CLERMONT AVENUE INTERCHANGE WITH INTERSTATE 95

FINAL ENVIROMENTAL ASSESSMENT

VIRGINIA DEPARTMENT OF TRANSPORTATION

NOVEMBER 1993

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ENVIRONMENTAL ASSESSMENT
INTERSTATE 95 AND CLERMONT AVENUE INTERCHANGE
CITY OF ALEXANDRIA AND FAIRFAX COUNTY, VIRGINIA
STATE NO. U000-100-109, PE103; FEDERAL NO. M-5401(180)

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

The Federal Highway Administration (FHWA) has determined that Alternative No. 5 which includes an interchange between Interstate 95 and Clermont Avenue and a connector road between existing Eisenhower Avenue and Pickett Street South will have no significant impact on the human environment. This FONSI is based on the attached Final Environmental Assessment (FEA) dated November 1993. FHWA has independently evaluated this document and has determined that it adequately and accurately discusses the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. The FEA provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

November 23, 1993
Date

Allen Masuda
District Engineer
Federal Highway Administration

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STATE PROJECT: U000-100-109,PE103
FEDERAL PROJECT: M-5401[180]

CLERMONT AVENUE INTERCHANGE WITH I-95

I. SUMMARY

A. DESCRIPTION OF THE PROJECT

The proposed project, as shown on Figures 1, 2, and 3, is located in the northeast Virginia Washington Metropolitan area in the City of Alexandria. This project is included in the Virginia Department of Transportation's Six-Year Improvement Plan as U000-100-109, PE-103 and as Federal-Aid Project M-5401 [180]. The project is designed to improve access to the Eisenhower Valley Section of Alexandria and to provide traffic relief for the Van Dorn Street and Telegraph Road Interchanges with Interstate 95 (I-95). By providing an alternative access point to I-95 the project will also serve the large traffic volumes in the Duke Street (Route 236) Corridor. To do so, the Virginia Department of Transportation proposes to construct a new interchange with I-95 at Clermont Avenue, extend Clermont Avenue to Eisenhower Avenue and to construct a connector from Eisenhower Avenue to Duke Street.

B. ALTERNATIVES CONSIDERED

Five candidate build alternatives (CBA's) were considered for this improvement (Figure 4). These five alternatives all call for a diamond interchange with I-95 at Clermont Avenue, an approximate 0.2 mile four-lane roadway between I-95 and Eisenhower Avenue on Clermont,and a four-lane connector road with limited access control between Eisenhower Avenue and Duke Street.

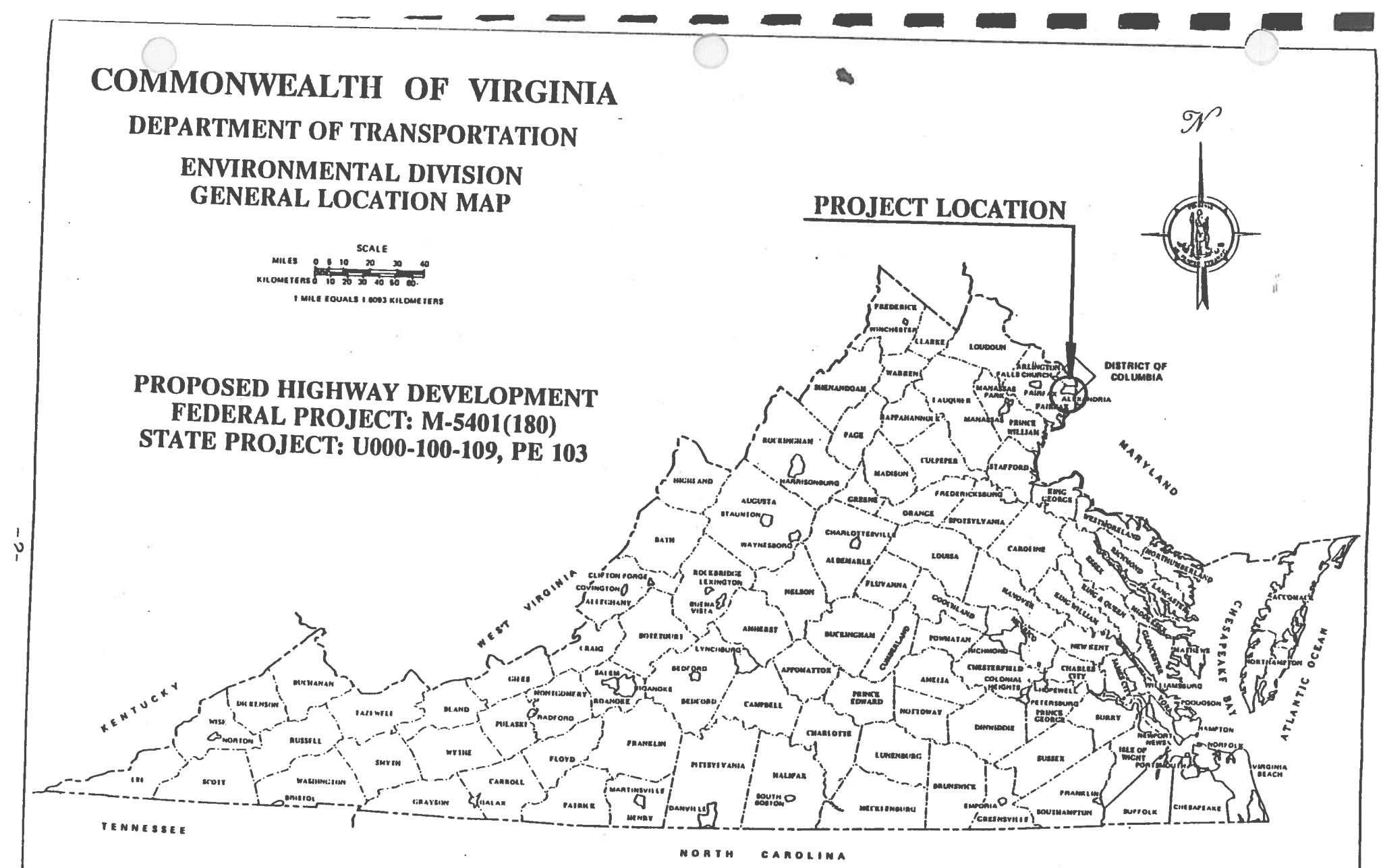
The interchange will be designed to accommodate east and west bound traffic wishing to travel from I-95 onto Clermont Avenue. No access will be allowed from I-95 onto south bound Clermont Avenue. Traffic will not be able to travel from the Eisenhower Valley south on Clermont to Fairfax County. In addition, the interchange will not allow traffic to travel north from Fairfax County to the Eisenhower Valley or onto I-95. This limitation was requested in the early project planning by Fairfax County.

The 0.2 mile four-lane roadway between I-95 and Eisenhower Avenue will consist of two lanes in each direction along with turning lanes for traffic moving onto Eisenhower Avenue from Clermont Avenue.

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL DIVISION
GENERAL LOCATION MAP



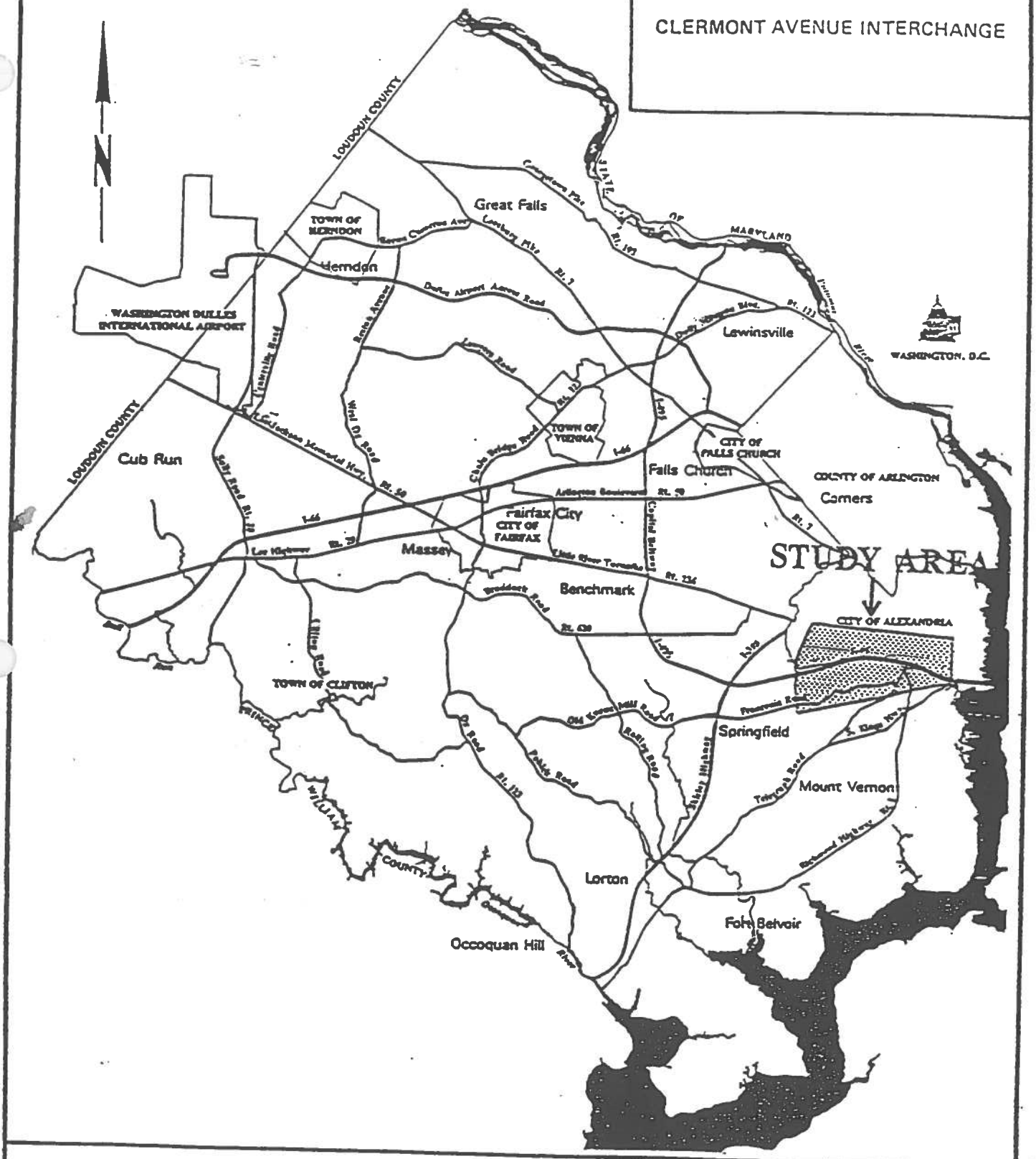
PROPOSED HIGHWAY DEVELOPMENT
FEDERAL PROJECT: M-5401(180)
STATE PROJECT: U000-100-109, PE 103

-2-

CLERMONT AVENUE INTERCHANGE WITH INTERSTATE 95

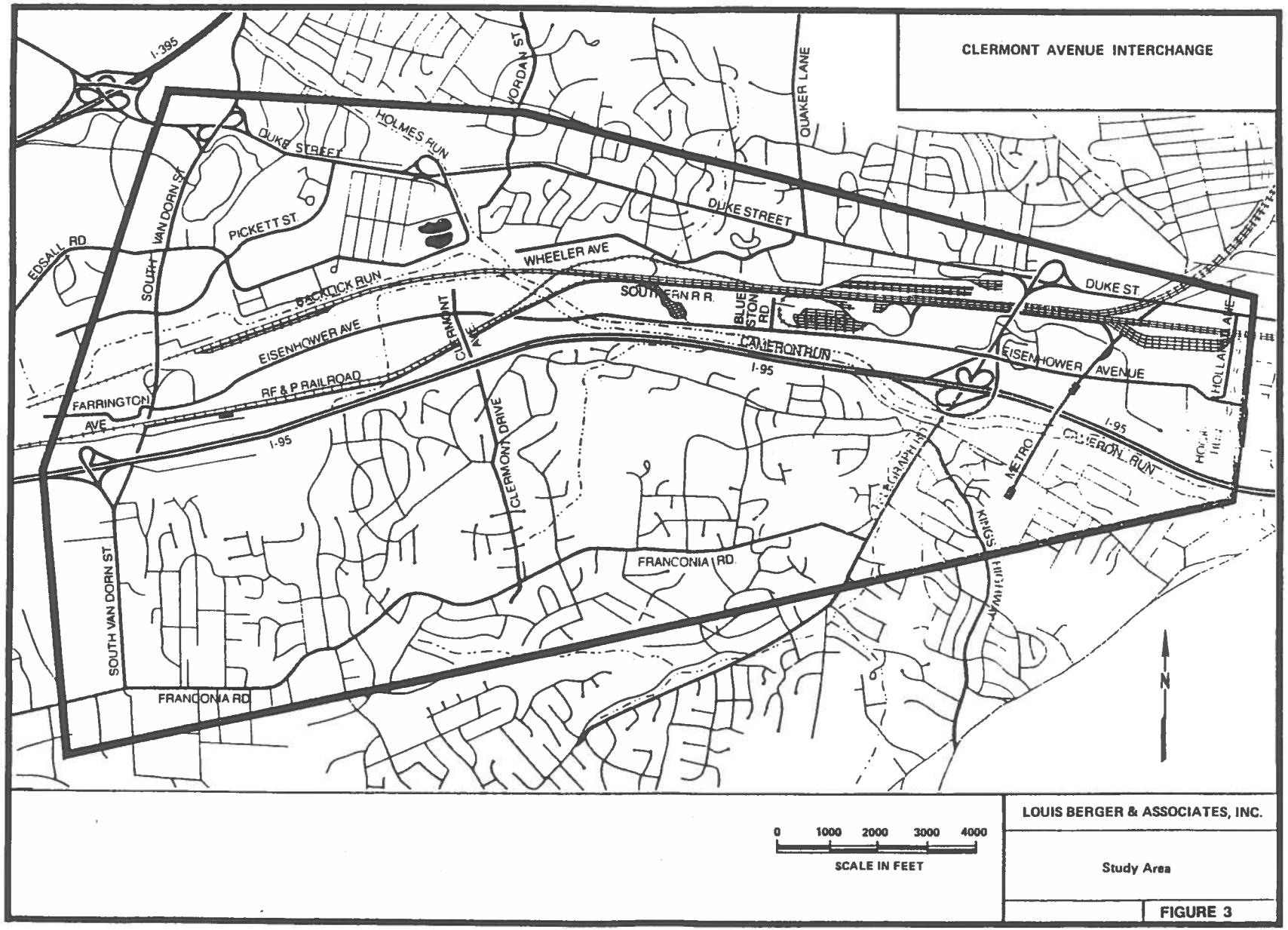
FIGURE 1

CLERMONT AVENUE INTERCHANGE



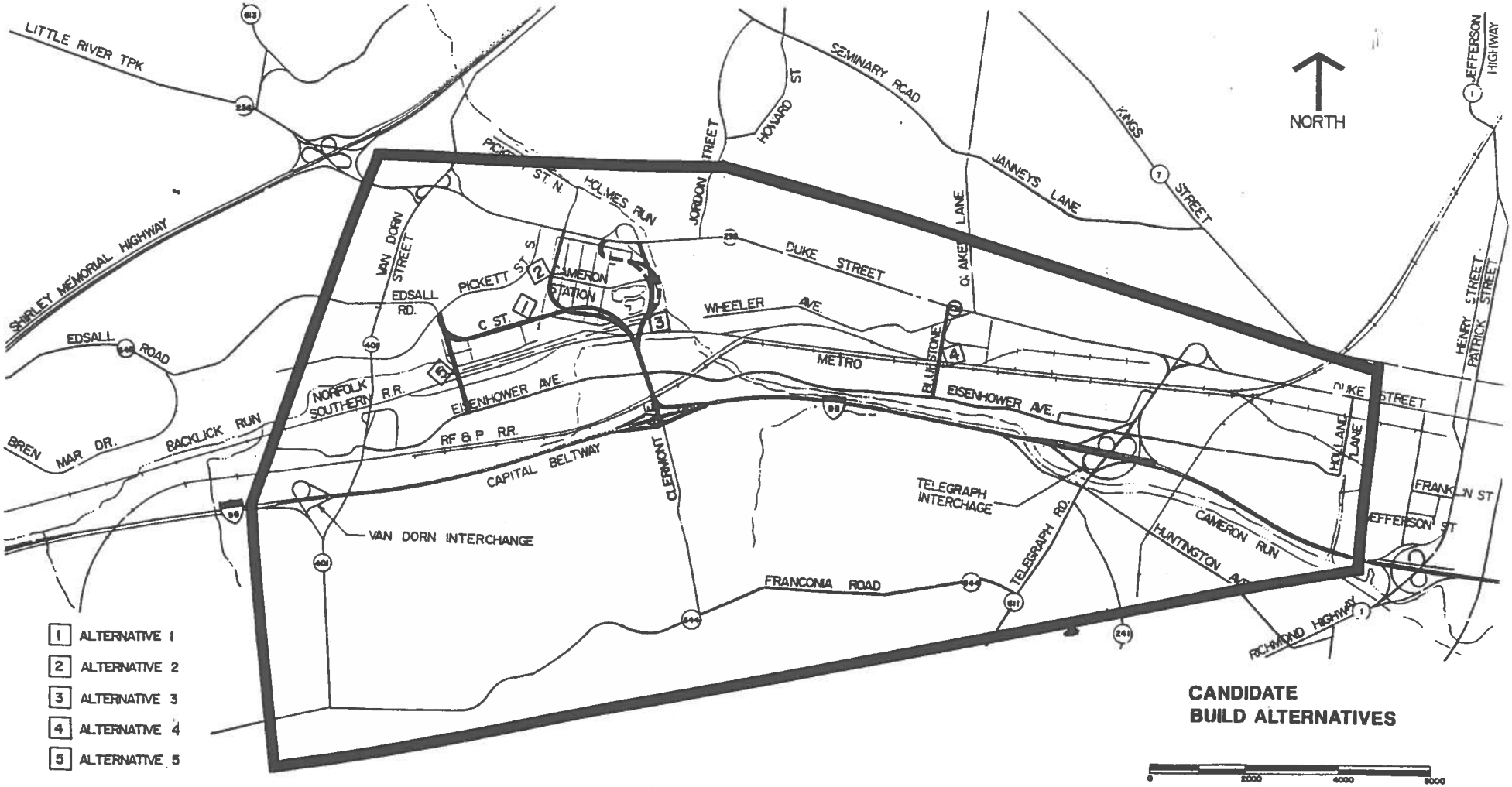
Regional Location

FIGURE 2


CLERMONT AVENUE INTERCHANGE
I-395
JORDAN ST
QUAKER LANE
HOLMES RUN
DUKE STREET
PICKETT ST
EDSALL RD
SOUTH VAN DORN ST
WHEELER AVE
DUKE STREET
BACKLICK RUN
SOUTHERN R.R.
BLUESTON RD
DUKE ST
EISENHOWER AVE
CLERMONT AVE
CAMERON RUN
I-95
EISENHOWER AVENUE
HOLLAND AVE
RF & P RAILROAD
FARRINGTON AVE
I-95
CLERMONT DRIVE
METRO
CAMERON RUN
FRANCONIA RD
KINGS HIGHWAY
SOUTH VAN DORN ST
FRANCONIA RD
N
0 1000 2000 3000 4000
SCALE IN FEET
LOUIS BERGER & ASSOCIATES, INC.
Study Area
FIGURE 3

VIRGINIA DEPARTMENT OF TRANSPORTATION

I-95 / CLERMONT AVENUE INTERCHANGE



CANDIDATE BUILD ALTERNATIVES

FIGURE 4

C. SELECTED ALTERNATIVE

Candidate Build Alternative No. 5 was selected as the Selected Alternative for the connector road between Eisenhower Avenue and Duke Street. The Selected Alternative is a 0.61 mile four-lane connector road between existing Eisenhower Avenue and South Pickett Street at the South Pickett Street/Edsall Road intersection (Figure 11, page 25). In addition, the project will include a signalized intersection at Clermont and Eisenhower Avenues, and a bridge over the Norfolk-Southern Railroad.

