the bonding mass at the same time (Howard 1995).

Early Plains Archaic archaeological sites are fairly rare; however, three were on file within the South Fork Cheyenne region. These sites are 39CU417, 39FA1045, and 39FA1159. 39FA1045 and 39FA1159 contain diagnostic Hawken projectile points and 39CU417 contains an early side notch point with at least six associated stone circles.

Middle Plains Archaic c. 4900 to 3000 B.P.

The end of the Altithermal and the return to modern climatic condition marks the beginning of the Middle Archaic Period. Bison populations again proliferated (Frison 1998:89). In addition to a refinement in bison hunting strategies, the Middle Plains Archaic period witnessed an even greater emphasis on plant foods. Reused sandstone plant grinders as well as roasting pits are common at sites dating to this time period. While small bison kill sites are the most typical of the period, Middle Archaic people continued to use bison jumps. One noteworthy innovation by Middle Archaic hunters was the use of bison corrals like that seen at the Scoggin Site in Wyoming. This strategy is very different in that it likely needed much fewer people to operate relative to the other strategies. Overall, Middle Archaic groups developed a carefully planned scheduling of economic activities based on seasonal plants and movements of game.

During this time period, the Plains also witnessed the widespread appearance of stone circles. The features typically measure between 13 and 23 feet in diameter. Although the function of them has been debated, it is generally agreed that most represent a circular anchor "to hold down the cover of a conical (or some other type) lodge" (Frison 1998:154).

The McKean Complex is the most notable Plains Middle Archaic archaeological manifestation, and McKean sites have an extremely wide distribution across the Plains. These site types are most readily recognized by the lanceolate McKean point with an indented base and convex blade edges. However, there are many variations of the McKean point and include side-notched and stemmed forms. Common Middle Archaic site types are bison kills, open occupations, and cave/rock shelters.

There have been 21 Middle Archaic sites recorded within the South Fork Cheyenne region. Of these 21 sites, 11 have been assigned to the McKean complex. Most of these sites are typed as either artifact scatters or occupations; however, a Middle Archaic stone circle site (39PN375) has also been recorded.

Late Plains Archaic 3000 to 1500 B.P.

The Late Plains Archaic is marked by the appearance of corner-notched points on the Plains. This notching technique produced flared edges with sharp points where the base and edge intersect. In general, Late Archaic people appeared to shift back to a focus on large, upland

game (Deaver and Deaver 1988:96), although other resources were certainly exploited to some extent.

The earliest Late Archaic manifestations are the Pelican Lake and the Yonkee phases (see Frison 1991:105). To date, there have been no Yonkee sites identified in the Sandstone Buttes region. The reason for this may be that the term "Yonkee" is commonly used by archaeologists working on the Northwest Plains but is not usually used in South Dakota. On the other hand, the Pelican Lake cultural complex is commonly used in South Dakota, especially in the western part of the state. The Pelican Lake cultural complex is thought to represent the earliest of the Late Archaic cultural manifestations on the Plains and is represented in the South Fork Cheyenne archaeological region.

There are 18 sites that have been assigned to the Late Archaic period within the South Fork Cheyenne archaeological region. Of these 18 sites, only four are assigned to the Pelican Lake cultural complex. In addition, one extensively occupied site (39PN1034) is recommended eligible for the National Register of Historic Places (NRHP).

The Late Prehistoric 1500 B.P. to 16th Century A.D.

The Great Plains witnessed significant changes during the Late Prehistoric Period. The innovation of the bow and arrow as indicated by small delicate projectile points was introduced around this time. In addition, ceramics first appear on the Plains during this period (Frison 1991: 116). Although ceramics are present in relatively small amounts on the Northwest Plains, they are valuable cultural makers between the Late Archaic and Late Prehistoric periods (Frison 1991: 116).

Besant and Avonlea phases are typically associated with the continuation of a general Archaic-based lifestyle. Besant represented a highly sophisticated bison hunting culture. Bison kill sites associated with this phase often consist of complicated, skillfully constructed bison corrals similar to modern cattle corrals. The use of these corrals would have required great knowledge and understanding of stampeding animals (Fagan 2000:125). At the Ruby site along the Powder River in Wyoming, a structure at the southern end of this bison corral site is interpreted to be a ceremonial structure. If this is true, this could represent the importance of ritual at communal hunts similar to the rituals documented in historical accounts.

No Besant sites have been recorded within the South Fork Cheyenne region as of May 2005.

Around A.D. 1, the Avonlea phase began on the Plains and continued well into the Late Prehistoric Period. Avonlea points are typically side-notched points with slightly concave bases. Based on their smaller sizes, it is believed that the Avonlea people were the first to use the bow and arrow. It is also widely believed that Avonlea peoples were the first to extensively utilize ceramics on the Plains. Avonlea ceramic styles include net impressed, spiral channeled and smooth surfaces (Dyck 1983:123).

Two Avonlea sites, 39FA25 and 39FA1450, have been recorded within the South Fork Cheyenne region as of May 2005. Both are described as small artifact scatters.

It is generally accepted that Eastern Woodland groups introduced horticulture onto the Plains. As the name implies, the introduction of horticulture likely spread from the east. These Woodland groups are characterized by fixed settlements, more complex societies, seed horticulture, pottery/ceramic production, and the construction of burial mounds. The Woodland Tradition is generally sub-divided into Early, Middle, and Late Woodland periods as well as other phases and cultures. These further divisions are mainly identified through ceramic types, geographic locales, and temporal ranges.

No sites assigned to the Woodland period were on file with the South Dakota Archaeological Research Center (SARC) within the South Fork Cheyenne region.

The Plains Village period supplanted or continued the Woodland culture in the Middle Missouri around 900 A.D and extended throughout the eastern Plains. The transition is generally marked by larger villages (sometimes with fortifications) and greater horticulture produce including corn, beans, squash, and sunflowers. This period is typically divided into "sub-traditions" and variants based on dates, ceramics, house types, and other characteristics. This includes, in order of antiquity, the Initial (IMM), Extended (EMM), and Terminal (TMM) Middle Missouri Variants and the (IC), Extended (ExC), Post-Contact (PCC), and Disorganized Coalescent Variants.

Seven sites have been assigned to the Plains Village period within the South Fork Cheyenne region. Three of these seven sites (39FA45, 39FA860, and 39FA861) were typed as Extended Coalescent sites based upon diagnostic ceramics.

The Protohistoric or Contact Period c.1600-1804

The Protohistoric Period marks the beginning of even greater change on the Plains. The term Protohistoric is associated with the onset of Euro-American presence on the Plains, even though this does not imply there was full-scale or even frequent direct contact with Euro-Americans. Certainly, the greatest impact was the arrival of trade goods including horses and firearms. Horses were provided indirectly by the Spanish from the southwest, and firearms came later indirectly from the French, English, and American fur-traders from the northeast. Both trade goods greatly increased the ease of bison hunting and also influenced other once semi-sedentary horticulture groups from the east such as the Cheyenne, Crow, and the Lakota/Dakota to become Plains equestrian nomadic Bison hunters. The Mandan, Hidatsa, and Arikara along the Missouri River also became central providers of firearms to tribes further west.

