

Recommended By:	<u>/S/ Daniel W. Uresk</u>	<u>10/25/01</u>
	Project Leader	Date
Recommended By:	<u>/S/ Robert J. Thompson</u>	<u>10/17/01</u>
	District Ranger	Date
Reviewed By:	<u>/S/ John R. Toliver</u>	<u>12/04/01</u>
	Acting Station Director	Date
Reviewed By:	<u>/S/ William G. Schleining</u>	<u>10/29/01</u>
	Forest Engineer	Date
Approved By:	<u>/S/ John C. Twiss</u>	<u>10/29/01</u>
	Forest Supervisor	Date

LIST OF PREPARERS

Daniel Uresk; Rocky Mountain Research Station Work Unit Project Leader

Robert J. Thompson; Mystic District Ranger

Henry Goehle; Mystic District Fire Management Officer

Craig Kjar; South Zone Engineer

Brian Beam; Civil Engineer

Executive Summary

In July of 1995, as the result of GPRA, the Black Hills National Forest Leadership Team identified the need to reduce operation and deferred maintenance costs, increase management efficiency, and improve public service. To accomplish these goals, the decision was made to combine Ranger Districts and reduce the total number of Districts on the Forest from seven to four. In 1990, the Rocky Mountain Research Station Work Unit identified the need to update aging facilities to continue to provide quality research services to the six national forests and nine national grasslands it serves as well as national and international interests. To accomplish this goal, a new laboratory and office facility is proposed for the Research Station Work Unit.

The Black Hills National Forest and Rocky Mountain Research Station Improvement Act (PL 106-329), enacted October 19, 2000, provides authority to the Forest to sell or exchange specific Forest Service lands in South Dakota with the proceeds being deposited to the Sisk Act (PL 90-171). The facilities to be disposed of have been identified as high maintenance or obsolete and are listed for disposal in the Black Hills National Forest Facilities Master Plan. These Sisk Act funds would be available upon appropriation for purchase of lands in South Dakota and administrative improvements within the Black Hills National Forest. PL 106-329 also authorized \$2.1 million in funding for the Research Station to collocate with one of the Forest's administrative improvements.

The Black Hills National Forest and Rocky Mountain Research Station are proposing to construct a new facility near Rapid City, South Dakota to meet the administrative needs of the Forest Service in the Black Hills and surrounding area. This project was initiated to increase efficiency, visibility, and customer service of several Forest Service Units. The project will result in consolidation of two District Offices, provide updated Research Station facilities, and include space for both Regional Forest Health Management staff and National Law Enforcement staff located on the Black Hills. Collocation of Forest Service Units provides increased efficiencies of operation.

Analysis of facility needs and location was completed in two steps. The first step determined that the facility needs would best be met by constructing a new facility at a new site. The second step determined the best location for the new facility is on the southern edge of Rapid City on the major highway entering the Black Hills. The land will be purchased since there is no National Forest Land in this area.

The new facility at the new location will best serve the Forest Service Units located in the Rapid City area. It will provide easy access for tourists and local publics, enhance the Research Station Work Unit's functions and identity, be efficient for consolidated District activities, reduce deferred maintenance, allow for future expansion, and offer collocation opportunities to other agencies. Total cost of the project is estimated to be \$14 million. This estimate includes the cost of land, building design, construction of office and laboratory facilities, warehouse facilities, heated shop and fire facilities, parking lots, and aesthetic enhancements.

The Fiscal Year 2002 Department of the Interior and Related Agencies Appropriation Act (PL 107-63) includes \$2,588,000 for planning, design, and acquisition of property to support efficient collocation of the Mystic Ranger District and the Rapid City Research Station Work Unit. Planning and design is funded for \$588,000 and property acquisition is funded for \$2,000,000. Initial construction funding will be requested in the fiscal year 2003.

The remainder of this report discusses the Facility Master Plan for the Black Hills National Forest, the specific needs of the Mystic District and Research Station Work Unit, alternatives considered, analysis method, and recommended alternative. Additional supporting information is presented in the Appendices.

Discussion of Proposal

I Background

In July of 1995, as the result of GPRA, the Forest identified the need to reduce operation and deferred maintenance costs, increase management efficiency, and improve public service. To implement this, the Black Hills National Forest Leadership Team made the decision to combine Ranger Districts and reduce the total number of Districts in the Forest from seven Districts to four. Plans have been formalized to physically consolidate District offices, work centers, and storage facilities. In May of 1999, the National Facilities Team (NFT) published the “Facilities Management Strategy” which identified the need to reduce the Forest’s deferred maintenance costs and take a “corporate” approach regarding the management of Forest facilities. The NFT identified the need to dispose of buildings that are no longer being used for their intended purpose, have become obsolete, or have become too expensive to maintain. Where necessary, these buildings will be replaced with new, energy efficient, sustainable facilities. New sustainable facilities will be designed to require less maintenance, keep deferred maintenance costs low, and serve the Forest longer than the previously recognized building life of 50 years for major structures. New facilities will be designed to anticipate and accommodate future expansion needs and to provide opportunity to collocate with other Federal, State and/or local agencies.

The “Facilities Management Strategy” requires a Forest Facilities Master Plan (FMP), which outlines how the Forest will manage existing and future facilities. A letter from Regional Forester Rick Cables dated October 16, 2001, re-emphasized the importance of facilities master planning, specifies the contents of the FMP will include: 1) “visioning” or planning for the future; 2) documentation of the Forest’s planning assumptions on which management decisions will be based; 3) a list of alternatives to achieve the Forest’s goals; and 4) a list of decision criteria to evaluate each alternative. Long-term goals are to be set and the Forest will adopt a strategy to manage facilities as corporate assets.

The benefits of following the recommendations outlined in the “Facilities Management Strategy” and the Forest FMP are as follows:

- **Overall Cost Savings:** The plan of the Black Hills National Forest is to combine 10 existing facilities (including five leased facilities) into five Forest owned facilities. It has been estimated, by implementing this policy, the Forest would save approximately \$1.425 million per year in lease costs (based on figures presented in the Black Hills National Forest Facilities Master Plan). Additional cost savings would also be realized by reducing Facility operation and maintenance costs, administrative support and travel time, by eliminating duplicate services, and by increasing work efficiency when staff groups are physically located together.

- **Better Public Access:** Currently, many of the Forest's offices are difficult for the visiting public to locate and access. It is the strategy of the Forest to locate offices in places that are readily visible and will provide easy access for local communities, business associates, and visitors traveling to the Black Hills.
- **Opportunities to Collocate for Better Service:** Consolidating offices and/or collocating facilities in locations convenient to newly formed Districts will benefit both the Forest and the public by providing opportunities to share facilities with other Forest Service Units, local agencies, State agencies, and/or other Federal agencies.
- **Reduction in Facility Deferred Maintenance:** Two thirds of the facilities on the Forest are over 30 years old. 39% are over 50 years old. Given the Forest's typical maintenance budget, it is impossible to adequately maintain many of these facilities to current standards. Construction of new, energy efficient, sustainable facilities in optimum locations will result in very low maintenance costs, particularly during their early life, and will allow the Forest to dispose of old, high maintenance, substandard buildings. Combining the former Harney and Pactola Ranger Districts to form the Mystic Ranger District and providing a new sustainable facility that will consolidate District management activities into one location will allow the Forest to dispose of 23 high maintenance or obsolete structures (Appendix B; Exhibit A). Building disposal will eliminate \$676,000 of deferred maintenance costs (Appendix B; Exhibit B).

II Purpose and Needs

During the development of the Facilities Master Plan, consultations were held with the Rocky Mountain Research Station's Research Work Unit and Center for Great Plains Ecosystem Research (Research Station Work Unit), the Mystic Ranger District (District), and the Rocky Mountain Regional Office (Region) to identify facility needs for personnel located on the Black Hills. The Research Station Work Unit identified the need for a new office building and laboratory due to inadequacies of their facilities in Rapid City at the South Dakota School of Mines and Technology. The new facility will include modern laboratories and new scientific equipment. The District identified the need to consolidate offices, reduce deferred maintenance costs, and increase operational efficiency. The Region identified needs to provide space for Regional Forest Health Management staff and National Law Enforcement and Investigation staff located on the Black Hills and to provide opportunities to collocate with other agencies. It is essential that facility plans meet the needs of all Forest Service Units and comply with the Black Hills National Forest Facilities Master Plan.

This Preliminary Project Analysis documents the need for a facility and location in the Rapid City area that will meet the objectives of the Black Hills National Forest Facilities Master Plan to serve the needs of the Forest. The proposed facility must not only meet the office and storage space needs of each Forest Service Unit and the Research Station

Work Unit, but must also be located to improve customer service and increase agency efficiency. In addition, other objectives, including increasing agency visibility, reducing deferred maintenance costs, maintaining fire response, and providing expansion capabilities, must be met.

The Mystic Ranger District is responsible for multiple resource management of the Forest. Currently, District activities and program management are being administered from four separate locations as shown on the Map in Appendix A. The Rapid City Office and the Hill City Office are about 25 miles apart. The Pactola Work Center is about 10 miles from the Rapid City Office and 15 miles from the Hill City Office. The District's primary need is to consolidate staff to improve operational efficiencies, eliminate travel between facilities, eliminate duplication of services, and to reduce deferred maintenance costs.