The diamond interchange with I-95 will require additional right of way on the north and south to accommodate the four needed ramps. The typical sections for the 0.2 mile extension of Clermont Avenue and the connector between Eisenhower Avenue and Duke Street are shown in Figure 5. Sidewalks and curb and gutter will be provided throughout the project and will require a minimum right-of-way width of 80 and 89 feet respectively.

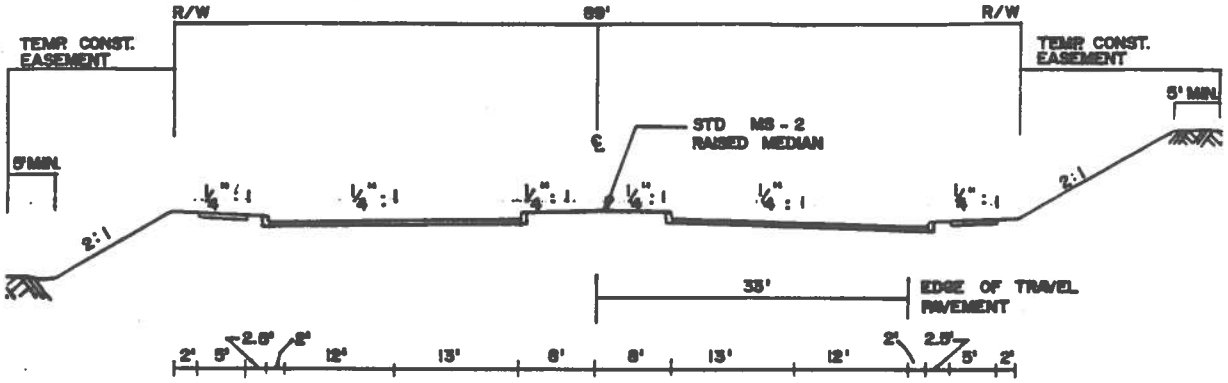
This project will be designed with a minimum design speed of 40 miles per hour. The actual posted speed will vary in accordance with the City of Alexandria regulations. The vertical and horizontal alignments provide adequate safe passing and stopping sight distance as the project will be designed in accordance with Virginia Department of Transportation and the American Association of State Highway Transportation Officials (ASSHTO) Standards.

D. CONSTRUCTION PHASING

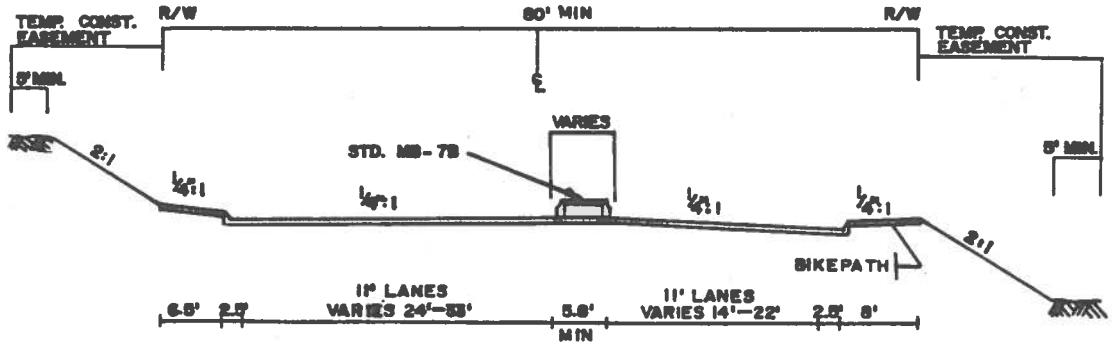
The project would be constructed in two phases: (1) construct the Clermont Avenue Interchange and extend Clermont Avenue to Eisenhower Avenue, and (2) construct the connector from Eisenhower Avenue to South Pickett Street. Construction of the interchange (Phase 1) would be funded with federal and state funds. Extending Clermont Avenue to Eisenhower Avenue and South Pickett Street will be funded with State, City and Federal funds. The interchange is currently listed in the Department's six-year plan. The connector road from Eisenhower Avenue to South Pickett Street (Phase 2) is not listed; however, this construction should be completed in a timely and sequential manner once Phase 1 is completed.

E. TECHNICAL REPORTS

Five Technical Reports were developed to provide detailed technical and background information for five areas of concern: noise, socioeconomics and land use, air quality, water quality and ecology, and traffic forecasting and analysis. The information contained in the Technical Reports was developed on the basis that this report would be an Environmental Impact Statement (EIS). After completion of these reports and review of the impacts, this document was revised to an Environmental Assessment to better reflect the minor degree of project associated impacts. The discussions and conclusions contained in this Environmental Assessment are based on the Technical Reports, which are available for public review.



TYPICAL SECTION OF CLERMONT AVE. CONNECTOR



TYPICAL SECTION EISENHOWER AVE. TO I-95

FIGURE 5

II. NEED FOR THE PROJECT

A. GENERAL

Currently the only access for the Eisenhower Valley to and from I-95 is at the South Van Dorn Street and Telegraph Road Interchanges. These are approximately three miles apart and are currently operating over capacity. In addition to South Van Dorn Street and Telegraph Road, other major highways that are important to the Eisenhower Valley include Eisenhower Avenue, South Pickett Street, Wheeler Avenue, Edsall Road and Duke Street. These streets also help to provide traffic to and from downtown Alexandria, Cameron Station, regional roads west of Alexandria and to Fairfax County south of I-95.

I-95 is a part of the National Interstate System. It serves through traffic from Maine to Florida. Regionally, I-95 serves as part of the Capital Beltway around the Washington metropolitan area. Locally it is important to the project area as it is the principal highway in the Eisenhower Valley area of Alexandria.

Improving access to the Eisenhower Valley in the City of Alexandria by constructing an interchange at Interstate 95 and Clermont Avenue has been under consideration since the early 1970's. Also, the road system of this area that includes the roads mentioned above was identified as needing improvement in 1973 when the Alexandria City Council passed a resolution requesting the Virginia Department of Transportation to construct an interchange at I-95 and Clermont Avenue. The justification of their request was to support growing development in the project area. In 1980, the Cameron Run Valley Study was approved by the City of Alexandria. As a result of this study, the City Council again passed a resolution requesting an interchange with I-95 and Clermont Avenue, and an extension of Clermont Avenue from Eisenhower Avenue to Duke Street.

In 1984, the Federal Highway Administration approved the additional access point on I-95 for the construction of the Clermont Avenue Interchange with a connector to Duke Street. This approval was based on no access south on Clermont Avenue past the interchange and no northbound access to the proposed interchange from Clermont Avenue south of the new I-95 interchange. The reasons cited for this approval included the need, (1) to provide traffic relief for the overburdened Van Dorn and Telegraph Road Interchanges, (2) to serve large volumes of traffic in the Duke Street corridor by providing direct access to I-95, and (3) to support the commercial and industrial growth occurring along Eisenhower Avenue.

B. TRAFFIC VOLUMES AND LEVEL OF SERVICE

The need for this project can also be illustrated by comparing traffic volumes and levels of service for existing conditions (base year - 1988) and the (future year - 2010) no-build conditions. Level of service is a letter designation which represents the operating efficiency of a particular roadway. It is based on traffic-related variables such as operating speeds and volume-to capacity ratios (Table 1).

A separate report entitled Traffic Forecasting and Analysis Report, dated April 1990 has been prepared for this project. This report studies in detail the existing and future traffic volumes and analyzes Level of Service (LOS) for 26 existing intersections and 23 proposed intersections within the study area. Table 2 presents a summary of the level of service at the existing intersections for the base year (1988) and the design year (2010) without improvements. As indicated in the table, four of the 26 intersections analyzed are currently experiencing level of service D or worse during the AM peak hour, and eight of the 26 intersections are at LOS D or worse during the PM peak hour. Also, eleven of the 26 are level of service C or worse during the AM peak hour and 14 during the PM peak hour.

With additional traffic associated with future development and the redevelopment of the Eisenhower Valley, levels of service will decrease even further throughout the study area. In the design year 2010, without the improvements, the number of intersections which will experience level of service D or worse is expected to increase to 10 during the AM peak hour and 11 during the PM peak hour.

The level of service analysis also shows that the intersection of Telegraph Road at Huntington Avenue and the I-95 Eastbound off-ramp are currently failing (LOS F) in both the AM and PM peak hours. The intersections of South Van Dorn Street at the I-95 ramps and at Eisenhower Avenue are failing during the PM peak hour, and the merges from Mill Road and from Pershing Avenue onto Telegraph Road are also failing in both peak hours.

The traffic forecasts show that 24-hour vehicle trips related to land use changes in the project area will increase daily traffic volumes substantially - by more than 59,700 vehicles. A comparison between 1988 and 2010 24-hour traffic volumes shows that on Telegraph Road north of I-95, traffic volumes will increase 118 percent from 66,800 to 145,800. On South Van Dorn Street north of I-95, the traffic volumes increase from 53,000 to 99,600. The daily volume of traffic served by the I-95/Telegraph Road interchange will grow from 56,980 to over 118,000. A similar increase will be realized at the I-95/South Van Dorn Street interchange where traffic volumes will increase from 38,500 to 84,880.

Construction of the I-95 to Duke Street Connector at Clermont Avenue would reduce the traffic volumes these intersections are currently experiencing and, more importantly, the future volumes that are anticipated.

TABLE 1

LEVEL OF SERVICE

Level of Service A represents free flow. Individual users are virtually unaffected by the presences of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

Level of Service B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.

Level of Service C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by the interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and the maneuvering within traffic requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

Level of Service D represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

Level of Service E represents operating conditions at or near capacity level. All speeds are reduced to a low , relatively uniform value. Freedom to maneuver within traffic is extremely difficult, and is generally forcing a vehicle to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

Level of Service F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level of service F is used to describe the operating conditions within the queue, as well as the point of the breakdown.

TABLE 2

SUMMARY OF LEVEL OF SERVICE FOR EXISTING INTERSECTIONS (AM/PM PEAK HOUR LOS)

		BASE 1988	NO BUILD 2010	ALT. 5 2010
South Van Dorn Street	@ I-95 Ramps	D/*	N/A	N/A
	@ Eisenhower Avenue	B/*	*/*	E/*
	@ South Pickett Street	B/D	*/*	*/*
	@ Edsall Road	D/E	*/*	*/*
	@ Duke Street eastbound off ramp	B/B	B/B	B/B
	@ Duke Street westbound off ramp /Land Mark Shopping Center	A/C	B/C	B/B
Duke Street	@ South Pickett Street	B/B	B/D	B/D
	@ North Pickett Street	A/B	B/B	B/B
	@ Cameron Station interchange/Overpass	B/B	B/B	B/B
	@ North/South Jordan Street	C/D	C/*	C/*
	@ North Gordon Street	C/B	C/B	D/B
	@ Wheeler Avenue	D/B	B/B	B/B
	@ Quaker Lane	B/B	B/C	C/C
	@ Telegraph Road Interchange/Overpass	C/C	D/D	D/D
Telegraph Road S.B.	@ Mill Road connector	C/F	F/F	F/F
Telegraph Road N.B.	@ Pershing Avenue	E/F	E/F	E/F
Telegraph Road	@ Huntington Avenue/I-95 off ramp	*/*	*/*	*/*
Stovall Street	@ Pershing Avenue	B/B	B/B	B/B
	@ Mill Road	B/C	D/*	B/*
	@ Eisenhower Avenue	B/B	C/B	B/B
Edsall Road	@ South Pickett Street	C/C	C/C	C/D
Eisenhower Avenue	@ Clermont Avenue	N/A	N/A	B/B
	@ Bluestone Road	A/A	B/B	B/C
	@ Mill Road	B/B	B/C	B/B
I-95	@ Van Dorn Street Interchange	C/C	D/C	C/C
I-95	@ Telegraph Road Interchange	C/C	D/D	D/D

Notes: See Figure 6 for location of intersections.
South Van Dorn Street @ I-95, LOS analysis performed under the assumption that the current intersection will be changed into a full interchange by the year 2010. This will be under another VDOT project.

Eisenhower Aveune and Clermont Avenue intersection provides access only to a loading facility at shopping center.

*: LOS is not meaningful when V/C ratio is greater than 1.2

III. ALTERNATIVES CONSIDERED

A. PRELIMINARY ALTERNATIVES

During the development of the project, 15 preliminary alternatives were considered (Figure 6). Those 15 were evaluated using three screening criteria developed around the following objectives: (1) improve access to Eisenhower Valley from I-95 and Duke Street, (2) have the potential to relieve congestion on the Telegraph and Van Dorn Interchanges, and (3) have the potential to relieve congestion on existing roadways. After evaluation, nine of the 15 were dismissed from further considered because they did not meet the screening criteria. Another was dismissed due to unavoidable Section 4(f) impacts. As a result of this process, five candidate build alternatives were derived for further detailed analysis along with the No-Build Alternative, Transportation Systems Management (TSM) Alternative and Mass Transit Alternative.

B. ALTERNATIVES DISMISSED FROM FURTHER CONSIDERATION

Jefferson Street Alternative

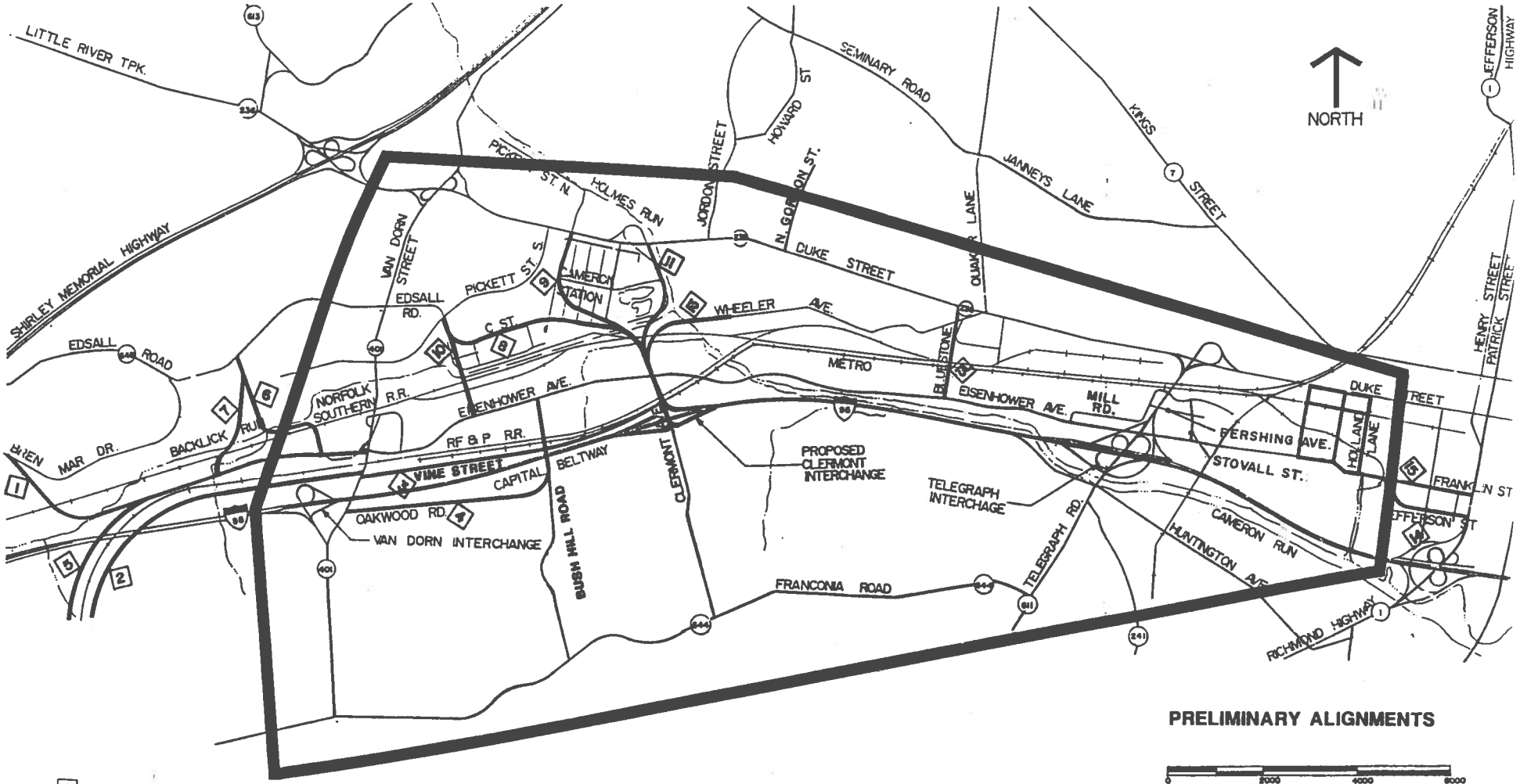
Extend Eisenhower Avenue to the east between the Alexandria National Cemetery and the Alexandria Sewage Treatment Plant to connect with Jefferson Street at Route 1. This alternative would provide minimal improved access value to eastern Eisenhower Valley and provide no connection to Duke Street. Access to the far eastern part of the valley is already available one block north of Jefferson Street at Franklin Street.

Franklin Street Alternative

Extend the eastern end of Eisenhower Avenue east through the Alexandria National Cemetery joining Franklin Street and Route 1 east of the cemetery. This alternative would only minimally improve access to the eastern part of the valley and would provide little or no reduction in traffic demand at the I-95 Telegraph Road Interchange and no access improvement to Duke Street.

Wheeler Avenue Alternative

Extend Clermont Avenue to just north of the Southern Railroad, then to the east across a public park to join Wheeler Avenue, and continue on Wheeler Avenue to Duke Street. This alternative meets all the Initial Screening Criteria. Access to Eisenhower Valley would be improved via I-95 and Duke Street, motorists would have a good alternative to using the Van Dorn or Telegraph Road interchanges, and traffic could be reduced on Duke Street.



PRELIMINARY ALIGNMENTS

0 2000 4000 6000
GRAPHIC SCALE IN FEET

1. FARRINGTON AVE. BREN MAR DR. EXTENSION
2. VINE ST. WESTERN EXTENSION
3. VINE ST. EASTERN EXTENSION
4. BUSH HILL RD. EXTENSION
5. FARRINGTON AVE. WESTERN EXTENSION
6. FARRINGTON AVE. OVERPASS EXTENSION
7. FARRINGTON AVE. EDSALL RD. EXTENSION
8. SOUTH PICKETT ST. CONNECTOR
9. WESTERN CAMERON STATION CONNECTOR
10. EDSALL RD. EXTENSION
11. TRADITIONAL CAMERON STATION CONNECTOR
12. WHEELER AVE. CONNECTOR
13. BLUESTONE CONNECTOR
14. JEFFERSON ST. EXTENSION
15. FRANKLIN ST. EXTENSION

FIGURE 6

However, despite meeting the screening criteria, this alternative was dropped from consideration because the alignment crosses a public park. Public park lands are protected from federally funded highway encroachment by Section 4(f) of the Department of Transportation Act of 1966. This act provides that the taking of park lands is allowed only if there are no feasible and prudent alternatives to using Section 4(f) land. Since several other alternatives meet the Initial Screening Criteria and avoid park lands, it could not be demonstrated that there are unique problems or unusual factors requiring the taking of park lands (23 CFR 771.135(a)(2)).

Bush Hill Alternative

Construct a new roadway off of Eisenhower Avenue south across I-95 to join Bush Hill Road in Fairfax County and then extend Bush Hill Road west to Oakwood Road which intersects South Van Dorn Street.

This connector road would improve access only to the southwestern part of Eisenhower Valley. The Bush Hill route would primarily serve Fairfax County northbound traffic on South Van Dorn Street. Congestion on Van Dorn Street would receive minimal improvement and no improvement would be realized on Duke Street.

