Preliminary Feasibility Study (Phase I) of Richmond Highway and Telegraph Road Connector, Fairfax County, VA

Prepared for:

Department of the Army
Installation Management Agency—Northeast Region Office
With assistance from Tetra Tech, Inc.

US Army Corps of Engineers
Baltimore District

Prepared by:

US Army Corps of Engineers, Baltimore District

November 2003

Transmittal Correspondence
Preliminary Feasibility Study (Phase I) of
Richmond Highway and Telegraph Road Connector
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April 2004

DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT AGENCY
NORTHEAST REGION
5 NORTH GATE RD
FORT MONROE, VA 23651-1048

SFIM-NE-PW (210-20) 2 Feb 04

MEMORANDUM THRU

Director, Installation Management Agency (SFIM-OP), 2511 Jefferson Davis Highway, Arlington, VA 22202-3926

Assistant Chief of Staff for Installation Management (DAIM-MD), 600 Army Pentagon, Washington, D.C. 20310-0600

FOR Deputy Assistant Secretary of the Army (Installations and Housing), 110 Army Pentagon, Washington, D.C. 20310-0110

SUBJECT: Preliminary Feasibility Study (Phase I) of Richmond Highway and Telegraph Road Connector Fairfax County, Virginia

1. References:

a. Memorandum, Baltimore District, U.S. Army Corps of Engineers, CENAB-PL-E, 24 Nov 03, subject: Transmittal of the Preliminary Feasibility Study (Phase I) of Richmond Highway and Telegraph Road Connector Fort Belvoir, VA. Enclosure 1

b. Memorandum For Record, Military District Washington/Installation Management Agency, North East Region, 28 Jan 04, SAB. Enclosure 2

2. In accordance with Fiscal Year 2003 National Defense Authorization Act, PL 107-314, dated 2 Dec 02, Section 367, a feasibility study assessing connector road corridor alternatives was prepared in consultation with the Department of Transportation of the Commonwealth of Virginia and Fairfax County. The preliminary feasibility study analyzing seven corridor options including extension of Old Mill Road is submitted herein.

3. On 13 Jan 04 Major General Jackman, Commander, Military District Washington and I co-chaired a meeting with impacted Fort Belvoir tenants to discuss alternatives and achieve consensus as to preferred options. After discussion of the relative technical, environmental, and economic merits and community and political ramifications of the alternatives there was consensus on four points.

a. Alternative C, extension of Old Mill Road is the Army's preferred alternative.

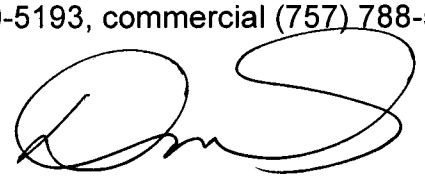
b. Given existing conditions, projected population growth, and improvements to Van Dorn Street, extension of Old Mill Road, by itself, will not eliminate the traffic congestion.

Fairfax County should be encouraged, at all Army levels, to pursue Alternative G, Van Dorn Street – Lockheed Boulevard connector as an additional long-term solution.

c. Technical and scheduling issues degrade the potential benefits of the proposed interim measure: realigning Woodlawn Road and/or hardening mission essential vulnerable assets. The Army should concentrate its planning and programming efforts on the preferred permanent alternative while maintaining the interim as a failsafe.

d. The Army supports construction of mass transit facilities adjacent to Fort Belvoir to ease traffic congestion in the future.

4. Point of contact is Bill Sanders, DSN 680-5193, commercial (757) 788-5193, e-mail sanderswl@monroe.army.mil.



2 Encls

DIANE M. DEVENS
Director

CF:
Commander, U.S. Army Military District Washington, 103 Third Avenue, Fort McNair, Washington, D.C. 20319-5058

SFIM-NE-PW (210-20) 28 January 2004

MEMORANDUM FOR RECORD

SUBJECT: Preliminary Feasibility Study (Phase I) of Richmond Highway and Telegraph Road Connector Fairfax County, Virginia

1. On 13 Jan 04, MG Jackman, Commander, Military District Washington and Ms. Devens, Director, Installation Management Agency, North East Region co-chaired a meeting of impacted Fort Belvoir (FBVA) tenants to discuss alternatives assessed in the subject study and to select a preferred option(s).

2. Major General Jackman opened the meeting thanking the Baltimore District for their efforts in completing the study, soliciting input from attendees, emphasizing the importance of traffic patterns on and in the immediate vicinity of FBVA and stating he expects the process to move quickly after submission of the study and recommended preferred option to DA.

3. Mr. Larry Lisle, FBVA Master Planner discussed FBVA land use, east-west traffic patterns, past road development efforts, and mission essential vulnerable assets (MEVA) and sensitive facilities.

a. FBVA is comprised of three distinct areas. South Post is relatively highly developed and dates back to WWI. Temporary facilities were constructed on North Post as part of the WWII buildup, many of which have been replaced with facilities of permanent construction. Southwest is relatively undeveloped.

b. FBVA and Huntley Meadows Park effectively separate Mount Vernon District and a portion of Lee District from the rest of Fairfax County. In the last two to three decades there have been, with varying degrees of success, efforts to construct/improve the road network. The Fairfax County Parkway has been partially constructed. Completion of the Parkway (Route 7100) through the Army's Engineer Proving Ground is scheduled to begin in 2006. A project to connect Van Dorn Street and Lockheed Boulevard was proposed and planning and design accomplished, but concerns over environmental impact on Huntley Meadows Park resulted in its cancellation. Fairfax County proposed widening Beulah Road to 4 lanes, but Army objections limited improvements to that portion outside the installation.

c. Prior to 9 Sep 01, in accordance with Chief of Staff of the Army directive, FBVA developed plans to close the post while allowing Beulah and Woodlawn roads to remain open. When the plan was exercised in the summer of 2001, major congestion resulted. Immediately following the terrorist attacks of 11 Sep, Beulah and Woodlawn roads were closed. Portions have been reopened to vehicles with DOD stickers, with other portions remaining closed.

d. Initial complete and subsequent partial closure of Woodlawn and Beulah roads is due to the numerous mission essential vulnerable assets (MEVA) on FBVA. Primary MEVAs include: DLA, DTRA, INSCOM, DCEETA, and HECSA. Secondary MEVAs include: the fire and military police stations, dial control office, and primary water and electrical source facilities. Sensitive facilities include family housing, child development center, elementary school, exchange and commissary, and, upon completion, the new hospital.

4. Mr. David Hand, Baltimore District, U.S. Army Corps of Engineers discussed study parameters, alternatives, and advantages and disadvantages. Section 367, PL 107-314 directs that (a) a preliminary engineering study and environmental analysis be conducted, with one alternative being extension of Old Mill Road; (b) that the study be conducted in consultation with Fairfax County and the Virginia Department of Transportation; and (c) that a summary report with budget justification materials in support of the budget of the President in fiscal year 2006 be submitted. The Corps' preliminary feasibility study identified 14 potential alternative corridors, but narrowed the study focus to 7 alternative roadway corridors examining technical (vehicle traffic volume, infrastructure, force protection and land use), environmental (natural and cultural resources to be protected), and economic (macro-level cost comparison among alternatives) feasibility. In addressing the general public's great interest in local and regional traffic congestion, the study's traffic analysis presented the projected traffic volume on the studied alternative roadway corridors, the projected Woodlawn Road traffic volume (pre 11 Sep 2001) that would be served, the projected change in volume on parallel north-south routes (Telegraph Road and US Route 1), and the projected change in vehicle hours traveled, for both current year 2003 and horizon year of 2025. The preliminary feasibility study evaluates potential 4-lane roadway corridors, and does not provide exact corridor routings, detailed cost estimates, or project development.

a. Alternative A is 2.99 miles long. Advantages include direct Route 1 to Telegraph Road connectivity and tie-in to existing 4-way intersection at Telegraph Road, highest utilization of existing roads, high traffic volume, low environmental impact, low land use change, and Fairfax County Board of Supervisors (BOS) endorsement. Disadvantages include force protection, low reduction in vehicle-hours traveled, bisects western portion of North Post, taking of 2.2 acres of on-post residential area, impacts golf course, and high number of utility crossings and cultural/historic sites. Of particular concern is that 8,900 feet of the road would be within 400 meters of security sensitive facilities.

b. Alternative B is 3.02 miles long. Advantages include direct Route 1 to Telegraph Road connectivity and tie-in to existing 4-way intersection at Telegraph Road, low environmental impact, and Fairfax County BOS endorsement. Disadvantages are length, low use of existing roads, low reduction in vehicle-hour traveled, bisects western portion of North Post, impacts golf course and Historic/Heritage Protection Districts, and third highest estimated cost.

c. Alternative C is 2.28 miles long. Advantages include direct Route 1 to Telegraph Road connectivity, high reduction in parallel North-South route traffic volume, low environmental impact, Fairfax County BOS endorsement, and second lowest estimated cost. Disadvantages: include bisects North Post, introduction of another "T" intersection with Telegraph Road, greatest on-post forestry impact, and impacts Historic/Heritage Protection Districts.

d. Alternative D is 2.65 miles in long. Advantages include use of existing roads, good Route 1 to Telegraph Road connectivity, and force protection. Disadvantages are: bisects eastern portion of North Post, introduction of another "T" intersection with Telegraph Road, closeness to

Hayfield Elementary School (within 350 feet) and Hayfield Secondary School (within 700 feet), required relocation of main substation serving FBVA, being parallel to high tension overhead electrical lines, impacts Historic/Heritage Protection Districts, and highest estimated cost.

e. Alternative E is the shortest route at 1.86 miles, but terminates at Pole Road, not Route 1. Advantages include high reduction in vehicle-hours traveled and does not bisect the post or impact cultural or historic areas. Disadvantages are no use of existing roads, no direct connection to Route 1 and Telegraph Road, closeness to Hayfield Elementary School (within 350 feet) and Hayfield Secondary School (within 700 feet), required relocation of main substation serving FBVA, being parallel to high tension overhead electrical lines, impacts 12 acres of Chesapeake Bay Resource Protection Areas and three acres of Huntley Meadows Park, documented opposition Fairfax County BOS, and strong public/agency opposition.

f. Alternative F is 2.61 miles long. Advantages include high reduction in parallel north-south route traffic volume and vehicle-hours traveled and does not bisect North Post or impact cultural or historical areas. Disadvantages include no direct connection to Route 1, no use of existing roads, does not directly connect Route 1 and Telegraph Road, close proximity to U.S. Coast Guard communications facility, taking of 7.59 acres of off-post residential property, impact on 26 acres of wetlands/ floodplains and 12 acres of Huntley Meadows Park, documented opposition by Fairfax County BOS, strong public/agency opposition, and second highest estimated cost.

g. Alternative G is 2.26 miles long. Advantages include highest volume of local traffic carried, does not bisect North Post, good regional east-west connector, and lowest estimated cost. Disadvantages include low use of existing roads, an actual increase in vehicle-hours traveled, low reduction in north-south parallel road volume, taking of 2.62 acres of off-post residential property, impact on 19 acres of Huntley Meadows Park, documented opposition by Fairfax County BOS, and strong public/agency opposition.

5. Mr. John Spears, MDW, briefed on conclusions drawn after evaluating technical information available from the preliminary study accounting for political and community relations impacts. Mount Vernon and Lee Districts have approximately 60,000 residents who are further cut off from the rest of Fairfax County by closure of Woodlawn and Beulah roads. The separation of these districts has been recognized for some time and various road construction/improvement projects have been proposed and studied including those completely off-post, through post, and along the eastern boundary of FBVA. Construction of a Van Dorn Street – Lockheed Boulevard connector was planned, but stopped due to the public resistance to any construction affecting Huntley Meadows Park. This resistance remains strong - most of the comments resulting from the 17 Nov 03 public information forum expressed opposition to any development. Additionally, the wetland is stressed by nearby development. In addition to suspending all efforts to construct the Van Dorn – Lockheed connector, Fairfax County no longer supports alternatives along FBVA's eastern boundary, i.e., Alternatives E and F. Alternatives A and B are less

attractive than Alternative C for a number of reasons including force protection and traffic carrying capacity of the off-post road network to which they would connect.

6. Mr. Spears spoke to the issue of Alternative C bisecting North Post, suggesting relocation of Woodlawn Village housing and redevelopment of the area as recreational space would shift the practical boundary to the west somewhat mitigating the impact. He also explained how Alternative C could support a division of on-post traffic improving local traffic flow and provision of mass transit, particularly for DLA, DTRA, INSCOM, and any future development on North Post.

7. Formal presentations were followed by open discussion.

a. MG Stephens stated Alternative C was better than A, B, D, E, and F leaving only Alternatives C and G. He said in the long-term Alternative C would not be sufficient to alleviate the traffic problems and the Army should work with local, state, and federal authorities to develop the political support to overcome opposition to construction the Van Dorn Street – Lockheed Boulevard connector.

b. DCEETA representative supported Alternative C stating the standoff was good and the grade afforded additional protection.

c. Mr. Rau, HECSA stated there were no objections to Alternative C.

d. Concern was expressed over extension of Kingman Road in the direction of the Earthlink Station. COL Williams stated there were no plans to extend Kingman Road.

e. LTG Hack asked if Alternative C impacts the existing access control points (ACP). Implementation of any on-post alternative could require additional ACPs depending upon desired access, but as currently envisioned Alternatives C – G have no ACP impacts. Alternatives A and B would require reconfiguring existing ACPs.

8. MG Jackman spoke about the interim solution. Two alternatives have been advanced: (1) provide blast protection and reopen Woodlawn Road and (2) realign Woodlawn Road by construction of a road segment through golf course. DCEETA has agreed to visit a potential contractor to discuss the hardening option. Mr. Chandler stated DCEETA had spoken with one firm and their blast mitigation technology did not adequately address the over pressure issue. He stated relocation of the road is the quality solution.

9. MG Jackman concluded the meeting restating the mutually agreed upon recommendations:

a. The recommended alternative is C.

b. Long-term, construction of the Van Dorn Street – Lockheed Boulevard connector will be required and the Army should work to assist the local, state, and federal authorities to establish a political climate in which the road can be built.

c. The time advantages of the interim solution are not significant compared to Alternative C and should not be the Army's primary focus.

d. Mass transit opportunities should be pursued/supported.

GALEN JACKMAN
MG, USA
COMMANDING

DIANE M. DEVENS
DIRECTOR

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P. O. BOX 1715
BALTIMORE, MARYLAND 21203-1715

REPLY TO
ATTENTION OF

CENAB-PL-E (200)

24 November 2003

MEMORANDUM FOR Installation Management Agency, Northeast Region, ATTN: SFIM-NE-PW-P (William Sanders), 5A North Gate Road, Fort Monroe, VA 23651-1047

SUBJECT: Transmittal of the Preliminary Feasibility Study (Phase 1) of Richmond Highway and Telegraph Road Connector, Fort Belvoir, VA.

1. The purpose of this memorandum is to submit to your office seven (7) hard copy and CD-ROM copies of the subject study for distribution within the Department of the Army, review and action.

2. The study is submitted in response to Congressional direction to perform "Engineering Study and Environmental Analysis of Road Modifications in Vicinity of Fort Belvoir, Virginia" described in Section 367 to the FY03 National Defense Authorization Act, PL 107-314, dated 2 Dec 02. Section 367 directed SECARMY to submit a summary of engineering study and environmental analysis with budget justification materials in support of the budget of the President for fiscal year 2006.

3. This initial phase of study effort is a planning-level feasibility alternatives analysis with macro-level cost support. No definitive road "project" is identified at this time. The Feasibility study examined seven (7) road corridor alternatives (identified by consensus of working group members to include Fort Belvoir, Fairfax County and Virginia Department of Transportation) in three (3) generic road connector corridors: (1) connector and/or hardening/reopening of existing road(s) through the Fort Belvoir installation's North Post; (2) connector at periphery of North Post, analyzing specifically in one or more alternative(s) the existing Old Mill Road as an east terminus as directed in the Section 367 language; and (3) connector outside the installation's northern boundary (encompassing residential and commercial areas and the County's Huntley Meadows Park).

4. The Feasibility study does not make any recommendations for a particular alternative, however the stated preferences of the Fort Belvoir and Fairfax County group members are included for informative purposes. In evaluating the technical, economic and environmental feasibility of potential alternative routes to replace the closed Woodlawn Road and Beulah Street, the study finds that all alternatives studied are feasible for consideration to implement, but do not represent all possible implementation actions, e.g. no action or local and/or regional traffic artery improvements vice a new roadway. It is noted that any roadway corridor(s) affecting the County's Huntley Meadows Park would require special Congressional legislation, based on current deed restrictions as to such development. Additionally, the report includes an Appendix of public comments received as of the date of this transmittal, resulting from a Public Information Session held on 17 November 2003 in conjunction with the Public Scoping Workshop for Fort Belvoir's Master Plan Update Environmental Impact Statement.

5. Request direction and authorization to proceed to specific project initiation in accordance with Section 367 Congressional language to support project definition and appropriate engineering design and environmental analysis to establish sufficient budget justification materials in support of the President's budget for fiscal year 2006.

6. Please contact Mr. David Hand at (410) 962-8154 if you have any questions regarding this matter.

Encls

for ROBERT F. GORE
Chief, Planning and Environmental
Services Branch

Preliminary Feasibility Study (Phase I) of
Richmond Highway and Telegraph Road Connector
Fairfax County, VA

Prepared for:

Department of the Army

Installation Management Agency – Northeast Region Office

Prepared by:

U.S. Army Corps of Engineers

Baltimore District

With assistance from Tetra Tech, Inc.

November 2003

EXECUTIVE SUMMARY

This report was prepared under the authority of Section 367 of the Fiscal Year 2003 Military Appropriations Act, Public Law 107-314, December 2, 2002 (Appendix A), which directed the Secretary of the Army to

> *Conduct a preliminary engineering and environmental study to evaluate the feasibility of establishing a connector road between Richmond Highway (United States Route 1) and Telegraph Road in order to provide an alternative to Beulah Road (State Route 613) and Woodlawn Road (State Route 618) at Fort Belvoir, Virginia.*

This preliminary study evaluated the technical, economic, and environmental feasibility of potential alternative routes to replace the closed Woodlawn Road and Beulah Street routes. Alternatives investigated were (1) entirely on Fort Belvoir, (2) entirely off Fort Belvoir, and (3) both on and off Fort Belvoir. The focus of this study was to identify potential long-term solutions to the problem of traffic congestion, and therefore the study does not identify near-term measures to ease the current traffic congestion. This report does not recommend any alternative over the others; rather, it highlights the advantages and disadvantages of seven alternatives based on criteria developed by the Road Study Interagency Working Group, a team of representatives from the Army, the Virginia Department of Transportation, and Fairfax County government. Macro-level assessments of land use, environmental constraints, and cultural resources were performed, but a micro-level analysis of the environmental impacts was not performed. If one or more of the seven alternatives are selected for further study, a more detailed environmental analysis would be required to comply with the National Environmental Policy Act.

Three components were used to identify alternatives for this study: (1) alternatives defined in the congressional mandate, (2) alternatives contained in previous transportation studies in the vicinity of Fort Belvoir, and (3) alternatives developed in a collaborative effort with the stakeholders conducted between March and November 2003. The following options were considered during development of the alternatives:

- Reopen or modify existing on-post roads for public access.

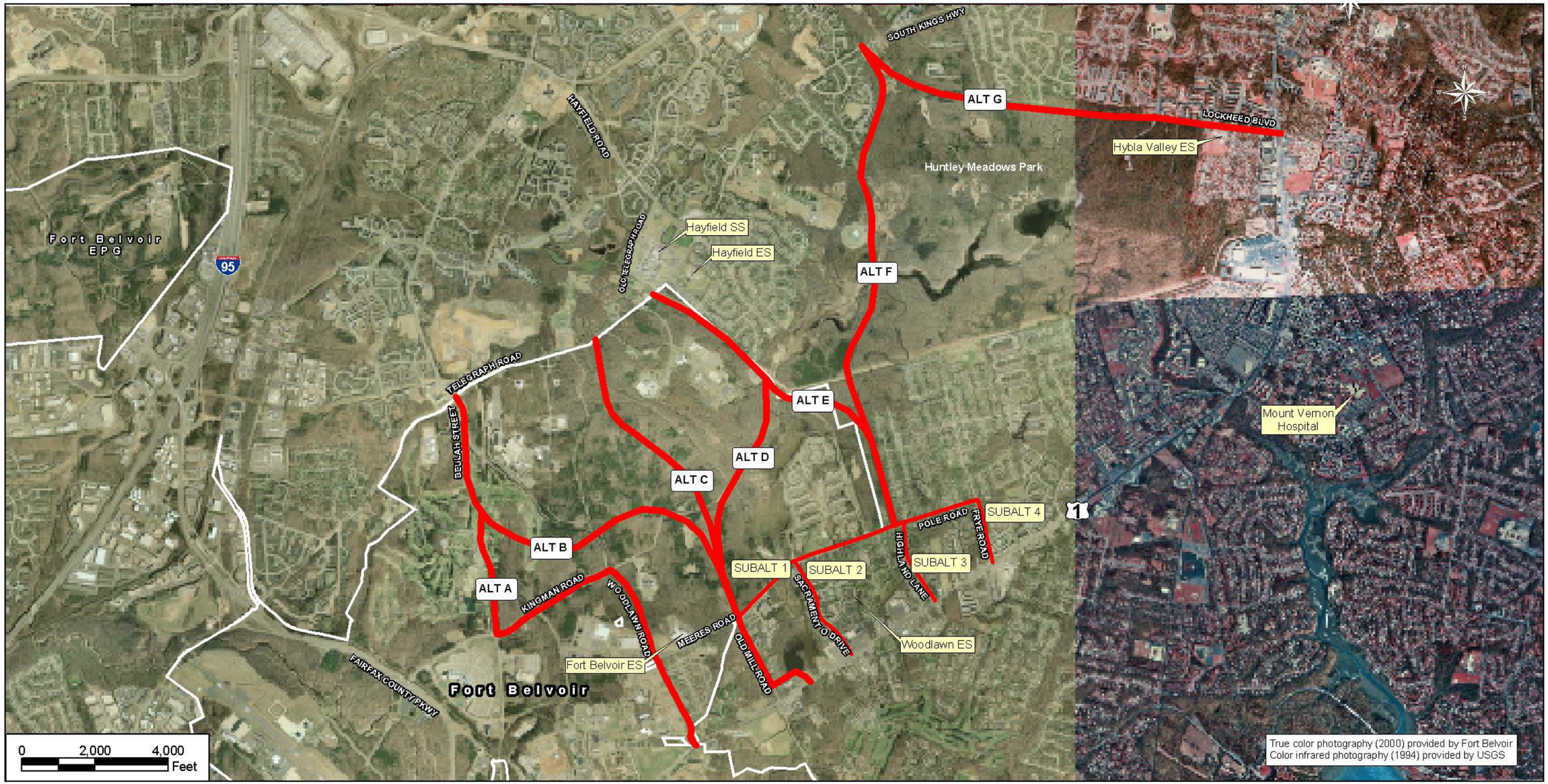
- Identify a new roadway alignment through or around the eastern portion of the installation to reconnect Telegraph Road and U.S. Route 1.
- Identify a new connector roadway alignment entirely off-post.
- Extend Old Mill Road to Telegraph Road.
- Reassess previous road studies and their alternatives.

This preliminary study initially reviewed 14 corridor alignments that could serve as future connector roads between Telegraph Road and U.S. Route 1 in the vicinity of Fort Belvoir. The number of corridors was narrowed to seven based on input from stakeholders and the evaluation criteria defined for this study. Alignments of the seven corridors were scrutinized, and minor adjustments to the corridors were made to reduce economic, environmental, or technical impacts. The traffic influence, constraints, and relative macro-level costs of the final seven corridors were compared. These seven alternatives are presented in Figure ES-1.

The objective of this study was to identify alternative corridors that were technically, environmentally, and economically feasible. The technical evaluation focused primarily on traffic analyses to demonstrate the effect that each alternative would have on local and regional traffic. The environmental analysis considered existing constraints based on available data from Fort Belvoir and Fairfax County. Because of the very preliminary nature of this study, the economic evaluation was limited to a macro-level cost comparison. Evaluations of these feasibility objectives are presented in a corridor matrix and macro-level cost comparison table in Section 5 and Section 7 of this report. All seven alternatives are considered to be technically, environmentally, and economically feasible at this phase of the study. A summary of the alternatives relative to these feasibility objectives is provided below, followed by the preferences of some of the Study Team members.

Technical Feasibility

The corridor alternatives were evaluated for their local and regional influence. Traffic analyses were performed using four-lane road scenarios. Local influence reflects the volume of traffic (vehicles per day) that would be expected to use the alternative road, if



LEGEND

Fort Belvoir

Corridor Alternatives Evaluated in This Study

Sources: Fort Belvoir GIS, 2003; USGS, 1994.

Figure ES-1

constructed. Regional influence reflects a reduction in total vehicle hours traveled per day. The following conclusions are based on current year (2003) model runs.

All seven of the alternatives demonstrate a positive result in relieving traffic congestion in the Fort Belvoir area, as measured by the amount of traffic rerouted from Woodlawn Road to the alternative corridor. Alternative A has the highest number of rerouted traffic at approximately 5,100 vehicles per day. This alternative makes use of existing alignments with Woodlawn Road and Beulah Street, making it understandable that the local traffic would return to using the same or very similar routes. The alternative that is nearest to Alternative A from a local perspective is Alternative C, with approximately 4,700 vehicles per day. This alternative, an extension of Old Mill Road, represents the most direct route to Telegraph Road.

The corridors with the most positive influence on regional traffic are Alternatives F, C, D, and E. The greatest reduction in vehicle hours traveled from the presumed baseline is Alternative F, resulting in a reduction of approximately 4,500 vehicle hours traveled. The second largest reduction in vehicles traveled is in Alternatives C, D, and E with a reduction of approximately 2,700, 3,000, and 3,200 vehicles hours traveled, respectively.

The corridor with the highest projected change in volume on parallel routes is Alternative F with nearly 11,000 vehicles per day from Route 1, north of Sherwood Hall Lane and Fairfax County Parkway, north of John J. Kingman Road. The greatest reduction in vehicle hours traveled is achieved by Alternative F, which reduces the number of vehicle hours traveled per day by 4,500. The second largest reductions in vehicle hours traveled per day are achieved by Alternatives C, D, and E, each of which reduces the number of vehicle hours traveled per day by 3,000. Alternatives A and G have the highest average volume of traffic at over 16,000 vehicles per day and 18,000 vehicles per day, respectively.

The corridors with the greatest improvement in level of service during the morning rush hour are Alternatives A, C, D, and E. During the evening rush hour, Alternatives B, D, and E show the greatest improvement in level of service.

If the evaluation criteria are combined, Alternative C is the most favorable alternative from a traffic perspective because it provides one of the greatest improvements in level of service, has the second highest beneficial influence on local and regional traffic, and has the second largest change in volume on parallel routes.

Environmental Feasibility

The environmental criteria encompass a wide range of constraints. This preliminary study specifically avoided weighting the criteria. Therefore, a quantifiable environmental assessment was not performed. Instead, the seven corridor alignments were superimposed over maps of environmental conditions that identify the constraints within the alternative corridors. These values are presented in the matrix in Section 5 for general comparison purposes.

None of the corridor alignments appear to have environmental constraints that could not be mitigated. Some readily apparent differences between the alternatives are the amount of wetlands and floodplains affected, the number of potential noise-sensitive receptors, and the number of historic or cultural sites affected. The alternatives with the least impact on natural resources (wetlands, upland habitat, threatened and endangered species, rare ecological communities) are Alternatives A and B; Alternative F has the most impact on natural resources. The corridor with the lowest number of potential noise-sensitive receptors is Alternative A; Alternative G has the highest number of potential noise-sensitive receptors. The corridor with the most historic and cultural sites affected is Alternative A; Alternatives E, F, and G do not affect any historic and cultural sites.

Economical Feasibility

The alternative with the lowest comparative cost is Alternative G at $25 million if all the assumptions were correct. The second lowest comparative cost is Alternative C at approximately $28 million. It should be noted that these costs are highly unrefined

because of the preliminary nature of this study. It is quite likely that costs would increase based on revised alignments, detailed road design, field data (e.g., geotechnical survey), and mitigation measures.

Study Team Preferences

There was a desire among the study team members to narrow the list of seven alternatives. However, identifying preferred alternatives was difficult to substantiate due to the preliminary nature of the study, particularly from a beneficial perspective. For example, the alignment of each corridor is very approximate and a slight modification in the alignment could significantly change the environmental and economical feasibility.

The following statements summarize the opinions of the study team members on the least favorable alternatives. Although all seven alternatives were determined to be feasible, specific study team members did not desire some of the alternatives but agreed to keep them in this study for comparison purposes.

Fort Belvoir. Alternatives F and G are most desired by Fort Belvoir because they have a positive affect on regional traffic congestion and do not have negative force protection implications. Alternative G was specifically requested to be added to this study by Fort Belvoir during the September 16, 2003 Study Team meeting. Alternative A is least desired by Fort Belvoir due to the existing and proposed land-use along this existing corridor.

Fairfax County. Of the alternatives considered in this study, Fairfax County endorses alternatives A, B, and C or a hybrid of these alternatives as viable options to replace the traffic capacity and accessibility lost with the closure of Woodlawn Road and Beulah Street. This desire was expressed in a letter from Katherine Hanley, Chairman-Fairfax County Board of Supervisors, to Colonel Williams, Fort Belvoir Garrison Commander, that was given to the study team during the November 17, 2003 information meeting.

Alternatives F and G are the least desired by Fairfax County because they traverse Huntley Meadows Park. The alternative G corridor was identified in a previous study as the preferred alternative but was faced with strong resistance by the Park Authority and

local residents. An attempt to proceed with this corridor was made approximately 15 years ago and did not succeed due to the deed to the property. The issue is: any activity in Huntley Meadows Park would require Fairfax County to renegotiate the deed to the property with the Department of Interior.

The Virginia Department of Transportation. The Virginia Department of Transportation did not express a most or least favorable alternative.

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SECTION 1.0:
PURPOSE AND SCOPE

1.1 Purpose

This report was prepared under the authority of Section 367 of the Fiscal Year (FY) 2003 Military Appropriations Act, Public Law 107-314, December 2, 2002 (Appendix A), which directed the Secretary of the Army to

> *Conduct a preliminary engineering and environmental study to evaluate the feasibility of establishing a connector road between Richmond Highway (U.S. Route 1) and Telegraph Road in order to provide an alternative to Beulah Street (State Route 613) and Woodlawn Road (State Route 618) at Fort Belvoir, Virginia, which were closed as a force protection measure.*

This preliminary feasibility study represents a response to the congressional mandate as the first phase of a potentially multiphase study to develop a connector road between U.S. Route 1 and Telegraph Road.

1.2 Scope

The scope of this study was to perform a cursory evaluation to determine the technical, economic, and environmental feasibility of alternative routes to replace the closed Woodlawn Road and Beulah Street routes. Alternatives studied were (1) entirely on Fort Belvoir, (2) entirely off Fort Belvoir, and (3) both on and off Fort Belvoir. The focus of this study was to identify long-term solutions to the problem of traffic congestion. The advantages and disadvantages of each route, based on criteria developed by the Road Study Interagency Working Group, are presented in Section 6.0 of this report. Macro-level assessments of land use, environmental constraints, and cultural resources were performed.

Alternatives were developed based on three sources: congressionally mandated requirements, previous road studies, and a collaborative effort conducted among

stakeholders and the public between March and November 2003. The following options were considered during development of the alternatives:

- Reopen or modify existing on-post roads for public access.
- Identify a new roadway alignment through or around the eastern portion of the installation to connect Telegraph Road and U.S. Route 1.
- Identify a new connector roadway alignment entirely off-post.
- Extend Old Mill Road to Telegraph Road.
- Reassess previous road studies and their alternatives.

Traffic analyses performed for the Fort Belvoir area before the road closures served as a baseline condition for this study. Additional traffic models were run to evaluate the effectiveness of each alignment as a replacement for Woodlawn Road and Beulah Street.

This study does not address the need for immediate and near-term mitigation measures to ease current traffic congestion. An analysis of the option of hardening of facilities along the Woodlawn Road/Beulah Street route for force protection purposes and reopening these roads was not performed as part of this study. Such an analysis, as well as an analysis of immediate and near-term mitigation measures, would be performed as a separate study. This report does not recommend any alternative over any other. A microanalysis of the environmental impacts of the alternatives was not conducted. If one or more of the seven routes are selected for further study, more detailed environmental analyses would be performed to comply with the National Environmental Policy Act (NEPA).

1.3 Public Involvement

The Road Study Interagency Working Group (Study Team), made up of representatives from the Army, Virginia Department of Transportation (VDOT), and Fairfax County government, was involved throughout the development of this study. Details of the Study Team's involvement in the development process are discussed throughout this document.

1.4 Study Timeline and Future Steps

This study represents the first phase of the preliminary engineering and environmental study. A decision on whether to proceed is anticipated by January 2004. If a decision to proceed is made, the following steps are likely to occur:

- Congressional action to provide funding
- Formal NEPA process
- Design
- Construction

SECTION 2.0:
BACKGROUND

2.1 Road Closings

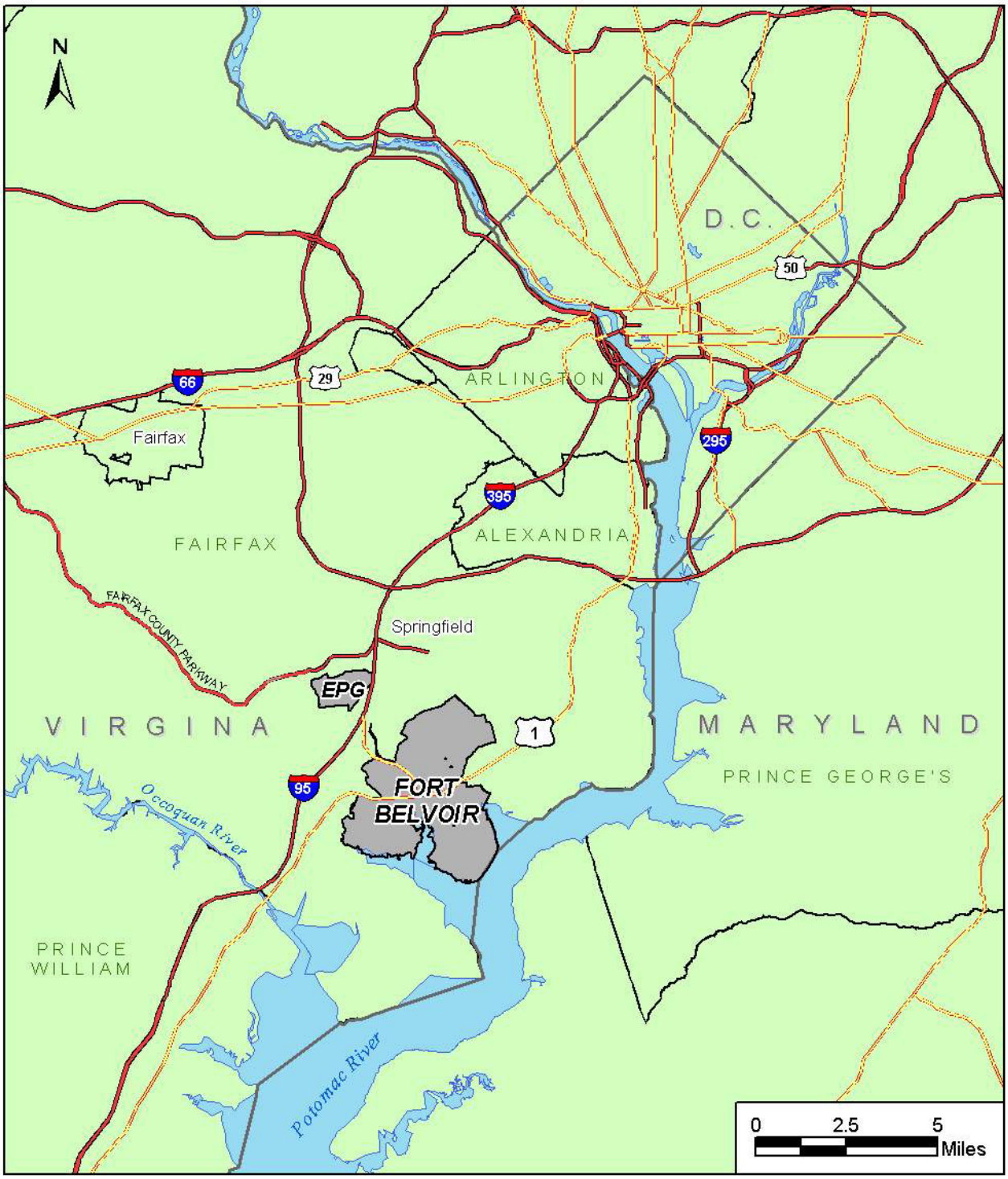
Woodlawn Road (State Route 618) and Beulah Street (State Route 613) are two-lane roads that extend through Fort Belvoir's North Post (Figures 2-1 and 2-2). These roads were constructed and maintained by VDOT, and commuters used them as connecting routes between Richmond Highway (U.S. Route 1) and Telegraph Road before they were closed. Fairfax County planned to widen Woodlawn Road to four lanes, and included it in the *Fairfax County Comprehensive Plan*.

The events of September 11, 2001, triggered an increase in security measures at military installations across the United States. One of the measures was the immediate closure of public roads through Fort Belvoir to non-Army traffic. The consequences were increased traffic congestion in the vicinity of Fort Belvoir. Figure 2-3 shows the daily traffic volumes, in vehicles per day, for the road network in and around Fort Belvoir in the pre- and post-September 11 scenarios. Figure 2-4 shows the projected daily traffic volumes for the road network in and around Fort Belvoir for the year 2025.

In response to public pressure to ease this traffic situation, Congress acted by including specific language in the FY03 National Defense Authorization Act that authorized this study.

2.2 Road Study Interagency Working Group

To a large extent, this study is the result of the concerns expressed by the citizens of Fairfax County, Virginia, to their local, state, and congressional representatives regarding the increased traffic congestion in the Fort Belvoir area that resulted from the closing of Woodlawn Road and Beulah Street. Consequently, a critical element of this study was to ensure that a broad spectrum of stakeholders was represented in the development and evaluation of alternatives.

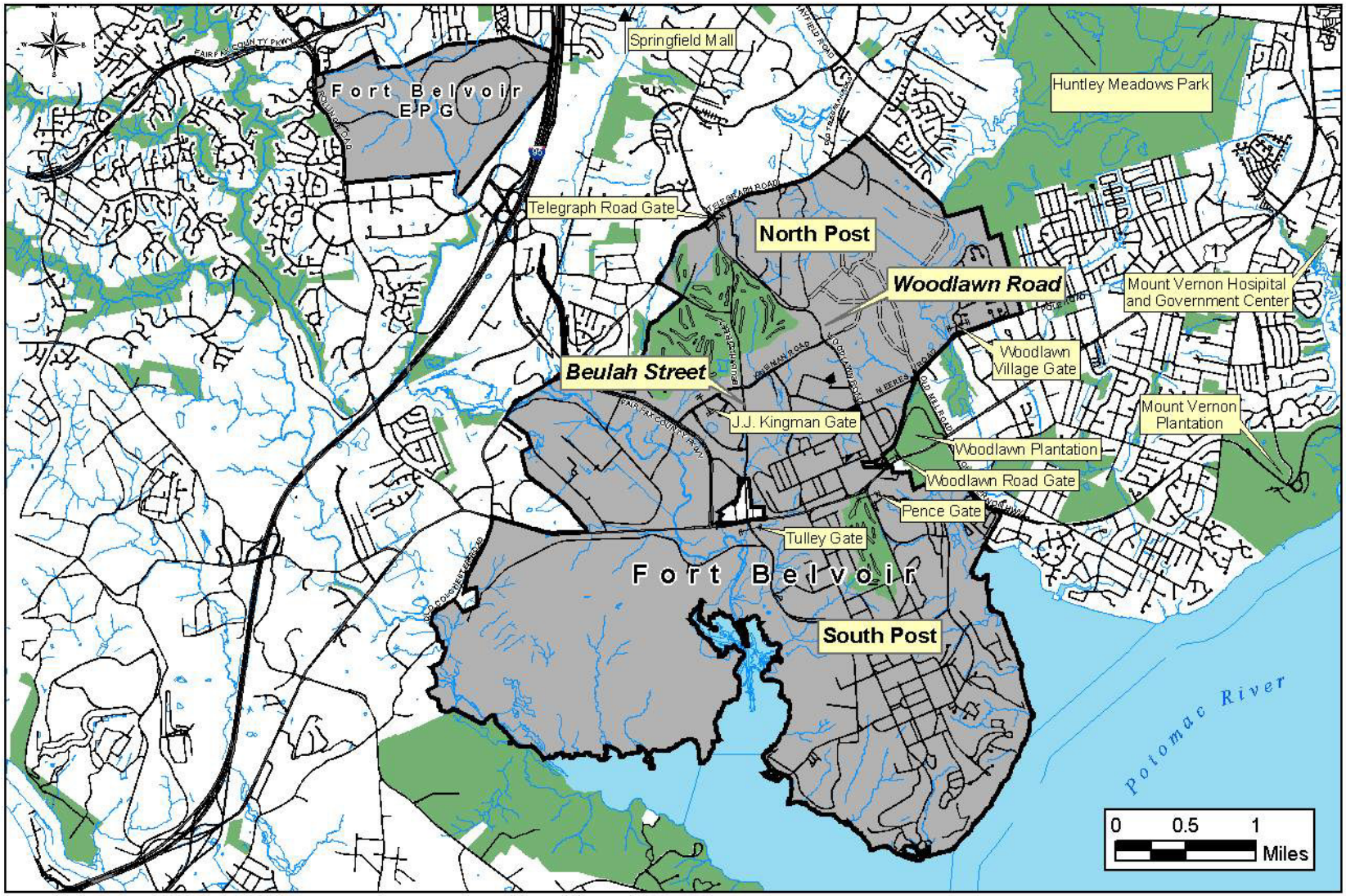


LEGEND

- Fort Belvoir
- County Boundary
- Interstate Highway

Regional Location

Figure 2-1



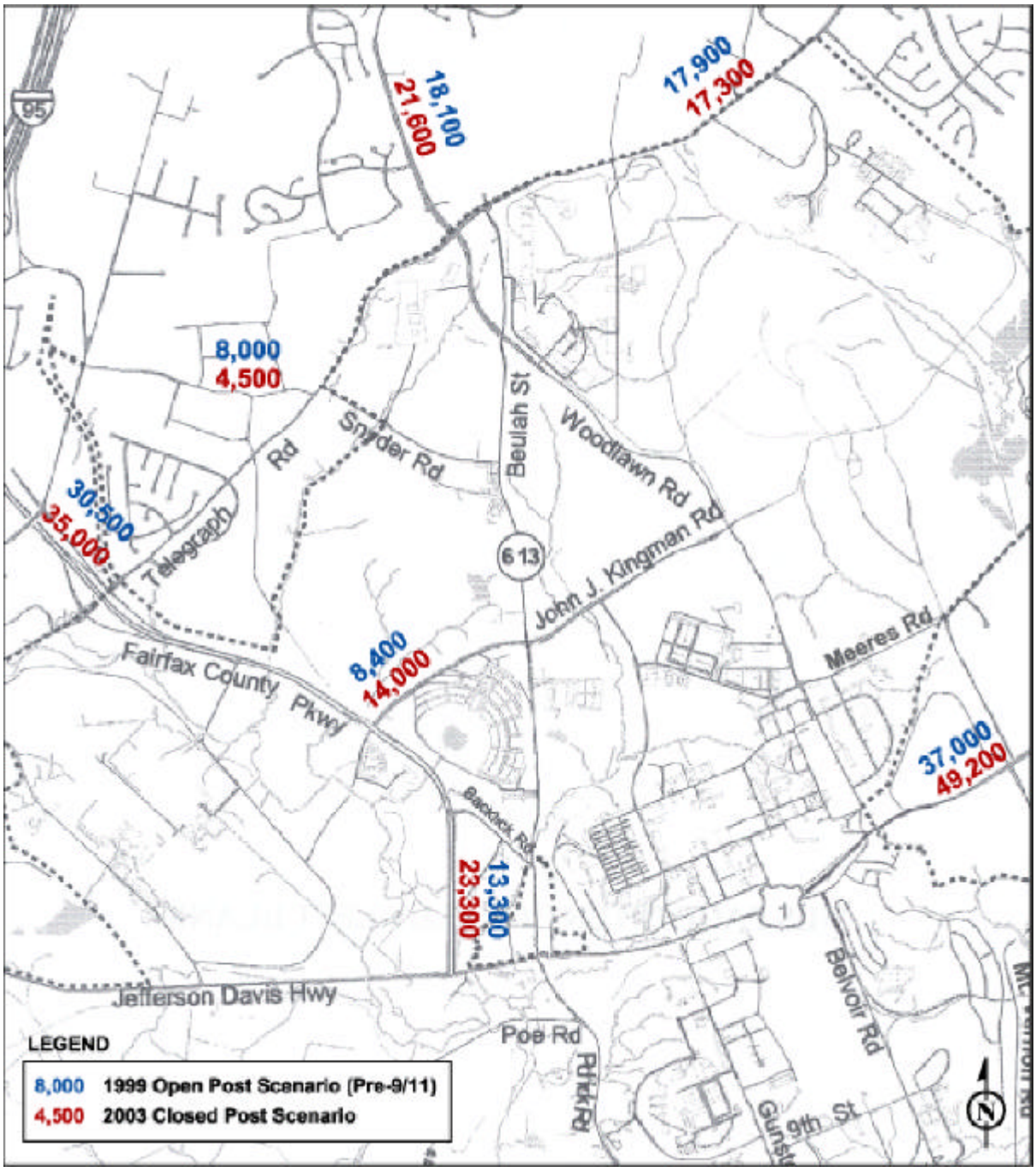
LEGEND

- Fort Belvoir
- Parkland
- Stream

Sources: Fairfax County GIS, 2003; Fort Belvoir GIS, 2003.

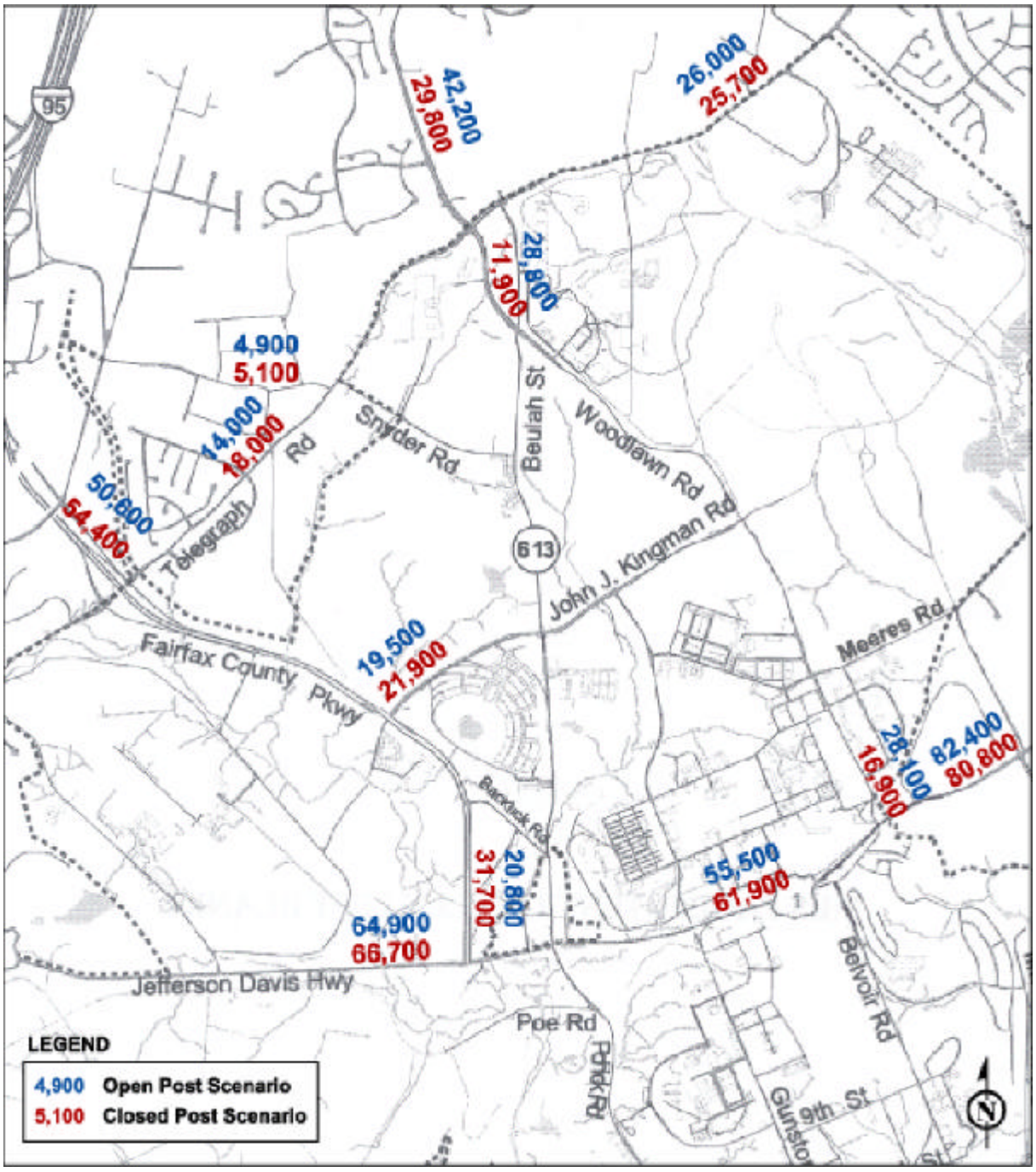
Fort Belvoir and Vicinity

Figure 2-2



Existing Daily Traffic Volumes

Figure 2-3



2025 Daily Traffic Volumes

Figure 2-4

The Road Study Interagency Working Group members (referred to as stakeholders or the Study Team) involved in developing the route alternatives included the Department of the Army (Northeastern Regional Office [NERO] of the Installation Management Agency [IMA], Military District of Washington [MDW], and Fort Belvoir), VDOT Northern Virginia District Office, and Fairfax County (Board of Supervisors and Department of Transportation). Each agency had its own interests and requirements for this study, and thus the study represents a collaborative effort among them. The primary concerns of stakeholders were the following:

- Reduce the traffic congestion in the Fort Belvoir area
- Ensure force protection
- Consider environmental and socioeconomic impacts
- Minimize impacts on residential neighborhoods and schools
- Define a project that could be executed as quickly as possible
- Maintain access to facilities, including Mount Vernon hospital and government center, historic plantations (Mount Vernon, Woodlawn, and Gunston Hall), Springfield Mall, Franconia-Springfield Parkway, and I-95 employment centers.

Beyond the agencies identified above, other federal, state, and local government agencies participated in the process of developing alternatives. A list of the agencies that participated in the stakeholder meetings is provided in Appendix B.

2.3 Prior Road Studies

Traffic congestion along U.S. Route 1 and Telegraph Road existed in the Fort Belvoir area before the closing of Woodlawn Road and Beulah Street. Consequently, VDOT, the Army, Fairfax County, and other agencies have performed numerous studies to address the traffic issues along U.S. Route 1 and Telegraph Road. The *Fairfax County Comprehensive Plan* addresses the need to widen both Woodlawn Road and Beulah Street to four lanes. Two of these studies and their findings were incorporated into this report for further consideration because of their relevance and their convergence with this study's goals. The first study, the Lockheed Boulevard Connector Road Study, was completed by Fairfax County in 1978 and was followed by an Environmental Assessment

in 1983. The second study, the North Post Transportation Study, was conducted by Fort Belvoir in December 2000.

2.3.1 Lockheed Boulevard Connector Road Study

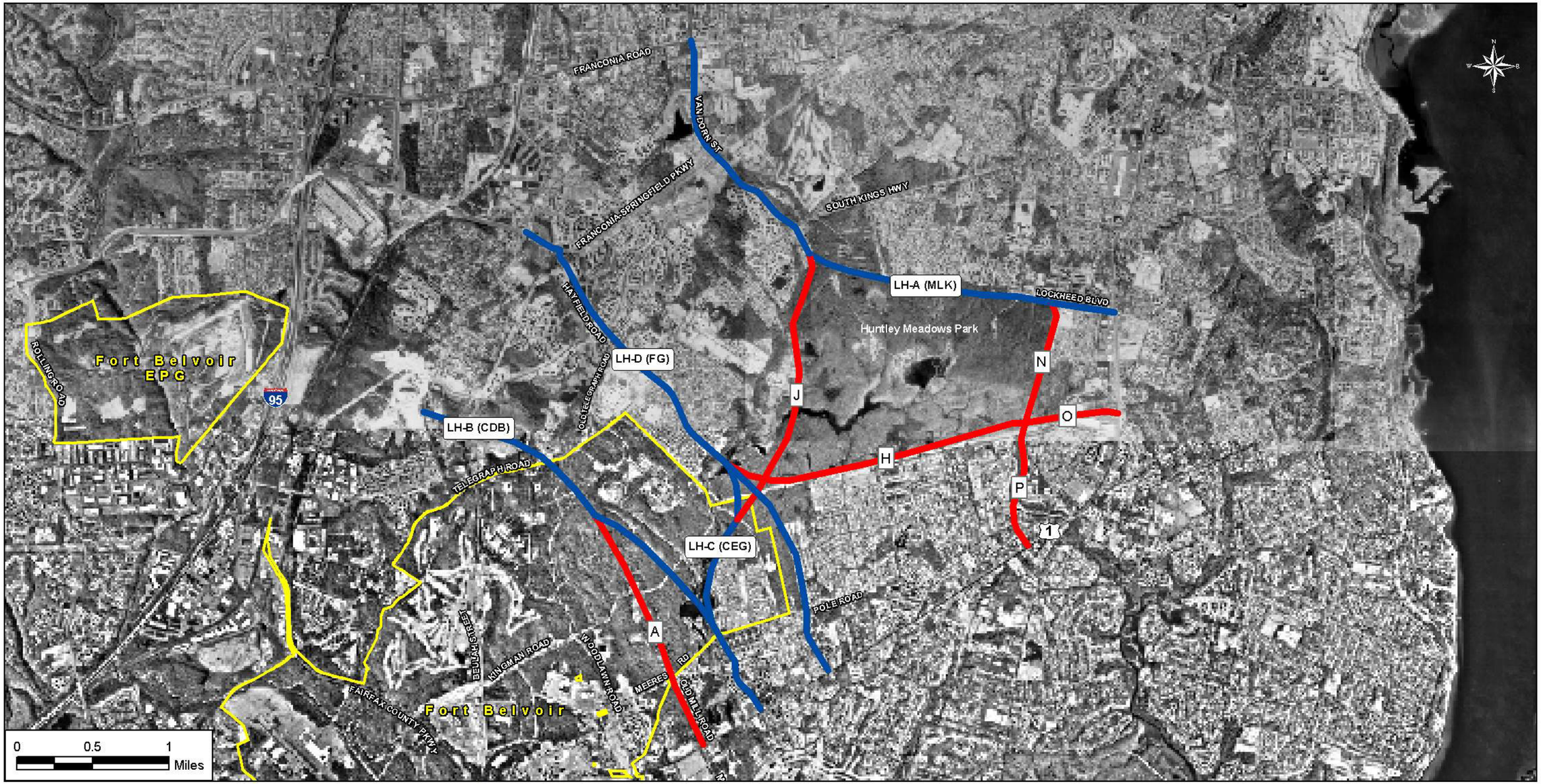
The intent of Fairfax County's Lockheed Boulevard Connector Road Study was to identify a connector route that would minimize the volume of commuters using residential areas as shortcuts and to enhance access to and movement between employment and commercial centers, community facilities, and various residential areas.

