Appendix B-2

SAMPLE STATEMENT OF WORK
FOR
INFRASTRUCTURE PLAN

Hometown AFB, Wyoming

Date:

1.0 GENERAL. This Statement of Work (SOW) describes the requirement for an Infrastructure Plan for Hometown AFB (HAFB), WY. The Infrastructure Plan is a component of the comprehensive planning structure. Its purpose is to combine and analyze the information contained in numerous separate element plans, studies, maps, and documents regarding the infrastructure of the installation and its capacity to sustain development. Information from the Infrastructure component plan is, in turn, combined and analyzed with data from the other three component plans -- Composite Constraints and Opportunities, Land Use, and Capital Improvements -- to form the installation's General Plan.

1.1 SOW CITE. This work will be accomplished under Contract No. Fxxxx-xx-x-xxxx, which has been initiated between HAFB and Contract AE for comprehensive planning services.

1.2 PURPOSE. AFPD 32-10, ***Installations and Facilities,*** **requires installation commanders to "develop base comprehensive ...plans". AFI 32-7062,** ***Air Force Comprehensive Planning,*** **establishes the Infrastructure Plan as a component of the base comprehensive plan and provides a brief description of its content.** ***Master Statement of Work for Preparation of Base Comprehensive Plans for Air Force Installations*** **(hereinafter referred to as the Air Force Master SOW) provides more detailed guidance on preparation of the element plans and studies which contribute to the Infrastructure Plan. AFI 32-7062 and the Air Force Master SOW are both incorporated by reference into this SOW.**

2.0 SCOPE. The contractor will produce an Infrastructure Plan that provides detailed information in the form of text, maps, graphics, and photographs, on infrastructure capacities, locations, and conditions as they affect the physical development of the installation.

2.1 PROJECT SCOPE. Prepare an Infrastructure Plan document that describes, assesses, and analyzes the infrastructure systems on HAFB. These include utility systems, communications systems, navigational aids, and fire protection measures as they apply to installation development. The Plan will contain a narrative and graphic description of each infrastructure system and subsystem, to include locational data, capacities, peak demands, and condition. It will also contain recommendations to correct existing or future deficiencies or shortfalls. As applicable, the following systems

and subsystems will be addressed and analyzed. Others should be added as appropriate.

Utility Systems
Water supply and distribution system
Sanitary sewerage system
Storm drainage system
Electrical distribution system
Central heating/cooling system
Natural gas system
Liquid fuel system
Cathodic protection system
Industrial waste system

Communications Systems
Information transfer system
Telephone switching system
Data communications
Long haul communications
Radio systems
Navigational aid (NAVAID) systems

Fire Protection Systems
Alarm system
Fire suppression systems

2.2 BACKGROUND. HAFB is an Air Force Space Command installation. The host organization is the 999th Missile Wing, whose mission is to "Defend America with the world's most powerful combat ready ICBM force." The installation has a collateral responsibility to develop plans, policies, and procedures that will ensure proper stewardship and management of valuable resources, including government owned or controlled land, facilities, and supporting infrastructure.

2.3 REFERENCE INFORMATION. The contractor's work will be guided by this Statement of Work and the references listed below:

Air Force Policy Directive 32-10, ***Installations and Facilities,*** **20 July 1994.**
Air Force Policy Directive 32-20, ***Fire Protection***
Air Force Instruction 32-1024, ***Standard Facility Requirements***
Air Force Instruction 32-1041, ***Airfield Pavement Evaluation Program***
Air Force Instruction 32-1044, ***Visual Air Navigation Systems***
Air Force Instruction 32-1061, ***Providing Utilities to US Air Force Installations***
Air Force Instruction 32-1062, ***Electrical Power Plants and Generators***
Air Force Instruction 32-1065, ***Grounding Systems***
Air Force Instruction 32-1066, ***Plumbing Systems***
Air Force Instruction 32-1067, ***Water Systems***
Air Force Instruction 32-1068, ***Heating Systems and Unfired Pressure Vessels***
Air Force Instruction 32-1069, ***Gas Supply and Distribution***
Air Force Instruction 32-2001, ***The Fire Protection Operations and Fire Prevention Program***
Air Force Instruction 32-7062, ***Air Force Comprehensive Planning,*** **18 April 1994.**
Air Force Handbook 32-1084, ***Standard Facility Requirements Handbook,*** **31 July 1995**
Air Force Instruction 33-104, ***Base Level Communications Planning and Management***
Air Force Center for Environmental Excellence, ***Master Statement of Work for Preparation of Base Comprehensive Plans for Air Force Installations,*** **18 August 1993.**
Air Force Comprehensive Planning Guides:
Utility Systems Planning
Base Comprehensive Planning Approach and Process

