

Final

Environmental Assessment

ARMORY ADDITION TO CATM WITH PARKING

At
Grand Forks AFB, North Dakota

July 2005

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14. ABSTRACT This Final EA has been prepared in accordance with the National Environmental Policy Act, and assesses the potential environmental impacts of an Armory Addition to CATM with Parking lot area, located in Grand Forks County, North Dakota. Resource areas analyzed in the EA include Air Quality; Noise; Wastes, Hazardous Materials, and Stored Fuels; Water Resources; Biological Resources; Socioeconomic Resources; Cultural Resources; Land Use Transportation Systems; Airspace/Airfield Operations; Safety and Occupational Health Environmental Management; and Environmental Justice. In addition to the Proposed Action, the Alternative Action and the No Action Alternative were analyzed in the EA. The EA also addresses the potential cumulative effects of the associated activities along with other concurrent actions at Grand Forks AFB and the surrounding area.					
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FINDING OF NO SIGNIFICANT IMPACT (FONSI) ARMORY ADDITION TO CATM WITH PARKING AT GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

The 319 Air Refueling Wing (319 ARW) of the United States Air Force (USAF) proposes to construct an Armory Addition to CATM (Combat Arms Training and Maintenance) with Parking lot on Grand Forks Air Force Base (AFB), North Dakota. The Proposed Action, an Alternative Action, and the No Action Alternative were assessed in the attached Environmental Assessment (EA), which is incorporated by reference. Grand Forks AFB is a USAF base within the Air Mobility Command (AMC). The 319 ARW, which serves as the host wing, maintains its mission as the first core refueling wing in the AMC, and guarantees global reach and extended range in the air. The host unit is comprised of a Maintenance Group, Mission Support Group, Medical Group, and Operations Group.

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the action is to provide an armory with Class A vault, guard mount and issue area at the Grand Forks AFB. The guard mount room shall be open in design to facilitate open ranks inspections, briefings and for dispatching personnel. The armory shall have sufficient lighting to illuminate exterior and interior approaches to the armory itself with a single entry steel door. Doors and issue windows will be secured by a key activated high security lock with a security system to positively identify personnel requesting assistance/entry. Free floor space shall be provided for access to the weapons racks. The armory shall meet security requirements of AFI 31-209, DoD 5100.76-M, and MIL HDBK 1013/1A.

The existing armory is over 46 years old, substandard, with severe structural deterioration, inadequate heating and air conditioning, and is non-compliant with current AFI, DoD, and command standards. The facility cannot be renovated to meet all requirements under the 70% rule. Existing asphalt roofing is missing shingles and is near the point of leaking. Adding the armory to the existing CATM triggers a requirement for a fire suppression system. Conversion of existing administrative space is required to ensure functionality between the new armory and the CATM. Appendix D contains the AF Form 813, Request for Environmental Impact Analysis.

DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action is to construct 1800 sq ft armory addition with masonry and concrete construction, concrete footings and floor, standing seam metal roof, expanded parking lot, dumpster screening, heating-ventilation-air conditioning, utilities, communications, mass notification system, fire suppression system, intrusion detection security system, and site improvements. The project shall meet AT/FP requirements per UFC 4-010-02 latest edition. Replace 4,200 SF of asphalt shingles with a standing seam metal roof, convert 391 SF in Room 111 for weapons maintenance, and provide a common thoroughfare between the existing CATM facility and the new armory. Install a wet pipe fire suppression system, and 3,687 SF ceiling tile repairs as required. Install a fire suppression system to comply with code for armory addition, roof repair to match new armory, convert existing administrative space to dual use for weapons maintenance, and provide common thoroughfare between the existing and new addition. Orientate the Guard Mount area from east to west, with the doors leading into the armory addition held back from the windows in the existing building and lending privacy to the offices on either side. The additional length allows for potential of more daylight into the space and an exterior covered area entrance for use in inclement weather.

ALTERNATIVE ACTION

The Alternative Action would be the same as the proposed action, except orientate the Guard Mount area from north to south, making the armory addition a simple rectilinear form.

NO ACTION ALTERNATIVE

Under the No Action Alternative, no Armory Addition to CATM with Parking lot will be constructed. Security Forces personnel will continue to work in a substandard, unsafe facility. Deplorable working conditions in the facility will continue impacting overall base security, anti-terrorism efforts, and force protection. Morale will continue to decline affecting retention of military personnel. The facility will not comply with fire code. The existing asphalt roof is near the end of its useful life and does not meet command standards. The new addition will not be fully functional without conversion of room 111 into a common thoroughfare for use of rest rooms.

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Analysis of the Proposed Action indicates that the affected environment would not be significantly impacted by proceeding with the construction of an Armory Addition to CATM (Combat Arms Training and Maintenance) with Parking lot.

Air Quality - Air Quality is considered good and the area is in attainment for all criteria pollutants. No significant impacts to air quality would result because of An Armory Addition to CATM with Parking lot construction activities.

Noise The construction of An Armory Addition to CATM with Parking lot would create additional noise. The increase in noise would be negligible and only occur during construction.

Wastes, Hazardous Materials, and Stored Fuels - The increase in hazardous and solid wastes from An Armory Addition to CATM with Parking lot construction would be minimal and temporary. Solid waste debris would be disposed of in an approved location, such as the Grand Forks Municipal Landfill. Inert construction debris would be disposal at an approved location, such as Berger Landfill.

Water Resources – Because the drainage is already fully taxed, there must be additional consideration given to drainage during this project. Improper drainage could lead to overflowing ditches, increase in wetland area, and additional contaminants introduced to the water due to the increased flows. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation, controlling erosion. Provided best management practices (BMPs) are followed, there would be minimal impacts on stormwater, ground water, and surface water. The proposed action would have no foreseeable impact on wastewater and drinking water quality.

Biological Resources – Runoff from the parking lot areas should be addressed to reduce impact to wetland water quality and vegetation, and protect wildlife habitat. BMPs and control measures, including silt fences and covering of stockpiles, would be implemented to ensure that impacts to biological resources be kept to a minimum. BMPs would be required to prevent the spread of noxious weeds, minimize soil erosion, and promote the establishment of native plant species.

Socioeconomic Resources - This action would have a minor positive effect on the local economy. Secondary retail purchases would make an additional contribution to the local communities. The implementation of the proposed action, therefore, would provide a short-term, beneficial impact to local contractors and retailers during the construction phase of the project.

Cultural Resources - The proposed action has little potential to impact cultural resources. In the unlikely event any such artifacts were discovered during the construction, the operator or contractor would be instructed to halt operations and immediately notify Grand Forks AFB civil engineers who would notify the State Historic Preservation Officer.

Land Use - The proposed operation would not have an impact on land use, since the area is designated for combat arms training.

Transportation Systems - The proposed operation would have minor adverse impact to transportation systems on base due to vehicles traveling to and from the CATM.

Airspace/Airfield Operations - The proposed action would not impact aircraft safety or airspace compatibility.

Safety and Occupational Health - The proposed action would have no impact on safety and occupational health.

Environmental Management - The proposed action would not impact IRP Sites. BMPs would be implemented to prevent erosion.

Environmental Justice - EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. There is no minority or low-income populations in the area of the proposed action or alternatives, and, thus, there would be no disproportionately high or adverse impact on such populations.

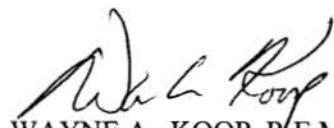
No adverse environmental impact to any of the areas identified by the EA is expected by the proposed action construction of An Armory Addition to CATM with Parking lot on Grand Forks Air Force Base (AFB).

PUBLIC REVIEW AND INTERAGENCY COORDINATION

Based on the provisions set forth in the Proposed Action, all activities were found to comply with the criteria or standards of environmental quality and coordinated with the appropriate Federal, state, and local agencies. The EA and Draft FONSI/FONPA were made available to the public for a 30-day review period. Public agency comments were addressed at the end of the review period prior to implementing the Proposed Action.

FINDINGS

Finding of No Significant Impact. After review of the EA prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations, and Environmental Impact Analysis Process (EIAP), 32 Code of Federal Regulations 989, as amended, I have determined that the Proposed Action would not have a significant impact on the quality of the human or natural environment and, therefore, an Environmental Impact Statement (EIS) does not need to be prepared.



WAYNE A. KOOP, R.E.M., GM-13
Environmental Management Flight Chief

Date: 12 Jul 05

Cover Sheet

Agency: United States Air Force (USAF)

Action: The action proposes to construct an Armory Addition to CATM with Parking lot area at Grand Forks Air Force Base (AFB), North Dakota.

Contacts: 319 CES/CEVA
525 Tuskegee Airmen Boulevard (Blvd)
Grand Forks AFB, ND 58205

Designation: Final Environmental Assessment (EA)

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In addition to the Proposed Action, the Alternative Action and the No Action Alternative were analyzed in the EA. The EA also addresses the potential cumulative effects of the associated activities along with other concurrent actions at Grand Forks AFB and the surrounding area.

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ACRONYMS, ABBREVIATIONS, AND TERMS

AAM	Annual Arithmetic Mean
ACM	Asbestos Containing Material
AFB	Air Force Base
AFI	Air Force Instruction
AICUZ	Air Installation Compatible Use Zone
AMC	Air Mobility Command
APZ	Accident Potential Zone
ARPA	Archeological Resource Protection Act
ARW	Air Refueling Wing
AST	Above Ground Storage Tank
Ave	Avenue
BASH	Bird Aircraft Strike Hazard
Blvd	Boulevard
BMP	Best Management Practice
BMX	Bike Motocross
BOD	Biochemical Oxygen Demand
CAA	Clean Air Act
CATM	Combat Arms Training and Maintenance
CWA	Clean Water Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES	Civil Engineering Squadron
CFR	Code of Federal Regulations
CO	Carbon Monoxide
dB	decibel
DBa	Decibel
DNL	Day-Night Average A-Weighted Sound Level
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
F	Fahrenheit
FEMA	Federal Emergency Management Agency
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact

ft	Feet
ft ³ /s	feet cubed per meter
GFAFB	Grand Forks Air Force Base
HAP	Hazardous Air Pollutants
hr	Hour
H ₂ S	Hydrogen Sulfide
IRP	Installation Restoration Program
LT	Long-Term
MBTA	Migratory Bird Treaty Act
MFH	Military Family Housing
mph	Miles Per Hour
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
µg/m ³	Micrograms Per Meter Cubed
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
ND	North Dakota
NDAAQS	North Dakota National Ambient Air Quality Standards
NDAC	North Dakota Administrative Code
NDDH	North Dakota Department of Health
NDPDES	North Dakota Pollutant Discharge Elimination System
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Act
NHPA	National Historic Preservation Act
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
O ₃	Ozone
OSHA	Occupational Safety and Health Act
OWS	Oil Water Separator
P2	Pollution Prevention
Pb	Lead
PCS	Petroleum-Contaminated Soil
PM ₁₀	Particulate Matter 10 Microns in Diameter

PM _{2.5}	Particulate Matter 25 Microns in Diameter
POL	Petroleum Oil Lubricant
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assessment and Quality Control
RACM	Regulated Asbestos Containing Materials
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
RV	Recreational Vehicle
SAGE	Strategic Air Ground Equipment
SARA	Superfund Amendments and Reauthorization Act
SO ₂	Sulfur Dioxide
SO _x	Sulfur Dioxide
St	Street
ST	Short-Term
SWMU	Solid Waste Management Unit
tpy	Tons Per Year
TSCA	Toxic Substance Control Act
TSI	Thermal System Insulation
US	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

The United States Air Force (USAF) proposes to construct an Armory Addition to CATM (Combat Arms Training and Maintenance) with Parking lot on Grand Forks Air Force Base (AFB), North Dakota.

Purpose and Need: The purpose of the action is to provide an armory with Class A vault, guard mount and issue area at the Grand Forks AFB. The guard mount room shall be open in design to facilitate open ranks inspections, briefings and for dispatching personnel. The armory shall have sufficient lighting to illuminate exterior and interior approaches to the armory itself with a single entry steel door. Doors and issue windows will be secured by a key activated high security lock with a security system to positively identify personnel requesting assistance/entry. Free floor space shall be provided for access to the weapons racks. The armory shall meet security requirements of AFI 31-209, DoD 5100.76-M, and MIL HDBK 1013/1A.

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No Action Alternative 1: No Armory Addition to CATM with Parking lot will be constructed. Security Forces personnel will continue to work in a substandard, unsafe facility. Deplorable working conditions in the facility will continue impacting overall base security, anti-terrorism efforts, and force protection. Morale will continue to decline affecting retention of military personnel. The facility will not comply with fire code. The existing asphalt roof is near the end of its useful life and does not meet command standards. The new addition will not be fully functional without conversion of room 111 into a common thoroughfare for use of rest rooms.

Proposed Action 2: Construct 1800 sq ft armory addition with masonry and concrete construction, concrete footings and floor, standing seam metal roof, expanded parking lot, dumpster screening, heating-ventilation-air conditioning, utilities, communications, mass notification system, fire suppression system, intrusion detection security system, and site improvements. The project shall meet AT/FP requirements per UFC 4-010-02 latest edition. Replace 4,200 SF of asphalt shingles with a standing seam metal roof, convert 391 SF in Room 111 for weapons maintenance, and provide a common thoroughfare between the existing CATM facility and the new armory. Install a wet pipe fire suppression system, and 3,687 SF ceiling tile repairs as required. Install a fire suppression system to comply with code for armory addition, roof repair to match new armory, convert existing administrative space to dual use for weapons maintenance, and provide common thoroughfare between the existing and new addition. Orientate the Guard Mount area from east to west, with the doors leading into the armory addition held back from the windows in the existing building and lending privacy to the offices

on either side. The additional length allows for potential of more daylight into the space and an exterior covered area entrance for use in inclement weather.

Alternative Action 3: Same as the proposed action, except orientate the Guard Mount area from north to south, making the armory addition a simple rectilinear form.

Impacts by Resource Area

Air Quality - Air Quality is considered good and the area is in attainment for all criteria pollutants. No significant impacts to air quality would result because of An Armory Addition to CATM with Parking lot construction activities.

Noise - The construction of An Armory Addition to CATM with Parking lot would create additional noise. The increase in noise would be negligible and only occur during construction.

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1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

This Environmental Assessment (EA) examines the potential for impacts to the environment resulting from construction of An Armory Addition to CATM with Parking lot on Grand Forks Air Force Base (AFB). As required by the National Environmental Policy Act (NEPA) of 1969, federal agencies must consider environmental consequences in their decision making process. The EA provides analysis of the potential environmental impacts from both the proposed action and its alternatives.

1.1 INTRODUCTION

Located in northeastern North Dakota (ND), Grand Forks AFB is the first core refueling wing in Air Mobility Command (AMC) and home to 48 KC-135R Stratotanker aircraft. The host organization at Grand Forks AFB is the 319th Air Refueling Wing (ARW). Its mission is to guarantee global reach, by extending range in the air, supplying people and cargo where and when they are needed and provides air refueling and airlift capability support to United States Air Force (USAF) operations anywhere in the world, at any time. Organizational structure of the 319th ARW consists primarily of an operations group, maintenance group, mission support group, and medical group.

The location of the proposed and alternative action would be at Grand Forks AFB, ND. Grand Forks AFB covers approximately 5,420 acres of government-owned land and is located in northeastern ND, about 14 miles west of Grand Forks, along United States (US) Highway 2. Grand Forks (population 49,321) is the third largest city in ND. Appendix A includes a Location Map. The city, and surrounding area, is a regional center for agriculture, education, and government. It is located approximately 160 miles south of Winnipeg, Manitoba, and 315 miles northwest of Minneapolis, Minnesota. The total Air Force population, as of May 2003, is approximately 7,167. Of that, 2,842 are military, 3,953 are military dependents, and 372 civilians working on base (Grand Forks AFB Public Affairs Fact Card, 2005).

1.2 NEED FOR THE ACTION

The existing Armory is over 46 years old, substandard, with severe structural deterioration, inadequate heating and air conditioning, and non-compliant with current AFI, DoD, and command standards. The facility cannot be renovated to meet all requirements under the 70% rule. The existing asphalt roofing is missing shingles and is near the point of leaking. Adding the armory to the existing CATM triggers a requirement for a fire suppression system. Conversion of the existing administrative space is required to ensure functionality between the new armory and CATM. Appendix D contains the AF Form 813, Request for Environmental Impact Analysis.

The purpose of the proposed action is to provide Grand Forks AFB with an armory with a Class A vault, guard mount and issue area. The guard mount room shall be open in design to facilitate

open ranks inspections, briefings and for dispatching thirty personnel. The armory shall have sufficient lighting to illuminate exterior and all interior approaches to the armory itself with single entry steel door. The doors and issue windows will be secured by key activated high security lock with closed circuit television monitoring security system to positively identify personnel requesting assistance/entry for both internal and external surveillance. Free floor space shall be provided for access to weapons racks, firearms, munitions and explosives. Climate controls must provide humidity control. One foot thick walls and ceiling are required. It shall provide an office for the Armory NCOIC, a supply storage room, and a weapons cleaning room with space for cleaning barrels. It shall provide parking to fit entire squadron parking needs. It must be accessible 24 hours per day and 7 days per week. The armory shall meet security requirements of AFI 31-209, AFH 32-1084, DoD 5100.76-M, and MIL HDBK 1013/1A.

1.3 OBJECTIVES FOR THE ACTION

The Armory Addition to CATM with Parking lot will provide an upgrade of the CATM to meet additional facility needs and overall base security requirements. The addition will improve anti-terrorism efforts and force protection.

1.4 SCOPE OF EA

This EA identifies, describes, and evaluates the potential environmental impacts associated with an Armory Addition to CATM with Parking lot construction on Grand Forks AFB. This analysis covers only those items listed above. It does not include any previous construction of facilities, parking lots, associated water drainage structures, or other non-related construction activities.

The following must be considered under the NEPA, Section 102(E).

- Air Quality
- Noise
- Wastes, Hazardous Materials, and Stored Fuels
- Water Resources
- Biological Resources
- Socioeconomic Resources
- Cultural Resources
- Land Use
- Transportation Systems
- Airspace/Airfield Operations
- Safety and Occupation Health
- Environmental Management
- Environmental Justice

1.5 DECISION(S) THAT MUST BE MADE

This EA evaluates the environmental consequences from implementing construction of an Armory Addition to CATM with Parking lot on Grand Forks AFB. NEPA requires that environmental impacts be considered prior to final decision on a proposed project. The Environmental Management Flight Chief will determine if a Finding of No Significant Impact can be signed or if an Environmental Impact Statement (EIS) must be prepared. Preparation of an environmental analysis 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 selecting the proposed action or any of the alternatives.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

These regulations require federal agencies to analyze potential environmental impacts of proposed actions and alternatives and to use these analyses in making decisions on a proposed action. All cumulative effects and irretrievable commitment of resources must also be assessed during this process. The Council on Environmental Quality (CEQ) regulations declares that an EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FONSI).
- Aid in an agency's compliance with NEPA when an EIS is not necessary, and facilitate preparation of an EIS when necessary.

Air Force Instruction (AFI) 32-7061 as promulgated in 32 Code of Federal Regulations (CFR) 989, specifies the procedural requirements for the implementation of NEPA and the preparation of an EA. Other environmental regulatory requirements relevant to the proposed action and alternatives are also in this EA. Regulatory requirements including, but not restricted to the following programs will be assessed:

AF Environmental Impact Analysis Process (EIAP) (32 CFR 989)
AFI 32-7020, Environmental Restoration Program
AFI 32-7040, Air Quality Compliance
AFI 32-7041, Water Quality Compliance
AFI 32-7042, Solid and Hazardous Waste Compliance
AFI 32-7063, Air Installation Compatible Use Zone (AICUZ) Program
AFI 32-7064, Integrated Natural Resource Management
Archaeological Resources Protection Act (ARPA) [16 U.S.C. Sec 470a-11, et seq., as amended]
Clean Air Act (CAA) [42 U.S.C. Sec 7401, et seq., as amended]
Clean Water Act (CWA) [33 U.S.C. Sec 400, et seq.]
CWA [33 U.S.C. Sec 1251, et seq., as amended]
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) [42 U.S.C. Sec. 9601, et seq.]