The study evaluated 15 potential road segments that created 8 road alternatives connecting the southeastern part of Fairfax County (Franconia and Springfield areas) to U.S. Route 1. Of these, four alternatives (LH-B/CDB, LH-C/CEG, LH-D/FG, and LH-A/MLK) were selected as potential solutions to provide improved east-west access from I-395 (Figure 2-5).

The Department of the Interior's Record of Decision on the Lockheed Boulevard Connector Road Study, dated November 30, 1990, is provided as Appendix C.

2.3.2 North Post Transportation Study

Seventeen years after Fairfax County completed the Lockheed Boulevard Connector Environmental Assessment, Fort Belvoir performed the North Post Transportation Study. The study's primary focus was to address the force protection concerns of security-sensitive tenant organizations on-post that feared breaches of security from nearby commuter roads. The study identified five transportation alternatives on the North Post, which included roadway alternatives to replace existing Beulah Street and Woodlawn Road, as well as the option of completely closing the North Post to off-site commuter traffic. All five alternatives presented in the North Post Transportation Study were initially considered as viable alternatives for the purpose of this preliminary feasibility study. Figure 2-6 illustrates the three proposed routes that did not use existing roads.



LEGEND

Corridor Alternative Considered Further

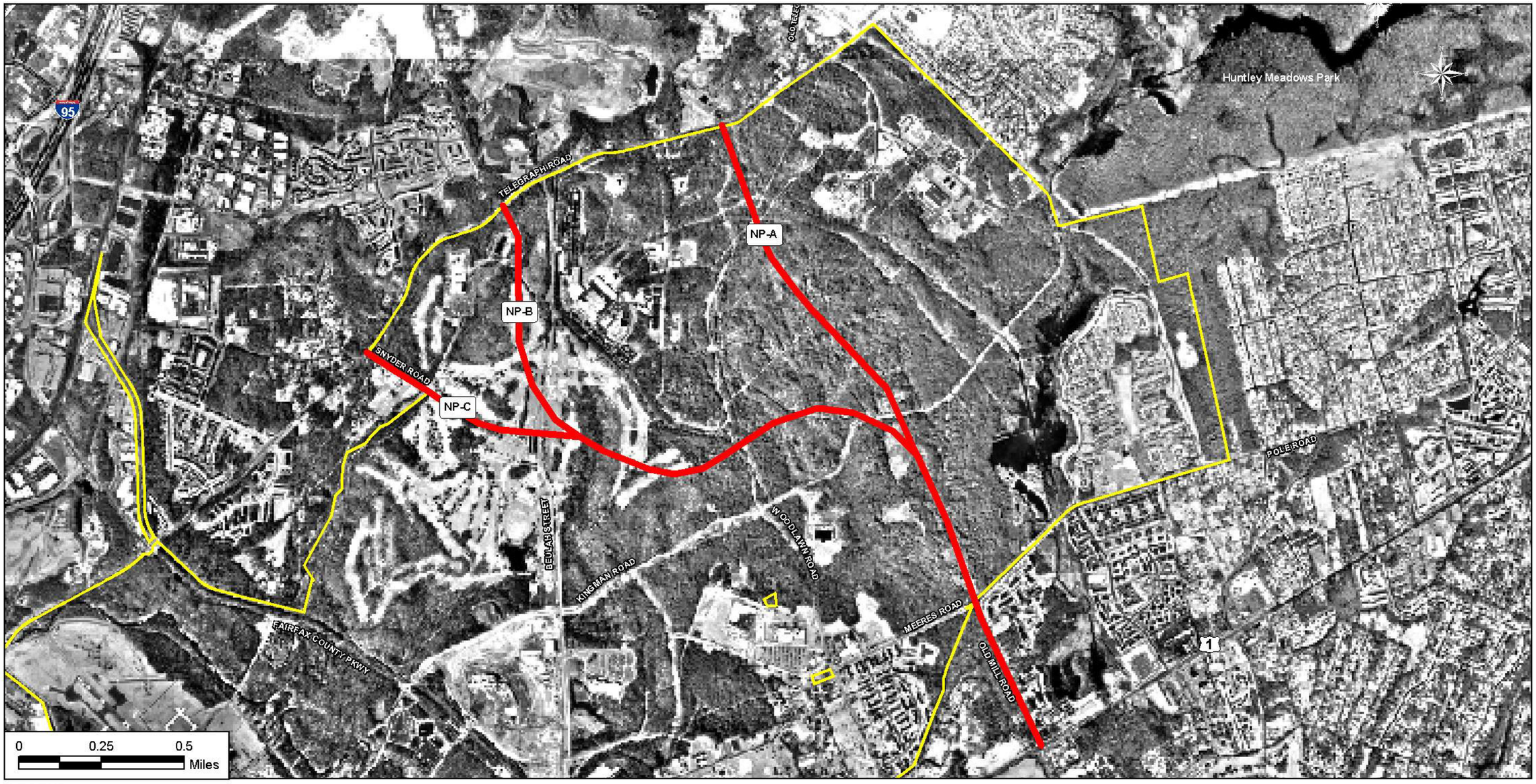
Corridor Alternative Not Considered Further

Fort Belvoir

Lockheed Connector Road Study Corridor Alternatives (1978)

Sources: Fairfax County, Virginia, 1983; USGS, 1994.

Figure 2-5



LEGEND

Fort Belvoir

North Post Transportation Study Corridor Alternatives (2000)

Note: NP-D would close the North Post to non-post traiffic.
NP-E would prohibit through trucks from entering the North Post.

Sources: U.S. Department of the Army, 2000; USGS, 1994.

Figure 2-6

2.4 Roadways and Traffic Conditions in the Vicinity of Fort Belvoir

U.S. Route 1 is classified as a principal arterial with a generally north-south regional orientation. Across Fort Belvoir, however, the roadway runs in an east-west direction. Access to Fort Belvoir is provided via three gates off U.S. Route 1. Through the Fort, U.S. Route 1 is primarily a four-lane, undivided roadway with exclusive turn lanes at the major intersections. Before the events of September 11, 2001, U.S. Route 1 carried approximately 37,000 vehicles per day (vpd) in the vicinity of Fort Belvoir.

Most of the U.S. Route 1 corridor currently operates at or beyond capacity. In the vicinity of Fort Belvoir, conditions are particularly congested during the morning and evening peak commuting hours. Within Fairfax County, identifying existing deficiencies and developing programs for improvement have been the object of intense study. The *Constrained Long Range Plan* of the Metropolitan Washington Council of Governments (MWCOG) recommended the addition of a third through lane in the Fort Belvoir area, with a completion date of 2015. However, the improvement to U.S. Route 1 currently has no committed funding.

Telegraph Road (State Route 611) begins at U.S. Route 1 to the south and west of Fort Belvoir. It is classified as a minor arterial (type A), and it runs alongside the northern boundary of the installation. Between the summer of 2000 and March 2002, a 2.5-mile segment between U.S. Route 1 and Beulah Street was improved from a two-lane to a four-lane divided roadway. From this point, the road narrows to two lanes approximately 0.2 mile northeast of the Beulah Street intersection (VDOT 2003a). Traffic conditions southwest of the Beulah Street intersection have improved because of the widening of Telegraph Road in the southwest direction. In the opposing traffic direction (heading northeast), traffic congestion has increased because of the reduction in road capacity from two northeast-bound lanes to one.

The Beulah Street entrance to Fort Belvoir from Telegraph Road was a major access point before the events of September 11, 2001. At that time, the traffic volume along Telegraph Road was approximately 17,500 vpd in the vicinity of Fort Belvoir. Today,

even though the Beulah Street entrance is closed to unrestricted access, the intersection of Telegraph Road is accommodating approximately 17,000 vpd.

A traffic volume database exists for Fort Belvoir and its surrounding roadways. Much of the count data was obtained for use in the North Post Transportation Study and in Environmental Assessments conducted for various actions on Fort Belvoir. Table 2-1 summarizes daily traffic volumes at locations on and adjacent to Fort Belvoir under four different time scenarios: (1) before the events of September 11, 2001—Open post; (2) after September 11, 2001, and the subsequent closing of Woodlawn Road and Beulah Street—Closed post; (3) horizon year 2025, in which Woodlawn Road and Beulah Street are presumed open to all traffic; and (4) horizon year 2025 with the current road closures.

Traffic data for before and after September 11, 2001, developed as part of the ongoing *Fort Belvoir Master Plan* update study, were obtained for use in this study. For the 2025 projected traffic volumes figures, the latest regional travel demand model (MWCOG Version 2./TP+Release C) was used to forecast future traffic volumes in the vicinity of Fort Belvoir to the year 2025. The 2025 model also included the South Post Development Scenario, which proposes to add 3 million square feet of development on Fort Belvoir by 2025, with most of that development taking place on the South Post golf course.

The closing of the post to public access and through traffic after the events of September 11, 2001, negatively affected U.S. Route 1 through the post, Fairfax County Parkway, and Telegraph Road. Traffic also increase significantly on John J. Kingman Road east of Fairfax County Parkway as Fort Belvoir traffic was diverted from the Beulah Street entrance to the North Post to the John J. Kingman Road entrance (Figure 2-2). U.S. Route 1 through the post (as well as elsewhere in the corridor) is over capacity. Although there is generally excess capacity on Fairfax County Parkway, the intersection at John J. Kingman Road is over capacity during the afternoon peak period. Additional capacity had recently been created on Telegraph Road west of Beulah Street, but capacity issues still exist on Telegraph Road east of Beulah Street.

Table 2-1. Estimated of Traffic Volumes for 1999, 2003, and 2025

LOCATION	1999 Open Post Scenario (vpd) Before 9/11	2003 Closed Post Scenario (vpd) After 9/11	2025 Open Post Scenario (vpd)	2025 Closed Post Scenario (vpd)
Beulah Street north of Telegraph Road	18,100	21,600	42,200	29,800
Beulah Street south of Telegraph Road	—	—	28,800	11,900
Fairfax County Parkway north of U.S. Route 1	13,300	23,300	20,800	31,700
Fairfax County Parkway north of Telegraph Road	30,500	35,000	50,600	54,400
John J. Kingman Road east of Fairfax County Parkway	8,400	14,000	19,500	21,900
Newington Road north of Telegraph Road	8,000	4,500	4,900	5,100
U.S. Route 1 east of Woodlawn Road	37,000	49,200	82,400	80,800
U.S. Route 1 west of Belvoir Road	—	—	55,500	61,900
U.S. Route 1 west of Fairfax County Parkway	—	—	64,900	66,700
Telegraph Road east of Beulah Street	17,900	17,300	26,000	25,700
Telegraph Road west of Newington Road	—	—	14,000	18,000
Woodlawn Road north of U.S. Route 1	—	—	28,100	16,900

— = Data not collected at these intersections.

There was a lag of about 4 years between the Open Post and Closed Post data collection periods. Over that time, traffic volumes through and adjacent to Fort Belvoir increased as a result of regional demographic growth. Historical data indicate that traffic on major roadways in the region is growing at approximately 1.5 percent per year. Therefore, a portion of the increased traffic near Fort Belvoir may be attributed to regional growth and not solely to the closing of the post to through traffic.

Output from the travel demand model indicates that opening the post to through traffic would have a positive effect on 2025 traffic volumes in the vicinity. Specifically, a positive effect would be expected on U.S. Route 1 through the Post, on Fairfax County Parkway, and on Telegraph Road. However, significant increases in volume are projected for Woodlawn Road and Beulah Street on the North Post and for Beulah Street north of Telegraph Road. As would be expected, the roadways affected are the same as those indicated for the 2003 Closed Post scenario.

SECTION 3.0:
IDENTIFICATION OF STUDY ALTERNATIVES

Three components were used to identify alternatives for this study: (1) alternatives defined in the congressional mandate, (2) alternatives contained in previous transportation studies in the vicinity of Fort Belvoir, and (3) alternatives developed in a collaborative effort involving the stakeholders. Alternatives were developed for each of the following categories:

- Modifying and reopening of Woodlawn Road and/or Beulah Street
- New road alignment (on-post)
- New road alignment (off-post)
- A combination of the on- and off-post new road alignments
- No action

Each alternative selected in this study was evaluated, through due process of input from stakeholders and discussions with technical professionals, for its adequacy to

- Improve general accessibility and transportation in the area.
- Minimize environmental degradation, including impacts on adjacent property, special watershed conditions, and rare ecological communities, as well as to follow all permit requirements and other regulatory constraints.
- Ensure security with respect to either the direct route footprint or its associated effects such as increased visibility, proximity, and exposure.
- Meet political and socioeconomic requirements.

3.1 Congressional Mandate

The congressional authorization language expressly directed that the minimum analysis include "the extension of Old Mill Road north to Telegraph Road."

3.2 Options Contained in Previous Transportation Studies

Two prior road connector and transportation studies performed for the Fort Belvoir area (discussed in Section 2.3) were incorporated into this study.

3.2.1 Lockheed Boulevard Connector Road Study

The Lockheed Boulevard Connector Road Study identified eight alternatives, four of which were eliminated for further study because they were not technically or environmentally feasible. The remaining four alternatives were analyzed in detail, and one of them, Alternative MLK (Alternative G in this study), was selected as the preferred alternative. The following four alternatives (depicted with blue lines in Figure 2-5) were selected for detailed analysis:

- **LH-A.** A four-lane connector road that begins at the intersection of U.S. Route 1 and Lockheed Boulevard, extends west along the northern border of Fairfax County's Huntley Meadows Park, and veers northwest to align with Van Dorn Street.

- **LH-B.** A four-lane connector road that begins at the intersection of U.S. Route 1 and Sacramento Drive, extends north on Sacramento Drive to the boundary of Fort Belvoir, bisects the base, crosses Telegraph Road, and connects with Beulah Street at a "T" intersection.

- **LH-C**. A four-lane connector road that begins at the intersection of U.S. Route 1 and Sacramento Drive, continues north along the same route as LH-B until it crosses the boundary of Fort Belvoir and veers to the northeast, turns north as it passes through the southwest corner of Huntley Meadows Park, and veers northwest, passing through the Hayfield Park subdivision before aligning with Hayfield Road and ending at the Franconia-Springfield Parkway.

- **LH-D.** A four-lane connector road that begins at the intersection of U.S. Route 1 and Highland Lane, continues north just east of the eastern boundary of Fort Belvoir, and passes through the southwest corner of Huntley Meadows Park, where it aligns with LH-C and continues to the Franconia-Springfield Parkway.

3.2.2 North Post Transportation Study

Fort Belvoir's North Post Transportation Study considered five alternatives for the replacement of the through-post access provided by Woodlawn Road and Beulah Street,

as well as a no action alternative. The three alternatives requiring new roadways are depicted in Figure 2-6. (The remaining two alternatives use existing roadways.) The features of the five alternatives considered in the North Post Transportation Study are described below:

- **No Action Alternative.** The no action alternative assumed that no action would be taken by Fort Belvoir, but included actions that would be implemented by others. Those actions included the improvements detailed in the *Fairfax County Comprehensive Long Range Plan*—widening Woodlawn Road to four lanes, widening Telegraph Road to four lanes, and widening U.S. Route 1 to six lanes.

- **NP-A.** A four-lane divided urban arterial that begins at the existing intersection of Old Mill Road and U.S. Route 1, provides a widening of existing Old Mill Road to a four-lane roadway to Pole Road, and then extends north on a new alignment to an intersection with Telegraph Road, south of the existing Leaf Road intersection.

- **NP-B.** A four-lane divided urban arterial that begins at the existing intersection of Old Mill Road and U.S. Route 1, provides a widening of Old Mill Road to Pole Road, extends north approximately 2,000 feet, curves west and passes through the North Post Golf Course (affecting approximately 10 holes), and then curves north and ties into the recently widened four-lane section of Beulah Street.

- **NP-C.** A four-lane urban arterial that begins at the existing intersection of Old Mill Road and U.S. Route 1, provides a widening of existing Old Mill Road to a four-lane roadway to Pole Road, extends north approximately 2,000 feet, turns west and passes through the North Post Golf Course (affecting approximately eight holes), and continues to a connection with Telegraph Road at the existing Snyder Road intersection.

- **NP-D.** The closing of the North Post to non-post traffic and the proposed improvements to U.S. Route 1 and Telegraph Road in the *Fairfax County Comprehensive Long Range Plan.*

- **NP-E.** Prohibition on through trucks entering the North Post of Fort Belvoir, and the closing altogether of three roadway segments: Snyder Road, Beulah Street north of Backlick Road, and Meeres Road west of Old Mill Road.

The study concluded that all the alternatives could be made to work from a traffic and environmental perspective. NP-A and NP-B violate the desired 400-meter force-protection setback distance from security-sensitive facilities, but these alternatives provide, respectively, 300 meters and 200 meters of setback distance. None of the alternatives were implemented before the terrorist attacks of September 11, 2001.

3.3 Alternatives Developed by Stakeholders

Three types of stakeholder meetings were conducted to develop new alternatives and to solicit input from the public: (1) regular meetings with the Road Study Interagency Working Group, (2) coordination meetings with Fort Belvoir Garrison staff and tenant organizations, and (3) meetings with the public.

3.3.1 Meetings with Stakeholders

Seven stakeholder meetings were held throughout the study period starting in March 2003. At these meetings participants developed the scope of this preliminary feasibility study, analyzed the alternatives identified in the congressional mandate and prior studies, and selected new corridors to be studied.

Summaries of the meetings are provided below. Complete meeting agendas, minutes, and handouts are included in Appendix D.

> Note: Both the North Post Transportation Study and the Lockheed Boulevard Study used unique naming conventions for their alternatives; however, those conventions were eliminated early in this study.
>
> Until the August 26, 2003, Study Team meeting, all corridors under consideration in this study were given numerical labels (1–6) and were numbered right to left (east to west). Because of feedback from the Study Team noting that numerals might imply a ranking of alternatives, the

labels were changed on August 26, 2003, from numbers to letters (A–F) and the order was reversed to read left to right (west to east). Therefore, the final seven alternatives are presented in alphabetical order (from A to G) and left to right (west to east). Meeting minutes and information from before the August 26, 2003, meeting might not reflect the alphabetical labeling system.

March 25, 2003. This meeting, held at Fort Belvoir by numerous U.S. Army agencies, was an implementation strategy meeting at which participants discussed the project requirements, goals, and objectives; scope of work; stakeholder involvement; and 8- to 9-month study schedule. The Study Team emphasized that there were no preconceived outcomes to this study and that the concerns of all participants would be solicited throughout the project's preliminary phase.

U.S. Army Corps of Engineers (USACE) representatives stressed that this is a preliminary study and that no decision has been made on whether the project would move forward to the design and construction phases. It was noted that if officials should decide to proceed with a project the appropriate NEPA analysis would be conducted to further evaluate the alternatives. It was also stated that the study should evaluate all reasonable road alternatives (on- and off-post routes, combination of on- and off-post routes, and other compensation mechanisms such as upgrading of existing area roads), that the extension of Old Mill Road must be considered per congressional mandate, and that the reopening of Beulah Street and Woodlawn Road, although not apparently viable, should be considered.

May 1, 2003. At this meeting, held at the VDOT Northern Virginia Regional Office, representatives from the Army, VDOT, and Fairfax County discussed the Phase 1 process for this study, identified project leads for this and related studies, and discussed potential project proponents should this study be approved.

Army representatives explained that all decisions on project funding would be made at the secretariat level. The USACE agreed to accelerate the schedule in response to concerns raised by Fairfax County.

Public participation planning began, and it was decided that information regarding the road study would be presented, as a courtesy, at the expected fall 2003 public scoping meeting for the Environmental Impact Statement (EIS) Fort Belvoir is preparing for update of its *Real Property Master Plan*. This meeting would provide the public the opportunity to learn about the study, ask questions of agencies representatives, and submit any comments concerning the study.

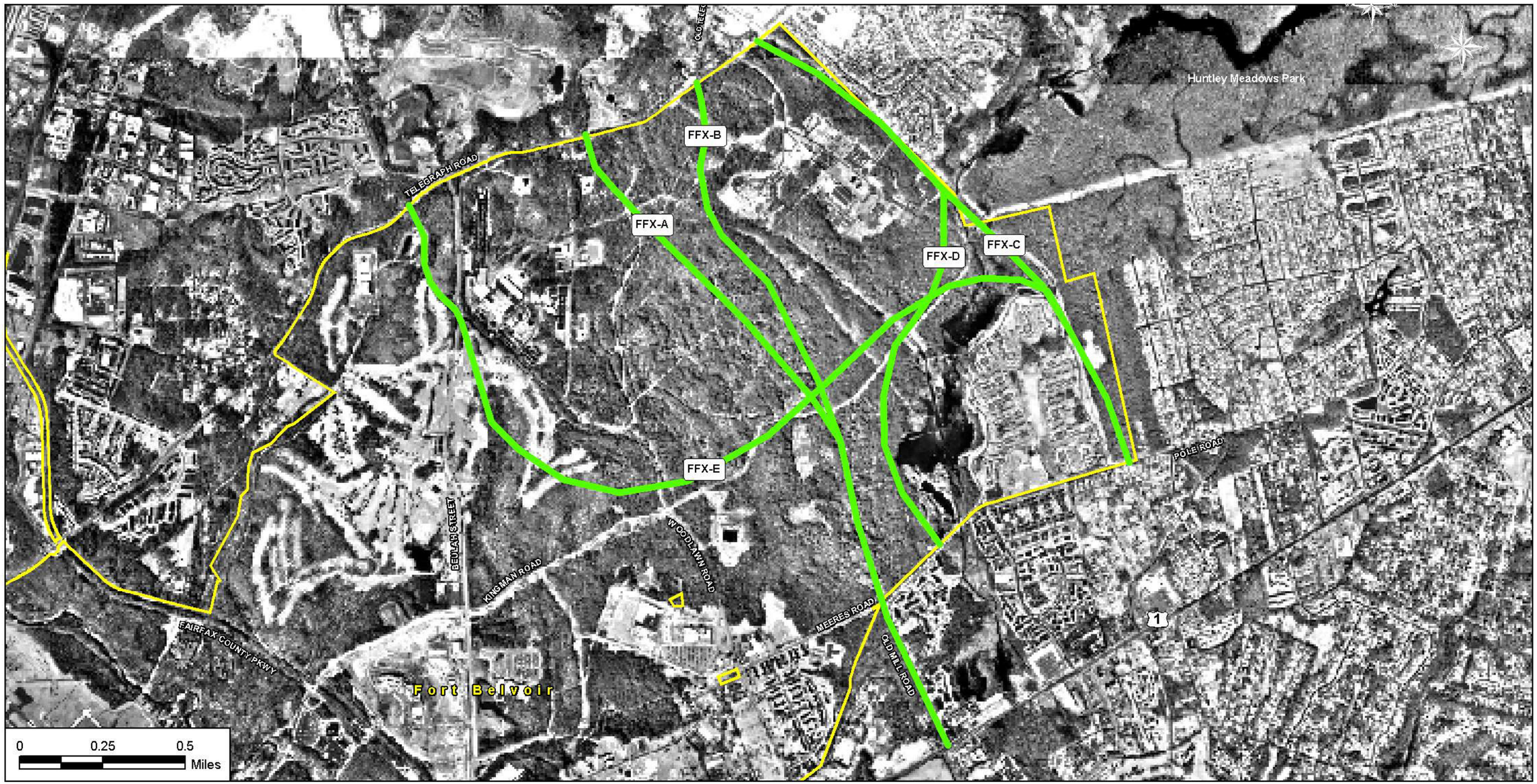
All stakeholders were asked to submit their recommendations for proposed alignments to be discussed at the next meeting.

May 27, 2003. The Transportation Resolution Team (TRT), consisting of representatives from Fort Belvoir, USACE, Army Installation Management Agency, Military Traffic Management Command, VDOT, and Fairfax County, met to discuss the status and direction of the TRT and to review, clarify, and reratify the TRT's charter. The TRT was initially established following September 11, 2001, to resolve issues associated with implementation of increased force protection requirements on Fort Belvoir and their effects on Fairfax County. The TRT reconvened to establish a framework for discussing many activities, such as the connector road study and environmental cleanup of the right-of-way for Fairfax County Parkway. Participants discussed the use of subcommittees to analyze specific projects and issues, as well as the process by which the TRT would present projects, such as this road study, to decisionmakers at Fort Belvoir and Fairfax County.

USACE provided an update on this study to the TRT and discussed the fall 2003 timeline for sharing preliminary findings of this study with the public.

June 25, 2003. Stakeholders discussed 14 preliminary corridor options compiled from the Lockheed Connector Study (Figure 2-5), the North Post Transportation Study (Figure 2-6), and six new corridor options submitted by Fairfax County for this study (Figure 3-1).

An information packet containing the routes of each previous study, a composite map of the 14 alternatives, a constraints map based on data received to date, and a summary



LEGEND

Fort Belvoir

East-West Corridor Alternatives Proposed by Fairfax County (2003)

Source: Fairfax County DOT, 2003; USGS, 1994.

Figure 3-1

matrix, was provided to help analyze these preliminary corridors and identify alternatives that should be considered for further evaluation. This information packet is found on page D-38 of Appendix D. A composite of past alternatives considered is shown in Figure 3-2.

Stakeholders agreed that at least one nonbisecting, off-post corridor should be evaluated in this study. There was some disagreement, however, about the maximum distance outside Fort Belvoir at which a corridor could be located and still meet the objective of this study.

Further discussion centered on whether the preferred alternative from the Lockheed Connector study, which is northeast of the study area, was too far from Woodlawn Road and Beulah Street to effective relieve the current local congestion caused by the closure of Woodlawn and Beulah and whether that option should be removed from further consideration because of its location and its associated environmental issues.

Potential corridor termini were also discussed. It was agreed that a "T" intersection would not be optimal for traffic flow. It was noted that U.S. Route 1 provides few access points, with the exception of the Old Mill area, and that Telegraph Road offers more flexibility.

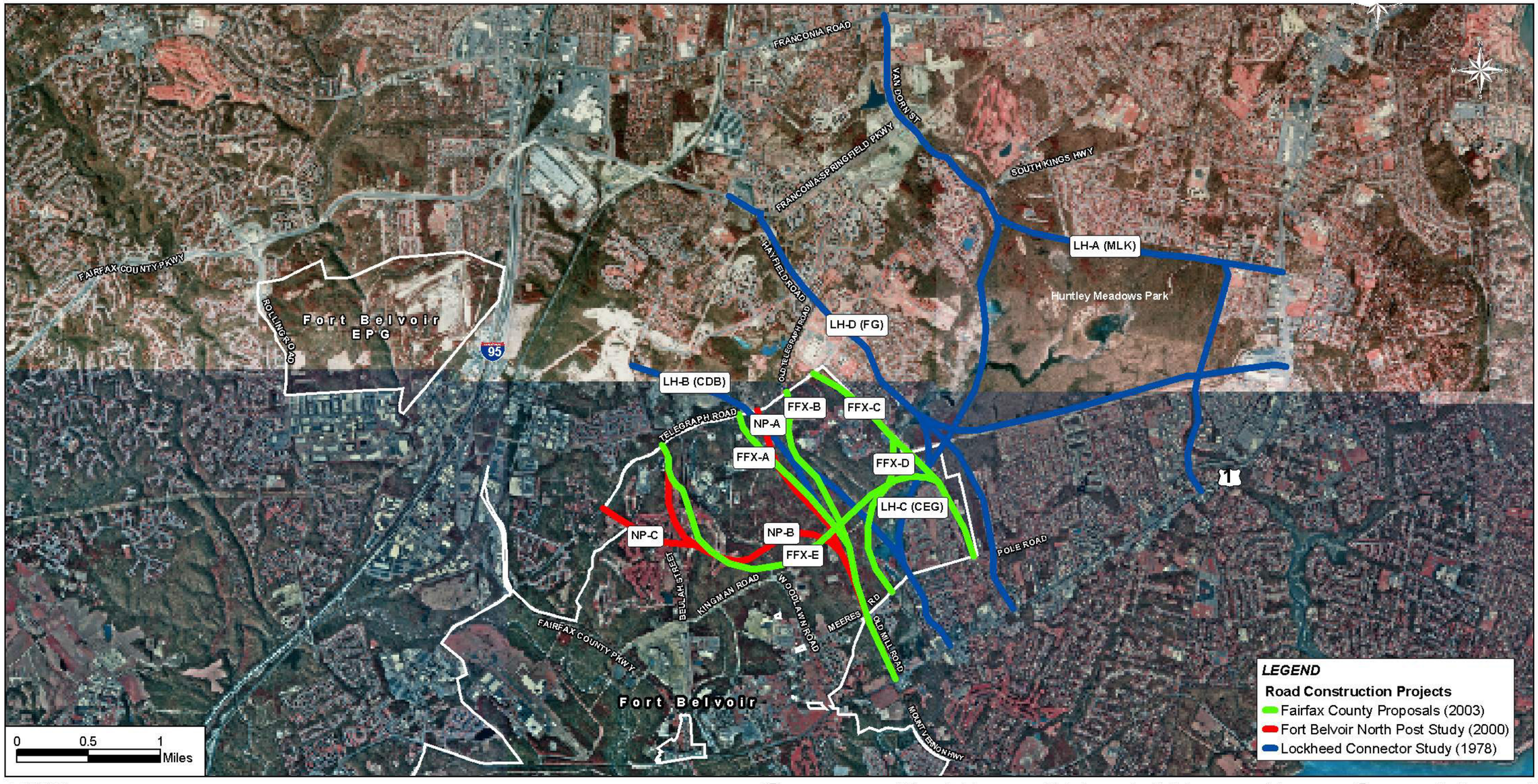
Stakeholders' comments concerning potential intersection locations were as follows:

Telegraph Road

- The most desirable intersection would be between Alternative NP-A (just south of the Leaf Road intersection) and Alternative NP-B (near Beulah Road) of the North Post Study. Any intersection farther north would be undesirable.

- An intersection with Hayfield Road would be too far north.

- An Old Telegraph Road intersection would not be desirable because Fairfax County is improving the road primarily to benefit access to Hayfield Secondary School. In addition, the road is not considered a commuter road and does not provide a sufficiently direct connection.



LEGEND

Fort Belvoir

Composite Map of Past Alternatives Considered

Sources: Fairfax County, Virginia, 1983; U.S. Department of the Army, 2000; USGS, 1994.

Figure 3-2

U.S. Route 1

- It might be desirable to terminate at Pole Road and use multiple subconnector routes (e.g., Sacramento Road and Old Mill Road).

Although it was decided that criteria presented in the matrix would not be ranked, residential areas and on-post security were both identified as important considerations. Hardening (e.g., Woodlawn Road), grade-separated interchanges (e.g., John J. Kingman Road interchange), and overpasses (e.g., Meeres Road) were identified as potential solutions to the security concerns.

Drawing on these discussions of the 14 preliminary corridors, the stakeholders then identified and recommended 6 corridors to be considered for this study. All other corridors were removed from consideration. The six corridors are identified on page D-42 in Appendix D.

July 29, 2003. Representatives from the Army, VDOT, the National Capital Planning Commission, and Fairfax County met to discuss the six alternatives selected during the June 25 meeting. Based on preliminary analyses, they proposed modifications to them and discussed potential conflicts for specific alternatives. No requests were made to remove any of the six alternatives from further consideration; however, Fort Belvoir proposed adding one alternative to the six.

Proposed Alternative Addition

Fort Belvoir proposed adding the Lockheed Connector Study's preferred alternative (LH-A) to the six alternatives being considered. Meting participants raised concerns that this corridor was environmentally and politically unpopular, and that the corridor would be too far north, precluding its use as a local traffic congestion remedy for Woodlawn Road and Beulah Street. It was suggested, however, that this corridor would serve a larger population of local residents and that adequate environmental mitigation could be developed. It was decided that the corridor would be referenced

in this study but that it would not be added to the alternatives being considered at that time.

Improvements to Fairfax County Parkway were also proposed as a potential alternative. The meeting participants concluded, however, that Fairfax County Parkway improvements were not within the scope of this study and that such improvements would have to occur in addition to this study.

Modifications

To minimize environmental impacts, Alternative 1 was realigned to more closely follow the western boundary of Huntley Meadows.

An extension from Hayfield Road as a subalternative to Alternatives 1 and 2 was proposed. However, representatives from Fairfax County said that this option would not be viable because the corridor passed through a residential neighborhood.

Other Discussions

The potential impacts of Alternatives 1 and 2 on residential areas were noted. It was noted that Alternatives 2 and 3 were in close proximity to Fort Belvoir's electrical substation and that setback requirements and relocation costs should be researched. Fort Belvoir noted that Alternatives 3, 4, 5, and 6 would have the greatest impacts on the post. Specifically, it was noted that Alternative 5 was in proximity to future development plans and that Alternative 3 would affect the Fort Belvoir housing program (under the Army's Residential Communities Initiative or RCI). Both options were considered viable, however, and were retained.

The widths of the proposed corridors were established to be up to four lanes (although Alternative 6 was not four lanes wide at that time).

Screening criteria to be used in future analyses were discussed. It was decided that analyses should include the number of lanes, number of grade-separated interchanges, traffic volumes, solid waste management units (SWMUs), utilities, easements, real estate take projections, force protection, water supply protection districts, macro-level

cost comparison, and potential impacts on threatened and endangered species and rare ecological communities.

The Study Team discussed the importance of full representation for the study and asked stakeholders to consider whether any other parties were not being represented.

August 26, 2003. The main purposes of this meeting were to discuss the criteria being used to evaluate the six alternatives, to address the availability of data, and to solicit feedback on the preliminary advantages and disadvantages of the alternatives.

Traffic modeling data were presented, and preliminary trends were discussed. Stakeholders requested that more detailed information (e.g., level of service [LOS], delays, hours of congestion) be included in the study and discussed what year future traffic projections should consider.

Consensus was also sought in preparation for the public information meeting. Participants expressed differing opinions on what they thought should be included in the scope of the discussion. Items deemed outside the scope of this study included an anticipated construction timeline, calculations of LOS and delay per vehicle, and evaluation of the effects on mass transit and emergency services. Stakeholders then refined the evaluation criteria to be used to evaluate the alternatives. The logistics of the road feasibility study booth were discussed, and participants agreed that the purpose of the booth was to share information and collect public comments. The booth was not intended to become a public scoping meeting because such a meeting would occur only if the study was continued into the next phase.

September 16, 2003. This meeting included the entire TRT. The Study Team represented only one of several ongoing regional studies and projects. The summary provided below is focused on only the preliminary road feasibility study.

The Study Team gave an overview of the road study task through a PowerPoint presentation. The primary purpose of the presentation was to inform the TRT of the work performed to date and the tasks yet to be completed. The presenters emphasized the importance of meeting the November 2003 deadline for submission of this report. A

schedule was discussed with the stakeholders for incorporating their review of the draft report.

Meeting participants further discussed the courtesy meeting intended to take place simultaneously with the Fort Belvoir Master Plan EIS public scoping meeting. It was emphasized that public comments would be collected by no later than the end of the courtesy meeting. These comments will be incorporated into an appendix as an addendum to this report.

Some stakeholders expressed concern that the public would not have sufficient opportunity to provide comments. The meeting participants were reminded that the public would have another opportunity to comment should the study advance to the next phase.

Fort Belvoir requested the removal of Alternative A from further evaluation, noting that residential housing was proposed just east of Woodlawn Road and any widening would encroach on the proposed development. Fort Belvoir emphasized that realigning or widening to the west of Woodlawn Road was not possible because of the cemetery immediately to the west.

Fort Belvoir also requested that Alternative G be added for evaluation in this study.

Fairfax County and VDOT were opposed to Fort Belvoir's requests, stating that Alternative G had been discussed in detail during previous meetings, at which those present had agreed to remove it from consideration.

3.3.2 Meetings with Fort Belvoir

Meetings were conducted with Fort Belvoir Garrison staff and tenant organizations to share information about the road study and solicit feedback from specific agencies to evaluate their concerns and incorporate their suggestions early in the study process. Three meetings of this type were held with (1) the RCI team currently developing residential housing throughout the post, (2) the Defense Communications Electronics Evaluation Testing Activity (DCEETA) located in the northwest quadrant of the Post,

and (3) the Humphreys Engineering Center (HEC) located in the northeast quadrant of the Post. These meetings are summarized below.

RCI Team: July 9, 2003. The Study Team and Fort Belvoir representatives met with the RCI representatives to introduce the alternatives being considered, determine whether any alternatives might affect RCI activities, and solicit comments and concerns the RCI team might have with respect to the study.

RCI representatives requested that Alternative D be modified to account for possible future housing development. They requested realigning the southern half of the corridor with Alternative C to connect with Old Mill Road, rather than creating a route that would connect Alternative D with Meeres Road between Old Mill Road and Sacramento Drive. They suggested that Alternatives E and F be extended to U.S. Route 1. The representatives were concerned about Alternative C's bisecting the post and stated that the Van Dorn connection was too far north to meet the requirements of this study. They also pointed out the sensitivity of Woodlawn Elementary School and Huntley Meadows Park. Alternatives A and B were determined to have no impact on RCI activities. Detailed meeting minutes are provided in Appendix E.

DCEETA: July 24, 2003. The Study Team met with a representative of DCEETA to discuss the preliminary Road Feasibility Study and to share information on the alternatives being considered.

DCEETA's primary concern is force protection, and its representatives requested that a 400-meter standoff distance from its facility be established. They requested that Alternative A be realigned because it was too close to DCEETA's facility. At their request, modifications to this alternative included discontinuing the alignment with Woodlawn Road and replacing it with an alignment along John J. Kingman Road to the west and extending north on Beulah Street, and through approximately 10 golf course holes, before rejoining Beulah Street just before the Telegraph Road intersection. Because the meeting was informal and was intended to provide an overview of the project and solicit preliminary feedback from DCEETA, no minutes were recorded.

HEC: July 29, 2003. The USACE Baltimore District and its contractor met with representatives of HEC on July 29, 2003, to discuss the alternatives being considered and to request their input. HEC's main concern is also force protection, including not only a standoff distance to protect against a blast but also visual screening to prevent observation by commuters. Specifically, they wish to prevent commuters from observing deliveries in support of sensitive operations. This concern applies to Alternatives B, C, and D.

HEC's representatives suggested depressed roadbeds to deflect blasts and obscure any direct line of sight to their operations. They also raised the issue of the electrical substation at the southeast corner of HEC's property and the overhead high-power lines that extend along its eastern property boundary, which could affect the corridor. Because this was an informal meeting intended to provide an overview of the task and solicit preliminary feedback from HEC, no minutes were recorded.

3.3.3 Meetings with the Public

Two opportunities for the public to ask questions about the study and provide feedback were included in this study. The first was a town hall meeting called by Representatives Jim Moran (8th Congressional District of Virginia) and Tom Davis (11th Congressional District of Virginia), held at Hayfield Secondary School on June 23, 2003. The second is a public information booth planned in conjunction with the Fort Belvoir Master Plan Update EIS scoping meeting scheduled for November 17, 2003.

Town Hall. The purpose of the town hall meeting was to provide Fort Belvoir representatives an opportunity to discuss with the public how the transportation situation resulting from the road closures might be addressed. The USACE also updated the public on the scope and status of this Road Feasibility Study. Approximately 400 people attended, and several dozen speakers explained their concerns about short-term solutions to alleviate the traffic congestion problems caused by the closure of Woodlawn Road and Beulah Street. They noted that Route 110 has been reopened since the events of September 11, 2001, even though it is in close proximity to the Pentagon. The public

asked if a similar solution could be identified for Fort Belvoir. The public also expressed interest in the possibility of constructing the Lockheed Connector Road.

November 17, 2003. A courtesy public information meeting was held in conjunction with the November 17 EIS public scoping meeting being held by Fort Belvoir for update of its *Real Property Master Plan*.

At this meeting, representatives from the US Army Corps of Engineers presented information regarding the proposed alternatives and preliminary data on their potential impacts. Comment form and comments received are included in appendix F of this report.

SECTION 4.0:
SUMMARY OF STUDY ALTERNATIVES

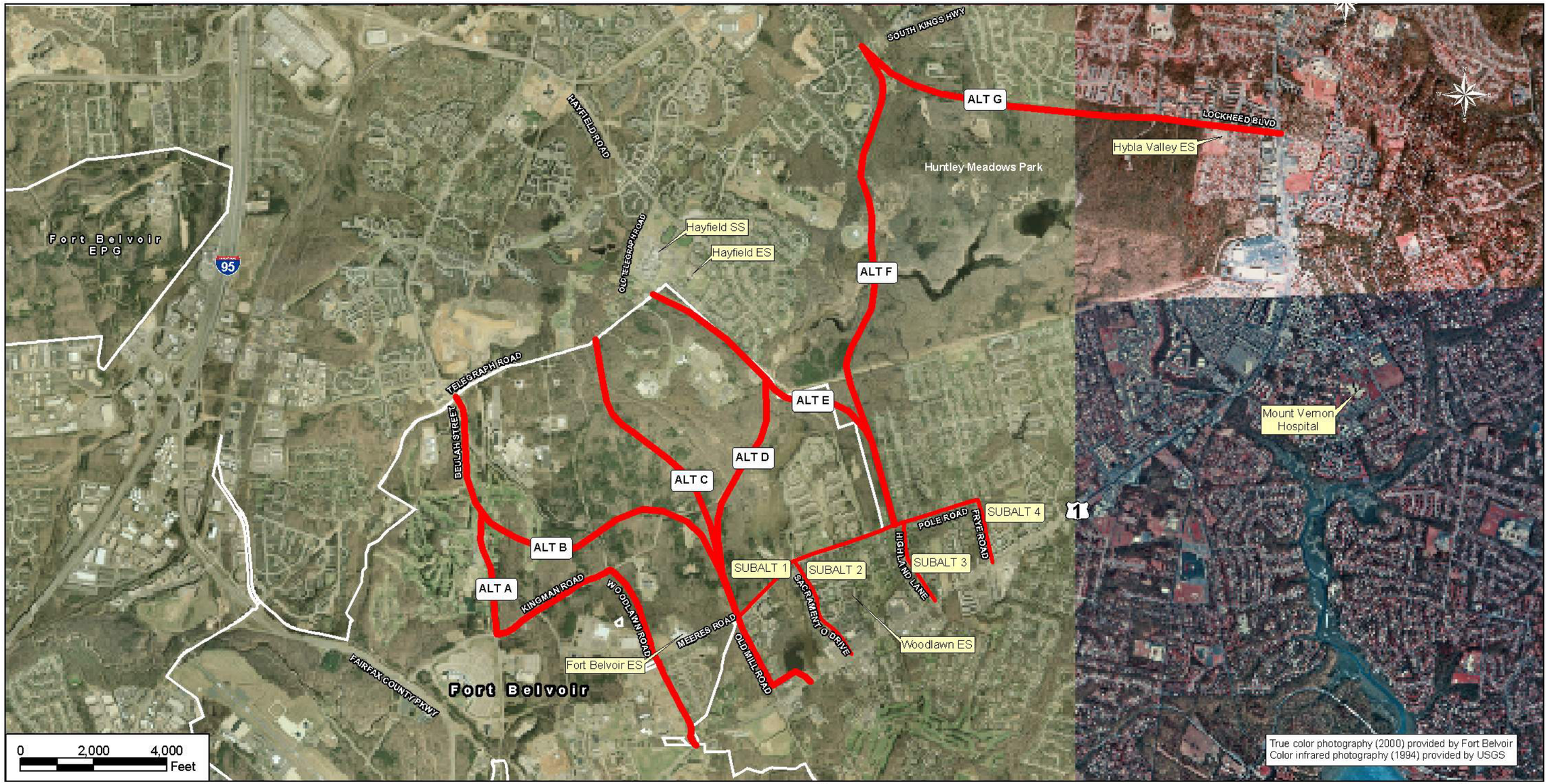
Input provided at stakeholder meetings allowed the Study Team to narrow the alternatives from 14 to 7, plus a no action alternative (Figure 4-1). The 14 alternatives consist of variations from prior studies, including LH-A, LH-B, LH-C, and LH-D from the Lockheed Study; NP-A, NP-B, NP-C, NP-D, and NP-E from the North Post Study; and FFX-A, FFX-B, FFX-C, FFX-D, and FFX-E from routes proposed by Fairfax County.

These seven alternatives meet the requirements to consider on-post alternatives (Alternatives A, B, C, and D), off-post alternatives (Alternatives F and G), and a combination of on- and off-post alternatives (Alternatives E). Detailed information about each of the seven alternatives is presented below.

4.1 On-Post Alternatives

Four on-post alternatives were evaluated in detail. Three alternatives are new corridors and extensions of Old Mill Road (Alternatives B, C, and D), while one (Alternative A) is limited to improvements of existing post roadways.

Fort Belvoir representatives expressed concerns about meeting force-protection requirements with any of these alternatives (A, B, C, and D). They agreed, however, to retain them and recommend them for further evaluation beyond this preliminary feasibility study. Fort Belvoir specifically requested that Alternative A be removed from further evaluation in the September 16, 2003, Study Team meeting, but this report has retained it for comparison purposes.



LEGEND

Fort Belvoir

Corridor Alternatives Evaluated in This Study

Sources: Fort Belvoir GIS, 2003; USGS, 1994.

Figure 4-1

4.1.1 Alternative A

This 3-mile corridor involves reopening and widening Woodlawn Road, John J. Kingman Road, and Beulah Street from U.S. Route 1 to Telegraph Road (Figure 4-2). From its southernmost intersection at Woodlawn Road and U.S. Route 1, the corridor extends north along Woodlawn Road, then turns 90 degrees west and follows John J. Kingman Road until it makes a second 90-degree turn north onto Beulah Street. The corridor extends north along Beulah Street until it terminates at the existing four-way intersection at Telegraph Road.

This alternative was initially developed as improvements to Woodlawn Road only, from U.S. Route 1 to Telegraph Road. However, the alternative was altered following meetings with DCEETA representatives, who suggested that it be rerouted along John J. Kingman Road and Beulah Street to gain additional standoff distance from the DCEETA buildings. This alternative is a variation of North Post Transportation Study Alternatives B and C and meets the minimum requirements for an east-west connector alternative.

Recent developments were brought to the Study Team's attention during the September 16, 2003, TRT meeting. Fort Belvoir announced that there was a conflict with a proposed residential development just east of Woodlawn Road. The point was made that widening Woodlawn Road to four lanes could occur only to the east because of an existing cemetery on the west side of the road. Therefore, a portion of the land intended for the residential development would be sacrificed to the alignment of Alternative A. A footprint of the proposed residential development was not provided to the Study Team, so the extent of the conflict could not be determined. Fort Belvoir requested that Alternative A be removed from further evaluation based on this new information. However, the Study Team continued with the evaluation of all seven alternatives for comparison purposes, recognizing the limitations of Alternative A.

Source: Fort Belvoir GIS, 2003.

Figure 4-2

4.1.2 Alternative B

This corridor, also 3 miles long, is one of three alternatives that generally align with Old Mill Road in their southern portions (Figure 4-3). This corridor extends north from a "T" intersection at U.S. Route 1, just northeast of the current Old Mill Road intersection with U.S. Route 1. The corridor then curves west and aligns directly with Old Mill Road just north of the entrance to Woodlawn Plantation, where it continues north and crosses Meeres Road. North of this intersection, it veers northwest and then north in an S-curve, passing through approximately 10 holes on the North Post Golf Course. It then aligns with Beulah Street to a four-way intersection at Telegraph Road. This alternative, which was slightly modified from the initial North Post Transportation Study corridor (Alternative B) to avoid traffic conflicts at the main entrance to Woodlawn Plantation, meets congressional requirements for inclusion in this study.

4.1.3 Alternative C

This 2.3-mile corridor is common with Alternatives B and D along its southern portion (Figure 4-4). The corridor then extends north from Old Mill Road, bisecting the North Post through an area that is equidistant from DCEETA and HEC. The corridor ends at a new "T" intersection with Telegraph Road between Old Telegraph Road and Beulah Street. It falls along a similar corridor identified in the North Post Transportation Study (Alterative A), although its northern portion was shifted slightly west by about 400 feet in response to stakeholder comments and force protection concerns. This alternative also meets congressional requirements for inclusion in this study.

Source: Fort Belvoir GIS, 2003.

Figure 4-3

LEGEND

Fort Belvoir Installation Boundary

Corridor Alternative C

Source: Fort Belvoir GIS, 2003.

Figure 4-4

4.1.4 Alternative D

This 2.7-mile corridor is common with Alternatives B and C along its southern portion (Figure 4-5). It intersects with U.S. Route 1 just northeast of the current Old Mill Road intersection and the historically important main entrance to Woodlawn Plantation. It then crosses Meeres Road and extends in a northeasterly direction to Fort Belvoir's northeastern boundary. Passing Fort Belvoir's electrical substation, it aligns with Alternative E east of HEC and then extends in a northwesterly orientation, along Fort Belvoir's border, until it forms a new "T" intersection with Telegraph Road, between Old Telegraph Road and Hayfield Road. This alternative also meets the congressional requirements for inclusion in this study.

4.2 Combination On- and Off-Post Alternatives (Alternative E)

The southern portion of this 1.9-mile-long corridor (Figure 4-6) is similar to Alternative D (segments F and G in the Lockheed Boulevard Study); however, it starts at Pole Road just west of Highland Lane and uses several existing roads that connect Pole road to U.S. Route 1. These roads are two-lane Fairfax County-owned roads through residential neighborhoods. In west-to-east order, they are Old Mill Road, Sacramento Drive, Highland Lane, and Frye Road (Subalternatives 1 to 4, respectively). The corridor extends north from Pole Road through Fairfax County parkland to just south of Fairfax County's environmentally important Huntley Meadows Park. (This 1,262-acre park is the County's largest park. Because of its freshwater wetland habitat and other features, the Park Authority has designated it a Managed Conservation Area). The corridor then aligns with Alternative D, just south of Fort Belvoir's electrical substation, and extends northwest along the northeastern boundary of Fort Belvoir. It joins Telegraph Road at a new "T" intersection between Old Telegraph Road and Hayfield Road.

This alternative was developed to provide a combined on- and off-post corridor. It was jointly identified by Fort Belvoir and Fairfax County participants through analysis of aerial photos during the June 25, 2003, stakeholder meeting.

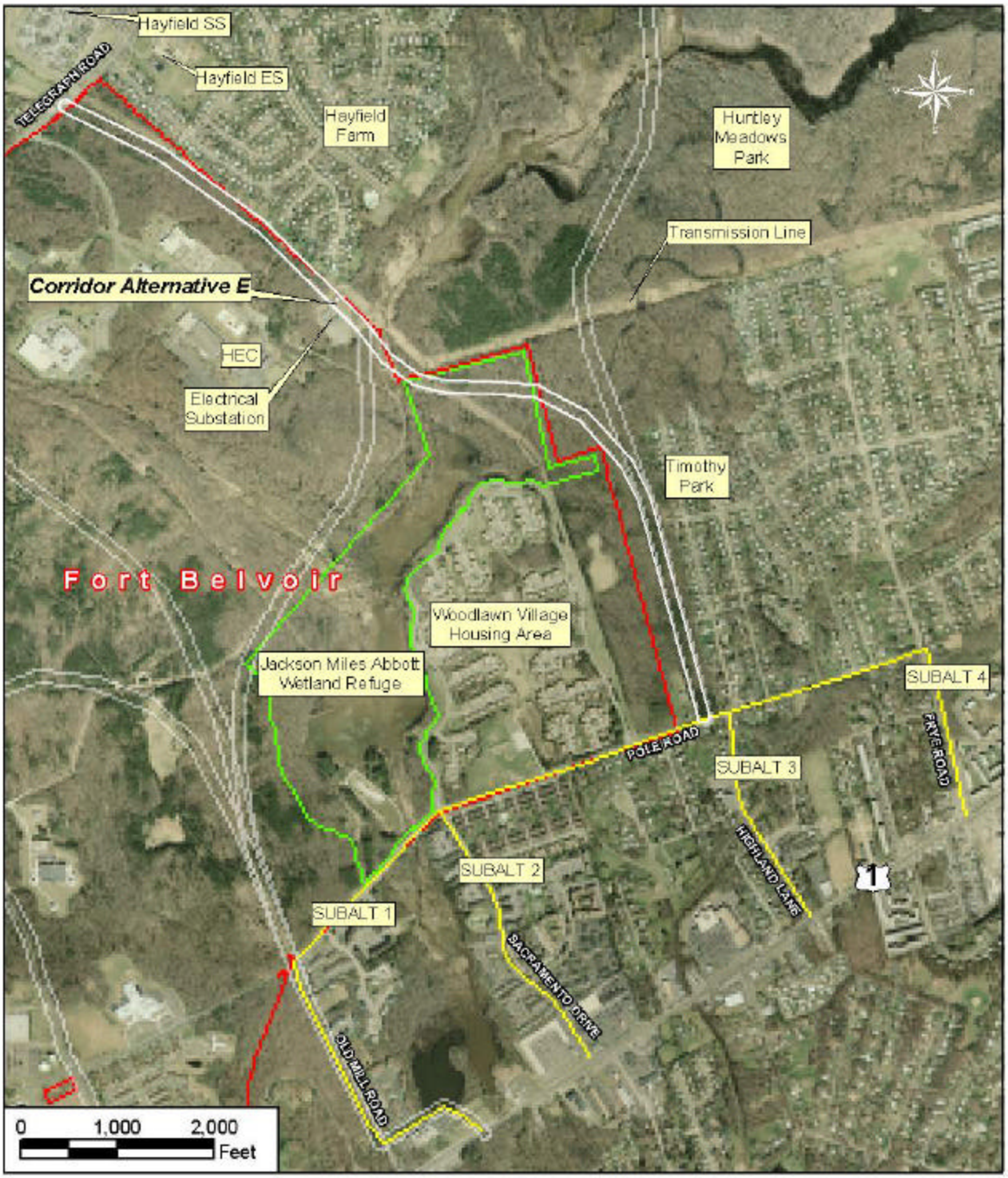
LEGEND

Fort Belvoir Installation Boundary

Corridor Alternative D

Source: Fort Belvoir GIS, 2003.

Figure 4-5



LEGEND

Fort Belvoir Installation Boundary

Corridor Alternative E

Source: Fort Belvoir GIS, 2003.