Fire Protection Planning
Long Range Facility Development Planning/Short Range Capital Improvement Program
Communication Systems Planning
Passive Solar Energy Planning
Area Development Planning

3.0 SPECIFICATIONS. Many of the systems to be addressed are documented in separate element plans and supporting studies, such as utility capacity studies, utilities system maps (G-series), Systems Telecommunications Engineer Manager-Base Level (STEM-B) and various other plans, studies, maps, and reports. These are Government furnished materials and are listed in paragraph 3.4. The contractor will review these for content, currency, and accuracy, and will analyze each for its potential impact, positive or negative, on future base development.

3.0.1 In cases where existing documentation is incomplete or non-existent, the contractor will conduct sufficient research to provide a preliminary assessment of the situation. The report will acknowledge the preliminary nature of the assessment and will cite all sources used in its development. Specific recommendations should be made for the accomplishment of additional in-depth studies where needed for better definition of system capacities and locations.

3.0.2 The contractor will also analyze off-installation providers of utilities or services (e.g., sewage treatment, fire protection) and evaluate their capacities to support present or future installation development. Any constraining factors, such as capacity or contractual limits, must be identified.

3.0.3 The contractor will ensure that the Infrastructure Plan is consistent with the other component plans, particularly the Land Use Plan and the Capital Improvements Plan. These other component plans will drive the future requirements for utilities and communications infrastructure. Similarly, the location, condition, and capacities of infrastructure systems can influence the formation of the Land Use and Capital Improvements. The cross-feeding of information among the four component plans must occur on an ongoing basis during their development.

3.0.4 Clear, understandable graphics will be used liberally to provide visual reference to locations of individual utilities and communications systems. Because of paper size limitations on report graphics, only main distribution, collection, or transmission lines will be shown. Detailed engineering information and locations of secondary lines are available on the G- and H- series maps.

3.0.5 The contractor will interview with key installation personnel as well as appropriate regional and local agencies and commercial suppliers to obtain the most current information available. Information contained in the Infrastructure Plan will be current as of the date of the Government's review comments on the 65% submittal.

3.0.6 No classified information will be included in this report, nor will the contractor require access to classified material to perform under this delivery order.

3.1 TECHNICAL REQUIREMENTS. The final plan documents will be 8 1/2" x 11" format with 11" x 17" foldout pages as necessary to accommodate graphics. They will be bound in 3-ring binders which have pockets for cover and spine inserts. Cover and spine inserts will be attractively designed and will be printed in color. They shall contain one or more colored photos or graphics and the following information:

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DATE

In addition to graphics, color and/or high contrast black and white photographs will be used as appropriate to illustrate the subject matter. These will be well composed, avoiding background and foreground distractions (clutter, trash, unsightly vehicles, etc.). Color or black/white photocopy reproduction will be used for all submittals as specified in paragraph 5.1. The text shall be prepared in Microsoft Word for Windows, v. 6.x. Maps/graphics will be prepared in AutoCAD, release 12 or better. Photographs and graphics will be digitized or scanned and will be integrated or linked to the text portions of the document. All photographs and graphic images will be in digital format and contained/stored on a CD-ROM. It is essential that the final product can be easily updated and reprinted by the Government. The contractor shall demonstrate operability of the electronic files on the installation's target system at the 65% submittal. All electronic files will be delivered to the Government at the conclusion of the contract.