The Research Station Work Unit serves six national forests and nine national grasslands over a six state area, as well as national and international interests. Facilities for the Research Station, located on the campus of South Dakota School of Mines and Technology for over 40 years, have become inadequate and are in need of repair. The existing laboratory facilities do not meet current safety standards and are no longer operational. In addition, the scientific equipment is outdated. As of October 1, 2001 the Research Station Work Unit will be moved to a leased facility in Rapid City. There are no laboratory facilities available at their leased location. The Research Station Work Unit needs updated laboratory and office facilities for its staff in Rapid City.

Regional Forest Health Management staff is responsible for providing technical support to the Forest. National Law Enforcement staff coordinates law enforcement activities with local jurisdictions. Law Enforcement personnel are currently located at the Mystic District Office in Rapid City. However, due to the lack of available space at the Rapid City Office, Regional Forest Health Management staff is temporarily sharing the leased facility with the Research Station Work Unit. Regional Forest Health Management staff and National Law Enforcement staff need adequate office and storage space in order to carry out their work.

Current conditions require that a new or expanded facility be proposed that will:

1. Provide facilities for the Research Station Work Unit to replace outdated laboratory space, equipment, and provide adequate office and storage space;
2. Provide adequate office space, indoor and outdoor storage space, shop/fire cache space, and parking space to effectively consolidate Mystic Ranger District offices into one location;
3. Provide office and storage space for Regional Forest Health Management staff and National Law Enforcement and Investigation staff;

4. Be conveniently located to access the Mystic Ranger District, minimize travel time, and maintain emergency response;
5. Be readily visible and accessible to the visiting public, local communities, Research Station Work Unit and Forest business associates, and employees.
6. Provide space to accommodate future expansion needs such as new or expanded Forest programs, collocation with other Federal, State, and/or local agencies, and future construction of bunkhouse facilities for seasonal/temporary employees.

The Black Hills National Forest and Rocky Mountain Research Station Improvement Act (PL 106-329), enacted October 19, 2000, authorizes the Forest Service to sell or exchange land in South Dakota in order to acquire or construct administrative improvements in the Black Hills. PL 106-329 also authorized \$2.1 million for a new Research Station Work Unit office and laboratory facility to be collocated with one of these Forest Service administrative improvements. The Fiscal Year 2002 Department of the Interior and Related Agencies Appropriation Act (PL 107-63) appropriated funds in the amount of \$2.588 million to the Forest Service to be used for administrative improvements in the Black Hills to support efficient collocation of the Mystic Ranger District and the Rapid City Research Station Work Unit. Pursuant to PL 107-63, the appropriated funds are to be used as follows: planning and design is funded for \$588,000 and, property acquisition is funded for \$2,000,000. Construction funding will be requested in the fiscal year 2003.

Current facilities and employee numbers are presented in Appendix B. Facility requirements for District consolidation and collocation with the Research Station Work Unit are presented in Appendix C.

III Evaluation of Alternatives

The evaluation process for this Preliminary Project Analysis is completed in two parts. First, the facility needs are documented and alternatives to meet those needs are evaluated. Second, alternatives for the location of the facility are evaluated. The proposed facility must be located to serve the Forest Service work units and the public. Based on the alternative analysis, final recommendations for the facility and location are made.

Evaluation of Facility Alternatives: Five alternatives were analyzed: 1) No Action; 2) Lease Office Space; 3) Purchase an Existing Facility; 4) New Construction at the Existing Rapid City Office; and 5) Construct a New Facility at a New Site. The Choosing By Advantages process was used to evaluate alternatives for 1) Availability, 2) Customer Service, 3) Resource Protection, 4) Security, 5) Current Needs, 6) Expansion Capability, and 7) Cost and Efficiency.

Alternative 1 will not be considered since it does not change the current situation. Alternative 1 does not accomplish the goals of the Facilities Master Plan to consolidate facilities and reduce leased space. Alternatives 2 and 3 are not feasible since there are no facilities available at this time that will accommodate the specialized laboratory needs of the Research Station Work Unit. Also, Alternative 2 does not meet the goal of the Facilities Master Plan to reduce leased facilities. Alternative 4 will accomplish the goals of the Facilities Master Plan to consolidate offices and reduce leased space, however, adequate space is not available for future expansion, and access for visitors and business associates will not be improved.

The analysis indicates the construction of a new facility is the best option. The new facility will be designed and constructed to meet the goals of the Facilities Master Plan and to provide a cost effective, energy efficient, sustainable, aesthetically pleasing facility at the best location. Appendix D provides the details of the facility alternatives evaluation process.

Evaluation of Location Alternatives: Development of location alternatives was guided by the need for easy public and business access, access to the Forest, and planned transportation changes in the Rapid City area. These three factors lead to selection of locations on the south side of Rapid City on Highway 16, which is the major access into the Black Hills from Rapid City. Potential sites were limited to three currently available locations: 1) Harney View Estates in Rapid City; 2) Commerford Estates in Rapid City; and 3) Forest Land 20 miles from Rapid City (See Map in Appendix A). The alternatives were evaluated for 1) Capital Costs, 2) Timing, 3) Space Available, 4) Customer Service, 5) Emergency Fire Response, and 6) Security.

Alternative 2 will meet the needs of all Forest Units involved, however, ingress and egress to this site have safety issues for visitors to the Forest. Visitors traveling south on Highway 16 will have to cross north-bound traffic to access this site. Land purchase and development costs will be about the same as with Alternative 1.

Alternative 3 will not require the purchase of land, however, the cost to develop this site will be higher than with Alternatives 1 and 2 since Alternative 3 will require installation of water and sewage systems. Long-term commitment for water and sewage treatment will increase annual operating costs for that site. Alternative 3 is located 20 miles south of Rapid City, and emergency fire response to the north of this site will be compromised. Alternative 3 also has entitlement for transfer of station costs for employees who will be working at this location.

The analysis determined the best location is Harney View Estates located on the west side of Highway 16, south of Catron Boulevard. This site meets the needs for the public, the Forest, the Research Station Work Unit, Forest Health Management, Law Enforcement and Investigation, and Forest Service and Research employees. Appendix E provides details of the location alternatives evaluation process.

IV Final Recommendation/Conclusion

A new facility constructed on the west side of Highway 16 south of Catron Boulevard is the best option. Adequate land is available at the Harney View Estates site to meet the needs of all Forest Service Units that will be located there. A new facility will be constructed that will meet office space, fire response, storage, and laboratory needs of the Forest, the Research Station Work Unit, Forest Health Management, and Law Enforcement and provide for future expansion. This site and facility will provide the best service to the local and traveling public, maintain adequate emergency fire response, consolidate the District workforce, and serve business associates well.