Defense Environmental Restoration Program [10 U.S.C. Sec. 2701, et seq.]
Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 [42 U.S.C. Sec. 11001, et seq.]
Endangered Species Act (ESA) [16 U.S.C. Sec 1531-1543, et seq.]
Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality as Amended by EO 11991
EO 11988, Floodplain Management
EO 11990, Protection of Wetlands
EO 12372, Intergovernmental Review of Federal Programs
EO 12898, Environmental Justice
EO 12989 Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations
EO 13045, Protection of Children from Environmental Health Risks and Safety Risks
Hazardous Materials Transportation Act of 1975 [49 U.S.C. Sec 1761, et seq.]
NEPA of 1969 [42 U.S.C. Sec 4321, et seq.]
National Historic Preservation Act (NHPA) of 1966 [16 U.S.C. Sec 470, et seq., as amended]
The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 [Public Law 101-601, 25 U.S.C. Sec. 3001-3013, et seq.]
Noise Control Act of 1972 [42 U.S.C. Sec. 4901, et seq., Public Law 92-574]
ND Air Pollution Control Act (Title 23) and Regulations
ND Air Quality Standards (Title 33)
ND Hazardous Air Pollutants Emission Standards (Title 33)
Occupational Safety and Health Act (OSHA) of 1970 [29 U.S.C. Sec. 651, et seq.]
Resource Conservation and Recovery Act (RCRA) of 1976 [42 U.S.C. Sec. 6901, et seq.]
Toxic Substances Control Act (TSCA) of 1976 [15 U.S.C. Sec. 2601, et seq.]

Grand Forks AFB has a National Pollutant Discharge Elimination System (NPDES) permit to cover base-wide industrial activities. The permit would allow discharge of storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover.

Applicable regulatory requirements and required coordination include a Work Clearance Request, Stormwater Protection Plan, Dust Control Plan, Spill Control Plan, and Erosion and Sediment Control Plan.

Scoping for this EA included discussion of relevant issues with members of the environmental management and bioenvironmental flights. Scoping letters requesting comments on possible issues of concern are sent to agencies with pertinent resource responsibilities. In accordance with AFI 32-7061, a final copy is submitted to the ND Division of Community Services.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Based on the descriptions of the relevant environmental resources presented in Section 3 and the predictions and analyses presented in Section 4, this section presents a comparative summary matrix of the alternatives (the heart of the analysis), providing the decision maker and the public with a clear basis for choice among the alternatives.

This section has five parts:

Selection Criteria for Alternatives

Alternatives Considered but Eliminated from Detailed Study

Detailed Descriptions of the Three Alternatives Considered

Comparison of Environmental Effects of the Proposed Action and Alternatives

Identification of the Preferred Alternative

2.2 SELECTION CRITERIA FOR ALTERNATIVES

Selection criteria used to evaluate the Proposed and Alternative Actions include the following:

A cost effective method to provide a realistic, integrated, combat arms training area to enhance the installations capability to respond, operate and recover from combatant contingency operations in the global war on terrorism at Grand Forks AFB.

Minimum mission requirements include efficiency, effectiveness, safety, sanitation, electrical power, and fiber optic communications, to meet armory security requirements of AFI 31-209, DoD 5100.76-M, and MIL HDBK 1013/1A.

Minimum environmental standards include OSHA, AFOSH, NFPA, AFI, CFR, EPA and North Dakota standards for noise, air, water, safety, HW, vegetation, cultural, geology, soils, and socioeconomic.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

There were several alternatives considered but eliminated from detailed study. They include:

- Repair Alert Facility, Building 807. This was not recommended because the facility is an airfield obstruction scheduled for demolition.
- Repair vacant Missile Transfer Facility, Building 606. This was not recommended because of major investment needed structurally to meet requirements; the facility is scheduled for demolition, and is within the arc for the hot cargo pad.
- Repair the MSA facilities. This was not recommended with Security Forces Squadron concurrence. The base has never received clear approval from wing safety to use these buildings for other functions.
- Repair Base Supply, Building 408. This was not recommended because of the large investment for water/sewer utilities, structural needs, security and parking. The facility

has access by contractors and many other base personnel which degrades the overall security and safety of the facility.

- Construct a new Armory at the future SFS Consolidated MILCON site. This was not recommended at this time because a P-341 MILCON would need full programming; AMC/Air Staff/Congressional support would be needed, would delay the project, and is not guaranteed. To properly construct an Armory now that would fully and properly integrate with the future SFS Consolidated MILCON 8-10 years out is extremely difficult.

2.4 DESCRIPTION OF PROPOSED ALTERNATIVES

This section describes the activities that would occur under three alternatives: the no action alternative, the proposed action, and action alternative. These three alternatives provide the decision maker with a reasonable range of alternatives from which to choose.

2.4.1 Alternative 1 (No Action Alternative): Status Quo

Security Forces personnel will continue to work in a substandard, unsafe facility. Deplorable working conditions in the facility will continue impacting overall base security, anti-terrorism efforts, and force protection. Morale will continue to decline affecting retention of military personnel. Facility will not comply with fire code, existing asphalt roof is near the end of its useful life and does not meet command standards, and new addition will not be fully functional without conversion of room 111 into a common thoroughfare for use of rest rooms.

2.4.2 Alternative 2 (Proposed Action): Construct 1800 SF armory addition with masonry and concrete construction, concrete footings and floor, standing seam metal roof, expanded parking lot, dumpster screening, heating-ventilation-air conditioning, utilities, communications, mass notification system, fire suppression system, intrusion detection security system, and site improvements. The project shall meet AT/FP requirements per UFC 4-010-02 latest edition. Replace 4200 SF of asphalt singles with a standing seam metal roof, convert 391 SF in Room 111 for weapons maintenance and provide a common thoroughfare between the existing CATM facility and new armory, install a wet pipe fire suppression system, and 3687 SF ceiling tile repairs as required. Install a fire suppression system to comply with code for armory addition, roof repair to match new armory, convert existing administrative space to dual use for weapons maintenance, and provide common thoroughfare between existing and new addition. Orientate the Guard Mount area from east to west, with the doors leading into the armory addition held back from the windows in the existing building and lending privacy to the offices on either side. The additional length allows for potential of more daylight into the space and an exterior covered area entrance for use in inclement weather. Appendix E contains the proposed location and siting. Appendix F contains a drawing of the proposed floor plan.

2.4.3 Alternative 3: Same as the proposed action, except orientate the Guard Mount area from north to south, making the armory addition a simple rectilinear form. Appendix F contains a drawing of the alternative floor plan.

2.5 DESCRIPTION OF PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS RELEVANT TO CUMULATIVE IMPACTS

Impacts from the Proposed Action would be concurrent with several other construction and demolition project actions occurring at Grand Forks AFB in the same time frame. These projects are addressed under separate NEPA documents. Several projects to construct buildings have been accomplished in the past, contributing to an improved, military base environment. A related area EIAP document is RCS # 1999-187 Catex A2.3.7. To Pave the CATM Road.

2.6 SUMMARY COMPARISON OF THE EFFECTS OF ALL ALTERNATIVES

Potential impacts from implementing the No Action Alternative, the Proposed Action, and Alternative are discussed in detail in Chapter 4.

Table 2.6.1: Summary of Environmental Impacts				
	No Action Alternative 1	Proposed Action 2	Alternative 3	
Legend: ST = short-term; LT = long-term				
Air Quality	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Noise	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Wastes, Hazardous Materials, and Stored Fuels	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Water Resources				
Ground Water	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Surface Water	None	Minor Adverse ST/LT Impact	Minor Adverse ST/LT Impact	
Wastewater	None	None	None	
Water Quality	None	None	None	
Wetlands	None	Minor Adverse ST/LT Impact	Minor Adverse ST/LT Impact	
Biological Resources				
Vegetation	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Noxious Weeds	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Wildlife	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Threatened and Endangered Species	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Socioeconomic Resources	None	Beneficial ST Impact	Beneficial ST Impact	
Cultural Resources	None	None	None	
Land Use	None	None	None	
Transportation Systems	None	Minor Adverse ST Impact	Minor Adverse ST Impact	
Airspace/Airfield Operations				
Aircraft Safety	None	None	None	
Airspace Compatibility	None	None	None	
Safety and Occupational Health	None	None	None	
Environmental Management				
Installation Restoration Program	None	None	None	
Geological Resources	None	None	None	
Pesticide Management	None	None	None	
Environmental Justice	None	None	None	

2.7 IDENTIFICATION OF PREFERRED ALTERNATIVE

Grand Forks AFB will construct an Armory Addition to CATM with Parking lot described in the proposed action with orientation of the Guard Mount area from east to west.

3.0 AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This section succinctly describes the operational concerns and the environmental resources relevant to the decision that must be made concerning this proposed action. Environmental concerns and issues relevant to the decision to be made and the attributes of the potentially affected environment are studied in greater detail in this section.

This descriptive section, combined with the definitions of the alternatives in Section 2, and their predicted effects in Section 4, establish the scientific baseline against which the decision-maker and the public can compare and evaluate the activities and effects of all the alternatives.

3.2 AIR QUALITY

Grand Forks AFB has a humid continental climate that is characterized by frequent and drastic weather changes. The summers are short and humid with frequent thunderstorms. Winters are long and severe with almost continuous snow cover. The spring and fall seasons are generally short transition periods. The average annual temperature is 40° Fahrenheit (F) and the monthly mean temperature varies from 6° F in January to 70° F in July. Mean annual precipitation is 19.5 inches. Rainfall is generally well distributed throughout the year, with summer being the wettest season and winter the driest. An average of 34 thunderstorm days per year is recorded, with some of these storms being severe and accompanied by hail and tornadoes. Mean annual snowfall recorded is 40 inches with the mean monthly snowfall ranging from 1.6 inches in October to 8.0 inches in March. Relative humidity averages 58 percent annually, with highest humidity being recorded in the early morning. The average humidity at dawn is 76 percent. Mean cloud cover is 48 percent in the summer and 56 percent in the winter (USAF, 2003).

Table 3.2-1: Climate Data for Grand Forks AFB, ND						
	Mean Temperature (°F)			Precipitation (Inches)		
	Daily			Monthly		
Month	Maximum	Minimum	Monthly	Mean	Maximum	Minimum
January	15	-1	6	0.7	2.4	0.1
February	21	5	13	0.5	3.2	0.0
March	34	18	26	1.0	2.9	0.0
April	53	32	41	1.5	4.0	0.0
May	69	47	56	2.5	7.8	0.5
June	77	56	66	3.0	8.1	0.8
July	81	61	70	2.7	8.1	0.5
August	80	59	67	2.6	5.5	0.1
September	70	49	57	2.3	6.2	0.3
October	56	37	44	1.4	5.7	0.1
November	34	20	26	0.7	3.3	0.0
December	20	6	12	0.6	1.4	0.0
Source: AFCCC/DOO, October 1998						

Wind speed averages 10 miles per hour (mph). A maximum wind speed of 74 mph has been recorded. Wind direction is generally from the northwest during the late fall, winter, and spring, and from the southeast during the summer.

Grand Forks County is included in the ND Air Quality Control Region. This region is in attainment status for all criteria pollutants. In 1997, the ND Department of Health (NDDH) conducted an Air Quality Monitoring Survey that indicated that the quality of ambient air in ND is generally good as it is located in an attainment area (NDDH, 1998). Grand Forks AFB has the following air permits: T5-F78004 (permit to operate) issued by NDDH and a CAA Title V air emissions permit.

The United States Environmental Protection Agency (USEPA) established the National Ambient Air Quality Standards (NAAQS), which define the maximum allowable concentrations of pollutants that may be reached, but not exceeded within a given time period. The NAAQS regulates the following criteria pollutants: Ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and particulate matter. The ND Ambient Air Quality Standards (NDAAQS) were set by the State of ND. These standards are more stringent and emissions for operations in ND must comply with the Federal or State standard that is the most restrictive. There is also a standard for hydrogen sulfide (H₂S) in ND.

Prevention of significant deterioration (PSD) regulations establishes SO₂, particulate matter 10 microns in diameter (PM₁₀), and NO₂ that can be emitted above a premeasured amount in each of three class areas. Grand Forks AFB is located in a PSD Class II area where moderate, well-controlled industrial growth could be permitted. Class I areas are pristine areas and include national parks and wilderness areas. Significant increases in emissions from stationary sources (100 tons per year (tpy) of CO, 40 tpy of nitrogen oxides (NO_x), volatile organic compounds (VOCs), or sulfur oxides (SO_x), or 15 tpy of PM₁₀) and the addition of major sources requires compliance with PSD regulations. There is also a 25 ton/year level for total particulate.

Air pollutants include O₃, CO, NO₂, SO₂, Pb, and particulate matter. Ground disturbing activities create PM₁₀ and particulate matter 2.5 microns in diameter (PM_{2.5}). Combustion creates CO, SO₂, PM₁₀, and PM_{2.5} particulate matter and the precursors (VOC and NO₂) to O₃. Only small amounts of Hazardous Air Pollutants (HAP) are generated from internal combustion processes or earth-moving activities. The Grand Forks AFB Final Emissions Survey Report (USAF, 1996) reported that Grand Forks AFB only generated small levels HAPs, 10.3 tpy of combined HAPs and 2.2 tpy maximum of a single HAP (methyl ethyl ketone). Methyl Ethyl Ketone is associated with aircraft and vehicle maintenance and repair. Secondary sources include fuel storage and dispensing (USAF, 2001a).

Table 3.2-2
National Ambient Air Quality Standards (NAAQS) and ND Ambient Air Quality Standards (NDAAQS)

Pollutant	Averaging Time	NAAQS $\mu\text{g}/\text{m}^3$ (ppm) ^a		NDAAQS $\mu\text{g}/\text{m}^3$ (ppm) ^a
		Primary ^b	Secondary ^c	
O ₃	1 hr 8 hr ^e	235 (0.12) 157 (0.08)	Same Same	Same None
CO	1 hr 8 hr	40,000 (35) 10,000 (9)	None None	40,000 (35) 10,000 (9)
NO ₂	AAM ^d	100 (0.053)	Same	Same
SO ₂	1 hr 3 hr 24 hr AAM	None None 365 (0.14) 80 (0.03)	None 1,300 (0.5) None None	715 (0.273) None 260 (0.099) 60 (0.023)
PM ₁₀	AAM 24 hr	50 150	Same Same	Same Same
PM _{2.5} ^e	AAM 24 hr	65 15	Same Same	None None
Pb	¼ year	1.5	Same	Same
H ₂ S	1 hr 24 hr 3 mth AAM Instantaneous	None None None None	None None None None	280 (0.20) 140 (0.10) 28 (0.02) 14 (10) 14 (10)

^a $\mu\text{g}/\text{m}^3$ – micrograms per cubic meter; ppm – parts per million

^bNational Primary Standards establish the level of air quality necessary to protect the public health from any known or anticipated adverse effects of pollutant, allowing a margin of safety to protect sensitive members of the population.

^cNational Secondary Standards establish the level of air quality necessary to protect the public welfare by preventing injury to agricultural crops and livestock, deterioration of materials and property, and adverse impacts on the environment.

^dAAM – Annual Arithmetic Mean.

^eThe Ozone 8-hour standard and the PM 2.5 standards are included for information only. A 1999 federal court ruling blocked implementation of these standards, which USEPA proposed in 1997. USEPA has asked the US Supreme Court to reconsider that decision (USEPA, 2000).

PM₁₀ is particulate matter equal to or less than 10 microns in diameter.

PM_{2.5} is particulate matter equal to or less than 2.5 microns in diameter.

Source: 40 CFR 50, ND Air Pollution Control Regulations – North Dakota Administrative Code (NDAC) 33-15

3.3 NOISE

Noise generated on Grand Forks AFB consists mostly of aircraft, vehicular traffic and construction activity. Most noise is generated from aircraft during takeoff and landing and not from ground traffic. Noise levels are dependent upon type of aircraft, type of operations, and distance from the observer to the aircraft. Duration of the noise is dependent upon proximity of the aircraft, speed, and orientation with respect to the observer.

Table 3.3-1 Typical Decibel Levels Encountered in the Environment and Industry			
Sound Level (dBA) ^a	Maximum Exposure Limits	Source of Noise	Subjective Impression
10			Threshold of hearing
20		Still recording studio; Rustling leaves	
30		Quiet bedroom	
35		Soft whisper at 5 ft ^b ; Typical library	
40		Quiet urban setting (nighttime); Normal level in home	Threshold of quiet
45		Large transformer at 200 ft	
50		Private business office; Light traffic at 100 ft; Quiet urban setting (daytime)	
55		Window air conditioner; Men's clothing department in store	Desirable limit for outdoor residential area use (EPA)
60		Conversation speech; Data processing center	
65		Busy restaurant; Automobile at 100 ft	Acceptable level for residential land use
70		Vacuum cleaner in home; Freight train at 100 ft	Threshold of moderately loud
75		Freeway at 10 ft	
80		Ringling alarm clock at 2 ft; Kitchen garbage disposal; Loud orchestral music in large room	Most residents annoyed
85		Printing press; Boiler room; Heavy truck at 50 ft	Threshold of hearing damage for prolonged exposure
90	8 hr ^c	Heavy city traffic	
95	4 hr	Freight train at 50 ft; Home lawn mower	
100	2 hr	Pile driver at 50 ft; Heavy diesel equipment at 25 ft	Threshold of very loud
105	1 hr	Banging on steel plate; Air Hammer	
110	0.5 hr	Rock music concert; Turbine condenser	
115	0.25 hr	Jet plane overhead at 500 ft	
120	< 0.25 hr	Jet plane taking off at 200 ft	Threshold of pain
135	< 0.25 hr	Civil defense siren at 100 ft	Threshold of extremely loud
^a dBA – decibals ^b ft – feet ^c hr - hours Source: US Army, 1978			

Table 3.3-2 Approximate Sound Levels (dBA) of Construction Equipment						
Equipment Type	Sound Levels (dBA) at Various Distances (ft)					
	50	100	200	400	800	1,600
Front-end Loader	84	78	72	66	60	54
Dump Truck	83	77	71	65	59	53
Truck	83	77	71	65	59	53
Tractor	84	78	72	66	58	52
Source: Thurman, 1976; US Army, 1978						

Because military installations attract development in proximity to their airfields, the potential exists for urban encroachment and incompatible development. The USAF utilizes a program known as AICUZ to help alleviate noise and accident potential problems due to unsuitable community development. AICUZ recommendations give surrounding communities alternatives to help prevent urban encroachment. Noise contours are developed from the Day-Night Average A-Weighted Sound Level (DNL) data which defines the noise created by flight operations and ground-based activities. The AICUZ also defines Accident Potential Zones (APZs), which are rectangular corridors extending from the ends of the runways. Recommended land use activities and densities in the APZs for residential, commercial, and industrial uses are provided in the base's AICUZ study. Grand Forks AFB takes measures to minimize noise levels by evaluating aircraft operations. Blast deflectors are utilized in designated areas to deflect blast and minimize exposure to noise.

3.4 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

3.4.1 Hazardous Waste, Hazardous Material, Recyclable Material

Hazardous wastes, as listed under the RCRA, are defined as any solid, liquid, contained gaseous, or combination of wastes that pose a substantive or potential hazard to human health or the environment. On-base hazardous waste generation involves three types of on-base sites: an accumulation point (90-day), satellite accumulation points, and spill cleanup equipment and materials storage (USAF, 2001c). Discharge and emergency response equipment is maintained in accessible areas throughout Grand Forks AFB. The Fire Department maintains adequate fire response and discharge control and containment equipment. Equipment stores are maintained in buildings 523 and 530. Petroleum contaminated soils generated from excavations throughout the base can be treated at the land treatment facility located on base. These solid wastes are tilled or turned several times a year to remediate the soils to acceptable levels.

Recyclable materials from industrial facilities are collected in the recycling facility, in building 671. Paper, cardboard, and wood are collected in separate storage bins. Glass, plastics and metal cans are commingled. Curbside containers are used in housing for recyclable materials. A contractor collects these materials and transports them off base for processing.