3.1.1 The final report will be gathered, collated, drilled (3/8 inch), and inserted into a three ring binder. Cover and spine inserts will be printed in color on cover stock and will be placed into the cover and spine before delivery. Plastic comb binding may be used for interim submittals of the report. Heavy stock paper will be used as tabbed section or chapter dividers.

3.2 CONTRACTOR TASKS.
3.2.1 Task 1: The contractor will describe and assess the water supply, storage, and distribution system on HAFB. This will require review of existing studies and planning documents, interviews with installation utilities engineering and maintenance personnel, research of historic demand data, interviews with off-installation water supplier, and coordination with base fire protection personnel. The existing water system will be evaluated for condition, capacity, and adequacy to meet existing and future demands. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Water System" chapter of the narrative report.

3.2.2 Task 2: The contractor will describe and assess the sanitary sewer collection and treatment system on HAFB. This will require review of existing studies and planning documents, interviews with installation utilities engineering and maintenance personnel, research of historic flow data, and interview with the state NPDES permitting agency. The existing sanitary sewer system will be evaluated for condition, capacity, and adequacy to meet existing and future demands. Deficiencies and shortfalls, as well as

planned or recommended improvements will be identified and documented. The deliverable will be the "Sanitary Sewer System" chapter of the narrative report.

3.2.3. Task 3: The contractor will describe and assess the storm drainage system on HAFB. This will require visual survey, review of existing studies and planning documents, interviews with installation utilities engineering and maintenance personnel, and coordination with the base Environmental Flight. Deficiencies or inadequacies of any drainage features, structures, or holding areas; any adverse downstream effects; and planned or recommended system improvements will be identified and documented. The deliverable will be the "Storm Drainage System" chapter of the narrative report.

3.2.4 Task 4: The contractor will describe and assess the electrical system on HAFB. This includes the commercial power source, user interface, power conditioning requirements, installation power generation facilities, and distribution system. The contractor will review existing studies and planning documents, interview installation utilities engineering and maintenance personnel, visually survey electrical system facilities, interview the commercial power supplier, and research historical demand data. Deficiencies and inadequacies, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Electrical System" chapter of the narrative report.

3.2.5 Task 5: The contractor will describe and assess the central heating and cooling system on HAFB. This will require review of existing studies and planning documents, interviews with installation utilities engineering and maintenance personnel, visual survey of central plant and above-ground distribution and return lines, interview with central plant fuel supplier, and research of historic space and process requirements. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Central Heating and Cooling System" chapter of the narrative report.

3.2.6 Task 6: The contractor will describe and assess the natural gas system on HAFB. This will require review of existing studies and planning documents, interviews with installation utilities engineering and maintenance personnel, interview with the commercial natural gas supplier, and research of historic consumption data. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Natural Gas System" chapter of the narrative report.

3.2.7 Task 7: The contractor will describe and assess the liquid fuels systems on HAFB. This system includes fuel delivery, storage, and distribution facilities. The contractor will review existing plans and studies, interview installation fuels management and engineering personnel, and interview functional users (e.g., operations, transportation) to assess system adequacy. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Liquid Fuels Systems" of the narrative report.

3.2.8 Task 8: The contractor will describe and assess the cathodic protection system on HAFB. This will require review of existing studies and planning documents, and

interviews with installation utilities maintenance and engineering personnel. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Cathodic Protection System" chapter in the narrative report.

3.2.9 Task 9: The contractor will describe and assess the industrial wastewater system on HAFB. This includes industrial wastewater collection, pretreatment and disposal subsystems. The analysis will require review of existing plans and studies, interviews with installation utilities engineering and maintenance personnel, coordination with environmental personnel, and evaluation of compliance with the NPDES permit. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Industrial Wastewater System" chapter in the narrative report.

3.2.10 Task 10: The contractor will describe and assess the communications and NAVAID systems on HAFB. These include the information transfer, switching, data communications, long haul communications, navigational aids and radio subsystems. The analysis will be based on information contained in existing plans and studies, and interviews with installation communications and air traffic control personnel. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Communications Systems" chapter in the narrative report.