APPENDICES

APPENDIX A - OFFICE LOCATION MAP

APPENDIX B - CURRENT FACILITIES

EXHIBIT A - FACILITIES TO BE CONSOLIDATED

EXHIBIT B - DEFERRED MAINTENANCE COSTS

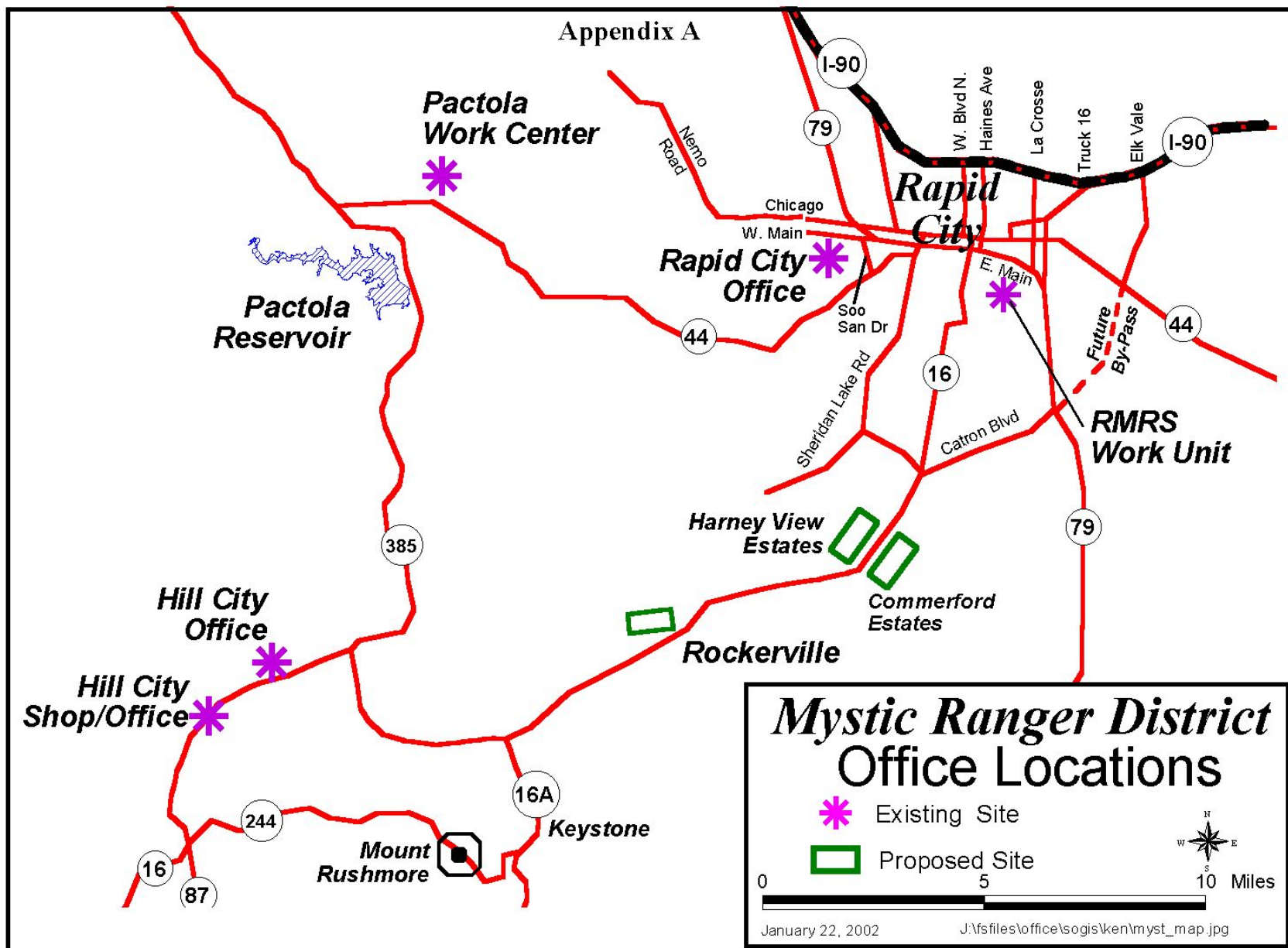
APPENDIX C - FACILITY REQUIREMENTS

APPENDIX D - FACILITY ALTERNATIVES AND EVALUATION

EXHIBIT C - FACILITY LEASE COST ESTIMATE

EXHIBIT D - LEASE VS OWN ANNUAL COST COMPARISON

APPENDIX E - LOCATION ALTERNATIVES AND EVALUATION



APPENDIX B: CURRENT FACILITIES

EXHIBIT A: Facilities to be Consolidated

EXHIBIT B: Deferred Maintenance Costs

Existing Situation/Current Facilities

Table 1 summarizes current facility space and employee numbers for the Research Station Work Unit, Forest Health Management, Law Enforcement and Investigation, and Mystic Ranger District. Since Forest Health Management is currently located in temporary lease space with the Research Station Work Unit, they are shown in that column. Law Enforcement and Investigation are stationed at the Mystic District Rapid City Office and shown in that column.

The Mystic District currently has employees in four locations: The Rapid City Office; the Hill City Office; the Hill City Shop, and the Pactola Work Center (see Map, Appendix A). District staff consists of 48 permanent employees and 8 non-permanent employees plus an additional 40 to 50 seasonal employees that vary depending on annual program size. The permanent employees are stationed at three locations and non-permanent employees are stationed at two locations as shown in the table. Seasonal staff reports primarily to the Rapid City Office and Hill City Shop/Office locations. The seasonal staff is field staff and does not require office space and desks. The seasonal staff uses warehouse or fire engine storage space as assembly points before leaving for field assignments. There are no employees stationed at the Pactola Work Center on a permanent or full time basis. Seasonal fire response personnel utilize the Pactola Work Center for crew and engine staging purposes during the fire season.

There are two National Law Enforcement and Investigation employees stationed in Rapid City at the Mystic District Office. This allows for communications with a large part of the District staff for law enforcement activities. In addition, the location facilitates coordination with local law enforcement and the judicial system.

The Research Station Work Unit currently has 19 employees plus the 4 Forest Health Management employees located at temporary lease facilities. The Research Station Work Unit anticipates addition of 12 seasonal employees/students to complete its workload for this year. Forest Health Management does not anticipate additional seasonal employees.

Exhibit B lists all office and storage facilities involved in the consolidation of the Mystic Ranger District. The Research Station Work Unit is currently in a temporary leased facility with no laboratory. Personnel numbers and office and lab space are presented in Table 1 for the Research Station Work Unit as they existed at the former buildings on the campus of the South Dakota School of Mines.

Table 1. Current Facilities

	Research Station Work Unit	Rapid City Office	Hill City Office	Hill City Shop/Office	Pactola Work Center
Permanent Employees	7	28	10	10	0
Seasonal and Non-Permanent	12	5	3	0	0
Forest Health Management	4				
Law Enforcement		2			
Total Requiring Space	23	35	13	10	0
Office Space	2,750	3,490	1,540	848	200
Hallways, Bathrooms, etc	2,030	2,510	572	852	
Reception	600	425	350		
Conference Room	550	775	240		
Inside Storage	70	1,400	90	350	
Laboratory Space	1,200				
Total Office Space (sq ft)	7,200	8,600	2,792	2,050	200
Fire Cache		1,960		800	
Inside Storage	1,250		1,758	4,180	2,392
Shop/Service	700			1,720	1,996
Total Warehouse (sq ft)	1,950	1,960	1,758	6,700	4,388
Fleet Parking	13,176	19,000		17,000	
Employee Parking		13,800	2,000	3,100	6,000
Visitor Parking		12,600	16,000		
Outside Storage				19,000	26,000
Total Outside Space (sq ft)	13,176	45,400	18,000	39,100	32,000

Mystic Ranger District: The Rapid City Office is located in a residential area and is difficult to locate and access by permittees, contractors, business associates, and visitors to the Forest. The two Hill City offices are located along State Highway 16, about 25 miles southwest of Rapid City. Maintaining three separate offices in two cities leads to confusion among Forest customers and business associates and inefficiency in Forest program management. The Pactola Work Center is in a rural area about 15 miles west of Rapid City (on Highway 44) and is not convenient to the District.

Over the past year, the Mystic District has been consolidating personnel into the Rapid City Office. Currently, about sixty percent of the District's workforce reports to the Rapid City Office, and the remaining forty percent are divided between the two offices in Hill City. The District's workforce lives throughout the Black Hills: most live in or near

Rapid City, five live in the Hill City area, three in the Custer area, two in Sturgis, and one near Hayward. Some employees travel a significant distance to and from work.

In addition to the permanent and temporary term positions, the Mystic District also employs 48 seasonal employees each year. These positions are divided between Hill City and Rapid City. The majority of these positions are field going and do not require office space, however, staging areas are needed.

After consolidation of District offices, a fire crew of five permanent and two temporary term employees plus seasonal employees will be stationed at the Hill City Shop/Office. The remainder of the workforce currently stationed in Hill City will be moved to the consolidated office in or near Rapid City.

Research Station: The Rocky Mountain Research Station Work Unit has been located on the campus of the South Dakota School of Mines and Technology for over 40 years. These facilities have structural problems and do not meet current standards for accessibility and lab safety. It is not feasible to modify or update these facilities, therefore; as of October 1, 2001, the Research Station Work Unit will be relocated in temporary leased facilities in Rapid City. Lab facilities are not available at this leased site. The Research Station Work Unit will share these leased facilities with the Regional Forest Health Management staff, formerly housed at the Rapid City Mystic District Office, until action is taken to collocate with the District.

Forest Health Management: Until October 2001, Regional Forest Health Management personnel stationed in the Black Hills had been working out of the Mystic District Office in Rapid City. Due to inadequate storage and office space at the Rapid City Office, Forest Health Management has relocated in a leased space with the Research Station Work Unit. The Forest Health Management staff is shown in the column with the Research Station staff.

Law Enforcement and Investigation: Currently, there are four members of the Law Enforcement and Investigation staff stationed in the Black Hill from the Washington Office. Two employees are currently located in the Rapid City Office. However, the current Rapid City Office is crowded and does not have adequate office space and secure storage for Law Enforcement and Investigation. The remaining Law Enforcement and Investigation staff is located in Custer and Spearfish and will remain in those locations.

EXHIBIT A

Mystic District/Research Station Current Facilities List.

SITE NAME	BUILDING NAME	GR SQFT	YEAR	OWNERSHIP	CATEGORY
* HILL CITY SHOP/OFFICE	PESTICIDE STORAGE SHED HA WC	96	1986	FOREST SERVICE	STORAGE
* HILL CITY SHOP/OFFICE	EQUIPMENT STORAGE	3885	1941	FOREST SERVICE	STORAGE
* HILL CITY SHOP/OFFICE	SHOP, HILL CITY EQUIP DEPOT	1720	1937	FOREST SERVICE	SERVICE
* HILL CITY SHOP/OFFICE	FLAMMABLE STORAGE, HCED	198	1962	FOREST SERVICE	STORAGE

HILL CITY OFFICE	WAREHOUSE EAST	1408	1938	FOREST SERVICE	STORAGE
HILL CITY OFFICE	STORAGE BLD, HARNEY AD SITE	350	1938	FOREST SERVICE	STORAGE
HILL CITY OFFICE	HARNEY RD OFFICE, AD SITE	2792	1964	FOREST SERVICE	OFFICE

RAPID CITY OFFICE	GARAGE/STOR, PACTOLA AD SITE	1960	1992	FOREST SERVICE	STORAGE
RAPID CITY OFFICE	PACTOLA RD OFFICE, AD SITE	8600	1992	FOREST SERVICE	OFFICE

RESEARCH WORK UNIT	OFFICE	6000		FOREST SERVICE	OFFICE
RESEARCH WORK UNIT	STORAGE/WAREHOUSE	1950		FOREST SERVICE	STORAGE
RESEARCH WORK UNIT	LABORATORY	1200		FOREST SERVICE	LABORATORY