Vine Street Alternative

This alternative has two components; an extension of Vine Street eastward to Clermont Avenue and a western extension along the RF&P Railroad under I-95 to Franconia Road. This alternative serves only a very limited area south of the RF&P Railroad and west of Clermont Avenue. The Vine Street Alternative would not improve traffic conditions at the Van Dorn Interchange, might further congest the interchange area and would not connect to Duke Street. No access improvement to the valley north of the RF&P Railroad would be realized. Finally, much of this alternative is outside the study area.

Farrington Avenue Alternatives

Construct an overpass from the western end of Eisenhower Avenue to the eastern end of Farrington Avenue over South Van Dorn Street. In conjunction with the overpass four alignments were studied, Farrington Avenue would be extended west and north to Edsall Road on two separate alignments, west to Bren Mar Drive, or southwest along the RF&P Railroad to the Springfield Bypass.

All of the Farrington Avenue improvements would provide access only to the far western end of the valley. The majority of the improvements would be outside the study area, would not provide new access to the central, northern and eastern valley, and would not provide a connection to Duke Street. Some traffic relief might be experienced on Van Dorn Street because of the overpass.

C. NO-BUILD ALTERNATIVE

Under the No Build Alternative, the Proposed Action would not be implemented and the existing roadways would essentially remain in their current configurations. As a result, traffic congestion would continue to increase along the approach roads at Exit 2 (Telegraph Road) and Exit 3 (Van Dorn Street) of I-95. Access to Eisenhower Valley would therefore not improve and current traffic patterns might inhibit the current and planned commercial and industrial growth in the valley.

D. TRANSPORTATION SYSTEM MANAGEMENT

Under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, all urbanized areas of 200,000 population or greater must be designated a Transportation Management Area (TMA). Because of this designation, the TMA must establish a Congestion Management System (CMS) that provides for effective management of new and existing transportation facilities through the use of travel demand reduction and operational management strategies. In TMAs that contain areas classified as nonattainment for ozone or carbon monoxide, highway projects which increase capacity for single occupant vehicles must be part of an approved CMS.

Interim Guidance on ISTEA Metropolitan Planning Requirements allow for a phase-in schedule whereby a currently self-certified planning process in conjunction with the NEPA process can constitute an interim congestion management system provided that individual projects include an analysis of transportation system management strategies.

This provision only applies to projects that significantly increase single occupancy vehicle (SOV) capacity. A significant increase in SOV capacity is considered to result with the addition of one mile or more of general purpose through lane. Because of this definition, the CMS requirement is not considered to apply to this proposal. Phase I of the project involves the construction of the interchange and modifications to Clermont Avenue between I-95 and Eisenhower Avenue. By definition, construction of the interchange will not increase SOV capacity but facilitates traffic movements. In addition, Clermont Avenue has generally been constructed to meet the criteria of this project, but some adjustments to the median and sidewalks are required. Therefore, Phase I is not classified as a

SOV increasing development. Phase II, however, can be considered to increase SOV capacity. But because the connector between Eisenhower Avenue and South Pickett Street is less than a mile long, this increase in SOV capacity is not considered significant. Although it can be defended that this proposal will not significantly increase SOV capacity, travel demand reduction and operational management strategies were examined as a means of reducing the need for this project. The need for this project was identified as far back as the early 70's when the Alexandria City Council passed a resolution requesting VDOT to construct the interchange at Clermont Avenue. In 1980, the City Council passed another resolution requesting an interchange with I-95 and Clermont Avenue and an extension of Clermont Avenue from Eisenhower to Duke Street. In 1984, FHWA recognized the need for access to the Eisenhower Valley and approved the Interstate access. Since then, the VDOT, the City of Alexandria, Fairfax County, regional planning agencies and local developers have programmed several projects to relieve congestion and improve access to the study area. Traffic management techniques such as coordinated signalization, signage and rerouting have already been implemented to the maximum extent practicable. These techniques and prospects were designed to maximize the utilization and energy efficiency of the current transportation system. Despite these improvements, the need to provide improved access and traffic flow to the Eisenhower Valley is still warranted.

E. MASS TRANSIT

Various Mass Transit improvements have also been proposed by the above agencies and developers to assist in alleviating congestion in the study area. Mass transit improvements were planned in conjunction with other regional and local transportation improvements. The proposed interchange and connector to Duke Street are planned to supplement and augment the existing and proposed mass transit system. The proposed mass transit improvement would not satisfy the need for the Clermont Avenue Interchange.

F. CANDIDATE BUILD ALTERNATIVES (CBA)

Five of the original 15 alternatives reviewed meet all of the screening criteria and were selected as Candidate Build Alternatives. The interchange with I-95 and Clermont Avenue (four-lane) from the interchange to a signalized at-grade intersection with Eisenhower Avenue are common to all the build alternatives. The interchange is proposed to be a diamond configuration in order to minimize right of way costs. As mentioned in the description of this project, the interchange will be designed to accommodate east and west bound traffic wishing to travel from I-95 north onto Clermont Avenue. No access will be allowed from I-95 to southbound Clermont Avenue. Traffic will not be able to travel from the Eisenhower Valley south on Clermont Avenue to Franconia Road. In addition, the interchange will not allow traffic to travel north from Franconia Road to the

Eisenhower Valley. The existing I-95 bridge will remain in place with Clermont Avenue widened under the bridge. Clermont Avenue has previously been constructed to generally meet the criteria of this project. Some adjustments to the median and sidewalks will be required. Overpasses carrying the RF&P and Metrorail over Clermont Avenue have been constructed.

At this preliminary Engineering Planning stage of the project, exact locations of the highway and right of way are not determined. Therefore, the alternative alignments should be viewed as defined corridors and not as specific locations. Corridor alternative sections which coincide with existing roadways would utilize as much of the existing right-of-way as is practical.

The cost of the proposed interchange and connector to Duke Street is comprised of three components: construction costs; right of way acquisition costs; and utility relocation costs. These costs for each Candidate Build Alternative were developed and are detailed in the Preliminary Engineering Technical Report on file in VDOT offices. A summary of estimated project costs, and environmental effects for each of the Candidate Build Alternatives, are presented in Table 3. The five Candidate Build Alternatives (CBAs) are described below.

1. <u>CBA No.1 - South Pickett Street Connector</u>

   CBA No.1 would entail construction of a new highway segment from the Eisenhower Avenue/Clermont Avenue intersection through the existing Cameron Station, then west along C Street in Cameron Station (Figure 7). Improvements to C Street would be needed as well as improvements to the intersection of South Pickett Street/Edsall Road/C Street. This alternative would provide for an improved east/west flow particularly if that flow utilizes the Clermont interchange.

   Traffic from Edsall Road west of South Van Dorn Street could continue on Edsall Road to the Clermont Avenue interchange and access I-95 there, as opposed to traveling south on South Van Dorn Street to I-95. This alternative would require the demolition of several buildings in Cameron Station. Deactivation of the base and reutilization of the parcel might require this demolition anyway. As part of the existing base, a grade separated interchange is provided on Duke Street, west of Jordan Street for access to the base from the east on Duke Street (Cameron Station/Duke Street Interchange). This Interchange provides an exit from the base to westbound Duke Street. It is unlikely that the interchange would be removed, therefore this interchange is included in Alternative No. 1 as a means of accessing the Eisenhower Avenue connector. As a result of this connection, the Eisenhower Avenue connector would support traffic from Duke Street as well.

TABLE 3

SUMMARY OF BUILD ALTERNATIVES

Alternative	1	2	3	4	5
Cost (in $1,000's)					
Construction	$ 9,173	$ 8,391	$10,164	$ 9,412	$ 7,855
Right-of-Way	$48,250	$34,110	$42,184	$20,919	$29,556
Utilities	$ 289	$ 302	$ 172	$ 0	$ 19
TOTAL	$57,713	$42,803	$52,521	$30,331	$37,430
Construction Length (Miles)*	1.29	.95	.90	.58	.61
Travel Distance (Miles)**					
Duke St. to I-95	1.91	.95	.90	1.72	1.97
New Bridge Length ***	580	580	650 150	1,100	600
Interchange Traffic Volume (24 hr.)	44,750	51,530	55,800	35,550	31,900
Connector Traffic Volume (24 hr.)	29,600	36,900	41,000	23,400	27,200
Right-of-Way Acres acquired	14.8	11.5	14.4	7.1	8.4
Relocations					
Businesses	7	1	1	1	7
Residential	0	0	0	0	0
Non-Profit	1	1	1	0	0
Wetlands (Acres)	0.38	0.35	0.31	0	0
Air					
Noise (Receptors)^^	31	31	31	31	31
Historic Sites	1	1	1	0	1
Archaeological Sites	0	0	0	0	0

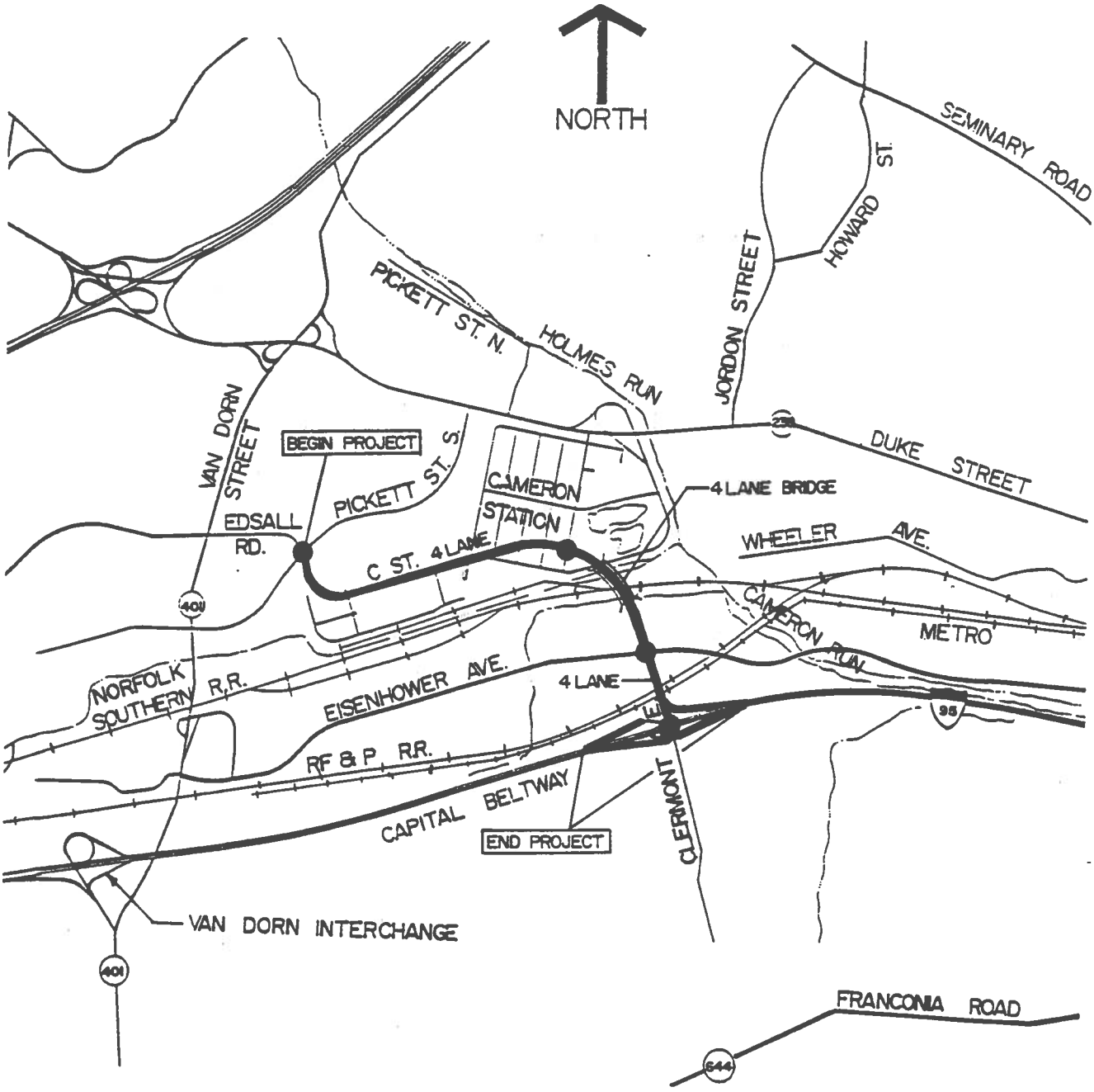
* Does not include *-95 Ramps

** Travel from Duke Street to I-95 Alternative 1 requires the use of South Picket Street for a distance of 3,200 feet, Alternative 4 requires the use of 6,000 feet of Eisenhower Avenue and Alternative 5 requires the use of 3,200 feet of South Pickett Street and 4,000 feet of Eisenhower Avenue.

*** Included in construction and travel length.

^^ All CBA's will impact 31 residences and Hensley Park, CBA No. 3 will impact Cameron Park also.

I-95 / CLERMONT AVENUE INTERCHANGE



CANDIDATE BUILD ALTERNATIVE 1

0 2000 4000 6000

GRAPHIC SCALE IN FEET

FIGURE 7

CBA No. 1 would have a total length of 1.9 miles, of which 1.3 miles would be new alignment. The roadway profile would be essentially at-grade. This route would be on a bridge over the Norfolk-Southern Railroad and Backlick Run.

2. CBA No. 2 - Cameron Station Connector

CBA No. 2 would extend Clermont Avenue northwest through Cameron Station and proceed to a connection with Duke Street in the vicinity of North Pickett Street (Figure 8). The alignment through Cameron Station would fall in a corridor between First Street and Fifth Street. The precise alignment would be determined at a later date to reflect future development plans for Cameron Station. This alternative would be expected to pull more north/south traffic through the area because it would serve as an alternate route to South Van Dorn Street. As was the case for CBA No. 1, CBA No. 2 includes continued use of the existing Cameron Station/Duke Street Interchange.

The Cameron Station Connector would follow Clermont Avenue north, be elevated over the Norfolk-Southern Railroad, then turn northwest to avoid Cameron Lake, and continue to an intersection at Duke Street. The route would be at-grade except for elevated crossings of Backlick Run and the Norfolk-Southern Railroad. CBA No. 2 would have a total length of .95 mile - all of it as new alignment.

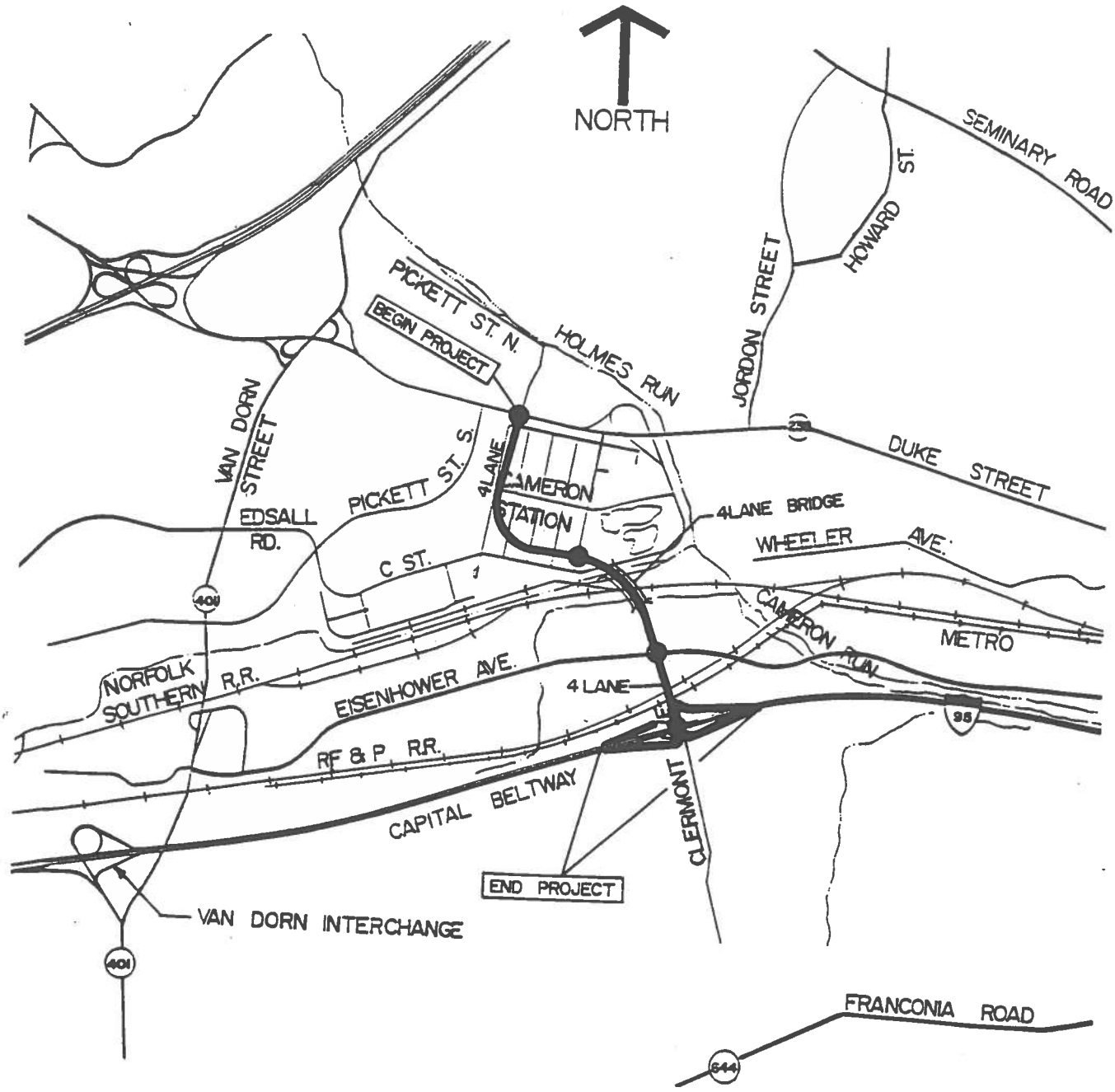
3. CBA No. 3 - Holmes Run Connector

The Holmes Run Connector would extend Clermont Avenue north through Cameron Station east of the lake to a connection with Duke Street (Figure 9). The alignment through Cameron Station would run generally along the northern leg of C Street avoiding Holmes Run and Cameron Lake. The intersection with Duke Street would be the existing location of the C Street/Duke Street interchange. A new ramp to accomodate the northbound Clermont Avenue to eastbound Duke Street traffic will be required. This ramp will diverge from Clermont Avenue and cross under it and intersect with Duke Street west of the interchange. The route would be at-grade except for crossings of Backlick Run and the Norfolk & Southern Railroad. All of the .90 mile length of CBA No.3 would be new alignment.