3.2.11 Task 11: The contractor will describe and assess the fire protection capabilities on HAFB. This will include discussions of firefighting and crash/rescue facilities, training facilities, hydrant systems, fire suppression systems, high risk areas and facilities, mutual assistance agreements with the local community, and any accessibility issues or concerns regarding on-base facilities. Visual survey, review of existing plans and studies, and interviews with engineering and firefighting personnel will be required. Deficiencies and shortfalls, as well as planned or recommended improvements will be identified and documented. The deliverable will be the "Fire Protection" chapter in the narrative report.

3.3 SITE LOCATION. Hometown AFB is located 23 miles north of Windville, WY, and consists of 2,456 acres. In addition the 999th Missile Wing is responsible for 45 remotely located launch facilities which comprise another 150 acres. These remote sites are not included in this plan. Major organizations to be included in the study are the Hq 999th Missile Wing, and the Headquarters and subordinate units of the 999th Operations Group, 999th Support Group, 999th Logistics Group, and the 999th Medical Group. Additionally, the contractor will interview major tenant units which include the 111th Air Refueling Group; Detachment 55, Air Force Materiel Command; AAFES; and AFCOMS.

3.4 GOVERNMENT FURNISHED MATERIALS. In addition to the references listed in paragraph 2.3 above, the government will provide the following materials:

Hometown AFB Comprehensive Plan, dated June 1986
HAFB Water Distribution System Capacity Study, dated January 1990
HAFB Sanitary Sewer System Capacity and Condition Study, dated March 1989
HAFB Electrical System Upgrade, dated August 1991

HAFB Natural Gas Distribution System Capacity Study, dated November 1993
HAFB Central Heating Plant Modernization Study, dated June 1994
HAFB Communications-Computer Systems Blueprint, Volume 1, dated July 1995
Digitized maps in AutoCAD r.12 format:

- **Map C-1, Base Layout, revised 28 Feb 96**
- **Map G-1, Water Supply Distribution, revised May 1990**
- **Map G-2, Sanitary Sewerage, revised March 1989**
- **Map G-3, Storm Drainage, dated June 1986**
- **Map G-4, Electrical Distribution, revised January 1990**
- **Map G-5, Central Heating/Cooling, revised June 1994**
- **Map G-6, Natural Gas Distribution, revised November 1993**
- **Map G-7, Liquid Fuels, dated June 1986**
- **Map G-8, Cathodic Protection, revised November 1993**
- **Map G-10, Industrial Waste, dated June 1986**
- **Map G-11, Composite Utilities, dated June 1986**
- **Map H-1, Base Wide Communications, dated June 1986**
- **Map H-2, Communication and NAVAID Systems, dated June 1986**
- **Map N, Fire Protection, dated June 1986**

4.0 QUALITY ASSURANCE. The government expects that the final products will be thorough, professional, high quality, well written, and visually attractive. The contractor will be bound by the contents of this statement of work. Any deviations, including those recommended by the government during the production and review process, must be approved by the contracting officer.

4.1 REPORTS AND DELIVERABLES. The contractor will provide a monthly status report to the installation Point of Contact and the Contracting Officer, It will summarize significant activities during the reporting month, progress to date, any problem areas, or other issues that need attention. The report will also explain and support the contractor's invoice for progress payment.

4.2 All deliverables will be submitted in the number of copies and to the offices specified below. The contractor will forward a copy of the transmittal letter for each submittal to the contracting office. All deliveries will be made by express mail or the equivalent.

4.2.1 The first submittal will be at the 35% stage. It will include draft copies of the narrative report, drafts or sketches of report graphics, and one set of proofs of proposed photographs. Graphics and photographs need not be integrated with the text at this point. Sketches or drafts of alternative cover designs and layouts will be presented. This submittal shall be made 60 calendar days following the Kick-off meeting. The Government review period will be 15 days which includes an on-board review at the installation. It is intended that all Government review comments will be provided the contractor at the on-board review meeting. This submittal is to review the Infrastructure Plan for broad direction, focus, format, and general content.