The Environmental Management Flight manages the hazardous material through a contract with Chenega Management, LLC. Typical hazardous materials include reactive materials such as explosives, ignitables, toxics, and corrosives. Improper storage can impact human health and the safety of the environment. The CATM stores and uses HM in building 652, which houses the classroom and HM storage Room. The other buildings 654, 669 and 694 do not have any HM or HW stored in them. HM items that are used in building 652 are 9150010546453, CLP-5 Lubricant; 9150008893522, 4 oz M-16 Oil Lube; 9150007542595, 1.75 lb Grease Moly; 8010013316108, Black Spray Paint; AC082M, Red Spray Paint; 9150010536688, Cleaner Lubricant. In the past the CATM generated HW patches and Q-tips contaminated with solvent during the cleaning of M-16s. The cleaner was changed to a less hazardous cleaner, which is the CLP-5. The last sample taken for this waste stream (IO-BA051A-02) was on 11-29-04 and came

back Non Regulated. The determination was made after this sample to dispose of these items as regular trash.

3.4.2 Underground and Above Ground Storage Tanks

Since Grand Forks AFB is a military installation with a flying mission, there are several aboveground and underground fuel storage tanks (ASTs and USTs).

Gasoline, diesel fuel, heating fuel, JP-8, and oil-water separator (OWS)-recovered oils are stored in thirty-nine (39) USTs. Twenty (20) regulated USTs include three (3) gasoline tanks, eight (8) diesel tanks, three (3) JP-8 tanks, and six (6) OWS product recovery tanks. Deferred USTs include fourteen (14) JP-8 tanks of which nine (9) are no longer in use and are programmed for removal. Five (5) USTs exempt from regulation include one (1) heating oil tank, four (4) emergency spill containment tanks, and one (1) hydraulic oil recovery tank.

Gasoline, diesel fuel, heating oil, JP-8, and used oil are stored in fifty-eight (58) ASTs. The majority of petroleum is JP-8 stored in six (6) tanks with a capacity of 3,990,000 gallons for the hydrant fuel system. Diesel fuel is stored in forty-five (45) tanks primarily for emergency generators. Other tanks include: heating oil stored in three (2) tanks; gasoline stored in two (2) tanks; and, used oil stored in three (3) tanks. All ASTs either have secondary containment or are programmed to have secondary containment installed. The six (6) hydrant fuel system tanks each are contained by a concrete dike system.

Runway deicing fluid (potassium acetate) is stored in two (2) 5000 gallon tanks while aircraft deicing fluid (propylene glycol) is stored in a 20,000 gallon tank (Type I) and a 4,000 gallon tank (Type IV). Appendix C contains a map depicting ASTs, USTs, OWSs and other environmental sites.

3.4.3 Solid Waste Management

Hard fill, construction debris, and inert waste generated by Grand Forks AFB are disposed of at a permitted off-base landfill. All on-base household garbage and solid waste is collected by a contractor and transported to the Grand Forks County Landfill, which opened in 1982.

The majority of demolition debris is disposed of at Berger Landfill (permit number IT-198) while municipal waste and asbestos waste is disposed of at the Grand Forks Landfill (SW-069).

GFAFB also operates a land treatment facility (IT-183) for the remediation of petroleum-contaminated soils (PCSs). PCSs are generated on-base through spills, are encountered while excavating for various subsurface repairs, or encountered while replacing or removing underground storage tanks and piping.

3.5 WATER RESOURCES

3.5.1 Ground Water

Chemical quality of ground water is dependent upon the amount and type of dissolved gases, minerals, and organic material leached by water from surrounding rocks as it flows from recharge to discharge areas. The water table depth varies throughout the base, from a typical 1-3 ft to 10 ft or more below the surface.

Even though the Dakota Aquifer has produced more water than any other aquifer in Grand Forks County, the water is very saline and generally unsatisfactory for domestic and most industrial uses. Its primary use is for livestock watering. It is sodium chloride type water with total dissolved solids concentrations of about 4,400 ppm. The water generally contains excessive chloride, iron, sulfate, total dissolved solids, and fluoride. The water from the Dakota is highly toxic to most domestic plants and small grain crops, and in places, the water is too highly mineralized for use as livestock water (Hansen and Kume, 1970).

Water from wells tapping the Emerado Aquifer near Grand Forks AFB is generally of poor quality due to upward leakage of poor quality water from underlying bedrock aquifers. It is sodium sulfate type water with excessive hardness, chloride, sulfate, and total dissolved solids. Water from the Lake Agassiz beach aquifers is usually of good chemical quality in Grand Forks County. The water is a calcium bicarbonate type that is relatively soft. The total dissolved content ranges from 308 to 1,490 ppm. Most water from beach aquifers is satisfactory for industrial, livestock, and agricultural uses (Hansen and Kume, 1970).

Grand Forks AFB draws 85 to 90 percent of its water for industrial, commercial and housing functions from the City of Grand Forks and 10 to 15 percent from Agassiz Water.

3.5.2 Surface Water

Natural surface water features located on or near Grand Forks AFB are the Turtle River and Kellys Slough National Wildlife Refuge (NWR). Drainage from surface water channels ultimately flows into the Red River.

The Turtle River, crossing the base boundary at the northwest corner, is very sinuous and generally flows in a northeasterly direction. It receives surface water runoff from the western portion of Grand Forks AFB and eventually empties into the Red River of the North that flows north to Lake Winnipeg, Canada. The Red River drainage basin is part of the Hudson Bay drainage system. At Manvel, ND, approximately 10 miles northeast of Grand Forks AFB, the mean discharge of the Turtle River is 50.3 feet cubed per second (ft³/s). Peak flows result from spring runoff in April and minimum flows (or no flow in some years) occur in January and February.

NDDH has designated the Turtle River to be a Class II stream, it may be intermittent, but, when flowing, the quality of the water, after treatment, meets the chemical, physical, and

bacteriological requirements of the NDDH for municipal use. The designation also states that it is of sufficient quality to permit use for irrigation, for propagation of life for resident fish species, and for boating, swimming, and other water recreation.

Kelly's Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR receives surface water runoff from the east half of the base and effluent from the base sewage lagoons located east of the base. Surface water flow of the slough is northeasterly into the Turtle River Drainage from surface water channels ultimately flowing into the Red River. Floodplains are limited to an area 250 ft on either side of Turtle River (about 46 acres on base). Appendix C contains a map depicting floodplains. Any development in or modifications to floodplains must be coordinated with the Corps of Engineers and the Federal Emergency Management Agency (FEMA). The North Dakota State Water Commission requires that any structure in the floodplain have its lowest floor above the identified 100-year flood level.

Surface water runoff leaves Grand Forks AFB at four primary locations related to identifiable drainage areas on base. The four sites are identified as northeast, northwest, west, and southeast related to the base proper. These outfalls were approved by the NDDH as stated in the Grand Forks AFB ND Pollutant Discharge Elimination System (NDPDES) Permit NDR02-0314 Stormwater Discharges from Industrial Activity. Of the four outfall locations, the west and northwest sites flow into the Turtle River, the northeast site flows to the north ditch and the southeast outfall flows into the south ditch. The latter two flow to Kellys Slough and then the Turtle River. All drainage from these surface water channels ultimately flows into the Red River. The Bioenvironmental Engineering Office samples the four outfall locations during months when de-icing activities occur on base.

3.5.3 Waste Water

Grand Forks AFB discharges its domestic and industrial wastewater to four stabilization lagoons located east of the main base. The four separate treatment cells consist of one primary treatment cell, two secondary treatment cells, and one tertiary treatment cell. Wastewater effluent is discharged under ND Permit ND0020621 into Kellys Slough. Wastewater discharge occurs for about one week, sometime between mid-April through October. Industrial wastewater at the base comprises less than ten percent of the total flow to the treatment lagoons.

3.5.4 Water Quality

According to the National Water Quality Inventory Report (USEPA, 1995), ND reports the majority of rivers and streams have good water quality. Natural conditions, such as low flows, can contribute to violations of water quality standards. During low flow periods, the rivers are generally too saline for domestic use. Grand Forks AFB receives water from Grand Forks and Lake Agassiz Water. The city recovers its water from the Red River and the Red Lake River, while the water association provides water from aquifers. The water association recovers water from well systems within glacial drift aquifers (USAF, 1999). The 319th Civil Engineering Squadron tests the water received on base daily for fluorine and chlorine. The 319th

Bioenvironmental Flight collects monthly bacteriological samples to be analyzed at the ND State Laboratory.

3.5.5 Wetlands

About 246,900 acres in the county are drained wetland Type I (wet meadow) to Type V (open freshwater). Approximately 59,500 acres of wetland Type I to V are used for wetland habitat. Wetland Types IV and V include areas of inland saline marshes and open saline water. Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR is the most important regional wetland area in the Grand Forks vicinity. EO 11990 requires zero loss of wetlands. Earlier surveys indicated Grand Forks AFB had 49 wetlands, covering 23.9 acres of wetlands, including 33 jurisdictional wetlands covering 12.2 acres. A wetland delineation conducted in 2004 indicated that the base had increased to 198 wetlands, including 164 Palustrine Emergent, 31 Palustrine Scrub-Shrub, and 3 Palustrine Forested type wetlands. Vegetation is robust at GFAFB wetlands, and they are characterized as typical prairie potholes found within the northern plains ecoregion.

Wetlands on Grand Forks AFB occur frequently in drainage ways, low-lying depressions, and potholes. Wetlands are highly concentrated in drainage ways leading from the wastewater treatment lagoons to Kellys Slough NWR. The majority of wetland areas occur in the northern and central portions of base, near the runway, while the remaining areas are near the eastern boundary and southeastern corner of base. Development in or near these areas must include coordination with the ND State Water Commission and the USACE. To help preserve wetlands, the North Dakota, Grand Forks County regional office of the Natural Resource Conservation Service recommends a 100-ft vegetated (grass) buffer with a perimeter filter strip.

3.6 BIOLOGICAL RESOURCES

3.6.1 Vegetation

Plants include a large variety of naturally occurring native plants. Hay land, wildlife management areas, waterfowl production areas, neighboring wildlife refuges, state parks, and conservation reserve program land have created excellent grassland and wetland habitats for wildlife in Grand Forks County. Pastures, meadows, and other non-cultivated areas create a prairie-land mosaic of grasses, legumes, and wild herbaceous plants. Included in the grasses and legumes vegetation species are tall wheat grass, brome grass, Kentucky bluegrass, sweet clover, and alfalfa. Herbaceous plants include little bluestem, goldenrod, green needle grass, western wheat grass, and bluegrama. Shrubs such as Juneberry, dogwood, hawthorn, buffaloberry, and snowberry also are found in the area. In wetland areas, predominant species include *Typha* sp., smartweed, wild millet, cord grass, bulrushes, sedges, and reeds. These habitats for upland wildlife and wetland wildlife attract a variety of species to the area and support many aquatic species.

Various researchers, most associated with the University of ND, have studied current native floras in the vicinity of the base. The Natural Heritage Inventory through field investigations has identified ten natural communities occurring in Grand Forks County (1994). Of these, two communities are found within base boundaries, River/Creek and Lowland Woodland. The River/Creek natural community refers to the Turtle River. This area is characterized by submergent and emergent aquatic plants, green algae, diatoms, diverse invertebrate animals such as sponges, flatworms, nematode worms, segmented worms, snails, clams, and immature and adult insects, fish, amphibians, turtles, and aquatic birds and mammals. Dominant trees in the Lowland Community include elm, cottonwood, and green ash. Dutch elm disease has killed many of the elms. European buckthorn (a highly invasive exotic species), chokecherry, and wood rose (*Rosa woodsii*) are common in the under story in this area. Wood nettle (*Laportea canadensis*), stinging nettle (*Urtica dioica*), beggars' ticks (*Bidens frondosa*), and waterleaf (*Hydrophyllum virginianum*) are typical forbes.

A prairie restoration project in the "Prairie View Nature Preserve" has been developed to restore a part of the native tallgrass prairie that once was dominant in this region. Plants thriving in this preserve include western wheatgrass, slender wheatgrass, big bluestem, little bluestem, Indian grass, switchgrass, blue gramma, buffalo grass, and many native wildflower species.

Two hundred and fifty five taxa were identified in the ND Natural Heritage Inventory and the BS Bioserve biological inventory update for Grand Forks Air Force Base. Two rare orchid species are known to exist on Grand Forks AFB, the Large and Small Yellow Lady's Slipper, identified during the 2004 inventory.

3.6.2 Wildlife

Grand Forks County is agrarian in nature, however it does have many wildlife management areas, waterfowl production areas, conservation reserve program land, and recreational areas providing excellent habitat for local wildlife within the county. Kellys Slough NWR is located a couple miles northeast of Grand Forks AFB. In addition to being a wetland, it is a stopover point for thousands of migratory birds, especially shorebirds. The Prairie Chicken Wildlife Management Area is located north of Mekinock and contains 1,160 acres of habitat for deer, sharp-tailed grouse, and game birds. Wildlife can also be found at the Turtle River State Park, The Bremer Nature Trail, and the Myra Arboretum.

The base supports a remarkable diversity of wildlife given its size and location within an agricultural matrix. The Turtle River riparian corridor, Prairie View Nature Preserve, grassland areas on the west side of the base, and the lagoons to the east of the base all provide important habitat for native plant and wildlife species and should be conserved as such within mission constraints. Many mammalian species are found on base such as the white tail deer, eastern cottontail, coyotes, beaver, raccoons, striped skunks, badgers, voles, gophers, shrews, mice, muskrat, squirrels, bats, and occasional moose and bear.

One hundred seventy bird species were identified in the 2004 biological survey, many of which include grassland bird species. Grassland bird populations are declining across North America

due to huge losses of prime grassland habitat from conversion to agricultural, urban, and industrial development. No other avian group has experienced such dramatic losses as grassland birds. GFAFB is fortunate to support a large variety of grassland birds, many of which are listed on the Partners-in-Flight species of concern list, such as the grasshopper sparrow. Large blocks of grassland should be conserved to protect these grassland bird species if the mission constraints allow it.

3.6.3 Threatened and Endangered Species

According to the Biological Survey Update 2004 of GFAFB, 21 state-listed birds and 1 federally listed bird species, 2 state-listed plant species, 1 state-listed mammal species, and 1 state-listed amphibian have been identified at GFAFB. The base does have infrequent use by migratory threatened and endangered species, such as the bald eagle, but there are no critical or significant habitats for those species present. Several rare and state-listed species have been observed on base near Turtle River, the lagoons, and the grassland to the west of the airfield. The ESA does require that Federal Agencies not jeopardize the existence of a threatened or endangered species nor destroy or adversely modify designated critical habitat for threatened or endangered species.

3.7 SOCIOECONOMIC RESOURCES

Grand Forks County is primarily an agricultural region and, as part of the Red River Valley, is one of the worlds most fertile. Cash crops include sugar beets, beans, corn, barley, and oats. The valley ranks first in the nation in the production of potatoes, spring wheat, sunflowers, and durum wheat. Grand Forks County's population in 2000 was 66,109, a decrease of 6.5 percent from the 1990 population of 70,638 (ND State Data Center, No Date). Grand Forks County's annual mean wage in Oct 2001 was \$26,715 (Job Service of ND, 2001). Grand Forks AFB is one of the largest employers in Grand Forks County. As of April 2005, Grand Forks AFB had 2,842 active duty military members and 372 civilian employees. The total annual economic impact for Grand Forks AFB is \$379,712,357.

3.8 CULTURAL RESOURCES

According to the Grand Forks AFB Cultural Resources Management Plan, there are no archeological sites that are potentially eligible for the National Register of Historic Places (NRHP). A total of six archeological sites and six archeological find spots have been identified on the base. None meet the criteria of eligibility of the NRHP established in 36 CFR 60.4. There is no evidence for Native American burial grounds, or other culturally sensitive areas. Paleosols (soil that developed on a past landscape) remain a management concern requiring Section 106 compliance. Reconnaissance-level archival and archeological surveys of Grand Forks AFB conducted by the University of ND in 1989 indicated that there are no facilities (50 years or older) that possess historical significance. The base is currently consulting with the ND Historical Society on the future use of eight Cold War Era facilities. These are buildings 313,

606, 703, 704, 705, 706, 707, and 714. Appendix B includes a Cultural Resource Probability Map.

3.9 LAND USE

Land use in Grand Forks County consists primarily of cultivated crops with remaining land used for pasture and hay, urban development, recreation, and wildlife habitat. Principal crops are spring wheat, barley, sunflowers, potatoes, and sugar beets. Turtle River State Park, developed as a recreation area in Grand Forks County, is located about five miles west of the base. Several watershed protection dams are being developed for recreation activities including picnicking, swimming, and ball fields. Wildlife habitat is very limited in the county. Kellys Slough NWR (located about two miles east of the base) and the adjacent National Waterfowl Production Area are managed for wetland wildlife and migratory waterfowl, but they also include a significant acreage of open land wildlife habitat.

The main base encompasses 5,420 acres, of which the USAF owns 4,830 acres and another 590 acres are lands containing easements, permits, and licenses. Improved grounds, consisting of all covered area (under buildings and sidewalks), land surrounding base buildings, the 9-hole golf course, recreational ball fields, and the family housing area, encompass 1,120 acres. Semi-improved grounds, including the airfield, fence lines and ditch banks, skeet range, and riding stables account for 1,390 acres. The remaining 2,910 acres of the installation consist of unimproved grounds. These areas are comprised of woodlands, open space, and wetlands, including four lagoons (180.4 acres) used for the treatment of base wastewater. Agricultural out leased land (1,040 acres) is also classified as unimproved. Land use at the base is solely urban in nature, with residential development to the south and cropland, hayfields, and pastures to the north, west, and east of the base.

3.10 TRANSPORTATION SYSTEMS

Seven thousand vehicles per day travel ND County Road B3 from Grand Forks AFB's east gate to the US Highway 2 Interchange (Clayton, 2001). Two thousand vehicles per day use the off-ramp from US Highway 2 onto ND County Road B3 (Dunn, 2001). US Highway 2, east of the base interchange, handles 10,800 vehicles per day. (Kingsley and Kuntz, 2001). A four lane arterial road has a capacity of 6,000 vehicles per hour and a two lane, 3,000, based on the average capacity of 1,500 vehicles per hour per lane. Roadways adjacent to Grand Forks AFB are quite capable of accommodating existing traffic flows (USAF, 2001a).

Grand Forks AFB has good traffic flow even during peak hours (6-8 am and 4-6 pm). There are two gates: the main gate located off of County Road B3, about one mile north of U.S. Highway 2 and the Secondary Gate located off of U.S. Highway 2, about 3/4 mile west of County Road B3. The main gate is connected to Steen Boulevard (Blvd), which is the main east-west road, and serves the passenger traffic; and the south gate is connected to Eielson Street (St), which is the main north-south road and serves the truck traffic.

3.11 AIRSPACE/AIRFIELD OPERATIONS

3.11.1 AIRCRAFT SAFETY

Bird Aircraft Strike Hazard (BASH) is a major safety concern for military aircraft. Collision with birds may result in aircraft damage and aircrew injury, which may result in high repair costs or loss of the aircraft. A BASH hazard exists at Grand Forks AFB and its vicinity, due to resident and migratory birds. Daily and seasonal bird movements create various hazardous conditions. Although BASH problems are minimal, Kellys Slough NWR is a major stopover for migratory birds. Canadian Geese and other large waterfowl have been seen in the area (USAF, 2001b).

3.11.2 AIRSPACE COMPATIBILITY

The primary objective of airspace management is to ensure the best possible use of available airspace to meet user needs and to segregate requirements that are incompatible with existing airspace or land uses. The Federal Aviation Administration has overall responsibility for managing the nation's airspace and constantly reviews civil and military airspace needs to ensure all interests are compatibly served to the greatest extent possible. Airspace is regulated and managed through use of flight rules, designated aeronautical maps, and air traffic control procedures and separation criteria.

3.12 SAFETY AND OCCUPATIONAL HEALTH

Safety and occupational health issues include one-time and long-term exposure. Examples include asbestos/radiation/chemical exposure, explosives safety quantity-distance, and bird/wildlife aircraft hazard. Safety issues include injuries or deaths resulting from a one-time accident. Aircraft Safety includes information on birds/wildlife aircraft hazards and the BASH program. Health issues include long-term exposure to chemicals such as asbestos and lead-based paint. Safety and occupational health concerns could impact personnel working on the project and in the surrounding area.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) of the CAA designates asbestos as HAP. OSHA provides worker protection for employees who work around or asbestos containing material (ACM). Regulated ACM (RACM) includes thermal system insulation (TSI), any surfacing material, and any friable asbestos material. Non-regulated Category I non-friable ACM includes floor tile and joint compound.