Many of the Protohistoric Plains groups were highly mobile focusing intensely on bison hunting with only a supplemental emphasis on other resources, although others certainly continued village farming. The need to cover the large migration ranges of bison coupled with the influx of other groups competing for the same resource created much competition between tribes. As a result, intertribal conflict became more common, and the power of tribes as well as individuals became defined by the accumulation of European trade goods.

Protohistoric sites are recognized by the occurrence of both native artifacts such as stone tools mixed in with European trade goods such as gun parts, trade beads, metal projectile points, and other metal items.

The SARC database indicates that there is only one site within the South Fork Cheyenne region that can be assigned to the Proto-Historic period. Site 39CU498 is an extensive lithic scatter with both stone tool artifacts and a gun flint.

The Historic Period 1800-1950

Although smaller trading operations under the control of the Missouri Company were present in the Dakotas and the Middle Missouri during the late 18th century, the purchase of the Louisiana Territory in 1803 and arrival of Lewis and Clark in 1804 signaled the beginning of the Historic Period and full-scale interaction between Native American groups and Euro-Americans. Euro-American fur traders and trappers were the first to enter the region after Lewis and Clark, and the Missouri River became an increasingly important trading locale.

In the early half of the 19th century, permanent settlements of forts and trade posts began to be set up along the Missouri River. The first trading fort was set up by the Missouri Company in 1794 and focused on trapping beaver and otter; this industry did not shift focus to buffalo robes until around 1815 (Hanenberger et al 2004). By 1840, buffalo were the most sought-after skins in the fur trading business (Hanenberger et al 2004).

Conflicts between the tribes and Euro Americans also escalated. Although once considered "Indian Territory," the United States looked to the west for expansion and settlement. During the 1800s, several treaties aimed at acquiring these Indian lands. While lands cessations were small at first, these could not keep up with the influx of migrants to these areas. Hoping to curtail the growing hostilities between the Northwestern tribes and the American frontier, the Fort Laramie Treaty of 1851 was signed between the United States and the Lakota, Arapaho, Cheyenne, Crow, Assiniboine, Mandan, Arikara, and Shoshone.

This "Great Treaty" and others, however, did little to assuage the conflicts since they were often breached or altogether ignored. In the 1860s, several tribes declared war on the Americas. The United States reacted by establishing several forts in the region.

The second "Great Treaty," the Fort Laramie Treaty of 1868, established the Great Sioux reservation in middle South Dakota, and all lands east of the Missouri River were ceded and officially opened for settlement.

Only a few years later, expansion ambitions to the west of the Missouri River again threatened the tribal lands. Political attempts focused at breaking up the Great Sioux Reservation. Two key events accomplished this. The General Allotment Act of 1887, or Dawes Act, allotted 160 to 320 acres to tribal families. The tracts of land were intended to "encourage" the Native Americans to take up farming in order to assimilate them into American economy and society. Surplus reservation lands were then available to be sold to non-Indian settlers. Under fear and broken promises, the state of South Dakota also officially divided the Great Reservation in the

five present-day reservations of Standing Rock, the Lower Brule, the Rosebud, the Pine Ridge, and the Cheyenne River Reservations. The National Historic Landmark Wounded Knee in the White River Badlands is the site of the last armed conflict between Native Americans and United States government troops, fought on December 29, 1890. Following this, most areas to the west were completely opened for settlement.

Ranchers, Farmers, Miners, and entrepreneurs from all over the U.S. began to settle South Dakota in the late 19th century. Most sites that are assigned to the historic period are associated with ranching, farming, railroad, and/or industrial activities. There are several hundred historic period sites on file within the South Fork Cheyenne archaeological region. These site types include dumps, depressions, foundations, well/cisterns, farmsteads, non-farm ruins, artifact scatters, cairns, schools, railroads, cabins, monuments, industrial sites, burials, earthworks, dams, and roads.

Cultural Resource Records Review

Quality Services, Inc. GIS specialist Olan Rom conducted records search for previous inventories, and previously recorded archeological and historic period resources with the South Dakota State Historic Society November 16, 2020. The National Register of Historic Places (NRHP) and National Historic Landmark online databases were also checked. Results are listed in the tables below.

Table 2. Cultural resources within one mile of the project area.

ID#	Name/ Type	NRHP	Potential Effect & Relationship to Project
39PN2003	Railroad	***Eligible***	**No Effect** – Out of APE
39PN2043	Railroad	***Eligible***	**No Effect** – Out of APE
39PN3236	Foundation	***Not Eligible***	Out of APE
55701	Base Engineering Maintenance and Inspection Building	***Eligible***	**No Effect** – Out of APE
55702	Boiler House – Building 602	***Not Eligible***	Out of APE
55703	Readiness Building	***Not Eligible***	Out of APE
55704	Flight Simulator Building	***Eligible***	**No Effect** – Out of APE
55705	A.C. Warehouse Miscellaneous (Bass Supply)	***Eligible***	**No Effect** – Out of APE
55711	Well House No. 1	***Eligible***	**No Effect** – Out of APE
55727	Warehouse	***Eligible***	**No Effect** – Out of APE
55728	Pumphouse, Bulk Storage	***Eligible***	**No Effect** – Out of APE
55729	Pumphouse, Bulk Storage Tank	***Eligible***	**No Effect** – Out of APE
55730	Pumphouse, Tank Car Unloading	***Eligible***	**No Effect** – Out of APE
55731	Warehouse	***Eligible***	**No Effect** – Out of APE
55732	Deep Well Pump	***Not Eligible***	Out of APE

ID#	Name/ Type	NRHP	Potential Effect & Relationship to Project
	House & Tower		
55733	Warehouse	***Eligible***	**No Effect** – Out of APE
55734	Storage Ammo & Shop	***Eligible***	**No Effect** – Out of APE
55735	Base Headquarters	***Not Eligible***	Out of APE
55737	P.X. Service Station	***Eligible***	**No Effect** – Out of APE
55738	Control Building	***Eligible***	**No Effect** – Out of APE
55739	PWTP Secondary Treatment Building	***Not Eligible***	Out of APE
55740	Bowling Alley	***Eligible***	**No Effect** – Out of APE
55741	Base Chapel	***Eligible***	**No Effect** – Out of APE
55742	Ellsworth Air Force Base Building	***Eligible***	**No Effect** – Out of APE
55746	Admin Office	***Eligible***	**No Effect** – Out of APE
55747	Alert Hanger		Out of APE
PN00000663	Bridge 52-485-275	***Not Eligible***	Out of APE
PN00000664	Bridge 52-486-275	***Not Eligible***	Out of APE
PN00000665	Bridge 52-490-275	***Not Eligible***	Out of APE
PN00000900	Box Elder School	***Eligible***	**No Effect** – Out of APE

Table 3. Previous inventories within one mile of the project area.