4.2.2 The second submittal will be made at the 65% stage. It will consist of the final draft narrative report with the selected cover design and with report graphics and photographs in final form and inserted into the text document. This submittal shall be

made 60 days after receipt of Government comments on the 35% submittal. The Government review period will be 15 days which includes an on-board review at the installation. It is intended that all Government review comments will be provided the contractor at the on-board review meeting. This submittal will firmly set the direction, content, and format for the final report. The end of the Government review period will be the cut-off date for incorporating new information or providing major redirection to the contractor.

4.2.3 The third submittal will be made at the 90% stage and will incorporate all approved Government review comments from the 65% submittal. It will consist of the pre-final narrative report with print-ready cover and spine inserts, graphics, and photographs. This submittal will be made 45 days following receipt of Government review comments on the 65% submittal. The government review period will be 15 days. At the conclusion of the review period, Government comments will be faxed or express-mailed to the contractor for inclusion in the final document and map. This submittal is intended to be the final review before printing of the report. Only minor editorial or content changes should be made at this point. Upon incorporation of these comments the contractor will proceed with printing and plotting the final documents.

4.2.4 The fourth and final submittal will be made 30 days after receipt of Government review comments on the 90% submittal. The contractor will deliver the final Infrastructure Plan report, AutoCAD files containing the report graphics, Microsoft Word 6.0 files containing the narrative text, and a CD-ROM containing the report photographs. (Alternatively, all report products, including the text, graphics, and photographs, can be delivered on CD-ROM.

5.0 PROJECT SCHEDULE. The total number of calendar days allowed for completion of this contract is 245 calendar days, to include time for printing and delivery to the installation. Review time for each submittal includes transmission of documents both ways and travel for conference both ways. The contractor shall immediately advise the contracting office of any circumstances that would affect completion of this delivery order within the time specified.

EVENT	DAYS FROM NTP	CALENDAR DATE
1. Notice to Proceed (NTP)	0	
2. Kick-off Meeting	5	
3. 35% Complete Submittal	65	
4. Government Review	80	
5. 65% Complete Submittal	140	
6. Government Review	155	
7. 90% Complete Submittal	200	
8. Government Review	215	
9. Final Submittal	245	

5.1 DELIVERABLES.

SUBMITTAL	DELIVERABLES	TO

35% Complete	**5 color photocopies** **5 monochrome photocopies**	**Installation**
65% Complete	**5 color photocopies** **5 monochrome photocopies**	**Installation**
90% Complete	**5 color photocopies** **Original copy of print-ready text, graphics, artwork, photographs**	**Installation** **(Optionally, may be reviewed at contractor's office)**
Final Submittal	**25 color photocopies (or offset printed copies)** **1 Set 3½" computer disks with narrative in Microsoft Word** **1 Set 3½ disks (or data tape) of AutoCAD graphics files** **Original photo prints or slides and 1 CD-ROM with digitized photographs** **All other original materials and artwork**	**Installation**
	5 color photocopies (or offset printed copies)	**MAJCOM**

5.2 VISITS AND MEETINGS. The contractor will attend a kick-off meeting and all review meetings at the installation. The installation Point of Contact will schedule and provide space for all required meetings.

5.2.1 KICK-OFF MEETING. A kick-off meeting will be held at HAFB within 5 working days of Notice to Proceed. The purposes of this meeting are to:

a. Review the project statement of work and ensure mutual understanding of the work, the schedule, and the deliverables;

b. Introduce the Government and contractor personnel associated with the project;

c. Present the contractor's plan for accomplishing the work;

d. Identify any special requirements for interviews, documents, or other information; and

e. Provide the contractor all Government-furnished materials needed to perform the work.

6.0 GOVERNMENT POINTS OF CONTACT. The following are the government points of contact for this delivery order:

Contracting Officer

Name:
Address:
Telephone:
Fax:

Technical Point of Contact:
Name:
Address:
Telephone:
Fax:

Paying Office:
Organization and Office Symbol:
Address:
Telephone:
Fax:

Appendix A

INFRASTRUCTURE PLAN

Outline