Lead exposure can result from paint chips or dust or inhalation of lead vapors from torch-cutting operations. This exposure can affect the human nervous system. Due to the size of children,

exposure to lead based paint is especially dangerous to small children. OSHA considers all painted surfaces in which lead is detectable to have a potential for occupational health exposure.

3.13 ENVIRONMENTAL MANAGEMENT

3.13.1 INSTALLATION RESTORATION PROGRAM

The Installation Restoration Program (IRP) is the AF's environmental restoration program based on the CERCLA. CERCLA provides for Federal agencies with the authority to inventory, investigate, and clean up uncontrolled or abandoned hazardous waste sites. There are seven IRP sites at Grand Forks AFB. These sites are identified as potentially impacted by past hazardous material or hazardous waste activities. They are the Fire Training Area/Old Sanitary Landfill Area, FT-02; New Sanitary Landfill Area, LF-03; Strategic Air Ground Equipment (SAGE) Building 306, ST-04; Explosive Ordnance Detonation Area, OT-05; Refueling Ramps and Pads, Base Tanks Area, ST-06; POL Off-Loading Area, ST-07; and Refueling Ramps and Pads, ST-08 (USAF, 1997b). Two sites are considered closed, OT-05 and ST-06. ST-08 has had a remedial investigation/feasibility study (RI/FS) completed and the rest are in long-term monitoring. Grand Forks AFB is not on the National Priorities List (NPL)

3.13.2 GEOLOGICAL RESOURCES

3.13.2.1 Physiography and Topography

The topography of Grand Forks County ranges from broad, flat plains to gently rolling hills that were produced mainly by glacial activity. Local relief rarely exceeds 100 ft in one mile, and, in parts of the lake basin, less than five ft in one mile.

Grand Forks AFB is located within the Central Lowlands physiographic province. The topography of Grand Forks County, and the entire Red River Valley, is largely a result of the former existence of Glacial Lake Agassiz, which existed in this area during the melting of the last glacier, about 12,000 years ago (Stoner et al., 1993). The eastern four-fifths of Grand Forks County, including the base, lies in the Agassiz Lake Plain District, which extends westward to the Pembina escarpment in the western portion of the county. The escarpment separates the Agassiz Lake Plain District from the Drift Plain District to the west. Glacial Lake Agassiz occupied the valley in a series of recessive lake stages, most of which were sufficient duration to produce shoreline features inland from the edge of the lake. Prominent physiographic features of the Agassiz Lake Plain District are remnant lake plains, beaches, inter-beach areas, and delta plains. Strandline deposits, associated with fluctuating lake levels, are also present and are indicated by narrow ridges of sand and gravel that typically trend northwest-southwest in Grand Forks County.

Grand Forks AFB lies on a large lake plain in the eastern portion of Grand Forks County. The lake plain is characterized by somewhat poorly drained flats and swells, separated by poorly drained shallow swells and sloughs (Doolittle et al., 1981). The plain is generally level, with

local relief being less than one foot. Land at the base is relatively flat; with elevations ranging from 880 to 920 ft mean sea level (MSL) and averaging about 890 ft MSL. The land slopes to the north at less than 12 ft per mile.

3.13.2.2 Soil Type Condition

Soils consist of the Gilby loam series that are characterized by deep, somewhat poorly drained, moderately to slowly permeable soils in areas between beach ridges. The loam can be found from 0 to 12 inches. From 12 to 26 inches, the soil is a mixture of loam, silt loam, and very fine sandy loam. From 26 to 60 inches, the soil is loam and clay loam.

3.13.3 PESTICIDE MANAGEMENT

Pesticides are handled at various facilities including Environmental Controls, Golf Course Maintenance, and Grounds Maintenance. Other organizations assist in the management of pesticides and monitoring or personnel working with pesticides. Primary uses are for weed and mosquito control. Herbicides, such as picloram, nonselective glyphosate and 2,4-D are used to maintain areas on base. Military Public Health and Bioenvironmental Engineering provide information on the safe handling, storage, and use of pesticides. Military Public Health maintains records on all pesticide applicators. The Fire Department provides emergency response in the event of a spill, fire, or similar type incident.

3.14 ENVIRONMENTAL JUSTICE

Environmental justice addresses the minority and low-income characteristics of the area, in this case Grand Forks County. The county is more than 93 percent Caucasian, 2.3 percent Native American, 1.4 percent African-American, 1 percent Asian/Pacific Islander, less than 1 percent Other, and 1.6 percent “Two or more races”. In comparison, the US is 75.2 percent Caucasian, 12.3 African-American, 0.9 percent Native American or Native Alaskan, 3.6 percent Asian, 0.1 Native Hawaiian or Pacific Islander, 5.5 percent Other, and 2.4 percent “Two or more races”. Approximately 12.5 percent of the county’s population is below the poverty level in comparison to 13.3 percent of the state (US Bureau of the Census, 2002). There are few residences and no concentrations of low-income or minority populations around Grand Forks AFB.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

The effects of the proposed action and the alternatives on the affected environment are discussed in this section. The project involves construction of an Armory Addition to CATM with Parking lot on Grand Forks AFB.

4.2 AIR QUALITY

4.2.1 Alternative 1 (No Action)

The no action alternative would not impact air quality.

4.2.2 Alternatives 2 (Proposed Action)

No long-term effects; however short term effects involve heavy construction equipment emissions (not a concern as they are mobile sources) and fugitive dust (mentioned on our Title V permit). Air Quality is considered good and the area is in attainment for all criteria pollutants. Fugitive emissions from construction activities are expected to be below the regulatory threshold and would be managed in accordance with NDAC 33-15-17-03. Best management practices (BMPs) to reduce fugitive emissions would be implemented to reduce the amount of these emissions.

4.2.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.3 NOISE

4.3.1 Alternative 1 (No Action)

The no action alternative would not impact noise generation.

4.3.2 Alternative 2 (Proposed Action)

The short-term operation of heavy equipment in the construction area would generate additional noise. These noise impacts would exist only during construction and would cease after completion. The increase in noise from activities would be negligible.

4.3.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.4 WASTES, HAZARDOUS MATERIALS, AND STORED FUELS

4.4.1 Alternative 1 (No Action)

The no action alternative would not impact hazardous or solid waste generation.

4.4.2 Alternative 2 (Proposed Action)

The increase in hazardous and solid wastes from construction of an Armory Addition to CATM with Parking lot would be minimal and temporary. Solid waste debris would be disposed of in an approved location, such as the Grand Forks Municipal Landfill, which is located within 12 miles of the proposed site. All solid waste materials would be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are encouraged by the State of North Dakota. Inert waste would be segregated from non-inert waste, where possible, to reduce the cost of waste management.

4.4.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.5 WATER RESOURCES

4.5.1 Alternative 1 (No Action Alternative)

The no action alternative would have no impact on groundwater, surface water, wastewater, drinking water quality, or wetlands.

4.5.2 Alternative 2 (Proposed Alternative)

4.5.2.1 Ground Water: Excavation would likely intercept the water table. If the excavated area fills with groundwater, water could be directly exposed to contaminants released from construction equipment. Provided best management practices are followed, there will be minimal impacts on ground water.

4.5.2.2 Surface Water: Surface water quality could be degraded in the short-term, during actual construction, and in the long term. Effects come from possible erosion contributing to turbidity of runoff and possible contamination from spills or leaks from construction equipment. Surface water could also be impacted if, due to storm water inflow to the excavation, the contractor would need to pump out the excavation. The contractor must utilize effective methods to control surface water runoff and minimize erosion. The long term effects come from the fact that additional impervious area is being added to a site where the drainage is already fully taxed (see design documents) and no additional consideration will be given to this drainage during this project. This could lead to overflowing ditches, increase in wetland area, and additional contaminants introduced to the water due to the increased flows. Proper stabilization and seeding the site immediately upon completion of the construction would provide beneficial vegetation,

controlling erosion. Provided best management practices are utilized during construction, short term negative surface water impacts should be minimal. Long term negative impacts may occur with an overall decrease in water quality.

4.5.2.3 Drinking Water Quality: No foreseeable impact.

4.5.2.4 Wastewater: The proposed action would have no impact on wastewater.

4.5.2.5 Wetlands: The project is to occur away from any wetland type areas but due to the additional surface runoff that is expected, some wetland areas will be affected.

4.5.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.6 BIOLOGICAL RESOURCES

4.6.1 Alternative 1 (No Action)

The no action alternative would not impact wildlife, vegetation, or other biological resources.

4.6.2 Alternative 2 (Proposed Action)

4.6.2.1 General: Runoff from the parking lot areas should be addressed to reduce impact to wetland water quality and vegetation, and protect wildlife habitat.

4.6.2.2 Vegetation: The site location is in an improved area and provides grassy areas for erosion control, runoff, and sedimentation control to the adjacent south and east wetland areas. The proposed action will permanently remove all vegetation where the 1800 SF armory addition is to be placed and the new parking lot and turn around areas. Subsequently, vegetative erosion control will be removed, increasing paved surfaces on base, and decreasing the ability of natural ecological processes to handle runoff events. BMPs and control measures, including silt fences and covering of stockpiles, must be implemented to ensure that impacts to biological resources be kept to a minimum outside of the construction footprint. Disturbed areas outside of the construction must be re-established with native grass seeding.

4.6.2.3 Noxious Weeds: Public law 93-629 mandates control of noxious weeds. Limit possible weed seed transport from infested areas to non-infested sites. Avoid activities in or adjacent to heavily infested areas or remove seed sources and propagules from site prior to conducting activities, or limit operations to non-seed producing seasons. Wash or otherwise remove all vegetation and soil from equipment before transporting to a new site. Following activities which expose the soil mitigate by covering the area with weed seed free mulch and/or seed the area with native species. Covering the soil will reduce the germination of weed seeds, maintain soil moisture, and minimize erosion. If any fill material is used, it should be from a weed-free source.

4.6.2.4 Wetlands: There are wetlands to the south and east of the proposed construction location. Construction activities are not within any wetland boundary. However, wetland water quality will be degraded from the parking lot construction, as runoff will no longer be filtered by grassed areas, and instead runoff will directly flow into the adjacent wetlands areas. Activity in any wetlands cannot occur without a Clean Water Act section 404 permit from the Army Corps of Engineers. No dumping, filling, dredging, or changing of the wetland hydrologic structure is permitted without a permit. Design and construction should avoid impacting wetlands, as there is appropriate room to work around them.

4.6.2.5 Wildlife: Construction would have negative impacts to wildlife. The area of construction is improved, but adjacent wetlands provide habitat for small mammals, birds, and invertebrates, such as mice, rabbits, grassland birds, butterflies, and raptors. Due to the abundance and mobility of these species and the available adjacent habitat, any wildlife disturbed would be able to find similar habitat in the local area. Cumulative affects of habitat loss, may result in species competition on the remaining habitats causing strain/stress on available resources, and result in removal of some species from the local landscape.

4.6.2.6 Threatened or Endangered Species: According to the Biological Survey Update 2004 of GFAFB, 21 state-listed birds and 1 federally listed bird species, 2 state-listed plant species, 1 state-listed mammal species, and 1 state-listed amphibian have been identified at GFAFB. The federally listed bird species (the Bald Eagle) has no critical habitat at GFAFB. Proposed activities should have minimal impact on these sensitive species. Some sensitive species of grassland birds may utilize this habitat, but have not been recorded in this area. Cumulative affects of developing on semi-improved and unimproved lands will contribute to habitat loss for grassland birds. Habitat loss is the number one factor identified causing dramatic declines of this avian assemblage in North America, and is especially prevalent in the great and northern plains of this continent. No known threatened or endangered plant species have been identified in the proposed section.

4.6.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.7 SOCIOECONOMIC RESOURCES

4.7.1 Alternative 1 (No Action)

The no action alternative would not impact socioeconomics.

4.7.2 Alternative 2 (Proposed Action)

Secondary retail purchases would make an additional contribution to the local communities. The implementation of the proposed action, therefore, would provide a short-term, minimal beneficial impact to local retailers during the construction phase of the project.

4.7.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.8 CULTURAL RESOURCES

4.8.1 Alternative 1 (No Action)

The no action alternative would not impact cultural resources.

4.8.2 Alternative 2 (Proposed Action)

The proposed action has little potential to impact cultural resources. In the unlikely event any such artifacts were discovered during the construction activities, the operator would be instructed to halt construction and immediately notify Grand Forks AFB civil engineers who would notify the State Historic Preservation Officer. Appendix B includes a Cultural Resource Probability Map.

4.8.3 Alternative 3

Alternative impacts would be similar to those generated under the proposed action.

4.9 LAND USE

4.9.1 Alternative 1 (No Action)

The no action alternative would not have an impact on land use.

4.9.2 Alternative 2 (Proposed Action)

The proposed operation would not have an impact on this land use currently designated for combat arms training.

4.9.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.10 TRANSPORTATION SYSTEMS

4.10.1 Alternative 1 (No Action)

The action would not impact transportation.

4.10.2 Alternative 2 (Proposed Action)

The proposed action would have minimal adverse impact to transportation systems on base due to vehicles traveling to and from an Armory Addition to CATM with Parking lot during construction.

4.10.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.11 AIRSPACE/AIRFIELD OPERATIONS

4.11.1 Alternative 1 (No Action)

The no action alternative would not impact aircraft safety or airspace compatibility.

4.11.2 Alternative 2 (Proposed Action)

The proposed action would not impact aircraft safety or airspace compatibility.

4.11.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.12 SAFETY AND OCCUPATIONAL HEALTH

4.12.1 Alternative 1 (No Action)

The no action alternative would not impact safety and occupational health.

4.12.2 Alternative 2 (Proposed Action)

The proposed action would have no impact on safety and occupational health.

4.12.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.13 ENVIRONMENTAL MANAGEMENT

4.13.1 Alternative 1 (No Action)

The no action alternative would not impact IRP Sites or geological resources.

4.13.2 Alternative 2 (Proposed Action)

IRP: The proposed action would not impact IRP Sites. The nearest IRP is the Fire Training Area/Old Sanitary Landfill Area, FT-02, 370 feet to the east of the CATM.

Geology: The proposed action would not impact geological resources. Soils present in the proposed area include the Gilby series.

Pesticides: No pesticides would be used as part of this project.

4.13.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.14 ENVIRONMENTAL JUSTICE

4.14.1 Alternative 1 (No Action)

The no action alternative would not impact environmental justice.

4.14.2 Alternative 2 (Proposed Action)

EO 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. There are no minority or low-income populations in the area of the proposed action or alternatives, and, thus, there would be no disproportionately high or adverse impact on such populations.

4.14.3 Alternative 3

Impacts would be similar to those generated under the proposed action.

4.15 INDIRECT AND CUMULATIVE IMPACTS

The short-term increases in air emissions and noise during construction and the impacts predicted for other resource areas, would not be significant when considered cumulatively with other ongoing and planned activities at Grand Forks AFB and nearby off-base areas. The cumulative impact of the Proposed Action or Alternative with other ongoing activities in the area would produce an increase in solid waste generation; however, the increase would be limited to the timeframe of each project. The area landfills used for construction and demolition debris do not

have capacity concerns and could readily handle the solid waste generated by the various projects.

4.16 UNAVOIDABLE ADVERSE IMPACTS

The proposed action and alternatives would involve the use of heavy construction equipment and vehicles, and their short-term impacts on noise, air quality, and traffic are unavoidable.

4.17 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed action and alternatives would involve the use of previously developed areas. No croplands, pastureland, wooded areas, or wetlands would be modified or affected as a result of implementing the Proposed Action and, consequently, productivity of the area would not be degraded.

4.18 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the proposed action, fuels, manpower, economic resources, and other recovery materials related to the construction of An Armory Addition to CATM with Parking lot would be irreversibly lost.

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REFERENCES

- Clayton, Scott, 2001. Personal communication. Grand Forks County Engineer.
- Doolittle, J. A., C. A. Heidt, S. J. Larson, T. P. Ryterske, M. G. Ulmer, and P. E. Wellman, Undated. Soil Survey of Grand Forks County, ND, U.S. Department of Agriculture, Soil Conservation Service.
- Dunn, Curtis, 2001. Personal communication. ND Department of Transportation, Grand Forks District Office.
- Grand Forks AFB, 2001. Economic Impact Analysis Fiscal Year 2001. Home Page.
- Hansen, Dan E. and Jack Kume, 1970. Genealogy and Ground Water Resources of Grand Forks County, Part I, Geology; ND Geological Survey Bulletin No. 53.
- Job Service of ND, 2001. ND State Wage Survey. Home Page.
- Kingsley, Dirk, 2001. Personal communication. ND Department of Transportation. April.
- Kuntz, Sean, 2001. Personal communication. ND Department of Transportation. April.
- NDDH, 2001. Division of Air Quality, Asbestos Control Program. www.health.state.nd.us
- NDDH, 1998. Annual Report, ND Air Quality Monitoring Data Summary. July.
- ND Natural Heritage Inventory and ND Parks and Recreation Department. Grand Forks AFB, ND, Biological Survey. 1994.
- ND State Data Center, No Date. Census ND 2000. Home Page.
- Stoner, J. D., D. L. Lorenz, G. J. Wiche, and R. M. Goldstein, 1993. Red River of the North Basin, Minnesota, ND, and South Dakota; Water Resources Bulletin 29:4; pages 575-615.
- Thurman, Albert and Richard Miller, 1976. Secrets of Noise Control. 2nd ed. Atlanta: Fairmont Press.
- US AFI 32-7061, as promulgated in 32 C.F.R. 989, EIAP
- USAF, 2001a. Base General Plan.
- USAF, 2001b. Bird Airstrike Hazard Plan. February.
- USAF, 2001c. Grand Forks AFB Installation Hazardous Waste Management Plan.
- USAF, 1999. Final EIS for Minuteman III Missile System Dismantlement at Grand Forks AFB, ND. April
- USAF, 1997a. Grand Forks AFB Integrated Natural Resources Management Plan.
- USAF, 1997b. Management Action Plan for Grand Forks AFB.
- USAF, 1996. Grand Forks AFB Final Emissions Survey Report. January.
- USAF, 1995. AICUZ Study at Grand Forks AFB, ND.
- US Army, 1978. Construction Engineering Research Laboratory (CERL). Construction

site Noise Control, Cost-Benefit Estimation
Technical Background. January.