Figure 4-6

4.3 Off-Post Alternatives

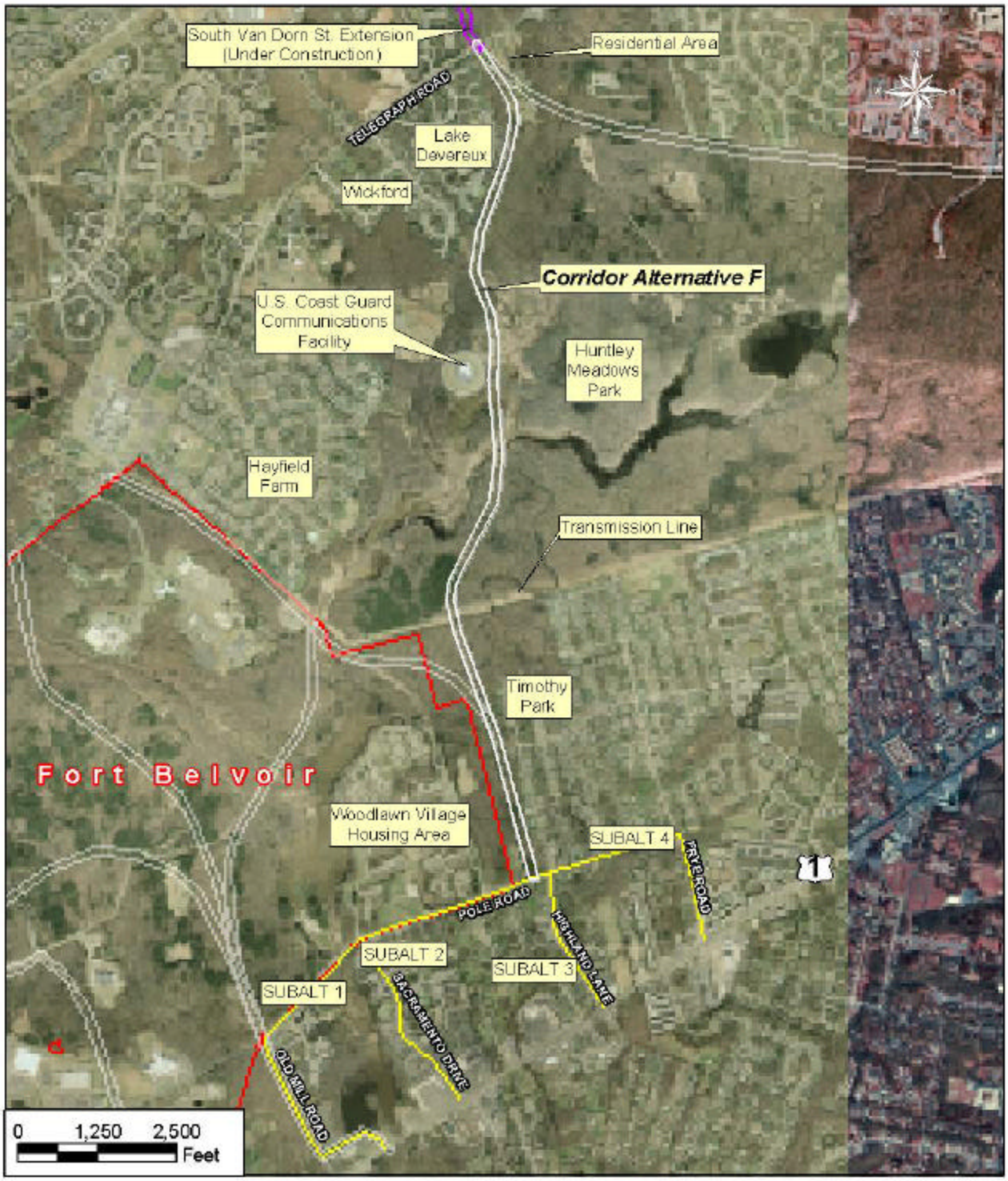
Two off-post alternatives are presented below. Both terminate at the intersection of Van Dorn Street and Telegraph Road; however, one (Alternative G) extends across the northern boundary of Huntley Meadows Park, while the other (Alternative F) extends south along the western boundary of Huntley Meadows Park.

4.3.1 Alternative F

The southern half of this 2.6-mile corridor (Figure 4-7), located entirely off-post and northeast of Fort Belvoir, is common with Alternative E. It begins at Pole Road just west of Highland Lane and also uses several existing roads that connect Pole Road to U.S. Route 1 (Subalternatives 1, 2, 3, and 4). The corridor extends north from Pole Road through Fairfax County parkland. The corridor then continues to the northeast along the western boundary of Huntley Meadows Park and joins Telegraph Road at a four-way intersection just south of the intersection of South Kings Highway and Telegraph Road. This route runs alongside a U.S. Coast Guard Communications Facility, which has some security sensitivity. Because this study is a preliminary alignment of routes, however, the full security requirements of the Coast Guard have not yet been considered with respect to this route.

Fairfax County presented this corridor during the June 25, 2003, stakeholder meeting to satisfy the requirement of this study to evaluate at least one off post alternative. Stakeholders who attended later meetings made slight revisions to the corridor, primarily to align it closer to the northwest boundary of Huntley Meadows Park. This alternative meets the minimal requirements for this study.

Negotiations are currently underway between Fort Belvoir and Fairfax County regarding a land exchange in which Fairfax County would exchange a 28-acre parcel of county land for a 28-acre parcel of Fort Belvoir land containing community ball fields. If this exchange were to take place, the route would cross the parcel of land newly acquired by Fort Belvoir, and force protection measures would be necessary along the portion of the corridor crossing Fort Belvoir land. While this alternative currently meets the off-post



Source: Fort Belvoir GIS, 2003; USGS, 1994.

Figure 4-7

requirements of this study, if the land exchange were to take place, this alternative would become a combination on- and off-post route.

4.3.2 Alternative G

This 2.25-mile alternative, which was the preferred alternative in the Lockheed Boulevard Study, begins at U.S. Route 1 and Lockheed Boulevard at a "T" intersection. It extends west along the northern boundary of Huntley Meadows Park and joins Telegraph Road at the four-way intersection of South Van Dorn Street Extension, currently under construction (Figure 4-8). On the northern side of this corridor are several residential communities; the southern side is almost exclusively Huntley Meadows Park.

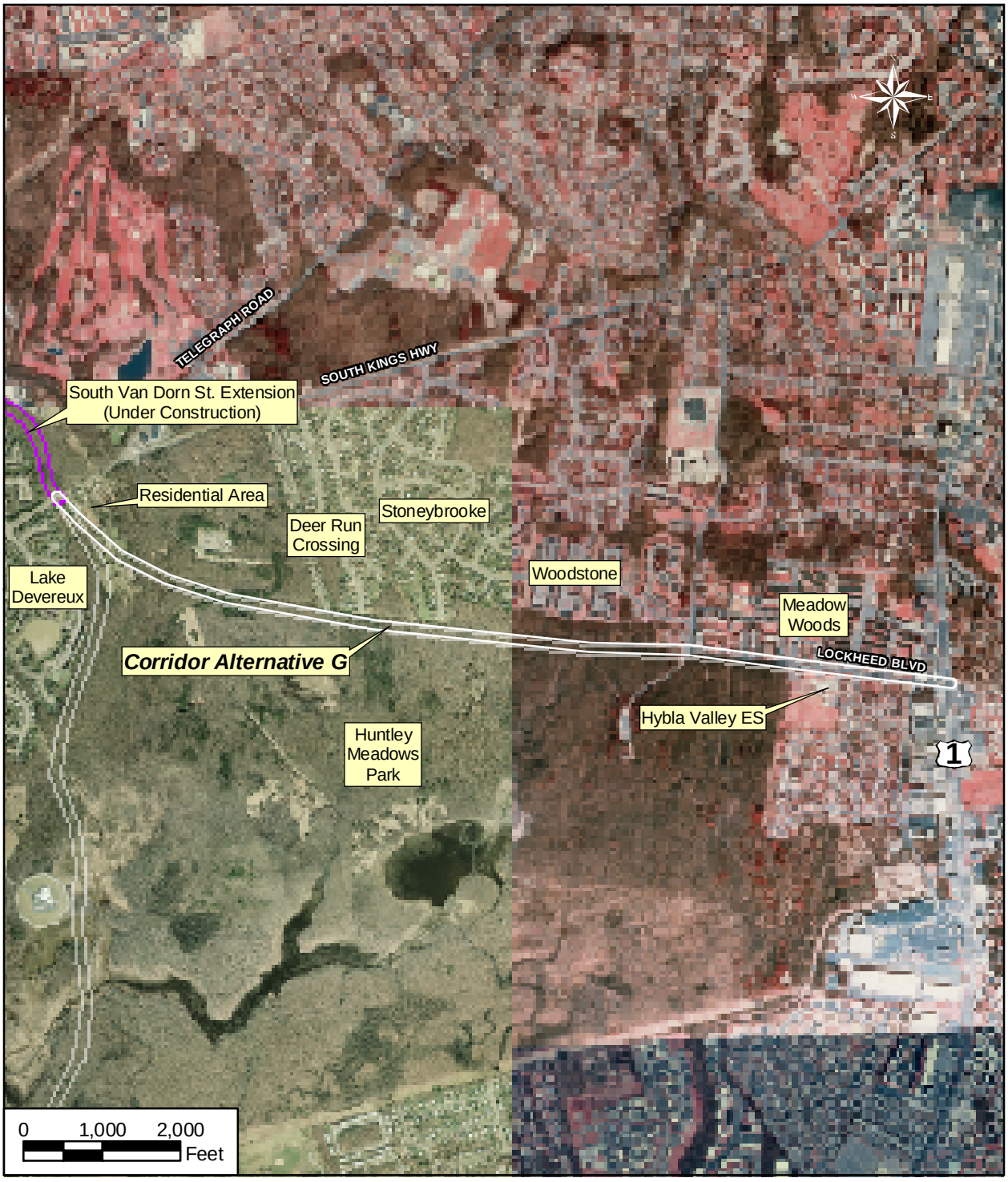
4.4 No Action Alternative

If no action is taken to implement a replacement east-west road connector, commuters would continue to use existing road networks to travel between U.S. Route 1 and Telegraph Road. This no action alternative represents the baseline condition for the comparison of alternatives in the matrix in Section 5.0.

4.5 Summary

Fourteen initial alternatives were evaluated during regular, interactive stakeholder and agency coordination meetings. Following the preliminary analyses, the stakeholders selected 7 of the 14 alternatives as potentially viable replacement connectors (Figure 4-1). These seven alternatives were chosen based on preliminary traffic, environmental, force-protection, political, and socioeconomic data. All seven meet the requirements for this study.

These seven alternatives were evaluated in further detail using the criteria described in Section 5.0 of this report. A summary of each alternative's respective advantages and disadvantages is provided in Section 6.0.



LEGEND

Fort Belvoir Installation Boundary

Corridor Alternative G

Source: Fort Belvoir GIS, 2003; USGS, 1994.

Figure 4-8

SECTION 5.0:
CRITERIA DEVELOPMENT

A range of evaluation criteria were used to compare the seven alternatives. These criteria, developed during the stakeholder meetings previously described in this report, reflect the diverse concerns of the stockholders. Stakeholders agreed by consensus to the following principles concerning criteria and the screening process:

- Criteria were not to be weighted.
- Analysis was to include both holistic and qualitative evaluations.
- Corridors were to be evaluated based on a four-lane road (128-foot width).
- Proximity to schools was to be considered.
- Residential neighborhoods were to be considered a constraint.
- Security issues were to be addressed and would include the number of road crossings and proximity to security-sensitive buildings.
- Both on-post and off-post threatened and endangered species data were to be included.
- Connectivity to Beulah, Hayfield, or Van Dorn Street was to be a criterion.

Other items discussed are reflected in the criteria listed in the matrix (Table 5-1).

5.1 Defining Evaluation Criteria

Three broad groupings of criteria were used: (1) technical feasibility, (2) environmental feasibility, and (3) economic feasibility. Under the groupings, a total of seven subcategories of screening criteria were developed with input from the stakeholders. Technical feasibility was further broken down into (1) infrastructure, (2) traffic volume, (3) force protection, and (4) land use. Environmental feasibility examined (5) environmental resource protection, and (6) cultural resources. Economic feasibility looked at (7) cost. Definitions of the criteria and their associated subcriteria are provided below. Appendix G provides detailed definitions, sources, and assumptions made for each of the subcriteria.

Table 5-1. Corridor Analysis Matrix

	ITEM No.	DESCRIPTION		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
INFRASTRUCTURE	1	**Total Road Length** (miles)		2.99	3.02	2.28	2.65	1.86	2.61	2.26
		Road Length on Fort Belvoir (miles)		2.99	2.37	1.67	1.97	0.99	0.00	0.00
		Road Length off Fort Belvoir (miles)		0.00	0.65	0.61	0.68	0.87	2.61	2.26
	2	**Use of Existing Road Corridors** (percentage)		86%	28%	44%	62%	0%	0%	28%
TRAFFIC		**CURRENT YEAR - 2003**								
	3	**Projected Volume on New Connector**								
		North End of Connector (at Telegraph Road)		15,000	15,600	13,600	11,600	13,600	14,400	18,600
		South End of Connector (at U.S. Route 1)		18,400	9,500	12,600	11,100	13,600	14,400	17,800
		Average Volume		*16,700*	*12,550*	*13,100*	*11,350*	*13,600*	*14,400*	*18,200*
	4	**Projected Woodlawn Road Volume (pre-9/11) That Would be Served**		5,100	4,200	4,700	4,200	4,500	3,400	1,800
	5	**Projected Change in Volume on Parallel N-S Routes**								
		Route 1 (North of Sherwood Hall Lane)		-1,700	-1,600	-2,100	-2,000	-2,700	-4,400	1,700
		Fairfax County Parkway (North of John J. Kingman Road)		-6,500	-6,800	-7,500	-4,800	-6,200	-6,500	-1,200
		Total		*-8,200*	*-8,400*	*-9,600*	*-6,800*	*-8,900*	*-10,900*	*500*
	6	**Projected Change in Vehicle Hours of Travel (VHT)**		-1000	-1,000	-2,700	-3,000	-3,200	-4,500	-1,400
		HORIZON YEAR - 2025								
	7	**Projected Volume on New Connector**								
		North End of Connector (at Telegraph Road)		24,000	21,400	19,200	16,200	17,500	16,700	22,400
		South End of Connector (at U.S. Route 1)		30,100	12,700	16,600	14,300	17,500	16,700	20,200
		Average Volume		*27,050*	*17,050*	*17,900*	*15,250*	*17,500*	*16,700*	*21,000*
	8	**Projected Change in Volume on Parallel N-S Routes**								
		Route 1 (North of Sherwood Hall Lane)		-2,000	-2,700	-3,700	-3,100	-3,800	-5,700	170
		Fairfax County Parkway (North of John J. Kingman Road)		-7,700	-6,100	-7,500	-5,400	-6,400	-5,400	-2,000
		Total		*-9,700*	*-8,800*	*-11,200*	*-8,500*	*-10,200*	*-11,100*	*-1,830*
	9	**Projected Change in Vehicle Hours of Travel (VHT)**		-1,300	-2,400	-2,100	-2,100	-2,100	-2,700	360
	10	**Projected Level of Service[1]/Delay (sec)**	**Baseline**	**AM**						
		Intersection 1 - Route 1/FFX CO PKWY	F/81	D/38	E/78	D/45	D/46	D/46	E/69	E/67
		Intersection 2 - Route 1/Sherwood Hall Ln	D/36	C/31	C/30	C/31	C/33	C/29	C/32	C/35
		Intersection 3 - FFX CO PKWY NB Ramps/Telegraph Rd	B/16	B/11	B/10	B/11	B/11	B/11	B/11	B/13
		Projected Level of Service[1]/Delay (sec)	**Baseline**	**PM**						
		Intersection 1 - Route 1/FFX CO PKWY	F/175	F/154	F/153	F/146	F/152	F/141	F/159	F/173
		Intersection 2 - Route 1/Sherwood Hall Ln	F/100	F/83	E/72	E/67	E/71	E/71	F/83	F/110
		Intersection 3 - FFX Co Pkwy NB Ramps/Telegraph Rd	C/28	C/25	B/20	C/27	B/18	B/20	B/18	B/18
FORCE PROTECTION	11	**Fort Belvoir Force Protection**								
		Crosses Fort Belvoir Boundary		Yes	Yes	Yes	Yes	Yes	No	No
		On-Post Road Crossings								
		State/Local Roads		12	4	2	2	0	0	0
		Unpaved/Service Roads		1	2	0	0	0	0	0
		Road Length (ft) Within 400 m of Security-Sensitive Facilities		8,900	2,900	2,900	2,000	2,000	0	0
LAND USE	12	**Number of Schools Within 750 Feet**		1	0	0	2	2	0	1
	13	**Within Easements** (FFX Co) (Dominion Virginia Power; Available Fort Belvoir Data Limited to Dominion Virginia Power Easement) (Acres)		0.00	0.00	0.00	1.29	1.29	0.45	0.05
	14	**Utility Crossings** (FFX Co) Data Limited to Major Utility Lines) (Total)		31	12	5	9	10	3	2
		Electric (Dominion Virginia Power)		13 (2 Parallel)	5	2	5 (1 Parallel)	8 (1 Parallel)	1	0
		Gas		2 (1 Parallel)	1	1	1	1	N/A	N/A
		Sanitary Sewer		6 (2 Parallel)	0	0	0	0	1	1
		Stormwater		3	1	0	0	0	N/A	N/A
		Water		7 (1 Parallel)	5 (1 Parallel)	2 (1 Parallel)	3 (2 Parallel)	1	1	1
	15	**Take Projections - Fairfax County**								
		Within Residential Areas (acres)		0.00	0.02	0.02	0.28	0.30	7.59	2.62
		Within Undeveloped Areas with Approved Development Plans (FFX Co) (acres)		0.00	0.10	0.10	0.10	0.00	0.00	0.00
	16	**Take Projections - Fort Belvoir**								
		Within Residential Areas (acres)		2.2	0.0	0.0	0.0	0.0	0.0	0.0
		Natural Based Constraints (acres)		70.6	25.2	27.3	49.3	27.5	0.0	0.0
		Operational Based Constraints (acres)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Cultural Based Constraints (acres)		0.1	0.0	0.0	0.0	0.0	0.0	0.0
		Developable Land (acres)		27.4	18.7	4.5	4.5	0.0	0.0	0.0
	17	**Zoning Overlay Districts**								
		Within Natural Resource District (acres)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Within Water Supply Protection District (acres)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Within Historic/Heritage Protection District (acres)		5.9	13.4	13.4	13.4	0.0	0.0	0.0
ENVIRONMENTAL	18	**Within Wetlands (Fort Belvoir)/Floodplains (FFX Co)** (acres)		0.5	3.4	5.6	15.0	7.1	26.5	4.9
	19	**Number of Major Stream Crossings**		5	4	4	5	2	4	3
	20	**Within Forested Areas** (Fort Belvoir only) (acres)		10.6	22.4	24.4	26.9	12.3	0.0	0.0
	21	**Potential Threatened & Endangered Species Impact**								
		Number of Known T&E Sightings within 400 meters of Corridor		3	3	2	22	20	20	32
		Wood Turtle Habitat (Fort Belvoir only) (acres)		0.0	0.0	5.5	12.7	5.7	0.0	0.0
	22	**Rare Ecological Communities acres** (Fort Belvoir only)		0.0	0.1	1.3	0.0	0.0	0.0	0.0
	23	**Conservation Areas**								
		Within Wildlife Corridor (Fort Belvoir only) (acres)		1.5	8.3	6.4	14.7	1.3	0.0	0.0
		Within Huntley Meadows (acres)		0.0	0.0	0.0	0.0	3.1	12.3	19.3
		Within Other County/City Parks (includes Fort Belvoir golf course) (acres)		13.5	17.7	2.5	2.5	9.1	16.4	0.9
		Within Jackson Miles Abbott Wetland (acres)		0.0	0.0	0.0	0.2	3.6	0.0	0.0
		Within Chesapeake Bay Resource Protection Area (acres)		1.2	4.0	8.2	11.7	4.0	24.8	19.9
	24	**SWMUs, Landfills, Septic Systems**								
		SWMUs (Landfills) - Fort Belvoir, within 100 feet		2	3	0	0	0	0	0
		Active Landfills - FFX Co, within 100 feet		0	0	0	0	0	0	0
		Septic Systems - Fort Belvoir, within 100 feet		1	0	0	0	0	0	0
	25	**Estimated Number of Noise Sensitive Receptors Within 750 Feet**								
		Residences		26[2]	196[3]	199[3]	344[3]	264	401	551
		Other (Schools, Churches, Hospitals)		*2*	*1*	*1*	*2*	*1*	*0*	*1*
CULTURAL	26	**Cultural/Historic Areas Affected**								
		Fort Belvoir (Total Sites)		8	3	2	2	0	0	0
		Eligible		0	0	0	0	0	0	0
		Potentially Eligible		3	1	2	2	0	0	0
		Not Eligible		5	2	0	0	0	0	0
		Fairfax County (Additional survey recommended)		0	0	0	0	0	0	3
COST	27	**Estimate**		$30M	$34 M	$28 M	$43 M	$32 M	$39M	$25 M

[1]Level of Service Criteria: A<10 seconds, B = 10–15 seconds, C = 15–25 seconds, D = 25–35 seconds, E = 35–50 seconds, F> 50 seconds.

[2]This corridor affects 26 Fort Belvoir housing units.

[3]This corridor affects a 12-building apartment/condominium complex and a 52-unit condominium development

5.1.1 Technical Feasibility

Infrastructure. These criteria include the number of miles of road on-post, the miles of road off-post, and the percentage of existing roadways used.

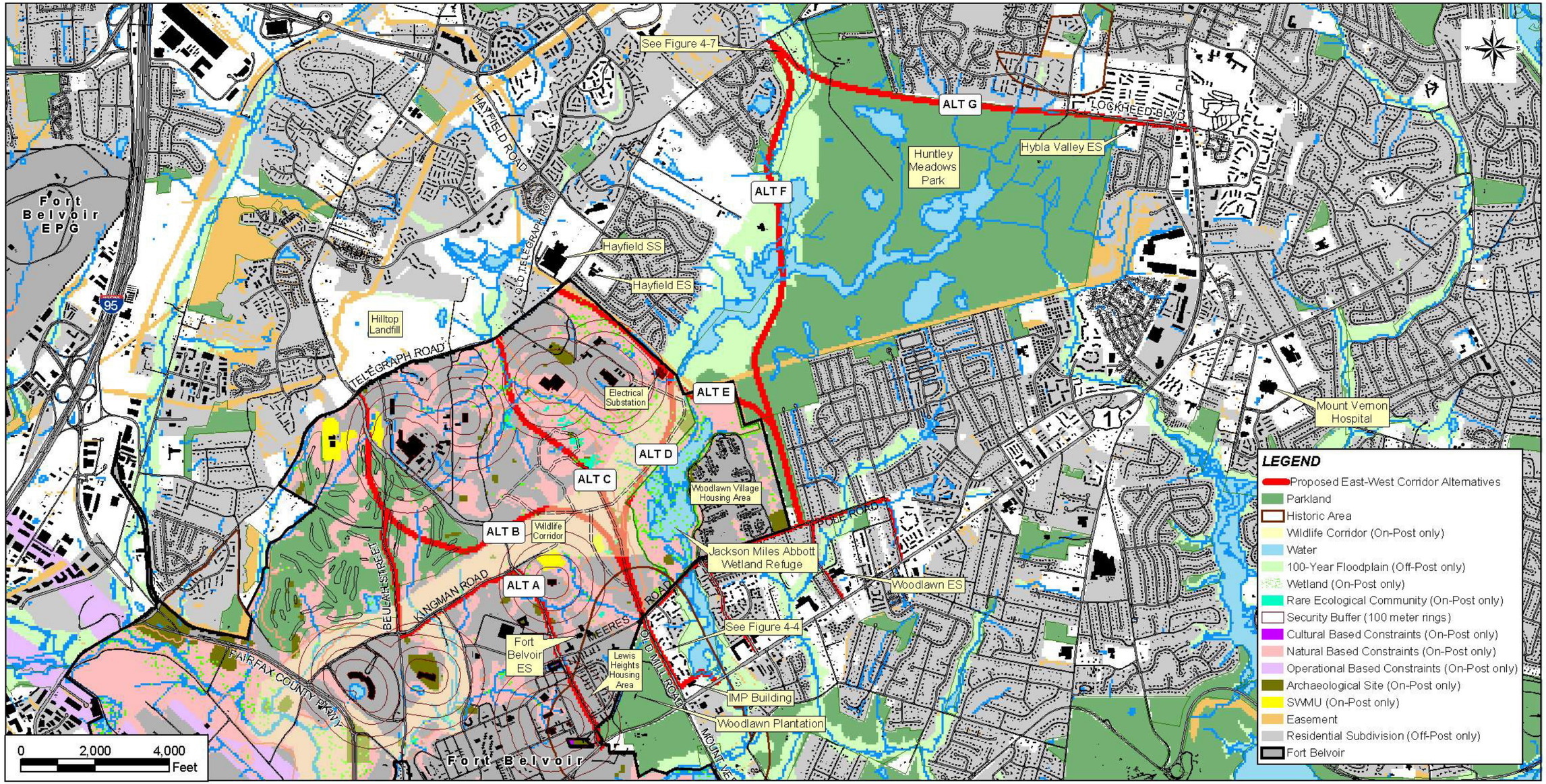
Traffic Volume. These criteria considered the impact on traffic volume, including the number of projected vehicle trips per day (near each alternative's connections to U.S. Route 1 and Telegraph Road), the reduction in the volume of traffic on complementary north-south routes, the reduction in vehicle hours traveled, and the volume of traffic diverted from Woodlawn Road.

Force Protection. These criteria cover the impact on force protection, including occurrences when the distance between a proposed corridor and security-sensitive building is less than 400 meters. This proximity is also related to the ability and likelihood of commuters to observe deliveries in support of sensitive operations.

Land Use. The impact on existing and proposed land uses was addressed by criteria such as the number of schools within 500 feet of the proposed route; the number of road crossings necessary with each alternative; utilities affected; and the number of acres within residential subdivisions, existing easements, Natural Resource Districts, Water Supply Protection Districts, and Historic or Heritage Protection Districts, and within parcels with approved development or improvement plans. Although these factors were all considered, Figure 5-1 indicates the subset of land use criteria applicable to the routes.

The rationale for including these criteria included the following factors:

- Increasing traffic volume around schools has safety implications.
- Providing gates, guards, or a combination of both to secure road crossings would increase project costs and security requirements.
- Rerouting or building around utilities would require additional efforts.
- Relocating homes and buildings could require significant effort and cost.
- Changing the land use for a parcel with an approved development plan could result in additional costs.



Land Use and Constraints

Sources: Fairfax County GIS, 2003; Fort Belvoir GIS, 2003.

Figure 5-1

5.1.2 Environmental Feasibility

Environmental Resource Protection. These criteria include the number of stream crossings as well as the acreage within floodplains or wetlands, including the Jackson Miles Abbott Wetlands. Also included are areas within upland habitats; critical habitats for threatened and endangered species; wildlife corridors; city and county parks, such as Huntley Meadows Park and the Fort Belvoir golf course; rare ecological communities; Chesapeake Bay Resource Protection Areas; and any sensitive noise receptors such as schools, residents, churches, hospitals, and nursing homes.

Cultural Resource Protection. Criteria used to calculate the impact of an alternative on cultural resources included the number of cultural and historic sites potentially affected.

5.1.3 Economic Feasibility

Cost. This study prepared a macro-level cost estimate for the purpose of comparing alternatives. A baseline cost per mile was calculated from costs generated during the recent construction of a 2.5-mile section of Telegraph Road in the area of Fort Belvoir. Additional line items were included based on the screening criteria in Table 5-1 to provide a standardized approach to the estimate. It should be noted that the individual line items could change if another measure was chosen to mitigate the known impacts. Therefore, the cost estimate is a general estimate that can be used to reasonably compare route alternatives. It does not represent the most cost-effective measures for each impact identified.

A full cost analysis is provided in Section 7.0, Macro-Level Cost Comparison.

5.2 Developing a GIS Analysis Tool

Software was developed to accurately and quickly calculate the impacts of roadway alignments throughout the study area. The GIS-based road corridor analysis tool generates a list of impacts by intersecting the 128-foot road corridor buffers with numerous GIS data layers for resources in the vicinity of the corridors. These data were collected from various sources, primarily the Fort Belvoir GIS Department, along with

the Fairfax County Department of GIS and Mapping and Department of Planning and Zoning.

Various scenarios are calculated when running the tool, including

- Length of road corridor on and off Fort Belvoir, and length using existing corridors.
- Length of road corridor within 400 meters of Fort Belvoir security-sensitive facilities.
- Distance from corridors to sensitive receptors such as schools and residential dwellings.
- Intersections and crossings with paved and unpaved roads, streams, and utilities.
- Acreage of road corridor within utility easements, subdivisions, parcels with approved development plans, historic protection districts, wetlands, Huntley Meadows Park, and Chesapeake Bay Resource Protection Areas.
- Acreage of road corridor within potential natural, operational, and cultural constraints as identified in the Fort Belvoir Master Plan.

The results of the analysis are presented in Table 5-1, and a discussion of the results is provided in Section 6.0, Evaluation of Alternatives.

SECTION 6.0:
EVALUATION OF ALTERNATIVES

This section presents the advantages (Table 6-1) and disadvantages (Table 6-2) of the seven corridor alternatives and the no action alternative. The listing in Tables 6-1 and 6-2 follows the criteria itemized in the matrix (Table 5-1) and represents a subjective comparison of the alternatives. Through this subjective comparison, the Study Team sought to identify items that were outliers from the majority of all the items of a particular criterion. The outliers could be positive or negative. A blank cell on Table 6-1 or 6-2 indicates that the criterion for that alternative is relatively the same as the criteria for the other alternatives. The advantages and disadvantages listed under the "Traffic Volume" category are based primarily on regional effects and do not reflect an analysis of specific point-to-point destinations of individual commuters.

Table 6-1. Advantages of Alternatives

Criteria	On-Post				On and Off-Post	Off-Post		No Action
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	
Infrastructure	• High percentage of corridor uses existing road corridor (86 percent).			• High percentage of corridor uses existing road corridor (62 percent).	• Shortest corridor at less than 2 miles.			
Traffic Volume	• According to traffic models, carries one of the highest south-end (18,400) and total average (16,700) volumes of local traffic in 2003, and would carry about 27,000 vpd in average volume in 2025. • Provides direct connectivity between U.S. Route 1 and Telegraph Road.	• Provides direct connectivity between U.S. Route 1 and Telegraph Road.	• Exhibits the highest 2025 reduction in volume of traffic on parallel north-south routes at over 11,000 vpd. • Provides direct connectivity between U.S. Route 1 and Telegraph Road.	• Provides good connectivity between U.S. Route 1 and Telegraph Road.	• Has the second largest reduction in vehicle hours traveled per day at about 3,200.	• Provides one of the most significant reductions in total traffic on parallel north-south routes at nearly 11,000 vpd. • Provides the largest reduction in vehicle hours traveled per day at about 4,500.	• According to traffic models, carries the highest volume of local traffic at approximately 18,000 vpd in 2003, and would carry approximately 21,000 vpd in 2025. • Serves the highest 2003 north-end volume of traffic at over 18,000 vpd.	
Force Protection				• Has the lowest effect on force protection of the on-post alternatives.	• Does not bisect the North Post.	• Does not cross Fort Belvoir.	• Does not cross Fort Belvoir.	• Does not further effect desired force protection.
Land Use	• Lowest change to existing land use of all alternatives (already a 2-lane road).	• Not in close proximity to any schools.	• Not in close proximity to any schools. • Few utility crossings (5).			• Not in close proximity to any schools. • Has one of the fewest numbers of utility crossings (3).	• Has the fewest number of utility crossings (2).	• No change to existing land use.
Environmental Resources	• Fewest acres of wetland impact (less than 1 acre). • Low impact on Fort Belvoir's wildlife corridor (1.5 acres). • No impact on wood turtle habitat. • Lowest impact on Chesapeake Bay Resource Protection Areas (1.2 acres). • Fewest noise receptors.	• Second lowest impact on wetlands (3.4 acres). • No impact on wood turtle habitat. • Second lowest impact on Chesapeake Bay Resource Protection Areas (4 acres).			• Lowest number of major stream crossings (two). • Second lowest impact on Chesapeake Bay Resource Protection Areas (4 acres). • Lowest impact on Fort Belvoir's wildlife corridor (1.3 acres).			
Cultural Resources					• Does not affect cultural or historic areas.	• Does not affect any cultural or historic areas.		

Table 6-1. Advantages of Alternatives (continued)

Criteria	On-Post				On and Off-Post	Off-Post		No Action
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	
Macro-level Cost Comparison	• Third lowest estimated cost ($30 million).		• Second lowest estimated cost ($28 million).				• Lowest estimated cost ($25 million)	

Note: Blank cells indicate that no outliers were identified when the alternatives were compared.

Table 6-2. Disadvantages of Alternatives

Criteria	On-Post				On and Off-Post	Off-Post		No Action
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	
Infrastructure	• Second longest corridor at 2.99 miles.	• Uses low percentage of existing road corridor (28 percent). • Longest on-post corridor at 3.02 miles.			• Uses lowest percentage of existing road corridor (0 percent).	• Uses lowest percentage of existing road corridor (0 percent).	• Uses low percentage of existing road corridor (28 percent).	• Continued strain on existing infrastructure, which is currently above capacity.
Traffic Volume	• Has the lowest reduction in vehicle hours traveled per day (about 1,000).	• Has the lowest reduction in vehicle hours traveled per day (about 1,000).			• Not a continuous corridor from U.S. Route 1 to Telegraph Road (requires four subalternative connectors to U.S. Route 1).	• Not a continuous corridor from U.S. Route 1 to Telegraph Road (requires four subalternative connectors to U.S. Route 1).	• Would result in an increase in vehicle hours traveled per day (about 360) in Horizon Year 2025. • Would result in the lowest (500) projected change in total volume on parallel north-south routes.	• No improvement to existing traffic congestion.
Force Protection	• Bisects the western portion of the North Post, limiting security standoff distances for future developments. • Has the greatest length of road within desired 400-meter standoff distance at nearly 9,000 linear feet. • Highest number of existing intersections at 12.	• Bisects the western portion of the North Post, limiting security standoff distances for future developments. • About 3,000 linear feet of corridor are within the desired 400-meter standoff distance.	• Bisects the North Post, limiting future development for security-sensitive buildings. • About 3,000 lineal feet of corridor are within the desired 400-meter standoff distance.	• Bisects the eastern portion of the North Post, limiting future development for security-sensitive buildings. • About 2,000 lineal feet of corridor are within the desired 400-meter standoff distance.	• About 2,000 linear feet of corridor are within the desired 400-meter standoff distance.			

Table 6-2. Disadvantages (continued).

Criteria	On-Post				On and Off-Post	Off-Post		No Action
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	
Land Use	• Affects the largest number of utility crossings at 31. • Would result in the largest estimated amount of on-post take from residential areas (2.2 acres). • Affects three holes on the North Post golf course.	• Affects a large amount of Historic/Heritage Protection Districts (13.4 acres). • Affects eight holes on the North Post golf course.	• Affects a large amount of Historic/Heritage Protection Districts (13.4 acres).	• Passes within 700 feet of Hayfield Secondary School and 350 feet of Hayfield Elementary School. • Would require relocation of the electrical substation in the southeast corner of HEC. • Runs parallel to overhead high-tension electric lines. • Affects a large amount of Historic/Heritage Protection Districts (13.4 acres).	• Passes within 700 feet of Hayfield Secondary School and 350 feet of Hayfield Elementary School. • Would require relocation of the electrical substation in the southeast corner of HEC. • Runs parallel with overhead high-tension electric lines.	• In close proximity to U.S. Coast Guard communications facility. • Would result in take of the largest amount of off-post residential property (7.59 acres).	• Would result in take of 2.62 acres of off-post residential property.	
Environmental Resources	• Has the greatest number of major stream crossings (5).	• Intersects the highest number of solid waste management units (3).	• Affects the second largest number of on-post forested areas (24.4 acres).	• Has the largest impact on wood turtle habitat at about 13 acres. • Has the highest impact on floodplain and wetland areas among all on-post alternatives at more than 15 acres. • Has the highest number of major stream crossings (5). • Has the largest impact on on-post forested areas (26.5 acres) and wildlife corridor (15 acres).	• Impacts about 12 acres of Chesapeake Bay Resource Protection Areas. • Affects about 3 acres of Huntley Meadows Park.	• Has the largest impact on wetlands/ floodplains (about 26 acres). • Affects about 12 acres of Huntley Meadows Park and 16 acres of other parkland. • Noise would affect the second greatest number of sensitive receptors.	• Affects about 19 acres of Huntley Meadows Park. • Noise would affect the greatest number of sensitive receptors.	
Cultural Resources	• Affects a high number of cultural/ historic sites (8).	(See Land Use)	(See Land Use)	(See Land Use)				
Macro-level Cost Comparison		• Third most expensive alternative ($34 million).		• Most expensive alternative ($43 million).		• Second most expensive alternative ($38 million).		

Note: Blank cells indicate that no outliers were identified when alternatives were compared.

SECTION 7.0:
MACRO-LEVEL COST COMPARISON

This preliminary study provides a macro-level comparison of the costs of the seven different route alternatives. This section describes the general methodology used to develop a cost estimate for each route and presents the factors contributing to the final cost of each road corridor.

The general approach taken to prepare these initial cost comparisons drew on the professional experience of the technical team and on stakeholder input to develop estimates of unit rates based on construction of similar type, size, and location. Those reasonable and representative estimates could then used for cost projections.

7.1 Methodology

The stakeholders developed a standardized approach for the preparation of the cost estimates that is commensurate with the level of technical detail and amount of data available. The initial step in the estimating process was to presume a four-lane, 128-foot-wide road that is at-grade for the length of the corridor. Additional costs (line items) were included for the unique features required by each corridor, based on the items identified in the matrix (Table 5-1). The costing approach, therefore, relies on two types of costs: (1) a base cost for the main infrastructure of a four-lane road extending the entire distance of the proposed corridor and (2) a suite of additions to the standard road. Recognizing the variety of potential engineering controls and architectural details for each route alternative, an attempt was made to apply measures representative of solutions that Fort Belvoir had used previously. The line items presented were prepared with the understanding that construction modifications or constraints on or adjacent to the proposed corridor might affect the actual costs.

These cost estimates were prepared before any road design to serve as initial planning-level guides. Therefore, some factors might change if this study advances to the NEPA level. In addition, no geotechnical study has been performed for any of the corridors. Data such as vertical and horizontal alignments, contours, cut and fill estimates, and

grading were not specifically factored into these estimates. Engineering constraints that are not considered in this study might exist. If further analysis to continue the evaluation of the corridors is deemed appropriate, it would be prudent to perform field studies and prepare a more detailed road design and estimates that are more inclusive of specific site conditions. As mentioned above, the estimates developed in this study draw on stakeholder input for a representative unit rate for each factor considered.

Described below is the methodology for developing a macro-level cost comparison using a base road cost and varying additional costs.

7.1.1 Base Cost (infrastructure for a four-lane, at-grade road)

The basis of the base cost was a four-lane road similar to Telegraph Road and Fairfax County Parkway in the vicinity of Fort Belvoir. For example, a 2.5-mile section of Telegraph Road was improved from a two-lane road to a four-lane divided roadway between Beulah Street and U.S. Route 1 in the summer of 2000. The cost of the new construction on this length of road (a total of $16.4 million) was used to establish a unit cost per linear foot of roadway. The unit cost was multiplied by the total length of new roadway to estimate the cost of the new road. A reduced unit rate was used where the corridor would extend along an existing two-lane road.

The following subsections present the additional costs required to mitigate known impacts or address constraints. These costs can be highly variable depending on the mitigation measures found most appropriate after further study.

7.1.2 Intersections

These costs are based on the number of intersections with existing roads throughout the length of the corridor. The volume of traffic directly correlates to the requirements for the type and size of a road, its intersections, the number of turning lanes and traffic lights, signage, and other details. A correlation between traffic volume and types of intersections (e.g., a four-lane road with a two-lane road with specific traffic volumes) was derived, based on the experience of the technical team and stakeholders, to approximate the unit costs for the intersections of the proposed corridor and existing

roads. This estimate does not include scenarios for overpasses or interchanges. The costs associated with security and force protection measures at the various intersections are addressed in Section 7.1.3.

The primary construction measure used was a four-way, at-grade intersection with traffic lights. The intersections were differentiated only by the size of the intersecting road. Therefore, cost estimates were provided for intersections with a two-lane road, another four-lane road, and secondary roads without restricted access.

7.1.3 Force Protection

Force-protection measures will likely be required along various portions of the on-post alternatives. The two conditions that required force protection as an additional cost are intersections with existing on-post roads and roads that pass within a specified distance from security-sensitive facilities on-post.

Each intersection affords an opportunity for a vehicle to access Fort Belvoir. Therefore, restricted-access gates to eliminate unauthorized access to the post were included in the estimate.

An earthen berm that follows the corridor alignment for the length of road that passes within the desired 400-meter standoff distance from the key tenant organizations was used to address the cost of a mitigation measure for vehicle bombs. The choice of measure was based primarily on aesthetics in keeping with the existing conditions on the post. Appendix H illustrates the design of the earthen berm used and the rationale for using the berm.

A number of other measures that might be more appropriate as force protection measures include

- Limiting access to two-axle cars along the route alternatives
- Vehicle screening at entry checkpoints
- Grade-separated overpasses
- Gates and barriers
- Building hardening

- Depressed roadbeds

Design criteria for force-protection measures were not part of this study. Consequently, a single mitigation measure was assumed and priced for the cost estimate. This estimate did not consider the sizes of the bombs from which structures had to be protected, and therefore the mitigation measure might not sufficiently protect against a particular size of explosive. A more detailed investigation of force-protection criteria and threat analyses would be required to determine the most appropriate and cost-effective measures for the alternatives.

If this study progresses, a full study of the effectiveness, engineering feasibility, and aesthetic design of such force-protection options for the on-post corridors is recommended.

7.1.4 Land Use

The primary factors for land-use based costs were (1) take costs for the purchase of existing residential and commercial facilities within and intersecting the route corridors, (2) the cost of utility crossings along each route alternative, and (3) other costs related to utilities.

The land use cost estimate was broken down to include this level of detail. It is important to note that changes in the alignment of the corridors could have a significant effect on the cost based on the land use criteria.

Real Estate Take Costs. Several of the route alternatives pass through existing residential and commercial properties. The properties would have to be purchased to allow for the construction of a new road or widening of an existing road. These take costs are reflected in the cost estimates based on acreage costs or average land and home values at prevailing prices. Property values were taken from the Fairfax County Department of Tax Administration's 2003 parcel assessment value data. Most of the take costs include the entire property unless the property is large enough to be subdivided.

Utilities. Costs associated with utility crossings in the corridor would be incurred either because the road design would have to be modified to efficiently accommodate the

existing utility or because the utility lines themselves would have to be relocated to accommodate the road. Costs for utilities vary according to their type, size, and location relative to a new road. The costs used in this study are based on cost data gathered from similar utility-related costs for road construction projects throughout the Northern Virginia area.

Although this study used the locations of utility crossings in estimating costs, it did not have the data necessary to determine the types of modification required at each crossing. If a project is approved, a more detailed evaluation of utilities would be prudent.

Two proposed alternatives would affect an electrical substation on Fort Belvoir owned and operated by Dominion Virginia Power. Assumptions on the cost of relocating the substation are based on the cost of relocating comparable facilities. These costs are factored in for the two routes. Discussions are ongoing to coordinate input from stakeholders on the most appropriate cost for this particular facility relocation.

7.1.5 Environmental

The four primary factors for environmental unit cost were (1) number of stream crossings, (2) acres of wetlands affected, (3) maintenance of a wildlife habitat corridor, and (4) reduction of traffic noise.

Stream Crossings. Because each stream crossing is unique, a variety of road crossings might be required depending on the slopes, subsurface soil conditions, and stream conditions. Because of data limitations, however, a bridge crossing of a representative stream width was assumed for all the alternatives. Most streams in the Fort Belvoir study area are first- and second-order streams, and therefore the cost of a four-lane bridge 100-feet long was used.

Wetlands. Two cost scenarios were applied in this criterion: banking wetlands and using elevated roadway. Banking wetlands was priced at $125,000 per acre. Elevated roadways would be used to minimize impacts on wetlands so large that it would be impractical to bank them from a cost perspective. The cost of an elevated roadway was prepared as a cost per linear foot.

Wildlife Corridor. A wildlife corridor extends in a nearly east-west orientation through the entire North Post of Fort Belvoir. This corridor provides connectivity for wildlife habitat, feeding, and other wildlife uses between Huntley Meadows Park and an environmental protection area that extends to the southwest area of the post. The purpose of the wildlife corridor is to provide a fairly unbroken path for wildlife migration, reproduction, feeding, and other habitat considerations. Costs for maintaining the wildlife corridor would be incurred in the form of altered road design. A length of elevated roadway with culverts below was incorporated into the cost of the affected alternatives to account for this factor. This approach is similar to that taken by Fairfax County when costing the Fairfax County Parkway, and it was assumed that it is an adequate approach for this study.

Noise. The need for noise barriers was determined based on a 65-decibel standard corresponding to a buffer distance of 750 feet from each side of the proposed roadways. As illustrated in Appendix H, the earthen berm, a standard noise protection measure, is proposed for this study; however, the use of other noise barriers, including noise barrier walls, is possible. Further study might be necessary to determine an optimal noise mitigation design in terms of aesthetics and security.

7.2 Macro-Level Cost Comparison of Alternatives

Using the methodology described above, a macro-level cost comparison was prepared. Table 7-1 presents the comparative costs by category and by total macro-level cost. The unit rates and quantity are provided with the cost items to show how the comparative costs were prepared. This table is not intended to represent a detailed summary of all costs. It is intended to provide a reasonable comparison between the alternatives. Each unit rate in the table represents a blended rate of anticipated costs associated with the construction items listed. The subsections below provide a brief overview of how the cost items were identified for each alternative.

Table 7-1. Macro-Level Cost Comparison Table

Category	Construction or Cost Item	Unit	Unit Rate	Alt A Quantity	Alt B Quantity	Alt C Quantity	Alt D Quantity	Alt E Quantity	Alt F Quantity	Alt G Quantity
Base Cost	Existing Road Length	LF	$1,125	14,300	6,300	8,500	8,600	0	700	3,600
	New Road Length	LF	$1,500	1,600	9,500	3,600	5,700	10,000	13,000	8,300
Additional Costs										
Intersections	At-grade intersection for 2-lane road	EA	$100,000	3	0	0	0	1	1	2
	At-grade intersection for 4-lane road	EA	$150,000	3	3	2	2	1	1	0
	Small, non security-sensitive intersections	EA	$25,000	8	4	8	4	0	0	7
Force Protection	Earthen berms along road	LF	$750	8,900	2,900	2,900	2,000	2,000	0	0
	Restricted road barrier/gate	EA	$100,000	6	3	2	2	1	0	0
Land Use	Take residential costs	EA	Variable	0	0	0	0	0	0	0
	Take commercial costs	EA	Variable	0	0	0	0	0	0	0
Utilities	Utility crossings and realignments	LF	$50,000	31	12	5	9	10	3	2
	Electric substation	EA	$10,000,000		0	0	1	1	0	0
Environmental										
Stream/Wetland Crossing	4-lane bridge	LF	$10,000	0	0	100	100	100	1000	100
Wetlands	Wetland mitigation banking in watershed	Acre	$125,000	0.5	3.4	5.6	15	7.1	26.5	4.9
Wildlife/Habitat Corridor	Culverts beneath road	LF	$200	5	4	4	5	2	3	4
Noise	Noise walls	LF	$600	2,000	4,000	4,000	6,300	5,300	6,700	9,300
			Total costs	**$30 M**	**$34 M**	**$28 M**	**$43 M**	**$32 M**	**$39 M**	**$25 M**

7.2.1 Alternative A

Alternative A extends northward along Woodlawn Road from its intersection with U.S. Route 1, primarily along existing roads, through the North Post golf course to the intersection of Beulah Street and Telegraph Road. About 90 percent of the route uses existing roadway corridors. The projected total cost for this alternative is about $30 million.

Base Cost. The portion of this alternative using existing road corridors is approximately 14,000 feet. This portion uses Woodlawn Road (two lanes) from U.S. Route 1 to John J. Kingman Road, John J. Kingman Road (four lanes) from Woodlawn Road to Beulah Street, and Beulah Street (two lanes) from John J. Kingman Road to just north of the North Post golf course clubhouse. The portion of the alternative that would require new road construction is about 1,500 feet long, and it extends from Beulah Street near the North Post golf course clubhouse northward to the realigned section of Beulah Street at its intersection with Telegraph Road.

Intersections. Intersections for Alternative A requiring security-related measures such as gate barriers or personnel checkpoints fall into two groups. Three four-lane at-grade intersections, from south to north, are the intersections of John J. Kingman Road with Woodlawn Road, Beulah Street, and the realigned segment of Beulah Street. Three two-lane at-grade intersections are at one end of the Kimbro Loop through the Lewis Housing Area on-post, Meeres Road, and Gunston Road. The following five road intersections would be closed and require permanent or key entry gates at their intersections with Alternative A: the other intersection with the Kimbro Loop in the Lewis Housing Area, the original closed portion of Woodlawn Road north of John J. Kingman Road ("Old Woodlawn Road"), and three unnamed roads along John J. Kingman Road between Woodlawn Road and Keene Road.

Land Use. No cost associated with land use changes would be incurred.

Utilities. There are 25 utility crossings along this proposed corridor. Fifteen are along Woodlawn Road in the southern portion of the route. One occurs along John J. Kingman

Road near its intersection with Beulah Street. The remainder are between Beulah Street and the golf course area, except for one aboveground electric utility crossing along Telegraph Road.

Environmental. Alternative A would affect 0.5 acre of wetlands. The wetland is along the eastern side of Woodlawn Road just south of John J. Kingman Road. Five culverts for stream crossings would be required along this corridor. Two crossings are along Woodlawn Road, two are along John J. Kingman Road, and one is near the northern end of Beulah Street. In addition, about 2,000 feet of noise walls would be required to provide a buffer for the Lewis Housing Area on the east side of Woodlawn Road at the southern end of the corridor.

Force Protection. The total length of earthen berms installed as a force protection measure would be about 9,000 feet. Four sections along the corridor would require berms. The first is 5,100 feet along the west side of Woodlawn Road across from the Lewis Housing Area. The second section is at the north end of Woodlawn Road on the east side (to protect EARTHCOM). The third section is 800 feet on the south side of John J. Kingman Road near the intersection with Beulah Street, and the fourth is 3,100 feet on the east side of Beulah Street (to protect DCEETA).

7.2.2 Alternative B

Alternative B begins at U.S. Route 1 on the proposed Old Mill Road realignment around the east and north sides of the IMP Building. It passes off-post residential areas, crosses into Fort Belvoir, passes alongside a proposed RCI housing area, and then heads northwest to join the Beulah Street realignment to connect with Telegraph Road.

Base Cost. The existing two-lane Old Mill Road is used in the southern portion of this route north of the proposed Old Mill Road realignment section, amounting to 40 percent of the total route. About 9,500 feet of the corridor would then cross gently rolling woodlands, the contours of which might require grading and leveling.

Intersections. Security measures would be required for four intersections with Alternative B. An intersection with a four-lane road occurs at the Beulah Street

realignment. Two-lane intersections include Meeres Road, John J. Kingman Road, and Beulah Street. Two other intersections, Old Woodlawn Road and an unpaved road that extends north from John J. Kingman Road, might require only a gated barrier with key access.

Land Use. The southern terminus of this corridor at U.S. Route 1 was shifted to the east to preserve the viewshed of Woodlawn Plantation, a historic site that stipulated cultural preservation mitigation measures during the planning of the corridor alternatives. This shift might require taking commercial property that falls in the route corridor. During the cost estimating, it was determined that either the entire IMP Building property on the south side of the corridor or three apartment buildings on the north side would be taken. The take costs for the two options are roughly the same. This corridor might also conflict with a proposed RCI housing area on-post. A cost might be incurred if this route is constructed after the proposed residential area is developed (if it is developed); however, it is expected that if both projects were to occur, consideration of the other project in each design would minimize potential conflicts.

Utilities. There are 12 utility crossings on this corridor. Four crossings are along Old Mill Road, one is near the intersection with John J. Kingman Road, one is near the intersection with Old Woodlawn Road, five are along Beulah Street, and one is at Telegraph Road.

Environmental. Noise mitigation barriers 4,000 feet long might be required along both sides of the southern section of this route because of the proximity of three residential areas and a church on the east side and Woodlawn Plantation on the west side. A total of 3.3 acres of wetlands would be affected. Two wetlands are along Old Mill Road, and three more are between John J. Kingman Road and Beulah Street. This corridor would cross 8.3 acres of the Fort Belvoir wildlife corridor between Old Mill Road and Beulah Street. In addition, 0.1 acre of a rare ecological community might be affected where the route veers northwest from Old Mill Road on-post.

Force Protection. Earthen berms about 2,900 feet long might be required on the eastern side of the northern third of Alternative B to provide protection for DCEETA.

7.2.3 Alternative C

Alternative C begins at U.S. Route 1 along the proposed Old Mill Road realignment. It passes off-post residential areas, crosses into the post, passes alongside the proposed RCI housing area, and then heads north to connect with Telegraph Road.

Base Cost. Seventy percent of this route would be located along an existing roadway corridor. Thirty percent would cross rolling woodlands, which might require grading and leveling.

Intersections. Intersections on-post that would require security mitigation measures include two 2-lane intersections with Meeres Road and John J. Kingman Road.

Land Use. Alternative C overlaps with Alternative B at its southern end, and land use take would be the same as that for Alternative B. Take of commercial property would be required to avoid viewshed conflicts with Woodlawn Plantation, and this corridor might affect the proposed RCI housing area. No land use conflicts would be incurred along the northern end of this route.

Utilities. There are two utility crossings near the junction of this corridor with Meeres Road and one crossing near the junction with John J. Kingman Road.

Environmental. Alternative C traverses a more direct north-south line through Fort Belvoir across wooded and fairly hilly topography to tie in with Telegraph Road. There are two stream crossings near Meeres Road and two more in the northern part of the corridor. The route affects 5.9 total acres of wetlands, a small wetland near Meeres Road and a much larger one at the northern end of the route near Telegraph Road. In the middle segment of Alternative C, the presence of a rare ecological community might require a slight route deviation to avoid impacts. This corridor would cross 6.4 acres of the Fort Belvoir wildlife corridor east of Old Mill Road. Noise mitigation barriers 4,000 feet long might be required in the southern section of the route on both sides because of proximity to three residential areas and a church on the east side and Woodlawn Plantation on the west side.

Force Protection. About 2,900 feet of earthen berms might be required on the east side of the northern third of the corridor to provide protection for HEC. The corridor is at least 400 meters to the east of DCEETA, and therefore no barrier would be required on the west side.

7.2.4 Alternative D

Alternative D begins at U.S. Route 1 along the proposed Old Mill Road realignment. It passes off-post residential areas, crosses into the post, passes alongside the proposed RCI housing area, and then veers northeast between the east side of HEC and the west edge of the off-post Hayfield Farm subdivision to connect eventually to Telegraph Road.

Base Cost. Sixty percent of Alternative D is along an existing road corridor. The remaining 40 percent crosses relatively flat, forested areas.

Intersections. Two 2-lane road intersections at Meeres Road and John J. Kingman Road would require security-related mitigation measures.

Land Use. The southern end of Alternative D overlaps Alternatives B and C, so take for the Old Mill Road realignment to accommodate the Woodlawn Plantation viewshed and potential conflict with the proposed RCI housing area would occur as previously discussed. The northern end of Alternative D runs parallel to an existing utility corridor.

Utilities. There are seven crossings in this corridor, including two at Meeres Road, one at John J. Kingman Road, three east of the HEC, and one at Telegraph Road. Alternative D would require relocation of the Dominion Virginia Power substation at the southeast corner of HEC.