Resource#	Author(s)	Year	Title
APN-0037	Hackbarth, M. R.	1977	A Cultural Resources Survey of a Proposed School Administration Building, Douglas School District, Ellsworth AFB Pennington County, South Dakota.
APN-0183	Malone, P. A., and J. V. Buechler	1986	An Intensive Cultural Resource Inventory Survey of Selected Portions of West River Electric Association, Inc.'s Proposed Buried Cable and Overhead Line Construction Routes in Pennington County, South Dakota.
APN-0324	Nowak, T.	1982	Cultural Resource Reconnaissance Survey for 22.33 Acres of Land Proposed for Disposal, T2N, R9E, Section 17 at Ellsworth Air Force Base, Pennington County, South Dakota.
APN-0499	Buechler, J. V.	1997	Letter Format Report of a Cultural Inventory - Box Elder Arterial Corridor, Pennington County, South Dakota.
APN-0732	Buechler, J. V.	2004	Letter Format Report of a Cultural Resources Inventory Survey of Box Elder Infrastructure Improvements Near I-90 Exit 67, Pennington County, South Dakota.
APN-0746	Rom, L.	2005	Letter Report Documenting a Level III Cultural Resources Survey of Proposed RCYC Ellsworth Air Force Base Communication Alternate #1, Williams 190 Ft. Monopole Communication Tower Lease, Access, & Utilities in the City of Box Elder, Pennington Co, SD.

Resource#	Author(s)	Year	Title
APN-0773	Buechler, J. V.	2006	Letter Format Report of a Cultural Resources Inventory Survey of Box Elder Water System Improvements, Pennington County, South Dakota.
APN-0909	Buechler, J. V.	2009	Letter Format Report of a Cultural Resources Survey of the Recreational Hiking Trail for the City of Box Elder, Pennington County, South Dakota.
APN-0916	Buechler, J. V.	2009	Letter Format Report of a Cultural Resources Record Search and Inventory Survey of the City Hall Construction Site for the City of Box Elder, Pennington County, South Dakota.
APN-0957	Buechler, J. V.	2010	Letter Format Report of the 2010 Cultural Resources Inventory Survey of Three Segments of a Proposed Recreational Hiking Trail for the City of Box Elder, Pennington County, South Dakota.
APN-0986	Byrne, D.	2011	An Intensive Cultural Resources Survey of a Proposed Materials Borrow for SDDOT Small Roads Project PCN 01QQ, Pennington County, South Dakota.
APN-0992	Holst, D.	2011	An Intensive Cultural Resources Survey of a Proposed Materials Stockpile Site for SDDOT Small Roads Project PCN 01QQ, North of I-90, Pennington County, South Dakota.
BLH-0049	Buechler, J. V.	1987	A Short Format Report of an Intensive Cultural Resource Inventory Survey of West River Electric Association, Inc.'s 1987 Projects in Meade and Pennington Counties, South Dakota.
WSD-0459	Buechler, J. V.	2015	Letter Format Report of a Cultural Resources Inventory Survey of Two Underground Conversion Projects for West River Electric Association, Inc. in Meade and Pennington Counties, South Dakota (W.O. 31626 & 31627).
WSD-0542	Hufstetler, M., M. McCormick, and J. V. Buechler	1997	Ellsworth Air Force Base Cultural Resources Survey Report.

Survey Methods & Results

Quality Services, Inc. Principal Investigators Elizabeth Celentano and Lina Ramirez, along with archeologist Mandy Woods, conducted a pedestrian cultural resource inventory of the proposed Liberty Center Development project area for five hours on November 24, 2020. The project area was located using a global positioning system (GPS) application, aerial and topographic maps, and project information provided by the client. Field investigation consisted of visual inspection, photography, and subsurface testing to determine the potential effects of the proposed project.

Pedestrian inventory of the project area was conducted in 15 meter transects. A total of 111.62 acres were inventoried. The project area consists of rolling hills with drainages cutting through

the project area. Disturbances from livestock use, transmission line construction, tree removal, and fencing are noted throughout the project area. Modern refuse and a single historic can were noted to be present. No prehistoric cultural resources were observed.

Ground surface visibility ranges from 0 to 70 percent with prairie grasses, shrubs, and scattered trees covering the ground surface. Four subsurface tests were conducted on different landforms in the project area, in order to determine whether there was a high potential for buried cultural resources. Subsurface tests one and three consisted of rocky brown clay loam. Dark brown loamy sand was observed in test four. Test two consisted of dark brow silt loam and contained glass shards and a can pull tab in the top 5 cm below the surface. The artifacts were likely modern refuge that had been covered by erosion and were not linked to a specific feature or site. No other cultural resources were encountered.