PACTOLA WORK CENTER	STORAGE, POLE BUILDING NEW	1100	1985	FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	SHOP, PACTOLA WORK CENTER	1996	1954	FOREST SERVICE	SERVICE
PACTOLA WORK CENTER	PESTICIDE STORAGE, PACTOLA W.C.	185	1993	FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	PUMPHOUSE, PACTOLA WORK CENR	86	1952	FOREST SERVICE	UTILITY
PACTOLA WORK CENTER	RANGE STORAGE #1	55		FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	RANGE STORAGE #2	50		FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	OFFICE, PACTOLA WORK CENTER	200	1954	FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	DWELLING #1, PACTOLA WORK	680	1954	FOREST SERVICE	CREW QUARTERS
PACTOLA WORK CENTER	DWELLING #2, PACTOLA WORK	760	1954	FOREST SERVICE	CREW QUARTERS
PACTOLA WORK CENTER	DWELLING #3, PACTOLA WORK	420	1954	FOREST SERVICE	CREW QUARTERS
PACTOLA WORK CENTER	ATV STORAGE	208		FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	POLE STORAGE	202		FOREST SERVICE	STORAGE
PACTOLA WORK CENTER	FLAMMABLE STORAGE,PACTOLA WC	63	1966	FOREST SERVICE	STORAGE
PACTOLA MARINA	POWDER CACHE	290	1937	FOREST SERVICE	STORAGE
PACTOLA MARINA	BLASTING CAP CACHE	39		FOREST SERVICE	STORAGE

TOTAL EXISTING	TOTAL OFFICE SPACE	17592
	TOTAL STORAGE/WAREHOUSE SPACE	11669
	TOTAL SHOP/SERVICE	3716
	TOTAL LABORATORY	1200
	TOTAL CREW QUARTERS	1860

TO BE DISPOSED	TOTAL OFFICE SPACE	17592
	TOTAL STORAGE/WAREHOUSE SPACE	7490
	TOTAL SHOP/SERVICE	1996
	TOTAL LABORATORY	1200
	TOTAL CREW QUARTERS	1860

* The Hill City Shop/Office facilities will not be disposed.

EXHIBIT B

Mystic District Deferred Maintenance Costs.

SITE_NAME	BUILD_ID	BUILDING_NAME	FUNDS NEEDED
HILL CITY	3429	PESTICIDE STORAGE SHED HA WC	\$750
SHOP/OFFICE	3520	EQUIPMENT STORAGE	\$27,680
	3567	SHOP, HILL CITY EQUIP DEPOT	\$364,170
TOTAL =			\$392,600
HILL CITY	3421	WAREHOUSE EAST	\$81,660
OFFICE	3450	STORAGE BLD, HARNEY AD SITE	\$22,440
	3577	OFFICE, HARNEY RD AD SITE	\$193,890
TOTAL =			\$297,990
RAPID CITY	3431	GARAGE/STOR, PACTOLA AD SITE	\$3,150
OFFICE	3568	PACTOLA RD OFFICE, AD SITE	\$68,490
TOTAL =			\$71,640
PACTOLA WORK CENTER	3435	STORAGE, POLE BUILDING NEW	\$2,890
	3436	SHOP, PACTOLA WORK CENTER	\$27,550
	3438	PUMPHOUSE, PACTOLA WORK CENR	\$2,900
	3483	RANGE STORAGE #1	\$1,490
	3484	RANGE STORAGE #2	\$840
	3487	ATV STORAGE	\$4,890
	3534	OFFICE, PACTOLA WORK CENTER	\$6,400
	3536	DWELLING #1, PACTOLA WORK	\$94,600
	3537	DWELLING #2, PACTOLA WORK	\$90,850
	3538	DWELLING #3, PACTOLA WORK	\$71,530
	3488	POLE STORAGE	\$2,450
TOTAL =			\$306,390

TOTAL DEFERRED MAINTENANCE TO BE ELIMINATED = \$676,020

The total does not include the deferred maintenance for the Hill City Shop/Office since these facilities will be retained.

APPENDIX C: FACILITY REQUIREMENTS

Facility Requirements

Table 2 outlines projected employee numbers and spatial requirements for a facility that will accommodate Mystic District consolidation and collocation with the Research Station Work Unit, Forest Health Management, and National Law Enforcement and Investigation. Additional space will be required for collocation with other agencies, construction of bunkhouses, and expansion of Forest programs.

Table 2. Employee and spatial requirements for the proposed Mystic Ranger District and Rocky Mountain Research Station Work Unit

	Research Station Work Unit	Mystic District Office
Permanent Employees	6	43
Seasonal and Non-Permanent	8	12
Forest Health Management		4
Nat'l Law Enforcement		2
Scientists/Projects Leaders	6	
Students	8	
Total Requiring Space	28	61
Office Space	2,020	6,880
Hallways, Bathrooms, Mechanical, Utility, etc.	2,230	3,870
Reception		1,300
Conference Room	450	1,300
Office Support	1,170	2,850
Lab Space	2,220	100
Inside Storage	60	510
Total Office Space	8,150	16,810
Fire Cache and Shop		2,000
Inside Storage and Warehouse Requirements	2,600	7,310
Total Warehouse	2,600	9,310
Fleet Parking	11,085	29,850
Employee Parking	Shared	37,935
Visitor Parking	Shared	27,360
Outside Storage	Shared	20,000
Total Outside Space	11,085	115,145

The following are issues, needs, and objectives that are relevant to the proposed Mystic Ranger District and Research Station Work Unit facilities:

1. The proposed facility must be easily accessible and highly visible to the public and business associates, preferably along a major access route into the Black Hills National Forest. Rapid City is the gateway to the Black Hills. Approximately 75 percent of the 3 to 4 million visitors to the Forest enter through Rapid City. The current Rapid City Office location is in a residential area on the west side of town. It is not centrally located nor is it easy to locate or access for visitors traveling to the Black Hills.
2. The proposed facility should be located for timely emergency fire response and to minimize travel time from the office to the field. Current emergency fire coverage for the Mystic Ranger District is provided from the Rapid City Office and Hill City Shop. The proposed facility should be located reasonably close to or within the Forest boundary and along main travel routes in order to maintain emergency response coverage and minimize work travel time.
3. Location of the proposed facility must meet the needs of the Research Station Work Unit to be close to regional air transportation facilities and easily located by Forest and Research Station Work Unit visitors, contractors, and partners.
4. The proposed facility must provide adequate office, storage, laboratory, warehouse, and outside storage space to effectively consolidate the existing Mystic Ranger District, Forest Health Management, Law Enforcement and Investigation, and Research Station Work Unit facilities and operations into one location.
5. The proposed facility must provide adequate parking space for the anticipated workforce, government vehicles, and the visiting public. There will be a large increase in visitors to the office, providing it is located in a highly visible and easily accessed area along a main travel route. Many of these public visitors will be traveling in motor homes and travel trailers. A large parking area must be designed to accommodate this need.
6. The size of the proposed facility and facility site must be flexible for future expansion of resource management programs, increases in employee numbers, and collocation with other State, Federal, and/or local agencies. The programs and workforce on the Forest changes over time. The future construction of bunkhouse facilities on this site should also be considered.
7. The proposed facility must provide a safe and secure environment for all members of the workforce and the visiting public. The proposed facility must also provide a safe and secure place to park and store government owned vehicles and equipment.

8. The proposed facility must incorporate low maintenance, energy efficient, sustainable design and construction. The useful life of the building must be longer than the typical design life of 50 years for major structures.
9. The proposed facility must be aesthetically pleasing. Landscaping and building design must be professional in appearance and compatible with the surrounding area and comply with the “Built Environment Image Guide”.

Mystic District: Based on the projected employee numbers, a consolidated Mystic District office in or near Rapid City will be required to provide office space for 61 Forest Service employees, including Forest Health Management and Law Enforcement personnel. An additional 30 to 35 seasonal employees, not requiring office space, will also be reporting to the proposed facility. Extra space is allocated for a larger reception area and visitor parking to accommodate an increase in visitor usage. Office space and fleet and employee parking space will meet the needs of the projected staffing levels. Fire station/cache facilities will meet the requirements of the NFMAS analysis and the National Fire Strategy, and staging areas for field going personnel must be provided. Five permanent employees plus 15 to 20 seasonal employees would continue to report to the Hill City Shop/Office for the fire organization.

Research Station: The new Research Station Work Unit facility needs are based on an assumed workforce of 28 employees. Space for additional seasonal employees must also be provided. The design of the Research Station Work Unit facility will include updated wet and dry labs, a grow room, a potting room, a weighing room, and adequate office and storage space. The Research Station Work Unit facility must also address disposal of laboratory wastes.

Forest Health Management: Four members of the Regional Forest Health Management staff are currently stationed in the Black Hills. Forest Health Management monitors insect infestation, forest diseases, and the general health of the Forest as a timber producing ecosystem. A location for the proposed facility in or near Rapid City will be central to the Black Hills National Forest and serve Forest Health Management well. The proposed facility will provide the office, water laboratory, and storage space needed for Forest Health Management to do their work effectively and efficiently.

Law Enforcement and Investigation: Two Washington Office Law Enforcement Officers are stationed in the Rapid City urban area that interfaces the Forest. This location allows timely response to the most heavily used area of the Forest and provides the Law Enforcement Officers access to state and local law enforcement and public safety agencies and facilities. Cooperation with local and state law enforcement agencies allows the Law Enforcement Officers to work effectively and efficiently. The proposed facility must provide adequate office and storage space and be conveniently located so Law Enforcement and Investigations can provide the best possible service to the Forest and the public.