Environmental. Within Fort Belvoir, Alternative D passes through relatively flat wooded areas with small stream crossings. Two stream crossings are near Meeres Road, two are to the east of John J. Kingman Road in the central portion of the route, and two more are near the electrical substation, where the route curves to the northwest. A total of 14.7 acres of the Fort Belvoir wildlife corridor would be affected, potentially requiring road culverts to permit continued habitat connectivity. A total of 15.3 acres of wetlands would be affected: a small wetland near Meeres Road, a large wetland in the middle

portion of the route, and a third wetland near Telegraph Road. The Jackson Miles Abbott Wetland Refuge would be avoided. In the southern portion of the route, 4,000 feet of noise mitigation walls on either side of Old Mill Road would be required, as discussed for Alternatives B and C. The northern end of Alternative D is adjacent to the Hayfield Farms off-post residential subdivision, as well as Hayfield Elementary School; noise mitigation walls totaling 2,300 feet in length might be required.

Force Protection. Security measures would be required in the northern portion of Alternative D as it approaches Telegraph Road because it runs adjacent to and east of HEC. Earthen berms 2,000 feet long would be required on the western side of the road.

7.2.5 Alternative E

Unlike the route alternatives mentioned previously, Alternative E does not provide a direct connection between U.S. Route 1 and Telegraph Road. It starts on Pole Road and offers four connector roads branching out to U.S. Route 1. These two-lane connector roads travel through residential neighborhoods. The roads are, from west to east, Old Mill Road, Sacramento Drive, Highland Lane, and Frye Road. The corridor runs north from Pole Road adjacent to the Timothy Park residential subdivision, crosses the southwestern corner of Huntley Meadows Park, continues into Fort Belvoir, and joins the northern end of Alternative D to connect with Telegraph Road.

Base Cost. No existing road corridors would be used by Alternative E.

Intersections. No intersections requiring security measures would occur along this corridor.

Land Use. No land use conflicts requiring take would be expected.

Utilities. There are four utility crossings near HEC and one at Telegraph Road. Alternative E would require relocation of the Dominion Virginia Power electrical substation at the southeast corner of HEC.

Environmental. A total of 7.1 acres of wetlands would be affected, all in the northern end of the route corridor. There are two stream crossings in the central portion of the

route. The route would affect 1.3 acres of the Fort Belvoir wildlife corridor, requiring mitigation such as wildlife culverts. Noise mitigation would be required for the sections of the road adjoining off-post residential neighborhoods, including 3,000 feet of noise barriers for Timothy Park and 2,300 feet of noise barriers for Hayfield Farms, both on the eastern side of the route.

Force Protection. Security mitigation measures would be required in the northern portion of Alternative E where it approaches Telegraph Road as it runs adjacent to HEC. Earthen berms 2,000 feet long would be required on the western side of the corridor.

7.2.6 Alternative F

This route overlaps the corridor for Alternative E at its southern end and runs north adjacent to the Timothy Park subdivision, then veers northeast and traverses Huntley Meadows Park, a wetland area. It then circumvents the U.S. Coast Guard communications facility to the southeast and passes alongside the Wickford subdivision. The route then passes through a small residential area before connecting with Telegraph Road. This intersection would be directly across from the intersection of the Van Dorn Street Extension with Telegraph Road. This corridor is entirely off-post.

Base Cost. Only 5 percent of this corridor would use existing road corridors.

Intersections. No security-sensitive intersections would occur along the route.

Land Use. About $616,500 of residential property take might be required in the small residential area to the east of the Wickford subdivision.

Utilities. There is an aerial transmission line in the central section of the route before it traverses Huntley Meadows. There are also four other utility crossings concentrated at the northern end near the intersection with Telegraph Road.

Environmental. Alternative F crosses 23.2 acres of floodplain and 28.7 acres of Huntley Meadows property in its central and northern portions. Further study would be required to determine the most efficient path for this section of the route given the condition of the terrain and potential impacts on wetlands. Although no detailed engineering design or

study has been conducted, a 1,000-foot-long bridge might be required for this section to minimize impacts on hydrology. There are also four stream crossings in the northern third of this route. In terms of noise mitigation requirements, 3,000 feet of noise walls would be required to protect Timothy Park, and 3,700 feet of walls might be needed on the western side of the corridor to protect the Wickford subdivision.

Force Protection. Additional security measures would be required to protect a Coast Guard facility along this route from potential security breaches.

7.2.7 Alternative G

Alternative G runs from U.S. Route 1 to the west along Lockheed Boulevard, running between the northern boundary of Huntley Meadows Park and residential areas to the north. It crosses a Huntley Meadows feeder stream before passing through a small residential area and connecting with Telegraph Road across from the Van Dorn Street Extension. This corridor is entirely off-post.

Base Cost. About 30 percent of the corridor would use existing roadways.

Intersections. No security-sensitive intersections would occur along Alternative G.

Land Use. Alternative G would require take of residential property near the intersection with Telegraph Road in the amount of $660,000.

Utilities. Alternative G crosses one utility corridor at its eastern end, two in the central portion, and two in the western end.

Environmental. There are 4.9 acres of floodplains at the western end of this corridor, and it crosses 20 acres of Huntley Meadows Park. There are four stream crossings, three in the middle section of the route and one near the western end of the route. A total of 9,300 feet of noise barriers would be expected, including 3,400 feet of noise barriers at the eastern end of the corridor on both sides of Lockheed Boulevard to reduce noise effects on three subdivisions and Hybla Valley Elementary School. An additional 5,900 feet of noise barriers would be required on the north side of the middle section of the route to protect two more residential subdivisions.

Force Protection. No force protection measures would be required by Alternative G.

SECTION 8.0:
CONCLUSION

This preliminary study initially reviewed 14 corridor alignments that could serve as future connector roads between Telegraph Road and U.S. Route 1 in the vicinity of Fort Belvoir. The number of corridors was narrowed to seven based on input from stakeholders and the evaluation criteria defined for this study. The traffic influence, constraints, and relative macro-level costs of the final seven corridors were compared.

The objective of this study was to identify alternative corridors that were technically, environmentally, and economically feasible. The technical evaluation focused primarily on traffic analyses to demonstrate the effect that each alternative would have on local and regional traffic. The environmental analysis considered existing constraints based on available records from Fort Belvoir and Fairfax County. Because of the very preliminary nature of this study, the economic evaluation was limited to a macro-level cost comparison. The evaluations of these feasibility objectives are presented in the matrix (Table 5-1) and broken down into advantages and disadvantages according to route in Tables 6-1 and 6-2. The macro-level cost comparison is presented in Table 7-1.

All seven alternatives are considered technically, environmentally, and economically feasible at this phase of the study. Alternative A, however, might not be a viable alternative because of a proposed housing development along the corridor and a cemetery that exists just west of the corridor. Information regarding the development was provided to the Study Team after the evaluation of alternatives was completed. A summary of the alternatives relative to their feasibility is provided below.

8.1 Technical Feasibility

The corridor alternatives were evaluated to determine the routes' local and regional influence. Local influence reflects the volume of traffic that is rerouted onto the alternative route, if constructed. Regional influence reflects the reduction in vehicle hours traveled resulting from the alternative route. The following conclusions are based on current year (2003) model runs.

All seven of the alternatives demonstrate a positive result in relieving traffic congestion in the Fort Belvoir area, as measured by the amount of traffic rerouted from Woodlawn Road to the alternative corridor. Alternative A has the highest number of rerouted traffic at approximately 5,100 vehicles per day. This alternative makes use of existing alignments with Woodlawn Road and Beulah Street, making it understandable that the local traffic would return to using the same or very similar routes. The alternative that is nearest to Alternative A from a local perspective is Alternative C, with approximately 4,700 vehicles per day. This alternative, an extension of Old Mill Road, represents the most direct route to Telegraph Road.

The corridors with the most positive influence on regional traffic are Alternatives F, C, D, and E. The greatest reduction in vehicle hours traveled from the presumed baseline is Alternative F, resulting in a reduction of approximately 4,500 vehicle hours traveled. The second largest reduction in vehicles traveled is in Alternatives C, D, and E with a reduction of approximately 2,700, 3,000, and 3,200 vehicles hours traveled, respectively.

The corridor with the highest projected change in volume on parallel routes is Alternative F with nearly 11,000 vehicles per day from Route 1, north of Sherwood Hall Lane and Fairfax County Parkway, north of John J. Kingman Road. The greatest reduction in vehicle hours traveled is achieved by Alternative F, which reduces the number of vehicle hours traveled per day by 4,500. The second largest reductions in vehicle hours traveled per day are achieved by Alternatives C, D, and E, each of which reduces the number of vehicle hours traveled per day by 3,000. Alternatives A and G have the highest average volume of traffic at over 16,000 vehicles per day and 18,000 vehicles per day, respectively.

The corridors with the greatest improvement in LOS during the morning rush hour are Alternatives A, C, D, and E. During the evening rush hour, Alternatives B, D, and E show the greatest improvement in LOS.

If the evaluation criteria are combined, Alternative C is the most favorable alternative from a traffic perspective because it provides one of the greatest improvements in level of

service, has the second highest beneficial influence on local and regional traffic, and has the second largest change in volume on parallel routes.

8.2 Environmental Feasibility

The environmental criteria encompass a wide range of constraints. This preliminary study specifically avoided weighting the criteria, and therefore a quantifiable Environmental Assessment was not performed. Instead, known environmental constraints were overlaid on the seven alternative corridor alignments to identify the constraints within the corridors. These values are presented in the matrix (Table 5-1) for comparison purposes.

None of the corridor alignments appear to have environmental constraints that could not be mitigated. Some readily apparent differences between the alternatives are the amount of wetlands and floodplains affected, the number of potential noise-sensitive receptors, and the number of historic or cultural sites affected. The alternatives with the least impact on natural resources (wetlands, upland habitat, threatened and endangered species, rare ecological communities) are Alternatives A and B; Alternative F has the most impact on natural resources. The corridor with the lowest number of potential noise-sensitive receptors is Alternative A; Alternative G has the highest number of potential noise-sensitive receptors. The corridor with the most historic and cultural sites affected is Alternative A; Alternatives E, F, and G do not affect any historic and cultural sites.

8.3 Economical Feasibility

The alternative with the lowest comparative cost is Alternative G at $25 million if all the assumptions were correct. The second lowest comparative cost is Alternative C at approximately $28 million. It should be noted that these costs are highly unrefined because of the preliminary nature of this study. It is quite likely that costs would increase based on revised alignments, detailed road design, field data (e.g., geotechnical survey), and mitigation measures.

8.4 Study Team Preferences

There was a desire among the study team members to narrow the list of seven alternatives. However, identifying preferred alternatives was difficult to substantiate due to the preliminary nature of the study, particularly from a beneficial perspective. For example, the alignment of each corridor is very approximate and a slight modification in the alignment could significantly change the environmental and economical feasibility.

The following statements summarize the opinions of the study team members on the least favorable alternatives. Although all seven alternatives were determined to be feasible, specific study team members did not desire some of the alternatives but agreed to keep them in this study for comparison purposes.

Fort Belvoir. Alternatives F and G are most desired by Fort Belvoir because they have a positive affect on regional traffic congestion and do not have negative force protection implications. Alternative G was specifically requested to be added to this study by Fort Belvoir during the September 16, 2003 Study Team meeting. Alternative A is least desired by Fort Belvoir due to the existing and proposed land-use along this existing corridor.

Fairfax County. Of the alternatives considered in this study, Fairfax County endorses alternatives A, B, and C or a hybrid of these alternatives as viable options to replace the traffic capacity and accessibility lost with the closure of Woodlawn Road and Beulah Street. This desire was expressed in a letter from Katherine Hanley, Chairman-Fairfax County Board of Supervisors, to Colonel Williams, Fort Belvoir Garrison Commander, that was given to the study team during the November 17, 2003 information meeting.

Alternatives F and G are the least desired by Fairfax County because they traverse Huntley Meadows Park. The alternative G corridor was identified in a previous study as the preferred alternative but was faced with strong resistance by the Park Authority and local residents. An attempt to proceed with this corridor was made approximately 15 years ago and did not succeed due to the deed to the property. The issue is: any activity

in Huntley Meadows Park would require Fairfax County to renegotiate the deed to the property with the Department of Interior.

The Virginia Department of Transportation. The Virginia Department of Transportation did not express a most or least favorable alternative.

SECTION 9

REFERENCES

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APPENDIX A

PUBLIC LAW 107-314

ENGINEERING STUDY AND ENVIRONMENTAL ANALYSIS OF ROAD MODIFICATIONS IN VICINITY OF FORT BELVOIR, VIRGINIA

Public Law 107-314—December 2, 2002.

SEC. 367. ENGINEERING STUDY AND ENVIRONMENTAL ANALYSIS OF ROAD MODIFICATIONS IN VICINITY OF FORT BELVOIR, VIRGINIA.

(a) Study and Analysis. (1) The Secretary of the Army shall conduct a preliminary engineering study and environmental analysis to evaluate the feasibility of establishing a connector road between Richmond Highway (United States Route 1) and Telegraph Road in order to provide an alternative to Beulah Road (State Route 613) and Woodlawn Road (State Route 618) at Fort Belvoir, Virginia, which were closed as a force protection measure. (2) It is the sense of Congress that the study and analysis should consider as one alternative the extension of Old Mill Road between Richmond Highway and Telegraph Road.

(b) Consultation. The study required by subsection (a) shall be conducted in consultation with the Department of Transportation of the Commonwealth of Virginia and Fairfax County, Virginia.

(c) Report. The Secretary shall submit to Congress a summary report on the study and analysis required by subsection (a). The summary report shall be submitted together with the budget justification materials in support of the budget of the President for fiscal year 2006 that is submitted to Congress under section 1105(a) of title 31, United States Code.

(d) Funding. Of the amount authorized to be appropriated by section 301(a)(1) for the Army for operation and maintenance, $5,000,000 may be made available for the study and analysis required by subsection (a).

[Page 116 STAT. 2524]

Source: National Defense Authorization Act, PL 107-314, December 2, 2002, Section 367 Engineering Study and Environmental Analysis of Road Modifications in Vicinity of Fort Belvoir, Virginia, found at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ314.107 on Sept 23, 2003.

APPENDIX B

AGENCIES THAT PARTICIPATED IN STAKEHOLDER MEETINGS

ARMY

Northeast Regional Office of the Installation Management Agency

Assistant Chief of Stall for Installation Management

Fort Belvoir Garrison

Master Planner

Environmental and Natural Resources Division

Directorate of Public Works & Logistics

Residential Communities Initiative Office

Provost Marshall's Office

Directorate of Plans OS

Fort Belvoir Tenant Activities:

Defense Communications-Electronics Evaluation & Testing Agency (DCEETA)

Intelligence and Security Command (INSCOM)

Humphrey's Engineering Center

Earth Terminal

Defense Threat Reduction Agency

Defense Logistics Agency

U.S. Army Corps of Engineers

North Atlantic Division

Baltimore District

Military Traffic Management Command (MTMC)

VIRGINIA DEPARTMENT OF TRANSPORTATION

Northern Virginia District Office

FAIRFAX COUNTY

Department of Transportation

Board of Supervisors

Lee District

Mount Vernon District

OTHER

Transportation Resolution Team (TRT) working group

National Capital Planning Commission

APPENDIX C

RECORD OF DECISION

HUNTLEY MEADOWS PARK

NOVEMBER 1990

RECORD OF DECISION
HUNTLEY MEADOWS PARK
November 1990

GENERAL FORMAT COMMENT

Under the guidelines established by the National Environmental Policy Act (NEPA) for the preparation of a Record of Decision (ROD), there is no prescribed or mandated format. However, due to the complexity of the issues involved, diversity of opinions and the unusual amount of time and controversy engendered by this project, a structured approach (following the format for the preparation of an Environmental Impact Statement) has been utilized in the preparation of this document.

BACKGROUND OF THE PROPOSED ACTION

In 1975 Huntley Meadows Park was declared surplus by the Federal Government and deeded to Fairfax County, Virginia, under the terms of the Legacy of the Parks Program. The intent of the county in acquiring Huntley Meadows Park was to acquire the property for its recreational and environmental attributes:

> "The proposed recreation use proposed for this property closely follows the desires and needs of the people in the surrounding urbanized areas for a large section of open land reflecting recreational use . . . . The master plan is divided into two basic recreational uses. The equestrian center . . . . The second major recreational use revolves around the natural characteristics and habitat of the area. The site is low, flat land that is damp to moderately wet most of the year. Major wetlands, both open and tree covered, comprise the southern section of the site. With such characteristics an obvious use for the area would be for the preservation and management of wildlife and environmental attributes of the site."[1]

This is further reinforced in the Fairfax County biennial reports for Huntley Meadows Park from 1980 through 1987 emphasizing the initial purposes for which the county requested the Huntley Meadows Park.

> "The site continues to be a valuable asset and integral part of the county park system as it provides an invaluable opportunity to experience and enjoy the natural beauty and creatures of this huge natural

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[1] Fairfax County Park Authority, Application for Federal Surplus Property for Public Park or Recreational Purposes (program of utlization), January 25, 1974

conservation area located so near the population center." [2]

In this regard the Quitclaim Deed transferring Huntley Meadows Park to the county states,

> "The property shall be used and maintained exclusively for the public purpose for which it was conveyed in perpetuity as set forth in the program of utilization and plan contained in Grantee's application dated the 31st day of January, 1974 . . . ." [3]

Therefore, a change in use requires an abrogation of this condition by the Federal Government (the National Park Service with concurrence of the General Services Administration) to permit reconveyance (to the county) for highway use. In the opinion of the Assistant Solicitor, National Capital Parks,

> "The Secretary must only determine that the property transferred either no longer serves the purpose for which it was transferred, or that such release, conveyance, or quitclaim deed will not prevent accomplishment of the purpose for which such property was transferred." [4]

Huntley Meadows Park could, therefore, revert to the United States if Fairfax County were found to be in noncompliance with the deed conditions, or if the county desired to use a portion (as in the case of the highway) or all of the property for other than recreation without approval by the United States.

In 1975 Fairfax County determined a need to construct a four-lane, east-west arterial connector, identified as Lockheed Boulevard-South Van Dorn Street, through the northern portion of Huntley Meadows Park. [5]

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[2] Fairfax County Park Authority Biennial Reports, 1983, 1985 and 1987.

[3] Quitclaim Deed, November 26, 1975.

[4] Assistant Solicitor's Opinion, National Capital Parks, February 2, 1987

[5] Lockheed Boulevard Connector Road, Environmental Assessment, March 1983, p. 19.

The stated purpose of this connector road was to provide "improved east-west access from I-395, Franconia and Springfield to the general Route 1 Corridor . . . ." [6,7]

The National Park Service (NPS) in accordance with the procedures set forth under NPS guidelines (NPS-12) requested Fairfax County to prepare an Environmental Assessment. This document was prepared in 1983 under the direction of the National Park Service in order to analyze the potential impacts of construction of a road across the park. The document was used as the basis for determining whether the portion of the park required for highway purposes no longer served the purpose for which it was transferred, or that such release, conveyance, or quitclaim deed would not prevent accomplishment of the purpose for which such property was transferred.

Based on this document the NPS on July 7, 1983, signed a Finding of No Significant Impact (FONSI). This determination was made on the following mitigation:

- Replacement land of approximately 25 acres.
- Mitigation measures identified in chapter V and appendix V of the Environmental Assessment.
- Documentation of the eight commitments made by the Virginia Department of Highways and Transportation (VDOT).
- Commitments to monitor construction and future traffic noise.

Virginia Department of Highways and Transportation commitments included:

- The placement of a light at the park entrance to reduce barrier perceptions.
- An elevated roadway at Dogue Creek for service vehicles and wildlife passage.
- Pedestrian underpass at two locations.
- Recessing the proposed road approximately 200 feet into the park (graduated) to mitigate noise and visual intrusion to the existing subdivisions. (modified to reduce impacts to the park based on community input)
- Further testing of archeological sites.
- Replacement land for the park.
- Deer fencing.
- Monitor noise for future evaluation.

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[6] ibid.

[7] Additional references included under Lockheed Boulevard Connector Road Supplemental Environmental Assessment, July 1987, Intro. p. 4.

Between 1983 and 1986 new information concerning the surface and subsurface geology and hydrology of Huntley Meadows Park brought the National Park Service's findings into question. The possible significance of this new information on the park and additional issues raised by the public warranted further consideration and analysis.

In 1985, in response to this new information, the National Capital Region requested Fairfax County to evaluate these concerns. The county's study was completed in 1986 by GKY and Associates. [9] The report addressed the projected environmental impacts of the connector road on Huntley Meadows Park and recommended design features that could be included in the project to mitigate the impacts.

This report and the previous report prepared on hydrological impacts by Camp Dresser & McKee [10] concluded that the impacts from the road were minimal and that the major impact to the park would be from the development of the watershed to the northwest of the park.

The report was received by the NPS on January 28, 1986, and on February 7, 1986, the National Capital Region requested the U.S. Department of Agriculture's Soil and Conservation Service, the U.S. Fish and Wildlife Service, and the U.S. Geological Survey (USGS) to provide comments. These agencies were also requested to suggest any additional mitigation measures they believed should be incorporated in the project and to compare the report's findings with Dr. Eleanor Robbins' geological report. [11]

The response to the county's report advised further geological and hydrological analysis of the complex water sources which feed the wetlands of the park, and recommended additional mitigation measures in the event that the road should be built.

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[8] Letter of October 4, 1985, from Regional Director, National Capital Region.

[9] Review and Evaluate the EIS Issues of the Proposed Connector Road: Lockheed Blvd.- South Van Dorn Street, GKY and Associates, November 1985.

[10] Technical Evaluation for Hydrological Impact Analysis, Lockheed Boulevard-South Van Dorn Street Connector Road.

[11] Letter of March 3, 1986, to Manus J. Fish, Regional Director, National Capital Region.

In October 1986, Assistant Secretary William P. Horn determined, based on a review of the recently completed studies and comments, that the FONSI was inadequate and requested Fairfax County to develop a new Environmental Assessment. The decision to rescind the FONSI was documented in correspondence to the Council on Environmental Quality (CEQ) on October 22, 1986.

On January 6, 1987, Assistant Secretary William P. Horn met with Mr. James Herrity, Chairman, Fairfax County Board of Supervisors, to discuss the preparation of a new document, and provided the county with each of the issues to be addressed. These issues predicated the decision to rescind the original Environmental Assessment.

The issues were:

1. Prepare a hydrological study including the total water budget in source, flow, and annual changes to Huntley Meadows. Quantify the relationship of these flows to the maintenance of the unimpaired ecological value of Huntley Meadows. Analyze the impacts of the construction of the road on these values.

2. Determine the total acreage and type of wetlands to be impacted by the proposed road. Study alternatives that would avoid wetlands, including Dr. Robbins' suggested alternative. If unavoidable losses will occur, identify replacement wetlands within this watershed other than those previously identified. In that the previously identified wetlands are publicly owned and already protected, they do not qualify. It should be noted that if forested wetlands are involved, the replacement area can be no less than 2 acres of replacement land for every 1 acre impacted.

3. Determine the cumulative increases in stormwater entering Huntley Meadows. Develop effective stormwater runoff controls for private developments in this watershed to ensure cumulative flows to the wetlands will not alter the existing quantity and quality.

4. Utilize the U.S. Geological Survey's recommendations and conclusions on the hydrological impacts as a basis to develop specific engineering solutions to insure continuing water flows from the north and to insure that highway runoff is not discharged into the wetlands.

5. Define the significance of the parklands, both as to their natural values and unique regional resources to the community.

The Supplemental Environmental Assessment was completed in May 1987. The document was transmitted for review on June 12, 1987, by the Regional Director, National Capital Region, to the Environmental Protection Agency (EPA), United States Fish and Wildlife Service, Soil Conservation Service, the NPS Mid-Atlantic Regional Office and the United States Geological Survey.

Each agency was additionally provided with copies of their previous comments that were submitted to the NPS on the GKY Report. These agencies were requested to review the document and "insure that all previously identified issues are fully addressed in this document." Each agency was advised that they would be requested to officially respond to the document during the 45-day review period. The document was authorized for release after confirmation by each of these agencies indicating that the document responded to their questions.

On July 2, 1987, Fairfax County was authorized to proceed with printing, distribution and review of the document. A notice of the availability of the document for review was placed in the Federal Register on July 20, 1987.

A public information meeting was held on July 18, 1987, to provide information on the location of the project, its limits and other physical features in order to insure that the public was fully informed of the project's scope. On August 8, 1987, an informal workshop was held to discuss mitigation proposals. Notification of this workshop was placed in the Federal Register on July 27, 1987.

During the 45-day review period the National Park Service received a total of 118 letters, including the comments prepared by Citizens Alliance to Save Huntley Meadows (CASH). The CASH comments, although consisting of 22 separate documents, were included for tabulation purposes as one comment. Of the 118 letters received, approximately 10 percent of the comments were favorable to the proposal. These included letters from the Fairfax Chamber of Commerce and Fairfax County Park Authority.

Three community groups (Wellington Civic Association, Wickford/Wellfleet Citizens Association and Hayfield Farms), consisting of approximately 1,000 residential families, took opposing viewpoints. The Wellington Civic Association, which is least affected by proximity to the park and road, was in opposition, while the Wickford/Wellfleet Association and Hayfield Farms, which lie north of the park and in closer proximity to the road, were supportive of the proposal.

Of the approximately 105 individuals and organizations, the following organizations commented in opposition to the proposal:

Audubon Naturalist Society (Central Atlantic)
National Audubon Society
Fairfax Audubon Society
Ornithology Society
Ducks Unlimited (Virginia Chapter)
Defenders of Wildlife
Wildflower Preservation Society (Potowmack Chapter)
Sierra Club (Virginia Chapter)
Sierra Club (Mount Vernon Group)
Friends of Dyke Marsh
National Wildlife Federation
Trout Unlimited (Virginia Council)
Mount Vernon Council of Citizens Associations
Northern Virginia Soil Conservation District
National Parks and Conservation Association
Fairfax County Park Authority
Fairfax County Chamber of Commerce

The comments were tabulated by address, zip code, and subject. There were further categorized into four groups for analysis by areas of concern. These four groups represented questions directed to the Fish and Wildlife Service (environmental), United States Geological Survey (geological and hydrological), NPS Solicitor (legal), and county (alternatives). A total of 25 subject areas were identified. Comments were also received from the Environmental Protection Agency and Soil Conservation District.

DISCUSSION OF ALTERNATIVES

In discussing alternatives two points must be taken into consideration.

(1) "...an EA should evaluate alternatives as required by Section 102(2)(E) of NEPA. This section of NEPA requires agencies to study, develop and describe alternatives to recommended courses of action 'in any proposal which involves unresolved conflicts concerning alternative uses of available resources'...." [12]

(2) "...should describe all compliance requirements pertinent to the proposal and the alternatives being evaluated under applicable environmental, historic preservation and other laws,...followed by a full range of reasonable alternatives designed to resolve pertinent issues and reach the objective of the proposed action....

[12] NEPA Compliance Guideline, NPS-12, ch. 3, p. 2.

> The alternative of no-action, or continuing the status quo, must always be evaluated in the EIS.... The no-action alternative provides a basis for comparing...." [13]

Since 1982 the county has studied five primary alternative alignment corridors and several combinations of these alignment corridors. Four of these were studied in the 1983 Environmental Assessment and the fifth one in the Supplemental Environmental Assessment. The extension of Lockheed Boulevard and Van Dorn Street has been on the county's master plan since 1975. The basis of these studies has been to provide an alignment corridor in conformance with highway selection guidelines. [14] In applying this criteria, the selection process has consistently favored an alignment through Huntley Meadows Park.

The 1983 Environmental Assessment noted that the Huntley Meadows Park Plan adopted in 1978 recognized the extension of Lockheed Boulevard as shown on the 1977 County Comprehensive Plan. Both of these plans were approved after the acquisition of the park by the county and are inconsistent with the purposes for which the county accepted the land in 1975.

This has consistently led to conflict that to date has been unresolvable, preventing an objective analysis of "the full range of reasonable alternatives designed to resolve pertinent issues and reach the objective of the proposed action." [15]

The issue of alternatives as it pertains to the park is not, therefore, a discussion of the county's transportation needs and alternative means to accomplishing its transportation objectives. The issue of alternatives concerns directly the modification of use of an available resource and whether such an alternative use of the resource can be implemented and the pertinent issues resolved.

Huntley Meadows Park has a unique standing in that a determination favoring reuse can only be made if the requested area "no longer serves the purpose for which it was transferred, or that such release, conveyance, or quitclaim

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[13] NEPA Compliance Guideline, NPS-12, ch. 4, p. 1, 2 (Preparation of Environmental Impact Statements).

[14] Lockheed Boulevard Connector Road Environmental Assessment, March 1983, p. 3.

[15] NEPA Compliance Guideline, NPS-12, ch. 4, p. 1, (Preparation of Environmental Impact Statements).

deed will not prevent accomplishment of the purpose for which such property was transferred." [16]

In this determination the environmental evaluation process by the National Park Service must primarily consider the impacts of the alternative use on the resource, and not whether construction of a road through the park provides the best means of accomplishing the stated purposes of the project.

In addition, because of the extensive wetlands and floodplains involved, the evaluation must insure compliance with Executive Order 11990 and Executive Order 11988 which govern the use of wetlands and floodplains. The jurisdictional requirements of the Corps of Engineers and Environmental Protection Agency are of paramount consideration.

In reviewing the regulations for implementing the procedural provisions of the NEPA, 40 CFR 1500-1508, section 1508.20 specifies that the requirements for mitigation of the impacts of an alternative, which is especially applicable to wetlands, are to be evaluated based on an order of avoidance, minimization, rectification, reduction and compensation.

Consequently, a determination can be made to select an alternative which does not completely meet the objectives of the project but results in the least impact to the environment.

AFFECTED ENVIRONMENT

This section "should describe the environmental values that may or will be affected by the proposed action...or areas where the consequences of the proposed action or alternatives are potentially controversial or sensitive." [17]

The park is a major wetland. Therefore, the values that are affected relate directly to the flora, fauna and ecological values of a wetland. The controversy or sensitivity involving these values stems from the need to understand the park's water budget and its relationship to the productivity and maintenance of its ecological values in an unimpaired state. In this regard Huntley Meadows Park is an unknown resource.

The environmental studies, reports and evaluations prepared on Lockheed Boulevard since 1983 support this conclusion. The 1983 Environmental Assessment did not provide for data

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[16] Assistant Solicitor's Opinion, National Capital Parks, February 2, 1987.

[17] NEPA Compliance Guideline, NPS-12, ch. 4, p. 3.

collection. However, studies were undertaken to establish a baseline of information for comparison and evaluation. Reference is made to previous studies [18] as informational references. The Environmental Assessment does make recommendations for highway design and suggestions for developing a botanical survey and faunal survey for an area within 560 feet of the centerline (due to identified noise impacts), but they were never implemented. Additional measures for inclusion in the project were identified to be established where possible. They included a monitoring program for aquatic ecosystems. [19]

A hydrological study prepared in 1983 by Camp Dresser & McKee (CDM) addressed the hydrological impacts of the road and concluded that [20] "the Connector Road will have little impact on the surface water conditions of the Park.... The ultimate land use is shown to have a more significant impact on flows entering the Park. Peak discharges are found to vary by almost 40 percent."

The study prepared by GKY and Associates in 1985 for the NPS which was "to provide an independent review and evaluation of the environmental and hydrological issues" reinforced this conclusion. [21]

The study concluded that "the CDM report correctly assessed the minimal impact of the connector... and the much more significant impact, past and future, of the suburban development on the steeper upslope areas to the north...."

Both of these studies were designed to evaluate hydrological and geological factors such as stormwater runoff, sediment and pollution loadings. The studies were not designed to consider

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[18] Parsons, Brinkerhoff, Quade and Douglas, Dogue-Little Hunting-Belle Haven Environmental Baseline Evaluation, October 1976.

[19] Recommendation included as commitments in Supplemental Environmental Assessment.

[20] Technical Evaluation for Hydrological Impact Analysis, Lockheed Boulevard-South Van Dorn Street Connector Road, Camp Dresser & McKee.

[21] Review and Evaluate the EIS Issues of the Proposed Connector Road: Lockheed Blvd.- South Van Dorn Street, Final Report, November 1985.

effects on wildlife, vegetation and aquatic resources, nor to assess the impacts of changes in the water regime on the park, or to establish a major database for the park.

The comments provided by the USGS on the GKY study did advise that further geologic and hydrologic analysis of the complex water sources which feed the wetlands of the park was needed and recommended additional mitigation measures in the event that the road should be built. This study was evaluated as part of the decision to rescind the FONSI in 1987.

The Supplemental Environmental Assessment which was completed in 1988 was intended to address the five major issues provided to the county by Assistant Secretary Horn and included an analysis of the water budget of the park, hydrological and geological issues, wetlands, cumulative impacts from private development north of the park, alternative alignments and the significance of the park as a resource.

The findings concluded that:

1. The main source of water to the park was quick flow (rainwater) and base flow (annual stream flow).

2. Subsurface flow was not a major contributor to the park's water budget.

3. The cumulative impacts from private development to the north (East Barnyard Run) constituted greater impacts in stormwater flows and pollution loadings to the park than the road.

4. The original concepts for the road as determined by the county's transportation needs were valid.

5. The proposed mitigation for the creation of wetponds and the construction of the parallel ditches to intercept runoff from the road and private development are adequate to protect the park's wetlands. The park provides a vital link between Fort Belvoir and Mason Neck in the management of migratory species.

6. The extensive inland freshwater wetlands are valued for their contribution toward improving water quality, and the park represents a natural island within a suburban area.

7. The park offers a diverse variety of flora and fauna, with many having local significance.

A separate study not directly related to the Connector Road, but directly related to the park, was prepared for Fairfax County in 1986, since it was based on the Woodstone and

Kingstowne developments north and northwest of the park and relates directly to the question of cumulative impacts.

This study "was to analyze both the short- and long-term impacts of stormwater and subsequent silt intrusion on the park's important natural resources...to determine whether significant damage had been done to the park..., to determine what steps could be taken to allow development to continue while minimizing both short-term (construction-related) and long-term (urbanization-related) impacts to the park."[23]

The study was predicated on a major storm event which occurred in August 1986 and contributed heavy sediment loadings to the park. Sediment analysis was done primarily by visual observations and selected water quality samples at six sites to determine nutrient impacts. The document stated that "there was no existing information about sediment levels." [24]

The findings were general in nature, referencing recommendations for public awareness and monitoring programs, requirements for the developer, and damage estimates.

The Corps of Engineers in June 1989 halted work on the last remaining section of the Lockheed Boulevard Connector from Telegraph Road to Van Dorn Street, based on impacts to wetlands along Dogue Creek immediately north of Huntley Meadows Park. This section of the road is now under separate review by the Corps of Engineers. The comments provided by the Fish and Wildlife Service specifically reference the cumulative impacts of the project on the Huntley Meadows Park. [25]

REVIEW OF THE SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT COMMENTS

During the 45-day review period the National Park Service received approximately 1,000 comments from individuals, organizations, Federal and State agencies. The comments were uniformly directed to Fairfax County, United States Fish and Wildlife Service, United States Geological Survey and the Assistant Solicitor for National Capital Parks. Of the total

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[23] Final Environmental Assessment, Huntley Meadows Park, December 1986.

[24] ibid.

[25] Letter of July 11, 1989, from the U.S. Fish and Wildlife Service.

number of comments received, 25 subgroups were established to categorize and address the comments.

Of these 25 subgroups the emphasis of many of the comments focused on six major areas of concern.

1. Noise impacts on the park's environment;
2. Impacts from construction and operation of the roads;
3. Pollution impacts to the wildlife and wetlands;
4. Monitoring and data collection requirements;
5. Replacement lands; and
6. Water budget.

The underlying concern of the comments was that there is a lack of adequate data to assess impacts on the park environment. Comments focused on the county's demonstrated inability (Kingstowne and Woodstone) to adequately control construction sediment within the watershed and protect the park from damage, and the lack of any commitment and followthrough by the county to establish an adequate database on the parks ecology for analysis.

This point is further emphasized in the comments regarding the long-term requirements for maintenance, monitoring and evaluation that would be necessitated to insure the continual functioning of the roadside ditches and the newly established wetponds after completion of the road. In this regard an adequate database is essential. Another major concern was the inability of the county to identify and acquire replacement lands to offset the impact of construction and loss of parklands.

REVIEW OF THE ISSUES

The road is proposed to be located at the northern extremity of the park and will segment the portion of the park abutting Telegraph Road totaling approximately 111 acres or 8.8 percent of the park.

A review of available documentation indicates that urban development is playing a major role in exerting a strong negative influence on the park environment, its wildlife and water budget by increasing impervious areas, concentrating pollutants, stormwater runoff and sediment loadings in the watershed. This influence has not been abated. In most instances reliance has been placed on educational programs, and as indicated in the 1986 assessment of the August storm event from the Kingstowne development, to find a means to allow development to continue.

Consequently, the northern portion of the park becomes critical to the protection of water flows into the primary wetland areas

and serves as an important buffer for the wetlands and park habitat providing for the initial collection and filtering of sediments and pollutants entering the park.

The addition of increased impervious areas within the park and the elimination of northern wetland areas will tend to exacerbate this situation by reduction and alterations of the buffer wetlands.

Even though the development of the proposed wetponds could provide a high degree of protection to the wetlands within the park, the proposed mitigation would also have to take into account the cumulative impacts of this project and expand considerably upon its scope to include the Dogue Creek watershed.

The proposed mitigation package will not adequately mitigate the potential impacts from the stated purposes of the road improvements.

A critical factor in establishing an adequate mitigation proposal is the degree of accuracy and reliability of the database and the long-term commitment to the collection of data and monitoring of the watershed to insure optimum performance and maintenance of the mitigation.

The initial Environmental Assessment prepared in 1983 suggested that a botanical and faunal survey be conducted to assess noise impacts for special interest species. In addition, there were recommendations for data collection, monitoring and regulation enforcement. Implementation of these recommendations by the county could have been the basis of establishing an adequate database for future mitigation proposals.

However, since 1983 no commitment has been made regarding the implementation of a data collection plan to establish a database for the park or a long-term monitoring program to understand, evaluate and take corrective measures to protect the park's resources. In addition, the county has not taken any measures to identify the necessary 55 acres of replacement wetlands required to implement the recommended mitigation plan or undertake the requested surveys to identify wildlife values within the alignment corridor.

Without adequate information on the park's wildlife and wetland resources, there is no reliable method to insure the proper

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[*] Letter of January 25, 1988, from United States Geological Survey.

construction and long-term monitoring of any newly established wetponds or insure that the replacement acreage would be suitable for inclusion into the park.

Based on the assessed cumulative impacts of the proposal, the development of a reliable database and long-term commitment to mitigation is essential to correct deficiencies within the mitigation plan, continue the collection of data and monitor the mitigation plan to protect the park environment from the cumulative impacts of the project. Since 1983 these basic issues have remained unresolved.

REVIEW OF PROPOSED MITIGATION, ENVIRONMENTAL CONSEQUENCES AND IMPACTS OF THE PROJECT

Within this section "the evaluation should include direct, indirect, and cumulative environmental effects; and should provide conclusions on impacts and the basis for those conclusions." *

Direct impacts are associated with actual construction of the project. The major types of impacts that will occur are (1) loss of vegetation, (2) loss of habitat, (3) disruption of habitat, (4) alteration and disruption of water flows, (5) degradation of water flows, and (6) increased noise.

Indirect impacts are associcate with impacts resulting after completion of the project. The types of impacts that may occur are the induced effects the project has on development, growth, land use patterns and the effect on the park's ecosystem.

Cumulative impacts are the impacts on the environment from the incremental effects of a project added to other past, present and foreseeable future actions.

In this respect the project will involve the direct loss and impact to approximately 20 acres of parkland for highway construction, the reconstruction and replacement of approximately 11 acres of forested wetlands with emergent wetlands.

The indirect and cumulative impacts from the project result from the buildout of East Barnyard Run and the Dogue Creek watershed which includes:

1. The eastern portion of the Kingstowne development, comprising an area of approximately 320 of the 475 acres

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* NEPA Compliance Guideline, NPS-12, ch. 4, p. 4.

that drain into Dogue Creek and Huntley Meadows Park which are not tributary to the proposed Kingstowne lake. [#]

2. The portion of Lockheed Boulevard from Telegraph Road to Van Dorn Street and the associated changes to the land use patterns from development, traffic and increases in impervious areas resulting from the road. [* #]

The proposed project mitigation plan for the portion of the park directly affected by the construction of the road includes:

1. The replacement acreage identified in the 1983 Environmental Assessment and replacement of forested wetlands disturbed by construction of the road and development of the emergent wetlands.

   Based on a projected use of approximately 20 acres of parkland, the county is required to purchase 55 acres of replacement land as follows.

   a. 20 acres of project area equal 13 acres of wetland acreage at a 2:1 ratio (26 acres), 7 acres of non-wetland at a 1:1 ratio (7 acres), plus 11 acres for pond development (mitigation) at a 2:1 ratio (22 acres) for a total of 55 acres. <u>This figure may vary based on a reevaluation by the Fish and Wildlife Service under the 1989 guidelines.</u>

   b. The recommendations and requirements of the National Park Service regarding replacement acreage are that they must be contiguous and functional to the park.

   c. The replacement acreage must be approved by the Fairfax County Park Authority.

   d. The replacement plan for the loss of wetlands must be approved by the Fish and Wildlife Service, which

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[#] Final Environmental Assessment, Huntley Meadows Park, December 1986.

[*] Letter of January 25, 1988, from U.S. Geological Survey.

[=] Letter of November 11, 1989, from U.S. Fish and Wildlife Service.

presently requires the development of forested wetlands from nonforested wetlands. Projected cost for conversion not including acquisition, could approach $2,000 to $10,000 per acre based on discussions with the Fish and Wildlife Service.

The remaining mitigation items include:

2. Traffic control signal at the park entrance;
3. Bridge over Dogue Creek to allow for passage of wildlife;
4. Paveing of bike path;
5. Deer fencing as required;
6. Access to the maintenance yard;
7. Monitor sedimentation and erosion control measures during construction;
8. Consideration to mitigate impacts to the aquatic system;
9. Commitment to the protection of the park's plant and animal life;
10. Landscape plan utilizing indigenous species; and
11. Reevaluate noise control measures identified in the 1983 Environmental Assessment.[20]

Based on the identifiable impacts of the project within the park and the cumulative impacts which are associated with the completed section of the road to Van Dorn Street and the associated buildout of the surrounding properties, the development of the four ponds totalling approximately 11 acres provides the only directly related mitigation proposal to protect the park resources. The remaining items of mitigation are inconsequential to protecting the park resources.

Properly developed, the proposed construction of wetponds can form the core of an excellent method of mitigation to protect the park resources from increased siltation and stormwater runoff. Extensive consideration and evaluation must be given as to whether such a mitigation proposal should be established within the boundary or outside the boundary of the park.

In either case, to properly establish such a measure of mitigation, a commitment of resources has to be made. This would require establishing a comprehensive data base on which to base evaluation of the wetlands resources; potential land acquisition; a monitoring program to evaluate the existing park resources prior to, during, and after the placement of the wetponds; and a permanent funding commitment to insure the functioning of the wetponds and protection of the park. The establishment of wetlands is not a proven science but rather an art which requires extensive planning and understanding of the

[20] Supplemental Environmental Assessment, chapter VIII.

resources being protected prior to implementation along with a long-term commitment to the protection of the resources.

CONSULTATION AND COORDINATION

The preparation of the Supplemental Environmental Assessment was coordinated by the National Park Service and Fairfax County with the United States Geological Survey, United States Fish and Wildlife Service, Environmental Protection Agency, Soil Conservation District and Fairfax County Park Authority. Fairfax County coordination included county offices and preliminary consultation with the United States Corps of Engineers and Virginia State Water Resources Board for Section 404 permit compliance. Coordination with major organizations has been previously identified in this document.

A notice of the availability of the document was placed in the Federal Register on July 20, 1987. An informational meeting was held on July 18, 1987, to provide information on the location of the project, its limits and other physical features, and to insure that the public was fully informed of the project's scope. On August 8, 1987, an informal workshop was held to discuss mitigation proposals. Notification of this workshop was placed in the Federal Register on July 27, 1987.

FINDING

A review of the information and supporting documentation presented indicates that the approval and subsequent conversion by Fairfax County of a portion of Huntley Meadows Park for transportation purposes will prevent accomplishment of the purpose for which such property was transferred, and that such conveyance is inconsistent with the best public interest and the purposes for which the land was deeded to Fairfax County.

The area under consideration continues to serve a function vital to the purpose for which Huntley Meadows Park was transferred to the county and that the preparation of an Environmental Impact Statement (EIS) would not serve to provide a resolution to the pertinent issues and reach the objective of the proposed action which is to build a road through Huntley Meadows Park.

Huntley Meadows Park is the last large freshwater nontidal wetlands in northern Virginia, comprising almost 75 percent of the total park of 1,200 acres. This area has remained open and undeveloped since the early colonial period.

In 1974 the park land was transferred to Fairfax County under the Legacy of Parks program. It is the largest park in Fairfax County, and in 1982 the park was designated by the county as a managed conservation area. The park is operated by the Fairfax

County Park Authority, whose stated objective is "to preserve [the park] forever in a natural state for hiking, biking, wildlife, relaxing and discovery." Today, this wetland serves as a quiet oasis in the middle of a heavily developed metropolitan landscape, providing sustenance for both wildlife and man.

The park and its 800 acres of wetlands is situated at the confluence of two watersheds, Dogue Creek and Barnyard Run, which flows into Dogue Creek. The watersheds are virtually intact below the park for an additional 2 miles to the Potomac River. The majority of the lower reach of the watershed is in the public domain. In 1989, 300 acres of the watershed under the jurisdiction of Fort Belvoir were declared an environmental protection area in honor of Jackson Abbott. Huntley Meadows Park protects the watershed by controlling stormwater and flooding, maintaining the downstream water quality, and reducing sedimentation in the lower reaches of the watershed and the Potomac River.

Like Everglades National Park, Huntley Meadows is threatened by upstream development. Until the development of the upper watershed, the park was reasonably stable, but is now showing signs of stress from private development and increased pollution. The greatest impact now being exerted on the park is from the Kingstowne subdivision at the headwaters of Dogue Creek, in association with the completed section of the Lockheed Boulevard Connector to Van Dorn Street.

Studies prepared since 1983 by the county project an increase in stormwater and pollutants of approximately 40 percent, necessitating that the management and long-term productivity of the park take into account the influences of private development north of the park by increasing control of stormwater drainage entering Huntley Meadows from the Dogue Creek and Barnyard Run watersheds. Unless the county implements a stormwater management plan, the wetlands in the park and downstream are threatened by these private developments.

Based on the studies which were conducted during the Environmental Assessment, the loss of 11 acres of existing forested wetland inside the park to the development of wetponds is considered unacceptable. Protection of the park's forested wetlands is so important to the watershed that the implementation of the proposed wetponds, which were designed to protect the park from cumulative development upstream, must be placed outside the park to intercept the flows before they reach Huntley Meadows.

The replacement of the 31 acres of forested wetland required by the proposed road at a 2:1 ratio requires the acquisition of

62 acres of replacement wetlands in the same watershed. No lands meeting these requirements have been identified by the county.

Further, the county would have to create forested wetlands on the replacement lands. According to EPA, forested wetlands constitute the most difficult type of wetlands to construct, with the highest failure rate as well. Because of the inherent difficulty of creating new wetlands, any replacement plan would require long-term monitoring, with adequate funding to allow for modifications to be made as the replacement program progresses.

The park provides one of the few remaining examples of a natural wetlands environmental study and educational area in close proximity to the Washington metropolitan area that has not undergone a major change.

It is home to a minimum of 47 species of birds and wildlife which have been listed as rare to Virginia. Seven of these species are known to breed in the park. It provides refuge for the only known breeding pair of king rails, and habitat to the freshwater otter and beaver, while serving as one of the four most valuable areas for ornithology in Washington. Situated above the Mason Neck Wildlife Refuge, a major nesting area to the American bald eagle, it buffers the refuge and provides flyover areas for the bald eagle and peregrine falcon. The area is also an over-wintering ground for the trumpeter swan that is presently being reintroduced by the Canadian government along the northern flyway. Originally, the trumpeter swan ranged extensively along the Chesapeake Bay.

Presently, the park provides one of the few study areas for the nesting, breeding and reestablishment of song birds and wood ducks in the northern Virginia area. The research area was established in 1982, and by 1985 had demonstrated a success rate of between 50 and 70 percent in breeding. In 1986, the program was expanded with the full cooperation of the United States Coast Guard.

The park is dominated by beavers, which play a major ecological role in the protection and evolution of the wetlands by allowing for the establishment of wildlife and food sources for the higher forms of predatory birds and animals.

To build the proposed road through the park perpendicular to the ground and surface water supply presents too high a risk, since it would be irreversible. Its potential to adversely impact this ecosystem through alternation of water flow and the introduction of pollutants and sediments is obvious and technologically unmitigatable. Although additional studies could be conducted, they could well result in more costly

measures which attempt to protect the park but offer no guarantees; the potential for failure remains too high to risk the irreversible destruction of the park.

While the preservation of the natural ecosystem within Huntley Meadows Park is an important objective, the issue should not be oversimplified into one of preserving the park for beavers as opposed to building a road for people.

The real value of the park to the human community lies in the use of the wetlands as an educational and revitalizing experience for all age groups. Preserving the ecological values of the park so that people can gain a better understanding and appreciation of the complex role they play in the natural world is critical to the preservation of the quality of their neighborhoods and, ultimately, to the livability of this planet.

The natural processes at work within this wetland form an ideal classroom to enlighten both children and adults to the subtle beauty and delicate balance of nature and its immeasurable value to man's quality of life. This quality of life can only be maintained if, through understanding, man is willing to become the guardian of his environment.

There may well be transportation alternatives available to the county, through improvements of the existing transportation network, that can provide for the accomplishment of the transportation objectives without degradation of Huntley Meadows Park. The county should undertake an objective analysis of widening the existing roads or creating new alignments that will not impact Huntley Meadows or its watershed.

DECISION

Based upon the cited referenced information, supporting documentation and the rationale of the finding above, I find that there is sufficient documentation to conclude that the cumulative impacts of the proposed highway and associated development either completed or approved and that the conversion by Fairfax County of a portion of Huntley Meadows Park for transportation purposes will prevent accomplishment of the purpose for which Huntley Meadows Park was transferred to the county; and

that such conversion is inconsistent with the purposes for which the land was deeded to Fairfax County, i.e., public park or public recreation purposes; and

that this project is committing the Department of the Interior to an action which is highly controversial and that sufficient

information is presently available to determine that the area under consideration continues to serve a vital function to the purpose for which Huntley Meadows Park was transferred to the county; and

that the potential impacts to the park resources from the proposal are potentially unmitigatable or impose such a high risk on the unique values of Huntley Meadows Park that it is more important to protect the wetlands for their ecological values rather than to risk an irreplaceable resource to potentially irreparable damage based on a complex of unproven and insupportable mitigation proposals developed with incomplete and inadequate data; and

that the preparation of an EIS would not serve to provide a resolution to the pertinent issues and reach the objective of the proposed action.

Therefore, pursuant to sections 203(k)(2) and 203(k)(4) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 484(k)(2) and (4)),it is determined that the release of a portion of Huntley Meadows Park for transportation purposes will prevent accomplishment of the purposes for which the property was transferred to the county; therefore, such release is denied.

Robert Stanton

(Regional Director, National Capital Region

November 21, 1990
Date

APPENDIX D

STAKEHOLDER MEETING

AGENDAS, HANDOUTS, AND MINUTES

Meetings, Dates, and Locations:

March 25, 2003

PROJECT PLANNING MEETING

Fort Belvoir, VA

MEETING MINUTES

Subject: Implementation Strategy Meeting for the Preliminary Feasibility Study of the Richmond Highway and Telegraph Road Connector

Attendees:

Frank Bizzoco, CENAB/DCEETA

Karlene Bodner, HQUSACE

Dick Chandler, D/CEETA

Peter Cline, Mil Traffic Mngt and Trans Eng Agency

Maury Cralle, FB Dir of Housing

Sean Donahoe, Tetra Tech

David Ghiglio, FB DPW&L

Susie Gillett, FB OSJA

Chris Guidi, Clark Pinnacle RCI

David Hand, USACE, Baltimore

Jim Jones, USACE, Baltimore

Bill Johnson, OACSIM

Michael Johnson, CENAD

Tom Magness, Tetra Tech

Lee Marshall, DGC Belvoir

Tom Marty, FB IG

Steve Mason, NERO

Patrick McLaughlin, FB Envir & Nat Resources

David Murr, CENAD

Paul Nigara (LTC), PMO

Randy Rivinus, CMH

Sonali Soneji, PBS&J

LTC Kevin Tate, FB DPW&L

Sandi Thomason, DPOS Belvoir

Andrea Walker, USACE, Baltimore

John Wright, TransCore

Minutes:

A meeting was held at Fort Belvoir, Virginia, on March 25, 2003, to discuss the implementation strategy for a Preliminary Feasibility Study of a Richmond Highway and Telegraph Road connector. Meeting attendees are listed above. LTC Kevin Tate opened the meeting with an overview of the road closure issue and introduced Mr. David Hand, USACE, Baltimore District as the Project Manager for the Richmond Highway and Telegraph Road Connector Study (referred to as the "road study" in these meeting minutes). Materials circulated by Mr. Hand at the meeting included an agenda, Fiscal Year 2003 (FY03) schedule for the Phase 1 study, a 4-page project overview, and maps of the project area. Key discussion points, agreements, and action items from the meeting are summarized below. These discussion points and agreements are organized in accordance with the meeting agenda.

1. Define Project, Goals, and Objectives

    a. Study was commissioned by Congress to investigate various roadway alignments (or other alternatives) in order to provide an alternative to Beulah and Woodlawn Roads at Fort Belvoir, Virginia, which were closed as a force protection measure. Fort Belvoir had provided easements to the State of Virginia to construct these roads as connectors between Telegraph Road and U.S. Route 1. As a result of the road closures, Congress requested a study be done to identify a compensation package for the withdrawl of these roads.

    b. The concerns of all interested parties would be solicited through the preliminary phase of the project. No preconceived outcomes to the study would be made. Public workshops would be held to relay information, as well as to gather information for the road study and viable alternatives.

c. At this point, a decision has not been made that this is a "project" that will move forward and be designed and constructed. Rather, this decision will made at a later date following completion of Phase 1 of the project. A potential proponent would be identified by the stakeholders at that point and appropriate National Environmental Policy Act (NEPA) analysis undertaken.

d. The study should evaluate all reasonable road alternatives (on- and off-post routes, a combination of on- and off-post routes, and other compensation mechanisms such as the upgrading of existing area roads).