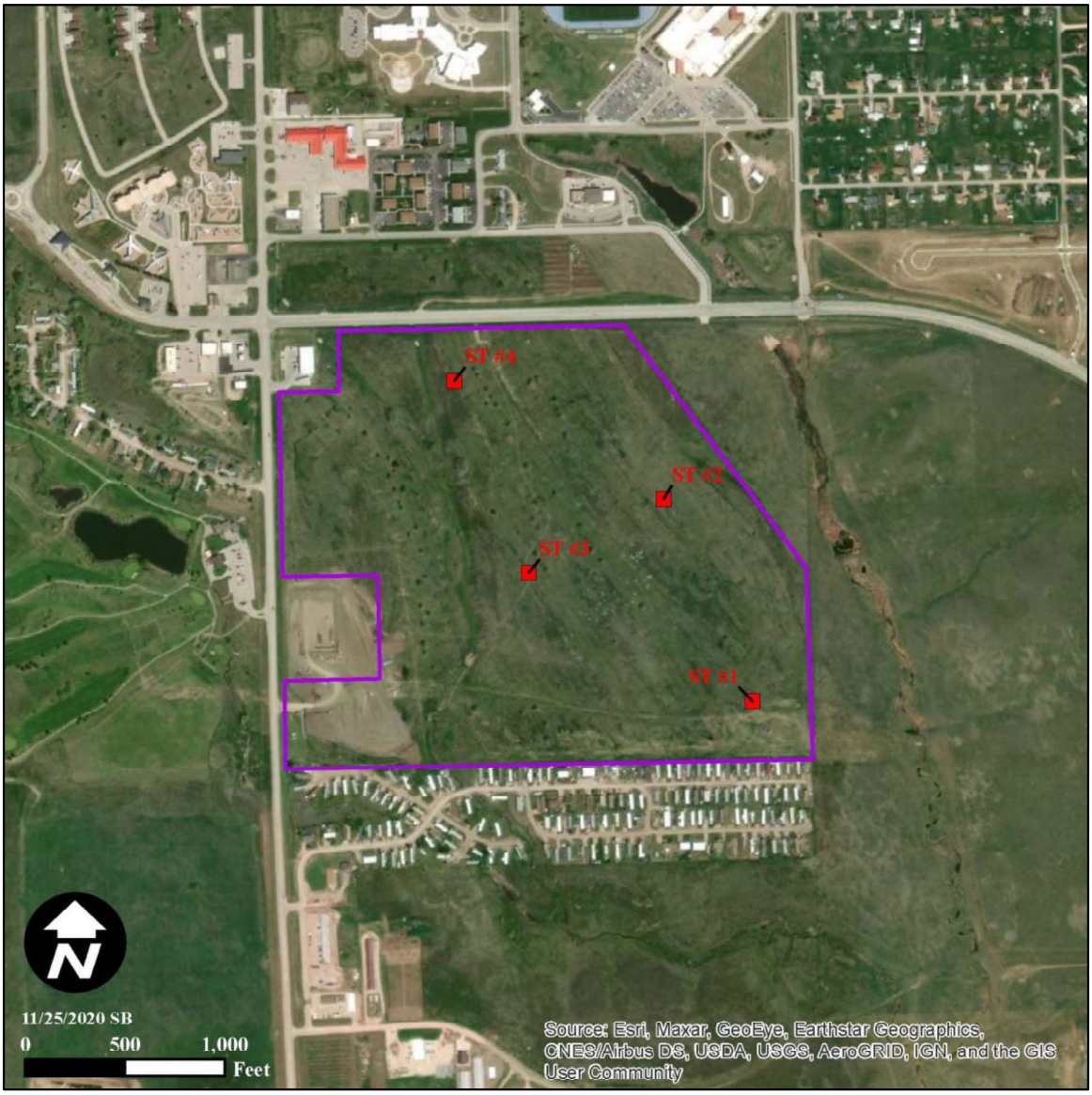

Figure 4. Liberty Center Development Testing Project.

Table 4. Subsurface Test #1.

Location: N/4887731 E/655067 **Size & Depth**: 50x50x30cm		
Stratigraphy: 0-30 cm 10YR 3/3 dark brown clay loam with a large number of rocks.		
Contents: No cultural materials		
Screen Sizes: 1/4"	**Liners**: No	**Backfilled**: Yes

Table 5. Subsurface Test #2.

Location: N/4888044E/654932 **Size & Depth**: 48x48x33cm		
Stratigraphy: 0-33 cm 10YR 4/3 brown silt loam.		
Contents: 4 glass shards, 1 can pull tab at approximately 5 cm. below the surface		
Screen Sizes: 1/4"	**Liners**: No	**Backfilled**: Yes

Table 6. Subsurface Test #3.

Location: N/4887932 E/654726 **Size & Depth**: 50x50x47cm		
Stratigraphy: 0-47 cm 10YR 4/3 brown clay loam with rocks increasing from pebbles to cobbles		
Contents: No cultural materials		
Screen Sizes: 1/4"	**Liners**: No	**Backfilled**: Yes

Table 7. Subsurface Test #4.

Location: N/4888225 E/654613 **Size & Depth**: 49x49x38 cm		
Stratigraphy: 0-38 cm 10YR 3/3 dark brown loamy sand		
Contents: No cultural materials		
Screen Sizes: 1/4"	**Liners**: No	**Backfilled**: Yes

Figure 5. Single historic can within inventory area.
M. Woods 11/24/2020.

Figure 6. Two-track in project area, facing north.
M. Woods 11/24/2020.

Figure 7. Two-track in project area, facing west.
E. Celentano 11/24/2020.

Figure 8. Two-track along fence line, facing east.
E. Celentano 11/24/2020.

Recommendations and Determination of Project Effect

A total of 111.62 acres were inventoried for the proposed Liberty Center Development project. Four subsurface tests were conducted, which yielded potential historic refuge at approximately 5 cm., which should not be considered an archeological site. No other cultural resources were identified in the records search or during pedestrian inventory within the proposed project area. Portions of the project area have been disturbed by development and current construction activities. Because of the results of the subsurface testing, the topography of the area, and the disturbance, it is not likely that buried cultural resources exist.

A determination of no historic properties within the APE is recommended.

In the unlikely event that cultural resources are located during development, it is recommended that the South Dakota State Historic Preservation Office (SHPO), Dream Design, Inc., the Department of Defense, and ***QSI*** be contacted immediately.

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south dakota
STATE HISTORICAL SOCIETY
DEPARTMENT OF EDUCATION

March 25, 2021

Scott Landguth
South Dakota Ellsworth Development Authority
PO Box 477
Rapid City, SD 57709

SECTION 106 CONSULTATION
Project: 210205002F – Ellsworth Development Authority Liberty Plaza North – T2N, R9E, Sec 17
Location: Pennington County
(DOD)

Dear Mr. Landguth:

Thank you for the opportunity to comment on the above-referenced project pursuant to 54 U.S.C. § 306108, also known as Section 106 of the National Historic Preservation Act of 1966 (as amended). The South Dakota Office of the State Historic Preservation Officer (SHPO) concurs with your determination regarding the effect of the proposed undertaking on the non-renewable cultural resources of South Dakota.

On February 5, 2021, we received your letter and the report titled "Cultural Resource Inventory of the Liberty Center Housing Project" by Lina Ramirez, Mandy Woods, and Sydney Boos of Quality Services, Inc. The report indicates that no properties were identified during the survey efforts. In a response dated February 25, 2021, SHPO provided only preliminary comments on the project, as our office had no record of the Department of Defense delegating responsibility for Section 106 consultation to Ellsworth Development Authority. On March 22, 2021, our office received a letter from James Holland, Deputy Director for Compliance of the Office of Local Defense Community Cooperation, in which the Department delegated Section 106 responsibility to the South Dakota Ellsworth Economic Development Authority.

Based upon the information provided, SHPO concurs with your determination of "No Historic Properties Affected" for the proposed undertaking. Should there be any changes to the nature or location of the activities associated with the proposed undertaking, your agency is required to submit additional documentation pursuant to 36 C.F.R. § 800.4 and § 800.5.

If historic properties are discovered or unanticipated effects on historic properties are found after the agency official has completed the Section 106 process, the agency official shall avoid, minimize or mitigate the adverse effects to such properties and notify the SHPO and Indian tribes that might attach religious and cultural significance to the affected property within 48 hours of the discovery, pursuant to 36 C.F.R. § 800.13.

Concurrence of the SHPO does not relieve the federal agency official from consulting with other appropriate parties, as described in 36 C.F.R. § 800.2(c).

Should you require additional information, please contact Jenna Carlson Dietmeier at Jenna.CarlsonDietmeier@state.sd.us or at (605)773-8370. Your concern for the non-renewable cultural heritage of our state is appreciated.

Sincerely,

Ted M. Spencer
State Historic Preservation Officer

Jenna Carlson Dietmeier
Review & Compliance Coordinator

CC: Lynn Kendall – South Dakota Ellsworth Development Authority
Margit Myers – Department of Defense, Office of Local Defense Community Cooperation

APPENDIX II. THREATENED AND ENDANGERED SPECIES DOCUMENTATION

Quality Services, Inc.