APPENDIX D: FACILITY ALTERNATIVES AND EVALUATION

EXHIBIT C: Lease Cost Estimation

EXHIBIT D: Lease vs Own Annual Cost Comparison

I Office Space Alternatives

Alternatives considered should meet the minimum requirements described in Appendix B of this document and meet the objectives of the Facilities Master Plan. Alternatives considered are as follows:

1. **No Action/Continue As Is:** Under this alternative, the Mystic Ranger District will continue to operate out of three office locations and the Pactola Work Center. The Research Station Work Unit and Regional Forest Health Management will remain in leased facilities. National Law Enforcement and Investigation staff will remain in the Rapid City Office, and the Mystic Ranger District will retain all existing facilities.
2. **Rent/Lease Available Office Space:** For this alternative, the Mystic Ranger District Offices and National Law Enforcement and Investigation staff will be consolidated in a leased facility in or near Rapid City. The Research Station Work Unit and Forest Health Management will vacate their temporary leased office space and will collocate in the newly leased facility. The Rapid City Office, Hill City Office, and the Pactola Work Center will be disposed.
3. **Purchase an Existing Facility:** This alternative will consolidate the Mystic Ranger District Offices and National Law Enforcement and Investigation staff into a purchased facility in or near Rapid City. The Research Station Work Unit and Forest Health Management will vacate their temporary leased office space and collocate in the newly acquired facility. The Rapid City Office, Hill City Office, and the Pactola Work Center will be disposed.
4. **New Construction at the Existing Rapid City Office:** Under this alternative, new construction will occur at the existing Rapid City Office site to accommodate consolidation of District facilities and provide for collocation with the Research Station Work Unit. The construction will include new office, parking, laboratory, warehouse, and engine facilities. The new facility will also provide office and storage space for Regional Forest Health Management and National Law Enforcement and Investigation.
5. **Construct a New Forest Owned Facility:** This alternative provides for the Forest Service to construct a new facility that will provide adequate office, storage, parking, staging, and laboratory space necessary to consolidate the Hill City Office, the Rapid City Office, and the Pactola Work Center and include the Research Station Work Unit, Regional Forest Health Management, and Law Enforcement and Investigation.

II Evaluation Criteria

The following criteria have been established for the purpose of evaluating alternative proposals:

- **Availability:** The proposed site and/or facility must be available within a reasonable amount of time to meet existing needs. This time period is approximately three years.
- **Customer Service:** The proposed facility should be located in a convenient location to provide good customer service to contractors, permittees, the visiting public, and other government agencies.
- **Resource Protection:** The proposed facility should be located to maintain or improve existing levels of emergency fire protection, and to minimize work travel time.
- **Security:** A secure office and storage facility for employees and District vehicles and equipment is required.
- **Current Needs:** The proposed facility must provide adequate space to accommodate current needs, while meeting all legally required access and safety needs of employees and the public. This includes office, warehouse, fire engine, laboratory, parking, and outside storage needs.
- **Expansion Capability:** The proposed facility should allow for expansion to meet future changes in workforce size and resource programs, and to accommodate future collocation with other State, local, and/or Federal agencies.
- **Cost and Efficiency:** The proposed facility should be cost effective. Its' design and construction should involve a reasonable tradeoff between capital and operating costs. The new facility must be designed to be low maintenance, energy efficient, and sustainable.

III Evaluation/Analysis

Alternative Ratings

Alternatives were analyzed against the evaluation criteria using a modified Choosing-By-Advantages (CBA) process. A numerical score was assigned to each alternative to indicate how well the alternative responded to the evaluation criteria. Importance factors have been assigned to each criteria. Each criteria is ranked in terms of importance as follows:

3 = high importance;
 2 = moderately important;
 1 = low importance.

A final score for each alternative was calculated. The following table summarizes the results of scoring for each alternative considered.

	Importance	Alternative*				
Criteria	Factor	1	2	3	4	5
Availability	1	1 x 3 = 3	1 x 0 = 0	1 x 0 = 0	1 x 5 = 5	1 x 4 = 4
Customer Service	3	3 x 1 = 3	3 x 2 = 6	3 x 2 = 6	3 x 2 = 6	3 x 5 = 15
Resource Protection	2	2 x 4 = 8	2 x 2 = 4	2 x 2 = 4	2 x 4 = 8	2 x 4 = 8
Security	2	2 x 2 = 4	2 x 3 = 6	2 x 3 = 6	2 x 3 = 6	2 x 4 = 8
Current Needs	1	1 x 1 = 1	1 x 2 = 2	1 x 2 = 2	1 x 3 = 3	1 x 5 = 5
Expansion Capability	3	3 x 3 = 9	3 x 1 = 3	3 x 1 = 3	3 x 0 = 0	3 x 5 = 15
Cost and Efficiency	2	2 x 3 = 6	2 x 3 = 6	2 x 3 = 6	2 x 4 = 8	2 x 4 = 8
Total		34	27	27	36	63

*Alternative Ratings: 0 = least responds to criteria.
 5 = best responds to criteria

Alternative Rating Narrative

Alternative 1: No Action:

The Mystic Ranger District will continue to operate out of three separate office locations. The Research Station Work Unit and Forest Health Management group will continue to be housed in a leased facility. There will be no laboratory services provided by the Research Station Work Unit. Law Enforcement and Investigation will continue to be housed in the Rapid City Office.

On the positive side, this alternative is readily available to the Mystic Ranger District. Since the Forest currently owns existing District office facilities there would be no additional capital costs. Existing emergency fire response would remain the same, as would current work travel times.

On the negative side, the existing situation poses significant problems to the Research Station Work Unit and Forest Health Management. The leased facility these units have moved into does not meet their current needs and was intended only as a temporary arrangement. Leasing costs directly impact the Research Station's and the Rocky Mountain Region's annual budget. District employees will continue to be stationed at more than one facility resulting in inefficiencies in management of the District and communication among employees and supervisors. Costs of operating three owned

District Offices and leased facilities for the Research Station Work Unit and Forest Health Management would not be efficient, both in terms of direct costs and lower productivity. Deferred maintenance costs will not be reduced.

The present situation does not accommodate the public's needs. Customer service will remain poor because the existing Mystic District offices are located approximately 25 miles apart. Also, the existing Rapid City Office is located in a residential area and is not easily accessible for the visiting public. The existing Hill City Office does not meet Americans with Disabilities Act accessibility requirements for employees or the public, and the existing water system requires upgrading the chlorination system to meet safe drinking water standards. Security of facilities is difficult because they are in multiple locations. The Pactola Work Center is located in a rural area approximately 15 miles east of Rapid City on Highway 44 and receives minimal law enforcement patrol.

To continue the status quo will not accomplish the goals of the Facilities Master Plan to consolidate District offices, increase management and operational efficiency, and reduce deferred maintenance costs. Current spatial needs, accessibility needs, and safety needs will not be met. In the current situation, the Research Station Work Unit cannot meet its mission of providing quality research products to its customers.

Alternative 2: Lease Available Office Space:

Another Federal agency is currently leasing space in a GSA owned facility in the Rapid City area at a rate of \$21.43 per square foot per year (including janitorial service). Warehouse space is being leased for approximately \$5.91 per square foot per year, and parking space is being leased for \$0.96 per square foot per year. At these rates, yearly leasing costs for an existing facility that meets the requirements of the Mystic District and the Research Station Work Unit would exceed \$707,500 per year (Exhibit C). The specialized needs of the Research Station Work Unit for lab space will require significant modification to any existing facility that might become available. The cost to modify such a facility will likely be passed along in higher leasing rates.

Since there are no suitable facilities available for long-term lease in the Rapid City area at this time, it will be necessary for such a facility to be constructed for lease. Annual leasing costs will be approximately \$800,000 per year (Exhibit D; Table 4). There will be little to no capital costs involved to lease a facility, however, the Forest's annual operating costs will increase to cover leasing expenses. Leasing costs come directly out of the Forest's, Region's, and Research Station's annual budgets. Expansion capabilities will be limited. Security concerns will be addressed in the lease. This alternative will accomplish the goals of the Facilities Master Plan to consolidate offices, collocate with the Research Station Work Unit, and reduce deferred maintenance costs, however, Alternative 2 will not accomplish the goals to reduce operating costs and the number of leased facilities being utilized by the Forest.

Alternative 3: Purchase an Existing Facility:

As with a lease facility in Alternative 2, there are no existing facilities currently available for purchase along the major travel routes in the Rapid City area. Should a facility become available, security needs will be addressed during modification of the facility. The specialized needs of the Research Station for lab space will require significant modification to any existing facility that might become available. Since this Alternative is not available at this time, Alternative 3 will necessitate the facility for purchase to be constructed to the required specifications.

Alternative 4: New Construction at the Existing Rapid City Office Site:

The Rapid City Office is an existing Forest owned property. Space is available to build additional facilities at this site. Collocation with the Research Station Work Unit was envisioned at the time the Rapid City Office was constructed in 1992. When the current Rapid City Office was constructed, however, it was not envisioned that Districts would consolidate and the Forest would be disposing of other facilities, such as the Hill City Office and the Pactola Work Center, as authorized by PL 106-329. These facilities provide substantial office, warehouse, and outside storage needs that must be replaced.