2. Project Scope

a. Phase 1 of the project would cover identification of preliminary alternatives, macro-level costing (front page 1391), preliminary analysis of alternatives, and public workshops.

b. The point was made that the $5 million project ceiling could likely cover Phase 1, NEPA analysis and documentation, and conceptual design of the selected alternative through 5 to 10 percent design. The initial funding of this effort would cover Phase 1, while subsequent phases would address NEPA and conceptual design issues.

c. The project would include identification of areas outside the boundaries of Fort Belvoir. The alternatives should not be restricted to government land. It was recognized that if the project is off government land, then the proponency would fall to another agency (e.g., Virginia Department of Transportation [VDOT]).

d. Option 1, extension of Old Mill Road, should be evaluated per Congressional mandate. Option 1 may include a boundary road along Fort Belvoir that does not necessarily bisect Fort Belvoir. One approach that was discussed would be to have an Option 1A and 1B. Option 1A would involve extension of Old Mill Road through Fort Belvoir (resulting in bisection of the land) and Option 1B would run along the boundary that starts at the end of Old Mill Road (thereby, not bisecting Fort Belvoir land). Option 1 may also evaluate a broader range of corridors that bisect the installation, generally from the end of Old Mill Road.

e. Options 2 and 3 (i.e., reopening of Beulah Road and Woodlawn Road) would not appear to be viable alternatives given the continued security situation and the results of past studies. Nevertheless, these alternatives would be evaluated, and if during the course of the study it is determined that these options are infeasible, even with modification, the study will document

these findings. Validation of this requirement to continue the closing of these roads should be included. It was also pointed out that the congressional mandate did not require a reevaluation of opening these roads. Past studies and validations need to be captured as part of this study. Thus, a more detailed analysis of Options 2 and 3 does not appear to be required.

f. A traffic study was done by Dewberry & Davis to evaluate alternatives on the North Post. Various corridor hardening options were evaluated in the North Post Transportation Study and costs were prepared.

g. Improvement of roads off-post should be looked at as an alternative (e.g., widening of Telegraph Road).

h. The study should consider long-term development around Fort Belvoir and other transportation plans/projects that are being developed for the area.

i. The point was raised that the legislative record indicates that since the roads were withdrawn, there should be compensation to the private sector and that this compensation may be made in many forms (e.g., construction of an alternative road [either on-post, off-post, or a combination route] or general monetary compensation to improve other roads).

3. ID Project Participants

a. Potential stakeholders would include VDOT, Arlington County, Fairfax County, certain small local advocacy groups (e.g., Ladies of Mount Vernon), Transportation Resolution Team (TRT) working group (established after 9/11), Installation Management Agency/Northeast Regional Office (IMA/NERO), Intelligence and Security Command (INSCOM), Defense Threat Reduction Agency, and Defense Logistics Agency (DLA).

b. A meeting would be held with Fairfax County and VDOT representatives prior to the first public meeting. It may be appropriate to add them as cooperating agencies during the NEPA process.

c. It was discussed that the TRT working group should be included as part of the study effort given the committees mandate to assess 9/11 issues. The TRT may be the forum to reach certain groups as part of the public involvement process.

d. Organizational issues were discussed. IMA DA is the client on the project, with support provided through NERO. The Baltimore District (Dave Hand) is the lead for the study. Tetra Tech has been selected as the lead AE firm to support the Baltimore District via a task order under the company's IDQ contract with the District.

e. PBS&J was awarded the contract for updating the Master Plan.

f. TransCore has been conducting extensive traffic studies on Fort Belvoir in support of the Master Plan and other studies.

g. Tetra Tech was awarded the task order for conducting the Master Plan Environmental Impact Statement (EIS).

h. A communication strategy would be mapped out for the project.

i. There would need to be recognized links between the Master Plan EIS public involvement process and the road study public meetings. Although, it was decided that it would be best not to combine the meetings given that the road study is not an "official project," as yet.

j. Congressional staff briefings should be done throughout the process, with a near term briefing perhaps at the end of April 2004. It was discussed that developing a road map/timeline for the project would be an important early step in the process. Such a road map should show key briefing milestones. It was pointed out that providing alternatives too early in the process may adversely effect the benefits gained through the public involvement process and stakeholder involvement. The point was also raised that it may be appropriate to discuss options rather than specific alternatives.

4. Schedule

a. A schedule for the Preliminary Feasibility Study (Phase 1) is attached. Phase 1 will be completed in an 8- to 9-month time period.

b. A schedule for all phases of the entire Feasibility Study should be prepared in order that it can be compared and coordinated with other ongoing programs on the installation such as the Residential Communities Initiative (RCI) program and Master Plan/EIS. The point was raised that alternatives considered in the road study, such as the extension of Old Mill Road, could affect land management decisions such as the possible expansion of housing north of Old Mill Road (e.g., 1,000 additional units).

c. An initial workshop would be held in late May early June 2003. Another workshop would be held in early October 2003. A meeting will be held with some stakeholders (e.g., VDOT, Fairfax County) prior to the first public meeting.

d. IPRs would be held with the stakeholders and Congressional staffers, as appropriate. The IPRs will be included in the schedule.

e. The point was raised that January 2005 may be a good goal for completion of the study in order to provide a number for the FY06 budget submission.

5. Action Items

a. Bill Johnson was to discuss/confirm with Joe Whitacre expectations for a near-term Congressional briefing on the project (end of April) and the results discussed with Dave Hand and appropriate channels at the Baltimore District.

b. In the next 60 days there would be an initiation of the study with the AE (develop scope, set up task order), parametrics for cost purposes, and targets for feasibility completion.

c. Fort Belvoir will provide the Baltimore District with the North Post Transportation Study and other relevant studies that will feed into this project.

d. LTC Kevin Tate will contact representatives of the TRT and set up a meeting in the next couple weeks (before May).

e. Fort Belvoir will coordinate obtaining representatives from INSCOM, Defense Threat Reduction Agency, and DLA.

f. Fort Belvoir will provide documentation of the continued need to keep Beulah and Woodlawn Roads closed.

g. Mr. Rivinus will provide data, when available, on traffic impacts of the museum project.

h. Baltimore District/Tetra Tech, Inc. will coordinate with Patrick McLaughlin and the Fort Belvoir PAO to develop a contact list for the public involvement effort. Also, Fairfax County will be contacted to assist in developing a public involvement contact list.

i. Dave Hand will coordinate setting up a meeting with Patrick McLaughlin to discuss available transportation studies and regional modeling being conducted by TransCore.

May 1, 2003

STAKEHOLDER KICKOFF MEETING

VDOT Springfield Interchange Office, Commerce Street

MEETING MINUTES

Subject: Minutes of the Scope of Work Meeting for the Preliminary Feasibility Study of the Richmond Highway and Telegraph Road Connector

Date: May 1, 2003

Attendees:

Baltimore District

David Hand (410 962-4905; David.B.Hand@usace.army.mil)

Andrea Walker (410 962-3027; Andrea.L.Walker@usace.army.mil)

Fairfax County DOT

Mark Canale (703 324-1177; Mark.Canale@FairfaxCounty.gov)

Kathy Ichter (703 324-1150; Kathy.Ichter@FairfaxCounty.gov)

Fort Belvoir

Mike Groeneveld, FB DPW (703 806-0045; Michael.C.Groeneveld@belvoir.army.mil)

Patrick McLaughlin, FB Environmental and Natural Resources (703 806-3193; McLaughlinp@belvoir.army.mil)

IMA/NERO

Chip Williams (757 788-3791; Williamsjl@monroe.army.mil)

MTMC

Chuck Ferguson (757 599-1117; Chuck.Ferguson@tea.army.mil)

Tetra Tech

Tom Delaney (703 385-6000; Tom.Delaney@tetratech-ffx.com)

Sean Donahoe ([ph] 703 385-6000; [fax] 703 385-6007; Sean.Donahoe@tetratech-ffx.com)

Tom Magness (703 385-6000; magneto@tetratech-ffx.com)

VDOT

Dic Burke (703 383-2099; Richard.Burke@VirginiaDOT.org)

John Muse (703 383-2099; John.Muse@VirginiaDOT.org)

Ken Wilkinson (804 371-6758; Ken.Wilkinson@VirginiaDOT.org)

Minutes:

A meeting was held at the Springfield Interchange office of the Virginia Department of Transportation (VDOT) on 1 May 2003 to discuss and reach consensus (if possible) on the scope of work for the Preliminary Feasibility Study of a Richmond Highway and Telegraph Road connector (referred to as the "Road Study"). Meeting attendees and contact information from the sign-up sheet are presented above. Mr. Dave Hand, project manager for the study, opened the meeting with a request for input from the stakeholder group regarding the scope of work for the project. Mr. Hand also provided an overview of the Corps's understanding of their mission with respect to this effort and offered their approach to the project. Key discussion points, agreements, and action items from the meeting are summarized below.

1. The Corps discussed a modification to the tentative approach offered at the previous meeting for conducting Phase 1 of the Preliminary Feasibility Study. To accommodate concerns raised by Fairfax County, the Corps could accelerate the initial phase of the project and offer a more streamlined assessment of alternatives. This approach could allow for an appropriate level of analysis of the alternatives evaluated to date and allow agencies and the public input into the early stages of the study. Subsequent to this preliminary assessment, a decision would have to be made as to whether or not an identifiable project exists. If a project is identified, then a proponent and/or study team would be identified to move forward with the project. In this case, subsequent

phases of the study would include appropriate NEPA analysis, cost estimation, and conceptual design studies.

2. The roles and responsibilities of the various companies and organizations involved in the Master Plan, Master Plan EIS, and Road Study are outlined in the table below:

Organizations/Companies Leading and Supporting the Master Plan, Master Plan EIS, and Road Study

	Planning Studies		
Roles	**Master Plan**	**Master Plan EIS**	**Road Study**
Lead Agency (Point of Contact)	Fort Belvoir (COL Tate)	Fort Belvoir (Patrick McLaughlin)	Baltimore District (Dave Hand)
Prime Contractor	PBS&J	Tetra Tech, Inc.	Tetra Tech, Inc.
Subcontractors	TransCore	TAMS/Earth Tech TransCore	TransCore

*** NOTE DEWBERRY IS A PRIME CONTRACTOR SUPPORTING FORT BELVOIR DPW ON VARIOUS ENVIRONMENTAL AND TRANSPORTATION PLANNING PROJECTS AT THE INSTALLATION.**

3. It was discussed that the scoping meetings for the Master Plan are tentatively planned for early September 2003. It was suggested that information regarding the Road Study could be made available at this meeting. It was discussed that a dedicated booth/station could be set up at this meeting for information on the Road Study and for soliciting public input. Some of the preliminary findings of this streamlined Phase 1 effort could be made available to present to the public at the Master Plan EIS scoping meetings.

4. VDOT discussed their approach for conducting Feasibility Studies and NEPA documentation for road projects. When considering new road projects, VDOT typically conducts a Feasibility Study to identify the purpose and need and a range of alternatives for the corridor. These studies would typically take 2 years. Subsequently they would move forward with their NEPA analysis and documentation and design work. Generally VDOT would conduct 1 to 2 public scoping meetings.

5. It was suggested that the alternatives analysis should include a mass transit alternative. Also, it was suggested that alternatives involving existing portions and/or new road corridors on Fort Belvoir, along with appropriate force protection, should be considered in the preliminary analysis. Overall, it was discussed that all options should be "on the table" at the beginning of the project

and that screening of these options be documented as part of the Phase 1 effort. Environmental constraints and other issues will be evaluated as part of the screening analysis.

6. The process for making a decision regarding whether or not a project exists was discussed. The Army decision would be made at the Secretariat level. Results of the Preliminary Feasibility Study could be provided to the Army for a decision in December 2003. If the decision is made that there is a project to move forward with, it is possible that FHWA could be designated as the proponent, with the ultimate execution of the project being managed by VDOT. VDOT would likely solicit bids for preparation of the NEPA document. The bid process for obtaining contractor support could take approximately 6 months. Alternatively, if the mission is given to the Corps of Engineers, the planning portion of the project could be conducted by the Baltimore District and subsequent construction managed by others.

7. It was suggested that the Phase 1 part of the Road Study would result in a streamlined draft Preliminary Feasibility Study report. Comments would be solicited on the draft, but the document would not likely be finalized. If the decision is made to move forward with a project, then the results of the report would be used to begin more detailed analysis of alternatives as part of the formal NEPA process.

8. Fairfax County provided several documents to the District/Tetra Tech on previous road studies (e.g., Lockheed connector documentation).

9. Public involvement tools discussed during the meeting included: fact sheets, dedicated websites, website linkages (e.g., Fairfax County, VDOT, Fort Belvoir, District), supervisor newsletters (but not between August to January), and press releases at Fort Belvoir through the Public Affairs Office. Formal scoping meetings as part of the NEPA process could not likely occur before January 2004.

10. A tentative schedule for the Phase 1 effort was discussed, as outlined below

    a. **May 23, 2003.** Interagency Working Group submits road corridor options to Tetra Tech

    b. **May 27, 2003.** TRT Meeting (9 am at Springfield Interchange Office)

    c. **June 25, 2003.** Interagency Working Group convenes to discuss road corridor options (1 pm at Springfield Interchange Office).

d. **July 30, 2003.** Strawman Preliminary Feasibility Study with options/alternatives, preliminary analysis (tabular form), and compilation of available data.

e. **August 26, 2003.** Interagency Working Group convenes to refine road corridor options/alternatives and discuss information to present to the public at September 2003 Master Plan EIS public meeting.

f. **September 16, 2003.** Master Plan EIS public scoping meeting. An information booth on the Road Study would be available at this meeting.

g. **October 2003.** First Draft of the Preliminary Feasibility Study.

h. **December 2003.** Army decision on whether a project exists (earliest timeframe).

i. **January 2004.** Suggested timeframe for beginning Phase 2 which would include formal NEPA documentation and other studies, assuming a project is identified.

11. Action Items:

a. Interagency Working Group will provide Tetra Tech (Sean Donahoe) road corridor options to include as part of the preliminary study by May 23rd, 2003.

b. Tetra Tech will coordinate with Fairfax County, VDOT, and Fort Belvoir (PBS&J) to obtain GIS coverages to create a base map of the study area.

c. Tetra Tech will prepare maps of road corridor options provided by work group, along with other corridors evaluated in past studies.

d. VDOT will provide District/Tetra Tech with an example Feasibility Study.

e. Reconvene on June 25th at 1pm in the Springfield Interchange Office to discuss corridor options.

May 27, 2003
TRANSPORTATION RESOLUTION TEAM (TRT) MEETING
VDOT Springfield Interchange Office, Commerce Street
9:00 AM

MEETING MINUTES

Attendees: Individuals representing Fort Belvoir; U.S. Army Corps of Engineers (USACE), Baltimore District; U.S. Army Installation Management Agency, Military Traffic Management Command; Fairfax County (Supervisors Hyland and Kaufman's offices); Fairfax County DOT; VDOT; Dewberry (Contractor); and Tetra Tech (Contractor) were in attendance. A Sign-In Sheet was circulated; a transcribed version is attached.

Purpose: On May 27, 2003, the Directorate of Public Works and Logistics (DPWL) in coordination with VDOT, reconvened the TRT. The TRT was established following 9/11 to resolve issues associated with implementation of increased force protection requirements, such as the closing of Woodlawn Road. After resolving immediate issues, the TRT stood down in May 2002. The TRT was reconvened to establish a framework for discussing the many recent activities such as initiation of the Connector Road Study and environmental cleanup of the right-of-way for the Fairfax County Parkway.

Objective:
1. The primary objective of the meeting was to review, clarify, and reratify the original TRT Charter.
2. The secondary objective was to communicate the baseline status of a variety of projects, initiatives, and issues.

Minutes:

1. The meeting was called to order at 9:00 a.m. by Morteza Salehi, representing VDOT Maintenance and Operations Division. Attendees introduced themselves.

2. Mr. Salehi stated that the original TRT consisted of four focus groups: operations, incident management (traffic management), Woodlawn Road, and U.S. Route 1. VDOT has quarterly meetings with a similar setup of groups. Mr. Salehi asked if the TRT should be restructured. What are the issues? Who should get status reports? Can the TRT representatives make decisions? General discussion of these questions followed.

3. Kathy Ichter stated that it may be difficult to get the work done with this large number of people. She suggested that the TRT be a group of representatives who can take the information back and get the authorization from the decisionmakers. However, the TRT still needs technical specialists and smaller meetings. She recommended having a planning group outside TRT because decisions are made elsewhere by others. Issues surrounding Route 1 are reported back to TRT but Route 1 is not a central focus here. There may be other issues that are better suited for this forum. Ms. Ichter recommended that it may be best to handle issues and report back to TRT. A consideration will be time management and logistics.

4. Rose Lambert would like the main focus of the TRT to be developed. Traffic and building continue to be problems and there still is not an East-West connector.

5. LTC Tate suggested the TRT be divided into two groups, one for future planning and one for current issues.

6. Mr. Salehi stated that there is a need to have separate technical teams and suggested that TRT be used as a one-stop clearinghouse. Status reports can be given to the group and the TRT will then either make decisions or individuals will report back to the people who do make the decisions.

7. Mike Estes recommended the TRT be used for big issue items. Subgroups of the TRT should be set up in accordance with the TRT issues and have regular meetings. New issues can be brought up at these meetings and reiterated at the TRT meetings.

8. LTC Tate inquired how the TRT would respond back to the higher level people—specifically Mr. Farley and Col Williams. Susie Gillett also stated that she sees Farley and Williams as the decision makers and asked how TRT can make the decisions?

9. Mr. Salehi inquired what other issues need to be added to the scope of the TRT and what other subcommittees are needed?

10. LTC Tate noted the need for future planning of mass transit. Ms. Ichter stated that spot improvements and other traffic management issues with VDOT signals need to be addressed.

11. Mr. Estes stated that, in VDOT, the same VDOT core group may cover many issues. Mr. Estes recommended the TRT be broken down by general function. He noted that Route 1 is a perfect example of a committee that stands on its own.

12. LTC Nigara recommended that the new Fairfax County Emergency Manager be brought in to the TRT meetings since he is a key player.

13. Ms. Ichter noted that she is not the only representative of the County. She has no problems being a representative at the TRT meetings but land-use issues must go through the standard County process. There are other County people that need to be involved.

14. Mr. Salehi responded that those other people may want to bring in other County people later if is appropriate to the composition. Mr. Salehi inquired if there were any other defense appropriation projects? LTC replied that there are many projects but some are either not related or adjacent to Fort Belvoir.

15. There was general discussion regarding the various issues and composition of subcommittees. The results of the white-board discussion are listed in a table at the end of these minutes.

16. Mr. Salehi stated that he would like the subcommittees/projects people to update TRT regularly. All the technical groups should continue to work and report to TRT. Everyone must agree to the role and function of the TRT.

17. LTC Tate recommended that the committee meetings alternate on months (refer to table for details) with a report to the decisionmakers occurring every 4 months. The three subcommittees would meet in separate months, one in June, one in July, one in August, and the decisionmakers would meet in September. LTC Tate questioned how much would be gained from the TRT as everyone on the TRT would likely be on a subcommittee.

18. Mr. Crow asked if the synchronicity would be lost across the teams by not having everyone together in the meetings. There would have to be some coordination. He stated that a clearinghouse between subcommittees would still be needed. He also noted that the TRT is not empowered by law and would need to meet as a group either quarterly or every 4th month.

19. Mr. Salehi stated that the TRT would meet to determine who has been briefed on what topics.

20. David Ghiglio noted that whoever holds the money is ultimately the decisionmaker. The TRT will need these representatives from the Federal government, VDOT, and Fairfax County. The TRT can engender transmission of information. The members of TRT can consider and may be able to immediately address smaller monetary issues.

21. LTC Lind recommended that the committees prepare status updates and send them electronically to people, and brief the decisionmakers. Then everyone can reconvene as TRT to make a decision.

22. Richard Bain recommended that the TRT have separate working groups that would meet at a frequency to be determined and then report back to the TRT. The TRT would then meet and representatives would report back to the decisionmakers to show the coordination between everyone.

23. LTC Lind stated that the decisionmakers must be given an opportunity to review the information at hand before being brought into a public forum.

24. Mr. Estes stated that most people seem to agree on three subcommittees (refer to table at the end of the meeting minutes) since most people would likely be on more than one. After the subcommittees meet, the group will meet to determine what goes on to the next level. This can be a fluid process to develop the format and final process.

25. Ms. Lambert recommended that the bosses be given a list of the issues discussed at the meetings and the items that require decisions. Mr. Estes agreed with Ms. Lambert and reiterated this concept to obtain a general agreement by all.

26. Mr. Salehi stated that the charter will need to be modified to reflect the changes discussed and then the system tested. Adjustments can then be made as needed. LTC Tate stated that the charter will be modified and sent out. The subcommittees will meet quarterly. The TRT will meet as a group to determine what will go to higher levels.

27. LTC Tate stated that each agency needs to determine who will be on each subcommittee and be the chair (main POC). Mr. Estes inquired who would be the clearinghouse for all the information and be responsible for setting up the meetings? LTC Tate responded that a lead is needed for each group and that each agency should have a group they are responsible for. The subcommittee will send out the minutes to the TRT.

28. Mr. Bain inquired about the County being on the Charter. LTC Tate responded that the County is not listed as a cochair for the TRT. Mr. Salehi added that County representatives are included in the meetings. The cochair is just to indicate who takes the lead for the meetings. If the County feels that it needs to sign the Charter, then that can happen.

    Action: LTC Tate will review and revise the Charter as necessary.

29. LTC stated that Dewberry will be responsible for setting up the next TRT meeting and getting the meeting minutes out. The Dewberry contact for this will be Jennifer Holcomb.

    Action: Dewberry will set up a date and time for the next TRT meeting and will handle meeting documentation.

30. Discussion then proceeded to updates for several ongoing matters.

31. Mr. Hand passed out a copy of the meeting minutes for the Interagency Working Group Meeting that occurred on May 1, 2003, regarding the Preliminary Feasibility Study of the Richmond Highway and Telegraph Road Connector. Mr. Hand is awaiting comments back by the end of the week to finalize the minutes. The minutes have the project outlines. The Public Hearing is scheduled for September. The EIS is due to Fort Belvoir at that time. The schedule is outlined in the minutes.

32. LTC Tate gave an update regarding Old Colchester Road. The Public Notice went out on May 15 and the comment period will close on June 15. The final findings will be issued 2

weeks afterwards depending on the comments received. The final Finding of No Significant Impact (FONSI) will be issued on July 1. The USACE will have 60 days to review. Mr. Estes asked if there was a list of who received or will receive the Environmental Assessment (EA). Patrick McLaughlin replied that he has a list and will email it to Mr. Estes. LTC Tate also mentioned that the list is posted on Fort Belvoir's Web site.

Action: Patrick McLaughlin will email to Mr. Estes the list of who will receive the EA.

33. Mr. Estes provided an update on the Fairfax County Parkway Extension through EPG. October is the estimated time to advertise for the construction contract. Regarding the VDOT 6-year plan, Transportation approved the project funding on the 15th. The state is putting out $7.2B. Only $150M in projects was added this year. Final approval will be given in the meeting on June 19.

34. Mr. Folse passed out two schedule scenarios for the Fairfax County Parkway extension. Plan A has a completion date of August 2007. The utility location task has 104 weeks which may be able to be reduced but they will have to see what is there. VDOT also needs to get the funding for the ROW of $10M to acquire the two parcels. Mr. Estes stated that they are working on getting the funding now and will hopefully have approval in June.

35. Mr. Crow stated that a new controller has been added to the Telegraph Road overpass. An overlap has also been added at JJ Kingman and should be in place by the end of May. Mr. Crow replied that Kingman is maintaining the same number of lanes but will receive additional head at the south side for increased right turn capacity. There is a new timing plan and it needed another arm. The lane striping will not change. The ultimate solution is to add a left turn capacity or build a new right lane. A dual left lane has been added to Mount Vernon onto southbound Route 1. This work should be completed by next summer. They could not re-stripe at this location. At Frye Road, adding another lane from the existing pavement was discussed but ultimately dismissed due to on-street parking needs. The need of parking outweighed the benefit of additional vehicle capacity. Currently there are more intermediate improvements than spot improvements.

36. Tom Folse provided an update on the Route 1 Location Study. The public hearing for the location study took place on April 29. The comment period was extended to 30 days and all comments should be postmarked by May 29. There is a meeting with the technical committee on June 5 to review comments. They will develop a consensus and recommendations for the steering committee. This was tentatively scheduled for June 19 but may be rescheduled to sometime in June or July. There were 400 people at the last meeting. Main issues are focused north of Mount Vernon and there are few comments regarding areas immediately by Fort Belvoir. There should be approval by the end of the year provided there are no problems.

37. LTC Tate inquired when VDOT will need the land once they acquire the funds. Mr. Folse replied that the schedule would not change and that the conveyance of the land would still occur in February 2005. Plan B still has a completion date of Aug 2007 but the flexibility on time for utilities is much less. The final soil survey will begin then and is tied to the site being cleared of all OE/UXO.

38. LTC Tate stated that the contract for the cleanup of EPG has been awarded on May 19 with an NTP date of May 15. He stated that he is still confident about the timeframe.

39. Mr. Salehi asked if there were any other possible future actions besides having Woodlawn Road open to Department of Devense (DoD) only? What security issues are there to open it to more? Can the operations group review additional possibilities? LTC Tate replied that operations can review other options but current conditions will stay in effect.

40. LTC Tate brought up Building 5389 on EPG and asked when VDOT will have the authority to provide monies to replace the building? Mr. Folse replied October 2004 because it is contingent upon ROW approval. This is a needed step for the ROW transfer. LTC Tate noted that he needs to be able to program replacement of the building. Mr. Folse reiterated that all monies will be transferred at the same time under one negotiation. This will be in February 2005. Mr. Estes added that if anything can be done to accelerate this, it will. However, they are having difficulties getting the money.

41. Mr. Ghiglio asked when the value of the building was determined. LTC replied that this was discussed at the last meeting, but no action has been undertaken to update the appraised replacement cost.

42. Mr. Salehi stated that for the charter, rather than putting his name, he preferred that Foley determine who should be listed.

43. There being no further comments and no comments regarding the previous meeting minutes, the meeting was adjourned at approximately 11:00 a.m. The next meetings will be scheduled according to the following table:

Committee	**Coordinator**	**Next Meeting**
TRT	Dewberry, Jennifer Holcomb	September

Subcommittee	**Coordinator**		**Next Meeting**	**Subcommittee Issues**
Planning (Long-term)	**Fort Belvoir** VDOT Fairfax County	**Richard Bain** Bahram Jamai Kathy Ichter	June	• East-West Connector Study • VDOT 6-Year Plan • Future Planning (e.g., WMATA Study) • New Fort Belvoir Initiatives
Engineering (Real projects funded/designed/ in design)	**VDOT** Fort Belvoir Fairfax County	**Mike Estes** Mike Groeneveld Charlie Strunk	July	• Old Colchester Road/Route 1 Widening • Fairfax County Parkway/EPG • Route 1 Location Study
Operations (Emergency response)	**Fairfax County** Fort Belvoir VDOT	**Kathy Ichter** LTC Nigara Sherrell Crow	August	• VDOT Signals and Spot Improvements • Woodlawn Road-Interim Measures • Incident Management

Respectfully submitted,

Jennifer L. Holcomb, PE

Dewberry & Davis LLC

703-849-0493

TRT Meeting May 27,2003 List of Attendees			
Name	**Organization**	**Phone**	**e-mail**
Thomas K. Folse	VDOT NoVA	703-383-2191	Thomas.Folse@virginiadot.org
Dic Burke	VDOT—PE	703-383-2431	richard.burke@virginiadot.org
Don Ostrander	VDOT—TE	703-383-2392	Donald.Ostrander@virginiadot.org
Rose Lambert	Fairfax County—Mount Vernon District, Chief Aide to Supervisor Hyland	703-780-7518	rlambe@fairfaxcounty.gov
Kathy Ichter	Fairfax County DOT	703-324-1150	kathy.ichter@fairfaxcounty.gov
Michael Estes	VDOT—NoVA Preliminary Engineering	703-383-2193	michael.estes@virginadot.org
Morteza Salehi	VDOT—Maintenance and Operations	703-383-2459	Morteza.Salehi@virginiadot.org
Sherrell Crow	VDOT—Signal Systems	703-383-2351	Sherrell.Crow@virginiadot.org
LTC Paul Nigara	Fort Belvoir DPS	703-806-4024	Paul_F_Nigara@belvoir.army.mil
LTC Denise Lind	Fort Belvoir SJA	703-805-4399	Denise.Lind@belvoir.army.mil
Susie Gillett	Fort Belvoir OSJA	703-805-4389	Susie_Gillett@belvoir.army.mil
Ryan O'Gara	Fairfax County DOT	703-324-1184	ryan.o'gara@fairfaxcounty.gov
Robert Sheehan	VDOT—STSS	703-383-2716	Robert.Sheehan@virginiadot.org
Chip Williams	IMA—NERO	757-788-3791	williamsjl@monroe.army.mil
Andrea Walker	USACE, Baltimore District	410-962-3027	rea.e.walker@usace.army.mil
David Hand	USACE, Baltimore District	410-962-4905	david.b.hand@usace.army.mil
LTC Kevin Tate	Fort Belvoir DPWL	703-806-3017	kevin.tate@belvoir.army.mil
Tom Rollins	USACE, Humphreys Engineering Center	703-428-6548	William.T.Rollins@usace.army.mil
David Ghiglio	Fort Belvoir DPWL	703-806-0068	david_j_ghiglio@belvoir.army.mil
Richard Bain	Fort Belvoir DPWL	703-806-0067	RichardB@belvoir.army.mil
Mike Groeneveld	Fort Belvoir DPWL	703-806-0045	michael_c_groeneveld@belvoir.army.mil
Chuck Ferguson	MTMC- Defense Access Road Program	757-599-1117	chuck.ferguson@tea.army.mil
Patrick McLaughlin	Fort Belvoir DPWL	703-806-3193	mclaughlinp@belvoir.army.mil
Tom Magness	Tetra Tech	703-385-6000	magneto@tetratech-ffx.com
Tom Delaney	Tetra Tech	703-385-6000	Tom.Delaney@tetratech-ffx.com
Sean Donahoe	Tetra Tech	703-385-6000	sean.donahoe@tetratech-ffx.com
Chris Nordstrom	Tetra Tech	703-385-6000	Chris.Nordstrom@tetratech-ffx.com
Bob Rooks	Dewberry	703-289-4782	brooks@dewberry.com
Jennifer Holcomb	Dewberry	703-849-0493	jholcomb@dewberry.com

June 24, 2003

STAKEHOLDER MEETING

VDOT Springfield Interchange Office, Commerce Street

1:00 PM

MEETING MINUTES

Subject: The Preliminary Feasibility Study of the Richmond Highway and Telegraph Road Connector Meeting

Attendees:

Baltimore District

David Hand (410 962-8154; david.b.hand@usace.army.mil)

Fairfax County DOT

Mark Canale (703 324-1177; mark.canale@fairfaxcounty.gov)

Kathy Ichter (703 324-1150; kathy.ichter@fairfaxcounty.gov)

John Muse (Environmental) (703 383-2099; john.muse@virginiadot.org)

Fairfax County

Ryan O'Gara (703 324-1194; ryan.o'gara@fairfaxcounty.gov)

Fairfax County Lee District

Bob Heittman (703 971-0531/8519; bhistac@yahoo.com)

Fort Belvoir

Richard Bain (703 806-0067; richardb@belvoir.army.mil)

IMA/NERO

Bill Sanders (757 788-5193; sanderswl@monroe.army.mil)

VDOT

Michael Estes (703 383-2193; michael.estes@virginiadot.org)

Dic Burke (703 383-2431; richard.burke@virginiadot.org)

TransCore

John Wright (703 813-3243; john.wright@transcore.com)

Jim Curren (703 813-3251; jim.curren@transcore.com)

Tetra Tech

Sean Donahoe ([p] 703 385-6000; [f] 703 385-6007; Sean.Donahoe@tetratech-ffx.com)

Tom Delaney (703 385-6000; tom.delaney@tetratech-ffx.com)

Patrick Solomon (703 385-6000; solompa@tetratech-ffx.com)

Chris Nordstrom (703 385-6000; chris.nordstrom@tetratech-ffx.com)

Minutes:

A meeting was held at the Springfield Interchange office of the Virginia Department of Transportation (VDOT) on June 25, 2003, to discuss potential road corridors for the Richmond Highway and Telegraph Road connector. Meeting attendees and contact information from the sign-up sheet are presented above.

Mr. Dave Hand, Project Manager for the study, opened the meeting by stating that the purpose of the meeting was to review and discuss information gathered from previous connector studies and recent meetings. He stated this phase is a strawman, for open discussion, and that all input is welcome. He then introduced Sean Donahoe, Tetra Tech.

Sean Donahoe, Tetra Tech, presented an overview of the information packet that was distributed. He indicated that the original scope directed Tetra Tech to collect and compile data. He noted that additional steps were taken for the purposes of strawman analysis, and that these preliminary analyses were presented in a matrix presented in the packet.

He then described the packet contents:

- Figure 1 - Corridors evaluated during the North Post Study. He noted that only the corridors that involved a "new" alignment were included, and that alternatives merely consisting of road improvements were not included in the figure. He noted the code prefix for various North Post corridors on the maps is "NP-x."

- Figure 2 - Corridors evaluated in the Lockheed Connector Study. He indicated that the blue corridors were the ones analyzed in the study, while the red corridors were not (based on the reasons presented in the table to the side of the figure). He noted that the code prefix for Lockheed corridors is "LH-x" with the original code (e.g., MLK) to the right in parentheses. He noted the preferred alternative for this study is LH-A.

- Figure 3 - New corridors submitted by Fairfax County, Spring 2003. He noted that because they were submitted via fax, they were manually placed on the GIS map. They were positioned as closely to the faxed alignments as possible, but their locations may require "tweaking." He noted that these corridors are coded with the prefix "FFX-x."

- Figure 4 - Represents existing natural resources in the area.

- Figure 5 - Presents land use zoning/types (separated on the legend by Fort Belvoir and Fairfax County designations).

- Figure 6 - Presents a composite of the North Post (NP), Lockeed Connector (LH), and newly submitted Fairfax County corridors (FFX), and VDOT projects in the area (that were identified in VDOT's six year plan). This figure may need to be updated pending additional information (e.g. RCI footprint, etc).

- Figure 7 - Presents road corridor constraints. This figure was created by placing the composite of all corridors onto 20+ GIS layers, representing a range of issues. The more intense the pink/red color, the greater the number of constraints to be considered. It was created to provide a quick and visual way of analyzing the corridors; it shows that many of the corridors have a somewhat similar alignment.

- Matrix - Presents preliminary analyses performed on the corridors (assumed a certain width, utilized GIS layers). Sean noted that additional information will be needed to strengthen these data (e.g., additional information on Force Protection).

- Traffic Flow Map – Prepared by Transcore as part of the NP study. These data represent pre-9/11 predictions, and 2020 projections.

Sean then introduced Patrick Solomon and the GIS program that was developed by Tetra Tech to perform the corridor analyses.

Patrick provided an overview of the software functionality, and then performed a sample "test" corridor to illustrate how the software calculates corridor impacts.

The meeting then opened for general discussion.

Fort Belvoir (FB) asked whether or not LH-A is a consideration for FFX County? FFX County stated it was not included on their Spring 2003 corridor fax. They noted that at the time of the LH study, there was no issue with Woodlawn (which was still open), and that LH was a separate project. Things have changed since then, and a new situation exists. It was stated that a blank slate exists, and that every corridor is under consideration at this point in time.

FB asked if FFX County will consider any sites not on FB property. FFX noted that corridor FFX-C is primarily off FB property, and that it would have little effect to FB property.

FFX noted that the environmental issues associated with LH study were vast (e.g., outflow of water north of Huntley Meadows), and that the LH study is a dead issue in light of these environmental issues and the closing of Woodlawn. It was noted that Woodlawn Village would be affected by select corridors, and that in general, residential development off post is a major constraint.

It was suggested that the specifics of the RCI program be analyzed and incorporated. Are houses and sites going to be relocated? Are sites flexible? Could placement work around a corridor? It was noted that this information, as well as other FB projects (e.g., hospital), needs to be put on the table.

It was noted that the security issues and the golf course restraint are significant issues, particularly relating to NP-B and FFX-E.

It was mentioned that urgency exists for a solution. A new corridor will take a significant amount to time to implement. Can a solution be made with improvements and hardening to existing alignments? It was requested that the next round of analysis include information on the hardening of Woodlawn.

It was noted that issues discussed at the public Town Hall meeting need to be addressed as soon as possible.

It was noted again that LH options are not worth revisiting — the environmental issues are too complex.

It was added, however, that although the environmental issues still exist, the traffic situation has changed, and that the reasons various LH connectors were not included may not be valid at this time (e.g., LH-AB was considered too far south for that study, but today it may be more appropriate).

It was stated that alternatives were presented only by FFX; and that possible corridors should be submitted by all parties.

LH-D was noted to have significant potential impacts on residential areas. Skirting the northeast side of Belvoir was stated as a potential solution to avoid residential impact.

FB noted their preference is to avoid the Woodlawn area. They also stated the relocation of the baseball fields will need to be considered.

It was noted that FFX-C would abut FB housing, and also that it would cross a significant portion of Huntley Meadows. Also, that a land acquisition in that area is moving forward at this time.

Attendees were reminded that the purpose of the meeting was not to analyze, in detail, specific alternatives at this point, but to try and develop a short list of corridors that would be analyzed further.

It was requested that the coloration on the matrix be adjusted, with greater gradation and less "black and white" representation.

The hardening of existing roads and new corridors that might cross the post was discussed. It was noted that, although it would be more intense, bridges, grade separations, or gates may address the security concerns.

The Secretary of the Army's direction that "all bases are closed to the public" was discussed. It was questioned whether this policy would allow for public passage (with grade separation) across a post. FB stated the language could be adjusted to allow for "controlled access."

FB stated their preference, among the FFX options proposed, would be FFX-C (wouldn't have the expense of overpasses, doesn't bisect)

Burming and limitation off access points were mentioned as two ways that the Army could maintain complete control over security. FB could dictate where (if any) a connection would be made to Post traffic.

The termini, or locations a corridor could connect, was considered to be "limited." It was suggested that a "T" on either end may not be advantageous. Route 1 is considered to have few access point options, while Telegraph Road was considered to be more "flexible."

FFX County recommended the plan consider mass transit, both present resources and future plans. It was suggested that representative(s) from the mass transit group should probably be invited to attend future meetings.

A Congressional mandate exists, which requires consideration of Old Mill Road. This would involve improvements and hardening.

The Corps referenced the criteria in the preliminary matrix, stating no particular one will override another, but that a holistic and qualitative view will be taken.

It was agreed that many criteria (e.g., residential impacts) should be further evaluated. Sean mentioned that as more data are collected, and models are evaluated, this will be done. For example, the qualitative residential impact ratings (high, medium, and low) may become quantitative (numbers).

It was suggested that other corridors, or hybrid corridors, may still be possible. It was pointed out that sensitive facilities are there, and will be there for some time. But other constraints, such as future housing areas, may be more flexible, and, therefore, maybe their locations could be tweaked in response to a corridor selection.

Route discussed: FFX-B from Route 1, pick up FFX-D for a bit, then proceed down FFX-C?

Route discussed: NP-B would require an overpass over Meeres? NP-B, NP-A, and FFX-A all hit Telegraph Road in a "good" spot.

It was suggested that an access point on Telegraph Road north of NP-A would be too far north, and an access point in this area would conflict with development in that area. But areas between NP-A and NP-B would be good.

Signalization (two lights on Telegraph in particular) and routing to DCEETA would need consideration. It was noted that DCEETA access was, at one time, going to be moved to the area around NP-A. DCEETA previously mapped out acceptable routing around their facility. NP-A and NP-B were evaluated in detail, but both were considered conflicts.

It was noted that additional VDOT projects should be identified on the map. Telegraph improvements are being implemented from Beulah Road to Hayfield Road, and from Hayfield Road to south King Street.

Status of Old Telegraph Road improvements was discussed. It was noted that on June 16th, changes to existing plans had occurred, and that FFX County would forward new information to Tetra Tech.

It was noted that at least one nonbisecting corridor should be ultimately included for analysis.

It was noted again that Woodlawn Road would be a problematic solution, as it would require many controls at many access points.

Route discussed: Modified FFX-C (most preferred by FB) or FFX-B (with a bigger loop around the engineering complex?)

FFX-C and FFX-B were suggested to have environmental concerns (wetlands and ravines/streams, respectively).

Who the ultimate decision maker will be was discussed. It was agreed that a new corridor would not provide an immediate fix. Discussions were then held on possible near-term (within 6 to 8 months) solutions (access points? County police support? Passes/registration for local residents?) while a long-term corridor is developed.

It was noted the Statement of Work currently does not include specific provisions for short-term analyses. It was suggested that if it is written broad enough, then short-term analyses and security could be included.

The reopening of Woodlawn Road was discussed as one viable short-term solution. It was suggested that it would be up to the Army to dictate how quickly it could be implemented. FB stated that from an administration standpoint, FB is ready.

The Corps stated it would provide FB with recommendations for the upcoming briefing to Dr. Fiori.

It was stated again, that the LH options are not viable, they are too far north. Also, no alignment that is 100 percent off-post is really possible, as there are too many residences.

It was suggested that the group focus on areas where the various corridors are grouped; also, superiors would need to be briefed to identify how flexible they may be.

Access points: Along Route 1, the Old Mill area seems good. Along Telegraph Road, Hayfield seems too far north, and Old Telegraph does not seem direct enough. But the other access points all seem to be viable. Telegraph could possibly be re-worked between Beulah and Old Telegraph.

It was suggested that a terminus at Pole Rd might be an option, with at least 2 links to Route 1 (e.g. Sacramento, Old Mill).

The elementary school in that area was noted as a concern.

It was noted that an interchange at Kingman would most likely be necessary for alignments in that area (e.g., FFX-A).

Soccer fields will be created at the EPG site. Southern soccer fields will be removed, as part of the museum construction.

Other Fort Belvoir Master Plan projects (e.g., hospital, soldier support center, barracks, D.C. National Guard facility) were discussed. Information on all of these would need to be incorporated into analyses.

Meeting participants then gathered around an aerial view of the project area, and five corridors were drawn/selected for future analysis.

Action Items:

Corps	1) The Corps stated it would provide Fort Belvoir with recommendations for the upcoming briefing to Dr. Fiori.
FB	1) Provide Tetra Tech with additional guidance on Force Protection issues and setbacks, details relating to potential hardening of Woodlawn, Master Plan information on current and proposed projects (e.g., RCI), and DCEETA routing study information.
FFX County	1) Provide Tetra Tech with information on the Kingman Road project.
Tetra Tech	1) Distribute meeting minutes.
	2) Prepare a new figure and matrix containing the five new corridors selected.
	3) Research RCI, Master Plan, security information, and Woodlawn "hardening" option and incorporate this information into the next iteration of materials.

Next Meeting:

July 29, 2003

1:00 PM

Preliminary Feasibility Study (Phase I) of
Richmond Highway and Telegraph Road Connector
Fort Belvoir, VA

24 June, 2003

Virginia Department of Transportation

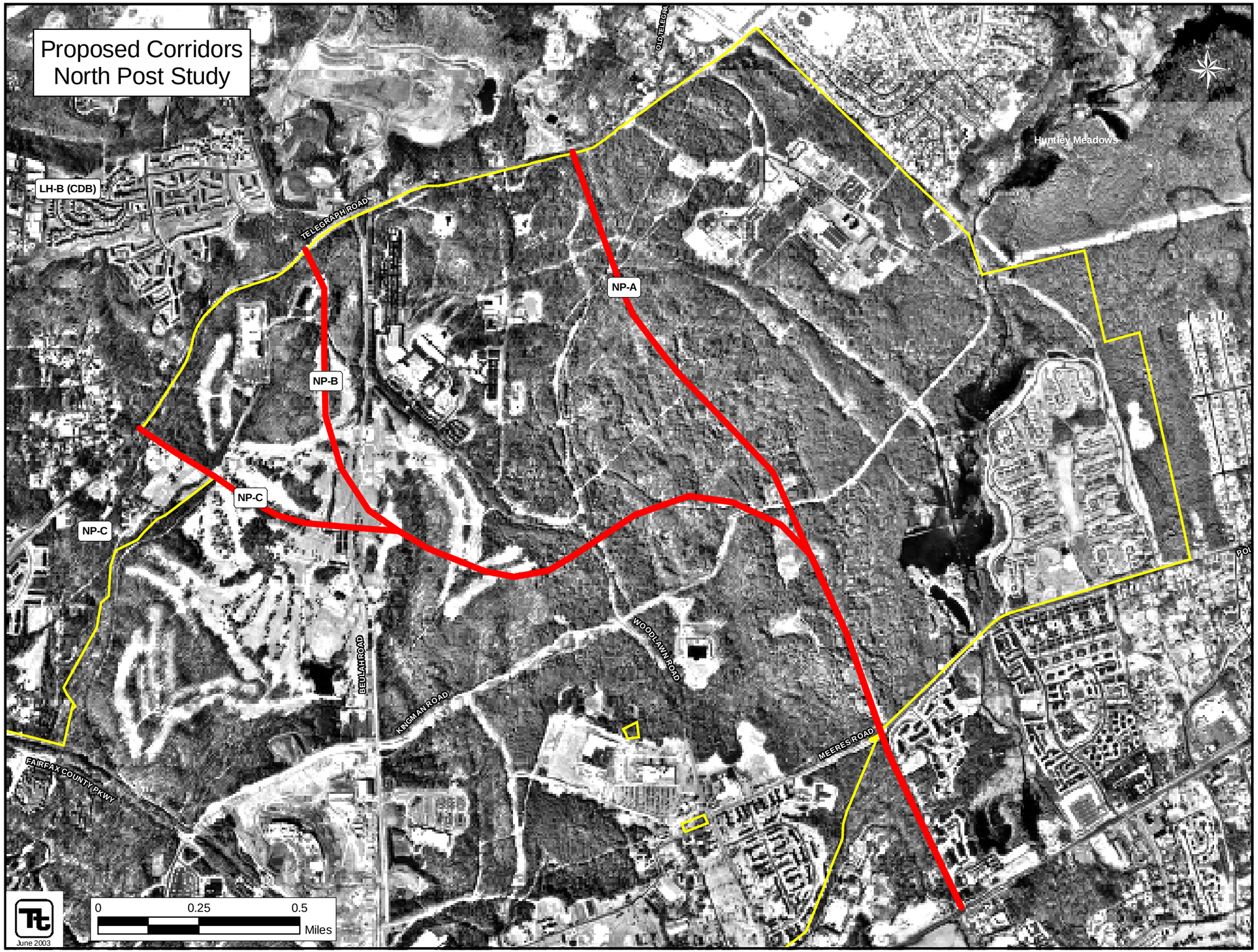
Fort Belvoir

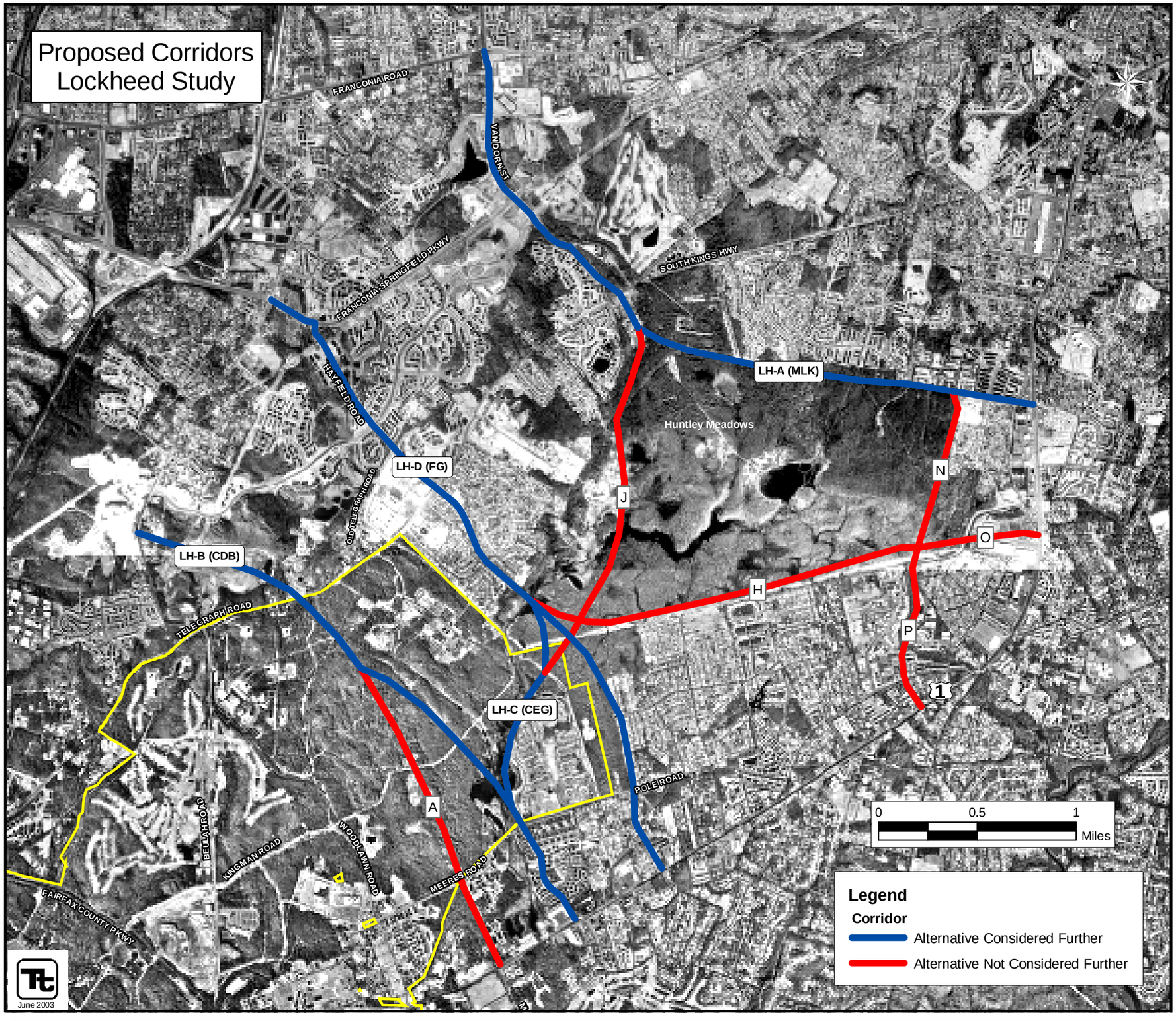
U.S. Army Corps of Engineers, Baltimore District

Fairfax County

Tetra Tech, Inc.

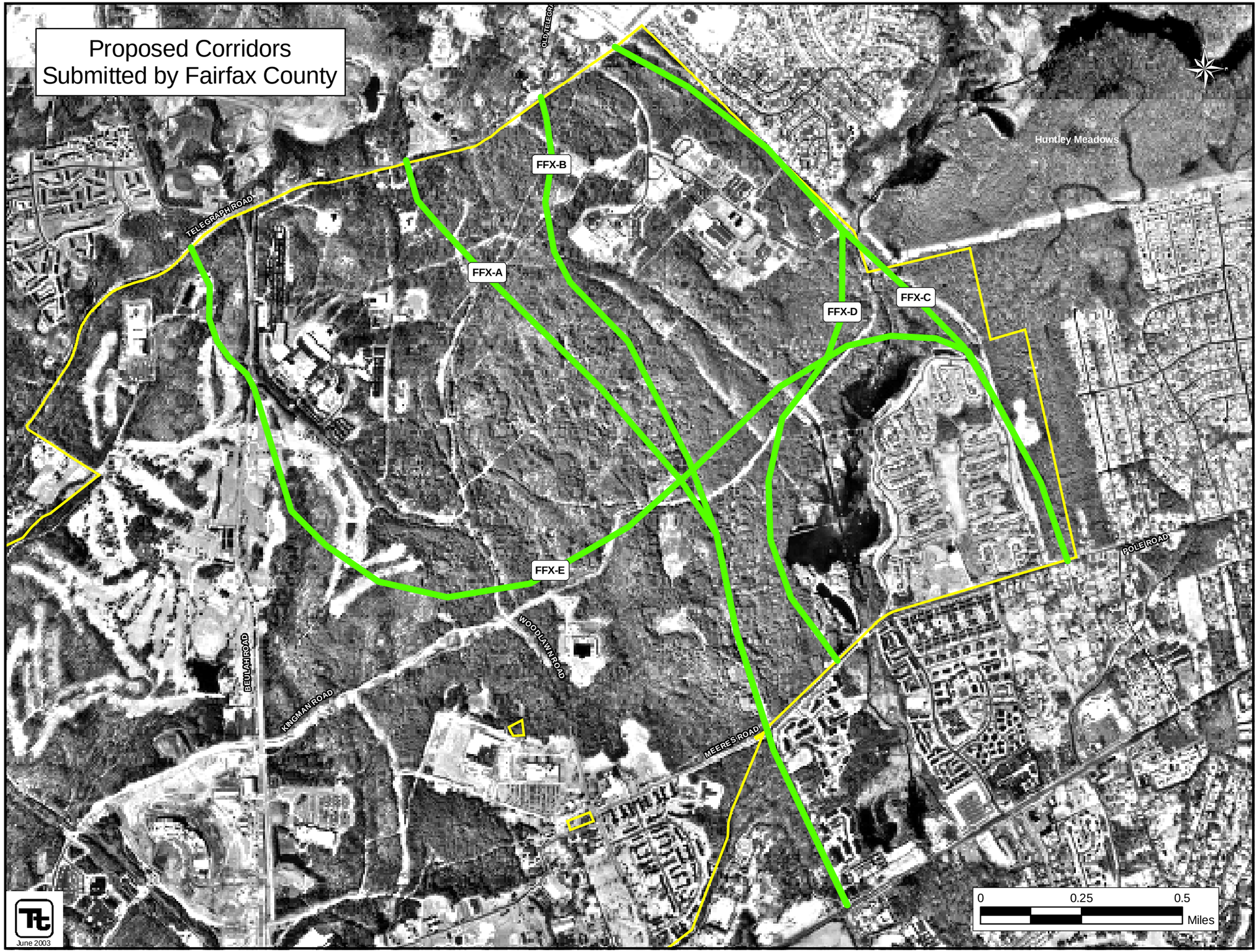
Proposed Corridors North Post Study



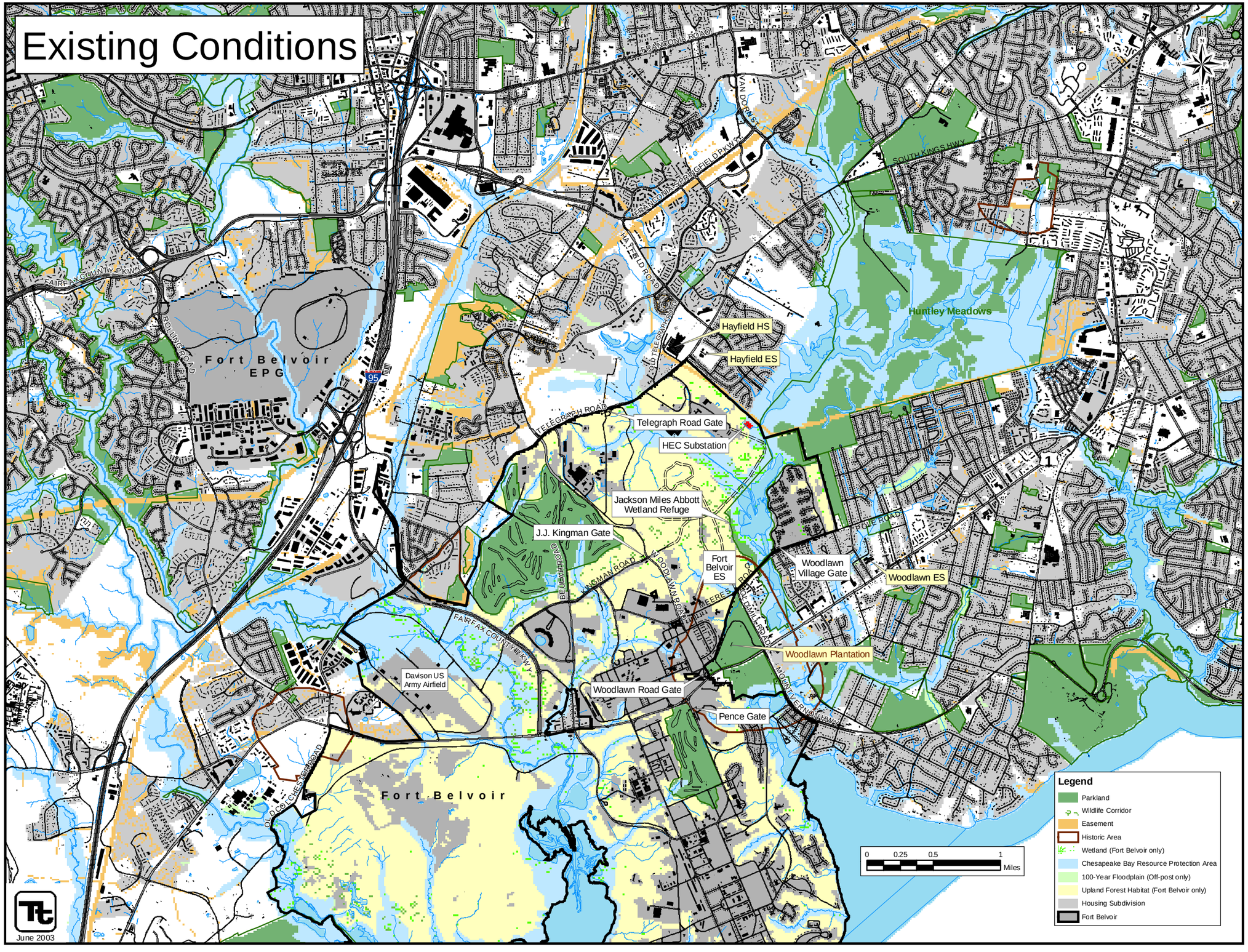


Alternative Not Considered Further (Red)	Primary Reasons for Deletion From Further Study
AB	Adjacent to Woodlawn Plantation National Historic Site. Route too far south.
CEJK	Lies almost completely within floodplain of Dogue Creek. High economic, environmental costs.
PNLK	Uses a private street which would need to be reconstructed through apartment community. Traverses boundaries and corner of Huntley Meadows Park; extensive impacts on Park.
OHG	Traverses southern boundary of Huntley Meadows Park and established Hayfield Farms neighborhood. Long and indirect; use of residential streets still likely.