Archeology, Architectural History, Forestry, Geophysics, History & Paleontology

1621 Sheridan Lake Road, Suite A, Rapid City, South Dakota 57702-3432

Email info@qualityservices.us.com

Phone: 605-388-5309 Fax: 605-388-5319 Cell: 605-209-0265

December 14, 2020

Re: SD – Dream Designs International, Inc. – Liberty Center Phase I Threatened and Endangered Species

Dream Designs International, Inc. in conjunction with the South Dakota Ellsworth Development Authority, intends to construct a recreation facility, referred to as Phase I of the Liberty Center (the Project). The facility will consist of a 59,183 square foot building and 273 parking spaces. ***Quality Services, Inc.*** has been retained to write the environmental report to assess the environmental impacts of the project. We are recommending a determination of **no effect** on all federally listed species.

We carefully reviewed (on December 11, 2020) the US Fish and Wildlife Section 7 Consultation website for a list of species and critical habitat that may be present within the project area, and received an official species list through the IPaC process (consultation tracking number (06E14000-2021-SLI-0115). The list identified a total of four species potentially present within the project areas (see table, below), and no critical habitats.

Table 1. Federally listed species identified in the Project area.

Common Name	Scientific Name	Federal Status	Habitat Possible in Action Area?	Listed species affected?	Effect on listed species?
Northern long-eared bat	*Myotis septentrionalis*	Threatened	Species **not present**	**No**	n/a
Least tern	*Sterna antillarum*	Endangered	Species **not present**	n/a	n/a
Red knot	*Calidris canutus rufa*	Threatened	Species **not present**	n/a	n/a
Whooping crane	*Grus americana*	Endangered	Species **not present**	n/a	n/a

Northern Long-Eared Bat: This species hibernates in caves, mines, or tunnels, and typically spends the summer inhabiting old-growth forests, roosting in cavities or under the bark of trees and snags. Northern long-eared bats have also been known to roost in buildings. Spring migration from hibernacula to these summer habitats occurs from March through May, and fall migration occurs from August through October. This species is not known to be a long-distance

migrant, averaging 35 to 55 miles between hibernacula and summer habitat.[1] However, distances of over 150 miles have been recorded.[2] The project area and surrounding parcels of land are entirely devoid of forests and suitable hibernacula. Thus, it is not likely this species is present in or near the project area.

Least Tern: This species typically nests on sandy shores and sandbars of rivers and large reservoirs. Terns may also occasionally nest on industrial sites, sand pits, and even rooftops, provided they are near water bodies with abundant fish for foraging. Preferred nest sites are sand or gravel islands with little or no vegetation.[3] As no rivers or large water bodies with sandbars or sandy shores are located nearby, this species is unlikely to be present in or near the project area.

Red Knot: This species is known only as a passage migrant in South Dakota, with breeding grounds in northern Canada and a wintering range along the Gulf Coast and further south into South America. In North America, this species typically migrates along coastal pathways, but some populations are known to migrate through the interior United States. These inland migrants are thought to utilize saline lakes as stopover sites in the northern Great Plains region, though sightings have also been observed along the Missouri River in North Dakota. Sightings in South Dakota, however, are sporadic and rare,[4] but are also concentrated along the Missouri River and further east, where prairie lakes are much more common. There are no suitable lakes situated close enough to the proposed project area for this species to be affected by the project.

Whooping Crane: The whooping crane is known to migrate over South Dakota along the Missouri River drainage area. Stopover habitat utilized by this species includes wetlands and small lakes with good horizontal visibility. As with the red knot, there are no suitable habitats for this species near the project area.

We conclude that all species listed as potentially present in the project area will not be present in or near the project areas, due to lack of suitable habitats. We recommend a determination of "No Effect" in regards to all species discussed above.

Sincerely,

Sarah Giles
Environmental Scientist

---

[1] U.S. Fish and Wildlife Service. 2015. Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Northern Long-Eared Bat with 4(d) Rule. Federal Register (Vol. 80, No. 63, pp. 17974-18033).
[2] U.S. Fish and Wildlife Service. 2014. Northern Long-eared Bat Interim Conference and Planning Guidance. 68pp.
[3] U.S. Fish and Wildlife Service. 2013. Interior Least Tern (*Sternula antillarum*) 5-Year Review: Summary and Evaluation. Jackson, MS. 71 pp.
[4] U.S. Fish and Wildlife Service. 2014. Rufa Red Knot Background Information and Threats Assessment. Supplement to Endangered and Threatened Wildlife and Plants; Final Threatened Status for the Rufa Red Knot (*Calidris canutus rufa*) [Docket No. FWS-R5-ES-2013-0097; RIN AY17]. 383 pp.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
Phone: (605) 224-8693 Fax: (605) 224-1416
http://www.fws.gov/southdakotafieldoffice/

In Reply Refer To: December 08, 2020
Consultation Code: 06E14000-2021-SLI-0115
Event Code: 06E14000-2021-E-00333
Project Name: Liberty Plaza

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Migratory Bird Treaty Act (16 U.S.C. 703-712, as amended), as well as the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may benefit from the development of an Eagle Conservation Plan (ECP), see guidance at this website (http://www.fws.gov/windenergy/eagle_guidance.html). An ECP can assist developers in achieving compliance with regulatory requirements, help avoid “take” of eagles at project sites, and provide biological support for eagle permit applications. Additionally, we recommend wind energy developments adhere to our Land-based Wind Energy Guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

We have recently updated our guidelines for minimizing impacts to migratory birds at projects that have communication towers (including meteorological, cellular, digital television, radio, and emergency broadcast towers). These guidelines can be found at:

http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm
http://www.towerkill.com

According to National Wetlands Inventory maps, (available online at http://wetlands.fws.gov/) wetlands exist adjacent to the proposed construction corridor. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible. If this is not possible, attempts should be made to minimize adverse impacts. Finally if adverse impacts are unavoidable, measures should be undertaken to replace the impacted areas. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted, and the methods of replacement should be prepared and submitted to the resource agencies for review.

Please check with your local wetland management district to determine whether Service interest lands exist at the proposed project site, the exact locations of these properties, and any additional restrictions that may apply regarding these sites. The Offices are listed below. If you are not sure which office to contact, we can help you make that decision.

U.S. Fish and Wildlife Service, Huron Wetland Management District, Federal Building, Room 309, 200 4th Street SW, Huron, SD 57350; telephone (605) 352-5894. Counties in the Huron WMD: Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld, Sanborn, Sully.

U.S. Fish and Wildlife Service, Lake Andes Wetland Management District, 38672 291st Street, Lake Andes, South Dakota; telephone (605) 487-7603. Counties in the Lake Andes WMD: Aurora, Bon Homme, Brule, Charles Mix, Clay, Davison, Douglas, Hanson, Hutchinson, Lincoln, Turner, Union, Yankton.

U.S. Fish and Wildlife Service, Madison Wetland Management District, P.O. Box 48, Madison, South Dakota, 57042, telephone (605) 256-2974. Counties in the Madison WMD: Brookings, Deuel, Hamlin, Kingsury, Lake, McCook, Miner, Minnehaha, Moody.