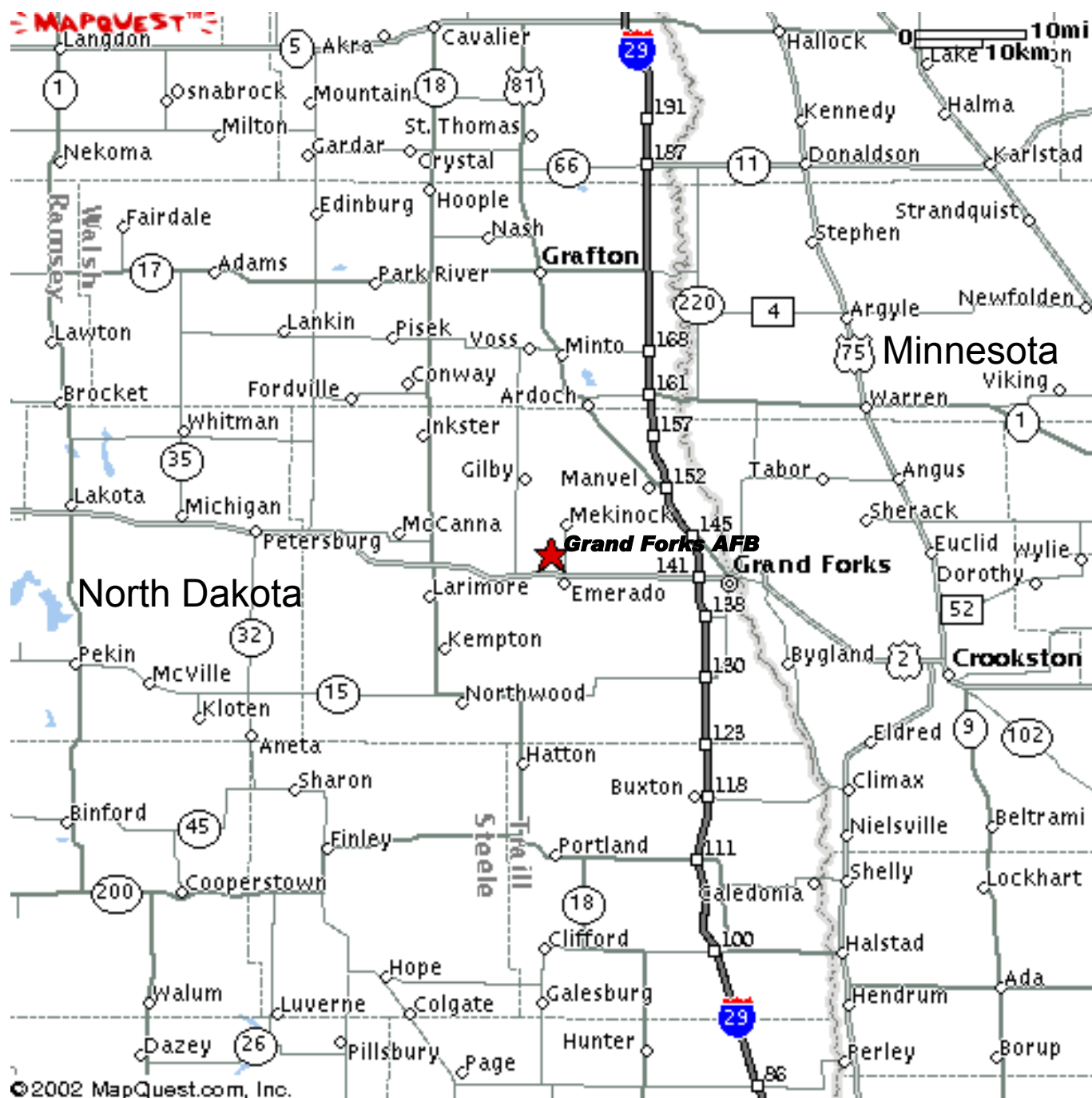
US Bureau of the Census, 2002. 2000
Census of Population and Housing
(population and demographic data.)

US Environmental Protection Agency, 1995.
National Water Quality Inventory, 1994
Report to Congress. EPA 841-R-95-005.
Washington D.C. December.

319 ARW Fact Card 2005 located at Grand
Forks Air Force Base web site
[https://private.grandforks.amc.af.mil/Units/
DS/pa/Wing%20Smart%20Card.pdf](https://private.grandforks.amc.af.mil/Units/DS/pa/Wing%20Smart%20Card.pdf).

APPENDIX A
LOCATION MAP – GRAND FORKS AFB

Grand Forks AFB, ND



State Boundary

APPENDIX B
CULTURAL RESOURCE PROBABILITY MAP

Figure 3.5
Survey Areas and
Probabilities

Grand Forks Air Force Base
Cultural Resources Management Plan

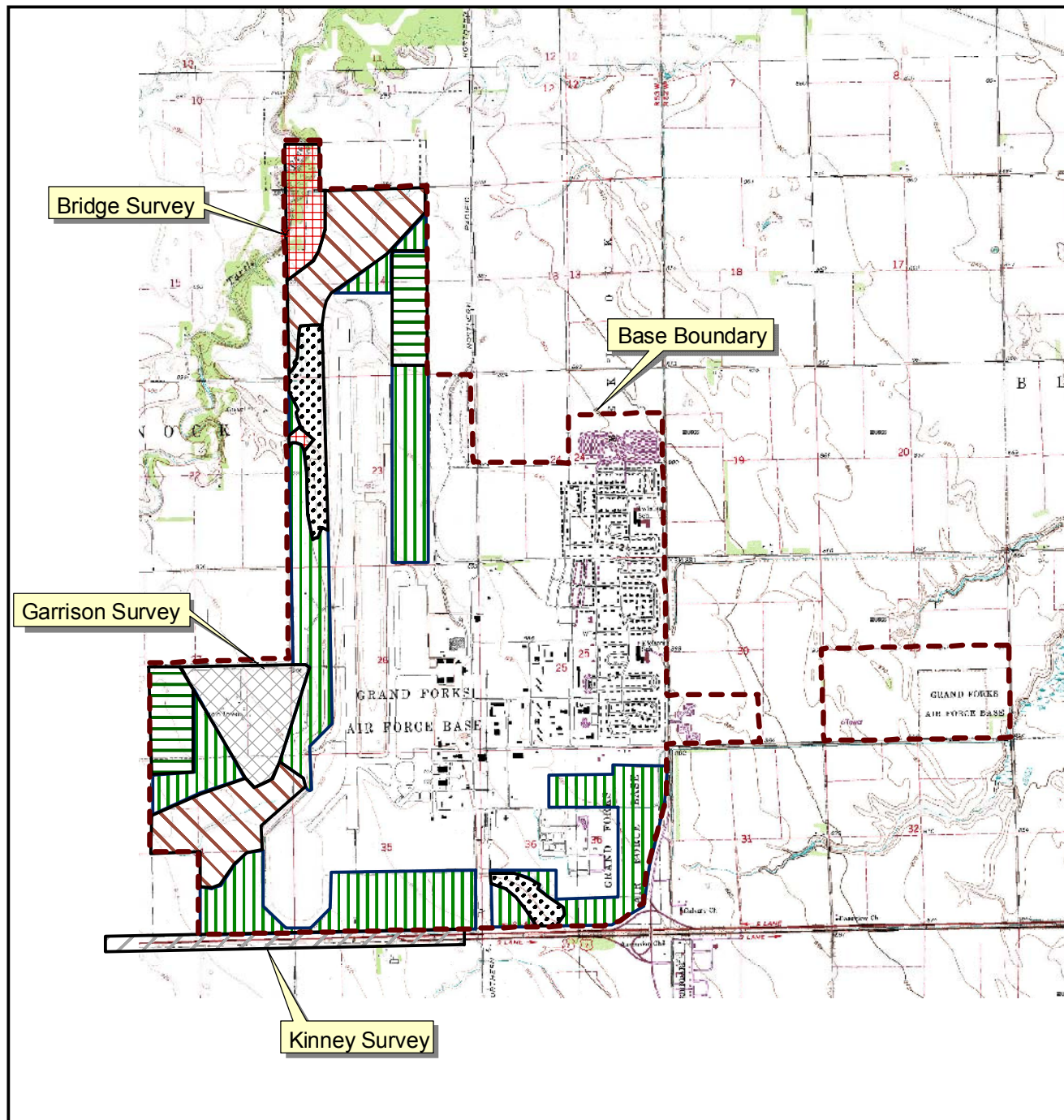
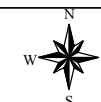
Legend

-  Historic Bridge Inventory Survey
-  Base Boundary
-  High Probability
-  Medium Probability (near water)
-  Kinney Survey
-  Medium Probability (beach ridge)
-  Peace Keeper Rail Garrison Survey
-  Low Probability (distance from water)
-  Low Probability (10% sample)
-  Previously Disturbed

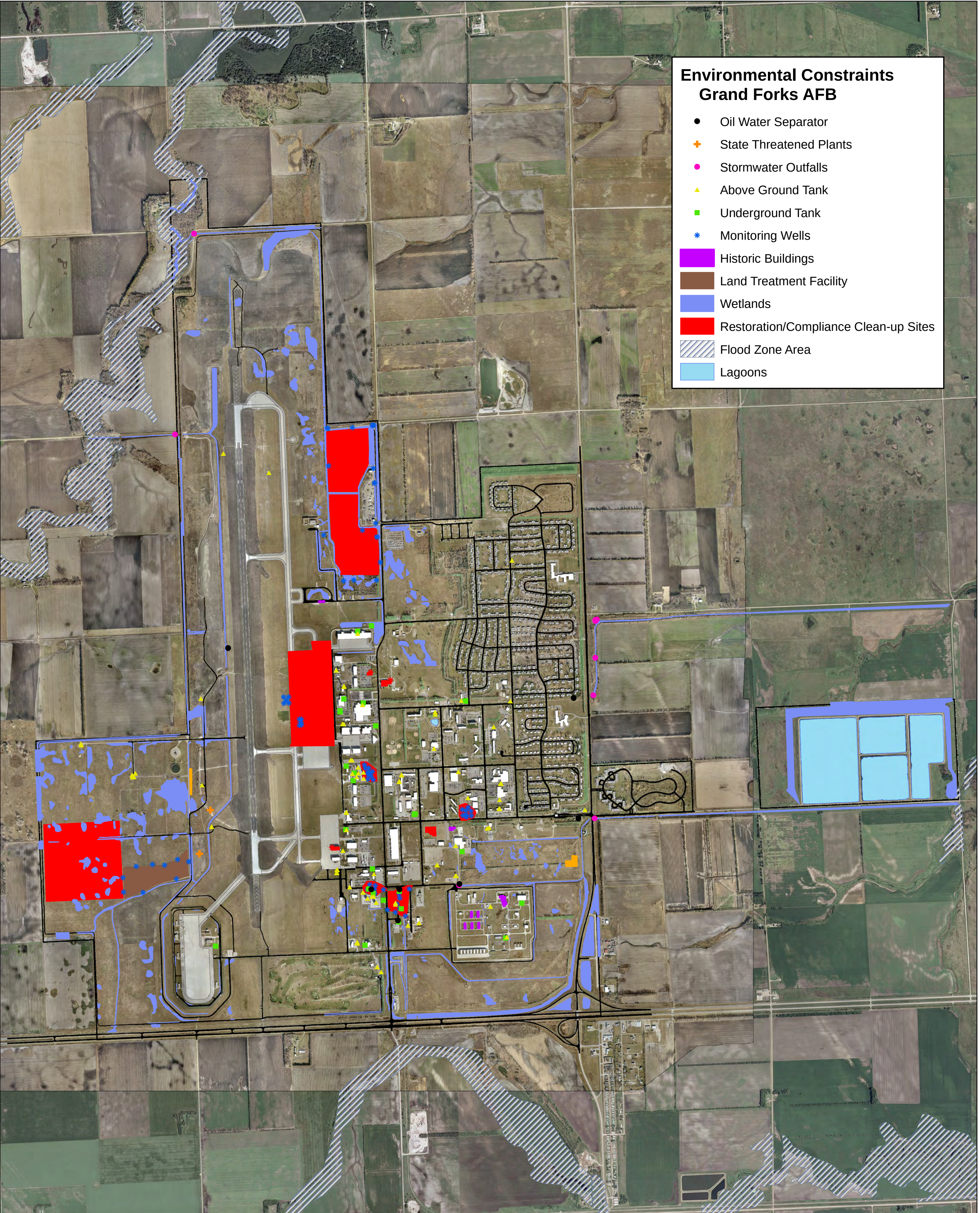
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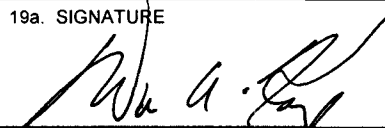
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Date: 5-16-02
Figure Number: 3.5
Page Number: 3-18



APPENDIX C
ENVIRONMENTAL SITE MAP



APPENDIX D
AF FORM 813

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCS: 2005-057		
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).				
SECTION I - PROPONENT INFORMATION				
1. TO (Environmental Planning Function) 319 CES/CEVA	2. FROM (Proponent organization and functional address symbol) 319 CES/CD	2a. TELEPHONE NO. 701-747-4761		
3. TITLE OF PROPOSED ACTION Construct Armory Addition and Parking to Combat Arms Training and Maintenance (CATM) (JFSD200472A, JFSD200472B)				
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) Repairs and construction are needed to ensure base security, anti-terrorism efforts and force protection requirements are met. Repairs are needed to ensure compliance with fire code, and command roof standards at Building 652.				
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) Construct 1800 SF Security Forces Armory Addition to CATM with additional Parking and Bus Turn-around Loop. Repair SF CATM with Fire Suppression system, replace asphalt shingles with standing seam metal roof, convert Rm 111.				
6. PROPONENT APPROVAL (Name and Grade) MARY C. GILTNER, GM-13 Deputy Base Civil Engineer	6a. SIGNATURE 		6b. DATE 4-25-05	
SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects Including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U= unknown effect)				
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)	☐ +	☒ 0	☐ -	☐ U
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)	☐ +	☒ 0	☐ -	☐ U
9. WATER RESOURCES (Quality, quantity, source, etc.)	☐ +	☐ 0	☒ -	☐ U
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)	☐ +	☒ 0	☐ -	☐ U
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)	☐ +	☐ 0	☒ -	☐ U
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)	☐ +	☐ 0	☒ -	☐ U
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)	☐ +	☒ 0	☐ -	☐ U
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)	☐ +	☒ 0	☐ -	☐ U
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	☐ +	☒ 0	☐ -	☐ U
16. OTHER (Potential impacts not addressed above.)	☐ +	☒ 0	☐ -	☐ U
SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION				
17. ☐ PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR ☒ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.				
18. REMARKS This action is not "regionally significant" and does not require a conformity determination in accordance with 40 CFR 93.153(1). The total emission of criteria pollutants from the proposed action are below the de minimus thresholds and less than 10 percent of the Air Quality Region's planning inventory.				
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) WAYNE A. KOOP, R.E.M., GM-13 Environmental Management Flight Chief	19a. SIGNATURE 		19b. DATE 22 APR 05	

4.0 Purpose and Need for Action

4.1 Purpose of the Action (mission objectives-who proposes to do what, where, when): Grand Forks AFB requires an armory with Class A vault, guard mount and issue area. Guard mount room shall be open in design to facilitate open ranks inspections, briefings and for dispatching personnel. Armory shall have sufficient lighting to illuminate exterior and all interior approaches to the armory itself with single entry steel door. Doors and issue windows will be secured by key activated high security lock with security system to positively identify personnel requesting assistance/entry. Free floor space shall be provided for access to weapons racks. Armory shall meet security requirements of AFI 31-209, DoD 5100.76-M, and MIL HDBK 1013/1A.

4.2 Need for the Action (why this action is desired or required-why here, why now): Existing Armory is over 46 years old, substandard, with severe structural deterioration, inadequate heating and air conditioning, and non-compliant with current AFI, DoD, and command standards. The facility cannot be renovated to meet all requirements under the 70% rule. Existing asphalt roofing is missing shingles and is near the point of leaking. Adding the armory to existing CATM triggers requirement for fire suppression system. Conversion of existing admin space is required to ensure functionality between the new armory and CATM.

4.3 Objectives for the Action (what goal do you wish to accomplish): Update the CATM to meet security requirements

4.4 Related EISs/EAs and other documents (similar projects in the past): 1999-187 Catex to Pave CATM Road A2.3.7.

4.5 Decision that must be made: Construct an Armory Addition to the CATM.

4.6 Applicable Regulatory Requirements and Required Coordination-- required permits, licenses, entitlements: Contractor must submit a Work Clearance Request, Stormwater Protection Plan, Dust Control Plan, Spill Control Plan, Erosion and Sediment Control Plan to the CEV Water Program Manager and Contracting Officer.

5.0 Description of Proposed Action and Alternatives

5.1 Description of the proposed action (in brief, introduction): Construct an 1800 sq ft Armory addition to CATM, additional parking and bus turn-around loop, replace shingles with metal roof, install wet pipe fire suppression system, ceiling tiles, and convert Room 111 for weapons maintenance.

5.2 Selection criteria for Alternatives

5.2.1 Minimum mission requirements: effectiveness, timeliness, costliness, legality, safety, efficiency.

5.2.2 Minimum environmental standards: noise, air, water, safety, HW, vegetation, cultural, geology, soils, socioeconomic.

5.3 Alternatives Considered but Eliminated from Detailed Study: None.

5.4 Description of proposed alternatives

5.4.1 No-action alternative: Security Forces personnel will continue to work in a substandard, unsafe facility. Deplorable working conditions in the facility will continue impacting overall base security, anti-terrorism efforts, and force protection. Morale will continue to decline affecting retention of military personnel. Facility will not comply with fire code, existing asphalt roof is near the end of its useful life and does not meet command standards, new addition will not be fully functional without conversion of room 111 for common thoroughfare for use of rest rooms.

5.4.2 Proposed Action: Construct 1800 sq ft armory addition with masonry and concrete construction, concrete footings and floor, standing seam metal roof, expanded parking lot, dumpster screening, heating-ventilation- air conditioning, utilities, communications, mass notification system, fire suppression system, intrusion detection security system, site improvements, and project shall meet AT/FP requirements per UFC 4-010-02 latest edition. Replace 4200 SF of asphalt singles with standing seam metal roof, convert 391 SF Room 111 for weapons maintenance and provide a common thoroughfare between the existing CATM facility and new armory, install wet pipe fire suppression system, and 3687 SF ceiling tile repairs as required. Install fire suppression system to comply with code for armory addition, roof repair to match new armory, convert existing admin space to dual use for weapons maintenance, and provide common thoroughfare between existing and new addition. Orientate the Guard Mount area from east to west, with the doors leading into the armory addition held back from the windows in the existing building and lending privacy to the offices on either side. The additional length allows for potential of more daylight into the space and an exterior covered area entrance for use in inclement weather.

5.4.3 Another Reasonable Action Alternative: Same as the proposed action, except orientate the Guard Mount area from north to south, making the armory addition a simple rectilinear form.

5.5 Description of Past and Reasonably Foreseeable Future Actions Relevant to Cumulative Impacts: There are several other construction and demolition projects occurring on Grand Forks AFB in the same time frame. These projects are addressed under separate NEPA documents.

5.6 Recommendation of preferred alternative: Recommend the Proposed Action to construct an 1800 sq ft Armory addition to CATM, additional parking and bus turn-around loop, replace shingles with metal roof, install wet pipe fire suppression system, ceiling tiles, and convert room 111 for weapons maintenance, with east to west orientation.