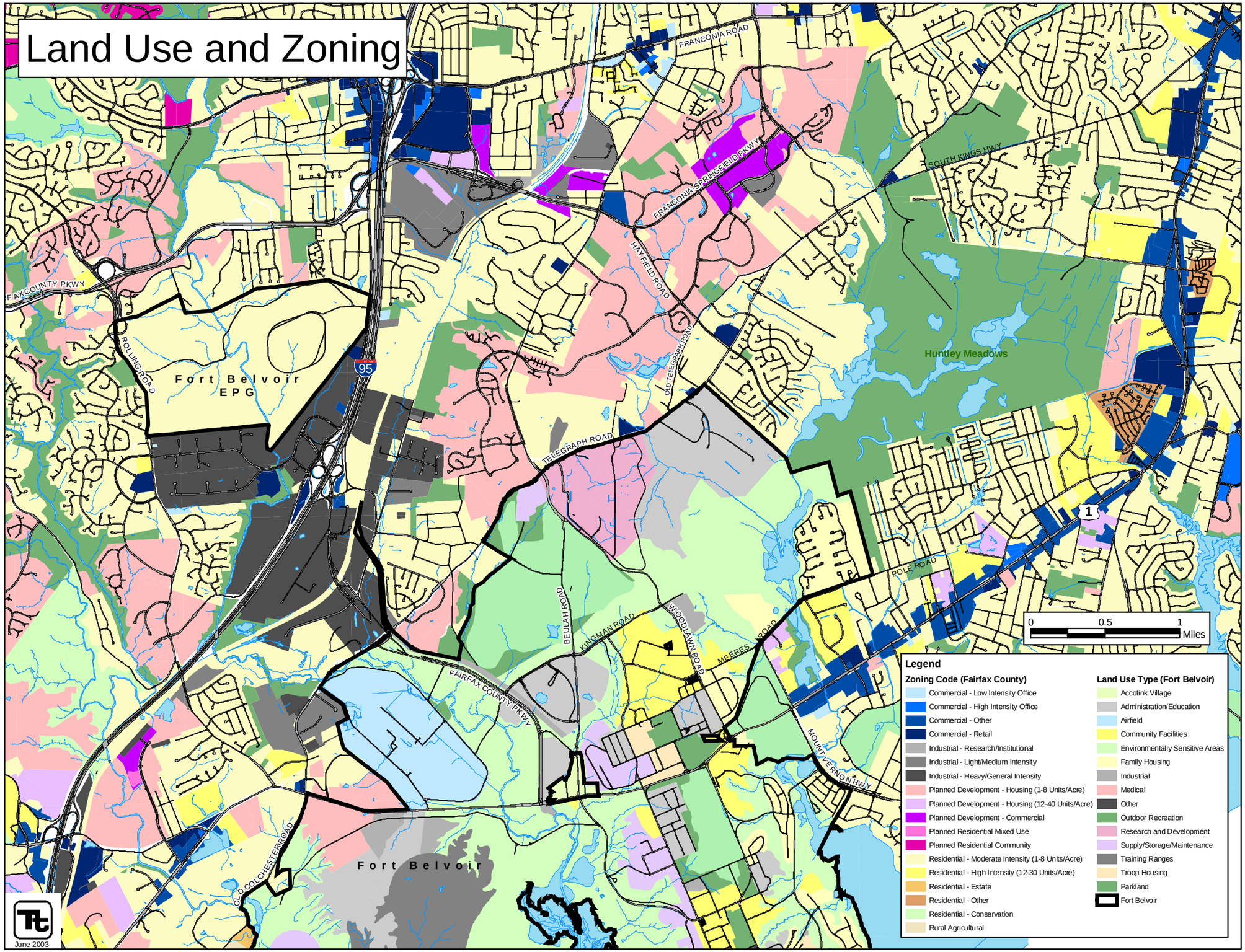
Source: FFX County, 1983


Proposed Corridors
Submitted by Fairfax County
FFX-A
FFX-B
FFX-C
FFX-D
FFX-E
TELEGRAPH ROAD
OLD TELEGRAPH
Huntley Meadows
BEULAH ROAD
KINGMAN ROAD
WOODLAWN ROAD
MEERES ROAD
POLE ROAD
0
0.25
0.5
Miles
June 2003

Existing Conditions

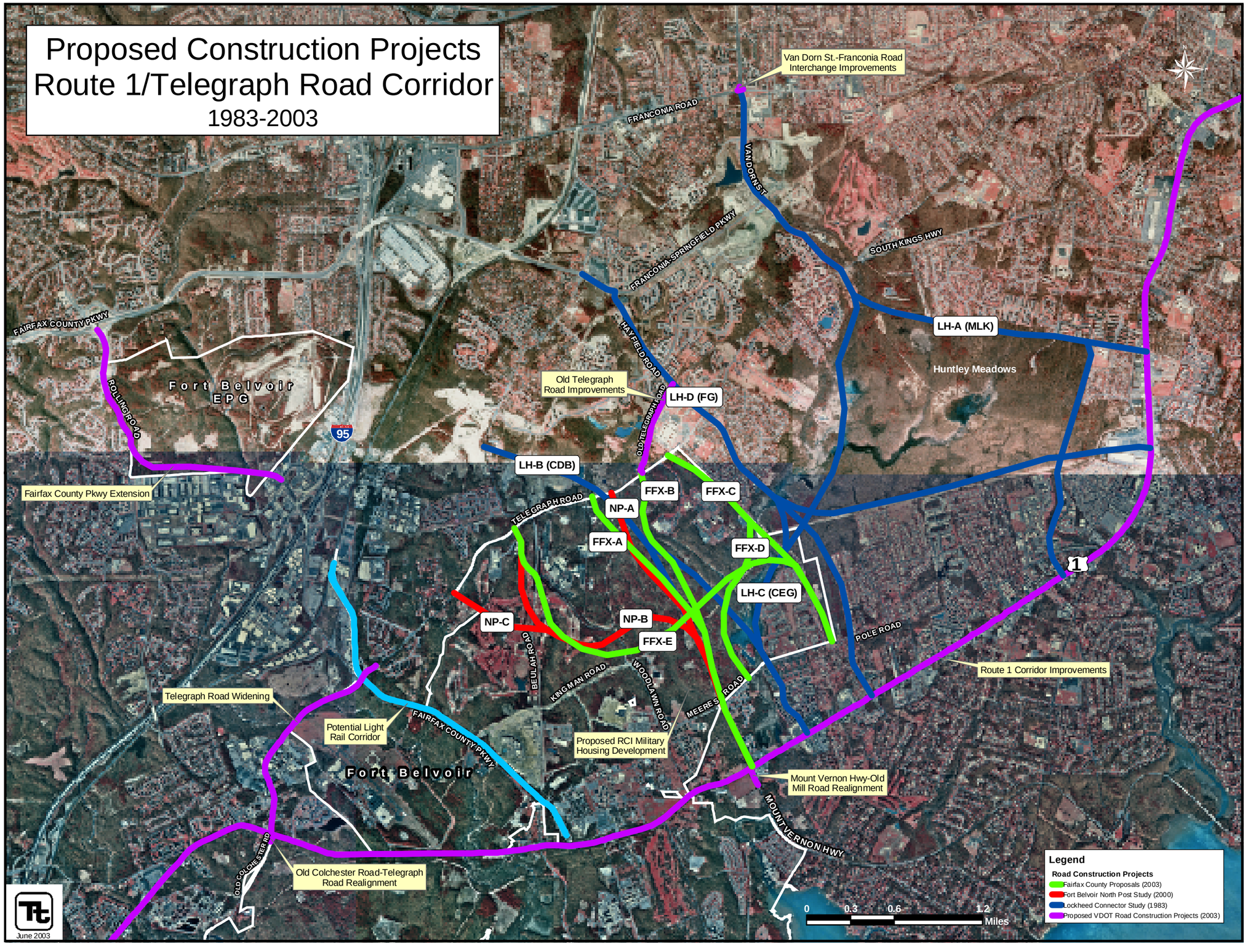


Land Use and Zoning

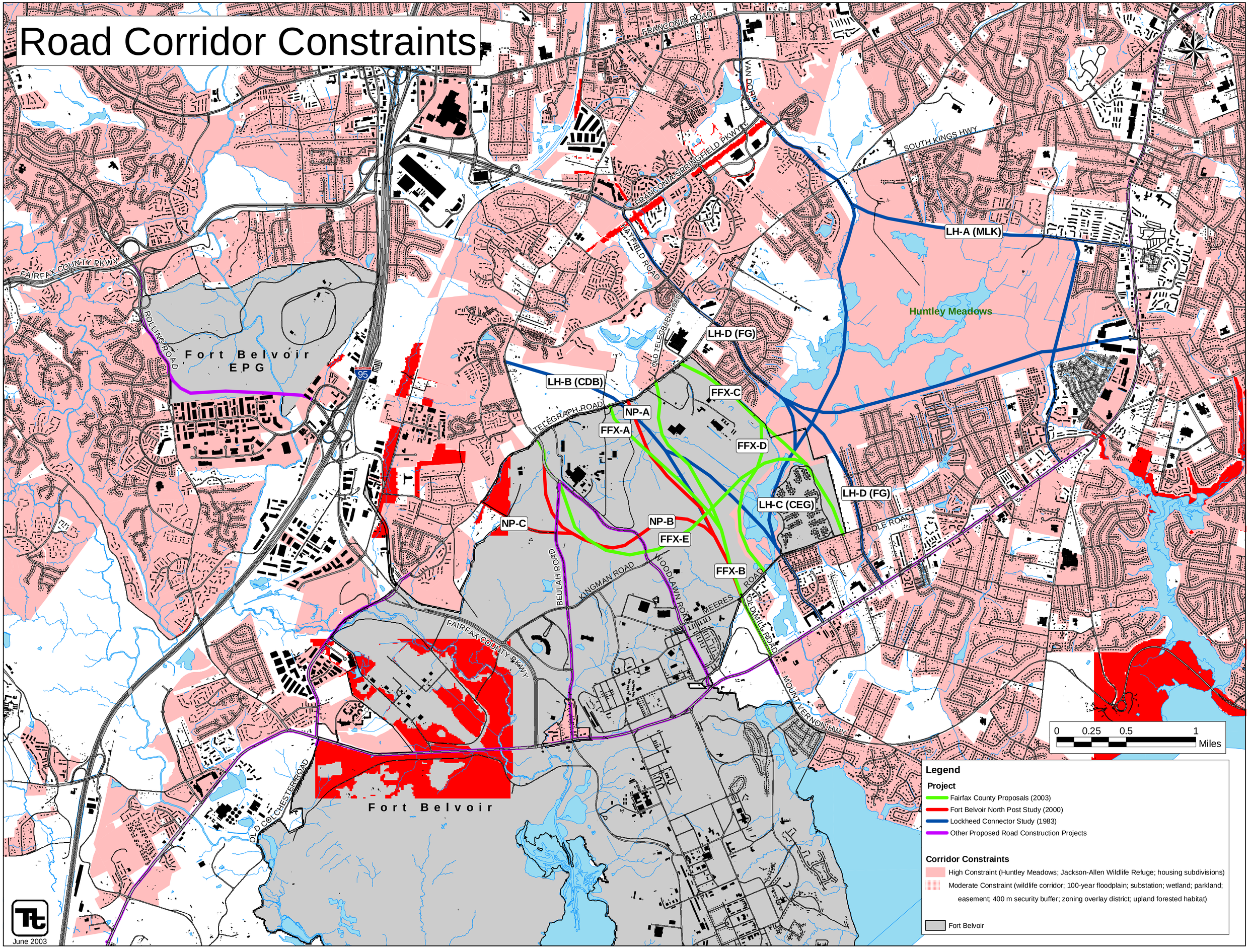


June 2003

Proposed Construction Projects
Route 1/Telegraph Road Corridor
1983-2003



Road Corridor Constraints

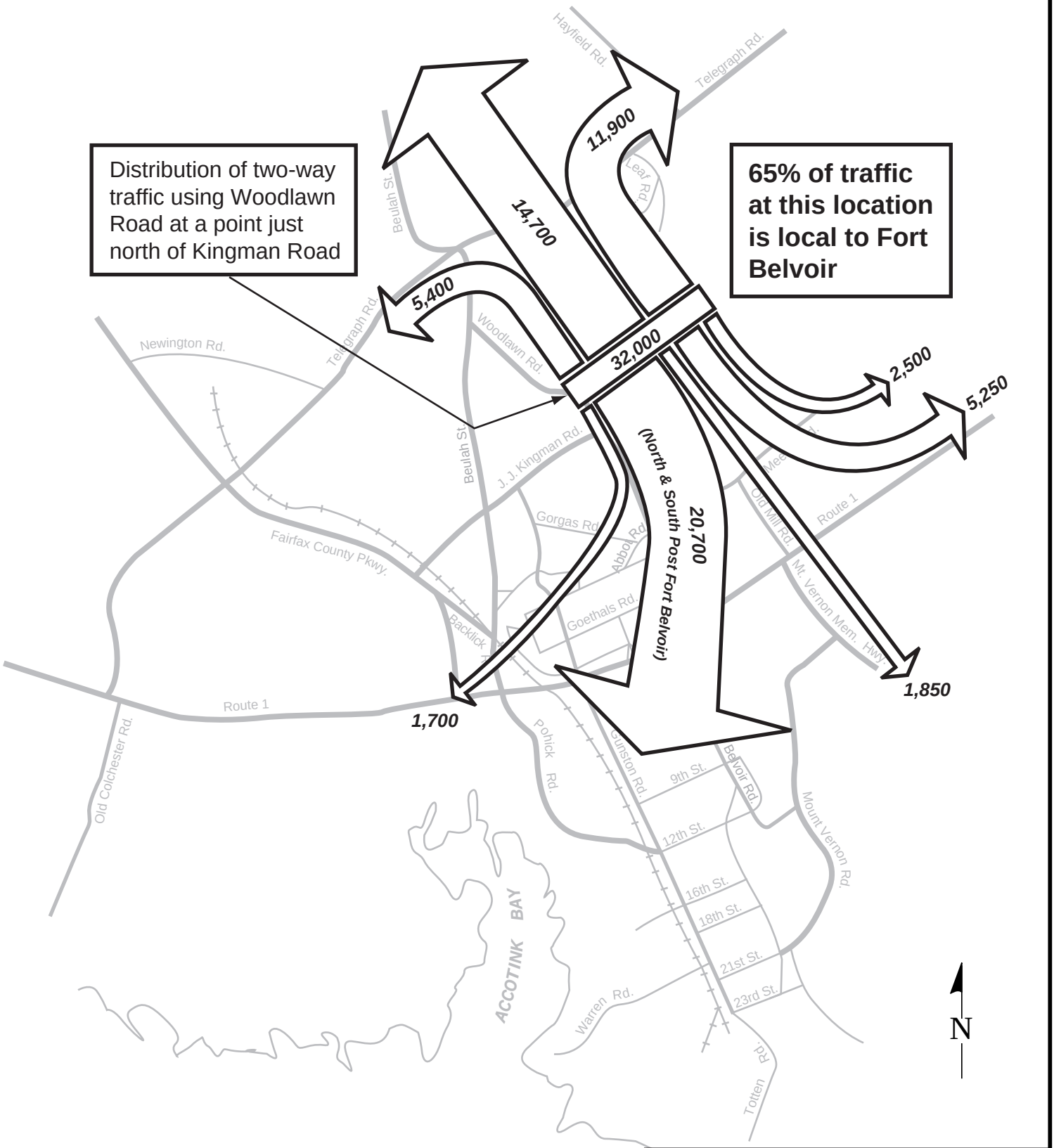


Road Corridor Matrix

		North Post Transportation Study Preliminary Final Design Report (2000)				Lockheed Boulevard Connector Road Environmental Assessment (1983)				2003 FFX CO Corridors				
		CLRP/No-Action Alternative	NP-A	NP-B	NP-C	LH-A *(MLK)*	LH-B *(CDB)*	LH-C *(CEG)*	LH-D *(FG)*	FFX-A	FFX-B	FFX-C	FFX-D	FFX-E
1	**Road Length (miles)**	2.74	2.13	2.86	2.80	3.75	3.08	3.85	3.64	2.20	2.19	1.74	1.89	3.24
	Road Length on Fort Belvoir (miles)	2.74	1.63	2.36	2.20	0.00	1.61	0.95	0.00	1.69	1.69	1.58	1.81	3.23
	Road Length off Fort Belvoir (miles)	0.00	0.50	0.50	0.60	3.75	1.47	2.90	3.64	0.51	0.50	0.16	0.08	0.01
2	**Use of Existing Roadways and Corridors (percentage)**	100%	35%	25%	35%	40%	15%	70%	75%	50%	55%	0%	15%	10%
3	**Route 1 - Telegraph Road Connection**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
4	**East-West Connectivity to Regional Arteries (Franconia-Springfield Parkway)**	High	Medium	High	Low	High	High	High	High	Medium	High	Medium	Medium	High
5	**Alleviation of Local Congestion**	High	High	High	Medium	High	High	Medium	High	High	High	Medium	Medium	Medium
6	**Force Protection Issues**													
	Bisects Fort Belvoir North Post	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes
	Road Length (ft) within 400 Meters of Buildings (identified in North Post Study)	9,286	2,079	2,895	0	0	3,018	0	0	2,857	3,309	0	0	4,978
	Road Length (ft) within 300 Meters of Buildings (identified in North Post Study)	6,838	0	1,403	0	0	2,256	0	0	1,156	2,606	0	0	2,922
	Road Length (ft) within 200 Meters of Buildings (identified in North Post Study)	4,173	0	0	0	0	848	0	0	0	1,706	0	0	1,460
	Road Length (ft) within 100 Meters of Buildings (identified in North Post Study)	611	0	0	0	0	0	0	0	0	536	0	0	0
7	**Within Wetlands/Floodplain (acres)**	0.0	5.0	2.0	2.0	7.0	14.3	14.0	7.1	1.9	3.4	9.9	16.7	11.9
8	**Number of Major Stream Crossings**	4	5	4 - 5	5 - 6	4	4	3	5	9	2	2	3	7
9	**Within Upland Habitat (acres)**	18.9	32.5	22.0	22.5	0.0	18.1	4.9	0.0	22.9	23.2	17.2	21.5	33.4
10	**Potential T & E Impact**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	na	na	na	na	na
11	**Conservation Areas**													
	Within Wildlife Corridor (acres)	1.4	5.7	7.8	7.8	0.0	3.1	0.0	0.0	6.0	6.0	0.8	8.2	19.8
	Within Huntley Meadows (acres)	0.0	0.0	0.0	0.0	18.1	0.0	3.7	8.0	0.0	0.0	1.1	0.0	0.0
	Within Other County/City Parks (acres) (inludes Fort Belvoir golf course)	3.4	2.6	15.9	15.3	0.8	0.0	0.1	1.3	2.3	2.4	0.0	0.0	10.8
	Within Jackson Miles Abbott Wetland (acres)	0.0	0.0	0.0	0.0	0.0	6.6	12.4	0.0	0.0	0.0	4.3	7.9	3.3
	Within Chesaeake Bay Resource Protection Area (acres)	0.0	6.0	1.5	3.2	26.0	17.1	17.0	8.3	2.1	3.4	5.3	13.1	9.4
12	**Noise Sensitive Receptors (schools, churches, residents, hospitals, nursing homes)**	na	na	na	na	na	na	na	na	na	na	na	na	na
13	**SWMUs (within 100 feet)**	No	No	No	Yes (n=1)	No	No	No	No	na	na	na	na	na
14	**Number of Cultural/Historic Sites Potentially Impacted**	13	4	2	5	4	2	unsurveyed	2	na	na	na	na	na
15	**Land Use Issues**													
	Schools (within 500 feet)	0	0	0	0	2	0	0	2	0	0	2	2	0
	Within Subdivisions (acres)	0.0	0.0	0.0	0.0	10.4	5.5	27.0	34.8	0.0	0.1	0.3	0.2	0.1
	Within Easements (acres)	0.0	0.0	0.0	0.0	0.3	1.0	0.8	0.9	0.0	0.0	1.1	1.1	0.0
	Zoning Overlay Districts													
	Within Natural Resource District (acres)	0.0	0.0	0.0	0.0	0.0	6.8	7.3	7.3	0.0	0.0	0.0	0.0	0.0
	Within Water Supply Protection District (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Within Historic/Heritage Protection District (acres)	5.5	10.9	10.8	10.9	0.0	0.0	0.0	0.0	10.9	10.9	0.0	0.2	0.0
	Overall Land Use Compatibility[1]	Low	Low	Low	Low	Medium	Low	Medium	Low	Low	Low	High	High	Low
16	**Notes**	Highest security risk; road closed	Shortest most direct route but with poor connectivity to F/S Parkway w/o continuing the road north and west to Beulah Street; could extend to Beulah behind landfill	Encroaches on DCEETA setback and impacts golf course	Same as NP - B except less direct connection to F/S Parkway	Because of distance from Woodlawn Road, the amount of traffic diverted to this connector is not known; most direct and excellent E-W connector	Similar to several other alternatives except uses Sacramento Drive instead of Old Mill Road as connection to Route 1	Long route through Huntley Meadows	Significant impacts on several residential areas	Shortest most direct route but with poor connectivity to F/S Parkway w/o continuing the road north and west to Beulah Street; couldn't extend to Beulah Street behind landfill	Minimal difference between FFX- A and FFX- B (terminus at Telegraph Road only)	Terminates at Pole Road without direct connection to Route 1; may require relocating substation	Terminates at Pole Road without direct connection to Route 1; may require relocating substation	Longest route; Encroaches on DCEETA setback and impacts golf course; terminates at Pole Road without direct connection to Route 1

[1] From the standpoint of land use compatability, it was assumed that a "secure" roadway across Fort Belvoir (such as NP - A) would be detrimental to the development of the North Post and was, therefore, rated low. Also, land use compatibility of road corridors in high security areas was considered low.

na = not available



Data derived from TransCore's travel demand model for 2020

NORTH POST TRANSPORTATION STUDY

Woodlawn Road
Daily Traffic Origin/Destination Pattern

Not To Scale

TRANSCORE

dtodp2.ai

July 29, 2003

STAKEHOLDER MEETING

Fort Belvoir, VA

1:00 PM

AGENDA

Purpose: To discuss the six revised alternatives developed during the June 25, 2003, meeting and to solicit feedback on the proposed alignments and evaluation criteria. An information packet containing an updated matrix and two maps is provided.

Objective: To present the current status of the Preliminary Feasibility Study (Phase I) and to discuss future actions.

Goal: To discuss the topics listed below prior to continuing the evaluation of the six alternatives currently being considered.

Stakeholder involvement

- Are all stakeholders being represented?
- Is sufficient communication occurring within each agency?

Addition/reduction of six alternatives

- Any other considerations?
- Any no-starters?

Screening Criteria

- Are there any additional criteria to be considered?
- Screening methodology

Traffic models

GIS constraint analysis

Stakeholder issues

Preliminary Feasibility Report

- Present alternatives that represent stakeholder interests/concerns
- Evaluate effectiveness of mitigating traffic congestion in the Fort Belvoir area
- Decisionmaker(s) to determine viability for future action

Other?

Schedule the next meeting for August. The purpose of this meeting will be to discuss the public scoping meeting scheduled for mid-September.

Topics For Discussion

1. Design criteria – Do we add anything else to the matrix?
2. Point of Contact for each Lead agency: Army, Fairfax County, VDOT.
3. Who are POCs coordinating with (FCPS, Mount Vernon Ladies Auxiliary)?
4. Any more alternative to be considered? Maybe a seventh alternative is being proposed.
5. Are we beginning to settle in on 3 or 4 “real” alternatives. “Real” means everyone can live with it, even though it is not their preferred alternative.

MEETING MINUTES

Subject: Minutes of the Preliminary Feasibility Study of the Richmond Highway and Telegraph Road Connector Meeting

Attendees:

USACE, Baltimore District

David Hand (410 962-8154; david.b.hand@usace.army.mil)

IMA/NERO

Bill Sanders (757 788-5193; sanderswl@monroe.army.mil)

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Patrick McLaughlin (703 806 3193; mclaughlinp@belvoir.army.mil)

Richard Bain (703 806-0067; richardb@belvoir.army.mil)

Susie Gillett (703 805-4389; Susie_gillett@belvoir.army.mil)

Don Carr (703 805-2583; carrdona@belvoir.army.mil)

Mike Groeneveld (703 806-0045; Michael_c_groeneveld@belvoir.army.mil)

Dave Ghiglio (703 806-0068; david.j.ghiglio@belvoir.army.mil)

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Fairfax County - Lee District

Bob Heittman (703 971-0531/8519; bhistac@yahoo.com)

Fairfax County - Mount Vernon District

Rose Lambert (703 780-7518; rlambe@fairfaxcounty.gov)

National Capital Planning Commission

Gene Keller (202 482-7251; gene.keller@ncpc.gov)

Joe Kocy (202 482-7275; joe@ncpc.gov)

MTMC – DAR Program

Chuck Ferguson (757 599 1117; chuck.ferguson@tea.army.mil)

HECS, Corps of Engineers

Tom Rollins (703 428-6548; william.t.rollins@hq02.usace.army.mil)

VDOT

Dic Burke (703 383-2431; richard.burke@virginiadot.org)

TransCore

John Wright (703 813-3243; john.wright@transcore.com)

Jun Villoria (703 813-3248; jun.villoria@transcore.com)

Tetra Tech

Sean Donahoe ([p] 703 385-6000; [f] 703 385-6007; Sean.Donahoe@tetratech-ffx.com)

Tom Magness (703 385-6000; magneto@tetratech-ffx.com)

Jeff Moran (703 385-6000; jeff.moran@tetratech-ffx.com)

Chris Nordstrom (703 385-6000; chris.nordstrom@tetratech-ffx.com)

Minutes:

A meeting was held at the Springfield Mall office of VDOT on July 29, 2003. Meeting attendees and contact information from the sign-up sheet are presented above. The purpose of the meeting was to discuss the six proposed alternatives developed during the June 25, 2003, meeting and solicit feedback on the proposed alignments and evaluation criteria. An information packet was provided as a handout containing an agenda, updated matrix, and revised map.

Dave Hand, Project Manager for the study, opened the meeting by stating the purpose of the meeting and proceeded through the agenda. He stated the importance of establishing consensus on the alternatives and the evaluation criteria. Mr. Hand asked if anyone thought any of the six alternatives were non-starters or if additional alternatives should be considered.

The meeting then opened for general discussion.

Addition to Six Alternatives

Lockheed Connector Study (Route "MLK," the preferred alternative in the LH study). Fort Belvoir expressed an interest in including the LH connector alternative that extends from South Kings Highway through the northeastern portion of Huntley Meadows to Route 1. It was suggested that, although this corridor is farther north, this corridor would serve a larger population of local residents. VDOT and Fairfax County reiterated discussions held during the June 25, 2003, meeting, stating that this corridor was unsuccessful in past attempts. They emphasized that this alternative was a nonstarter because it had environmental issues and lacked support from the Department of the Interior and Congress. They also felt that this alternative was too far north and that Alternatives 1 and 2 were more appropriate alternatives for the purpose of replacing Woodlawn Road and Beulah Street. It was proposed by Fort Belvoir that environmental mitigation measures, however, could possibly be performed on Fort Belvoir (or special legislation could be pursued) to address past LH connector issues. It was agreed that the Feasibility Study will incorporate by reference information regarding this corridor and the LH connector study.

Improvements to the Fairfax County Parkway were requested as a possible new alternative. It was noted that it is not within the scope of this project to analyze the Parkway, and that this study is over and above Parkway. improvement plans (e.g., interchange, additional lanes). Also, local residents desire a more north-east solution.

Deletion of any Alternatives

None of the six alternatives were removed from further analysis.

Other Considerations

A realignment of Alternative 1 was discussed that could minimize environmental impacts. This new corridor would more closely follow the western boundary of Huntley Meadows. It was discussed whether or not this Alternative would be required to be entirely elevated on structure.

Alternatives 1 and 2 were noted to have potential conflicts with residential areas, even if the corridor property could be acquired. It was noted that Fort Belvoir Command had requested consideration to Alternative 2, and also that attention to Old Mill Road is within the Congressional mandate for this study.

A sub-alternative was also discussed. This included extending Alternatives 1 and 2 to Hayfield Road. This option is presented below.

Hayfield Road extension – The Corps discussed the possibility of a Hayfield Road extension as subalternatives to Alternatives 1 and 2 to minimize impacts on the environment and force protection

concerns. Fairfax County stated that the extension would not be viable because of the existing residential community on Hayfield Road, south of Telegraph Road.

Fort Belvoir noted that Alternatives 2 and 3 would impact the electric substation, which provides all of Fort Belvoir's electricity and is a key facility of Dominion Virginia Power. Setback requirements will be researched, but they may be has high as 400 meters. Relocation and the associated costs of such an action should be included in the analysis of Alternatives 2 and 3.

Fort Belvoir stated that Alternatives 3, 4, 5, and 6 would have the greatest impacts to Fort Belvoir. It was noted that Alternative 5 is in near proximity to possible major future development on Fort Belvoir, which is being considered for the North Post golf course area. Potential Alternative 3 impacts on RCI housing were discussed, but it was decided that it is still a viable corridor, particularly with its connection to Old Mill Road.

It was noted that Alternative 6 is not a four-lane road, but that its reopening is an alternative. It was noted that Alternatives 1, 2, 3, 4, and 5 would be evaluated to accommodate up to a four-lane road.

A general consensus was reached that the alternatives to be evaluated would remain the six that were shown on the corridor map. However, it was noted that the corridors discussed were approximate and that they did not yet represent the detailed alignments. Therefore, alterations of the alignments will be considered as the evaluation of each proposed alternative proceeds. The alternatives were broken into three categories (1) Within Fort Belvoir, (2) Outside of Fort Belvoir, and (3) a combination of on-post and off-post corridors.

Screening Criteria

Number of lanes (two or four). The stakeholders agreed to evaluate corridors that include the width of a four-lane road (128 feet), with the exception of Alternative 6 which is currently being considered as a 2-two lane option.

Number of Grade Separated Interchanges. Stakeholders requested clarification on this criteria, and requested a possible subheading entitled "Constructability."

Traffic Volumes. Fairfax County requested to include level of service, delay per vehicle (baseline vs. alternatives), and hours of congestion data.

SWMUs. Stakeholders requested clarification on the content of this criteria (e.g., if this category includes landfills, sewer/septic systems). Fort Belvoir noted that no septic systems exist on-post. Fairfax County said they do exist off-post, and that GIS layers should be available for integration into the GIS system.

Utilities. Fairfax County requested to include utility information. Specifically, the study should identify what utilities need to be relocated and what corresponding easements exist.

Easements. Requested a break out according to type.

"Number of Units Taken"/"Number of Acres of Take." Request to provide information on the number of units or acres (on-post vs. off-post) that would be taken. Fairfax County noted that designed developments involve a plan submission, and that parcels or plans that have "approved" status should be identified as the "actual" take costs may reflect the fully developed state of the planned parcel. Fairfax County offered their assistance in identifying development plans.

Force Protection. It was requested that the "Force Protection Issues" include the frequency in which the Alternative crosses a road/intersection.

Water Supply Protection District. Confirmation that this is an accurate criterion was requested.

Cost. Provide a breakdown on the major categories of cost (e.g., structure, existing facilities)

Potential T & E Impacts (acres) and Rare Ecological Communities (acres). Should be expanded to include off-post data.

Additional Screening Criteria. Aesthetics and project timelines should be considered for the matrix.

Aerial Photograph. Fairfax County requested that a more recent aerial photograph be used in the presentation of alternatives.

There was agreement that the evaluation criteria would not be weighted as part of this study.

Fairfax County requested that Tetra Tech work with their staff to incorporate relevant information to the corridors.

Dave Hand requested that everyone review the matrix in detail and provide written comments to add, modify, or delete the evaluation criteria. He also emphasized that the evaluation criteria and methodology would represent everyone's ideas and will be fair and objective.

Stakeholders/Public Involvement

Tetra Tech asked if all appropriate agencies were represented in this meeting and in the study. The point was made that it was important to make sure that each representative from their respective agency were communicating with those within their agencies to avoid "new" conflicts as the study progresses.

There were discussions on the Master Plan EIS scoping meeting and how a booth would be included at that meeting to address the purpose and status of this study. All were in agreement of this action.

Preliminary Feasibility Report

A Draft Feasibility Report will be prepared following the finalization of the evaluation of alternatives. This will be performed once all evaluation criteria are finalized on the matrix.

Other

Master Plan Scoping Meeting. A booth will be set up to present the purpose of this study and collect input from the public.

It was noted the SOW currently does not include specific provisions for short-term analyses. It was recognized that the public is most interested in the immediate and short-term solutions and that the stakeholders need to have a unified position prior to the scoping meeting.

Next Meeting

A revised matrix will be provided in advance of the next meeting. The updated matrix will incorporate changes based on discussion in today's meeting and written comments from the stakeholders. The next meeting is scheduled for 9:30 a.m., August 26, 2003.

Action Items:

Corps (1) Review matrix and provide comments.

(2) Forward review comments from stakeholders to Tetra Tech.

FB	(1) Review matrix and provide written comments to Dave Hand.
	(2) Provide Tetra Tech with required stand-off distance for key tenant organizations.
VDOT	(1) Review matrix and provide written comments to Dave Hand.
FFX County-	(1) Work with Tetra Tech in pulling together relevant data in County records.
	(2) Review matrix and provide written comments to Dave Hand.
Tetra Tech	(1) Distribute meeting minutes.
	(2) Meet with Fairfax County to receive relevant data.
	(3) Incorporate comments from stakeholder into matrix.

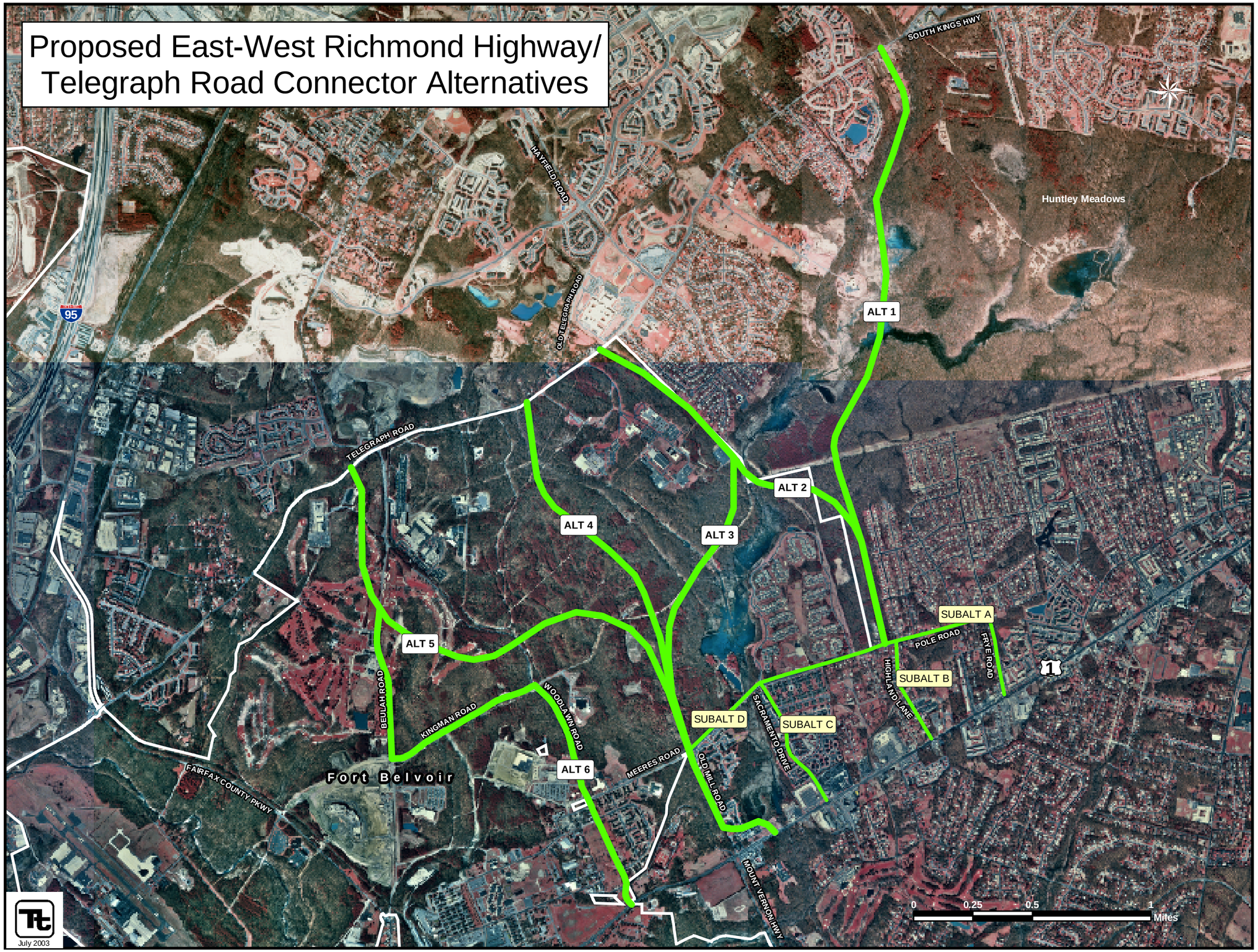
Preliminary Feasibility Study (Phase I) of
Richmond Highway and Telegraph Road Connector
Fort Belvoir, VA

CRITERIA	ITEM No.	DESCRIPTION	ALT-1	ALT-2	ALT-3	ALT-4	ALT-5	ALT-6
INFRASTRUCTURE	1	**Total Road Length (miles)**	2.6	1.9	2.7	2.3	3.0	3.0
		Road Length on Fort Belvoir (miles)	0.0	1.0	2.0	1.7	2.4	3.0
		Road Length off Fort Belvoir (miles)	2.6	0.9	0.7	0.6	0.6	0.0
	2	**Use of Existing Roadways and Corridors (percentage)**	5%	0%	60%	70%	40%	90%
	3	**Linear Feet Elevated**	na	na	na	na	na	na
	4	**Number of Grade Separated Interchanges**	na	na	na	na	na	na
TRAFFIC VOLUMES[1]	5	**Volume on New Connector**						
		North End of Connector	14,000	14,000	12,000	14,000	15,000	13,000[2]
		South End of Connector	14,000	14,000	12,000	13,000	10,000	14,000[2]
	6	**Reduction in Volume on Parallel N-S Routes**						
		Route 1 (North of Sherwood Hall Lane)	4,000	3,000	2,000	2,000	2,000	1,000[2]
		Fairfax County Parkway (North of Kingman Road)	6,000	6,000	5,000	8,000	7,000	7,000[2]
		TOTAL	10,000	9,000	7,000	10,000	9,000	8,000[2]
	7	**Reduction in Vehicle Hours of Travel (VHT)**	4,000	3,000	3,000	3,000	1,000	3,000[2]
CONNECTIVITY	8	**Route 1 - Telegraph Road Connection**	Fair	Fair	Good	Good	Fair	Good
	9	**East-West Connectivity to Regional Arteries (Franconia-Springfield Parkway)**	Good	Fair	Fair	Fair	Good	Good
FORCE PROTECTION	10	**Force Protection Issues**						
		Bisects Fort Belvoir North Post	No	Yes	Yes	Yes	Yes	Yes
		Road Length (ft) within 400 Meters of Buildings (identified in North Post Study)	0	0	0	2,860	2,895	8,907
		Road Length (ft) within 300 Meters of Buildings (identified in North Post Study)	0	0	0	1,195	1,403	5,398
		Road Length (ft) within 200 Meters of Buildings (identified in North Post Study)	0	0	0	0	0	2,343
		Road Length (ft) within 100 Meters of Buildings (identified in North Post Study)	0	0	0	0	0	0
LAND USE	11	**Land Use Issues**						
		Schools (within 500 feet)	0	2	2	0	0	0
		Within Subdivisions (acres)	5.3	0.2	0.2	0.0	0.0	0.0
		Within Easements (acres)	0.5	1.1	1.1	0.0	0.0	0.0
		Zoning Overlay Districts						
		Within Natural Resource District (acres)	0.0	0.0	0.0	0.0	0.0	0.0
		Within Water Supply Protection District (acres)	0.0	0.0	0.0	0.0	0.0	0.0
		Within Historic/Heritage Protection District (acres)	0.0	0.0	12.5	12.5	12.5	5.5
		Overall Land Use Compatibility	Low	Medium	Medium	High	Low	Low
ENVIRONMENTAL	12	**Within Wetlands/Floodplain (acres)**	23.7	6.7	14.1	5.2	2.6	0.5
	13	**Number of Major Stream Crossings**	4	2	5	6	4	6
	14	**Within Upland Habitat (acres)**	0.0	11.6	25.3	22.9	20.9	9.7
	15	**Potential T & E Impact (acres of wood turtle habitat; Fort Belvoir only)**	0.0	5.4	11.8	5.1	0.0	0.0
	16	**Rare Ecological Communities (acres; Fort Belvoir only)**	0.0	0.0	0.0	1.2	0.1	0.0
	17	**Conservation Areas**						
		Within Wildlife Corridor (acres)	0.0	1.2	13.7	6.0	7.8	1.1
		Within Huntley Meadows (acres)	17.7	3.0	0.0	0.0	0.0	0.0
		Within Other County/City Parks (acres) (inludes Fort Belvoir golf course)	13.7	8.4	2.3	2.3	15.9	12.6
		Within Jackson Miles Abbott Wetland (acres)	0.0	3.3	0.2	0.0	0.0	0.0
		Within Chesapeake Bay Resource Protection Area (acres)	23.7	4.5	11.0	7.7	3.2	1.1
	18	**SWMUs (within 100 feet; Fort Bevloir only)**	0	0	0	0	2	1
	19	**Noise Sensitive Receptors (schools, churches, residents, hospitals, nursing homes)**	na	na	na	na	na	na
CULTURAL	20	**Number of Cultural/Historic Sites Potentially Impacted (Fort Belvoir only)**	0	0	2	2	3	8
COST	21	**Cost Estimate Range**	TBD	TBD	TBD	TBD	TBD	TBD

Tetra Tech July, 2003

[1] **Rounded approximations**
[2] **Traffic counts reflect original Alternative 6 alignment**
na = not currently available

Proposed East-West Richmond Highway/ Telegraph Road Connector Alternatives



August 26, 3003

STAKEHOLDER MEETING

Fort Belvoir, VA

9:30 AM

AGENDA

Purpose: To discuss the evaluation criteria in the Matrix that will be used to evaluate the six road corridor alternatives, address availability of data for the criteria, and solicit feedback on the perceived advantages and disadvantages for each alternative. An information packet containing an updated matrix, corridor map, and a draft list of advantages and disadvantages for each alternative are provided.

Objective: The four primary objectives are to update the stakeholders on the status of the evaluation of alternatives, achieve consensus on the evaluation criteria, address the inclusion of readily available data in the matrix, and obtain official approval on corridor alignments and evaluation criteria. Meeting these objectives will allow the Baltimore District to proceed with the evaluation of alternatives and preparation of the Draft Feasibility Study Report.

Action Items Remaining From July 29 Meeting

- Written comments on the matrix
- Required stand-off distances for security sensitive tenants
- Final data collection with Fairfax County

Evaluation Criteria

- Have the criteria requested in the July 29 meeting been added to the matrix?
- Are there any additional criteria to be considered?
- Data availability
    - Level of detail required for this level of study
        - Traffic models
            - relevant analyses

        - Off-post data

- Screening methodology
    - Traffic models
    - GIS constraint analysis
    - Stakeholder input

Advantages/Disadvantages of each alternative

- Draft list provided as a qualitative evaluation
    - Input from the stakeholders?

Road Feasibility Study Booth (MP EIS Public Scoping Meeting)

- Need to receive official signoff approval from Army, VDOT, and Fairfax County on the six alternatives and meeting materials
- Meeting scheduled for September 25, 2003 at Mount Vernon High School from 6-9 p.m.
- Thoughts on what to present/handouts?
- Method of receiving and documenting public comments (handout).

Future meetings

- Propose having a meeting the first week of September with authorized representatives to obtain official sign off of materials to be presented in public meeting.
- Next stakeholder meeting date?

MEETING MINUTES

Subject: The Preliminary Feasibility Study of the Richmond Highway and Telegraph Road Connector Meeting.

Attendees:

USACE, Baltimore District

David Hand (410-962-8154; david.b.hand@usace.army.mil)

Jim Simms (410-962-0684; james.l.simms@usace.army.mil)

NERO-DPW

Bill Sanders (757-788-5193; sanderswl@monroe.army.mil)

NERO-ENV

Chris McDaid (757-788-4496; chris.mcdaid@Monroe.army.mil)

ACSIM

Richard Bain (703-692-9207; richard.bain@hgda.army.mil)

NMUSA-PDC

Tom Genis (202-674-5265; tomgenis@aol.com)

Michael Mancuso (202-685-2798; michael.mancuso@hgda.army.mil)

Randy Rivinus (706-566-5103; rrivinus@midland-engineering.com)

MTMC – DAR Program

Chuck Ferguson (757-599-1117; chuck.ferguson@tea.army.mil)

Fort Belvoir

LTC Kevin Tate (703-455-2532; kevin.tate@belvoir.army.mil)

Patrick McLaughlin (703-806-3193; mclaughlinp@belvoir.army.mil)

Dave Ghiglio (703-806-0068; david.j.ghiglio@belvoir.army.mil)

Fairfax County DOT

Kathy Ichter (703-324-1150; kathy.ichter@fairfaxcounty.gov)

Mark Canale (703-324-1177; mark.canale@fairfaxcounty.gov)

VDOT

Dic Burke (703-383-2431; richard.burke@virginiadot.org)

Mount Vernon Transportation Commissioner

Earl Flanagan (703-780-4709; earlflanagan@verizon.net)

Fairfax County - Lee District

Bob Heittman (703-971-0531/8519/6262; bhistac@yahoo.com)

Fairfax County - Mount Vernon District

Rose Lambert (703-780-7518; rlambe@fairfaxcounty.gov)

TransCore

John Wright (703-813-3243; john.wright@transcore.com)

Jun Villoria (703-813-3248; jun.villoria@transcore.com)

Tetra Tech

Sean Donahoe ([p] 703-385-6000; [f] 703-385-6007; Sean.Donahoe@tetratech-ffx.com)

Jeff Moran (703-385-6000; jeff.moran@tetratech-ffx.com)

Chris Nordstrom (703-385-6000; chris.nordstrom@tetratech-ffx.com)

Minutes:

Dave Hand (Baltimore District), Project Manager for the study, opened the meeting by stating the purpose of the meeting and provided an overview to the agenda and handouts. He emphasized that a primary purpose of this meeting was to gain consensus on the corridors in preparation for the upcoming public information meeting. He requested that comments be directed to him for consideration. He then requested introductions from the stakeholders.

Mr. Hand then proceeded through the meeting agenda.

Action Items Remaining From July 29 Meeting

- Written comments on the matrix:

Discussions began with the importance of receiving comments from the stakeholders prior to the next meeting to maximize the effectiveness of stakeholder input and to maintain progress throughout the study period.

- Final data collection with Fairfax County:

  County representatives agreed to assist Tetra Tech in filling data gaps. Fairfax County said they would coordinate with Tetra Tech to acquire the data, and mentioned that a list of outstanding data needs was available.

Evaluation Criteria

- Have the criteria requested in the July 29 meeting been added to the matrix?
- Are there any additional criteria to be considered?

A question was raised about adding other pre-existing conditions (e.g., distance to schools, utilities) as a "baseline" for comparison. However, it was decided in the meeting that transportation is the only criteria to be used for baseline comparison and that the remaining evaluation criteria were not affected by the closing of Woodlawn Road.

Traffic. It was requested that more information regarding baseline conditions (Woodlawn) be incorporated into the matrix. The response was that traffic-related studies were being conducted, and that they would be presented in the matrix prior to the next meeting.

Destination Criteria. A suggestion to include travel time to Huntley Meadows was made. It was agreed that a qualitative assessment of travel time to major destinations could be included in the study.

Timeline. A suggestion was made that a comparison be made of the anticipated construction timelines of the various corridors. An agreement was reached that too many variables exist at this level of study to provide any reasonable schedule for the alternatives.

Additional criteria. These were mentioned as possible additions to the matrix/study including mass transit (and the participation of WMATA personnel), and emergency services. These additional items were outside the scope of this study.

A clarification was made that the scope of this Feasibility Study is preliminary in nature and that a detailed analysis would be performed should this study proceed to project status.

Traffic Models. The method of analysis and the model being used (MWCOG Model) to perform the traffic analyses was presented to the stakeholders. An important finding from multiple traffic model runs was also presented. The alternatives had the same relationship to each other for both two-lane and four-lane road scenarios, and the same relationship regardless of the baseline scenario (pre-9/11, post-9/11, and present-day scenarios were all run). There was agreement that this information needed to be clearly presented in the public information meeting.

It was also noted that construction method (e.g., grade separation) and the resulting speeds would also be a factor in the travel times. Again, at this level of study, a detailed evaluation is not appropriate because a corridor is being evaluated, not a specific roadway.

Level of service (LOS)/Delay Per Vehicle. Requests were made for more detailed information (level of service, delays, and hours of congestion) to be added to the matrix. It was noted that Matrix Item 5, "Projected Reduction," provides a good, general estimate for time savings and that Item 6, "Woodlawn Road Rerouted," relates to traffic on Woodlawn prior to 9/11. Also, Items 3 and 4 look at reduction from two specific points.

- Items 7 and 8 on the Matrix (LOS and Delay per vehicle) were considered to be too detailed for the current year but would be included in the out-year model. In addition, an explanation that these data were calculated by selecting multiple points on parallel facilities and comparing to the alternatives was provided. They reiterated that Item 5, "Projected reduction…," is a good, aggregate view of the traffic. It was suggested that the language used be less technical and therefore a more "generic" title for that criteria be used.

- There was a request to include LOS information on the matrix. Fairfax County agreed to work with Tetra Tech and TransCore in identifying two-off post intersections and comparing the LOS with each alternative.

Projections. There was also discussion about running future year model runs to show the effectiveness of the alternatives in out years. TransCore agreed to run the more detailed analysis in the out years but stated that it would not be run for the current year analysis. The out year was initially going to be run for year 2010. TransCore later realized that the MWCOG model was not calibrated for year 2010 and recommended that the 2025 model, currently being used as the traffic model for the Fort Belvoir Master Plan, be used.

It was stated that the model conditions assume DoD access on Beulah, and that if it was removed, the numbers may need to be adjusted.

A recommendation was made to include all assumptions regarding the number of intersections, access points, and so forth in the model. It was explained that all assumptions would be included with the model runs. It was also pointed out that the model is analyzing a four-lane corridor and that details regarding overpasses vs. at-grade intersections were not detailed in this study.

Fairfax County suggested current traffic analyses could be based on fewer criteria, but that future conditions should involve a more detailed presentation. It was noted that typically 1.5 to 2 percent growth increases are assumed in County models, with around 2 percent being the recommended level for this area.

Force Protection. Fort Belvoir suggested that a decision paper should be drafted and forwarded through Army channels to get approval for setbacks being used in this study. Tetra Tech stated they would draft this document and provide it to the Baltimore District who could finalize it and send it to Fort Belvoir. USACE-Omaha was noted as being skilled in force protection issues and that should future, more detailed studies warrant, they may be a useful resource in determining mitigating force protection measures (e.g., facility hardening, power substation relocation).

Costing. The planned methodology for cost estimating was presented to the stakeholders. A basic, four-lane, at-grade road would be the starting point, and additional "add-ons," such as grade-separated interchanges and wildlife overpasses, would be presented as "cost per unit" items. A recommendation to provide a range of costs to represent a low and a high price/order of magnitude was made.

Off-Post Data. There was a brief discussion about the availability of Fairfax County data during the meeting. An agreement was made between Fairfax County and Tetra Tech to work together on determining what data are available and what was going to be included in the matrix. There were also discussions regarding the Virginia Electric and Power Company (VEPCO) substation that would be impacted by Alternatives 1 and 2. The stakeholders agreed that the appropriate action would be to consider relocation of the substation and include this action in the cost estimate.

Screening Methodology. It was emphasized that stakeholder input was the critical component of the screening methodology and that each stakeholder should provide feedback as issues are identified, and not wait for the next stakeholder meeting.

- Advantages/Disadvantages of each alternative

- Draft list provided as a qualitative evaluation

Input from the stakeholders. The purpose for providing the list of Advantages/Disadvantages was to share a "working copy" with the stakeholders and solicit a response to add or remove items from the list prior to the next meeting.

- Road Feasibility Study Booth (MP EIS Scoping Meeting)

Need to receive official signoff approval from Army, VDOT, and Fairfax County on the six alternatives and meeting materials. A representative from each primary stakeholder (Army, VDOT, Fairfax County) needs to be identified so that these representatives would be the single point of contact for each agency for approving the materials to be presented during the public meeting.

A meeting is scheduled for September 25, 2003, at Mount Vernon High School from 6-9 p.m. LTC Tate explained that the Notice of Intent (NOI) release package is currently under review and needs to be advertised by September 10, 2003, in order for the September 25, 2003, scoping meeting to take place. There was significant discussion about holding joint meetings and the latest date that a "courtesy meeting" for this study could be held. It was emphasized that it was not the intent of the public information booth to become a "public scoping meeting" because this would occur formally during the next phase when an EIS would be prepared if the road study were to move forward as a project. To that end, the point was raised that it would be better to keep the meeting combined if possible. LTC Tate suggested reserving Mount Vernon High School for a date in mid-October as a back-up plan for a public meeting if the NOI release package is not advertised by September 10, 2003.