Adequate space is available at the 8.5 acre Rapid City Office site to meet the requirements for warehouse space, fire station, fire cache, outside storage, office space, laboratory, and parking needs. However, due to topography issues at the Rapid City office site and the fact that the Rapid City office is a single story facility, consolidation of the Mystic District office and storage facilities and the Research Station Work Unit at the current Rapid City location will require the entire site to be developed. Aesthetic enhancements will be minimal. Security will require additional fencing to be installed which will not meet residential aesthetics. Additional adjacent land has been developed and is not available for purchase. Adequate space is not available for future expansion and opportunities to collocate with other agencies will be limited. Given the existing 8,600 square foot office building in Rapid City, the overall cost to construct new facilities, including office, laboratory, warehouse, and parking space at the Rapid City Office site would be approximately \$10.9 million.

The location will continue to be a problem for customer service. The Rapid City Office is located in a residential neighborhood, next to a grade school and is not highly visible to the traveling public. Access to the Rapid City Office is via a narrow, two-lane street. Increasing the size of the building and the services provided at this location will create a potential for conflict with local residents. Increased traffic and associated noise will be a disturbance to the Office neighbors. Fire response crews respond to emergency calls at all hours of the day or night, which will also be disturbing to Office neighbors. Increased traffic at the Rapid City Office site would not only create a nuisance for neighbors, but also create a safety issue for local pedestrians and children going to and coming from school.

On the positive side emergency fire protection, and work travel times will not be compromised by consolidating at this site. This alternative does accomplish the goals of the Facilities Master Plan to consolidate facilities into Forest owned facilities and collocate with the Research Station Work Unit, however, some District activities will still be located elsewhere due to spatial limitations.

Alternative 5: Construct a New Forest Owned Facility.

Construction of a new facility will provide the opportunity to meet the needs for office, warehouse, laboratory, and fire facilities, outside storage, parking, visibility, and visitor access that have been identified as critical to the efficient operation/management of the Mystic Ranger District, Research Station Work Unit, Forest Health Management, and Law Enforcement and Investigation. Planning and design of the new facility will take into account specialized needs for lab space, storage of flammable materials and herbicides, NFMAS and National Fire Strategy, customer service, accessibility, and security. Efforts will be made to design and construct facilities that are energy efficient, sustainable, and expandable. The proposed facilities may be eligible for consideration as a pilot project to demonstrate state of the art design in energy efficiency and sustainability. It has been estimated that approximately \$12 million will be required for the design and construction of a new facility that will accommodate District consolidation and collocation with the Research Station Work Unit, Forest Health Management, and Law Enforcement and Investigation. This \$12 million estimate for the new facility does not include the purchase of additional land.

Initially, there will be high capital costs involved with Alternative 5; however, operating costs will be controlled through energy efficient, sustainable designs, lower deferred maintenance costs, and increased efficiency in the management of Forest programs. Annual costs for a building with a design life of 50 years will be approximately \$351,500 (Exhibit D; Table 4). A lease versus construct/own analysis (Exhibit D; Table 5) indicates annual costs for Alternative 5 to be considerably less than annual costs of leasing facilities in Alternative 2. A discussion of the Lease vs Construct Analysis is presented in the next section.

This Alternative will accomplish the goals of the Facilities Master Plan to consolidate into Forest owned facilities, increase customer service, increase management efficiency, reduce operational and deferred maintenance costs, and dispose of facilities which do not efficiently support the mission of the Forest.

IV Lease vs Construct Analysis

Method

Prior to acquisition of a new major facility, the Office of Management and Budget (OMB) requires an economic analysis to determine whether to lease or to construct the needed facility. OMB Circular No. A-94 states: "Whenever a Federal Agency needs to

acquire the use of a capital asset, it should do so in a way that is least expensive to the Government as a whole.” The Circular provides the following guidance for the lease/construct Analysis and requires the following considerations must be included.

1. **Life-Cycle Cost.** Lease/construct analyses will compare the net discounted present value of the life-cycle cost of leasing with the full costs of constructing or purchasing an identical asset. The full costs of constructing or purchasing include the asset's purchase price plus the net discounted present value of any relevant ancillary services connected with the purchase. Nominal Discount Rates for lease/construct analysis are included in the Circular.
2. **Economic Life.** For purposes of lease/construct analysis, the economic life of an asset is its remaining or productive lifetime. It begins when the asset is acquired and ends when the asset is retired from service.
3. **Purchase Price.** The purchase price of the asset for purposes of lease/construct analysis is its fair market value, defined as the price a willing buyer could reasonably expect to pay a willing seller in a competitive market to acquire the asset.
 - (a) In the case of property that is already owned by the Federal Government or that has been donated or acquired by condemnation, an imputed purchase price should be estimated.
 - (b) If public land is used for the site of the asset, the imputed market value of the land should be added to the purchase price.
 - (c) The asset's estimated residual value, as of the end of the period of analysis, should be subtracted from its purchase price.
4. **Taxes.** In analyzing the cost of a lease, the normal payment of taxes on the lessor's income from the lease should not be subtracted from the lease costs since the normal payment of taxes will also be reflected in the purchase cost. The cost to the Treasury of special tax benefits, if any, associated with the lease should be added to the cost of the lease. Examples of such tax benefits might include highly accelerated depreciation allowances or tax-free financing.
5. **Ancillary Services.** If the terms of the lease include ancillary services provided by the lessor, the present value of the cost of obtaining these services separately should be added to the purchase price. Such costs may be excluded if they are estimated to be the same for both lease and purchase alternatives or too small to affect the comparison. Examples of ancillary services include:
 - (a) All costs associated with acquiring the property and preparing it for use, including construction, installation, site, design, and management costs.
 - (b) Repair and improvement costs (if included in lease payments).
 - (c) Operation and maintenance costs (if included in lease payments).
 - (d) Imputed property taxes (excluding foreign property taxes on overseas acquisitions except where actually paid). The imputed taxes approximate

the costs of providing municipal services such as water, sewage, and police and fire protection.

(e) Imputed insurance premiums.

6. **Residual Value.** A property's residual value is an estimate of the price that the property could be sold for at the end of the period of the lease/construct analysis, measured in discounted present value terms.
 - (a) The recommended way to estimate residual value is to determine what similar, comparably aged property is currently selling for in commercial markets.
 - (b) Alternatively, book estimates of the resale value of used property may be available from industry or government sources.
 - (c) Assessed values of similar, comparably aged properties determined for property tax purposes may also be used.
7. **Renewal Options.** In determining the term of a lease, all renewal options shall be added to the initial lease period. This analysis assumes the initial period is 10 years with two 10year renewal periods. Each renewal period lease rate is increased by 15 percent.

Exhibit D presents the spreadsheet model used to perform the lease/construct analysis. The spreadsheet model was developed by Missoula Technology Development Center to meet the requirements of OMB Circular No. A-94. Net Present value analyses are based on future benefits and costs. Since future economic conditions and facility requirements are uncertain, the data entered in the model are based on the most recent data available and the modeler's best professional judgment where data is not available.

The spreadsheet model includes five tables:

Table 1: Basic data including the name and location of the project, lease and lease/construct information, space requirements, relevant interest rates and time periods.

Table 2: Purchase alternative information, including ancillary costs, that may include imputed costs, as directed by the Circular.

Table 3: Construction costs and interest, including yearly expenditures during construction, for the construction alternative. The interest cost is included to reflect the opportunity cost associated with the use of Federal funds.

Table 4: Annual payments, which may include imputed costs, as directed by the Circular.

Table 5: Annual cash flows for the life of the analysis (used to determine net present values in the summary figures) and a summary indicating the best alternative based on the analysis.

Each table is organized into titles, data, and equations necessary to complete the analysis.

Results

The results of analyses are presented in Exhibit D and indicate leasing the needed facility is the best economic option available at this time. It should be noted, however, since some of the data used for the analyses is based on unknown future conditions, the model is somewhat subjective. Due to the subjective nature of the spreadsheet model, a sensitivity analysis was performed to determine which factors most significantly influence the final results of the model. These factors include:

- 1. Gross Square Feet:** Should the final design for the new facility be required to be increased by 3000 square feet, the results of analyses shift to construction as the best alternative.
- 2. Higher Lease Rates:** Should the initial leasing rate be increased by \$2.00 per square foot, the results of analyses shift to construction as the best alternative. Given the specialized needs of the laboratory requirements for the Research Station Work Unit, higher leasing rates are possible.
- 3. Construction Costs:** Decreasing the cost of construction by \$1 million shifts the results of analyses to construction as the best alternative. Every effort will be made in the final design to provide the most cost effective construction alternatives.
- 4. Maintenance Costs:** Lower maintenance costs (reduced from 2% of the construction costs to 1.25%) shifts the results of analyses to construction as the best alternative. Every effort will be made in the final design for the most cost effective construction alternatives to provide sustainability of the facility and low maintenance.
- 5. Residual Value:** Increasing the residual value of the facility to \$17,000,000 after 30 years shifts the results of analyses to construction as the best alternative. Given a good location in a commercially favorable area, it is not unrealistic to expect the value of the facility to increase.

The lease/construct analysis prefers lease by less than \$1,000,000 Net Present Value over 30 years. This facility will be needed for the Black Hills National Forest for more than 50 years. Due to the specialized construction required for the laboratory portion of the facility, the lease costs cannot be accurately estimated from similar structures since there are none in the local market. The sensitivity analysis indicates that direct Forest Service control of design and construction to reduce construction and maintenance costs and increase residual value through sustainable construction is likely to shift the analysis to construct. The judgment of the modelers is that direct control of design and construction will allow the Forest Service to affect those factors that will lead to the most sustainable,

cost effective facility. Due to the need for this facility for 50 years or more, this analysis does not conclusively eliminate the option of construction by the Forest Service, but does indicate that effort to maximize useful life and minimize operation and maintenance costs during design is necessary.