4. CBA No. 4 - Bluestone Road Connector

The Bluestone Road Connector would extend existing Bluestone Road from Eisenhower Avenue north to Duke Street (Figure 10). The western

I-95 / CLERMONT AVENUE INTERCHANGE



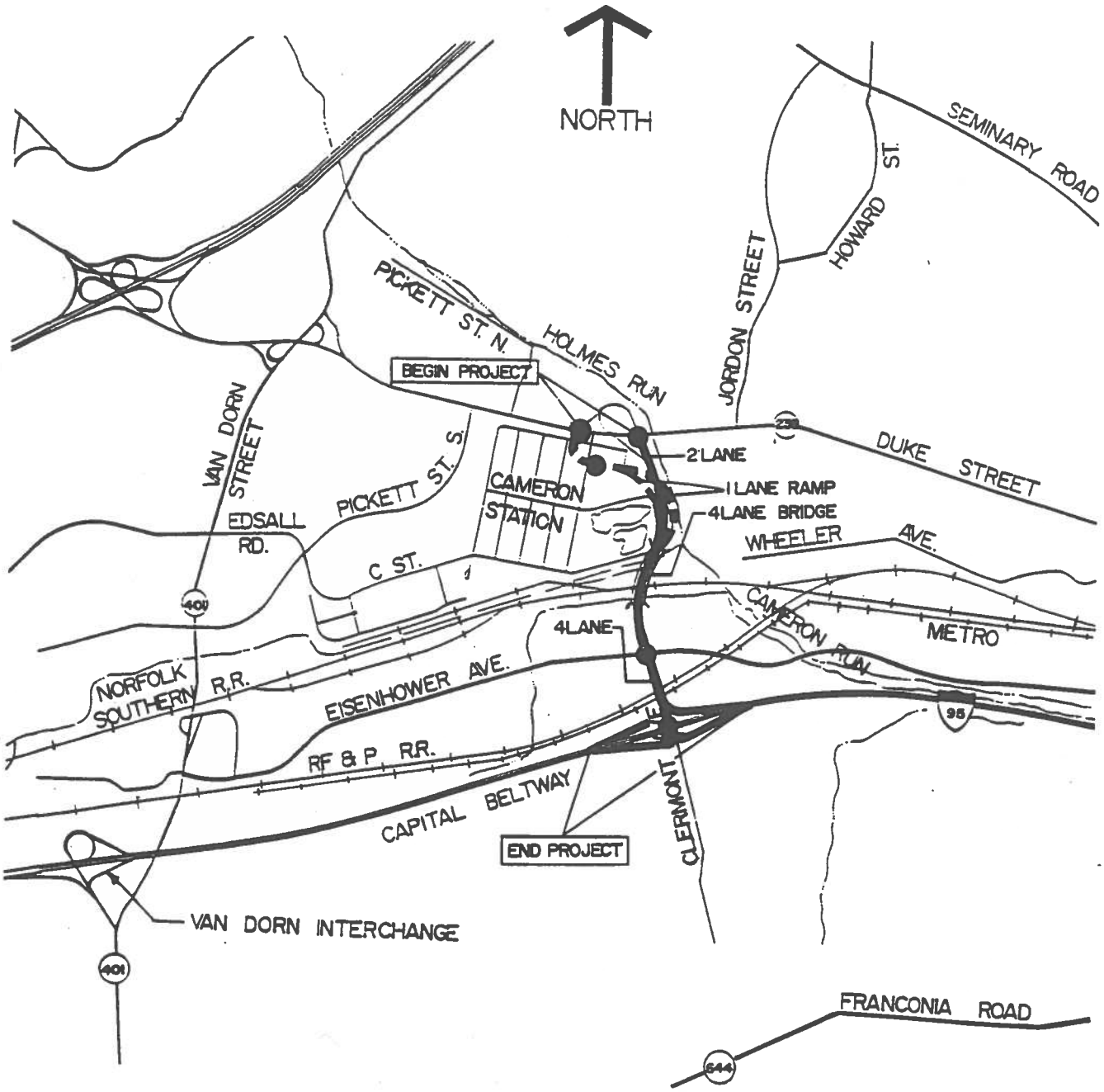
CANDIDATE BUILD ALTERNATIVE 2

0 2000 4000 6000

GRAPHIC SCALE IN FEET

FIGURE 8

I-95 / CLERMONT AVENUE INTERCHANGE



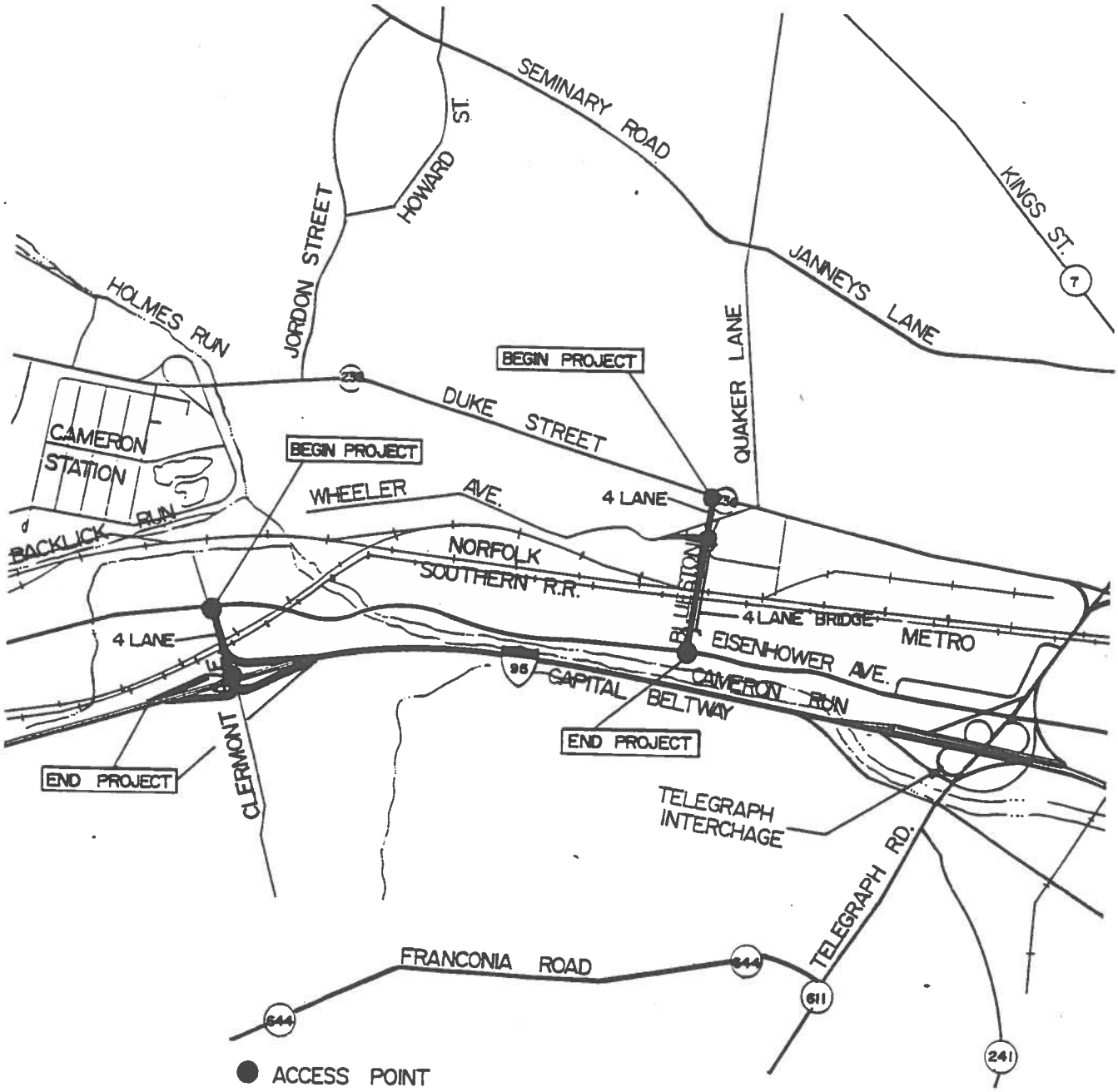
CANDIDATE BUILD ALTERNATIVE 3

0 2000 4000 6000

GRAPHIC SCALE IN FEET

FIGURE 9

I-95 / CLERMONT AVENUE INTERCHANGE



CANDIDATE BUILD ALTERNATIVE 4

0 2000 4000 6000

GRAPHIC SCALE IN FEET

FIGURE 10

section of Eisenhower Avenue is a four lane highway and the two lane eastern section would be widened to four lanes to the intersection of Bluestone Road. The intersection of Wheeler Avenue and Duke Street would be modified so that Wheeler Avenue would intersect Bluestone Road instead of Duke Street. The roadway profile would be at-grade until the crossing of the Norfolk-Southern Railroad, the Metrorail and City owned parking lots and storage yards, which would be spanned with an 1100-foot long bridge. Of CBA No. 4's 1.72 mile length, .58 mile would be new alignment.

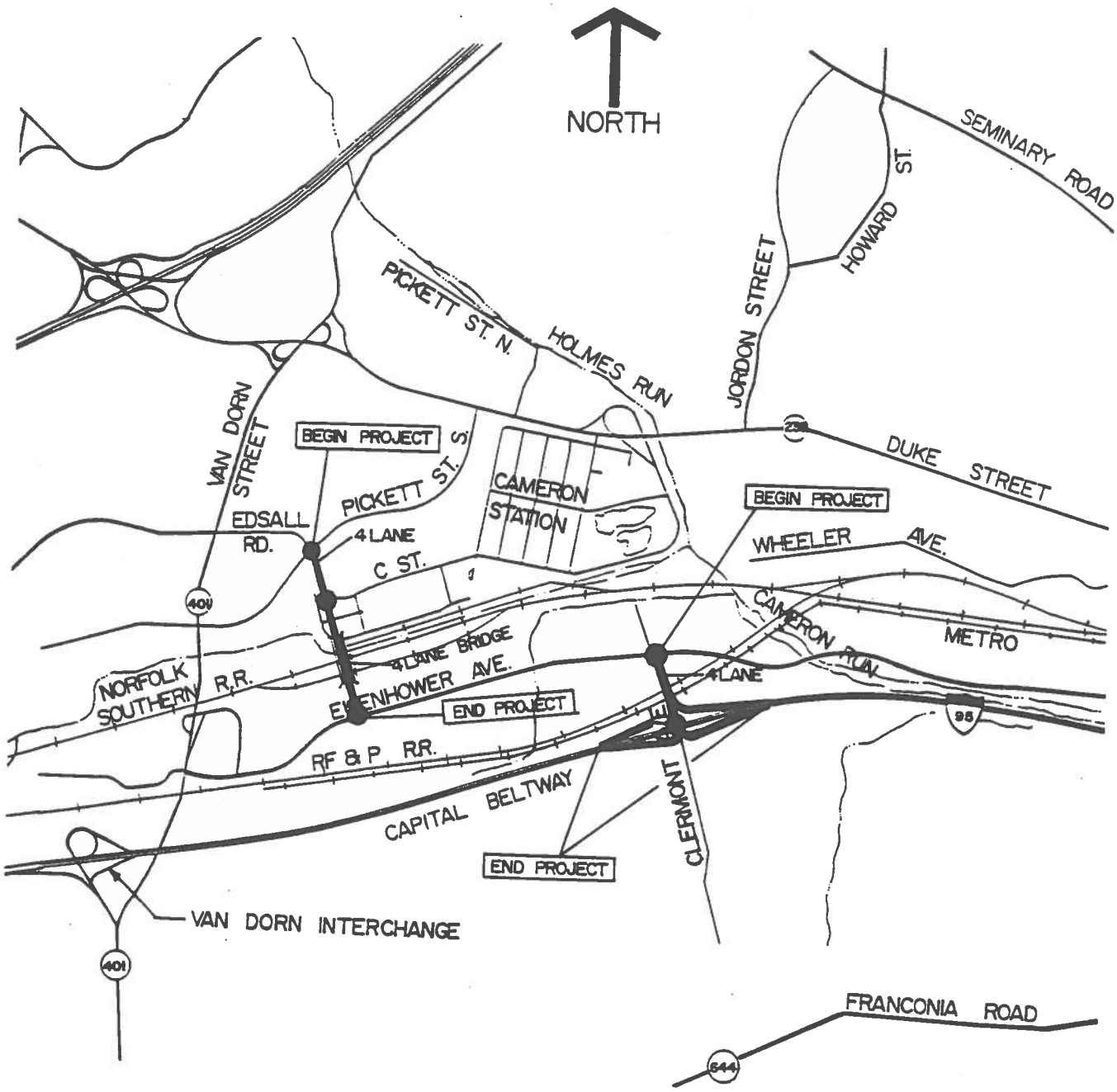
5. CBA No.5 - Eisenhower-Pickett Connector

The Eisenhower-Pickett Connector entails the construction of a direct connection between existing Eisenhower Avenue and South Pickett Street at the South Pickett Street/Edsall Road intersection (Figure 11). This alternative would replace the C Street approach to the South Pickett/Edsall Road intersection with a newly constructed connector road coming from Eisenhower Avenue. The roadway profile would essentially be at-grade except for the crossing of Backlick Run and the Norfolk-Southern Railroad. CBA No.5 would be 1.97 miles long, with .61 mile of new alignment.

G. SELECTED ALTERNATIVE

The five Candidate Build Alternatives were presented to the public at a Public Hearing on May 6, 1993. As a result of the comments received from the Public Hearing, recommendation from the Alexandria City Council, and upon the review of cost, environmental impacts, community impacts and criteria for the project, Candidate Build Alternative No. 5 was selected as the Selected Alternative as illustrated in Figure 11.

I-95 / CLERMONT AVENUE INTERCHANGE



CANDIDATE BUILD ALTERNATIVE 5

0 2000 4000 6000

GRAPHIC SCALE IN FEET

FIGURE 11

IV. IMPACTS AND COORDINATION

In the process of developing this document, federal, state and local agencies were contacted to obtain input regarding the potential impacts of the project. Based on comments received from these agencies and additional studies performed by the Virginia Department of Transportation, the project will have no significant environmental impacts. This document has been prepared in accordance with the Federal Highway Administration regulations (23 C.F.R. 771).

A task force was formed to provide input and citizens had an opportunity to review this project at two public workshops and a public hearing. The public hearing was held on May 6, 1993 in the Patrick Henry Elementary School in Alexandria, Virginia. On May 25, 1993, the Alexandria City Council adopted Resolution No. 1644 that approves the location of the Clermont Avenue Interchange as a two-phase project with Phase I to include the interchange and a bikeway connection between Eisenhower Avenue and Clermont Avenue in Fairfax County. Phase II would consist of the Alternative 5 connector from Eisenhower Avenue to Duke Street as presented at the Location Public Hearing on May 6.

On July 15, 1993, the Commonwealth Transportation Board approved the location of the I-95 Interchange and Alternative 5 as presented at the public hearing with the addition of a bikeway connection between Eisenhower Avenue and Clermont Avenue. The project was approved in two phases: Phase I, the interchange and bikeway; Phase II, the Alternative 5 connector to Duke Street.

Following are discussions and analyses of specific impact categories pertinent to the proposed project, and in conformance with 23 CFR 771.

A. SOCIAL

At the time of preparing this document, the only organized opposition was from the Clermont Woods residents who have presented a petition opposing the construction of the interchange. Through on-site inspections and contact with various state and local agencies, this project is not likely to adversely affect the quality of the human environment. Also, the project will not disrupt any established communities or planned development. Finally, the project is consistent with the area's community goals.

The City of Alexandria and Fairfax County are located in the Washington Metropolitan area. Zoning in the Alexandria portion of the study area is industrial/planned unit development and land uses consist of office, commercial, industrial, distribution and residential. The residential development is predominantly medium to high density. Zoning in the Fairfax County portion of

the study area is residential. This residential use consists of single family-detached houses. Several elementary schools and parks are also in this area.

The Cameron Station Army Base is located within the study area and is affected by all the CBA's except CBA No. 4. Prior to identification of CBA No. 5, the U.S. Army had indicated that CBA No. 3 had the least impact on the base and was their preferred alternative. However, the base is currently being decommissioned, and base officials have indicated that base operations will be relocated to another installation(s) by 1995. Cameron Station is now in the process of being conveyed to the City of Alexandria. A task force has developed a land use plan for the base, which allocates 70 acres for residential, 16 acres for commercial, 50.5 acres for parks, and 28 acres for roads and streets.

A review of existing patterns of land use and zoning, local and regional plans and known proposals for development has determined that the project will have no significant adverse impacts or effects to existing or proposed development, zoning or land use. The Selected Alternative will have a beneficial affect on proposed development by providing a new access point to the Beltway (I-95) from the Eisenhower Valley. Without this improvement, development would be limited because any proposed development will have access to the Beltway only at the existing Telegraph Road and South Van Dorn Street Interchanges with I-95.

Review and analysis of the project area indicates that no community facility will be directly affected by the Selected Alternative. Also, the Selected Alternative will not restrict access to community facilities nor will it result in any reduction in the ability of the area residents to use any community services or facilities.

1. Right-of-Way

   The Selected Alternative will require the acquisition of 8.4 acres of right-of-way. The amounts of right-of-way for each of the Candidate Build Alternatives, ranging from 7.1 to 14.8 acres, are shown in Table 3.

2. Relocations

   The Selected Alternative will require the displacement of seven businesses. No families or farm operations will be displaced. Relocation impacts are summarized in Table 4, and are presented in the following discussion.

   The information presented in this section is based on the Stage 1 Relocation Assistance Report prepared by VDOT in January, 1991. The only displacee contacted during the field investigation was Cameron Station. Contacts were made with local realtors and other appropriate representatives of the areas.

TABLE 4

RELOCATION IMPACTS

Alternative	Families	Businesses			Farms	Non-Profit Organizations
		Owner	Tenant	Total		
1	0	1	6	7	0	1
2	0	1	0	1	0	1
3	0	1	0	1	0	1
4	0	1	0	1	0	0
5	0	1	6	7	0	0*

* Support units of the City of Alexandria and Cameron Station will be impacted and will require movement of personal property only.

Source: VDOT Stage 1 Relocation Report

The businesses to be displaced are located in buildings which appear to be in fair to good condition. The buildings are tenant occupied except for one which is owner occupied. The estimated value of these buildings ranges form $132,000 to $1,400,000, and the estimated tenant rental rates range from $10 to $15 per square foot per month.

The only non-profit organization in the study area is the Cameron Station army base. The buildings on the base range in value from approximately $286,000 to $11,700,00.

Clermont Interchange and Connector to Eisenhower Avenue, an element common to all of the alternatives being considered, would displace one owner-occupied business. A construction contractor with 35 employees will be displaced by improvements to the intersection of Clermont and Eisenhower Avenues. The company's metal frame building appears to be owner occupied.

Candidate Build Alternative 1 would displace six businesses located in a single structure at the corner of South Pickett and "C" Streets, as well as the one business displacement common to all of the alternatives. The six businesses include a retail copying service, a government office, an auto parts distributor, an auto repair and cleaning service, a small gifts distributor, and a swimming pool service. The businesses have from 10 to 35 employees each, totalling approximately 115 employees in the building. This alternative would also impact Cameron Station army base. The Station houses eight major buildings and other smaller buildings and facilities housing the various functions performed at the base. Four of the eight major buildings, as well as other facilities, would be directly affected.

Candidate Build Alternative 2 would impact Cameron Station, bisecting it as the right-of-way runs northward to Duke Street. Five of the eight major buildings, as well as other facilities, would be directly affected. This alternative would also displace the business common to all of the alternatives.

Candidate Build Alternative 3 would run north to Duke Street and will impact Cameron Station. Relocation would be required. Two major buildings and a service station on Cameron Station would be directly affected, as well as the displacee common to all alternatives.

Candidate Build Alternative 4 would not cause any disruptions, nor necessitate any relocations, except for the displacee common to all of the alternatives.

Candidate Build Alternative 5, the Selected Alternative, would displace six businesses. The new alignment section would disrupt the City of Alexandria's automobile impoundment yard near its intersection with Eisenhower Avenue as the new alignment runs northward over the Norfolk-Southern Railroad tracks. North of the railroad tracks, the alignment would run along the western edge of Cameron Station, disrupting a ballfield on the base used by base personnel and a satellite dish and two small support buildings. At the intersection of South Pickett and "C" Streets, Candidate Alternative 5 would displace six businesses located in a single structure, necessitating their relocation. These are the same businesses and structure affected by Alternative 1. Alternative 5 would also displace the business common to all of the alternatives.

3. Relocation Plan

Contact with local realtors indicates that commercial rental properties ranging in price from $13.50 to $17.00 per square foot are available in the 600 block of Pickett Road, and that the commercial market for sale properties is active and available for $150,000 and upward. All of the businesses to be displaced appear to be well established in the area. It is estimated that the businesses can relocate within the general area and that most of their employees will continue to be employed. If any businesses are unable to satisfactorily relocate, the Department will determine their eligibility for an "In Lieu of Moving" cost option.

The Cameron Station army base is currently being decommissioned, and base officials have indicated that base operations will be relocated to another installation(s) by 1995. The base closing is not a result of the Clermont Avenue Interchange project. The timing of the decommissioning is not known at this point. Cameron Station is now in the process of being conveyed to the City of Alexandria.

The acquisition of right-of-way and relocation of displacees will be effected in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Finally, relocation resources will be available to all relocatees in a non-discriminatory manner.