Thoughts on what to present/handouts. The primary discussion on this topic was to clarify that a public meeting is not required at this stage of the study. This study is not yet a project and therefore, the NEPA process requiring a formal public meeting is not within the scope of work. This meeting is considered a courtesy meeting to share information with the public and collect written comments only.

Method of receiving and documenting public comments (handout). It was agreed that a comment form would be provided at the booth for the public to fill out. The comments would be compiled and added as an appendix to the Draft Feasibility Study Report. It was also suggested that if the meeting does not take place in time for the report to be submitted, an addendum report could be prepared that would include the public comments as an appendix.

Future Meetings:

A tentative date of September 16, 2003, was set for our next meeting. This meeting was recommended to coincide with the TRT meeting and serve as a status briefing to the TRT members.

It was agreed that representatives from each primary stakeholder would present a project update to the TRT members and give final approval of the public scoping materials.

Schedule:

Although the schedule was not specifically discussed during the meeting, the following schedule is presented to allow all stakeholders to plan for the remaining tasks in this study. This schedule will be discussed at the next stakeholder meeting.

October 17, 2003: Draft Feasibility Study Report to Stakeholders

October 28, 2003: Review comments from Stakeholders to Baltimore District

November 5, 2003: On-board review of important issues raised in stakeholder review comments

November 12, 2003: Submit Draft Preliminary Feasibility Report to IMA-NERO

Action Items:

Corps	(1) Review matrix and provide comments.
	(2) Forward review comments from stakeholders to Tetra Tech.
	(3) Provide setback decision paper to LTC Tate.
FB	(1) Review matrix and provide written comments to Dave Hand.
VDOT	(1) Review matrix and provide written comments to Dave Hand.
FFX County	(1) Review matrix and provide written comments to Dave Hand.
	(2) Work with Tetra Tech in pulling together relevant data in County records/data.
Tetra Tech	(1) Distribute meeting minutes.
	(2) Draft a Setback Decision Paper, send to Baltimore District who will provide it to Fort Belvoir.

(3) Continue coordination with Fairfax County to incorporate additional data into matrix

(4) Incorporate comments from stakeholders into matrix.

(5) Perform additional traffic model runs for out year (2025).

(6) Reserve Mount Vernon High School for mid-October "courtesy meeting."

(7) Proceed with public scoping meeting planning and prepare meeting materials.

(8) Contact VEPCO to determine possible relocation of the substation.

Others (1) Review matrix and provide written comments to Dave Hand.

Handout 1

Advantages and Disadvantages of the Six Alternatives

Alternative 1. This corridor is the only proposed alignment that is entirely off-post. The 2.6-mile corridor is located east of Fort Belvoir and represents the easternmost corridor evaluated in this study. The corridor extends from Route 1 starting at several existing "T" intersections, identified as Subalternatives A, B, C, and D. Each road "T" intersects with Pole Road. The corridor extends north from Pole Road through park land and northeasterly along the western boundary of Huntley Meadows to Telegraph Road, making a four-way intersection at Telegraph Road.

Advantages:

- No on-post force protection impacts.*
- Provides one of the most significant reduction in traffic on parallel north-south routes.
- Provides the largest reduction in Vehicle Hours Traveled per day.
- Only alternative that is not with in Fort Belvoir's wildlife corridor.
- Only alternative with no upland habitat impacts.
- Does not bisect the North Post.
- No impact to cultural/historic areas.
- Fewest utility crossings.

Disadvantages:

- Has the lowest local-level user benefit.
- One of the longest corridors at 3 miles.
- Not a continuous corridor from Route 1 to Telegraph Road (four-Subalternatives).
- Alignment is almost entirely in the Huntley Meadows Park, approximately 20 acres, which is an environmentally sensitive area, and approximately 25 acres of wetlands and floodplains.
- May impact U.S. Coast Guard facility (off-post).
- Majority of corridor is new roadway.

Alternative 2. The southern half of this corridor is common with Alternative 1. The corridor veers from Alternative 1 alignment just south of Huntley Meadows where it extends northwest along the northeastern

boundary of Fort Belvoir creating a "T" intersection with Telegraph Road, between Old Telegraph Road and Hayfield Road.

Advantages:

- Has one of the least impacts on force protection of the on-post alternatives.
- This corridor is the shortest route at less than 2 miles.
- Least number of major stream crossings.
- Has the largest reduction in Vehicles Miles Traveled per day.
- Does not bisect the North Post.
- No impact to cultural/historic areas.

Disadvantages:

- Force Protection-proximity to a security sensitive facility.
    - ~ 2,000 feet of the corridor is with in 400 meters.
    - Tenant organization concerned about commuters observing delivery activities at security sensitive facilities.
    - Passes with in 700 feet of Hayfield Secondary School.
    - Passes with in 350 feet of Hayfield Elementary School.
- Electric Substation in southwest corner of HEC.
- Runs parallel with overhead high-tension electric lines.
- Not a continuous corridor from Route 1 to Telegraph Road (four-Subalternatives).
- Majority of corridor is new roadway.

Alternative 3. This corridor is one of three alternatives that begin with Old Mill Road. The alternative extends from Route 1 as a "T" intersection, just east of the Old Mill Road intersection. The corridor aligns with Old Mill Road just north of the entrance to Woodlawn Plantation and continues along Old Mill Road where it terminates at Meeres Road. The corridor begins a new alignment in a northerly direction then veers to the northeast towards Fort Belvoir's eastern boundary. It aligns with Alternative 2 just south of HECSA and extends northwest along Fort Belvoir's northeast border until it creates a "T" intersection with Telegraph Road, between Old Telegraph Road and Hayfield Road.

Advantages:

- Has one of the least impacts on force protection of the on-post alternatives.

- Least impacts on parkland (includes Fort Belvoir Golf Course and County parks).
- Good connectivity between Route 1 and Telegraph Road.

Disadvantages:

- Force Protection-proximity to a security sensitive facility.
    - ~ 2,000 feet of the corridor is with in 400 meters.
    - Tenant organization concerned about commuters observing delivery activities at security sensitive facilities.
    - Passes with in 700 feet of Hayfield Secondary School.
    - Passes with in 350 feet of Hayfield Elementary School.
- Largest impact on wood turtle habitat.
- Highest impacts on floodplain and wetland areas for on-post alternatives.
- Electric substation in southwest corner of HEC.
- Runs parallel with overhead high-tension electric lines.
- Largest on-post take projections.

Alternative 4. This corridor is common with Alternative 3 along its southern portion. The corridor continues in the direction of Old Mill Road transecting the North Post until it makes a "T" intersection with Telegraph Road between Old Telegraph Road and Beulah Street.

Advantages:

- Has one of the highest volumes of traffic reduction on parallel north-south routes.
- Has one of the highest volumes of local traffic on this proposed corridor.
- Has one of the highest reductions in Vehicle Miles Traveled per day.
- Not in close proximity to any schools.
- Least impacts on parkland (includes Fort Belvoir Golf Course and County parks).
- Good connectivity between Route 1 and Telegraph Road.
- No impact to Huntley Meadows.
- May be extended to behind old landfill to provide connectivity to Beulah Street.

Disadvantages:

- Force Protection-Between two security sensitive facilities.
    - ~ 3,000 feet of the corridor with in 400 meters.

  - ~ 1,000 feet of the corridor with in 300 meters.
- Bisects Fort Belvoir North Post.
- Majority of corridor is new roadway.

Alternative 5. This corridor is common with Alternatives 3 and 4 along its southern portion. After extending north beyond Meeres Road, the corridor veers to the west then north in an "S-curve" pattern where it aligns with Beulah Street near the four-way intersection at Telegraph Road.

Advantages:

- Not in close proximity to any schools
- Good connectivity between Route 1 and Telegraph Road
- Highest volume of traffic at the north end of the connector
- Direct access to existing Beulah Street (four-way intersection)

Disadvantages:

- Force Protection-proximity to a security sensitive facility
  - ~ 3,000 feet of the corridor is with in 400 meters
  - ~ 1,500 feet of the corridor is with in 300 meters
  - One of the least beneficial corridor with respect to Vehicle Hours Traveled
- Impacts the North Post Golf Course
- Majority of corridor is new roadway
- Bisects the North Post
- Lowest volume of traffic at the south end of the corridor

Alternative 6. This corridor reopens and widens Woodlawn Road from Route 1 to JJ Kingman Road. The corridor makes a 90-degree bend to the west onto JJ Kingman Road. The corridor follows JJ Kingman Road to the west until it makes another 90-degree bend to the north onto Beulah Street. The corridor extends north along Beulah Street until it terminates at the existing four-way intersection at Telegraph Road.

Advantages:

- Has one of the highest volume of local traffic using this proposed corridor
- Least amount of wetland impacts

- Only on-post alternative that does not further impact Fort Belvoir's wildlife corridor
- Good connectivity between Route 1 and Telegraph Road
- Majority of corridor is existing roadway
- Direct access to existing Beulah Street (four-way intersection)

Disadvantages:

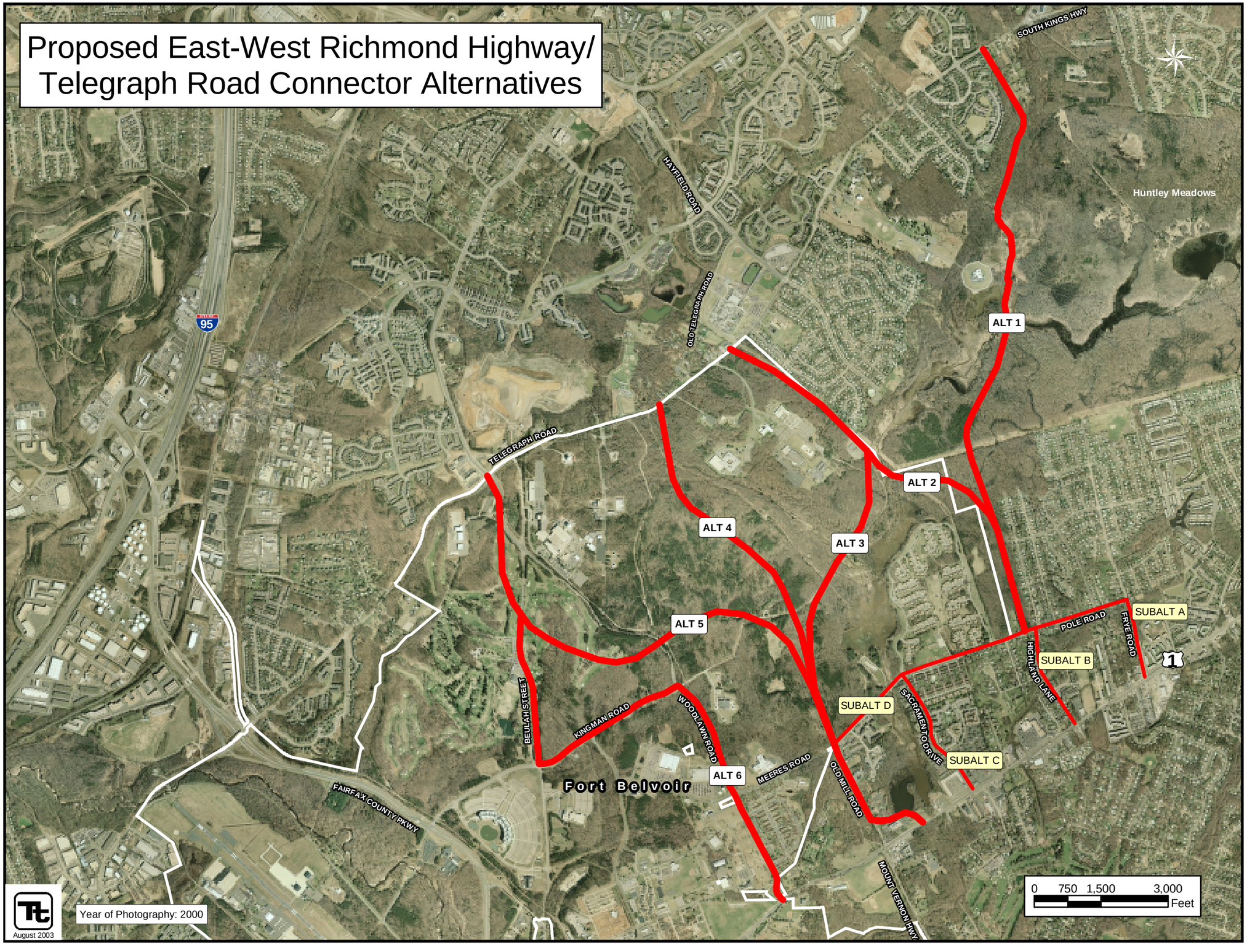
- Force Protection-proximity to two security sensitive facilities
    - Combined, ~ 9,000 feet of the corridor is with in 400 meters
    - Combined, ~ 5,500 feet of the corridor is with in 300 meters
    - Combined, ~ 2,500 feet of the corridor is with in 200 meters
- Existing section of Woodlawn Road would need to be widened to four lanes
- One of the least beneficial corridor with respect to Vehicle Hours Traveled
- Potentially impacts the largest number of cultural/historic sites
- Impacts the North Post Golf Course
- Largest number of road miles of the Fort Belvoir corridors (3 miles)
- Largest take projection
- Impacts the largest number of utility crossings

Preliminary Feasibility Study (Phase I) of
Richmond Highway and Telegraph Road Connector
Fort Belvoir, VA

August 26, 2003 Stakeholder Meeting

	ITEM No.	DESCRIPTION	ALT-1	ALT-2	ALT-3	ALT-4	ALT-5	ALT-6
INFRASTRUCTURE	1	**Total Road Length** (miles)	2.6	1.9	2.7	2.3	3.0	3.0
		Road Length on Fort Belvoir (miles)	0.0	1.0	2.0	1.7	2.4	3.0
		Road Length off Fort Belvoir (miles)	2.6	0.9	0.7	0.6	0.6	0.0
	2	**Use of Existing Roadways and Corridors** (percentage)	5%	0%	60%	70%	40%	90%
TRAFFIC VOLUMES	3	**Projected Volume on New Connector**						
		North End of Connector (at Telegraph Road)	14,000	14,000	12,000	14,000	16,000	15,000
		South End of Connector (at U.S. Route 1)	14,000	14,000	11,000	13,000	10,000	18,000
	4	**Projected Reduction in Volume on Parallel N-S Routes**						
		Route 1 (North of Sherwood Hall Lane)	4,000	3,000	2,000	2,000	2,000	2,000
		Fairfax County Parkway (North of John J. Kingman Road)	6,000	6,000	5,000	8,000	7,000	6,000
		Total	10,000	9,000	7,000	10,000	9,000	8,000
	5	**Projected Reduction in Vehicle Hours of Travel (VHT)**	4,000	3,000	3,000	3,000	1,000	1,000
	6	**Woodlawn Road Traffic Rerouted to New Connector**	3,000	4,000	4,000	5,000	4,000	5,000
	7	**Projected Level of Service (LOS)**	*Analysis Pending*					
	8	**Delay Per Vehicle**						
		Baseline	*Analysis Pending*					
		Projected	*Analysis Pending*					
	9	**Projected Hours of Congestion**	*Analysis Pending*					
	10	**Route 1 - Telegraph Road Connection**	Fair	Poor	Fair	Fair	Good	Good
	11	**East-West Connectivity to Regional Arteries (Franconia-Springfield Parkway)**	Good	Fair	Fair	Fair	Good	Good
FORCE PROTECTION	12	**Fort Belvoir Force Protection**						
		Crosses Fort Belvoir Boundary	No	Yes	Yes	Yes	Yes	Yes
		On -Post Road Crossings						
		State/Local Roads	0	0	4	8	5	12
		Unpaved/Service Roads	1	0	0	0	1	1
		Proximity to Security Sensitive Facilities						
		Road Length (ft) within 400 Meters	0	2,006	2,006	2,860	2,895	8,907
		Road Length (ft) within 300 Meters	0	0	0	1,195	1,403	5,398
		Road Length (ft) within 200 Meters	0	0	0	0	0	2,343
		Road Length (ft) within 100 Meters	0	0	0	0	0	0
LAND USE	13	**Proximity (feet) to Schools Within 7,500 Feet**						
		Fort Belvoir Elementary	6,300	6,300	1,400	1,400	1,400	560
		Hayfield Elementary	4,500	660	660	2,900	6,300	7,000
		Hayfield Secondary	5,600	330	330	2,100	6,200	6,200
		Woodlawn Elementary	1,400	1,400	4,100	4,100	4,100	7,500
	14	**Within Easements** (FFX CO; Acres; Dominion Virginia Power; Available Fort Belvoir Data Limited to Dominion Virginia Power Easement)	0.4	1.3	1.1	0.0	0.0	0.0
	15	**Utility Crossings** (Fort Belvoir Only; FFX CO Data Pending)						
		Cable Television	*Data Source Not Identified*					
		Electric (Dominion Virginia Power)	1	6 (1 Parallel)	5 (1 Parallel)	2	5	7 (3 Parallel)
		Gas	0	1	1	1	1	3 (1 Parallel)
		Sanitary Sewer	0	0	0	0	0	5 (2 Parallel)
		Stormwater	0	0	0	0	1	3
		Telephone	*Data Source Not Identified*					
		Water	0	1	1 (Parallel)	1 (Parallel)	5 (1 Parallel)	7 (1 Parallel)
	16	**Take Projections - Fairfax County**						
		Within Subdivisions (acres)	6.4	0.3	0.3	0.0	0.0	0.0
		Dwelling Units	*Analysis Pending- FFX CO Records Research Assistance for Multi-Family Unit Developments Requested*					
		Developed Acres (no approved plan for improvements on file)	*FFX CO Data Not Readily Available in GIS Format; FFX CO Records Research Assistance Requested*					
		Developed Acres (approved plan for improvements on file)	*FFX CO Data Not Readily Available in GIS Format; FFX CO Records Research Assistance Requested*					
		Undeveloped Acres (no approved development plan on file)	*FFX CO Data Not Readily Available in GIS Format; FFX CO Records Research Assistance Requested*					
		Undeveloped Acres (approved development plan on file)	*FFX CO Data Not Readily Available in GIS Format; FFX CO Records Research Assistance Requested*					
		Total Acres	*FFX CO Data Not Readily Available in GIS Format; FFX CO Records Research Assistance Requested*					
	17	**Take Projections - Fort Belvoir**						
		Dwelling Units (within 100 feet)	0	0	0	0	0	4
		Natural Based Constraints (acres)	0.0	27.5	47.3	27.3	25.2	70.6
		Operational Based Constraints (acres)	0.0	0.0	0.0	0.0	0.0	0.0
		Cultural Based Constraints (acres)	0.0	0.0	0.0	0.0	0.0	0.1
		Developable Land (acres)	0.0	0.0	4.6	4.5	18.7	27.4
		Total Acres	0.0	27.5	53.9	31.8	43.9	98.1
	18	**Zoning Overlay Districts**						
		Within Natural Resource District (acres)	0.0	0.0	0.0	0.0	0.0	0.0
		Within Water Supply Protection District (acres)	0.0	0.0	0.0	0.0	13.4	0.0
		Within Historic/Heritage Protection District (acres)	0.0	0.0	13.4	13.4	13.4	5.9
		Overall Land Use Compatibility	Low	Medium	Medium	High	Low	Low
ENVIRONMENTAL	19	**Within Wetlands (Fort Belvoir)/Floodplains (FFX CO)** (acres)	23.6	7.1	15.0	5.6	3.0	0.5
	20	**Number of Major Stream Crossings**	4	2	5	4	4	5
	21	**Within Upland Habitat (Fort Belvoir)** (acres)	0.0	12.3	26.9	24.4	27.4	10.6
	22	**Potential T & E Impact**						
		Fort Belvoir (Wood turtle habitat)	0.0	5.7	12.7	5.5	0.0	0.0
		Fairfax County	*Analysis Pending - USFWS and Natural Heritage Data Requested*					
	23	**Rare Ecological Communities acres (Fort Belvoir only)**	0.0	0.0	0.0	1.3	0.1	0.0
	24	**Conservation Areas**						
		Within Wildlife Corridor (Fort Belvoir Only) (acres)	0.0	1.3	14.7	6.4	8.3	1.5
		Within Huntley Meadows (acres)	19.2	3.2	0.0	0.0	0.0	0.0
		Within Other County/City Parks (acres) (includes Fort Belvoir golf course)	14.9	9.0	2.5	2.5	17.0	13.5
		Within Jackson Miles Abbott Wetland (acres)	0.0	3.6	0.2	0.0	0.0	0.0
		Within Chesapeake Bay Resource Protection Area (acres)	24.7	4.7	11.7	8.2	3.5	1.2
	25	**SWMUs, Landfills, Septic Systems**						
		SWMUs (Landfills) - Fort Belvoir, within 100 feet	0	0	0	0	2	1
		Active Landfills - FFX CO, within 100 feet	0	0	0	0	0	0
		Septic Systems - FFX CO, within 100 feet	*FFX CO Data Not Readily Available in GIS Format; Records Research Assistance Requested*					
	26	**Noise Sensitive Receptors Within 750 Feet**						
		Residences	*Analysis Pending - Records Research for Multi-Family Unit Developments Requested*					
		Other (Schools, Churches, Hospitals, Nursing Homes)	*Analysis Pending - Records Research for Building Types Requested*					
CULTURAL	27	**Cultural/Historic Areas Impacted**						
		Fort Belvoir (Total Sites)	0	0	2	2	3	8
		Eligible	0	0	0	0	0	0
		Potentially Eligible	0	0	0	0	2	5
		Not Eligible	0	0	2	2	1	3
		Fairfax County (Total Sites)	*Data Request Submitted to FFX CO Archaeological Department*					
		Eligible	*Data Request Submitted to FFX CO Archaeological Department*					
		Potentially Eligible	*Data Request Submitted to FFX CO Archaeological Department*					
		Not Eligible	*Data Request Submitted to FFX CO Archaeological Department*					
COST	28	**Total**	TBD	TBD	TBD	TBD	TBD	TBD

Proposed East-West Richmond Highway/ Telegraph Road Connector Alternatives



September 16, 2003

TRANSPORTATION RESOLUTION TEAM (TRT) MEETING

Fort Belvoir, VA

Preliminary Feasibility Study (Phase 1) of Richmond Highway and Telegraph Road Connector

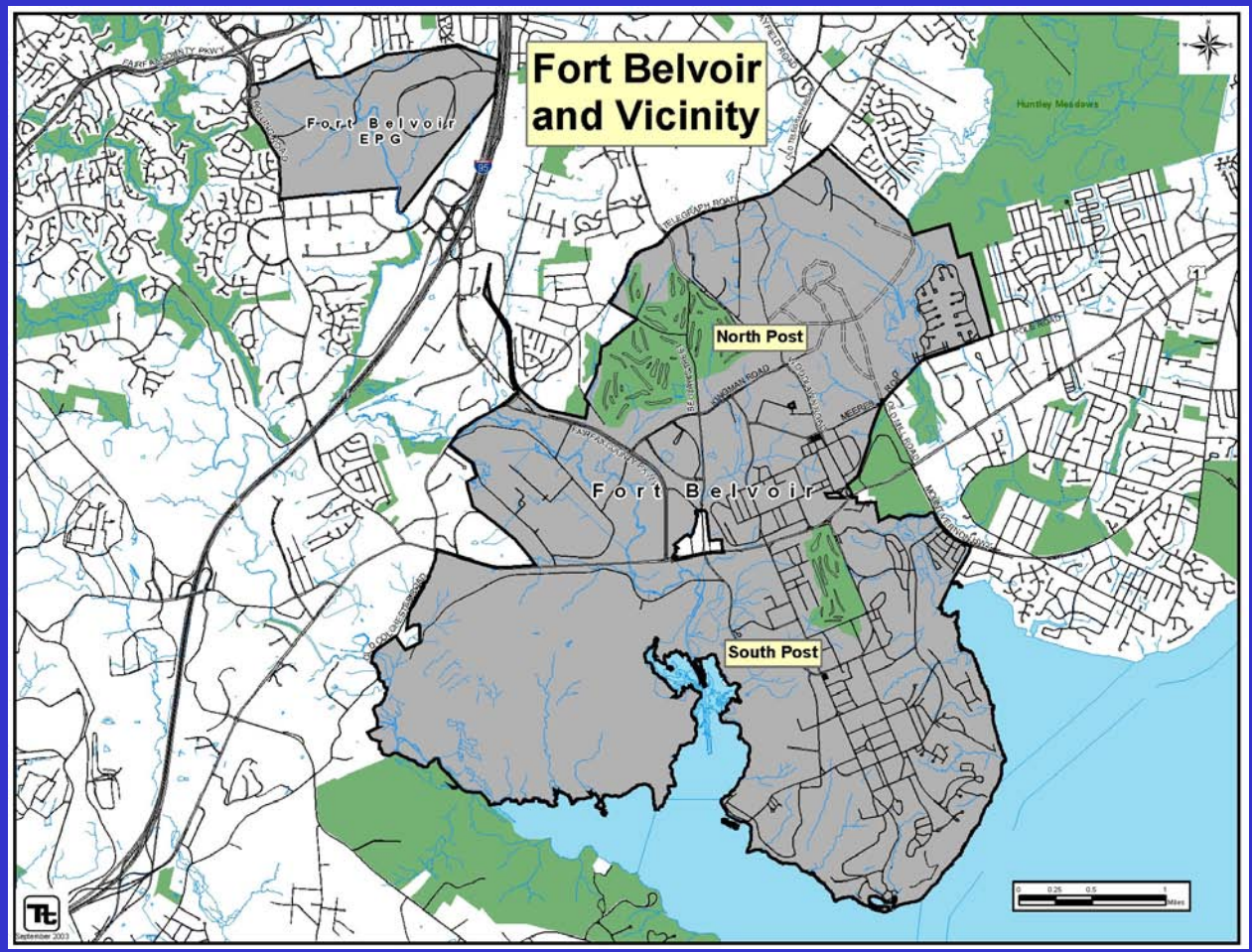
Project Update
September 16, 2003

US Army Corps of Engineers
Baltimore District

Study Overview

- Local Traffic Congestion and Road Closure
  - Woodlawn Road and Beulah Street (state owned/maintained)
  - Force protection measure
- Congressional Mandate for Study
  - Evaluate the feasibility of re-establishing a connector road between U.S. Route 1 and Telegraph Road
    - Project Scope: identify potential long-term solutions
    - Perform engineering & environmental analysis
- Project Team Members
  - Dave Hand, Project Manager, U.S. Army Corps of Engineers, Baltimore District
  - Andrea Walker, U.S. Army Corps of Engineers, Baltimore District
  - Tetra Tech Inc., Contractor

Fort Belvoir



Purpose and Procedure

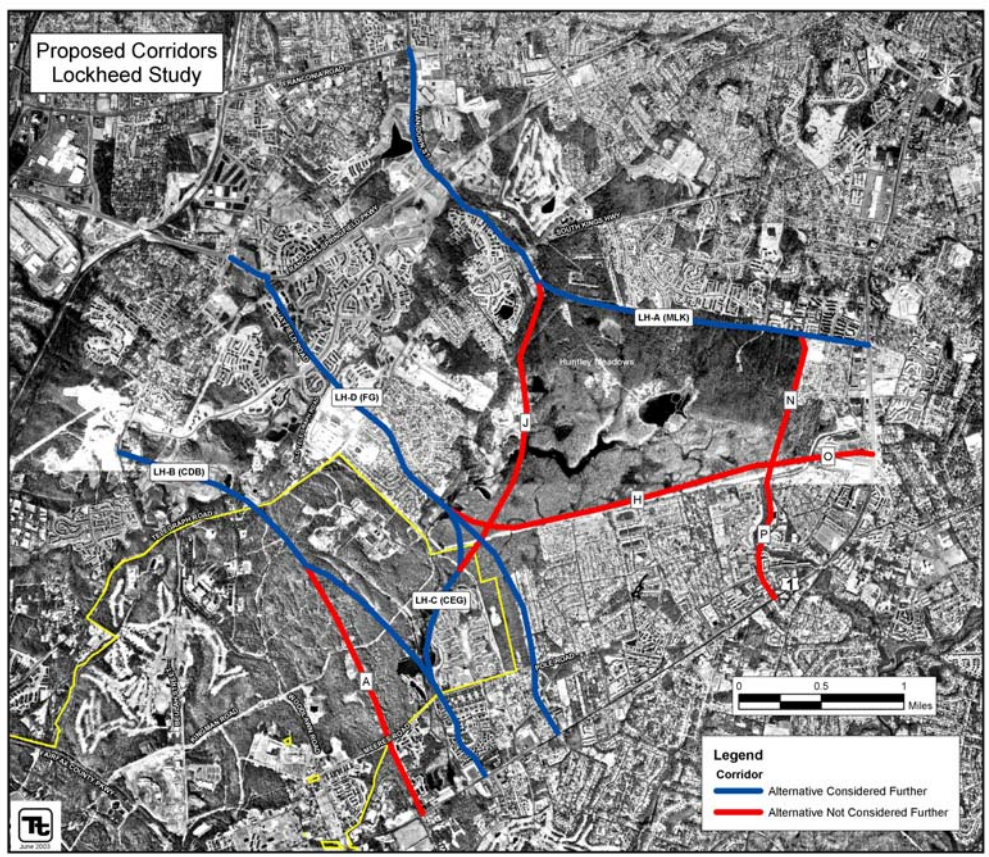
- Identify a reasonable number of on- and off-post corridor alternatives to compensate for the closure of Woodlawn Road and Beulah Street
- Submit study to the Department of the Army (DA)
  - DA to make decision on project viability
  - Detailed NEPA studies would follow

Primary Stakeholders

- Department of the Army
  - Army Corps of Engineers, Baltimore District
  - Fort Belvoir
  - IMA/NERO
  - MTMC
- Fairfax County
- Virginia Department of Transportation

Background/Prior Studies

Lockheed Van-Dorn Connector Study

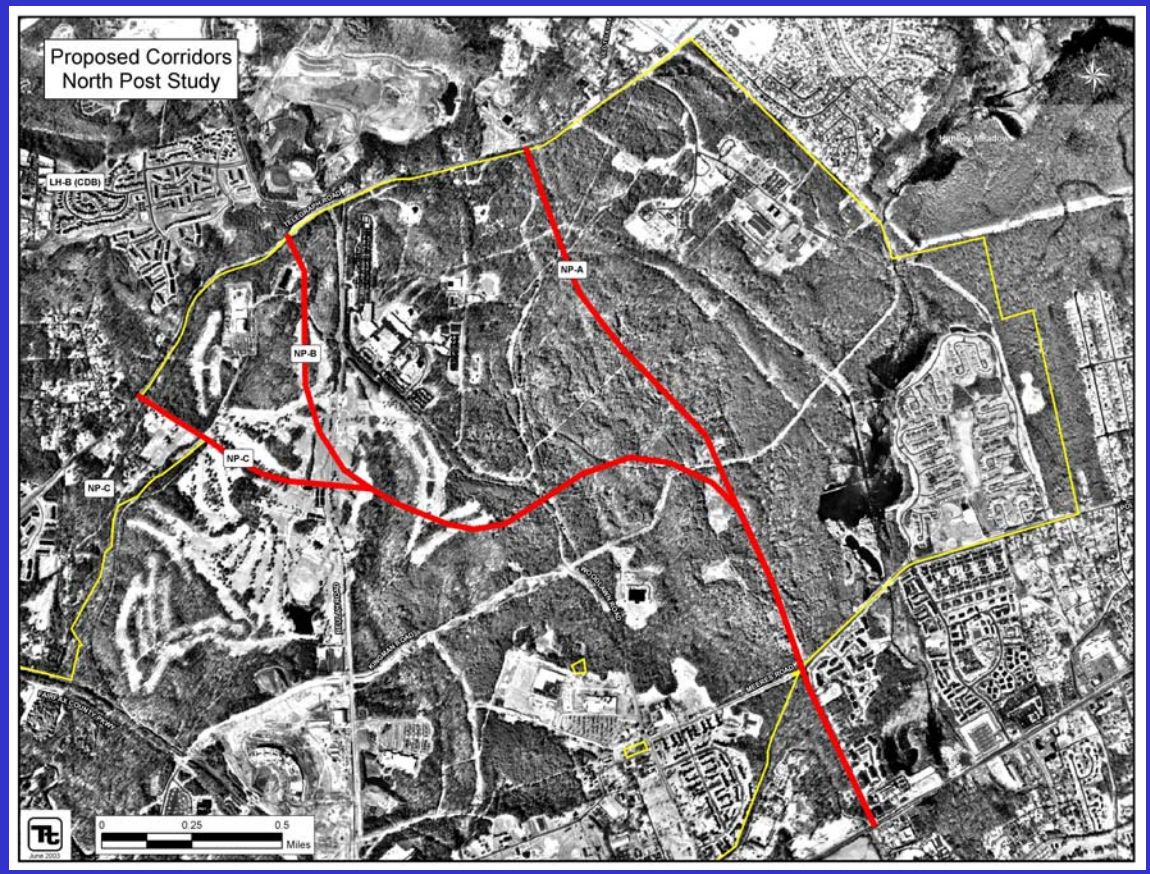


Alternative Not Considered Further (Red)	Primary Reasons for Deletion From Further Study
AB	Adjacent to Woodlawn Plantation National Historic Site. Route too far south.
CEJK	Lies almost completely within floodplain of Dogue Creek. High economic, environmental costs.
PNLK	Uses a private street which would need to be reconstructed through apartment community. Traverses boundaries and corner of Huntley Meadows Park; extensive impacts on Park.
OHG	Traverses southern boundary of Huntley Meadows Park and established Hayfield Farms neighborhood. Long and indirect; use of residential streets still likely.

Source: FFX County, 1983

Background/Prior Studies

North Post Transportation Study

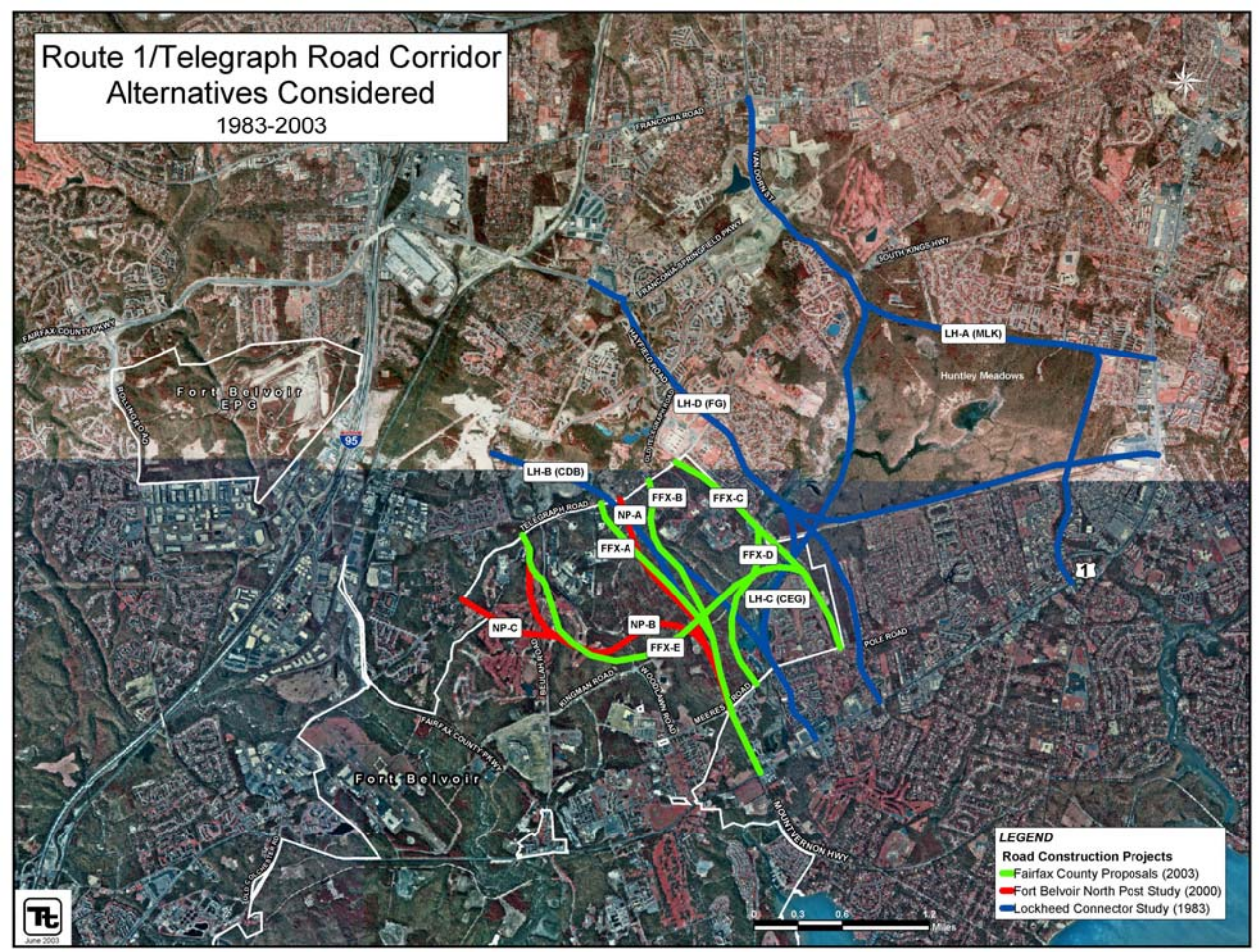


Identification of Alternatives

- Congressional Mandate Requirements
  - Woodlawn Road
  - Old Mill Road
  - On-post/Off-post
  - Prior Studies
    - Lockheed Connector Study
    - North Post Transportation Study
  - 2003 Stakeholder Generated

Consolidated Alternatives

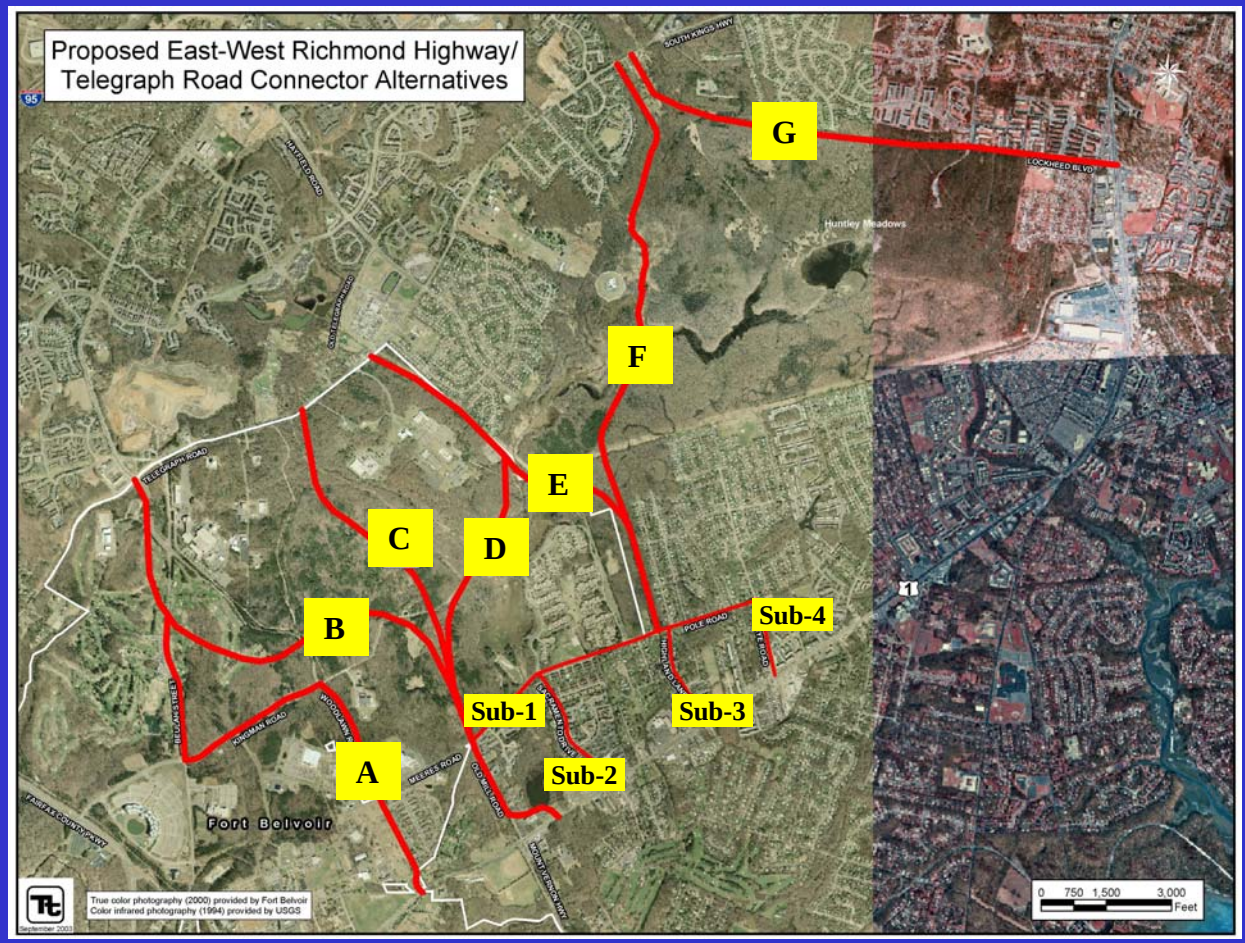
June 2003



Evaluation of Alternatives

- Presentation/analysis of corridor maps
- Development/analysis of a summary matrix
  - Data collection from Fort Belvoir and Fairfax County
    - GIS layers
    - Records research
  - Custom GIS impact assessment program developed
  - Traffic modeling (TransCore)
    - MWCOG Model
    - Existing Year, Horizon Year (2025)
- Stakeholder input/regular stakeholder meetings

Selected Alternatives (A-G)



Summary Matrix

DESCRIPTION	ALT-A	ALT-B	ALT-C	ALT-D	ALT-E	ALT-F	ALT-G
INFRASTRUCTURE							
Total Road Length (miles)	3.0	3.0	2.3	2.7	1.9	2.6	
Use of Existing Roadways and Corridors (percentage)	90%	40%	70%	60%	0%	5%	
TRAFFIC VOLUMES							
Existing Year							
Projected Average Volume on New Connector	17,000	13,000	13,000	11,000	14,000	14,000	18,000
Projected Reduction in Volume on Parallel N-S Routes	8,000	8,000	10,000	7,000	9,000	11,000	-500
Projected Reduction in Vehicle Hours of Travel (VHT)	1,000	1,000	3,000	3,000	3,000	4,000	1,000
Horizon Year - 2025							
Projected Average Volume on New Connector	27,000	17,000	18,000	15,000	18,000	17,000	21,000
Projected Reduction in Volume on Parallel N-S Routes	10,000	9,000	11,000	9,000	10,000	11,000	2,000
Projected Reduction in Vehicle Hours of Travel (VHT)	1,000	2,000	2,000	2,000	2,000	3,000	-400
Projected Level of Service (LOS)/Delay AM							
Intersection 1 - Route 1 & FFX CO PKWY	E/38	E/78	D/45	D/46	D/46	E/69	E/67
Intersection 2 - Analysis Pending Decision on Intersection							
Intersection 3- Analysis Pending Decision on Intersection							
Projected Level of Service (LOS)/Delay PM							
Intersection 1 - Route 1 & FFX CO PKWY	F/154	F/153	F/146	F/152	F/141	F/160	F/183
Intersection 2- Analysis Pending Decision on Intersection							
Intersection 3- Analysis Pending Decision on Intersection							
FORCE PROTECTION							
Length of Corridor within Security Distance (meters)	8,907	2,895	2,860	2,006	2,006	0	0
LAND USE							
Number of Schools Within 750 Feet of Road Corridor	1	0	0	2	2	0	
Take Projections within Subdivisions (acres)				0.3	0.3	6.4	
Zoning Overlay Districts							
Within Water Supply Protection District (acres)	0.0	13.4	0.0	0.0	0.0	0.0	
Within Historic/Heritage Protection District (acres)	5.9	13.4	13.4	13.4	0.0	0.0	
Conservation Areas							
Within Huntley Meadows (acres)	0.0	0.0	0.0	0.0	3.2	19.2	
Within Other County/City Parks (acres) (includes Fort Belvoir golf course)	13.5	17.0	2.5	2.5	9.0	14.9	
Within Jackson Miles Abbott Wetland (acres)	0.0	0.0	0.0	0.2	3.6	0.0	
Noise Sensitive Receptors Within 750 Feet							
Residences	*Analysis Pending - Records Research for Multi-Family Unit Developments Requested*						
Other (Schools, Churches, Hospitals, Nursing Homes)	*Analysis Pending - Records Research for Building Types Requested*						
CULTURAL/HISTORIC AREAS							
Cultural/Historic Areas Impacted	8	3	2	2	0	0	
COST							
Macro-level Cost Estimate	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Alternative A

Advantages

- Has one of the highest volumes of local traffic using this proposed corridor
- Lowest impact to impacts
- Only on-post alternative that does not further impact Fort Belvoir's wildlife corridor
- Good connectivity between U.S. Route 1 and Telegraph Road
- Majority of corridor is existing roadway
- Direct access to existing Beulah Street (4-way intersection)

Disadvantages

- Force protection-proximity to 2 security-sensitive facilities
  - ~ 9000 feet of the corridor is w/in 400 meters
  - ~ 5500 feet of the corridor is w/in 300 meters
  - ~ 2500 feet of the corridor is w/in 200 meters
- Existing section of Woodlawn Road would need to be widened to 4-lanes
- One of the least beneficial corridors with respect to Vehicle Hours Traveled
- Potentially impacts the largest number of cultural/historic sites
- Impacts the North Post golf course
- Largest number of road miles of the Fort Belvoir corridors (3 miles)
- Impacts the largest number of utility crossings

Alternative B

Advantages:

- Not in close proximity to any schools
- Good connectivity between U.S. Route 1 and Telegraph Road
- Highest volume of traffic at the north end of the connector
- Direct access to existing Beulah Street (4-way intersection)

Disadvantages:

- Force protection-proximity to a security sensitive facility
  - ~ 3000 feet of the corridor is w/in 400 meters
  - ~ 1500 feet of the corridor is w/in 300 meters
- One of the least beneficial corridor with respect to Vehicle Hours Traveled
- Impacts the North Post golf course
- Majority of corridor is new roadway
- Bisects the North Post
- Lowest volume of traffic at the south end of the corridor

Alternative C

Advantages:

- Has one of the highest volumes of traffic reduction on parallel north-south routes
- Has one of the highest volumes of local traffic on this proposed corridor
- Has one of the highest reductions in Vehicle Miles Traveled per day
- Not in close proximity to any schools
- Least impact on parkland
- Good connectivity between U.S. Route 1 and Telegraph Road
- No impact to Huntley Meadows
- May be extended behind old landfill to provide connectivity to Beulah Street

Disadvantages:

- Force Protection- between 2 security sensitive facilities
  - ~ 3000 feet of the corridor is w/in 400 meters
  - ~ 1000 feet of the corridor is w/in 300 meters
- Bisects the North Post
- Majority of corridor is new roadway

Alternative D

Advantages:

- Has one of the least impacts on force protection of the on-post alternatives
- Least impacts on parkland
- Good connectivity between U.S. Route 1 and Telegraph Road

Disadvantages:

- Force Protection-proximity to a security sensitive facility
  - ~2000 feet of the corridor is w/in 400 meters
  - Tenant organization concerned about commuters observing delivery activities at security sensitive facilities
- Passes w/in 700 feet of Hayfield Secondary School
- Passes w/in 350 feet of Hayfield Elementary School
- Greatest impact on wood turtle habitat
- Highest impact to wetlands (of on-post alternatives)
- Electrical substation in SW corner of HEC
- Runs parallel with overhead high-tension electric lines

Alternative E

Advantages:

- Has one of the lowest impacts on force protection of the on post alternatives
- This corridor is the shortest route at less than 2 miles (excluding subalternatives)
- Lowest number of major stream crossings
- Has the largest reduction in Vehicles Miles Traveled per day
- Does not bisect the North Post
- No impact to cultural/historic areas

Disadvantages:

- Force Protection-proximity to a security sensitive facility
  - ~2000 feet of the corridor is w/in 400 meters
  - Tenant organization concerned about commuters observing delivery activities at security sensitive facilities
- Passes w/in 700 feet of Hayfield Secondary School
- Passes w/in 350 feet of Hayfield Elementary School
- Electric Substation in SW corner of HEC
- Runs parallel with overhead high-tension electric lines
- Not a continuous corridor from U.S. Route 1 to Telegraph (4-subalternatives)
- Majority of corridor is new roadway

Alternative F

Advantages:

- No on-post force protection impacts
- This corridor provides one of the most significant reductions in traffic on parallel north-south routes
- Provides the largest reduction in Vehicle Hours Traveled per day
- Only alternative that is not w/in Fort Belvoir's wildlife corridor
- Does not bisect the North Post
- No impact to cultural/historic areas
- Fewest utility crossings

Disadvantages:

- Has the lowest local level user benefit
- One of the longest corridors at 3 miles
- Not a continuous corridor from U.S. Route 1 to Telegraph Road (4-Subalternatives)
- Alignment is almost entirely in the Huntley Meadows Park, ~20 acres, which is an environmentally sensitive area, and impacts ~25 acres of wetlands/floodplains
- May impact U.S. Coast Guard facility (off-post)
- Majority of corridor is new roadway

Alternative G

- **Advantages:**
  - Analysis in Progress
- **Disadvantages:**
  - Analysis in Progress

Cost

- Macro-level cost estimate
- Baseline cost ($/linear foot/4-lane roadway)
  - Reference = Telegraph Road
- Additional items
  - Infrastructure: at-grade intersections, traffic lights, split-grade interchanges
  - Force Protection: proximity to security sensitive facilities
  - Land Use: Existing and proposed land uses
  - Environmental: stream crossings, wetlands, wildlife corridor, noise, etc.

Project Timeline

- Public Information Meetings
  - Interagency- Preferred Date: October 6, 2-5 pm, South Fairfax Government Center
  - Public- Preferred Date: October 22, 6-9 pm, Mount Vernon HS
- Draft Report
  - To stakeholders October 17
  - 10-day comment period
- Final Report
  - To the DA the first week of November
- Army Decision
  - Late 2003 (Anticipated)

September 16, 2003

"POST" TRT ROAD STUDY SUB MEETING—WOODLAWN WORKING GROUP

Fort Belvoir, VA

Immediately following the TRT meeting.

AGENDA

Final Approvals of Corridors for Public Presentation:

- Receive stakeholder signoff on specific corridor alignments
- Make slight route corridor adjustments as needed

Approval for Booth/Display Concept:

- Large Poster Display
  - Photograph with overlay of corridors, key features, and prominent shopping and employment centers in the ROI.
- Large Poster Display
  - Project overview/summary (describes a Feasibility Study, project goals, timelines, potential next phases).
- Handout (11 x 17)
  - Side 1–Photograph with overlay of corridors, key features, and prominent shopping and employment centers in the ROI.
  - Side 2–Simplified matrix with emphasis on traffic data and travel times, possibly an overview of project and corridor summary.

Commitment of Agency Representatives:

- Identify which agencies will be present and who will be their representatives at the meeting (Tentative dates: Public Meeting, October 22 or October 29; Agency Meeting, TBD).

APPENDIX E

COORDINATION MEETING

AGENDAS, HANDOUTS, AND MINUTES

July 9, 2003

COORDINATION MEETINGS-RESIDENTIAL COMMUNITIES INITIATIVE (RCI)

Fort Belvoir, VA

10:00 p.m.

MEMORANDUM FOR RECORD

Subject: Fort Belvoir Corridor Impacts/USACE Road Study - Summary Minutes

Purpose: To record a summary of the minutes of the meeting held on Wednesday, July 9, 2003, 10:00p.m., in Building 766, the Fort Belvoir RCI Conference Room, in reference to the Corridor Impacts as they relate to the Fort Belvoir RCI project.

Attendees:

Mr. David Hand	U.S. Army Corps of Engineers, Baltimore
Mr. Maury Crallé	Director of Housing, Fort Belvoir
Mr. Chris Guidi	Clark Pinnacle, LLC
Mr. Jeff Moran	Tetra Tech, Inc.
Mr. Sean Donahoe	Tetra Tech, Inc.
Mr. Tom Magness	Tetra Tech, Inc.
Mr. Joe Jones	RCI Assistant Project Manager, Fort Belvoir
Mr. Dave Ghiglio	DPW&L, Fort Belvoir
Mr. Richard Bain	DPW&L, Fort Belvoir
Ms. Cheri Thompson	RCI Development Plan Coordinator, Fort Belvoir

Minutes:

Opening Remarks: Mr. Hand began with an explanation of the purpose of the meeting: to reach out to the different tenants and activities on Fort Belvoir to flush out corridor alternatives and discover possible impacts on the different activities/projects. He explained the role of Tetra Tech, which has been contracted to provide analysis and options of an East/West connector corridor through Fort Belvoir. This corridor is proposed to connect Telegraph Road to Richmond Highway (U.S. Route 1).

Business: Mr. Hand explained that the issue of a connector route sprang from the closing of Woodlawn Road/Beulah Street to the public with the implementation of Forced Protection. He noted that there is no project yet to build a connector road. He stated that the mission is to first identify all of the issues, and second to provide the compiled information to the "decisionmakers."

Mr. Crallé stated that he was concerned about not having a time schedule. He asked if this project needed to be delivered to the Army in time for the 2006 budget. Mr. Hand reiterated that there is not a project at this time. The studies need to be pulled together to determine if there should be a project and what type, and then get permission to go forward. Mr. Hand admitted that he did not know the outcome of the study at this time. Mr. Bain noted that he has been given a directive to speed up for a 2005 project and asked if this study would be part of that directive. Mr. Hand answered no, then noted that the Fort Belvoir Environmental Impact Study (EIS) public scoping meeting is scheduled for September. Mr. Bain stated that Dr. Fiori has asked if this issue could be made a 2005 project and asked if we should try to move the project up. Mr. Ghiglio noted that everything would have to be completed by January 2004 in order to meet the deadline for the 2005 budget schedule. He observed that a decision for action would have to be made right now. Mr. Hand stated that there is no project, decision, or action right now. Mr. Ghiglio stated that we need a solution to the problem; perhaps a report should be submitted to DA stating the problem with the options for solution and ask them to pick one. Mr. Hand stated that the project has not been determined to be a military or nonmilitary project at this time.

Mr. Crallé stated that one option would be to do nothing; just say the road is closed and another one will not be built. Another option would be to provide funding with the stipulation that the connector route be built somewhere else. Mr. Hand stated that theoretically the existing route could be reopened, provided additional gates and barriers were added. He explained that there are two types of solutions: short-term and long-term. Mr. Ghiglio stated that approximately $9.1 to $10.1 million had been funded and is available for improvements of Route 1. Mr. Crallé asked for a chart to be created to show the timeline of this project for submission. Mr. Bain was asked to send an e-mail to Dr. Fiori stating that the project cannot happen in 2005.

Mr. Bain asked if a near end solution was being considered. Mr. Hand stated that to pre-suppose there is a next step is premature. He explained that there will be a decisionmaker who will ask: “Is there a solution that we want to go forward with?” and that decisionmaker will identify the players. Mr. Hand stated that his job, along with Tetra Tech, is to identify alternatives. Mr. Crallé noted that he will be looking to Mr. Hand to identify the issues and to find a preferred solution and get is approved. Mr. Ghiglio stated that a timeline is needed to show the dates for DA submission, and Army submission to Congress, including cost and a solution. Mr. Hand stated that the first date on the timeline would be the public scoping session in September.