U.S. Fish and Wildlife Service, Sand Lake Wetland Management District, 39650 Sand Lake Drive, Columbia, South Dakota, 57433; telephone (605) 885-6320. Counties in the Sand Lake WMD: Brown, Campbell, Edmunds, Faulk, McPherson, Potter, Spink, Walworth.

U.S. Fish and Wildlife Service, Waubay Wetland Management District, 44401 134A Street, Waubay, South Dakota, 57273; telephone (605) 947-4521. Counties in the Waubay WMD: Clark, Codington, Day, Grant, Marshall, Roberts.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

You are welcome to contact our office at the address or phone number above for more information.

Thank you.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408
(605) 224-8693

Project Summary

Consultation Code: 06E14000-2021-SLI-0115

Event Code: 06E14000-2021-E-00333

Project Name: Liberty Plaza

Project Type: DEVELOPMENT

Project Description: The proposed project is a mixed use commercial development.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.1285858591176N103.06585215727509W

Counties: Pennington, SD

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Least Tern *Sterna antillarum* Population: interior pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8505	Endangered
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Lark Bunting *Calamospiza melanocorys* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Aug 15

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

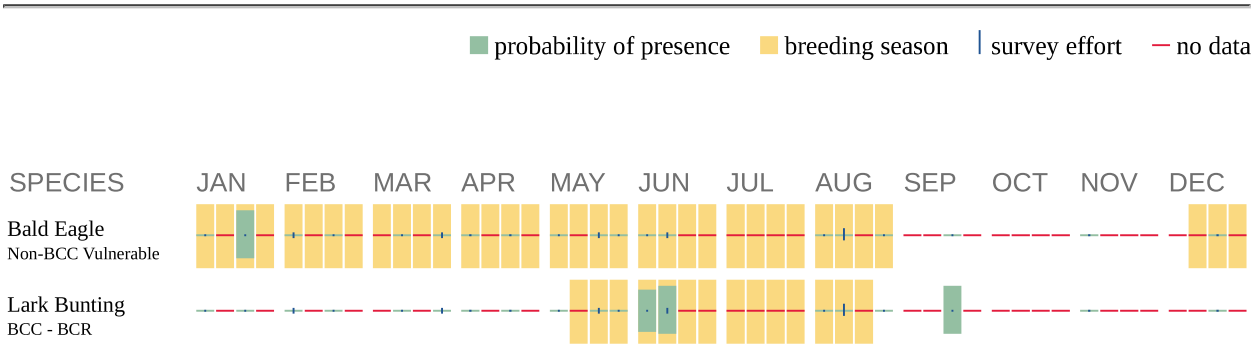
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