B. HISTORIC AND ARCHAEOLOGICAL

The study area has been subjected to a series of cultural resource investigations between 1988 and 1992. The initial, or Phase IA, investigation (Louis Berger & Associates, Inc. 1989) covered the ca. 3,000-acre study area and identified areas of prehistoric and historic archaeological potential in addition to architectural

resources; this study was accepted by the Virginia Department of Historic Resources (VDHR). The Phase IB (Louis Berger & Associates, Inc. 1991) archaeological survey assessed preservation of land surfaces on which intact prehistoric and early historic archaeological materials might remain. Additional historic architectural evaluations were undertaken by VDOT and the Corps of Engineers.

The project was divided into two parts consisting of (1) the proposed interchange with I-95 at Clermont and expansion of Clermont Avenue to Eisenhower Avenue, which is common to all CBA's and (2) the five build alternatives that extend from Eisenhower Avenue to Duke Street across the Eisenhower (or Cameron Run) Valley.

1. Historic Architectural Resources

The Phase IA study identified 29 buildings and two building complexes over 50 years of age. Of these resources, the only potentially significant (i.e., eligible for inclusion in the National Register of Historic Places) resource potentially impacted by the undertaking is Cameron Station. The most recent study (KFS Historic Preservation Group 1992), conducted on behalf of the U.S. Army Corps of Engineers, has found that this complex does not meet the criteria for inclusion in the National Register of Historic Places. VDHR has concurred in this determination. (See following letter). Therefore, the proposed action will not pose an adverse effect or impact upon significant historic architectural properties.

2. Archaeological Resources

Work to date has not identified any prehistoric or historic archaeological resources within the impact area associated with any of the five alternative alignments. The area associated with the construction of the interchange at Clermont Avenue and I-95 and expansion of Clermont Avenue between the proposed interchange and Eisenhower Avenue was subject to a Phase IB field survey (Louis Berger & Associates, Inc. 1991). Field methods included walkover examination and limited subsurface testing in accessible areas. No archaeological sites were identified.

Accessible areas within the proposed connector alignments have also been surveyed (Louis Berger & Associates, Inc. 1991). Upland areas appear to be heavily disturbed and no archaeological properties were identified. However, the Cameron Run Valley bottom has been extensively filled (up to about 30 feet) and has the potential to contain buried, intact archaeological resources. However, the process of land filling and land stabilization may have disturbed previously existing archaeological sites.

Thus, the potential for significant, buried, intact archaeological sites along the channelized stream bed and adjacent filled areas remains undetermined.

All five connector alignments that extend from Eisenhower Avenue to Duke Street will cross this area; thus, all five connectors have the potential to adversely effect or impact significant archaeological resources (i.e., archaeological properties that meet the criteria for inclusion in the National Register of Historic Places). A bridge has been proposed for the segment of the alignment that will traverse the railroad right-of-way and portions of the floodplain. Preliminary engineering documents do not specify the length of the span of the bridge nor the distance between individual piers, nor the construction technique of the piers (i.e., whether on piles, or proposed depths of potential excavation). Thus, the extent of impact associated with the construction of the bridge cannot be ascertained at this time.

3. Mitigations

No significant historic architectural properties will be impacted by the proposed action; thus, no mitigation will be required for historic architectural properties. (See attached letter from the Virginia Department of Historic Resources).

No archaeological properties have been identified within the area of the proposed interchange with I-95 at Clermont and expansion of Clermont Avenue to Eisenhower Avenue. This portion of the undertaking will have no impact upon archaeological properties, and no mitigation will be required.

The proposed undertaking does have the potential to adversely effect deeply buried archaeological resources in those portions of the connector alignments that traverse the Cameron Run Valley. VDOT will continue the consultation process with VDHR prior to the initiation of any construction-related activities. The need for and scope of further investigations, including deep tests in the floodplain, shall be determined by the lead agency in consultation with VDHR, based on the predicted sensitivity and the nature of the proposed impact.

If further archaeological investigations are necessary, and if these investigations do not identify any archaeological properties, then the proposed action will have no effect upon significant archaeological resources and no mitigation will be required. If these investigations identify archaeological resources, then the FHWA in consultation with the

COMMONWEALTH of VIRGINIA

Ralph C. Miller, Director

Department of Historic Resources
221 Governor Street
Richmond, Virginia 23219

TDD: (804) 786-1934
Telephone (804) 786-3143
FAX: (804) 225-4261

June 11, 1992

Thomas B. Reth, Col., U.S. Army
Deputy Chief of Staff for Engineering and Housing
U.S. Military District of Washington
Washington, D.C. 20319-5050

Re: Base Realignment and Closure (BRAC), Cameron Station, City of Alexandria: VDHR File No. 92-0921-F

Dear Col. Reth:

We appreciated the opportunity to review the cultural resource documentation concerning Cameron Station which was prepared for the undertaking referenced above. The documentation was prepared in March 1992 by the KFS Historic Preservation Group. Our review copy was received on May 4, 1992 and we apologize for the slight delay in providing these comments.

We concur with your consultant's recommendation that the architectural resources of Cameron Station (VDHR Archives File No. 100-152) be considered not eligible for listing on the National Register of Historic Places, either individually or as an historic district. This concurrence is consistent with the opinion of our agency's National Register Evaluation Committee which found Cameron Station to be not eligible at their meeting on September 9, 1991.

With regard to archaeological potential, however, additional information is necessary to support your consultant's conclusion that Cameron Station "is considered to have a low potential or probability for containing significant archeological resources" (page 22). We recognize that the facility is characterized by substantial amounts of fill placed on top of original grade during construction of Cameron Station in the 1940s. While such conditions preclude the use of conventional archaeological survey techniques, they underscore the critical need for thorough use of the documentary record to support arguments of archaeological potential. Specifically, we recommend that the following sources of information be examined by the consultant and integrated into the report:

1. Historic Maps - A thorough examination of all relevant historic maps needs to be incorporated into the documentation. Of particular importance are maps dating to the Civil War which depict the topography of the Cameron Station area in considerably greater detail than the 1879 map used in Figure 9. Maps associated with nineteenth-century railroad construction may also provide important information concerning the pre-military character of Cameron Station and its environs. Also, we request that the 1943 topographic survey of Cameron Station referenced on page 18 of the report be illustrated. All relevant historic maps should be used as illustrations in the report.

2. Local Records - An effort should be made to trace land ownership and potential land use through examination of historic deeds, plats, and tax records. Use of such documentation may provide evidence concerning the use and conditions of the Cameron Station area that is not available from historic maps alone.

3. Aerial Photographs - An effort should be made to determine whether any aerial photographs exist which depict the Cameron Station area before and during construction of the facility. Aerial photographic documentation of the Washington, D.C. area is abundant and installation-specific views may be available from the Department of the

Army and/or the National Archives. Such photographic documentation needs to be examined with particular regard to pre-military conditions within the Cameron Station area and potential disturbance to original grade by cutting and filling activities. Relevant aerial photographs should be used as illustrations in the report.

4. Existing Archaeological Survey Documentation - Once a more explicit definition of pre-existing environmental conditions at Cameron Station has been developed, the consultant should make comprehensive use of the extensive archaeological inventory for northern Virginia. These records are available at our office in Richmond as well as at the cultural resource program offices for the City of Alexandria and Fairfax County. Fairfax County constitutes one of the most comprehensively surveyed localities in Virginia. The archaeological record in northern Virginia of areas environmentally similar to Cameron Station should be examined in relation to settlement models used in the report.

Please recognize that we are not recommending additional archaeological testing at Cameron Station at this time. Given the subsurface conditions at the facility, the documentary record needs to be used in as comprehensive a manner as possible to ensure that any recommendation for testing is based upon a reasonable and explicit expectation of the archaeological record.

If you have any questions concerning our comments, please contact Antony Opperman or Mary Harding Sadler of our staff. Your cooperation is appreciated.

Sincerely,

J. Bryan Mitchell

J. Bryan Mitchell
Deputy State Historic Preservation Officer

cc: Mary Shipe, U.S. Army Corps of Engineers
Pamela J. Cressey, Alexandria Archaeology

VDHR shall determine whether any identified archaeological resources meet the criteria for inclusion in the National Register of Historic Places. If the agencies concur that the resource is not eligible for inclusion in the National Register, then the proposed action will have no effect upon significant archaeological properties, and no mitigation will be required.

If the agencies concur that the resource is eligible for inclusion in the National Register, then it is likely that the archaeological resource will be significant for its potential to contain important information. Consequently, the resource would not qualify under 4(f). Pursuant to 36 CFR Part 800.9(c), the action would pose No Adverse Effect upon archaeological resources conditional upon execution of a data recovery plan. To obtain the Determination of No Adverse Effect, the FHWA would develop an acceptable data recovery plan, obtain concurrence from the VDHR, and afford the Advisory Council on Historic Preservation a thirty-day comment period.

If the agencies do not concur in the National Register eligibility of resources identified as a result of further work, then appropriate documentation shall be forwarded to the Secretary of the Interior for a determination.

Should any archaeological sites be found during construction, the contractor shall follow the guidelines outlined in the Department of Transportation's Road and Bridge Specifications regarding the discovery of archaeological sites.

4. References

KFS Historic Preservation Group
1992 Cameron Station, Alexandria, Virginia, Cultural Resource Investigation Report. Prepared for the U.S. Army Corps of Engineers, Baltimore District.

Louis Berger & Associates, Inc.
1989 Phase IA Cultural Resource Assessment of the Eisenhower Avenue/Cameron Run Valley, City of Alexandria, Virginia. Prepared for the Virginia Department of Transportation, Richmond.

1991 Phase IB Cultural Resource Survey of the Clermont Avenue Interchange, City of Alexandria and Fairfax County, Virginia. Prepared for the Virginia Department of Transportation, Richmond.

C. ENVIRONMENTAL

No significant adverse impacts are anticipated on natural, physical, agricultural or recreational/scenic resources of national or local significance.

1. Agricultural and Recreational

The project will not require the acquisition of any Title 49 U.S.C., Section 303(c) lands, prime agricultural areas or unique farmlands.

There are no public established recreational rivers in the project area, nor are there any state scenic, existing national or proposed national wild or scenic rivers.

Also, no parks or recreation areas in the study area will be adversely affected by the project. Finally the project will not require the acquisition of park and recreational areas pursuant to Section 4(f).

2. Ecological

Based on field studies and coordination with state and federal agencies, the project's impact to local species of wildlife or their habitat will be minimal. Also, there are no known unique breeding or nesting grounds nor any rare or endangered species. The U.S. Fish and Wildlife Service has indicated that, except for occasional transient individuals, no Federally listed or proposed endangered or threatened species are known to exist in the project area. Therefore, no Biological Assessment or further Section 7 Consultation is required with the Fish and Wildlife Service. The Virginia Department of Game and Inland Fisheries has stated that no species of special status are known to occur in the project area, nor are there any critical habitats listed as occurring at the site for the fauna of that area.

A local citizens' wildlife breeding program is being carried out at the lakes located in Cameron Station. The lakes and the breeding program will not be affected by the Selected Alternative.

The Virginia Department of Agriculture and Consumer Services has indicated that currently there are three species of plants listed under the Virginia Endangered Plant and Insect Species Act; however, none of these plants, to their knowledge, inhabit the study area. The Natural Heritage Program has also stated that based on information currently in their files, there are no populations, rare, threatened, or endangered species documented for the project site. Field studies also revealed the presence of no threatened or endangered species.

3. Air Quality

The Clean Air Act, as amended in 1977, directed the United States Environmental Protection Agency (USEPA) to establish standards for clean air. As a result EPA established primary and secondary National Ambient Air Quality Standards (NAAQS) for six atmospheric pollutants. These six pollutants included carbon monoxide, ozone, nitrogen oxide, sulfur dioxide, particulates matter, and lead. The standards for these pollutants were designed to protect the public welfare and the natural and manmade environments.

Motor vehicles emit five of the six pollutants (carbon monoxide, nitrogen oxide, sulfur dioxide, particulates, and lead) identified by the NAAQS. The last pollutant, ozone, can be formed as a result of the reaction of nitrogen oxide and hydrocarbons in the presence of sunlight. Hydrocarbons are also emitted by motor vehicles.

The Washington, D.C. Metropolitan Statistical Area (MSA) is classified as a serious nonattainment area for ozone. In ozone nonattainment areas, a project complies with the requirements of the Clean Air Act Amendments (CAAA) of 1990 in the interim period if the project comes from a transportation plan and program found to conform under the CAAA. An air quality conformity analysis was performed on the plan and program for the Washington Metropolitan Area by the Washington Council of Government (WashCOG) and endorsed by the Transportation Planning Board on October 21, 1992. Similarly, the Federal Highway Administration and Federal Transit Administration (then the Urban Mass Transit Administration) performed a conformity finding on WashCOG's conformity analysis on December 8, 1992. This finding, which was performed pursuant to Section 176(c) of the CAAA, verified that hydrocarbon emission levels resulting from the transportation network that included projects contained in the plan and program would be lower in the milestone year than if the projects were not constructed. The design concept and scope of this proposal as presented are included in the plan and program for the Washington Metropolitan Area which were found to conform to the requirements of the CAAA. Therefore, this project conforms to the requirements of the CAAA. The FY94 TIP and conformity determination have been endorsed by the Transportation Planning Board and are under review by the EPA. Once the EPA completes their review, the Federal Highway Administration and the Federal Transit Administration will be in a position to conduct another conformity finding.

Unlike ozone which is regional in nature, carbon monoxide (CO) is a project specific pollutant. All the cities and counties making up the Washington D.C. MSA except for Arlington County and the City of Alexandria have been classified as attainment for carbon monoxide. Because this project is being proposed in the City of Alexandria it must be found to conform to the requirements of the CAAA with regards to CO. In order for a project to be found in conformance with the CAAA in the interim period in CO nonattainment areas, it must be shown through analysis that the project will eliminate or reduce the number and severity of CO NAAQS violations in the area substantially affected by the project.

A microscale carbon monoxide analysis was conducted to evaluate the pollutant's concentrations in the study area. The purpose of the microscale analysis was threefold: (1) to quantify existing CO concentrations in the study area; (2) to provide data for comparing the impacts of various build alternatives and the no-build scenario; and (3) to determine whether the project will cause or contribute to levels that exceed the NAAQS for this pollutant. The California Department of Transportation's CALINE3 line source dispersion model was used to predict CO concentrations at select sensitive receptors. Emission factors were used from Mobile 3 with local inspection and maintenance and anti-tampering inputs. Worst case meteorological inputs were used. Receptor sites were selected at worst case CO locations.

Receptors are fixed points representing locations where the public is likely to have exposure to CO. Receptors adjacent to roadways with high volumes of slow moving traffic are most likely to be exposed to high CO. Receptors for this project are located in areas with residential, commercial, and recreational land uses close to roadways with project generated traffic effects and/or locations adjacent to new roadway alignments (Figure 12, Table 5). Some receptors are applicable to all build alternatives, others are specific to one or more alternatives.

CO concentrations at receptors for 1988 are presented in Table 6. The one-hour values include a background concentration of 6.0 ppm and the eight-hour values include a background concentration of 3.0 ppm. In most cases more than one receptor was analyzed at each site to ensure that the worst case location was identified. Only the worst case receptor at each site was evaluated in the future year analyses.

The results of microscale analyses are shown in Tables 7 and 8. In general, CO concentrations are similar under the existing and no-build conditions even though traffic volumes are expected to increase significantly. The projected increase in traffic volumes is offset by the

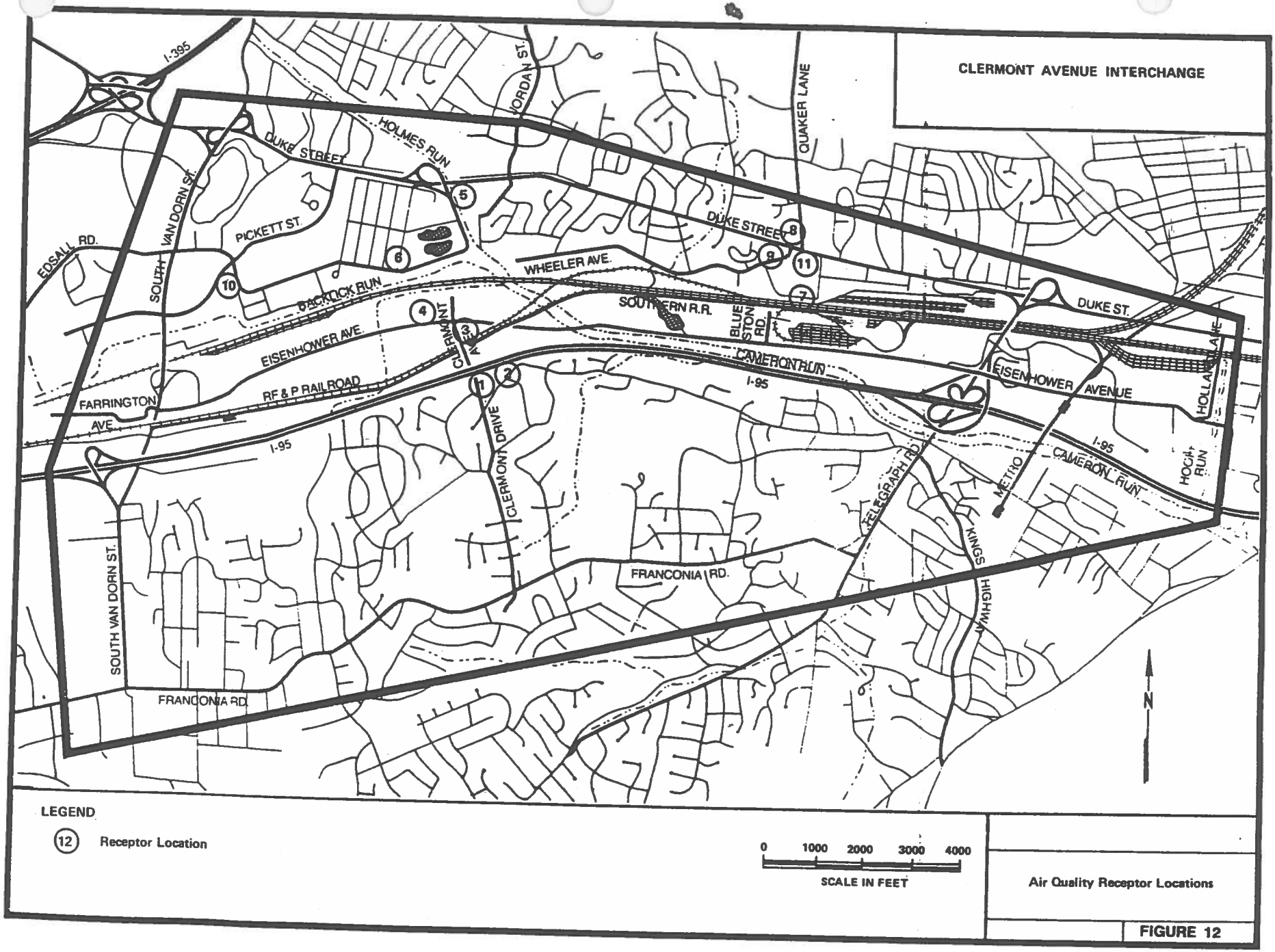

CLERMONT AVENUE INTERCHANGE
I-395
DUKE STREET
HOLMES RUN
JORDAN ST.
QUAKER LANE
VAN DORN ST.
PICKETT ST.
EDSALL RD.
SOUTH
WHEELER AVE.
BACKLICK RUN
SOUTHERN R.R.
BLUESTON RD.
DUKE ST.
EISENHOWER AVE.
CLERMONT AVE.
CAMERON RUN
I-95
EISENHOWER AVENUE
HOLLAND LANE
FARRINGTON AVE.
RF & P RAILROAD
CLERMONT DRIVE
TELEGRAPH RD.
METRO
HOOF RUN
KINGS HIGHWAY
SOUTH VAN DORN ST.
FRANCONIA RD.
N
LEGEND
12 Receptor Location
0 1000 2000 3000 4000
SCALE IN FEET
Air Quality Receptor Locations
FIGURE 12

TABLE 5

AIR QUALITY
WORST CASE RECEPTOR LOCATIONS

1. Residence on Clermont Drive: This receptor is 140 feet south of the existing I-95 overpass (250 feet south of the house itself). Under the Build alternatives, this receptor would be 20 feet south of the north bound entrance ramp.