Mr. Ghiglio asked if this project is being tied into the Fort Belvoir Master Plan. Mr. Hand stated that the project is being tied in with the Fort Belvoir Master Plan so that the fort can be a participant in the public scoping meeting. He stated that it was decided that this would be the prudent way to proceed. Mr. Crallé noted that it may be possible to have much of the planning completed, approved, and incorporated in the Master Plan EIS. There was discussion pertaining to the timeline and if the solutions for the project could be completed in time to go to Congress and be presented for the President's budget in January 2005.

Short-term and long-term solution options were discussed. Mr. Hand stated that the DA would have to tell the public if there is no short-term solution. Realistically the connector route would not be complete until approximately 2009-2010. Mr. Bain stated that he needed to send an answer back to Dr. Fiori in 2 weeks on this matter.

Mr. Hand stated that his plan is to have the public scoping meeting in September, provide information to DA in November, and reach a decision in December. Mr. Bain noted that September 3 is the date for the EIS public scoping meeting for the Master Plan. It was noted that Tetra Tech is compiling the EIS for the Master Plan. Mr. Crallé asked if a draft would be ready by November 1. Mr. Donahoe answered yes.

It was noted that Fairfax County administration has already selected a corridor that they would like to have built; it would be prudent for Fort Belvoir to finalize its position. Mr. Hand stated that a list of potential pros and cons would be created for each proposed route. He would like to see what impacts each of these routes would have on RCI as well as other agencies on-post. It was noted that two of the alternatives, Alternatives 5 and 6, passed through Fort Belvoir proper and would not affect the RCI planned development. Mr. Crallé asked that all information be linked through Mr. Bain.

Discussing the six alternatives, Mr. Crallé noted that Alternatives 1 and 2 did not meet the criteria to be considered as an Alternative because the drawn lines did not connect with Route 1. Mr. Hand stated that his intention was to provide a corridor from Telegraph Road to Route 1 and there are already several connections from Pole Road to Route 1. Mr. Crallé suggested that the green lines be drawn all the way to Route 1 and Mr. Ghiglio agreed. Mr. Bain stated that the county did not want to show the lines all the way to Route 1 because one of the lines would pass by Woodlawn Elementary School, which could result in a public outcry. Mr. Crallé noted that Alternative 1 was drawn across Huntley Meadows. He suggested that the County would never approve that route, however, Mr. Hand said it needed to be included in this study. Mr. Hand noted that Old Van Dorn Street was considered, but not included

because its location was too far north. He stated that Alternative 1 would probably not be considered but needed to be addressed in the study, Alternative 2 would impact the wildlife corridor, and Alternative 3 could cross the Jackson Abbot Wetland Refuge, which may not be acceptable. Mr. Crallé stated that there was a possibility to build Alternative 1 without crossing Huntley Meadows and Mr. Ghiglio agreed. Mr. Hand noted that several of the alternatives crossed land that was not owned by Fort Belvoir. Alternatives 2, 3, and 4 all crossed land belonging to the Humphries Engineer Center. Mr. Crallé stated that Alternative 2 had been discussed between MG Jackson and Senator John Warner. Mr. Hand felt that Alternative 2 would be the least objectionable. It was stated that Alternative 4 would connect with Old Mill Road. Mr. Crallé felt that this was not a viable solution because the corridor would dissect a proposed housing area in consideration for RCI Project 2. He also noted that no matter which Alternative was chosen it would need to be able to stay open during Threat Con Delta. Mr. Hand stated that the design of the road would be similar to Fairfax County Parkway. Mr. Donahoe asked if a land plan for the proposed New North Post Village was available yet.

Mr. Ghiglio stated that the Lockheed project was killed because the Park Service stated that if a road was built the Park Service would take back the land that had been previously donated. Mr. Hand stated that he would like to have documentation of issue to include language to that effect in this project. There was discussion of the type of impacts possible should the corridor be built by the Proposed New North Village, Lewis Heights, or Woodlawn Village. If the corridor should be built near these villages, an overpass or underpass may need to be built to ensure access to the village. Mr. Crallé felt that Woodlawn Village should not be considered a constraint since there is an intention to relocate that village onto post in a future RCI project. Mr. Bain and Mr. Ghiglio disagreed citing the fact that Project 2 has not been approved, and the baseline for this study shows Woodlawn Village existing. Mr. Hand agreed that since an analysis is being compiled, all impacts would have to be listed.

Mr. Moran stated that his company is still in need of some GIS data layers that have been requested. He also needs a data dome. Mr. Hand is planning to meet with other tenants and agencies to collect data and information to assist in this study.

There was discussion of Forced Protection and security requirements. Mr. Hand stated they will use the DoD criteria for the study. Mr. Crallé noted that Alternative 4 is located near a secure area. Mr. Bain stated that Alternative 2 is the most preferred. Mr. Hand stated that after the scoping meeting the maps would be refined with the general constraints learned from the said meeting. Mr. Crallé suggested deleting Alternative 6. Mr. Hand felt that this alternative should stay in the study since the study

describes the impacts and alternatives. Mr. Bain asked what the final end date would be. Mr. Hand answered that he would like to shoot for November, 1. He asked if that was reasonable. Mr. Bain suggested participating in the public scoping meeting for the Master Plan EIS planned in September. He asked if there was a short-term or near-term plan. Mr. Moran stated that Tetra Tech envisioned the current scope as long term, a near-term solution, such as opening roads or passes, is a different effort and needs to be recognized as such. Mr. Hand stated that Fort Belvoir would make that decision. Mr. Ghiglio stated that the decision for near-term solution of opening the road affects the long-term solution.

Mr. Ghiglio asked if the NOI for the public meeting would be separate from the EIS notice and Mr. Hand answered yes.

Mr. Hand stated that January 1, 2004, would be the date for the decision point of the project. Form 1391 would be written after the decision point. Mr. Ghiglio stated that a programmatic cost would be needed. Mr. Hand stated that it would be a macro-broad cost. Mr. Moran suggested an order of magnitude cost, and he stated that he had some estimates from an earlier study.

Mr. Bain suggested that the next meeting scheduled for July, 29 be used to establish the decision of the type of road, two or four lanes. Mr. Hand suggested that he would like to have an internal Fort Belvoir stakeholders meeting before the July, 29 meeting. He would also like to have the commander approve the internal decision. It was suggested that an internal meeting be held the week of July 21.

Open discussion: There was discussion of a mitigation strategy. Mr. Magness noted that Tetra Tech was not scoped to do a mitigation plan. He stated that the decisions to be made were Fort Belvoir decisions.

Closing: The meeting adjourned.

Cheri N. Thompson
Residential Communities Initiative
Development Plan Project Coordinator

Copy Furnished:
Garrison Commander, Fort Belvoir
Deputy Garrison Commander, Fort Belvoir
RCI Project Manager, Fort Belvoir
Director of Installation Support, Fort Belvoir
RCI Program Manager, DAHQ

APPENDIX F

PUBLIC COMMENT SUBMISSION FORM AND COMMENTS

Road Connector Comment Form

Please place your completed comment form in the basket located at the Road Connector Study Booth.

All comments submitted will be included in the report to the Army.

I. Contact Information

Name _____

Agency/Organization _____

Street Address _____

_____

City, State, ZIP Code _____

II. Please select an affiliation that best represents your role (check one):

- ❑ Private citizen
- ❑ Fort Belvoir Resident
- ❑ Civic Organization
- ❑ Environmental Organization
- ❑ Recreational Organization
- ❑ Business/Commercial Org.
- ❑ County Govt. [_____]
- ❑ State Government
- ❑ Federal Government
- ❑ Federally Recognized Tribe
- ❑ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper).

COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX
BOARD OF SUPERVISORS
OFFICE OF THE CHAIRMAN

KATHERINE K. HANLEY
CHAIRMAN

Suite 530
12000 GOVERNMENT CENTER PARKWAY
FAIRFAX, VIRGINIA 22035-0071

TELEPHONE 703/324-2321
FAX 703/324-3955

Colonel Thomas W. Williams, Commander
U.S. Army Garrison, Fort Belvoir
9820 Flagler Road
Fort Belvoir, Virginia 22060-5932

Dear Colonel Williams:

I am writing you at the request of the Fairfax County Board of Supervisors to provide the Board's position concerning the "Preliminary Feasibility Study (Phase I) of the Richmond Highway to Telegraph Road Connector". The Board reviewed this matter at its November 17, 2003, meeting and requested that this letter be forwarded along with the feasibility study results to the Department of the Army and the Defense Department for full consideration. The Board believes it is imperative that a roadway connection between Richmond Highway and Telegraph Road, to serve the general public and Fort Belvoir traffic movements previously provided by Woodlawn Road/Beulah Street, be restored without further delay.

After reviewing the proposed alignments shown in the feasibility study, *the Board's preferred alternative is the reopening of Woodlawn Road incorporating force protection "hardening" measures to meet security concerns*. This option would save both time and money as compared to the other alternatives presented in the feasibility study since this facility already exists. However, in recognition of the Army's previous objections to the reopening of Woodlawn Road through Fort Belvoir, *the Board also endorsed alternatives A, B, and C, or a hybrid of these alternatives,* as viable options to replace the traffic capacity and accessibility lost with the closure of Woodlawn Road/Beulah Street through the Fort. *The Board will not support any alignment which intrudes into existing Huntley Meadows Park.* As you are aware, Huntley Meadows Park alignments were explored and rejected by the U.S. Department of the Interior in the late 1980s/early 1990s as part of the Lockheed Boulevard studies.

The Board is very concerned that the Department of the Army has not committed to move forward with a project to reopen or replace Woodlawn

Road. Further, the Board is concerned that the project does not have a defined project timeline. The Board requests that development (including environmental documentation, design, land acquisition, and construction) of a *project* to reopen Woodlawn Road or replace this roadway connection between Richmond Highway and Telegraph Road begin immediately as a priority for Fort Belvoir and the Army. Continued delays will not best serve the public interest of either the citizens of Fairfax County or Fort Belvoir.

The Board applauds the on-time delivery of the feasibility study and the very positive, productive teamwork exhibited by the members of the Feasibility Study Team comprised of representatives of Fort Belvoir, the Army Corps of Engineers, the Department of Defense, the Virginia Department of Transportation, Fairfax County, and the consultant team. We look forward to continuing this constructive teamwork as the project advances through implementation.

Sincerely,

Kate Hanley

Katherine K. Hanley

cc: Senator George F. Allen, U.S. Senate
Senator John W. Warner, U.S. Senate
Congressman Thomas M. Davis, U.S. House of Representatives
Congressman James P. Moran, U.S. House of Representatives
Congressman Frank R. Wolf, U.S. House of Representatives
Members, Fairfax County Board of Supervisors
Anthony H. Griffin, Fairfax County Executive
Robert A. Stalzer, Deputy County Executive, Fairfax County
Young Ho Chang, Director, Fairfax County Department of Transportation
Thomas F. Farley, District Administrator, Virginia Department of Transportation, Northern Virginia
LTC Kevin Tate, Director, Department of Public Works, Fort Belvoir
Mr. David B. Hand, Army Corps of Engineers, Baltimore District

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: William P Cleveland

Agency/Organization:

Street Address: 902 Neal Drive

City, State, ZIP Code: Alexandria VA 22308

II. Please select an affiliation that best represents your role (check one):

- [x] Private citizen
- [ ] Fort Belvoir Resident
- [ ] Civic Organization
- [ ] Environmental Organization
- [ ] Recreational Organization
- [ ] Business/Commercial Org.
- [ ] County Govt. [_____]
- [ ] State Government
- [ ] Federal Government
- [ ] Federally Recognized Tribe
- [ ] Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

In creating a road from Rt 1 to Telegraph, no route affecting Huntley Meadows Park should be considered. If alt A is not feasible, Alt B or Alt C appear good.

The timeline for solving this problem should be as short as possible

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

Please acknowledge receipt. L.G. Guthrie

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: Lucian G. Guthrie
Agency/Organization: Transportation Committee of MVCCA
Street Address: 2008 Hoover Lane
City, State, ZIP Code: Alexandria, VA 22308

II. Please select an affiliation that best represents your role (check one):

- [x] Private citizen
- [ ] Fort Belvoir Resident
- [x] Civic Organization
- [ ] Environmental Organization
- [ ] Recreational Organization
- [ ] Business/Commercial Org.
- [ ] County Govt. [_____]
- [ ] State Government
- [ ] Federal Government
- [ ] Federally Recognized Tribe
- [ ] Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

Alternatives B, C or D look the most promising. Alternative A is messed up due to the jog to Bulah Road. I would oppose alternatives F & G due to the wetlands issue of Huntly Meadows Park.

Alternative A would be much improved by keeping present alignment & hardening the sensitive parts by viaducts or other means.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: Marjorie Barondes

Agency/Organization:

Street Address: 2608 Childs Lane

City, State, ZIP Code: Alexandria VA 22308

II. Please select an affiliation that best represents your role (check one):

- ☒ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

With projected expansion of more than 6 million sq. feet by 2025 the impact will be seen in all areas from schools to housing and road use. Roads must be in place before development starts. The roads should not go through wetlands and must be wide enough to carry the added traffic. I don't understand why the present Woodlawn Road can't be secured and used as one connector road. More will be needed in the future especially since 3,600 acres on Main Post are suitable for development and probably will be.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: Barbara B. Ballentine, President
Agency/Organization: Friends of Historic Huntley
Street Address: 732 S. Royal St
City, State, ZIP Code: Alexandria, VA. 22314

II. Please select an affiliation that best represents your role (check one):

- ☐ Private citizen
- ☐ Fort Belvoir Resident
- ☒ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

The Friends of Historic Huntley do not support any roadways or other building within the confines of Huntley Meadows Park.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: JAY JUPITER

Agency/Organization:

Street Address: POB 15127

City, State, ZIP Code: Alexandria VA 22309

II. Please select an affiliation that best represents your role (check one):

- ☒ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

The failure to include the historical through access demonstrates a gross example of lack of good faith in presenting alternatives.

While there may be significant force protection issues with the historical route such force protection can be addressed. Simply eliminating ~~this~~ route ~~without~~ while burdening the community with alternatives which are costly, environmentally sensitive and/or structurally impractical, testifies to the lack of credibility of these proposals.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: LINDA RASKIN

Agency/Organization:

Street Address: 8623A BEEKMAN PL

City, State, ZIP Code: ALEX, VA 22309

II. Please select an affiliation that best represents your role (check one):

- ☒ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

SUB ALT 2 (SACREMENTO DR). USING THIS ROUTE WOULD HAVE AN ADVERSE IMPACT ON THE RESIDENTS IN THIS AREA. THE ROAD IS TOO NARROW FOR A LARGER VOLUME OF VEHICLES. YOU WOULD HAVE TO REMOVE HOMES OR STORES TO WIDEN THE ROAD. IT'S A SHORT STRETCH AND CAN EASILY GET BACKED UP TO ROUTE 1, CAUSING MORE PROBLEMS.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: Sue Gass-Burson
Agency/Organization: Langley Hill Monthly Meeting
Street Address: 5825 Edgehill Drive
City, State, ZIP Code: Alex, VA 22303

II. Please select an affiliation that best represents your role (check one):

- ☑ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

What Environmental Impact will occur notably to the grave sites and historical sites by the roads being proposed much less a proposed museum with probable physical demonstrations ie tanks rolling, platoons marching, helicopters flying

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: Tariq Bushnaq

Agency/Organization: WMATA

Street Address: 600 5th Street, N.W., Room 6E-18

City, State, ZIP Code: Washington, D.C. 20001

II. Please select an affiliation that best represents your role (check one):

- ☐ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other WMATA

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

Please send me a copy of draft feasibility report when it is completed. If you have any questions, please contact me at (202) 962-2043 or at tbushnaq@WMATA.com Thanks

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: COL MIKE DOWNIE
Agency/Organization: Mt. Vernon on the Potomac
Street Address: 9377 Mt Vernon Circle
City, State, ZIP Code: Alex VA 22309

II. Please select an affiliation that best represents your role (check one):

- ☐ Private citizen
- ☐ Fort Belvoir Resident
- ☒ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

Stop stalling this effort and get on with an open road - both temporary and permanent. Your negligence is crippling our Communities!

e-mail: MHDOWNIE@AOL.COM

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: ROBERT J MCLAREN

Agency/Organization: (1) HAYFIELD CITIZENS ASSOCIATION

Street Address: (2) CHAIRMAN, ENVIRONMENTAL QUALITY ADVISORY COUNCIL TO FAIRFAX BOARD OF SUPERVISORS
7810 KINCARDINE CT

City, State, ZIP Code: ALEXANDRIA VA 22310-4023

II. Please select an affiliation that best represents your role (check one):

- ☐ Private citizen
- ☐ Fort Belvoir Resident
- (1) ☒ Civic Organization
- (2) ☒ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☐ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

(1) ALTERNATIVES C, D, E, F, G HAVE SIGNIFICANT ENVIRONMENTAL ~~IMPACTS~~ AND ~~WETLANDS~~ WETLAND IMPACTS. ALT. G WAS REJECTED BY FEDERAL GOVERNMENT NINE YEARS AGO. ALT F IS ALMOST COMPLETELY IN WETLANDS PLUS PASSES WITHIN BLAST RADIUS OF A SENSITIVE GOVERNMENTS FACILITY. ALT D & E CROSS SIGNIFICANT WETLAND PLUS THE WILDLIFE CORRIDOR. ALT C TEARS UP A STREAM VALLEY.

(2) ALT A & B ARE NOT GOOD ROUTES - TOO WINDING & WITH DOG LEGS

(3) THE BEST ALTERNATIVE IS NOT BEING CONSIDERED. THAT IS TO RETAIN

[OVER]

THE EXISTING WOODLAWN ROUTE, BUT HARDEN THE ROAD AS IT PASSES SENSITIVE FACILITIES. THIS ~~SH~~ CAN BE DONE BY A COMBINATION OF DEPRESSING THE ROADBED AND BERMING.

(4) - RECOMMEND THAT AS A MINIMUM ALTS D, E, F, G BE DROPPED. EVALUATING ~~THES~~ THESE IS A WASTE OF TIME AND MONEY
- RECOMMEND THAT AN ALTERNATIVE THAT RETAINS PRESENT WOODLAWN ROAD IN A HARDENED CONFIGURATION BE ADDED. I WOULD CONSIDER THIS THE FAVORED ALTERNATIVE

NOTE: OTHER BASES AROUND THE US HAVE EITHER HARDENED STRUCTURES OR RUNWAYS SUCCESSFULLY AND ALLOW EXISTING ROADS TO STAY IN USE.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: Glenda Booth
Agency/Organization: Fairfax Co. Wetlands Board
Street Address: 7708 Fauxemont Rd.
City, State, ZIP Code: Alex VA 22308

II. Please select an affiliation that best represents your role (check one):

- ☑ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☑ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

No road thru Huntley Meadows Park

COMMENTS

Richmond Highway and Telegraph Road Connector, Fairfax County, VA

November 17, 2003

Peter Kuck
8600 Mount Zephyr Drive
Alexandria, VA 22309
Tel: 703-360-8034

Transportation representative for the Mount Zephyr Citizen Association
Member of the Transportation Committee of the Mount Vernon Council of Citizen Associations

1. Huntley Meadows Park

ALT G and ALT F are unacceptable because both routes fall within the boundaries of Huntley Meadows Park. A 4-way intersection at the junction of the Van Dorn Extension and Telegraph Road would create a serious bottleneck on Telegraph because the intersection and its traffic light would be too close to the poorly designed, existing V-intersection of South King's highway and Telegraph Road.

It might be possible to reroute ALT G down Deer Creek Crossing but at least 5 homes would have to be condemned.

Rerouting ALT F along the southern boundary of the Coast Guard station also would be unsatisfactory because ALT F would still cross sensitive wetlands.

2. Route 1 Corridor

SUBALT 4 is unsatisfactory. If Frye road were to be widened from 2 lanes to 4 lanes, a bottleneck would be created at the intersection of Frye Road and Pole Road.

SUBALT 3 also is unsatisfactory because the connector would run immediately in front of Woodlawn Elementary School. Please note that Woodlawn Elementary School is improperly located on the study map.

SUBALT 2 also is unsatisfactory because there is insufficient room to widen Sacramento Drive. The townhouses are located too close to the road. In addition, traffic on Sacramento Drive already is overloaded because it serves as a short cut between two shopping centers and Fort Belvoir's Woodlawn Village housing area.

3. Intersection of Mount Vernon Highway and Route 1 at the Roy Rogers Restaurant

The jug handle junction between Route 1 and Old Mill Road (ALT B, C, D) is **totally unacceptable.** Residents of the Patton Avenue-Yacht Haven-Grist Mill Park-Walker Gate area would have a difficult time accessing the jug handle to get to Springfield Mall.

4. Fort Belvoir north of Route 1

One of the better routes is not shown on the study map. This route would tie the Telegraph Road-Beulah Road intersection to the intersection of Woodlawn Road and Route 1. The northern half of ALT B would be linked across the golf course to the southern half of ALT A. Underpasses could be constructed so that golfers could pass safely from one side of the divided golf course to the other. The intersection of Woodlawn Road and Route 1 would have to be modernized and widened in any event to accommodate vehicles of visitors going to the proposed Army Museum (i.e., the plateau adjacent to the existing soccer field).

ALT C (a variation of the Mulligan Road proposal of a decade ago) might be acceptable if the jug handle intersection proposed for Route 1 (and the IMP building) were redesigned.

ALT E might work if the proposed route were moved to the south side of the existing power lines. However, a number of homes between Pole Road and Route 1 would have to be condemned to widen existing Leaf Road to accommodate the increased traffic.

Email Comments

Hi David, guess you don't know about the big fight we had several years ago re a proposal to violate Huntley Meadows with a road. I am a private citizen who opposes alternate routes F (the very worst), G (next worst), D and E.

Please leave this valuable park alone. Thanks Barbara Selzer

Dear Mr. Hand:

This message is to provide public comment on information disseminated at the November 17, 2003, Public Information Meeting at Mount Vernon High School on alternatives under consideration for connecting Telegraph Road and Richmond Highway.

1. My name is Jo Belser. My address is 5604 Cornish Way, Alexandria, VA 22315-4019.

2. I am a private citizen and a resident of Hayfield, a development that is physically located between Telegraph Road and Richmond Highway on the north and south. Hayfield is also physically located between Fort Belvoir on the west and a U.S. Coast Guard station and the Hutley Meadows park and wetlands on the east.

3. I drive a vehicle that bears a DoD sticker, so I understand the need to protect from harm the sensitive facilities presumably located at Fort Belvoir. Yet as a neighbor of Fort Belvoir, I have been more than greatly inconvenienced by closure of that facility to through traffic: There are many types of activities that I used to participate in that are no longer feasible without the access that such a route allows. I can, for example, no longer feasibly attend a place of worship that I once was able to easily access that is located on Fort Hunt Road. So I generally favor the need to provide the public with a way to access Richmond Highway from Telegraph Road.

From my perspective, building a road through the wetlands that is Huntly Meadows Park is not a viable alternative because it would endanger those wetlands. Even having the possibility of such a road marked on the map that was distributed at tonight's Public Information Meeting is alarming to me. There was a lawsuit about this in the 1980s and, to my way of thinking, nothing has changed since then, except that the potential environmental damage to the wetlands by such a road has greatly increased.

Of course, I would also favor those options that would push the connector as far as possible from my own back yard (but not through wetlands). I so urge out of more concern than just the self-serving interests of NIMBY ("not-in-my-back-yard") : this would be the most equitable solution, given than any the previous road that was closed after 9/11/2001 connected through Fort Belvoir at Beulah Road.

Beulah Road has four-lanes. It thus is already equipped to handle the increased traffic volume that such a connector would ellicit and it has the added attraction of being connected to the Fairfax County Bypass. Therefore I believe that a new connector should be either at or south of the Beulah alternative.

Dear sir,

Regarding the road between Telegraph and Rte I in Alexandria, I support hardening Woodlawn Rd. The other alternatives are not acceptable.

Sincerely,

Mary B. Millikin

Dear Mr. Hand,

I am writing as a resident of Hayfield Farm in the Fairfax County area of Alexandria. I am interested in more information on the proposed connector road for Richmond Highway (Route 1) and Telegraph Road, in the area of Fort Belvoir.

I ask that the extension of Woodlawn Road be considered as the first alternative. I think this would have the least impact on the neighborhoods and wetlands in this area. Living so close to Huntley Meadows Park and the wetlands areas has many advantages, but pose a problem for building roadways.

Michele Webb
Hayfield Elementary

---

1. CONTACT INFORMATION:

Jim Walton
4320 Jackson Pl
Alexandria, VA 22309

2. AFFILIATION:

x Private Citizen

3. COMMENTS:

General:
The proposals lack the following considerations that should be included or technical rationale as why they cannot be included:

- immediate/near term and or interim solutions
- "hardening" of road/facilities
- combination of immediate "interim" solutions with "long term" solutions.

Without these, entire process lacks credibility that a sincere effort is being done. The current process gives an appearance that seems to be towards "appeasement" rather than determining credible (feasible) solutions. Especially in light of Alt F/G, which have been historically rejected already.

ALT A

- Suitable for an "interim" solution as long as it contains improvements to allow traffic to flow unimpeded (i.e. no stoplights/signs) between Telegraph and Richmond Hwy

ALT B: (or a variations that combines hardening) can provide best of many worlds.

- Best proposal
- Alignments with Beulah Rd & Mt. Vernon Mem Hwy provide excellent traffic flow to reduce Rt 1 Traffic
- Alignment should be to Mt. Vernon Mem Hwy, not "dog leg" around IMP building. Current VDOT study has these roads aligned. (There is an only an "OPTION" for the dogleg, but that is NOT currently the baseline plan)
- Enhances Emergency vehicle East/West access
- Provides viable "relief" in case Route 1 is blocked.
- Can allow Fort Belvoir to reduce two gates (Woodlawn Rd Gate & Telegraph Rd gate) to one controlled gate off of the new rd i.e. such as the intersection of Woodlawn Rd and Alt B, or by extending Kingman Rd to Alt B.)

ALT C, D, E:

- Alt D is worse of these three
- Poor traffic flow to Beulah Rd and Hayfield Rd
- Significantly less effective to move traffic.
- Forces Belvoir to maintain two security gates (Woodlawn Rd Gate & Telegraph Rd gate)
- Dumps traffic through residential areas
- Alignments E/F @ Poe Rd should be closer to Belvoir Property, not through residential area

ALT F, G:

- well publicized as historically rejected.
- Only "credible" if an immediate interim solution is available.
- Dumps traffic through residential area
- Forces Belvoir to maintain two security gates (Woodlawn Rd Gate & Telegraph Rd gate)
- Provides significant "round about" during events Route 1 is blocked
- Does provide a viable East West Access if aligned with Van DORN street extension.

As discussed last night at planning meeting.. The county and residents want Woodlawn Road opened asap. Jerry Hyland spoke for Board of Superviors last night about opening road by "hardening" the area along CEETA.

I have made suggestions on how to open that road immediately based on my security experience in Vietnam.. I will give them to you so maybe someone will look seriously at them. They would save millions of dollars and time. This was used on HQ DISA on Courthouse road in Arlington right after 9/11.

First, go to the fensed in area next to Woodlawn Rd and remove all trees outside of fense to the road surface.. Smooth that area against fense..

Second, Buy 50 foot cargo containers.. Stack the one layer high, cut a big hole in top, fill them with sand (cheaper than cement). Stack them 3 high.. They should be staggered over each other. There is no amount of explosives that can penetrate these containers filled with sand.. We did this in Vietnam and it worked fine. It even took mortors and rockets every night and were never knocked over or damaged. Saved many a US soldier in our compounds in Veitnam.

Third, Install a closed circuit TV camera system so PMO could monitor the road traffic.

Fourth, Restrict Woodlawn Rd to cars and pickup trucks only. NO big 18 wheel or commercial trucks. This might make Provost Marshall and CEETA more comfortable.

Fifth. Install Jersey barriers along both sides of Woodlawn Rd to prevent any vehicles from going on Belvoir without going thru a gate. Open a gate toward the elementary school and one toward the commissary.. Block the end of Kingman or install gate, same where Beulah turns toward golf course. This will prevent the NON DOD vehicles from entering post without going thru a check point. Opening several new gates is a very costly human toll for guards, but we are going to contract guards in Jan 2004, more guards can be ordered. This is much cheaper than building new roads all over the Woodlawn area to Telegraph road.

This suggestion would protect CEETA (can be used at Army facility on Woodlawn) , get road opened fast, cheap, and effective. The resistance against outside DOD ideas are really hindering any common sense solutions to this situation.

If anyone thinks this will not work. Get the ATF or FBI to test it at Quantico, it never failed us in Vietnam.

You asked for background information. I have been employed here at Fort Belvoir since 1988. I live one mile away at 7931 Grimsley Street. I have been in DOD since Feb 1962. I spent 3 yrs in Vietnam, 10 years in Europe, been to Kuwait, Saudi, Qatar twice.

Good luck...

Paul Mayo
Product Integration Specialist
SEAT/FBEO
PEO EIS
Fort Belvoir, Va 22060
703-806-3034
cell 571-236-4672

Sandy Stallman

FAIRFAX COUNTY PARK AUTHORITY

12055 Government Center Parkway, Suite 927
Fairfax, VA 22035-1118

November 25, 2003

Colonel Thomas W. Williams, Commander
U.S. Army Garrison, Fort Belvoir
9820 Flagler Road
Fort Belvoir, VA 22060-5932

Dear Colonel Williams:

I am writing to offer the Fairfax County Park Authority position concerning the alternative alignments proposed in the Feasibility Study of the Richmond Highway to Telegraph Road Connector. The Park Authority has reviewed the alternative alignments and are very concerned about impacts to nearby park-owned properties, specifically, Huntley Meadows Park.

Huntley Meadows Park, one of the largest parks in Fairfax County, contains 1,425 acres of diverse habitats including wetlands, meadows and mature forest. Its animal residents include fox, deer, beaver, otter and over 200 species of birds. Naturally, we are very concerned about any potential impacts to this major environmental treasure and will not support any alignment that impacts this park.

After reviewing the proposed alignments shown in the feasibility study, the Park Authority strongly opposes Alternatives D, E, F and G due to their direct negative impacts to Huntley Meadows Park. We urge that the study focus on the remaining alternatives or hybrids of these alternatives to replace the Woodlawn Road connector closed for security reasons. Although not proposed as an alternative, reopening of the Woodlawn Road connector would also be supported by the Park Authority.

It is our understanding that the Army is anticipated to make a decision on whether and how to proceed with the connector road in January 2004. If we can provide any additional information that will assist the Army in this task, we will welcome the opportunity to participate. At the least, I request that we be directly informed of decisions, process and timelines.

We look forward to future communication and involvement.

Sincerely,

Michael A. Kane
Director

cc: Park Authority Board
Board of Supervisors
Anthony H. Griffin, Fairfax County Executive
Robert A. Stalzer, Deputy County Executive
Young Ho Chang, Director, Fairfax County Department of Transportation
Thomas F. Farley, District Administrator, VDOT, No. Va.
LTC Kevin Tate, Director, Department of Public Works, Fort Belvoir
Mr. Dave Hand, Army Corp of Engineers, Baltimore District

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
Baltimore MD 21203-1715
E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: EARL FLANAGAN

Agency/Organization: MT. VERNON TRANS. COMMISSIONER

Street Address: 3117 WATERSIDE LANE

City, State, ZIP Code: ALEXANDRIA, VA 22309

II. Please select an affiliation that best represents your role (check one):

- ☐ Private citizen
- ☐ Fort Belvoir Resident
- ☐ Civic Organization
- ☐ Environmental Organization
- ☐ Recreational Organization
- ☐ Business/Commercial Org.
- ☒ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

Woodlawn Road/Beulah Street between Route 1 and Telegraph Road should be reopened as a depressed road between Route 1 and the wildlife corridor, be elevated over the wildlife corridor and depressed between the wildlife corridor and Telebraph Road. If the depressed roadway is not sufficient blast protection near sensitive failitites, additional hardening facilities should be added at those points.

Internal Fort roads (Meers, Gorgas, Kingman and Beulah) that intersect with Woodlawn Road should cross over Woodlawn. No access ramps from Woodlawn Road in internal Fort roads should be provided.

The present Woodlawn roadway is elevated above Route 1, and Telegraph Road and naturally depressed below existing intersections.

Comment Form

Richmond Highway and Telegraph Road Connector, Fairfax County, VA.

Please place your completed comment form in a basket located at the Road Connector Study Booth.

- OR -

Mail to:
Mr. Dave Hand
U.S. Army Corps of Engineers, Baltimore District
P.O. Box 1715
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E-mail: David.B.Hand@usace.army.mil

ALL COMMENTS MUST BE RECEIVED OR POSTMARKED BY NOVEMBER 26, 2003

I. Contact Information:

Name: EARL FLANAGAN

Agency/Organization: MT. VERNON TRANS. COMMISSIONER

Street Address: 3117 WATERSID LANE

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- ☒ County Govt. [_____]
- ☐ State Government
- ☐ Federal Government
- ☐ Federally Recognized Tribe
- ☐ Other _____

III. Please write your comments in the space below (if you need additional space, please attach additional sheets of paper):

The study cannot be presented to the public as complete unless previous agreements by the Secretary of War about Woodlawn Road/Beulah Street are included.

The study ~~should reference the County's Memorandum~~ of January 15, 2002 from the Assistant County Attorney to Supervisor Hyland and note that:

1) Fairfax County Deed Book 471, pages 144-8, records that the Secretary of War in 1945 granted an easement to the ~~Commonwealth of Virginia for the construction and use~~ of Woodlawn Road/Beulah Street by the public in perpituity, and

2) the Army would have to use their powers of eminent domain to ~~close or otherwise interfere with its use, and~~

3) the Army must pay the Commonwealth reparations for the fair market value of the Commonwealth's investment.

The study should not hide this information from the public.
The information should be referenced within the executive summary as well as body of the study.

APPENDIX G

SCREENING CRITERIA

DEFINITIONS AND ASSUMPTIONS

Screening Criteria Definitions and Assumptions

	DESCRIPTION	Definition	Assumptions/Conditions	Source	Date
1	**Total Road Length** (miles)	Total length of proposed road corridor. Corridors were manually delineated on maps by stakeholders and digitized by Tetra Tech, Inc. Their lengths were calculated using ArcGIS 8.1.	none	Stakeholder Group/Tetra Tech, Inc.	2003
	Road Length on Fort Belvoir (miles)	Length of roadway that would cross Fort Belvoir property.	none	Tetra Tech, Inc.	2003
	Road Length off Fort Belvoir (miles)	Length of roadway that would cross property outside the Fort Belvoir boundary.	none	Tetra Tech, Inc.	2003
2	**Use of Existing Roadways and Corridors** (percentage)	Amount of existing road corridors or roadways (paved and unpaved) that would be utilized. Percentages were estimated using a 2000 aerial photo provided by Fort Belvoir GIS and a roads GIS layer provided by FFX.	Existing road alignments have not changed since the 2000 photo was taken or the roads-GIS layer was last updated. Beulah Street (where it intersects Woodlawn from the north) has since been cut off.	Tetra Tech, Inc	2003
3,7	**Projected Volume on New Connector**				
	North End of Connector (at Telegraph Road)	Daily volume on new connector at Telegraph Rd.	New connector would consist of 4 lanes.	TransCore	2003
	South End of Connector (at U.S. Route 1)	Daily volume on new connector at Route 1.	New connector would consist of 4 lanes.	TransCore	2003
	Average Volume	Average of above two rows.	New connector would consist of 4 lanes.	TransCore	2003
4	**Projected Woodlawn Road Volume (pre-9/11) That Would Be Served**	The volume of Woodlawn Road traffic (pre-9/11) that would be served by each alternative. Note: Not all traffic that previously used Woodlawn Road would be expected to use the new connector (some volume would be expected to continue to use other existing roads in the area).	New connector would consist of 4 lanes.	TransCore	2003
5,8	**Projected Change in Volume on Parallel N-S Routes**				
	Route 1 (North of Sherwood Hall Lane)	Daily traffic diverted from Route 1 N. to new connector.	New connector would consist of 4 lanes.	TransCore	2003
	Fairfax County Parkway (North of John J. Kingman Road)	Daily traffic diverted from FFFX CO. Pkwy. to new connector.	New connector would consist of 4 lanes.	TransCore	2003
	Total	Sum of above two rows.	New connector would consist of 4 lanes.	TransCore	2003
6,9	**Projected Change in Vehicle Hours of Travel (VHT)**	Change in VHT within study area due to availability of new connector.	VHT is surrogate for level of service and delay and is available from model.	TransCore	2003
10	**Projected Level of Service Delay**	Level of Service (LOS) and Delay (sec) for selected intersections in the vicinity of Fort Belvoir. LOS criteria: A<10 seconds, B = 10–15 seconds, C = 15–25 seconds, D = 25–35 seconds, E = 35–50 seconds, F> 50 seconds. Both baseline and estimated future AM and PM LOS and Delay are provided.	New connector would consist of 4 lanes.	TransCore	2003
11	**Fort Belvoir Force Protection**				
	Crosses Fort Belvoir	Whether the corridor crosses the Fort Belvoir Post boundary.	none	Fort Belvoir GIS	2003
	On-Post Road Crossings	Number of roads that the corridor would cross (if at grade). Numbers were generated using a roads GIS layer provided by FFX.	Existing road alignments have not changed since the roads GIS layer was last updated in October 2002.	FFX GIS	2002
	State/Local Roads	Number of paved roads that the corridor would cross. Numbers were estimated using a roads GIS layer provided by FFX.	Existing road alignments have not changed since the roads GIS layer was last updated in October 2002.	FFX GIS	2002
	Unpaved/Service Roads	Number of unpaved roads that the corridor would cross. Numbers were estimated using a roads GIS layer provided by FFX.	Existing road alignments have not changed since the roads GIS layer was last updated in October 2002.	FFX GIS	2002
	Road Length (ft) Within 400 m of Security-Sensitive Facilities	Length (feet) of roadway that would fall within 400 meters of sensitive structures and facilities identified in the North Post study, plus one additional building on HEC.	Length (feet) of roadway that would fall within 400 meters of sensitive structures and facilities identified in the North Post study, plus one additional building on HEC.	North Post Study; Tetra Tech, Inc.	2000; 2003
12	**Number of Schools Within 750 Feet**	Distance from each corridor to school (measured using GIS).	none	Tetra Tech, Inc.	2003
13	**Within Easements** (FFX Co) (Dominion Virginia Power; Available Fort Belvoir Data Limited to Dominion Virginia Power Easement) (Acres)	Acres of corridor within easements; Only one easement belonging to Virginia Dominion Power was identified within the corridors. No effort was made to obtain easement information from individual utility companies and hardcopy research of easements information at Fort Belvoir was not attempted.	GIS easement layer provided easement information for the area.	FFX GIS	2003
14	**Utility Crossings**	Number of utility lines that would be crossed on and off post. "Parallel" indicates utility lines that run parallel to and within 64 feet of the corridor centerline. Cable television and telephone data were not readily available, and no attempt to obtain these data from private utility companies was made.	GIS layers provided represent utility lines within the area.	Fort Belvoir GIS	2003
	Electric (Dominion Virginia Power)	Number of above- and below-ground electric lines that would be crossed.	All electric lines are contained in the GIS layers provided by Fort Belvoir and FFX.	Fort Belvoir GIS; FFX GIS	2003
	Gas	Number of gas lines that would be crossed.	All gas lines are contained in the GIS layers provided by Fort Belvoir.	Fort Belvoir GIS	2003
	Sanitary Sewer	Number of sanitary sewer lines that would be crossed.	All electric lines are contained in the GIS layers provided by Fort Belvoir and FFX.	Fort Belvoir GIS; FFX GIS	2003
	Stormwater	Number of stormwater lines that would be crossed.	All stormwater lines are contained in the GIS layers provided by Fort Belvoir.	Fort Belvoir GIS	2003
	Water	Number of water lines that would be crossed.	All electric lines are contained in the GIS layers provided by Fort Belvoir and FFX.	Fort Belvoir GIS; FFX GIS	2003
15	**Take Projections - Fairfax County**				
	Within Residential Areas (acres)	Acres within residential area (subdivision) boundaries.	none	FFX GIS	2003
	Within Undeveloped Acres with Approved Development Plan (FFX) (Acres)	Acres of undeveloped land based on parcel data. These include undeveloped parcels that do have an approved development plan filed with Fairfax County.	Parcels have not been developed since the latest parcel data update.	Parcel data: FFX Dept of Taxes and Revenue	2003
16	**Take Projections - Fort Belvoir**				
	Within Residential (acres)	Acres within on-post housing area boundaries.	Dwelling units have not been constructed since the photo date (2000) or the latest building GIS layer update.	Fort Belvoir GIS; Tetra Tech, Inc.	Aerial photo: 2000; Building layer: 2003
	Natural Constraints (acres)	Acres of areas classfied as "Natural Based Constraints" that would be affected.	Data presented in Draft Master Plan are current.	PBS&J	2003
	Operational Constraints (acres)	Acres of areas classfied as "Operational Based Constraints" that would be affected.	Data presented in Draft Master Plan are current.	PBS&J	2003
	Cultural Constraints (acres)	Acres of areas classfied as "Cultural Based Constraints" that would be affected.	Data presented in Draft Master Plan are current.	PBS&J	2003
	Developable Land (acres)	Acres of areas classfied as "Developable" that would be affected.	Data presented in Draft Master Plan are current.	PBS&J	2003
17	**Zoning Overlay Districts**				
	Within Natural Resource District (acres)	Acres of corridor that fall within a Natural Resource Disctrict.	Data provided are current.	FFX GIS	2003
	Within Water Supply Protection District (acres)	Acres of corridor that fall within a Water Supply Protection District.	Data provided are current.	FFX GIS	2003
	Within Historic/Heritage Protection District (acres)	Acres of corridor that fall within a Historic/Heritage Protection District.	Data provided are current.	FFX GIS	2003
18	**Within Wetlands (Fort Belvoir)/Floodplains (FFX CO)** (acres)	Acres of wetlands or floodplains that would be affected.	GIS layers provided accurately represent wetland locations.	Wetlands: Fort Belvoir GIS; Floodplains: FFX GIS	Wetlands: 2003; Floodplains: 2003
19	**Number of Major Stream Crossings**	Number of major stream crossings the corridor would have. Numbers were calculated using stream data layers provided bv FFX CO GIS.	All streams in the GIS layer are perennial and would require a crossing to be constructed.	Streams provided by FFX GIS	2003
20	**Within Forested Areas (Fort Belvoir)** (acres)	Number of acres of upland habitat that could be affected.	none	Fort Belvoir GIS	2003
21	**Potential Threatened and Endangered Species Impact**				
	Number of Known T&E Sightings Within 400 m of Corridor	Number of known T&E sightings is randomly offset and given an 800 m buffer. Impact occurs if corridor intersects this buffer.	GIS layer includes only known sightings.	Virginia Department of Game and Inland Fisheries	2003
	Wood turtle habitat (Fort Belvoir only) (acres)	Number of acres of wood turtle habitat that could be affected off Fort Belvoir.	GIS layer accurately represents wood turtle habitat.	Fort Belvoir GIS	2003
22	**Rare Ecological Communities acres** (Fort Belvoir only)	Number of acres of identified as "Rare Ecological Communities" that could be affected off Fort Belvoir.	none	Fort Belvoir GIS	2003
23	**Conservation Areas**				
	Within Wildlife Corridor (Fort Belvoir only) (acres)	Number of acres of Fort Belvoir's wildlife corridor that could be affected.	none	Fort Belvoir GIS	2003
	Within Huntley Meadows (acres)	Number of acres of Fairfax County's Huntley Meadows that could be affected.	none	FFX GIS	2000
	Within Other County/City Parks (acres) (includes Fort Belvoir golf course)	Number of acres of parks on Fort Belvoir and in Fairfax County that could be affected.	none	FFX GIS	2000
	Within Jackson Miles Abbott Wetland (acres)	Number of acres of Jackson Abbott Wetland that could be affected.	none	Fort Belvoir GIS	2003
	Within Chesapeake Bay Resource Protection Area (acres)	Number of acres within the Chesapeake Bay Resource Protection Areas.	none	FFX GIS	1997
24	**SWMUs, Landfills, Septic Systems**				
	SWMUs (Landfills) - Fort Belvoir, within 100 feet	Number of SWMUs on Fort Belvoir that could be affected. Landfills were the only SWMUs identified near the corridors.	none	Fort Belvoir GIS	2003
	Active Landfills - FFX, within 100 feet	Number of active landfills within Fairfax County that could be affected.	No active landfills within 100 feet of the corridors were identified.	FFX CO Department of Public Works and Environmental Services	2003
	Septic Systems - Fort Belvoir, within 100 feet	Number of septic systems on Fort Belvoir that could be affected. Data for septic systems in Fairfax County were not readily available.	GIS layer reflects all septic systems on Fort Belvoir.	Fort Belvoir GIS	2003
25	**Estimated Number of Noise Sensitive Receptors Within 750 Feet**				
	Residences	Number of residences within 750 feet that could be affected by noise.	750 feet is the distance at which noise from a diesel truck diminishes to an acceptable level (Noise Zone I - 65 dB).	Tetra Tech, Inc.	2003
	Other (Schools, Churches, Hospitals, Nursing Homes)	Number of other facilities within 750 feet that could be affected by noise.	750 feet is the distance at which noise from a diesel truck diminishes to an acceptable level (Noise Zone I - 65 dB).	Tetra Tech, Inc.	2003
26	**Cultural/Historic Areas Affected**				
	Fort Belvoir (Total Sites)	Sum of 3 rows below.	GIS layers provide an accurate and thorough assessment of cultural sites.	Fort Belvoir GIS	2003
	Eligible	Number of eligible archaeological sites on Fort Belvoir that could be affected.	GIS layers provide an accurate and thorough assessment of cultural sites.	Fort Belvoir GIS	2003
	Potentially Eligible	Number of potentially eligible archaeological sites on Fort Belvoir that could be affected.	GIS layers provide an accurate and thorough assessment of cultural sites.	Fort Belvoir GIS	2003
	Not Eligible	Number of not-eligible archaeological sites on Fort Belvoir that could be affected.	GIS layers provide an accurate and thorough assessment of cultural sites.	Fort Belvoir GIS	2003
	Fairfax County (Additional Survey Recommended)	Number of investigated archaeological sites in Fairfax County that could be affected. Fairfax County recommends that additional survey be conducted to determine eligibility.	All sites were identified by review of FFX archaeological data.	FFX Archaeological Services	2003
27	**Estimate**	Cost estimate for Alternative (see Table 7-1).	See Table 7-1.	Tetra Tech, Inc.	2003

APPENDIX H

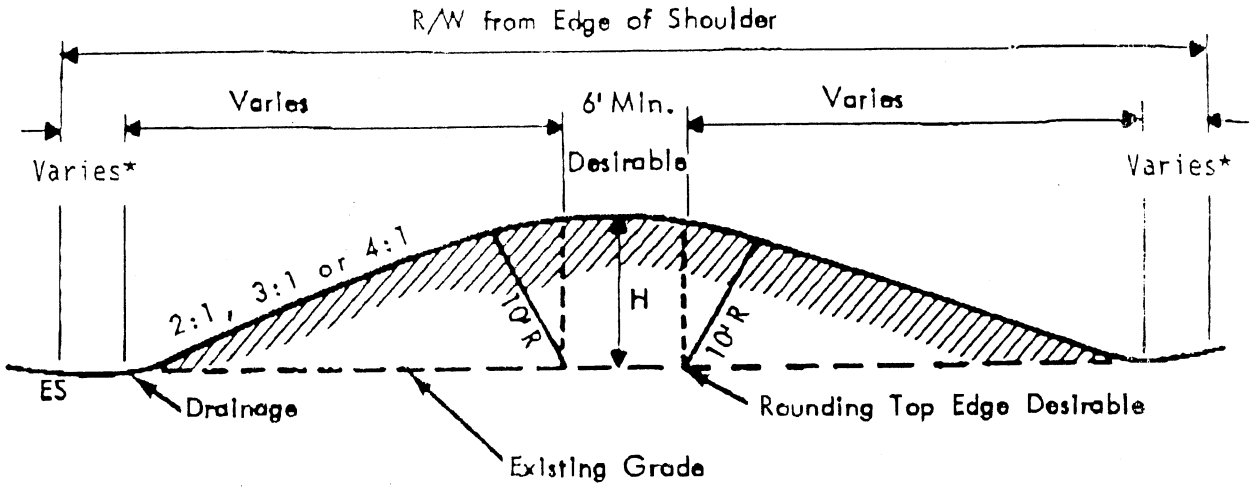
EARTHEN BERM DESIGN

3-6.5 Earth Berms

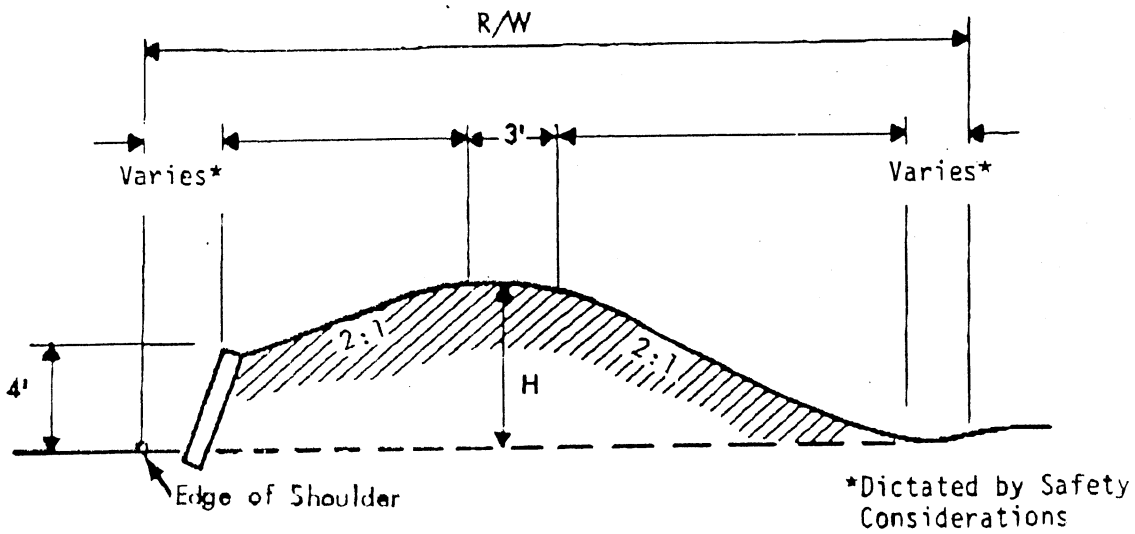
Planted earth berms are usually superior to barrier walls from aesthetic considerations and may be more economical if fill material and right-of-way are available. Slopes of 4:1 or flatter are best from a visual point of view but 2:1 slopes are acceptable if the circumstances warrant.

The main disadvantage of berming is that large areas of right-of-way are required for mounds of significant height. Combining walls and berms allows for more height in a limited right-of-way and more flexibility in the location of walls (see Figures 3-27 and 3-28). In situations where right-of-way width does not permit adequate mounding to occur, a wall built on top of a mound extends its height. In most cases this would cost less than a wall of equal height and increases the aesthetic possiblities. Berms can also serve as connecting points for walls or walls of different heights adding variety to possible severe directional design.

It should be noted however that there is at present serious concern in the scientific community that extensive landscaping along the top of a berm can degrade its attenuation characteristics by scattering the diffracted sound energy. This phenomenon merits further investigation. For the present it is recommended that landscaping along the top of berms be kept to a minimum.



TYPICAL BERM CONFIGURATION

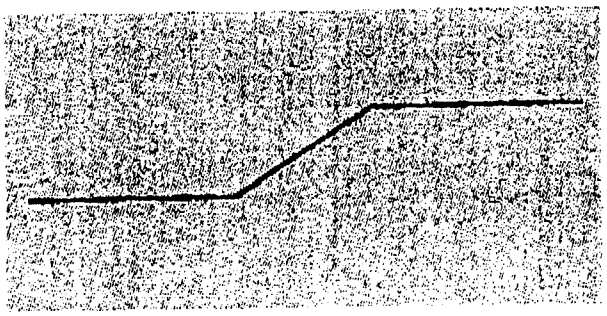


BERM IN LIMITED RIGHT-OF-WAY

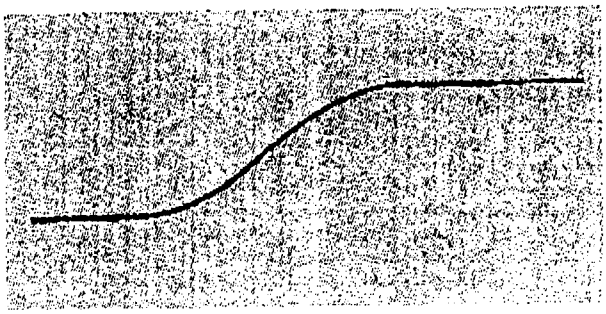
FIGURE 3-27. ALTERNATE APPROACHES TO BERM CONSTRUCTION

Earth Berms: Line and Form

Earth berms, as the most natural appearing type of noise barrier, should have a line and form similar to a natural hillside. Slopes should approach a 3:1 ratio wherever possible, with transitions in the form of an S curve. Slopes that are steeper than this, with sharply angled transitions, are erosion prone, difficult to plant and maintain, and appear manmade. Rather, one should get the feeling that the berm is a natural landform. Where space allows, the line of an earth berm should vary to further create a natural look. Several berms can be overlapped to create pleasing effects while maintaining noise abatement capability. Plantings should be used as vertical elements on berms, which are distinctly horizontal forms.

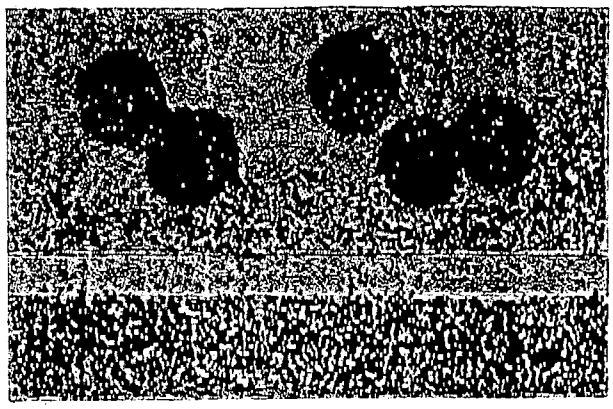


Angle section

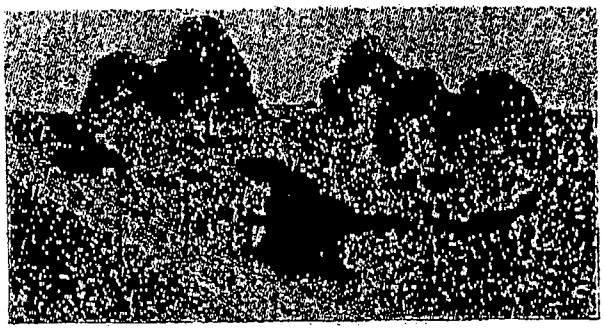


S curve section

Earth berm which varies in plan



Plan view



Perspective view

This Appendix is an Excerpt From:

Federal Highway Administration. No date. *A Guide to Visual Quality in Noise Barrier Design*. Federal Highway Administration. Washington, DC.