V Recommendations for Office Space Alternatives

Based on the evaluation and analysis of the alternatives provided in this document, Alternatives 1 will not be considered since it does not improve the current condition or accomplish the goals of the Facilities Master Plan to consolidate District facilities and reduce leased space. Leasing costs associated with Alternative 2 are high and will not reduce operation costs for the Forest. Alternatives 2 and 3 are not feasible at this time due to lack of facilities available. Although Alternative 4 will accomplish the goals of the Facilities Master Plan to consolidate offices and reduce leased space, consolidation of the Mystic District offices, the Research Station Work Unit, Forest Health Management, and Law Enforcement and Investigation at the current Rapid City location will require the entire site to be developed. Adequate space is not available for future expansion, and access for visitors and business associates will not be improved. The Rapid City Office is located in a residential area and is next to a grade school. Traffic, noise, and safety issues also combine to indicate Alternative 4 is not the most favorable option. The analysis indicates that Alternative 5 (construct a new facility) is the best option available at this time due to the specialized construction for the laboratory and the more than 50 year life necessary for this facility.

EXHIBIT C

Facilities Lease Cost Estimate.

Leasing Costs (Based on GSA rates in Rapid City, SD)

Office Space Leasing Rate	\$21.43	per square foot per year (includes janitorial service)
Mystic District/Research Station		
Office Space Required	24,960	square feet

Office Space Leasing Cost \$534,893 per year

Warehouse Leasing Rate	\$5.91	per square foot per year
Mystic District/Research Station		
Warehouse Space Required	11,910	square feet

Warehouse Leasing Cost \$70,388 per year

Parking Space Leasing Rate	\$32.50	per space per month
	\$0.96	per square foot per year
Mystic District/Research Station		
Parking Space Required	106,230	square feet

Parking Space Leasing Cost \$102,296 per year

Total Leasing Cost For the Mystic District/ Research Station Facility \$707,576 per year

EXHIBIT D

Lease vs Own Annual Cost Comparison.

TABLE 1 -- BASIC DATA

Project:	Mystic District and RMRS Lab			
Location:	Rapid City, SD			
Date:	Feb 20, 2002			
Lease Period:	10 years			
Gross Sq. ft.		37,000 **		
Net Usable sq. ft.(about 80% of gross)		30,000	81%	
Lease Rate sq. ft.		\$21.50 **		
Lease Rate Renewal Period	10 years	\$24.75	15%	increase
Ancillary Costs for lease		\$5,000.00		
Lease Purchase Rate sq. ft.		\$50.00		
Lease/Pur Renewal Period		\$50.00		
Interest Rates:				
Nom U.S. Treasury Rate	20 Yr	5.45%		
(See OMB A-94, App C)	3 Yr	4.10%		
Analysis Period (in Years)		30		
Design & Construction period (years)		3		
Economic Life (Construction)		50		
Economic Life (Purchase)		30		

** Gross square footage are based on current design office, laboratory, and warehouse space requirements. The lease rate is estimated to account for higher lab leasing rates, leased parking space, and additional leased outdoor storage space.

TABLE 2 -- COSTS ASSOCIATED WITH PURCHASE ALTERNATIVE

Purchase Price- Building	\$13,500,000
Land	\$2,000,000
Other Imputed Costs	
Ancillary Costs/yr from Table 4	\$396,500

Exhibit D

TABLE 3 -- CONSTRUCTION AND INTEREST DURING CONSTRUCTION (ESTIMATED)

Interest Rate 4.10%							
Construction	\$11,250,000						
Design Costs	\$588,000						
Contract Supervision	\$242,000						
Land Value or actual cost	\$2,000,000						
Total Construction	\$14,080,000	Federal	One-Half	Prior	Prior	Amount for	Federal
			Annual	Years	Years	Computing	Interest
		<u>Year</u>	<u>Appropriation</u>	<u>Funding</u>	<u>Funding</u>	<u>Interest</u>	<u>Construction</u>
All design + land in Yr 1		1	\$2,588,000	\$1,294,000	\$0	\$0	\$53,050
% Constr & Supv in Yr 2:	60.00%	2	\$6,895,200	\$3,448,000	\$2,588,000	\$53,050	\$249,650
% Constr & Supv in Yr 3:	40.00%	3	\$4,596,800	\$2,298,000	\$9,483,200	\$302,700	\$495,440
		Total	\$14,080,000				
							Total: \$798,140

TABLE 4 -- ANNUAL EXPENDITURES AND REVENUES

	<u>Lease</u>	<u>Construction</u>	<u>Lease Purchase</u>	<u>Purchase</u>
Borrowing Term or				
Lease Term (yrs)	20	3	20	N/A
Lease payment	\$795,500		\$1,850,000	
Renewal Period	\$915,621		\$1,850,000	
Real Estate Taxes	*	\$50,000	*	\$50,000
Insurance	*	\$20,000	*	\$20,000
Building Maintenance (2% of Building Cost)	*	\$225,000	*	\$270,000
Utilities	*	\$45,000	*	\$45,000
Operations Costs	*	\$11,500	*	\$11,500
Lease Administration	\$3,000	N/A	\$3,000	N/A
Total Annual Costs	\$798,500	\$351,500	\$1,853,000	\$396,500
Residual Value		\$12,500,000	\$12,500,000	\$12,500,000
* = Included in Lease Contract				

EXHIBIT D

TABLE 5 -- CASH FLOW AND NET PRESENT VALUE

annual payments				
Year	Lease	Construction	Lease/Purchase	Purchase
			e.	
1	(\$803,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
2	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
3	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
4	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
5	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
6	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
7	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
8	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
9	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
10	(\$798,500)	(\$351,500)	(\$1,853,000)	(\$396,500)
11	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
12	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
13	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
14	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
15	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
16	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
17	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
18	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
19	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
20	(\$918,621)	(\$351,500)	(\$1,853,000)	(\$396,500)
21	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
22	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
23	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
24	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
25	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
26	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
27	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
28	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
29	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)
30	(\$1,056,414)	(\$351,500)	(\$1,853,000)	(\$396,500)

SUMMARY

Net Present Value:

Lease

(\$12,882,410)

Construction

(\$13,865,713)

Lease/Purchase

(\$24,536,421)

Purchase

(\$18,750,617)

PREFERRED OPTION:

LEASE

See Lease vs Construct Results p. 30

APPENDIX E: LOCATION ALTERNATIVES AND EVALUATION

I Office Location

The proposed construction of a new facility to consolidate the Mystic Ranger District and the Rocky Mountain Research Station Work Unit results in a need to analyze locations for that facility. The new site must be sized to adequately accommodate the consolidation of the Mystic Ranger District, Regional Forest Health Management, and Law Enforcement and Investigation office and storage needs, provide for the Research Station Work Unit office space, laboratory, and storage requirements, and provide space for future expansion of Forest programs, collocation with other agencies, and the possibility of including bunkhouses for seasonal employees and/or fire response crews. The new site must be conveniently located and highly visible for the traveling public, local public, business associates, fire response crews, and the office workforce. The preferred location for the new facility would be along a major travel corridor to the Black Hills.

Currently about 75% of the visitors to the Black Hills arrive on Interstate 90 from the east, take one of five exits to downtown Rapid City, and then travel south on Highway 16. Highway 16 is the major route to Mount Rushmore National Memorial and the Black Hills National Forest. This pattern of traffic through downtown will change in the next three years, however, with construction of a southeast connector bypass. This new route will direct the majority of tourist traffic from Interstate 90 at Elk Vale Road and visitors will have a choice of traveling through downtown or taking the new bypass around downtown and onto Highway 16 at Catron Boulevard on the southern edge of the city.

Possible sites that would improve visibility to the traveling public would be located along Interstate 90, east of Elk Vale Road, along the new southeast connector route, or on Highway 16, south of the Highway 16/Catron Boulevard intersection. It is likely, however, locating the new consolidated facilities along Interstate 90 or along the southeast connector may not significantly improve Forest management activities, and emergency fire response time to the Forest south and west of these areas would be compromised. Sites on Highway 16, east of Elk Vale Road or on the new bypass route would not accommodate travelers coming from the west. Given the major changes in the local transportation system, access for visitors, business associates, and workforce will be best accommodated at a location on Highway 16 south of Catron Boulevard. Locations south of Catron Boulevard on Highway 16 will be highly visible and provide the potential to contact the greatest numbers of visitors. By consolidating the Mystic District offices in this area along Highway 16, it is expected that visitation to the Mystic District Office would increase from approximately 14,000 customers per year to over 100,000 visitors per year. Fire response will be analyzed for each proposed alternative along Highway 16 to assure that reasonable travel times are maintained to urban interface areas of the District as well as rural areas. A site in this area will serve the Research Station Work Unit, Forest Service LEI, and Forest Health Management well and will provide good access for Research Station Work Unit customers and business associates.

Location Alternatives

Sites on Highway 16, south of Catron Boulevard, large enough to accommodate District consolidation and the Research Station Work Unit are currently available (see Map; Appendix A). These sites include:

Alternative 1: Collocate on Highway 16 at Harney View Estates: The Mystic Ranger District and Research Station Work Unit will collocate at this site on the west side of Highway 16 inside Rapid City limits on land currently zoned as Commercial. Up to 50 acres are available for purchase at this site.