2. Residence on Elmwood Drive, Fairfax County: This receptor is located 80 feet south of I-95, approximately 1400 feet east of the existing Clermont overpass. This receptor was selected to demonstrate the impacts from changes in I-95 traffic.

3. Cameron Run Valley Regional Park, upper baseball fields: This receptor is located northeast of the proposed interchange. It is at-grade with I-95 but above the grade of Clermont Avenue and Eisenhower Avenue.

4. Northwest Corner of Eisenhower Avenue and Clermont Avenue. This receptor will represent traffic increases for all alternatives.

5. Cameron Run Valley Regional Park, near Holmes Run Parkway: This portion of the park is a strip of land 50 feet wide located between Holmes Run to the west and the residential area along Homes Run Parkway to the east. The receptor represents the park, the duplexes along Homes Run Parkway, and the outdoor pool area for the condominiums at 4600 Duke Street. This receptor is particular to Build Alternative #3.

6. Cameron Station Picnic Area near 1st Street and C Street: This location at Cameron Station is currently used as a picnic area near the ponds. It is located close to the proposed alignment of CBA#1, CBA#2 and CBA#3. This area is also suggested to be retained as a park after the redevelopment of Cameron Station.

7. Alexandria Vehicle Maintenance Facility: This receptor is located along the ROW line east of the proposed alignment for Build Alternative #4.

8. North Side of Duke Street near the intersection with Build Alternative #4: This receptor measures the secondary impacts of the alternative.

9. High Rise Apartment on Duke Street: This receptor measures project specific traffic changes along the eastern end of Duke Street.

10. Cameron Station Playground, near C Street and Pickett St. This receptor is located at the western edge of Cameron Station, south of CBA#1. It includes playgrounds and a baseball field. It has been proposed that this area remain a park after the redevelopment of Cameron Station.

11. Recreational area of the Stonewall Jackson School, now a city park. This property is located approximately 400 feet to the east of Build Alternative #4 on Duke Street.

TABLE 6

MODELLED CARBON MONOXIDE CONCENTRATIONS
EXISTING CONDITIONS (1988)

RECEPTOR #	1 HOUR	1-HOUR + BACKGROUND (6 PPM)
1	1.3	7.3
2	2.5	8.5
3	1.3	7.3
4	0.7	6.7
5	0.7	6.7
6	0.6	6.6
7	0.4	6.4
8	1.2	7.2
9	1.7	7.7
10	0.6	6.6
11	2.0	8.0

RECEPTOR #	8-HOUR	8-HOUR + BACKGROUND (3 PPM)
1	1.3	4.3
2	2.5	5.5
3	1.3	4.3
4	0.6	3.6
5	0.7	3.7
6	0.6	3.6
7	0.4	3.4
8	1.2	4.2
9	1.6	4.6
10	0.5	3.5
11	1.8	4.8

TABLE 7

1995 PREDICTED ONE-HOUR CARBON MONOXIDE CONCENTRATIONS in Parts-Per-Million (ppm)

(background concentration is 6 ppm)

RECP #	NB	Change from Existing	ALT 1	Change from NB	ALT 2	Change from NB	ALT 3	Change from NB	ALT 4	Change from NB	ALT 5 (*Selected Alternative*)	Change from NB
1	7.4	*0.1*	7.2	*-0.2*	7.2	*-0.2*	7.4	*0.0*	7.1	*-0.3*	7.1	*-0.3*
2	8.6	*0.1*	8.5	*-0.1*	8.5	*-0.1*	8.6	*0.0*	8.0	*-0.6*	8.3	*-0.3*
3	7.4	*0.1*	7.5	*0.1*	7.7	*0.3*	7.7	*0.3*	7.3	*-0.1*	7.4	*0.0*
4	6.6	*-0.1*	7.1	*0.5*	7.1	*0.5*	7.4	*0.8*	7.0	*0.4*	7.1	*0.5*
5	6.6	*-0.1*	6.7	*0.1*	6.5	*-0.1*	6.6	*0.0*	NA	*NA*	NA	*NA*
6	6.3	*-0.3*	7.3	*1.0*	8.0	*1.7*	6.9	*0.6*	NA	*NA*	NA	*NA*
7	6.4	*0.0*	NA	*NA*	NA	*NA*	NA	*NA*	6.7	*0.3*	NA	*NA*
8	7.1	*-0.1*	NA	*NA*	NA	*NA*	NA	*NA*	7.3	*0.2*	NA	*NA*
9	7.4	*-0.3*	NA	*NA*	NA	*NA*	NA	*NA*	7.5	*0.1*	NA	*NA*
10	6.5	*0.0*	6.7	*0.2*	6.4	*-0.1*	6.7	*0.2*	NA	*NA*	7.4	*0.9*
11	7.9	*-0.1*	NA	*NA*	NA	*NA*	NA	*NA*	7.9	*0.0*	NA	*NA*

1995 PREDICTED EIGHT-HOUR CARBON MONOXIDE CONCENTRATIONS in Parts-Per-Million (ppm)

(background concentration is 3 ppm)

RECP #	NB	Change from Existing	ALT 1	Change from NB	ALT 2	Change from NB	ALT 3	Change from NB	ALT 4	Change from NB	ALT 5 (*Selected Alternative*)	Change from NB
1	4.3	*0.0*	4.0	*-0.3*	4.1	*-0.2*	4.1	*-0.2*	3.8	*-0.5*	4.0	*-0.3*
2	5.1	*-0.4*	5.0	*-0.1*	5.1	*0.0*	5.1	*0.0*	4.6	*-0.5*	5.0	*-0.1*
3	4.2	*-0.1*	4.3	*0.1*	4.4	*0.2*	4.4	*0.2*	4.1	*-0.1*	4.3	*0.1*
4	3.5	*-0.1*	3.9	*0.4*	4.0	*0.5*	4.1	*0.6*	3.9	*0.4*	4.0	*0.5*
5	3.5	*-0.2*	3.2	*-0.3*	3.5	*0.0*	3.5	*0.0*	NA	*NA*	NA	*NA*
6	3.3	*-0.3*	3.8	*0.5*	4.7	*1.4*	3.7	*0.4*	NA	*NA*	NA	*NA*
7	3.4	*0.0*	NA	*NA*	NA	*NA*	NA	*NA*	3.6	*0.2*	NA	*NA*
8	4.1	*-0.1*	NA	*NA*	NA	*NA*	NA	*NA*	4.2	*0.1*	NA	*NA*
9	4.4	*-0.2*	NA	*NA*	NA	*NA*	NA	*NA*	4.4	*0.0*	NA	*NA*
10	3.4	*-0.1*	3.5	*0.1*	3.4	*0.0*	3.6	*0.2*	NA	*NA*	4.3	*0.9*
11	3.7	*-1.1*	NA	*NA*	NA	*NA*	NA	*NA*	4.8	*1.1*	NA	*NA*

TABLE 8

2010 PREDICTED ONE-HOUR CARBON MONOXIDE CONCENTRATIONS in Parts-Per-Million (ppm)

(background concentration is 6 ppm)

RECP #	NB	Change from Existing	ALT 1	Change from NB	ALT 2	Change from NB	ALT 3	Change from NB	ALT 4	Change from NB	*Selected Alternative* ALT 5	Change from NB
1	7.3	*0.0*	7.6	*0.3*	7.7	*-0.4*	8.0	*0.7*	7.8	*0.5*	7.4	*0.1*
2	8.4	*-0.1*	8.3	*-0.1*	8.3	*-0.1*	8.4	*0.0*	7.9	*-0.5*	8.3	*-0.1*
3	7.3	*0.1*	7.3	*0.0*	7.3	*0.0*	7.3	*0.0*	7.1	*-0.2*	7.3	*0.0*
4	6.6	*-0.1*	7.7	*1.1*	8.1	*1.5*	8.7	*2.1*	7.9	*1.3*	7.3	*0.7*
5	6.6	*-0.1*	6.7	*0.1*	6.6	*0.0*	6.6	*0.0*	NA	*NA*	NA	*NA*
6	6.3	*-0.3*	7.5	*1.2*	8.0	*1.7*	6.9	*0.6*	NA	*NA*	NA	*NA*
7	6.4	*0.0*	NA	*NA*	NA	*NA*	NA	*NA*	6.7	*0.3*	NA	*NA*
8	7.4	*0.2*	NA	*NA*	NA	*NA*	NA	*NA*	7.8	*0.4*	NA	*NA*
9	7.7	*0.0*	NA	*NA*	NA	*NA*	NA	*NA*	8.0	*0.3*	NA	*NA*
10	6.5	*0.0*	6.5	*0.0*	6.3	*-0.2*	6.7	*0.2*	NA	*NA*	7.1	*0.6*
11	8.5	*0.5*	NA	*NA*	NA	*NA*	NA	*NA*	9.1	*0.6*	NA	*NA*

2010 PREDICTED EIGHT-HOUR CARBON MONOXIDE CONCENTRATIONS in Parts-Per-Million (ppm)

(background concentration is 3 ppm)

RECP #	NB	Change from Existing	ALT 1	Change from NB	ALT 2	Change from NB	ALT 3	Change from NB	ALT 4	Change from NB	*Selected Alternative* ALT 5	Change from NB
1	4.3	*0.0*	4.3	*0.0*	4.4	*0.1*	4.8	*0.5*	4.5	*0.2*	4.2	*-0.1*
2	5.2	*-0.3*	5.1	*-0.1*	5.1	*-0.1*	5.2	*0.0*	4.9	*-0.3*	5.1	*-0.1*
3	4.3	*0.0*	4.3	*0.0*	4.3	*0.0*	4.3	*0.0*	4.1	*-0.2*	4.3	*0.0*
4	3.6	*0.0*	4.6	*1.0*	4.7	*1.1*	5.2	*1.6*	4.6	*1.0*	4.3	*0.7*
5	3.6	*-0.1*	3.7	*0.1*	3.6	*0.0*	3.6	*0.0*	NA	*NA*	NA	*NA*
6	3.3	*-0.3*	4.2	*0.9*	4.9	*1.6*	4.1	*0.8*	NA	*NA*	NA	*NA*
7	3.3	*-0.1*	NA	*NA*	NA	*NA*	NA	*NA*	3.7	*0.4*	NA	*NA*
8	4.2	*0.0*	NA	*NA*	NA	*NA*	NA	*NA*	4.6	*0.4*	NA	*NA*
9	4.4	*-0.2*	NA	*NA*	NA	*NA*	NA	*NA*	4.9	*0.5*	NA	*NA*
10	3.5	*0.0*	3.5	*0.0*	3.3	*-0.2*	3.6	*0.1*	NA	*NA*	4.1	*0.6*
11	5.3	*0.5*	NA	*NA*	NA	*NA*	NA	*NA*	5.9	*0.6*	NA	*NA*

projected decrease in average fleet emissions as a result of the Federal Motor Vehicle Emission Control Program.

The proposed Build alternatives improve the ambient air quality at some receptors and deteriorate air quality at others. In 1995 and 2010, the maximum increase in the one-hour concentration from a Build Alternative is 1.7 ppm. The maximum increase in the eight-hour concentration from a Build alternative is 1.4 ppm in 1995, and 1.6 ppm in 2010. All predicted concentrations are below the one-hour NAAQS of 35 ppm and the eight-hour NAAQS of 9.0 ppm. Therefore, the project is not expected to cause or contribute to levels that exceed the Federal ambient air quality standards for carbon monoxide.

The maximum predicted concentrations of 9.1 ppm and 5.9 ppm, for one-hour and eight-hour respectively, would occur at receptor 11 in the year 2010. Since these values are well below the one-hour NAAQS of 35 ppm and the eight-hour NAAQS of 9.0 ppm, the project is not expected to increase the frequency or severity of the existing violation of the NAAQS for which the area is designated as nonattainment for CO.

It has been determined that this project complies with the conformity requirements of the CAAA during the interim period and is therefore in conformance with the CAAA as enacted.

Elevated concentrations of particulate matter are likely to occur during construction phase of the project. Fugitive dust will be generated by heavy equipment during clearing, excavation and grading operations. The movement of construction traffic and equipment on unimproved surfaces and wind blowing over exposed earth will also contribute to particulate concentrations. Local concentrations of this pollutant are extremely sensitive to local meteorology, topography, soil type and moisture content.

A large percentage of fugitive dust from highway construction activity is composed of particles larger than 10 microns in diameter. Larger particulates constitute less of a threat to public health since they settle out rapidly and are more easily filtered by the respiratory system. The fraction of fine particulates is not expected to cause or contribute to violations of the NAAQS for PM-10.

Finally, construction activities will be performed in accordance with provisions of the Virginia Department of Transportation's Road and Bridge Specifications. These Specifications conform with the State Implementation Plan. In addition, construction activities will be in accordance with all federal, state and local regulations.

4. Noise

In accordance with the FHWA and VDOT guidelines this project was assessed for noise impacts. These guidelines are set forth in 23 CFR 772, the Federal-Aid Program Guide (FAPG) Part 772 and the VDOT "Noise Abatement Policy". The guidelines establish noise standards in the Noise Abatement Criteria (NAC) that are used to determine the degree of traffic noise impact on human activity. Table 9 shows the noise abatement criteria for various land uses. The NAC apply to areas having regular noise-sensitive human activity. These criteria do not apply to the entire tract of land on which the activity is based but only to the portion where the activity takes place.

Noise abatement criteria are given in terms of the hourly, A-weighted sound level in decibels (dBA). The A-weighted sound level is a single number measure of sound intensity with weighted frequency characteristics that correspond to human subjective response to noise. The decibel measure is a logarithmic scale for measuring sound pressure levels. Three decibels represents roughly the smallest change in loudness that can be perceived by the human ear.

All of the noise-sensitive receptors within the study area are classified as Category B land uses. The FHWA criteria for Category B land uses is 67 decibels (dBA). Such land uses in the category include picnic areas, recreation areas, playgrounds, parks, residences, motels and hotels, school, churches, libraries and hospitals.

Based on traffic changes and variations in roadway-receptor configuration, noise sensitive areas along the project are divided into study areas experiencing uniform noise conditions. In each area, a study site was chosen; this site usually is the building which is closest to the roadway and which therefore experiences the greatest noise impact.

In order to determine the noise impact of this proposed project, 13 study sites, which represent other noise-sensitive receptors in their vicinity, were selected and monitored. Figure 13 and Tables 10 and 11 provide an indication of the types of sites and their locations. At these sites existing noise levels were measured and traffic counts were taken and classified where appropriate.

A preliminary review of the project corridor established highway traffic as the dominant source of noise. Based on peak hour traffic conditions, both existing and design year noise levels were evaluated with the STAMINA 2.0 computer model which is approved by the FHWA for use in traffic noise assessment. A discussion of it is presented in FHWA-RD-

TABLE 9

FHWA NOISE ABATEMENT CRITERIA

Activity CATEGORY	Leq(h)*	Description of Activity Category
A	57(Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67(Exterior)	Picnic areas, recreation areas, playgrounds, active sports, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72(Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D		Undeveloped lands.
E	52(Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

*Hourly A-Weighted Sound Level (dBA)

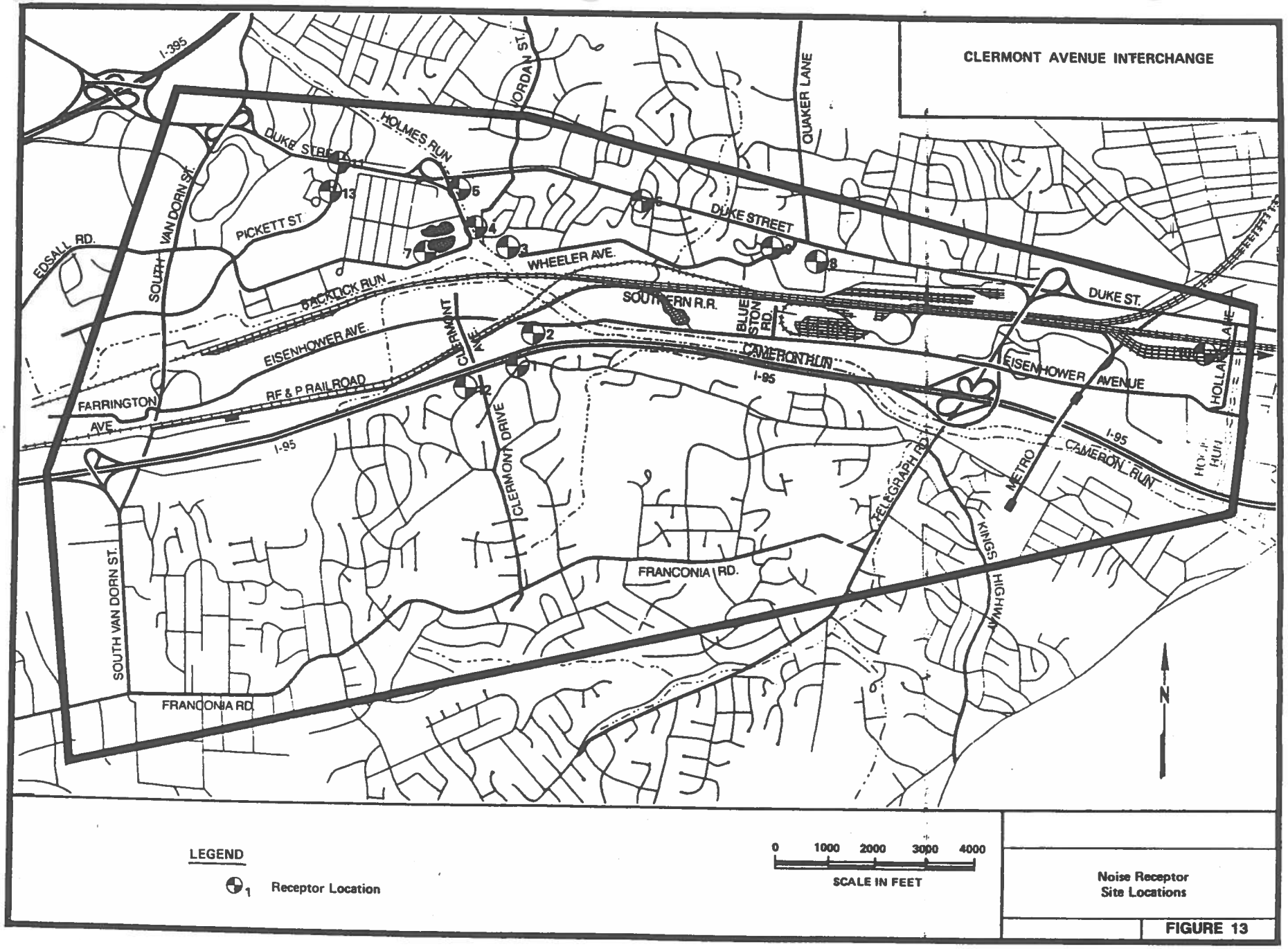

CLERMONT AVENUE INTERCHANGE
I-395
DUKE STREET
HOLMES RUN
JORDAN ST.
QUAKER LANE
SOUTH VAN DORN ST.
PICKETT ST.
EDSALL RD.
WHEELER AVE.
BACKLICK RUN
SOUTHERN R.R.
BLUE STON RD.
DUKE ST.
EISENHOWER AVE.
CLERMONT AVE.
CAMERON RUN
I-95
EISENHOWER AVENUE
HOLLAND LANE
FARRINGTON AVE.
RF & P RAIL ROAD
CLERMONT DRIVE
TELEGRAPH RD.
METRO
KINGS HIGHWAY
FRANCONIA RD.
SOUTH VAN DORN ST.
N
LEGEND
Receptor Location
0 1000 2000 3000 4000
SCALE IN FEET
Noise Receptor Site Locations
FIGURE 13

TABLE 10

NOISE RECEPTOR DESCRIPTIONS

Site No. 1 is on the South side of the Capital Beltway, in back of 4400 Elmwood Drive, Fairfax County. Shrubs, grasses, trees and a metal noise barrier separate this location from the traffic lanes of the Beltway.