APPENDIX E
LOCATION MAP – PROPOSED AND ALTERNATIVE SITES

1 COMPONENT AF (AMC)	FY 2005 MILITARY CONSTRUCTION DATA	2 DATE 04 Nov 04
-------------------------	------------------------------------	---------------------

3 INSTALLATION AND LOCATION GRAND FORKS AFB, NORTH DAKOTA
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4 PROJECT TITLE Addition to CATM for Armory	5 PROJECT NUMBER NA
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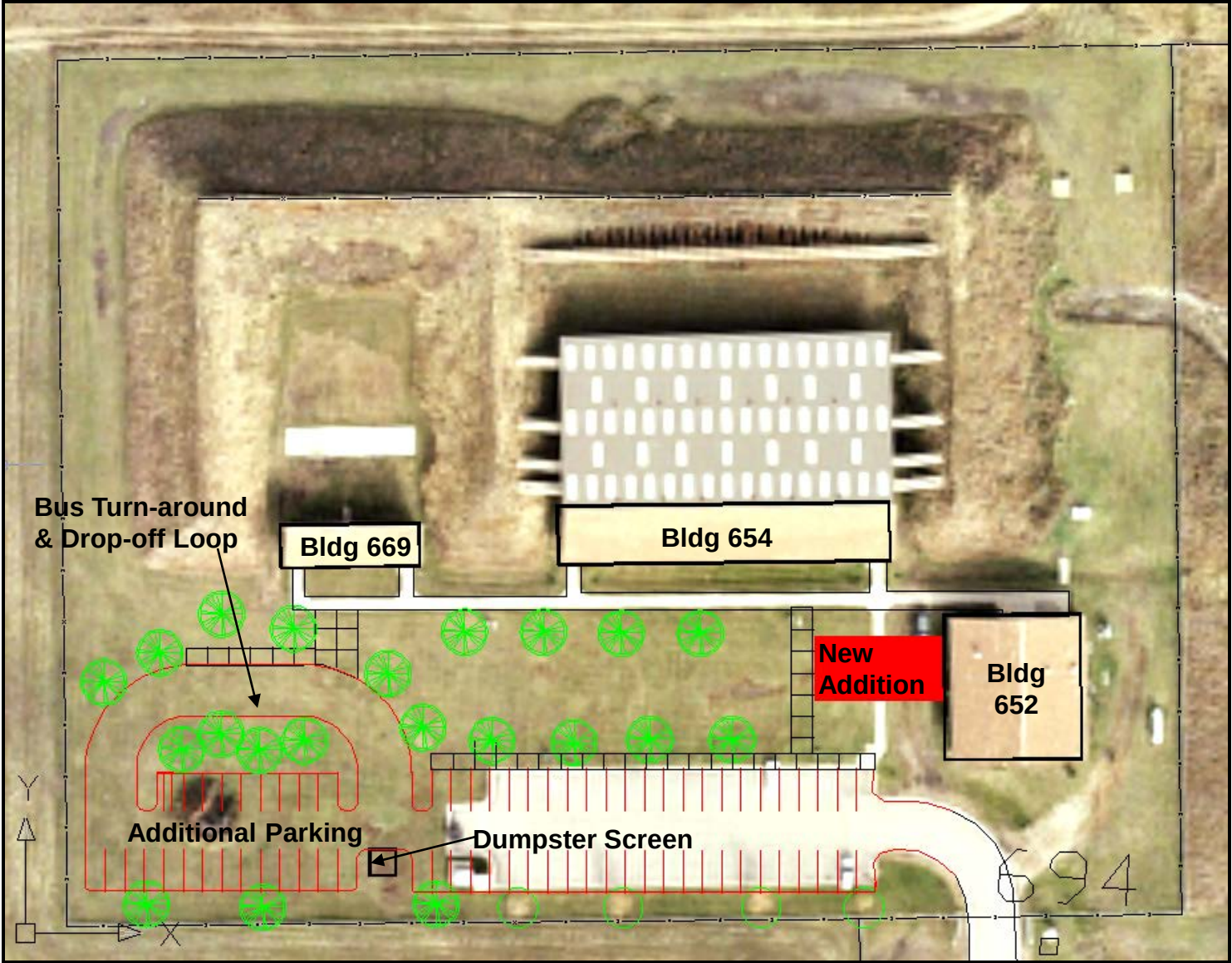
LOCATION PLAN



1 COMPONENT AF (AMC)	FY 2005 MILITARY CONSTRUCTION DATA	2 DATE 04 Nov 04
-------------------------	------------------------------------	---------------------

3 INSTALLATION AND LOCATION GRAND FORKS AFB, NORTH DAKOTA
--

4 PROJECT TITLE Addition to CATM for Armory	5 PROJECT NUMBER NA
--	------------------------



SITE PLAN

N

FACILITY BOARD APPROVAL

DATE

APPENDIX F
AN ARMORY ADDITION TO CATM WITH PARKING LAYOUT

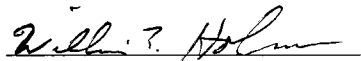
Armory Addition to CATM with Parking

Type "A" Services
JFSD 200472

Grand Forks Air Force Base
North Dakota

Final
February 2005

I hereby certify that this plan, specification, or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:  Typed or Printed Name: William E. Holman, P.E.

Date: February 2, 2005 Reg. No.: 24427



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Engineering, Environmental and Construction Services - Worldwide

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Existing Conditions

Existing Site Plan

The project site has an existing parking lot located southwest of the CATM building. CPS, Ltd. has completed a site survey of the existing parking lot and the surrounding project site. The existing parking lot has approximately 40 parking spaces and is used to service Buildings 652, 654, 669, and the shooting ranges. The existing parking lot consists of asphalt pavement with a concrete curb and gutter and overhead street lighting. The dimensions of the parking lot are approximately 56 feet wide by 200 feet long. The site also has a series of concrete sidewalks that connect the parking lot to the adjacent buildings and shooting range. The area Southeast of the project site has been designated a wetland area. Midwest Testing Laboratory, Inc. will complete a geotechnical investigation for the proposed addition and parking lot. Two borings will be taken, one boring to 20 feet at the addition and a one boring to 8 feet at the parking lot addition.



Existing Parking Lot, West View
Figure 1-1

Existing Civil Utilities

The existing CATM building is serviced by water, sanitary sewer, and tank supplied LP gas.

Water Mains

A 2-inch water main services the CATM building. The water main enters the building along the east side of the structure.

Gas Main

A ½-inch LP gas main enters the CATM building from the east. The LP tank is located approximately 35 feet east of the building.

Sanitary Sewers

A 6-inch diameter sanitary sewer line exists at the CATM on the South side of the building. The line travels southeast approximately 65 feet to a duplex grinder pump lift station. A 2-inch force main running parallel to the access road connects the lift station to the remainder of the base sanitation system.

Site Drainage

The Site drains towards the southeast to an existing drainage pond. The existing drainage swale south of the range shelters drains to an existing drainage ditch which flows off the project site. The parking lot has two 2-foot curb cuts to allow water to drain from the parking lot to the drainage ditches. The flow from the parking lot travels to the South in a ditch to a culvert that runs underneath the access road to another drainage ditch that runs parallel to the access road. The site is a mixture of impervious and pervious areas.

Personnel at the CATM facility indicated that, the area south of the range shelters and on the southwest corner of the CATM building currently experiences ponding during heavy precipitation events. It was also indicated that during heavy rainfall events the existing drainage ditches appear to be at full capacity.

Existing Structure

The existing building is nominally 60 foot square in plan. The building is supported on a concrete perimeter foundation extended to a depth of 6-1/2 feet below the 4-inch reinforced concrete slab. The perimeter load bearing walls are composed of 8-inch concrete masonry units, 1-1/2 inch rigid insulation, 1/2 inch air space, and 4-inch concrete masonry units. The 8-inch masonry units have a smooth face and are located on the interior side of the wall assembly. The 4-inch masonry units, on the exterior side, use a combination of fluted and smooth faced block. The switch in type of 4-inch block occurs at the top of the door and window frames and creates a strong horizontal orientation. The roof is constructed from prefabricated, 4:12 sloped, wood trusses positioned at 2 feet on center, plywood sheathing and asphalt shingles. Areas of the eave and rake are composed of cedar veneered plywood, gables are cedar siding, and the fascia is cedar dimensional lumber.



Existing CATM Building
Figure 1-2

The interior of the existing building is compartmentalized into a series of rooms around a central corridor; virtually all of the existing partitions are fire-rated. Currently the rooms are used as office, classroom and shop spaces. The mechanical and storage rooms are accessible only from the exterior of the building. Partitions are constructed predominately of gypsum board applied to steel studs. Wall finishes range from painted concrete masonry units to gypsum with vinyl wall covering. Floor finishes also vary and include concrete in the utility rooms, carpet in the corridor/offices, vinyl composition tile in the classroom and ceramic tile in the toilets. In a majority of spaces, the ceiling is composed of two independent assemblies. The first is a suspended acoustic ceiling tile at 8 foot above finished floor and the second is a fire rated gypsum board ceiling at approximately 10 feet. Throughout the existing building, there are various spaces that are not accessible as defined by the Americans with Disabilities Act due to hardware and fixtures.

Existing Mechanical

HVAC

The existing CATM building HVAC systems consists of three residential-style forced air furnaces, a makeup air handling unit, unit heaters, fin-tube radiation, and three exhaust fans. The southwest classroom is heated/cooled with an LP-gas fired forced air furnace with a remote condensing unit (60 MBh heating/2.3 Tons cooling). The southeast office area is heated/cooled with an LP-gas fired forced air furnace with a remote condensing unit (22 MBh heating/1.6 Tons cooling). The northeast office, corridor, and storage/maintenance room is heated/cooled with an LP-gas fired forced air furnace with a remote condensing unit (60 MBh heating/1.4 Tons cooling). A 100% outside-air, electric heat only, makeup air handling unit serves the old cleaning room (at one time a cleaning tank fume hood was in the room connected to a 1,100 CFM rooftop exhaust fan). The male and female latrines in the center of the building and the janitor room are exhausted with a single 710 CFM rooftop exhaust fan. A 600 CFM rooftop exhaust fan provides ventilation cooling for the mechanical room. Electric unit heaters serve the mechanical room and the small northeast storage room. A 1.0 kW electric baseboard radiator provides heat at the north door entryway.

Plumbing

A 1,000 gal LP tank located outdoors east of the building mechanical room serves the three furnaces through a single ½" buried pipe. The tank has a first stage regulator at the tank to regulate the output to 10 psig. A second stage regulator is located at the building entrance to lower the pressure from 10 psig to 7" w.c. (½ psig according to the drawings). The tank does not have a vaporizer. A 30-gal electric water heater serves the building sinks and lavatories. A 2" cold water service main enters underground from the east into the mechanical room and serves the water heater, two building sinks, four lavatories, two urinals, four water closets, two exterior wall hydrants, and a water cooler. A 6" sanitary sewer line, exiting the south end of the building, drains the building waste lines.

Fire Suppression

The building does not have a fire suppression system but does have a fire alarm and detection system.

Other Equipment

A 1-1/2 hp air compressor located in the mechanical room provides compressed air to the storage/maintenance room (and previously to the weapons cleaning room). In the old weapons cleaning room, the degreasing tanks, exhaust hood and emergency eyewash/safety shower have been removed.



Mechanical Room
Figure 1-3

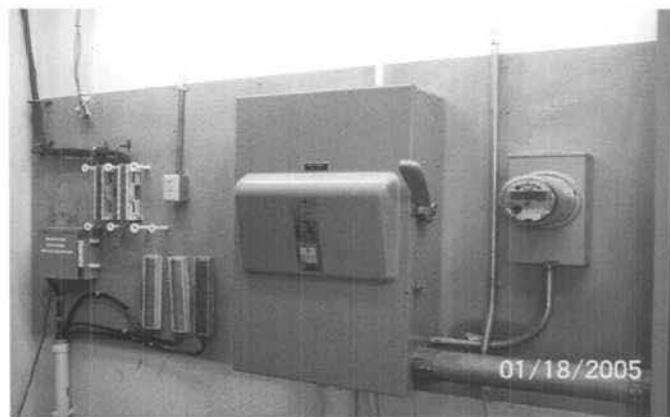


Old Weapons Cleaning Room
Figure 1-4

Existing Electrical

Power

The electrical system in the CATM compound is currently sufficient for operational needs. The compound is fed off of an underground feeder, from the base electrical distribution system. The underground feeder supplies power to a 225kVA pad mounted transformer, located on the east side of the building. The transformer steps down utility voltage of 12.4kV to a user voltage of 480/277V. The building has a 400 ampere service disconnect located in the electrical/mechanical room. From the main disconnect there is a single primary switchboard that feeds several other smaller panelboards.



Electrical Service Disconnect
Figure 1-5

At this time, there is no emergency power supply or connection to an emergency electrical generator.

Lighting

The vast majority of the building interior lighting fixtures consist of lay-in fluorescent troffers. These are sufficient in numbers to provide a good level of light for the intended purpose of this building. There are also a sufficient number of emergency battery back-up egress and exit lighting fixtures. All interior lighting fixtures are in good working order.

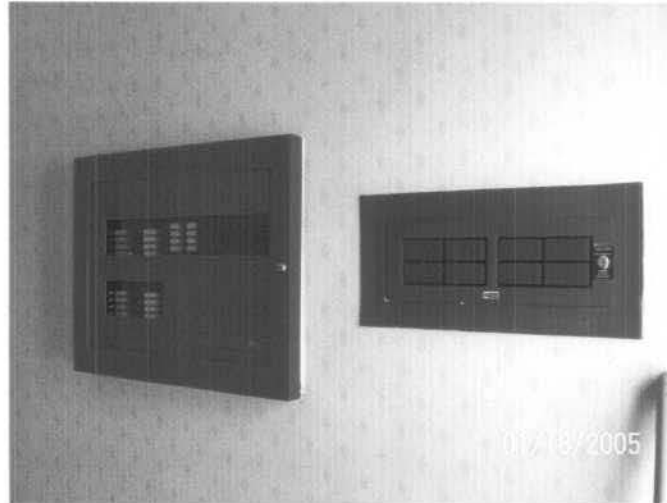


Typical Interior Lighting
Figure 1-6

Exterior lighting is being provided by wall mounted lighting fixtures located over building entrances. There are also several pole mounted lighting fixtures providing light for the open yard and parking lot. These light fixtures were not operating during the site visit, but appear to be in good working order.

Fire Alarm

The existing fire alarm system is an older zoned system that is in good working order. This system has been checked and tested on an annual basis and remains operational. Currently, there are three zones being monitored for this building. The fire alarm panel has several spare zones available for expansion and future capacity.



Fire Alarm Panel
Figure 1-7

Security

At this time, there is no existing security system for this building.

Underground Hazards

The selected site for the construction of the building addition has a pair of underground communication lines routed through it. These lines will need to be identified and located prior to any construction. It is possible that these lines will need to be relocated during the construction process.

Recommendations

Architectural/Structural

Alternative 1

The armory addition to the existing CATM building is approximately 75 foot by 32 foot in plan. The armory addition will be constructed in a fashion similar to the existing building in both structure and aesthetics. The foundation will be a concrete perimeter foundation at a depth of 6-1/2 feet below the 6-inch reinforced concrete slab. Perimeter load bearing walls will be an insulated assembly consisting of 8-inch and 4-inch concrete masonry units. The roof trusses will be prefabricated timber trusses at approximately 2 feet on center with similar loadings as the original structure. The roof trusses at the existing CATM building will be reviewed to determine whether modification to the existing roof trusses are required due to additional building loads introduced by the addition. A combination of fluted and smooth faced masonry units will face the exterior of the addition. The roof, of similar construction materials, will possess the same 4:12 slope and be finished with standing seam metal panels. Dormers will be provided above the north and south doors for protection of the entrances from the possibility of rain and ice falling from the eaves. The areas of the eave, rake, and gable will also be finished in wood to match the existing CATM building.

Functionally, the armory addition is divided into three main parts:

The open Guard Mount area will be a pivotal point for both the armory addition and existing CATM building. Glazed double doors to the south will become the main entrance to the new/existing spaces and glazed double doors to the north will become a route to the existing ranges. Windows will line both the north and south exterior walls of the Guard Mount area to provide daylight. Primary access into the existing CATM building, via the new main entrance, will be through an extension of the existing corridor within the CATM building. A secondary access point will be available directly from the

armory addition and into the cleaning room of the existing CATM building. The Guard Mount area is 20 feet by 30 feet orientated with its length east to west. By orientating the Guard Mount area as such, the doors leading into the armory addition are held back from the windows in the existing CATM building lending privacy to the offices on either side. The additional length of exterior wall also allows for the potential of more daylight into the space and an exterior covered area for use even in inclement weather.

As opposed to the Guard Mount area, the Class A Vault will be a closed space. The vault will be designed for secure storage and distribution of its contents. A single Class V vault door and two issue windows with lockable shutters will be the only penetrations through its perimeter, masonry walls. The Class A Vault will be capped by an 8" pre-cast, pre-stressed hollow core concrete slab and possess no direct access to daylight or the exterior. All systems associated with the Class A Vault will be constructed to meet the physical security, time delay requirements against unauthorized entry.

The mechanical/electrical room for the armory addition will be accessible only from the exterior similar to the existing CATM building.

Wall finishes throughout the armory addition will include painted concrete masonry units and gypsum board. Floor finishes will be concrete treated with a sealer in all areas and an abrasive for traction within the Guard Mount area. Ceilings will be at a height of 10 feet above the finish floor and be painted concrete and gypsum board. For artificial illumination, lights will be hung from the 10-foot ceilings to an 8-foot level and ductwork will be exposed. The walls will be painted white up to 8 feet with black paint above. The ceiling, ductwork and conduit will also be painted black. The paint scheme will create the feel of a ceiling without the expense and allow the facility to adapt to future uses without excessive demolition. The armory addition and connection to the existing CATM building will comply with accessibility as defined by the Americans with Disabilities Act.

Alternative 2

The armory addition to the existing CATM building is approximately 66 foot by 32 foot in plan. The armory addition will be constructed in a fashion similar to the existing building in both structure and aesthetics. The foundation will be a concrete perimeter foundation at a depth of 6-1/2 feet below the 6-inch reinforced concrete slab. Perimeter load bearing walls will be an insulated assembly consisting of 8-inch and 4-inch concrete masonry units. The roof trusses will be prefabricated timber trusses at approximately 2 feet on center with similar loadings as the original structure. The roof trusses at the existing CATM building will be reviewed to determine whether modification to the existing roof trusses are required due to additional building loads introduced by the addition. A combination of fluted and smooth faced masonry units will face the exterior of the addition. The roof, of similar construction materials, will possess the same 4:12 slope and be finished with standing seam metal panels. Dormers will be provided above the north and south doors for protection of the entrances from the possibility of rain and ice falling from the eaves. The areas of the eave, rake, and gable will also be finished in wood to match the existing CATM building.

Functionally, the armory addition is divided into three main parts:

The open Guard Mount area will be a pivotal point for both the armory addition and existing CATM building. Glazed double doors to the south will become the main entrance to the new/existing spaces and glazed double doors to the north will become a route to the existing ranges. Windows will be placed at the north and south exterior walls of the Guard Mount area to provide daylight. Primary access into the existing CATM building, via the new main entrance, will be through an extension of the existing corridor within the CATM building. A secondary access point will be available directly from the armory addition and into the cleaning room of the existing CATM building. The Guard Mount area is 20 feet by 30 feet orientated with its length north to south. By orientating the Guard Mount area as such, the armory addition becomes a simple rectilinear form.

As opposed to the Guard Mount area, the Class A Vault will be a closed space. The vault will be designed for secure storage and distribution of its contents. A single Class V vault door and two issue windows with lockable shutters will be the only penetrations through its perimeter, masonry walls. The Class A Vault will be capped by an 8" pre-cast, pre-stressed hollow core concrete slab and possess no direct access to daylight or the exterior. All systems associated with the Class A Vault will be constructed to meet the physical security, time delay requirements against unauthorized entry.

The mechanical/electrical room for the armory addition will be accessible only from the exterior similar to the existing CATM building.

Wall finishes throughout the armory addition will include painted concrete masonry units and gypsum board. Floor finishes will be concrete treated with a sealer in all areas and an abrasive for traction within the Guard Mount area. Ceilings will be at a height of 10 feet above the finish floor and be painted concrete and gypsum board. For artificial illumination, lights will be hung from the 10-foot ceilings to an 8-foot level and ductwork will be exposed. The walls will be painted white up to 8 feet with black paint above. The ceiling, ductwork and conduit will also be painted black. The paint scheme will create the feel of a ceiling without the expense and allow the facility to adapt to future uses without excessive demolition. The armory addition and connection to the existing CATM building will comply with accessibility as defined by the Americans with Disabilities Act.

Existing CATM Building

Regardless of the Alternative chosen for the armory addition, various work should be performed on the existing CATM building as well. The exterior of the CATM building will be fitted with a standing seam metal roof to match the addition. The roof trusses and CMU walls at the existing CATM building will be reviewed to determine whether modification to the existing roof trusses are required due to additional building loads. The interior of the building will have minor retrofits to its existing arrangement for both function and accessibility requirements. The existing office space will be reduced in length by 5-1/2 feet to adjoin the armory addition to the corridor of the existing CATM building. This new extension of the corridor will have a doorway cut into the masonry to the west and the existing door removed to the east. The door once leading from the cleaning room to the office space will be removed and a new door will be placed in the northeast corner of the offices. The cleaning room will have a doorway cut into the existing masonry at the

southwest corner of the room. This opening will be cut wider to allow for the installation of an interior window alongside the door to provide daylight into that space. Finishes, such as carpet and ceiling tiles, will be reinstalled upon completion of construction. Vinyl wall coverings will be removed as necessary and terminated at the nearest corner and the modified walls will be painted to match adjacent finishes. Various upgrades to door hardware will be introduced as well as toilet accessories to provide accessibility throughout the existing building. These features will include door levers, grab bars, lever faucets, pipe insulation, and a high/low electric water cooler.