Alternative 2: Collocate on Highway 16 at Commerford Estate: The Mystic Ranger District and Research Station Work Unit will collocate at a site on the east side of Highway 16 inside Rapid City limits directly across from the Harney View Estates location. Approximately 40 acres are available for purchase.

Alternative 3: Collocate on Highway 16 on Current NFS Land Past Rockerville: The Mystic Ranger District and Research Station Work Unit will collocate at a Forest owned site on the west side of Highway 16 between Rockerville and the Keystone intersection on Highway 16. This location is 20 miles south of Rapid City.

II Evaluation Criteria

The following criteria have been established for the purpose of evaluating the location alternatives proposed:

- **Overall Capital Costs** (Land, Buildings, Infrastructure, Assets to be Sold);
- **Timing** (Time Until Occupation and Required Interim Arrangements);
- **Space Available** (Office, Shop, Labs, Parking, Storage, Quarters, and Future Expansion);
- **Customer Service;**
- **Emergency Fire Response;** and
- **Security.**

III Evaluation of Location Alternatives

Location Alternative Rating

This section provides some general information that provides a context for evaluating the alternatives, and describes the pros and cons of each specific alternative. Alternatives were analyzed against the evaluation criteria using a modified Choosing-By-Advantages process.

Importance factors have been assigned to each criteria. Each criteria is assigned a value based on a scale from one to three and is ranked in terms of importance as follows:

- 3 = high importance;
- 2 = moderately important;
- 1 = low importance.

The following table provides a qualitative ranking of the proposed location alternatives.

	Importance	Alternative *		
Criteria	Factor	1	2	3
Overall Cost	2	2 x 3 = 6	2 x 3 = 6	2 x 3 = 6
Timing	1	1 x 5 = 5	1 x 5 = 5	1 x 5 = 5
Space Available	3	3 x 5 = 15	3 x 5 = 15	3 x 4 = 12
Customer Service	3	3 x 5 = 15	3 x 3 = 9	3 x 3 = 9
Emergency Fire Response	3	3 x 4 = 12	3 x 4 = 12	3 x 2 = 6
Security	2	2 x 4 = 8	2 x 4 = 8	2 x 2 = 4
Total		61	55	42

*Alternative Ratings: 0 = least responds to criteria.
5 = best responds to criteria

Location Alternative Rating Narrative

Alternative 1: Co-locate on Highway 16 at Harney View Estates:

The Harney View Estates is a currently undeveloped area located on the west side of Highway 16 at its junction with the reconstructed Moon Meadows Road. It is a short distance south of the junction of Highway 16 and Catron Boulevard, and provides direct access off Highway 16 for easy access by vehicles traveling south toward the Black Hills. The site is just within the Rapid City limits in an area that was recently annexed. The site is currently zoned Commercial.

Approximately 50 acres is available for purchase at the Harney View Estates site. The asking price is approximately \$150,000 per acre for 5 to 10 acre tracts with highway frontage. For the purpose of this analysis, it was assumed that the actual sales price would be approximately 80% of the asking price (\$120,000 per acre). The current owners understand that the Forest Service can not pay more than the appraised fair market value for the property. Rapid City is aggressively expanding to the south, and development within the entire area is expected within the next five to ten years.

On the positive side, this alternative would provide excellent customer service for Rapid City residents, Forest Service and Research Station Work Unit business associates, and for visitors to the Black Hills and Mount Rushmore. This site is highly visible and has

easy off/on accessibility with Highway 16. Extension of utilities such as natural gas and Rapid City water and sewage to this site will be included in the purchase price. Purchase of this site would allow for future expansion on land that has favorably flat terrain. Travel time for the workforce to and from residences is not significantly affected.

The major disadvantage of this alternative is that it will be expensive. At 80% of the asking prices, the purchase of a 15-acre tract will cost \$1.8 million. Based on preliminary estimates, the total cost of this Alternative will be approximately \$14 million to acquire land and construct the needed facilities at this site. This estimate includes land purchase, design, office and warehouse construction, utilities, and landscaping. This estimate does not include crew living quarters for seasonal employees, however; space is available for future expansion on the site.

When compared with the current location of the Rapid City Office, fire response time will be slowed by 10 to 15 minutes for areas to the west and north of Rapid City along Highway 44 and Nemo Road. However, response time will be faster by 10 to 15 minutes for areas south along Highway 16. The District will continue to preposition engines during extreme fire conditions to compensate for travel time differences. Alternatives 1 and 2 are identical in fire response time. Security will be maintained since this area is patrolled by the Rapid City Police Department.

Alternative 2: Co-locate on Highway 16 at Commerford Estate:

Commerford Estates is a currently undeveloped area located on the east side of Highway 16 near the junction with the reconstructed Moon Meadows Road. It is directly across the highway from the site in Alternative 1. The site is within the Rapid City limits and is zoned Commercial.

Two 40 acre parcels are available for purchase at the Commerford Estates site. Recently, a portion of land in this area reportedly sold for approximately \$117,600 per acre. At that price, a 15 acre tract of land would cost \$1.76 million. The purchase of a 15 acre tract of land on the Commerford Estates will cost slightly less than at Harney View Estates. The total cost of this Alternative will also be about \$14 million.

The major difference between Alternative 1 and Alternative 2 is public access. Site access in Alternative 2 is inferior to Alternative 1. Although the parcel of land in Alternative 2 is located along the main route to the Black Hills and is highly visible, it is located on the east side of Highway 16. This will require all visitors going to the Black Hills and Mount Rushmore to cross oncoming high-speed traffic for both ingress and egress to the office. This is a major safety and convenience issue. Ingress and egress for large RV's will be difficult and it will be necessary to have turning lanes installed to reduce the risk of crossing traffic. The savings in land costs may not be justified when evaluated with the ingress and egress safety issues. Due to limited crossings on the highway and traffic speeds, a frontage road to access this property will likely be required.

On the positive side, this alternative will provide better customer service than that which currently exists, both for Rapid City residents and for visitors to the Black Hills. Also positive, there will be more than enough space (up to 40 acres) to construct facilities and for future expansion. Utilities such as natural gas and Rapid City water and sewage are will also be extended to this site. Travel time to residences for the workforce is not significantly affected.

When compared with the current location of the Rapid City Office, fire response time will be slowed by 10 to 15 minutes for areas to the west and north of Rapid City along Highway 44 and Nemo Road. However, response time will be faster by 10 to 15 minutes for areas south along Highway 16. The District will continue to preposition engines during extreme fire conditions to compensate for travel time differences. Alternatives 1 and 2 are identical in fire response time. Security will be maintained since this area is patrolled by the Rapid City Police Department, County Sheriff's Department, and the State Highway Patrol.

Alternative 3: Co-locate on Highway 16 on Current Forest Land Past Rockerville

There is Forest land available along Highway 16 between Rockerville and the Keystone junction that could be developed for the District Office. This site will require a well, water treatment facilities, and sewage treatment. Electrical and phone services are available in the area, but there is no natural gas available.

The advantage of this option is the availability of land at no additional cost. The site will provide customer service to the traveling public as well as the sites near Catron Boulevard, and space at the site will be adequate to provide for future expansion.

The disadvantages of the site are numerous. It is 20 miles to Rapid City, which will result in poor customer service to the local public, business partners, other government agencies, and research customers. Compared with Alternatives 1 and 2, fire response time is increased by 20 minutes or more to the areas west and north of Rapid City. Prepositioning of engines will not overcome all of the fire response needs of this location. This location will also entitle all District employees to transfer of station benefits, which will be a significant cost. Travel time for the workforce would have an impact since there is not adequate housing available in this rural area. Utilities are not available at this site. Development of water and sewage systems and annual maintenance and upgrading of those systems will be expensive. Natural gas is not available at this site. The costs of these disadvantages could exceed the initial cost of land purchase for Alternatives 1 and 2. Security is also decreased since the area is not patrolled by the Rapid City Police Department. County and State law enforcement must cover large areas and do not provide the frequency of patrol to ensure adequate coverage for this area.

IV Recommendations for Location Alternatives

Based on the evaluation and analysis of the alternatives provided in this Preliminary Project Analysis, Alternative 1 is the best location alternative. This site on Highway 16 South of Catron Boulevard meets the objectives of the Black Hills National Forest Facility Master Plan, public needs, resources protection, and employees of the Black Hills National Forest, the Mystic Ranger District, the Research Station Work Unit, Regional Forest Health Management, and National Law Enforcement and Investigation. Alternative 2 is a good second choice, but the ingress and egress to the site have safety issues for the traveling public that will be visiting the office. Alternative 3 will not require the purchase of land, however the cost to develop this site will be high. Construction cost at this site will be higher than with Alternates 1 and 2 due to the need for water and sewage systems. Alternative 3 also has entitlement for transfer of station costs for employees working at this location. Alternative 3 will require a long-term commitment for water and sewage treatment that will significantly affect annual operating costs for that site. Long term disadvantages make Alternative 3 unsuitable.

V Conclusion

The recommendation of this Preliminary Project Analysis is that a new facility be constructed at the Harney View Estates to collocate the Forest Service employees of the Mystic Ranger District, Rocky Mountain Research Station Work Unit, Regional Forest Health Management, and National Law Enforcement and Investigation.