Site No. 2 is on the North side of the Beltway, on the upper level of the Joseph M. Hensley Recreational Park.

Site No. 3 is in the Cameron Run Park, off the end of Wheeler Avenue. It is one of three areas affected by the proposed alternative utilizing the Cameron Station Road. This portion of the park includes a bikeway, picnic area and playground. This quiet area is bounded by private residences and the Cameron Run.

~~**Site No. 4** is also a parkland and is located between Holmes Run and Holmes Run Parkway.~~ The area fulfills a similar function as the Cameron Run Park and is near the Site No. 3.

Site No. 5 is next to the swimming pool of a 13-story apartment building known as "4600 Duke". It is next to Holmes Run and across from Cameron Station Road, one of the alternative routings. This alternative is the same that will impact areas represented by Site Nos. 3 and 4. This location is also currently affected by the Duke Street traffic.

Site No. 6 is on Duke Street/Fendall Avenue corner, in front of Cameron Knoll Townhouses. This site location represents 20 apartments fronting Duke Street. Traffic on Duke Street may be impacted when either of the connectors is built.

Site No. 7 is in a picnic and playground area of the Cameron Station. The area is bounded by two lakes and C Street of the Station.

Site Nos. 8 and 9 are close to Duke Street and in the vicinity of the proposed Bluestone Road connector. Site No. 8 is one the grass-covered recreational field of the former Stonewall Jackson School. It is East of the proposed connector and represents users of the recreational field. The area is also impacted by traffic on Duke Street to which the effect of traffic using the new connector would be added.

Site No. 9 is on the West side of Wheeler Avenue and represents the Normandy Hill apartments. The Bluestone Road connector would pass very close to this area, impacting apartment dwellers, hence the selection of this site location. Noise levels affecting residents of the apartments would be less than that measured because they are well beyond the fence line used for monitoring. Predictions and impact analysis, were therefore made for a new site No. 9A which represents the external location of the closest residents.

Site No. 10 is within the Alexandria National Cemetery, at the Eastern end of the study area. The dominant noise sources were frequent aircraft takeoffs from Washington National Airport and motorized gardening tools used by ground maintenance workers. Traffic on Holland Lane to the west was minor contributor.

Site No. 11 is at the North side of the Duke Street/Pickett Street signalized intersection. This is a surrogate location used for measurements only. Its selection can be explained by considering that the purpose of this study is to analyze the project generated impact on Duke Street; therefore, the noise monitor was placed near Duke Street and the local service road rather than in front of Canterbury Square residences. Noise levels impacting the Canterbury Square residences would be less than those measured at this location because the residential buildings are set back from Duke Street to accommodate a service road and parking lot.

Site No. 12 is a private residence and is the counterpart of Site No. 1, south of the Capital Beltway and behind an approximately 15-foot high steel noise barrier. This private residence was built on a rise above the level of the Beltway traffic lanes.

Site No. 13 was on the West side of South Pickett Street, in an elevated parking lot belonging to the Brigadoon Town House Complex.

TABLE 11

NOISE STUDY SITES WITH MEASURED NOISE LEVELS

SITE#	SITE DESCRIPTION	MEASURED NOISE LEVELS Leq(H) dBA
1	4400 Elmwood Dr., Fairfax County	62
2	Hensley Baseball Field	70
3	Cameron Run Park, Wheeler Ave.	62
4	Cameron Run Park, Holmes Run Parkway	60
5	4600 Duke St., Swimming Pool	58
6	Cameron Knoll, Townhouses, Duke St.	68
7	Picnic and Playground Area, Cameron Station	61
8	Recreation field, former Stonewall Jackson School	63
9	Normandy Hill Apts., Wheeler Ave.	68
10	Alexandria National Cemetery	61
11	Canterbury Square Apts., Duke St./ Pickett Street Corner	71
12	5614 Glenwood Dr., Fairfax County	63
13	Brigadoon Townhouses, S. Pickett St.	66

Note: Measured noise levels were rounded to the nearest whole number.

77-108, "FHWA Highway Traffic Noise Prediction Model". The model predicts an equivalent noise level at the noise receptors for free flowing traffic using geometric and traffic flow data. The geometric data involves such factors as ground absorption, roadway geometry and receptor distance. The traffic flow data is comprised of the most severe hourly combination of speeds and volumes of automobiles, light trucks, medium trucks and heavy trucks.

After validating the computer model, existing noise levels were calculated by entering baseline "worst case" hourly traffic volumes, speeds, and vehicle mix data generated as part of the traffic and transportation study. Either AM or PM peak hour traffic constitutes the worst case for most study roadways and was used as input for noise modelling purposes. Appropriate traffic volumes and roadway geometry were used as model inputs for each of the Candidate Build Alternatives.

The STAMINA 2.0 computer model was used to predict noise levels at 12 receptor locations (Alexandria National Cementry was not modelled) for the five Candidate Build Alternatives. In addition, noise levels in the project area were determined for existing conditions, design year no-build conditions and build conditions. The design year is a future year chosen for comparison with the existing year. The noise levels for design year no-build conditions are the noise levels which would occur in the design year if the proposed project is not constructed; noise levels for build conditions are the noise levels expected in the design year if the project is constructed and fully operational. These levels are shown in Table 12.

To assess the noise impacts of this project the existing, build and no-build levels were compared. Comparing the existing with the build shows what increase in noise levels can be expected if the project is constructed. Contrasting the no-build and build levels shows how much of an increase can be attributed to the project. Finally, comparing the build condition to the NAC determines if future noise level are compatible with land uses.

As previously stated, all receptors along the project are defined by the FHWA as Category B properties with an NAC of 67 dBA. FHWA and VDOT guidelines require that noise abatement measures be considered if predicted levels equal or exceed the NAC or if predicted levels substantially exceed existing levels. VDOT considers an increase in traffic noise of 10 dBA or greater as substantial.

While all impacted receptors will receive noise levels which equal or exceed the NAC, at some locations substantial increases in noise levels will also be experienced (Table 12). All Candidate Build Alternatives will

TABLE 12

PREDICTED NOISE LEVELS

NOISE SITE NO.	FHWA NOISE CAT.	NO BLD. 2010 dBA	ALT.1 2010 dBA*	ALT.2 2010 dBA*	ALT.3 2010 dBA*	ALT.4 2010 dBA*	Selected Alternative ALT.5 2010 dBA*
1	B	62	73	74	73	73	73
2	B	69	69	69	69	69	69
3	B	44	49	49	50	44	44
4	B	48	56	54	56	49	49
5	B	54	58	57	59	54	55
6	B	69	69	69	69	70	69
7	B	47	65	67	54	47	47
8	B	61	61	61	61	61	61
9	B	65	65	65	65	62	65
11	B	70	68	68	68	70	66
12	B	64	69	69	69	69	69
13	B	66	64	64	64	66	64

* Does not include mitigation measures.

Note: Monitored noise levels shown on Table 11 included all the noise present in an environment. By contrast, modelled noise levels shown on Table 12 represent only the contribution of motor vehicles from adjacent roadways.

impact sites Nos. 1, 2, 6, and 12. The highest impacts will be with Alternative 2, where an estimated 31 residences and two park areas will be affected. The level of impact is the same for all the other alternatives including the Selected Alternative. At site No. 1 an estimated eight residences will be impacted. At sites 6 and 12, 20 and 3 residences will be impacted respectively. Site No. 2 is located at Hensley Park. Table 13 summarizes the impacted receptors for each site.

In accordance with FHWA and VDOT policy, noise abatement was considered for those receptors whose noise levels will equal or exceed the NAC or which will experience substantial increases over existing level. Abatement strategies that were considered for this project include (1) traffic management, (2) roadway alterations and (3) noise barriers. In addition to evaluating noise abatement potential, mitigation measures were evaluated to determine if such measures will cause adverse social or environmental effects which outweigh the benefits received. If the effects outweigh the benefits, the highway department may dismiss them from further consideration.

Traffic management for noise abatement purposes might involve alternative traffic routing schemes, reducing traffic speeds or prohibiting certain classes of vehicles from area roadways. Due to the nature of this project this is not a viable solution for noise mitigation.

Alterations to roadway geometry can serve to reduce levels by moving the source away from sensitive receptors. For the proposed project, such actions are being considered through the comparison of the five build alternatives. The most advantageous alignment, from a noise standpoint, can be determined by evaluating the results of the noise study for this project. Further, the receptors exposed to the highest noise levels are located along the I-95 and the relocation of this roadway is not considered feasible.

Noise barriers appear to be the only type of practical solution for most of the impacts defined. For a barrier to be reasonable and feasible, in accordance with the Virginia State Noise Abatement Policy, it must provide a minimum insertion loss of 5 dBA and cost no more than $20,000 per protected residence. Barriers therefore are feasible but not reasonable for the protection of areas represented by Sites Nos. 1, 2, 7, and 12. Inasmuch as the policy allows VDOT's participation up to $20,000 per protected residence, further consideration of these barriers will depend on the availability of third party funding for the difference.

There is no feasible solution apparent for the protection of residences represented by Site No. 6.

TABLE 13

SUMMARY OF NOISE IMPACTS

CLERMONT AND I-95 INTERCHANGE TRAFFIC NOISE ASSESSMENT (1989) AND FUTURE NOISE PREDICTION (2010) WITH NO MITIGATING MEASURES

NOISE SITE NO.	SITE DESCRIPTION INTENDED LAND USAGE	NUMBER OF IMPACTS NO BLD. 2010	Alt. 1 2010	Alt. 2 2010	Alt. 3 2010	Alt. 4 2010	Alt. 5 (Selected Alternative) 2010
1	Resid., 4400 Elmwood	–	8	8	8	8	8
2	Park, Hensley	I	I	I	I	I	I
3	Park, Cameron Run	–	–	–	–	–	–
4	Park, Holmes Run	–	–	–	–	–	–
5	Swim. Pool 4600 Duke	–	–	–	–	–	–
6	Resid. Cameron Knoll	20	20	20	20	20	20
7	Park, Cameron	–	–	I	–	–	–
8	Park, Jackson Sch.	–	–	–	–	–	–
9A	Resid., Normandy Hill	–	–	–	–	–	–
11A	Resid., Canterbury Sq.	–	–	–	–	–	–
12	Resid., 5614 Glenwood	–	3	3	3	3	3
13	Brigadoon Townhouses	–	–	–	–	–	–
Summary		20+I	31+I	31+2I	31+I	31+I	31+I

Impacts were determined according to FHWA criteria and shown above by the approximate number of dwellings impacted or letter I for non-residential receptors.

Notes: Site 10 located at the Alexandria National Cemetery was not included in the noise modeling. "RESID." identifies private residences. "REC. PARK" identifies a recreational park and/or picnic area. FHWA Category "B" specifies exterior noise levels not to equal or exceed 67 dBA leq (h). Site Nos. 9A and 11A replaced Nos. 9 and 11 which were subsites and therefore are not considered further.

Alternatives 1 and 2 have the highest impact because both affect the park within Cameron Station.

While none of the barriers considered appears to be reasonable, the designs have been based on preliminary data and the cost is only estimated. A formal decision on whether or not any of these barriers will be incorporated as noise abatement features will be made after the completion of the public involvement processw and the final project design.

An existing noise barrier located east of I-95 will be removed as a result of construction. It is the position of the Virginia Department of Transportation that all barriers removed due to construction will be replaced. Since it is not a new barrier, this existing barrier is not subject to the reasonableness and feasibility criteria cited above. Therefore, although its location may be shifted, a similar noise barrier will replace the existing barrier to continue to provide noise abatement for the residences currently protected.

To control construction noise, construction will be regulated by the implementation of the Department's Road and Bridge Specifications. These require the contractor to conform to noise levels set in the specifications and to reduce the impact of construction noise on the surrounding community.

5. Wetlands, Streams and Water Bodies

Several distinct water features are located in the project area. These areas include Holmes Run, Backlick Run, Cameron Run, Cameron Lake, Lake Cook and an unnamed wetland area located near the existing northern terminus of Clermont Avenue. Holmes Run, Backlick and Cameron Run are classified as riverine nontidal lower perennial open water permanent streams. Cameron Lake is classified as a palustrine emergent seasonally saturated wetland. Lake Cook is a man-made lake. The unnamed wetland area is a palustrine forested broad-leaved deciduous wetland.

The study area lies within the Hunting Creek basin, which drains approximately 42.1 square miles and empties into the Potomac River. The entire drainage basin is heavily developed. Since the 1970's major flood control programs have significantly modified Cameron Run, Backlick Run and Holmes Run.

The head of Cameron Run is located at the confluence of Backlick and Holmes runs. Cameron Run then flows eastward toward the Potomac River and becomes Hunting Creek at the confluence with Hooff Run. The entire channel of Cameron Run has been heavily modified for stormwater management. Cameron Run has undergone extensive channelization from the Potomac River to the confluence of Backlick and Holmes Runs. Prior

to channelization, Cameron Run was a tidally influenced meandering stream which subjected much of Eisenhower Valley to flooding hazards. Presently, it is approximately 200 feet wide and 45 feet deep and can accommodate the majority of the 100-year flood discharge (40,000 cfs.). Cameron Run now contains a series of low rise dams which prevent upstream flow of tidal waters and which form ponds behind each dam. Many areas of the channel have a heavy accumulation of silt. The City of Alexandria's Department of Engineering and Design dredges the accumulated sediment every three years.

Another alteration was the formation of Lake Cook, a man-made 2-acre lake constructed within the original channel of Cameron Run and located within Cameron Run Valley Park. Lake Cook receives water from an unnamed tributary to the north and several stormwater outfalls. The lake discharges the water back into Cameron Run through a culvert beneath Eisenhower Avenue.

The only wetland area in the study area is the unnamed wetland area mentioned above. The wetland area is 1.38 acres in size and is part of an undeveloped tract of land approximately 250-300 feet wide and 4,400 feet long, extending from Clermont Avenue on the east to the Norfolk-Southern Railroad yard to the west. Based on review of National Wetland Inventory (NWI) maps, this wetland represents less than 1 percent of the total wetland acreage within the Cameron Run watershed.

A qualitative assessment of wetland values for stormwater retention, groundwater recharge and discharge, nutrient and sediment retention, and habitat was conducted based on the observable characteristics of the wetland and its position in the landscape relative to other natural features. The wetland has a hydrology maintained by a stormwater outfall and a storage potential which is minor. The wetland has a low value for groundwater recharge and discharge. The wetlands value for sediment and nutrient retention is also considered low because of the small size of the ponding area and the high nutrient and sediment values documented for areas downstream of the wetland. It is considered to have moderate habitat value because it has a diverse plant community, and it is contiguous with an undisturbed forested area located in a highly urban environment.

A jurisdictional wetland determination and delineation was conducted following the plant community assessment procedure of the Federal Interagency Committee (Federal Manual for Identifying and Delineating Jurisdictional Wetlands, 1989). The approximate boundaries of the wetland are depicted in Figure 14, which also shows the corridor zone

LEGEND

Wetland

Soil Point

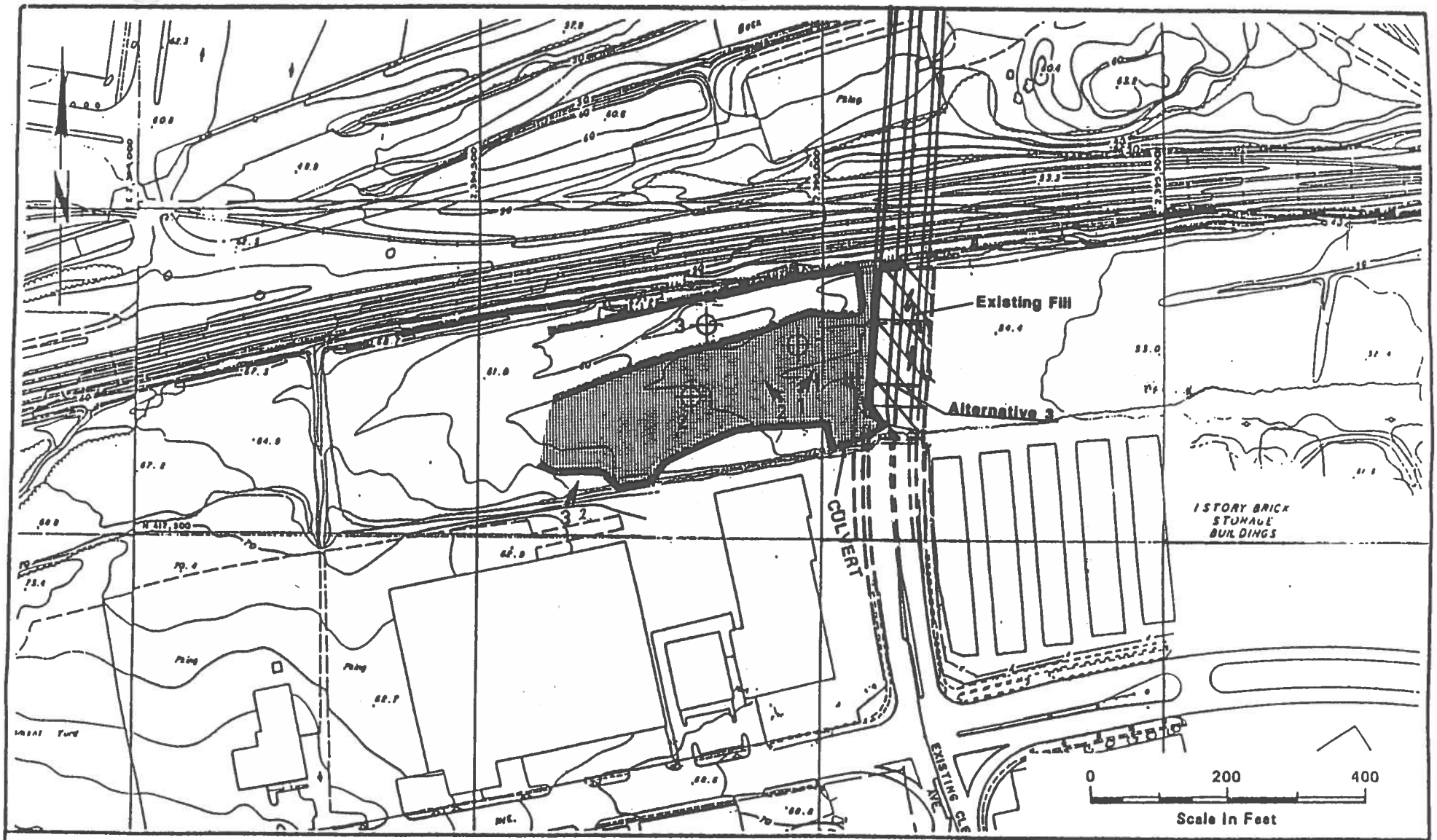
Photograph Location

Limit of Fill

Existing Fill

Extent of Delineated Wetlands

FIGURE 14



LEGEND

- Wetland
- Soil Point
- Photograph Location
- Limit of Fill
- Existing Fill

Extent of Delineated Wetlands

FIGURE 14A

that will accommodate the alternative alignments that potentially effect this wetland.

Wetland displacement will be due to small amounts of fill into the wetland from roadway construction of CBA's 1, 2 or 3. The footprint of existing fill for the railroad bridge approach will need to be enlarged. The change will be very nearly the same for the three alternatives. The most wetland displaced would be no more than .40 acres. This small amount of wetlands filling is allowed by Nationwide Permit No. 25, Structures in Wetlands.

Build Alternatives 4 and 5 both do not involve the acquisition or displacement of any wetlands. In addition, every practical method was used to reduce or eliminate wetland impacts with the remaining Build Alternatives. Alternatives 1, 2 and 3 were designed to avoid as much wetland area as possible without jeopardizing safety and design requirements for the anticipated traffic patterns and volumes. This project has been developed in accordance with EO 11990 (Protection of Wetlands).