Mechanical

HVAC

Based upon the HVAC equipment installed in the CATM building, the heating requirements average to approximately 60 Btu/hr/Ft² and cooling requirements average to approximately 25 Btu/h/Ft². These figures are within the typical range for this type of construction and in this climate. Assuming similar construction and heating/cooling requirements in the new Armory addition, the vault area will require 80 MBh heating/2.75 Tons cooling and the guard mount area will require 40 MBh heating/1.5 Tons cooling. Total heating required is approximately 120 MBh and total cooling is approximately 4.25 Tons cooling (the actual loads may be larger depending on the amount of outdoor air required for ventilation to meet ASHRAE-62). The existing CATM building equipment does not have additional capacity to handle these loads. A new forced air furnace located in a new mechanical room will be required to serve this load. The unit will be LP-gas fired and use a split DX system with a remote condensing unit. The unit will be designed as a two-zone system using a variable speed drive fan motor and multiple stages of heating and cooling to match the heating/cooling requirements for each zone.

Plumbing

The new Armory addition does not require any domestic cold water, hot water, sanitary sewer, or storm sewer piping. The existing buried ½" LP gas line and pressure regulators will be upsized to handle the additional capacity. A new ½" LP gas line will be routed above the ceiling from the existing mechanical room to the new mechanical room.

Fire Suppression

The new Armory addition will require a wet-type sprinkler system in both the vault and the guard mount area installed in accordance with NFPA 13. According to Appendix B of UFC 3-600-01 Fire Protection Engineering for Facilities, the building is classified as Ordinary Hazard Group 1 Occupancy. Table 4-1 of this same code, requires the sprinkler system to be have a design density of 6.1 L/min/m² (0.15 GPM/ft²), design area of 280m² (3,000 ft²) and a hose stream allowance of 1900 L/min (500 GPM) for a duration of 60 minutes. The required fire water demand for the building is estimated at 770 GPM. A new 6" fire water main will connect to the existing 10" water main located south of the building. The 6" fire water main will be routed underground and into the new mechanical room to a new fire water riser with alarm valve, test valves, and zone flow switches. The siamese connection for the building will be located on the exterior south side of the building in a location suitable for fire truck access.

Other Equipment

At this time, there are no provisions for installing a new exhaust hood, degreasing tanks or an emergency eyewash/shower in the renovated weapons cleaning room.

Civil

Parking Lot and Site Improvements

The proposed parking lot will be bituminous asphalt pavement with concrete curb and gutter. The proposed parking lot will include spaces for an additional 27 vehicles plus two handicap spaces. The existing parking lot will be modified to provide parking for 41 vehicles plus two handicap spaces.

The site will also include a bus turnaround and drop-off loop south of Building 669. A concrete apron will be installed along the south side of the new addition. The concrete apron will provide a location for sighting equipment and for assembling during good weather. The site work will include installation of a series of new concrete sidewalks and site grading to accommodate the new parking lot and other site improvements. The dumpster screen will be located on the drop-off loop to provide access to the dumpster without subtracting from the number of parking spaces. The flagpole will remain in its current location. The site improvements comply with the height restrictions for the adjacent airfield.

Site Drainage Improvements

The site will continue to drain to the east and to the southeast. The proposed parking lot area will drain into a drainage swale that will drain into the existing system. The new addition to Building 652 (CATM) will require the site to be graded to provide drainage from behind (North) the building. The ponding that is reported to occur southwest of the CATM will be addressed through the site grading plan. It is assumed that the additional parking lot and site improvement will not overburden the current drainage system. Modification of the drainage system south of the facility is beyond the scope of this project.

Landscape

The proposed landscape improvements for the Armory Addition are intended to enhance the building architecture as well as promote an attractive public appearance. After a thorough site inventory and analysis, the design reflects the following goals: enhance loop drive appearance, channel pedestrian traffic, comply with standards outlined in the draft architectural and landscape compatibility guide, blend new enhancements into surrounding landscape, reduce maintenance concern, and comply with government regulations.

Design Character

Walkways will be enhanced with shrub materials to help define the pedestrian corridor. Hardy perennial plantings will be added at sidewalk intersections to provide a colorful punctuation to these areas. Native ornamental trees will provide color and pedestrian scale aesthetic appeal. Native shade trees that are salt tolerant will be planted to continue the parking lot tree row character along the south side of the new parking lot extension. Plantings will comply with height restrictions associated with the adjacent airfield.

Reduce Maintenance Concerns

The planting palette shall be limited to species that minimize maintenance requirements, such as, heavy trimming, watering, and cutting. The palette shall also include only native drought and heat tolerant species. The draft *Architectural and Landscape Compatibility Guide* provides an extensive list of plant material that will guide the selection of appropriate species. All disturbed area will be sodded. New sidewalks will be 8' wide to maximize pedestrian space and to minimize damage to the adjacent landscape from snow removal operations.

Electrical

Power Improvements

The existing electrical system will handle the additional building load. The electrical/mechanical room located on the east side of the existing building currently has sufficient spare electrical capacity to handle the building addition. A single 480 volt, 3 phase feeder circuit will be routed to the new building addition to power all electrical loads. A step-down transformer will be required, but with the small loads could be included in a single panelboard. The new building addition will contain a dedicated electrical/mechanical room for locating all new panelboards and electrical equipment.

The Air Force has determined the building addition to be a critical facility. This designation requires an electrical generator, automatic transfer switch, and emergency panelboard capable of handling the required emergency systems. At this time, the required emergency systems will include lighting for the weapons vault, lighting for the guard mount area, a source of dedicated power for the fire alarm system, and a source of power for the security system.

A new emergency electrical generator will be located on the east side of the existing building, and connected to an automatic transfer switch located in the existing electrical/mechanical room. The emergency feeder line will be routed overhead to an emergency panelboard located in the electrical/mechanical room of the new building addition.

The following codes and standards will be used in the design process:

NFPA-70, NFPA-72, NFPA-780, along with applicable AFI's, DOD manuals, and Military handbooks.

Lighting Improvements

The new building addition will have an industrial appearance. The selected lighting fixtures will be appropriate for this type of area. Selected lighting fixtures will most likely include chain hung fluorescent fixtures, ceiling mounted fluorescent fixtures, exterior building lighting, wall mounted egress lighting, and wall mounted exit lighting. Additional pole mounted lighting fixtures will be added for the parking lot expansion. All of the selected interior lighting fixtures for the new building addition will be connected to the emergency power panelboard.

If the normal power supply is interrupted, the emergency generator will be capable of supplying power for the new building addition lighting fixtures. This will allow the weapons

vault and guard mount area to remain operational during disruption in the normal power delivery system.

Fire Alarm Improvements

The existing building fire alarm system currently has sufficient spare capacity to handle the additional zoning requirements of the building addition. New fire alarm devices will be installed to provide sufficient coverage for the new building addition. New fire alarm devices will include smoke alarms, heat detectors, along with flow and tamper switches for the fire suppression system. The existing fire alarm system power supply will be re-fed from the new emergency panelboard.

If the normal power supply is interrupted, the emergency generator will be capable of supplying power for the complete fire alarm system. This will allow the weapons vault and guard mount area to remain operational during disruption in the normal power delivery system.

Security Improvements

There is currently no existing security system for the CATM complex. A new security system will be installed for the new building addition. The new security system will be specifically designed for the weapons vault area, and will contain sufficient devices to monitor all door/window openings, motion detectors, and operator duress stations. The specifications will include requirements for the contractor to install all wiring and mounting devices, with the Air Force to provide the final connections.

Because of the strict security requirements for this area, a secure internet cable (SIPRNET) will have to be installed from the new building addition to building 102. The contractor will install this cable through existing underground duct bank, with the Air Force making the final connections.

If the normal power supply is interrupted, the emergency generator will be capable of supplying power for the complete building security system. This will allow the weapons vault and guard mount area to remain operational during disruption in the normal power delivery system.

Grounding/Lightning Protection

At this time, the Air Force has determined that there will be an on-hand ammunition storage located in the weapons vault. This will mandate that an extensive grounding system be installed for both the electrical power system and the building structure as well. The electrical power system grounding conductor will be bonded to all metal parts of the power system and the building structure. The building structure will include a lightning protection system located on the roof of the structure. The lightning protection system will also be bonded to all metal parts of the structure, and finally to a ground ring that will surround the building.

Unresolved Design Issues

The following items need to be discussed and clarified before proceeding with the design.

Architectural / Structural

- Vault Ceiling
 - Are there any specific regulations that would prohibit the use of a pre-cast, hollow core ceiling above the Class A vault?

Electrical

- Size and location of the Emergency Electrical Generator.
 - Are there any specific regulations that would dictate the location for the generator?
 - Other than lighting for the interior portion of the new building addition, fire alarm systems, and security system, are there any other loads expected for the generator?
- Length and routing of the secure cable connection (SIPRNET) cable required for the security system.
 - The secure cable (SIPRNET) is intended to be routed from the new building addition to building 102. Building 102 is located on the opposite side of the base. Are there any cable sizing requirements for this distance?
 - Is there a preferred routing of this cable? Is it possible to tie into a closer building?
- There is a pair of existing underground communication lines that are routed through the construction site of the building addition.
 - Are the communication lines still active and in use?
 - Can the Air Force locate these lines for exact reference?
 - Would relocating these lines prior to this contract be considered by the Air Force?

Mechanical

- Does the weapon cleaning room require a new exhaust hood, ~~degreasing tanks and an emergency eyewash/shower station~~? If so, what are the hood and tank requirements?
- Should the compressed air lines be extended into the weapons cleaning room and drops with air valves be provided?
- Does the Base have a preference for the manufacturer of the new furnace, condensing unit, and temperature controls?
- Does the Base require connection of the temperature controls system to a central energy management system or at least provisions for a future connection via internet dial-up or network communications?
- Is exposed supply and return duct acceptable for the Armory and Guard Mount area or should an acoustical tile ceiling conceal the duct (or at least a gypsum board chase constructed around the duct)?

Civil

- Based on conversations during the site visit, the existing drainage ditches were indicated to be at capacity. Analysis and modification of the drainage system beyond the limits of the project site is beyond the scope of this project. Does the Base intend to address the reported drainage issues south of the project site? - *Ta//l*
- Are there any stormwater management regulations applicable to this site for stormwater runoff? *Talk to Envir Follow local and state regulations*
www.nddh.com
- The existing parking lot did not have any handicap spaces. ADA requires a minimum of three handicap accessible parking spaces. Are these required or can the Base waive this requirement?

2881

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA }
COUNTY OF GRAND FORKS } SS.By [Signature] of said State and County being
first duly sworn, on oath says:

That { she } is { a representative of the GRAND FORKS HERALD, INC.,

publisher of the Grand Forks Herald, Morning Edition, a daily newspaper of general circulation, printed and published in the City of Grand Forks, in said County and State, and has been during the time hereinafter mentioned, and that the advertisement of

Public Notice armory const.
a printed copy of which is hereto annexed, was printed and published in every copy of the following issues of said newspaper, for a period of 2 time (s) to wit:

<u>5-5</u>	Yr. <u>05</u>	Yr. _____
<u>5-7</u>	Yr. <u>05</u>	Yr. _____
_____	Yr. _____	Yr. _____
_____	Yr. _____	Yr. _____

and that the full amount of the fee for the publication of the annexed notice *inures solely* to the benefit of the publishers of said newspaper; that no agreement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever and the amount of said fee is \$ 20.70;

That said newspaper was, at the time of the aforesaid publication, the duly elected and qualified Official Newspaper within said County, and qualified in accordance with the law of the State of North Dakota to do legal printing in said County and State.

Publication Fee \$ 20.70

ELAINE FAWCETT

NOTARY PUBLIC

STATE OF NORTH DAKOTA

My Commission Expires: Feb. 7, 2007

Subscribed and sworn to before me this 11 day ofMay A.D. 05[Signature]
Notary Public, Grand Forks, ND

News

Exchange Parking Lot Closed

The base exchange parking lot will be closed for reconstruction starting Monday. Construction is scheduled to be complete by July 13. During this time, alternate parking will be available in the Burger King parking lot. Exchange patrons are asked to watch for and follow the alternate parking signs along Holzapple Street.

For more details, call Mr. Jim Rosinsky at 747-4612.

Scholarship, Angel Award Banquet

The 6th Annual Scholarship and Angel Award Banquet is Tuesday at the Northern Lights Club.

The guest speaker will be Dr. Gordon Henry.

Social hour begins at 6 p.m. with dinner at 6:30 p.m. The featured meal will be vegetarian or meat lasagna, salad and fresh rolls. Cost is \$8 for club members and \$10 for non-members.

Reserve your seat by May 13 by contacting Cathy Meyer at (218) 779-7756 or via email at ocsreserve@yahoo.com.

Reynolds Park honors Active Duty and Vets

A celebration honoring veterans and those currently serving in the military will be held at Central Valley High School May 22 at 2 p.m.

The school is located off of Highway 81 between Reynolds and Buckston. Military memorabilia from World War I through Vietnam will be on display courtesy of "The Dakota

Mobile Military Museum."

Weather permitting there will be a flyover of vintage warplanes from those who are and have served in the Fargo Air Museum at 2:05 p.m. Following the flyover there will be a program honoring the military.

Veterans and active duty members who pre-register will receive a medal in honor of their service to the nation.

This event is open to the public with 4-H activities and a large playground for kids. A light meal will be provided at 5 p.m.

To register, write to Reynolds American Legion, Box 51, Reynolds N.D. 58275. For details call Mr. Kendall Gjelsnes at (701) 847-3042.

Commissary Case Lot Sale

The base commissary is having a case lot sale today through Saturday from 10 a.m. to 5 p.m. For details call Stephanie Crouch at 747-3083 ext 318.

Public Notification

Grand Forks Air Force Base has proposed the construction of an addition to the combat arms training and maintenance facility; an armory with parking. An environmental assessment has been conducted and a finding of no significant impact has been determined for the action.

Anyone interested in viewing the support documents to this action should contact the 319th Air Refueling Wing Public Affairs office within the next 30 days at (701) 747-5017, or <http://public.grandforks.amc.af.mil/>.

is achievement, the 905th will be posting a reunion, June 3rd - 5th, for those who are and have served in the

The 905th is also hosting a banquet the Northern Lights Club, Saturday June 4th, featuring guest speaker Col. (ret) Richard E. Fitzhugh, USAF, a former "tanker driver" and a business development manager for the Boeing Corporation. Social hour starts at 6 p.m. followed by a buffet dinner. The cost of the buffet is \$18 per person. To attend RSVP by May 24 to Capt. Chris Thompson at 747-3450.

Twining School Carnival

The Annual Twining School Spring Carnival today from 5 to 7 p.m. There will be a jumpy castle, carnival games, food and prizes.

Campaign Medals Not Yet Authorized

Guidance for the wear of the Afghanistan Campaign Medal and Iraq Campaign Medal from Air Force Personnel Center has not been finalized yet. Until that time military members are not authorized to wear these two medals. For details call Mr. Todd Erickson at 747-5222.

Secret Shoppers

Secret Shoppers are needed to help evaluate Services facilities including the Bowling Center, Golf Course and many more.

For more information, contact: 319th Services Marketing at 747-3268.

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Public Notices

ABSTRACT OF STATEMENT
FOR THE YEAR ENDING
DECEMBER 31, 2004
of the

Reliance	
Life Insurance Company	
Delaware	
Total Assets	\$9,336,035
Total Liabilities	155,457
Common Capital Stock	2,500,000
Preferred Capital Stock	0
Aggregate write-ins for other	
than special surplus	0
Surplus Notes	0
Gross paid in and contributed	
surplus	5,597,063
Aggregate write-ins for special	
surplus fund	0
Unassigned funds (surplus)	1,083,515
Less treasury stock, at cost:	
# shares common	0
# shares preferred	0
Surplus as regards	
policyholders	9,180,578
Total Liabilities, Capital	
and Surplus	9,336,035

NORTH DAKOTA BUSINESS ONLY
FOR THE YEAR 2004

LIFE & ANNUITY	
Total Direct Premiums Written	0
Total Direct Losses Paid	0

ACCIDENT & HEALTH	
Total Direct Premiums Written	0
Total Direct Losses Paid	0

STATE OF NORTH DAKOTA
OFFICE OF THE COMMISSIONER
OF INSURANCE

I, Jim Poolman, Commissioner of the State of North Dakota, do hereby certify that the foregoing is a true Abstract of Statement, as officially filed by the Company in this office.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of this office at Bismarck, the first day of May, A.D. 2005 (SEAL).

JIM POOLMAN
Commissioner of Insurance

STATE OF NORTH DAKOTA
OFFICE OF THE COMMISSIONER
OF INSURANCECOMPANY'S CERTIFICATE OF
AUTHORITY

WHEREAS, the above corporation duly organized under the laws of its state or country of domicile, has filed in this office a sworn statement exhibiting its condition and business for the year ending December 31, 2004 conformable to the requirements of the laws of this State regarding the business of insurance and

WHEREAS, the said company has filed in this office a duly certified copy of its charter with certificate of organization in compliance with the requirements of insurance law aforesaid.

NOW THEREFORE, I, JIM POOLMAN, Commissioner of Insurance of the State of North Dakota, pursuant to the provisions of said laws, do hereby certify that the above named company is fully empowered through its authorized agents and representatives, to transact its appropriated business of authorized insurance in the state according to the laws thereof, until the 30th day of April, A.D. 2006.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal at Bismarck this first day of May, A.D., 2005 (SEAL).

JIM POOLMAN
Commissioner of Insurance

ABSTRACT OF STATEMENT
FOR THE YEAR ENDING
DECEMBER 31, 2004
of the

Security Benefit	
Life Insurance Company	
Kansas	
Total Assets	\$10,242,646,155
Total Liabilities	9,651,527,927
Common Capital Stock	7,000,130
Preferred Capital Stock	0
Aggregate write-ins for other	
than special surplus	0
Surplus Notes	149,639,346
Gross paid in and contributed	
surplus	0
Aggregate write-ins for special	
surplus fund	900,000
Unassigned funds (surplus)	433,578,882
Less treasury stock, at cost:	
# shares common	130
# shares preferred	0
Surplus as regards	
policyholders	591,118,228
Total Liabilities, Capital	
and Surplus	10,242,646,155

NORTH DAKOTA BUSINESS ONLY
FOR THE YEAR 2004

LIFE & ANNUITY	
Total Direct Premiums Written	317,492
Total Direct Losses Paid	0

ACCIDENT & HEALTH	
Total Direct Premiums Written	0
Total Direct Losses Paid	0

STATE OF NORTH DAKOTA
OFFICE OF THE COMMISSIONER
OF INSURANCE

Public Notices

ABSTRACT OF STATEMENT
FOR THE YEAR ENDING
DECEMBER 31, 2004
of the

Reliance Standard	
Life Insurance Company	
Illinois	
Total Assets	\$2,420,
Total Liabilities	2,095,
Common Capital Stock	6,
Preferred Capital Stock	30,
Aggregate write-ins for other	
than special surplus	2,
Surplus Notes	
Gross paid in and contributed	
surplus	33,
Aggregate write-ins for special	
surplus fund	253,
Unassigned funds (surplus)	
Less treasury stock, at cost:	
# shares common	
# shares preferred	
Surplus as regards	
policyholders	325,
Total Liabilities, Capital	
and Surplus	2,420,

NORTH DAKOTA BUSINESS ONLY
FOR THE YEAR 2004

LIFE & ANNUITY	
Total Direct Premiums Written	
Total Direct Losses Paid	

ACCIDENT & HEALTH	
Total Direct Premiums Written	
Total Direct Losses Paid	

STATE OF NORTH DAKOTA
OFFICE OF THE COMMISSIONER
OF INSURANCE

I, Jim Poolman, Commissioner of the State of North Dakota, do hereby certify that the foregoing is a true Abstract of Statement, as officially filed by the Company in this office.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of this office at Bismarck, the first day of May, A.D. 2005 (SEAL).

JIM POOLMAN
Commissioner of Insurance

STATE OF NORTH DAKOTA
OFFICE OF THE COMMISSIONER
OF INSURANCECOMPANY'S CERTIFICATE OF
AUTHORITY

WHEREAS, the above corporation duly organized under the laws of its state or country of domicile, has filed in this office a sworn statement exhibiting its condition and business for the year ending December 31, 2004 conformable to the requirements of the laws of this State regarding the business of insurance and

WHEREAS, the said company in this office a duly certified copy of its charter with certificate of organization in compliance with the requirements of insurance law aforesaid.