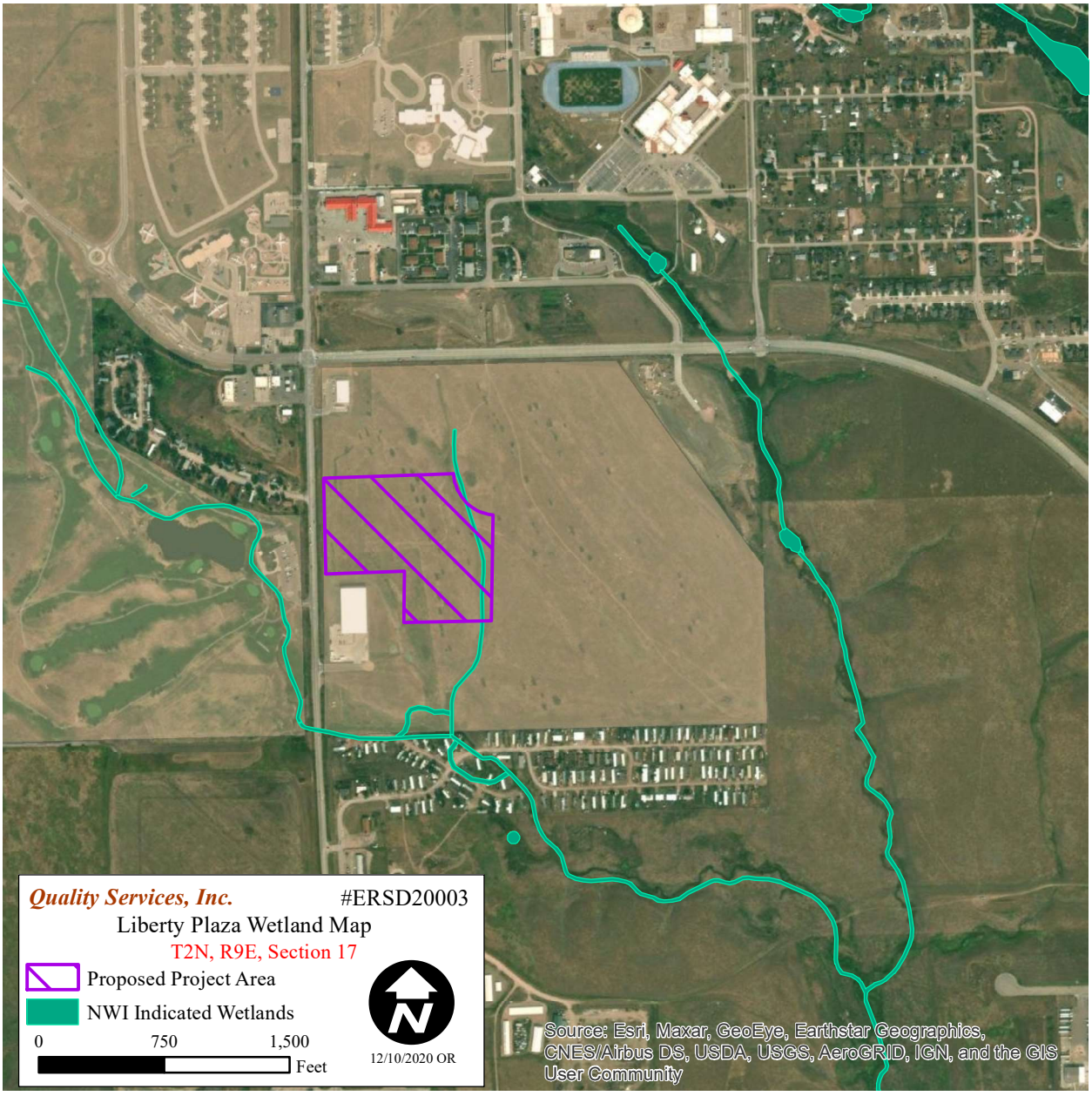
FRESHWATER EMERGENT WETLAND

- PEM1Cx

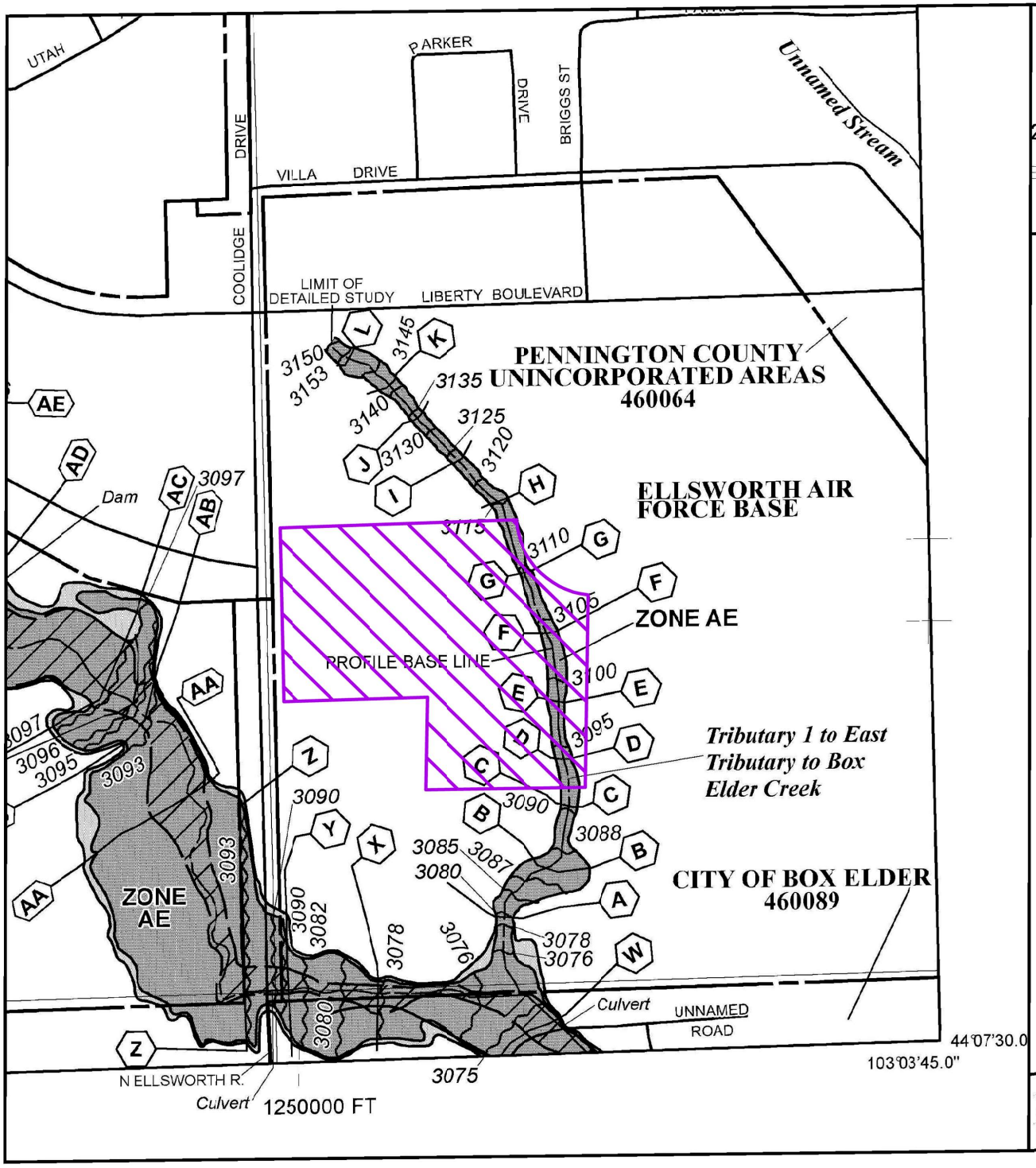
RIVERINE

- R5UBH

APPENDIX III. NWI WETLANDS MAP


Quality Services, Inc.
#ERSD20003
Liberty Plaza Wetland Map
T2N, R9E, Section 17
Proposed Project Area
NWI Indicated Wetlands
0
750
1,500
Feet
12/10/2020 OR
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDIX IV. FEMA FLOOD INSURANCE RATE MAP PANEL



MAP SCALE 1" = 500'

250 0 500 1000 FEET

METE

PANEL 0389H

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

PENNINGTON COUNTY, SOUTH DAKOTA

AND INCORPORATED AREAS

PANEL 389 OF 2050

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PENNINGTON COUNTY	460064	0389	H
BOX ELDER, CITY OF	460089	0389	H

Project Boundary

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46103C0389H

EFFECTIVE DATE
JUNE 3, 2013

Federal Emergency Management Agency

APPENDIX V. SITE PLAN

SITE LAYOUT NOTES
LEGAL: LOT __ BLOCK ___

ZONING: PLANNED DEVELOPMENT

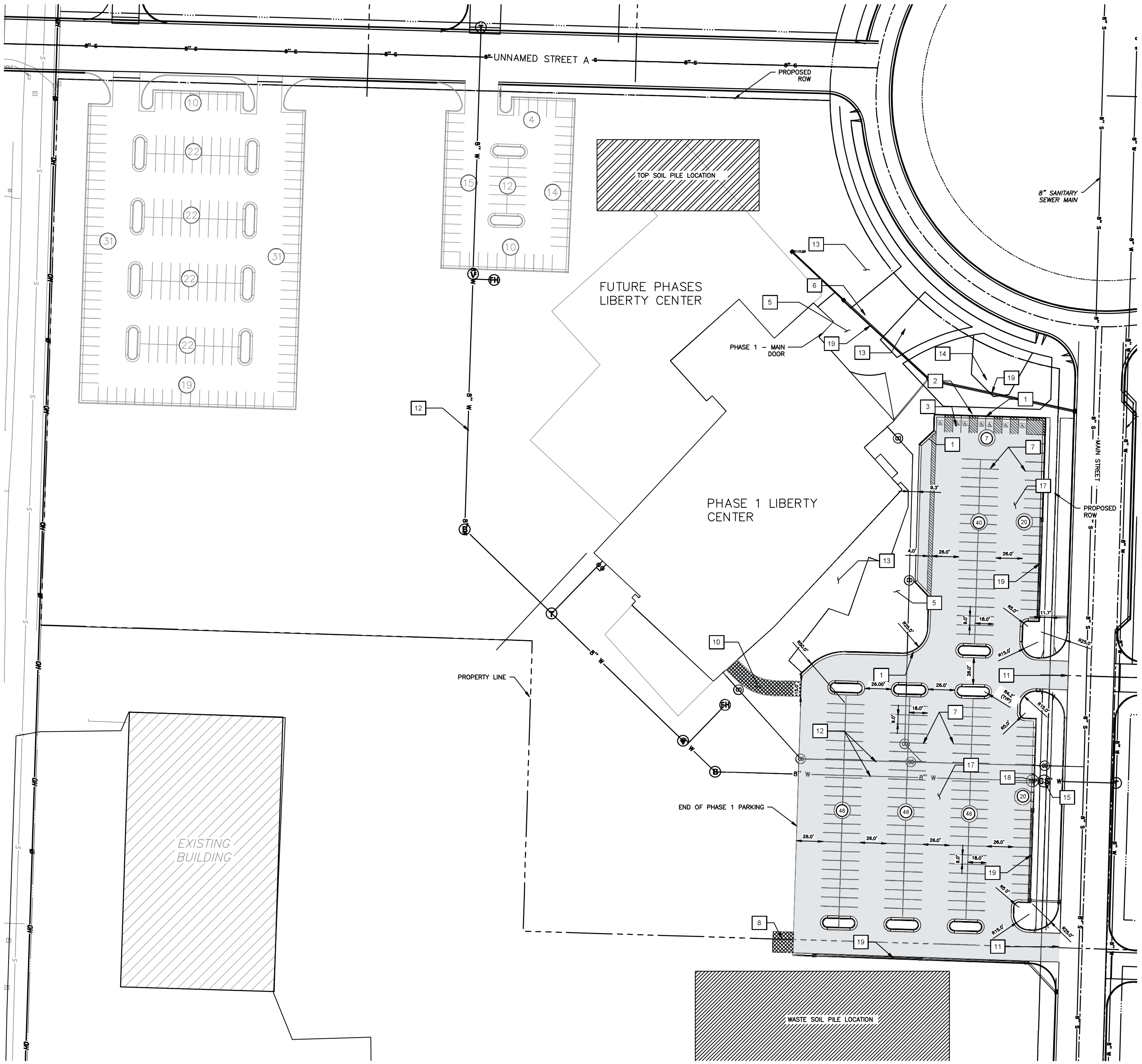
MINIMUM SETBACKS:
FRONT = 25'; SIDE = 8'; BACK = 25' - ACCESSORY - 5'