NOW THEREFORE, I, JIM POOLMAN, Commissioner of Insurance of the State of North Dakota, pursuant to the provisions of said laws, do hereby certify that the above named company is fully empowered through its authorized agents and representatives, to transact its appropriated business of authorized insurance in the state according to the laws thereof, until the 30th day of April, A.D. 2006.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal at this first day of May, A.D., 2005 (SEAL).

JIM POOLMAN
Commissioner of Insurance

ABSTRACT OF STATEMENT
FOR THE YEAR ENDING
DECEMBER 31, 2004
of the

Security Financial	
Life Insurance Company	
Nebraska	
Total Assets	\$765,
Total Liabilities	686,
Common Capital Stock	
Preferred Capital Stock	
Aggregate write-ins for other	
than special surplus	
Surplus Notes	
Gross paid in and contributed	
surplus	
Aggregate write-ins for special	
surplus fund	72,
Unassigned funds (surplus)	
Less treasury stock, at cost:	
# shares common	
# shares preferred	
Surplus as regards	
policyholders	
Total Liabilities, Capital	
and Surplus	686,

NORTH DAKOTA BUSINESS ONLY
FOR THE YEAR 2004

LIFE & ANNUITY	
Total Direct Premiums Written	
Total Direct Losses Paid	

ACCIDENT & HEALTH	
Total Direct Premiums Written	
Total Direct Losses Paid	

STATE OF NORTH DAKOTA
OFFICE OF THE COMMISSIONER
OF INSURANCE

Public Notices

AIR FORCE BASE
PUBLIC NOTIFICATION

Grand Forks Air Force Base has proposed the construction of an addition to the combat arms training and maintenance facility - an armory with parking. An environmental assessment has been conducted and a finding of no significant impact has been determined for the action.

Anyone interested in viewing the support documents to this action should contact the 319th Air Refueling Wing Public Affairs Office within the next 30 days at (701) 747-5017, or <http://public.grandforks.af.mil/>.

(May 5, 7, 2005)

IN DISTRICT COURT,
GRAND FORKS COUNTY,
NORTH DAKOTA

In the Matter of the Estate of
Sybil D. Morris, Deceased

NOTICE AND ORDER
OF HEARING ON PETITION FOR
FORMAL PROBATE OF
WILL AND APPOINTMENT OF
PERSONAL REPRESENTATIVE
IN AN UNSUPERVISED ADMINISTRATION
Probate No. 05-P-0053

It is Ordered and Notice is hereby given that on the 1st day of June, 2005, at 4:00 p.m., a hearing will be held in the above named Court, in Grand Forks, North Dakota, in a proceeding for the formal probate of an instrument purporting to be the Last Will and Testament; and for the appointment of Nancy A. Benson, whose address is 114 Sleepy Hollow, Grand Forks, ND 58201, as Personal Representative of the above referenced matter in an unsupervised administration. Any objections must be filed with the Court or raised at the hearing. If proper, and if no objections are filed or raised, the Personal Representative will be appointed with full power to administer the estate, including the power to collect all assets, to pay all legal debts, claims, taxes and expenses, to sell real and personal property, and to do all necessary acts for the Estate.

Dated: May 4, 2005,
/s/ Judge of the District Court
Court Administrator

Gerard D. Neil
Attorney ID #03787
GERARD D. NEIL P.C.
418 Third Street NW
P.O. Box 477
East Grand Forks, MN 56721
Telephone (218) 773-0808
Fax (218) 773-2355
Attorney for Estate

(May 7, 14, 21, 2005)

NOTICE OF PUBLIC HEARING FOR
REQUESTS FOR VARIANCE APPEALS FROM
THE ZONING ORDINANCE FOR THE CITY
OF GRAND FORKS, NORTH DAKOTA

Notice is hereby given that the City of Grand Forks Board of Adjustments will conduct a public hearing on Thursday, May 19, 2005, at 10:30 AM in Room A302 of City Hall, on the following appeals:

1. Scott and Mary Tolbert, 1010 22nd Ave S., have made a request for a variance to the accessory building requirements (Section 18-0305 of the Land Development Code) in order to build an addition to the existing detached garage. Legal description: Lot 19, Block 9, Cox's Addition.

2. William Woods, 2102 Belmont Rd, has made a request for a variance to the accessory building requirements (Section 18-0305 of the Land Development Code) in order to build a detached garage. Legal description: Lot 1, Block 3, Hvidston's Subdivision.

3. Travis Kautz, 1118 Belmont Rd, has made a request for a variance to the impervious surface area coverage (Section 18-0209(7) of the Land Development Code) in order to build a detached garage. Legal description: South 50' of Lot 9, Block 2, Andrew's Subdivision.

BY ORDER OF THE CITY OF GRAND FORKS.
BOARD OF ADJUSTMENTS
BEV COLLINGS
SECRETARY
(May 7, 2005)

CITY OF GRAND FORKS
REQUESTS FOR QUOTES

Notice is hereby given that the City of Grand Forks is requesting sealed quotes until 2:00 pm on Monday, May 23, 2005, for the following:
Project #5759 - 2005 Casting Quotes
For more information on the bids and a copy of the bidding documents and specifications, contact Doug Ferrie, City Engineering Department, P.O. Box 5200, Grand Forks, ND 58206-5200 or call 746-2651.

(May 7, 14, 2005)

PUBLIC NOTICE

The Grand Forks Growth Fund will hold a

Public Notices

Emergency Management Agency in Grand Forks County. Motion carried.

The Chair declared a recess of the County Commission Meeting and called the Building Authority Meeting to order.

Myron Knutson, Public Financial Management, addressed the board.

Moved by Malm, seconded by Yahna, to approve a resolution providing for Public Sale, not to exceed \$16,750,000, of Grand Forks County Building Authority Lease Revenue Bonds, Series 2005 adopted on April 19, 2005 by the Authority. Motion carried with Murphy, Malm and Yahna voting aye and Kvasager voting nay. Commissioner Triplett was absent for the vote.

The Chair adjourned the Building Authority Meeting and reconvened the County Commission Meeting.

Todd Mitzel, Icon Architectural Group, addressed the board.

Moved by Yahna, seconded by Malm, to hire CFS Ltd for approximately \$2800 to conduct a site survey for the new Correctional Center. Motion carried.

Moved by Malm, seconded by Triplett, to give the Building Committee the authority to approve purchases, up to \$10,000, on the new Correctional Center without prior County Board approval. Motion carried.

Dan Hill, Sheriff, addressed the board.

Moved by Triplett, seconded by Kvasager, to hire a Resource Officer for the rural Grand Forks County Schools that will be funded with a Safe Schools/Healthy Students Initiative Grant. Motion carried.

Richard Onstad, Highway Department Superintendent, addressed the board.

Moved by Kvasager, seconded by Yahna, to approve a County Road Encroachment and Crossing Permit with Trail Water District on CR 5. Motion carried.

Carole McMahon, Planning and Zoning Administrator, addressed the board.

Stacy Evens, Ag Depot, addressed the board.

Moved by Malm, seconded by Triplett, to approve the Rezoning Permit application by James Weber and Ag Depot Inc. to remove from Zone 3 and include within Zone Industrial a parcel located in the E 1/2 of the NE 1/4, except Railroad property, of Section 1, Township 150 North, Range 51 West, Allendale Township as presented in the plans with the primary dike to be one foot above the highest point on County Highway 6. Motion carried.

Moved by Kvasager, seconded by Malm, to approve an Approach Permit application by Joey Rickett for an access with a 24 inch diameter culvert off County Highway 8 in the SE 1/4 of Section 11, Township 149 North, Range 50 West, Americus Township with final approval to come from Americus Township. Motion carried.

Ken Vein, Director of Garrison Conservancy District, addressed the board.

Moved by Malm, seconded by Yahna, to enter into executive session. Motion carried.

Moved by Yahna, seconded by Kvasager, to end the executive session. Motion carried.

Moved by Malm, seconded by Yahna, to hire Lane Magnuson for the County Planner position, to start May 16, 2005. Motion carried.

Dean Dahl, Information Systems Director, addressed the board.

Moved by Triplett, seconded by Malm, to pay the 2001 and 2002 taxes on parcel number 44-2901-00146-000 in the amount of \$2883.00 because of a clerical error. Motion carried.

Moved by Triplett, seconded by Yahna, to approve the purchase of a Passport Photo Camera in the amount of \$829.00. Motion carried.

Moved by Malm, seconded by Yahna, to approve \$18,100 for the remodeling of the Property and Records workroom and furniture for the Conference Room and County Planner's Office. Motion carried.

Moved by Kvasager, seconded by Yahna, to adjourn. The next meeting will be held on May 3, 2005.

William Murphy, Chairman
Grand Forks County Commission
Debbie Nelson, County Auditor
(May 7, 2005)

00020INVITATION TO BID

Sealed bids for the North Central Correctional & Rehabilitation Center, will be received until 2:00 p.m., May 26, 2005, after which they will be opened and read aloud by the Owner and Architect. The Owner anticipates an immediate award of the contract; however, all bids will be firm and not subject to withdrawal for sixty (60) days.

Bids received after that time will not be accepted. The time is determined by the clock at the Owner's office. It is the responsibility of the bidders to see that mailed or delivered bids are received by the deadline listed above.

Bids will be received at the same time on the

From: 319 ARW/PA (Public Affairs)

Sent: Thursday, June 09, 2005 3:53 PM

To: Strom Diane Civ 319 CES/CEVA

Subject: RE: Public Comments on CATM Addition EA

No e-mails or phone calls, ma'am. We'll send any hard copy comments that we get your way.

Thanks!

Very Respectfully,

Capt Michael Meridith

Chief, Public Affairs

319th Air Refueling Wing

Grand Forks AFB, ND

Phone: (701) 747-5608 DSN: 362-5608

Fax: (701) 747-5022 DSN: 362-5022

E-mail: meridith.michael@grandforks.af.mil

From: Strom Diane Civ 319 CES/CEVA

Sent: Thursday, June 09, 2005 2:03 PM

To: Meridith Michael J Capt 319 ARW/PA

Subject: Public Comments on CATM Addition EA

Did your office receive any public comments on the proposed construction of an addition to the CATM – armory with parking?

The public comment period ended June 7th. Thanks.

Sincerely,

Diane M. Strom

Environmental Impact Analysis Program

319 CES/CEVA, Room 128

525 Tuskegee Airmen Blvd

Grand Forks AFB ND 58205-6434

Phone (701) 747-6394; DSN 362-6394

FAX (701) 747-6155; DSN 362-6155

Diane.Strom@grandforks.af.mil



"Strom Diane Civ 319
CES/CEVA"
<Diane.Strom@grandfo
rks.af.mil>

06/10/2005 08:38 AM

To: <tdwelle@state.nd.us>, <dhildebr@state.nd.us>,
<mpaaverud@state.nd.us>, <jeffrey_towner@fws.gov>
cc: <ccain@state.nd.us>, <sdyke@state.nd.us>, <dglatt@state.nd.us>,
<ppicha@state.nd.us>, <Marie_Nelson@fws.gov>
Subject: Review of EA for CATM Addition

The U.S. Air Force is preparing an environmental assessment (EA) on construction of an addition to the CATM (combat arms training and maintenance) facility, including an armory with parking. Attached is an electronic copy of the EA. Please review the document and identify any additional resources within your agency's responsibility that may be impacted by the action. We respectfully request that your comments be sent, electronically if necessary, to reach our office by June 30, 2005, to:

Environmental Impact Analysis Program

319 CES/CEVA

525 Tuskegee Airmen Blvd

Grand Forks AFB, ND 58205-6434

Your assistance in providing information is greatly appreciated. The larger files are forwarded by separate email. If you have any questions, please call Mrs. Diane Strom at 701-747-6394, or email diane.strom@grandforks.af.mil.

Sincerely,
Diane M. Strom
Environmental Impact Analysis Program
319 CES/CEVA, Room 128
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434
Phone (701) 747-6394; DSN 362-6394
FAX (701) 747-6155; DSN 362-6155
Diane.Strom@grandforks.af.mil

U.S. FISH AND WILDLIFE SERVICE

**ECOLOGICAL SERVICES
ND FIELD OFFICE**

Project as described will have no significant impact on fish and wildlife resources. No endangered or threatened species are known to occupy the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT PLANS FOR REVIEW.

Date

Jeffrey K. Towner
Jeffrey K. Towner
Field Supervisor



Draft EA CATM.doc Draft FONSI.doc Appendix D-signed AF 813.pdf Map, Location Map GFAFB-Appendix A.ppt

Rec 20 Jun 05

From: Strom Diane Civ 319 CES/CEVA
Sent: Friday, June 10, 2005 8:39 AM
To: tdwelle@state.nd.us; dhildebr@state.nd.us; mpaaverud@state.nd.us;
(jeffrey_towner@fws.gov)
Cc: ccain@state.nd.us; sdyke@state.nd.us; dglatt@state.nd.us; (ppicha@state.nd.us);
Marie_Nelson@fws.gov
Subject: Review of EA for CATM Addition

The U.S. Air Force is preparing an environmental assessment (EA) on construction of an addition to the CATM (combat arms training and maintenance) facility, including an armory with parking. Attached is an electronic copy of the EA. Please review the document and identify any additional resources within your agency's responsibility that may be impacted by the action. We respectfully request that your comments be sent, electronically if necessary, to reach our office by June 30, 2005, to:

Environmental Impact Analysis Program
319 CES/CEVA
525 Tuskegee Airmen Blvd
Grand Forks AFB, ND 58205-6434

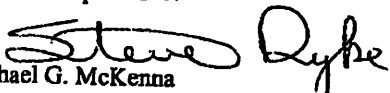
Your assistance in providing information is greatly appreciated. The larger files are forwarded by separate email. If you have any questions, please call Mrs. Diane Strom at 701-747-6394, or email diane.strom@grandforks.af.mil.

Sincerely,
Diane M. Strom
Environmental Impact Analysis Program
319 CES/CEVA, Room 128
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434
Phone (701) 747-6394; DSN 362-6394
FAX (701) 747-6155; DSN 362-6155
Diane.Strom@grandforks.af.mil



North Dakota Game & Fish Dept.
100 N. Bismarck Expressway
Bismarck, ND 58501-5095

We have reviewed the project and foresee no identifiable conflict with wildlife or wildlife habitat based on the information provided.

(fol) 
Michael G. McKenna
Chief, Conservation & Communication Division
Date: 6/30/05



**STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA**

John Hoeven
Governor of North Dakota

North Dakota
State Historical Board

Diane K. Larson
Bismarck - President

Marvin L. Kaiser
Williston - Vice President

Albert I. Berger
Grand Forks - Secretary

Chester E. Nelson, Jr.
Bismarck

Gerold Gerntholz
Valley City

A. Ruric Todd III
Jamestown

Sara Otte Coleman
*Director
Tourism Division*

Kelly Schmidt
State Treasurer

Alvin A. Jaeger
Secretary of State

Douglass Prchal
*Director
Parks and Recreation
Department*

David A. Sprynczynatyk
*Director
Department of Transportation*

John E. Von Rueden
Bismarck

Merlan E. Paaverud, Jr.
Director

June 20, 2005

Diane M. Strom
Environmental Impact Analysis Program
319 CES/CEAVA, Room 128
525 Tuskegee Airman Boulevard
Grand Forks AFB, ND 58025-6434

**NDSHPO REF. : 97-0527 GFAFB/USAF Environmental Assessment and
FONSI for CATM facility, including Armory and Parking Lot**

Dear Sir/Ms.:

We have reviewed draft: "Environmental Assessment" and FONSI for CATM facility at GFAFB, including armory and parking lot, and find them acceptable.

We concur that no survey is warranted and with a "**No Historic Properties Affected**" determination provided the project is of the nature specified and it takes place in the location plotted in the project documentation.

Also, borrow fill, if needed should be derived from an approved source.

Thank you for the opportunity to review the project. If you have questions please contact either Fern Swenson at (701) 328-3575 or Paul Picha at (701) 328-3574.

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)
and
Director, State Historical Society of North Dakota

RECEIVED
BY CEVA DATE 30 JUN 05

Accredited by the
American Association
of Museums



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
1200 Missouri Avenue, Bismarck, ND 58504-5264
P.O. Box 5520, Bismarck, ND 58506-5520
701.328.5200 (fax)
www.ndhealth.gov



June 13, 2005

Ms. Diane Strom
Environmental Impact Analysis Program
319 CES/CEVA
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

Re: Draft EA for Addition to Combat Arms Training & Maintenance Facility
Grand Forks Air Force Base, Grand Forks County

Dear Ms. Strom:

This department has reviewed the information concerning the above-referenced project submitted under date of June 10, 2005, with respect to possible environmental impacts.

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.
3. Projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.
4. All necessary measures must be taken to minimize the disturbance of any asbestos-containing material and to prevent any asbestos fiber release episodes. Removal of any friable asbestos-containing material must be accomplished in accordance with section 33-15-13-02 of the North Dakota air pollution control rules.

Environmental Health
Section Chief's Office
701.328.5150

Air
Quality
701.328.5188

Municipal
Facilities
701.328.5211

Waste
Management
701.328.5166

Water
Quality
701.328.5210

Printed on recycled paper.

Rec 20 JUN 05

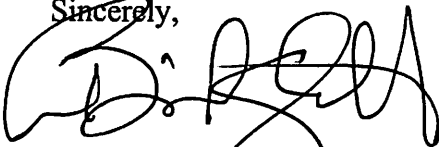
5. Radon - You may want to consider adding radon measurement and control as part of this project. Initial screening tests for radon are relatively inexpensive and usually can be obtained in a couple days. Buildings with radon test results above 4 picocuries of radon per liter of air (pCi/l) should be mitigated to reduce radon levels.
6. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. David Glatt', written over a horizontal line.

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc
Attach.



Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

North Dakota
Department of Commerce

Community Services

Economic

Development & Finance

Tourism

Workforce Development



Community Center

1600 E. Century Ave

Suite 2

PO Box 2057

Bismarck, ND 58502-2057

Phone 701-328-5300

Fax 701-328-5320

www.ndcommerce.com



July 12, 2005

Diane M. Strom
Dept. of the Air Force
319 CES/CEVA, Room 128
525 Tuskegee Airmen Blvd.
Grand Forks AFB, ND 58205-6434

"Letter of Clearance" In Conformance with the North Dakota Federal Program
Review System - State Application Identifier No.: ND050712-0382

Dear Ms. Strom:

SUBJECT: FONSI - Armory Addition to Combat Arms Training & Maintenance
Facility with Parking

The above referenced FONSI has been reviewed through the North Dakota Federal
Program Review Process. As a result of the review, clearance is given to the project
only with respect to this consultation process.

If the proposed project changes in duration, scope, description, budget, location or
area of impact, from the project description submitted for review, then it is necessary
to submit a copy of the completed application to this office for further review.

We also request the opportunity for complete review of applications for renewal or
continuation grants within one year after the date of this letter.

Please use the above SAI number for reference to the above project with this office.
Your continued cooperation in the review process is much appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Boyd".

James R. Boyd
Manager of Governmental Services
Division of Community Services

jml

RECEIVED
BY CeVA | DATE 14 Jul 05

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 319TH AIR REFUELING WING (AMC)
GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

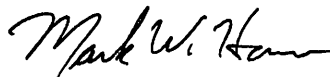
6 July 2005

MEMORANDUM FOR 319 CES/CEV

FROM: 319 ARW/JA

SUBJECT: Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for
Construction of Armory Addition

1. **ISSUE/RECOMMENDATION:** EA and FONSI have been reviewed and are legally sufficient. Recommend 319 CES/CEV signature.
2. **LAW:** National Environmental Policy Act – 32 CFR Part 989
3. **FACTS:** The EA examines various alternatives and environmental impacts of the proposed construction of an armory addition with parking lot for the combat arms training and maintenance facility. In addition, I have also reviewed the finding of no significant impact and finding of no practical alternative and have no corrections.
4. **DISCUSSION:** From a legal viewpoint, the EA and FONSI comply with the requirement of 32 CFR Part 989. The projected environmental impacts are not significant. The FONSI described why the project would not have a significant effect on the human environment or other features of the natural environment.
5. **RECOMMENDATION/CONCLUSION:** Proposed EA and FONSI are both legally sufficient.
6. If you have any questions, I can be reached at ext. 7-3618.



MARK W. HANSON, GS-12, DAF
Chief, General Law