LOT COVERAGE
MAXIMUM PERMISSIBLE =
PROPOSED =

PROPOSED BUILDING
USE: RECREATION CENTER
SIZE (SF): 59,183

PARKING REQUIREMENTS:
BOX ELDER REQUIREMENTS
4 SPACES PER 1,000 SQ.FT. (BUILDING)
TOTAL REQUIRED = 237 SPACES

TOTAL SPACES PROVIDED = 273 SPACES

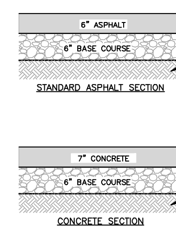


LEGEND

1	INSTALL TYPE B OR BL CONCRETE CURB & GUTTER PER DETAIL 60-2 ON SHEET C110
2	INSTALL HANDICAP ACCESSIBLE RAMP PER DETAIL 61-5 ON SHEET C110
3	INSTALL HANDICAP PARKING SPACE PER DETAIL B ON SHEET C110
4	INSTALL HANDICAP PARKING SIGN PER DETAIL C ON SHEET C110
5	INSTALL 5" THICK CONCRETE PAVING WITH 18" REBAR AT 18" O.C.
6	CONCRETE JOINTING
7	INSTALL 4" PAINTED WHITE PAVEMENT MARKING (TYP.)
8	INSTALL DUMPSTER ENCLOSURE PAD (PAD DETAIL SHOWN ON SHEET XXX DETAIL A)
9	SIGNAGE (BY OTHERS)
10	DRIVEWAY TO ACCESS DOOR
11	INSTALL CONCRETE PAN & FILLET PER DETAIL 60-1 ON SHEET C110
12	INSTALL WATER AND SEWER SERVICES SEE SHEETS XXX-XXX
13	LANDSCAPE AREAS
14	ART/PLANE PEDESTAL
15	INSTALL CURB STOP
16	INSTALL FIRE HYDRANT ASSEMBLY SEE DETAIL 8-1 ON SHEET C110
17	ASPHALT PAVEMENT, SECTION THIS SHEET
18	INSTALL METER PIT PER DETAIL SHEET C110
19	INSTALL STORM SEWER PER SHEETS C107-C108
231	PARKING TOTALS

INSTALL CONCRETE PAVEMENT PER DETAIL THIS SHEET

INSTALL ASPHALT PAVEMENT PER DETAIL THIS SHEET



SCALE: 1"= 40'

PRELIMINARY
FOR REVIEW ONLY

JLG architects
510 9th Street, Suite #202
Rapid City, SD 57701
phone 605.394.8831
www.jlgarchitects.com

PRELIMINARY

REVISION SCHEDULE

NO.	DESCRIPTION	DATE

SD ELLSWORTH DEVELOPMENT AUTHORITY
LIBERTY CENTER
BOX ELDER, SD

DATE 11/20/2020
PHASE 65% DESIGN DEVELOPMENT
PROJECT 20-1116
SHEET C105
SITE PLAN

KTM DESIGN SOLUTIONS, INC.

11/6/2020 3:19:28 PM

APPENDIX VI. MASTER GRADING PLAN

LEGEND

- 3245 PROPOSED INDEX CONTOUR
- 3242 PROPOSED INTERMEDIATE CONTOUR
- 3245 EXISTING INDEX CONTOUR
- 3242 EXISTING INTERMEDIATE CONTOUR

CONTOUR INTERVAL 1'

SCALE: 1" = 40'

PRELIMINARY FOR REVIEW ONLY

JLG architects
510 9th Street, Suite #202
Rapid City, SD 57701
phone 605.394.8831
www.jlgarchitects.com

PRELIMINARY NOT FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DESCRIPTION	DATE

SD ELLSWORTH DEVELOPMENT AUTHORITY
LIBERTY CENTER
BOX ELDER, SD

DATE 11/20/2020
ISSUED 65% DESIGN DEVELOPMENT
PROJECT 20-1116
SHEET **C103**
MASTER GRADING PLAN

KTM DESIGN SOLUTIONS, INC.

11/6/2020 3:19:29 PM

APPENDIX VII. ELLSWORTH AIR FORCE BASE APPROVAL

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 28TH MISSION SUPPORT GROUP (AFGSC)
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA

8 June 2021

Mr. Glenn Meyer, Deputy Base Civil Engineer
28 CES/CD
28th Civil Engineer Squadron
2125 Scott Drive
Ellsworth AFB, SD 57706

Mr. Scott Landguth, Executive Director
South Dakota Ellsworth Development Authority
14 St Joseph Street
Rapid City, SD 57709

Dear Mr. Landguth,

Ellsworth Air Force Base (EAFB) Environmental, NEPA, and Legal specialists have reviewed the Environmental Assessment (EA) for the Liberty Center Phase 1 Project in Pennington County, South Dakota. The EA was prepared by Quality Services, Inc. for Dream Designs International, Inc. in conjunction with The South Dakota Ellsworth Development Authority. After review, EAFB has no substantive comments on the Environmental Assessment. I do not see any reason the project should not proceed.

Should you have any questions or comments please contact Dr. Gary Brundige at (605) 385-2690 or by email at gary.brundige@us.af.mil.

GLENN A. MEYER, GS-14, DAFC
Deputy Base Civil Engineer