6. Water Quality

The Department's provisions for erosion and sediment control are in accordance with the Erosion and Siltation Prevention Guidelines and the Department's Road and Bridge Specification. These provisions will be stringently enforced during construction and are expected to adequately manage any potential problems of this nature. Two highly erodible soil types (Lunt and Beltsville) are found in the study area. Four basic soils are typical to the study area. Lunt and Beltsville are found in the Alexandria portion of the study area, while Elkton and Sassafras are found in the Fairfax County portion.

The Department's Road and Bridge Specifications prohibit the discharge of construction materials into State waters. The discharge of pollutants, such as chemicals, fuels, lubricants, bitumens, raw sewage, paints and other harmful waste into or alongside State waters is also prohibited. The project will not cause any contamination of public water supply, nor will it significantly affect water supply facilities.

Cameron Run receives drainage from two major urban tributaties, Holmes Run and Backlick Run, as well as several other smaller tributaties. Typical of highly developed urban streams, Cameron Run exhibits degraded water quality including nutrient enrichment and high fecal coliform counts.

- Water quality data for Holmes Run, Backlick Run and the unnamed tributary were not available, but these streams have a similar urban character to Cameron Run. Field inspections showed both Holmes Run and Cameron Run to have heavy algal growth, indicating high nutrient loads to the streams. Petroleum products were visibly being released from the sediment in Backlick Run, and there was a strong hydrocarbon odor along the streams. In addition, acidic groundwater was flowing into Backlick Run from the north bank (Cameron Station).

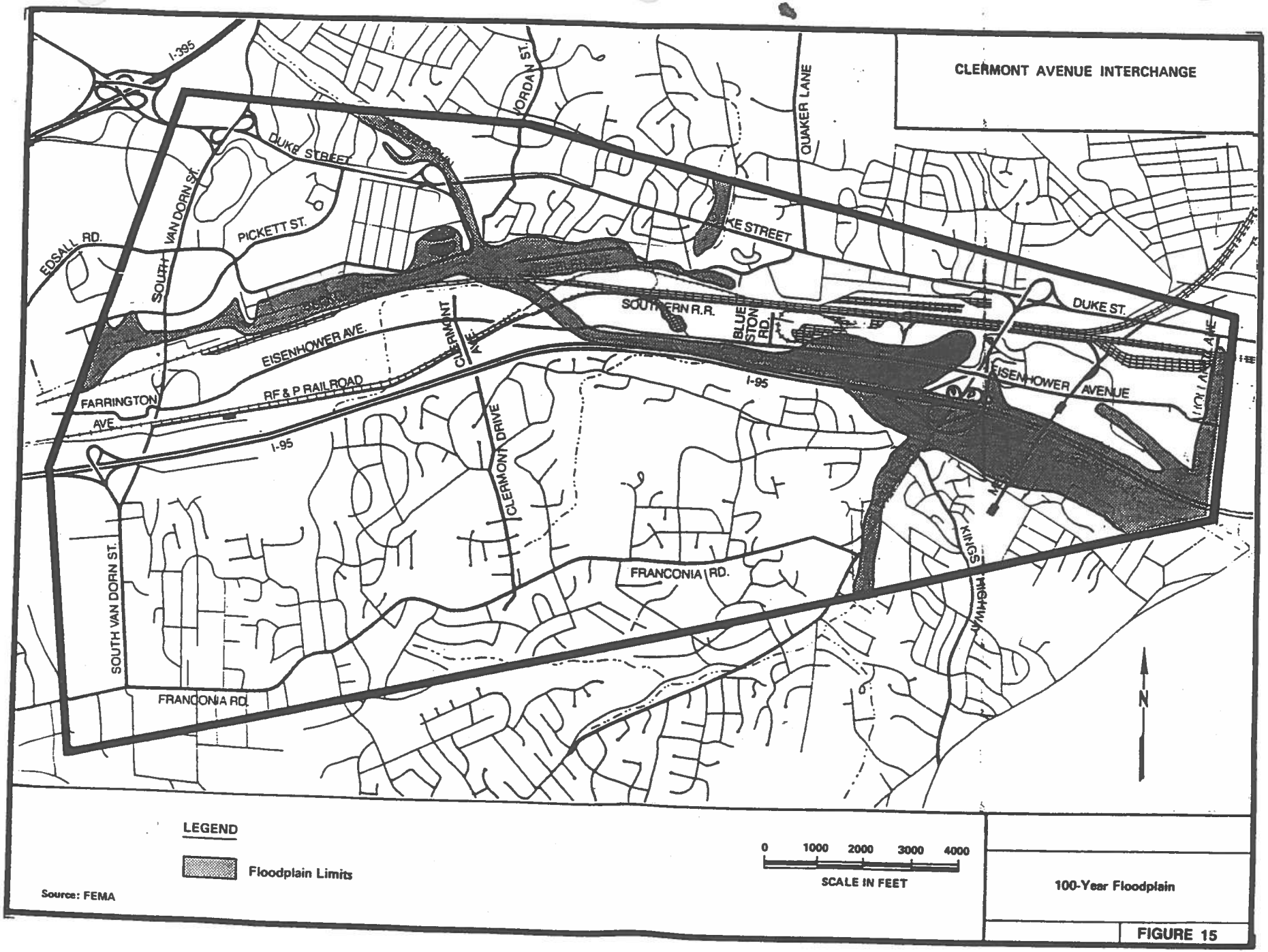
  Hunting Creek is influenced by stormwater discharge from Cameron Run and Hooff Run, and by discharge from the Alexandria Wastewater Treatment Plant located on Hooff Run. High fecal coliform bacteria contamination partly attributable to combined sewer overflows is prevalent in Hunting Creek. Hunting Creek also exhibits relatively higher ammonia levels, but these levels do not violate Virginia water quality standards.

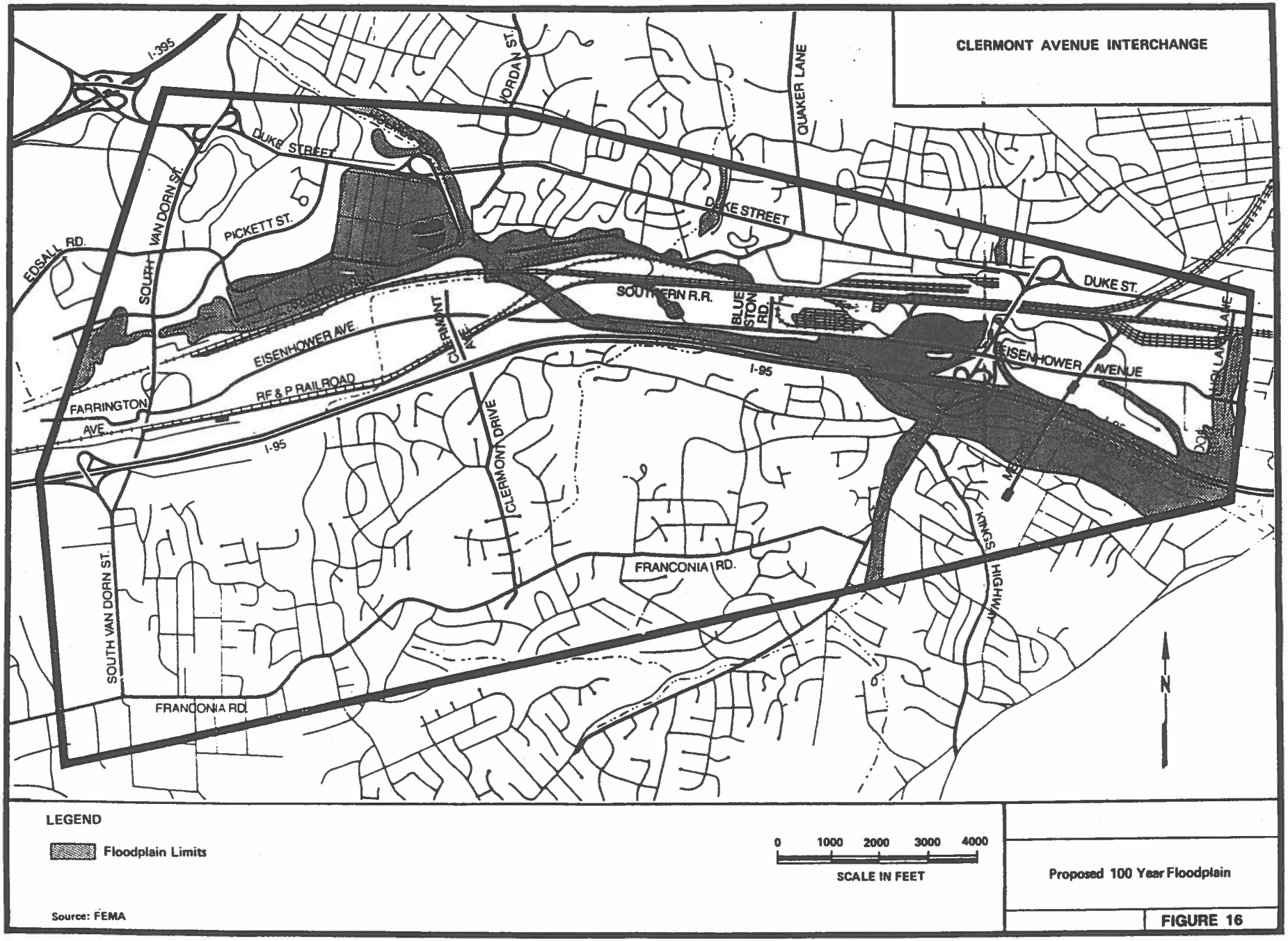
  Sediments from Hunting Creek were classified as heavily contaminated with arsenic and lead and moderately contaminated with copper and zinc. Although not reported in the 1988 Water Quality Assessment Report, the heavy metal contamination of sediment in Cameron Run would be classified similar to Hunting Creek. The project will bridge Cameron Run, not disturbing these sediments.

  The northern Regional Office of the Virginia Water Control Board, within the Virginia Priority Water Body List (Section 304(1) of the Clean Water Act), ranks waterbodies according to their level of pollution and need for mitigation. In this list, the Potomac Embayments, including Hunting Creek, are given a "high priority" rating. The Virginia Water Control Board justifies this rating by runoff found in the Potomac Embayment system. Point Source and non-point source nutrients are cited as the main source of pollution.

7. Floodplains

The Eisenhower Valley has historically been subjected to flooding from Cameron Run. Figure 15 depicts the 100-year floodplain for Eisenhower Valley, as adapted from currently accepted Federal Emergency Management Agency (FEMA) maps, dated October 18, 1988. A preliminary copy of a proposed FEMA map covering the study area depicts a more extensive 100-year floodplain (Figure 16). The only significant revisions proposed within the study area place nearly all of Cameron Station within the proposed regulated floodplain. Only slight alterations to other zones of the regulated floodplains are proposed.


CLERMONT AVENUE INTERCHANGE
I-395
DUKE STREET
JORDAN ST.
QUAKER LANE
SOUTH VAN DORN ST.
PICKETT ST.
EDSALL RD.
EISENHOWER AVE.
SOUTHERN R.R.
BLUESTON RD.
DUKE ST.
CLERMONT AVE.
RF & P RAILROAD
FARRINGTON AVE.
I-95
CLERMONT DRIVE
EISENHOWER AVENUE
KINGS HIGHWAY
FRANCONIA RD.
N
LEGEND
Floodplain Limits
0 1000 2000 3000 4000
SCALE IN FEET
Source: FEMA
100-Year Floodplain
FIGURE 15


CLERMONT AVENUE INTERCHANGE
I-395
DUKE STREET
JORDAN ST.
QUAKER LANE
EDSALL RD.
SOUTH VAN DORN ST.
PICKETT ST.
DUKE STREET
SOUTHERN R.R.
BLUESTON RD.
DUKE ST.
EISENHOWER AVE.
CLERMONT AVE.
EISENHOWER AVENUE
I-95
RF & P RAILROAD
FARRINGTON AVE.
I-95
CLERMONT DRIVE
KINGS HIGHWAY
FRANCONIA RD.
SOUTH VAN DORN ST.
FRANCONIA RD.
N
LEGEND
Floodplain Limits
0 1000 2000 3000 4000
SCALE IN FEET
Source: FEMA
Proposed 100 Year Floodplain
FIGURE 16

Candidate Build Alternatives 1, 2, 3, and 5 all cross the current and proposed floodplain limits. Alternative 4 avoids all floodplain limits. The impacts are limited to the floodway fringe and none involve displacement of the actual floodway. In addition, the amount of floodway fringe displaced is considered minimal and the project will not change the flood elevations. Also, there will be no significant longitudinal encroachments. Finally, no significant adverse effects on natural and beneficial floodplain values nor increased floodplain risk to human safety, health, or welfare are anticipated. Therefore the project is in accordance with Executive Order 11988 "Floodplain Management".

8. Hazardous Sites

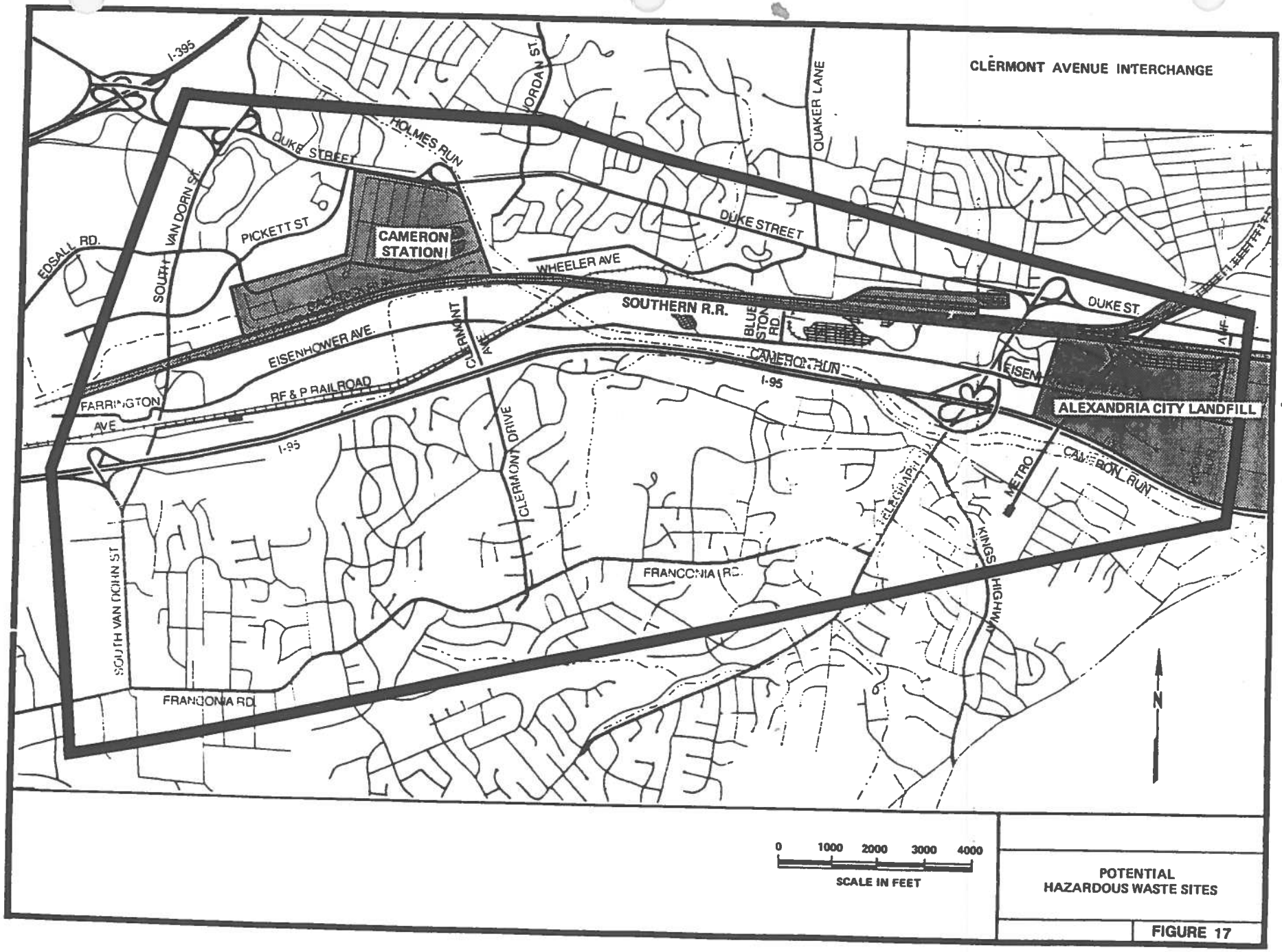
An initial Site Assessment was conducted which included a visual inspection of the project area and a records check of all known hazardous waste sites.

The potential hazardous waste sites identified in the study area are shown in Figure 17. The Alexandria City Landfill is located in the far eastern part of the study area and would, therefore, be beyond any of the Candidate Built Alternative corridors.

Each CBA will require the crossing of the Norfolk-Southern Railroad lines. Although these lines will be crossed on structure, the point of crossing will be inspected in the field and tests conducted as appropriate to ensure any contaminated areas adjacent to the lines will not be disturbed.

The contaminated sediments of Backlick and Cameron Runs are not expected to be disturbed since these drainages will be bridged.

The U.S. Army Toxic and Hazardous Materials Agency has prepared a Preliminary Assessment for Cameron Station. The conclusions and recommendations were used to develop the remedial investigation/feasibility study (RI/FS). A field investigation began in August 1990, of Cameron Station. The following areas of potential environmental concern are being investigated:


CLERMONT AVENUE INTERCHANGE
I-395
DUKE STREET
HOLMES RUN
JORDAN ST.
QUAKER LANE
SOUTH VAN DORN ST.
PICKETT ST
EDSALL RD.
CAMERON STATION
WHEELER AVE
DUKE STREET
SOUTHERN R.R.
DUKE ST.
BLUESTON RD.
EISENHOWER AVE.
CLERMONT AVE
CAMERON RUN
RF & P RAILROAD
FARRINGTON AVE
I-95
ALEXANDRIA CITY LANDFILL
CLERMONT DRIVE
METRO
CAMERON RUN
KINGS HIGHWAY
FRANCONIA RD.
SOUTH VAN DORN ST
FRANCONIA RD.
N
0 1000 2000 3000 4000
SCALE IN FEET
POTENTIAL
HAZARDOUS WASTE SITES
FIGURE 17

- Asbestos-Containing Material
- Underground Storage Tanks
- Sanitary and Storm Sewer Lines
- Road Oiling and Fly-Ash Disposal
- PCB Transformers
- Burning Pits and Dredge - Spoil Disposal Area
- Landfills
- Pesticides
- Miscellaneous: Radon, Abandoned Wells, Pigeon Dropping Accumulation and Buried Transformer

Candidate Build Alternative 1, 2, 3 and 5 pass through Cameron Station. Prior to the construction of any of these alternatives, the selected alignment should be inspected in the field and tests conducted to ensure that the construction of the alignment will not disturb any potentially contaminated sites.

Candidate Build Alternative 4 does not pass through any known hazardous waste sites.

A Preliminary Site Investigation will be conducted on the Selected Alternative to determine if any additional hazardous waste sites not discovered as part of the initial site assessment are present. If any hazardous wastes are discovered as part of this investigation, attempts will be made to attach liability to the owner and/or responsible parties. No right-of-way will be purchased until all hazardous wastes have been cleaned up, removed, and disposed of properly.

9. Coordination

The project was coordinated at an Interagency Coordination Meeting. At this meeting, the Fish and Wildlife Service requested that all avoidance and minimization measures should be taken into consideration. These measures should include selection of the least environmentally damaging alternative, steeping of fill slopes, etc. Also, the Fish and Wildlife Service requested acceptable compensation for unavoidable wetlands impacts in the form of 2:1 replacement of forested wetlands, 1.5:1 for scrub/shrub, and 1:1 for emergent wetlands. The Army Corps of Engineers and the Virginia Water Control Board both concurred with Fish and Wildlife.

The Corps of Engineers also recommended Alternative 4 to avoid waters of the U.S. In addition, the Corps provided their standard bridge comments that include the following:

1) Span entire waterway.
2) Minimize the abutments encroachment into the waterway.
3) Permanent stream bank protection.
4) Provide an erosion and siltation plan with narrative.
5) Remove existing bridge and replace roadway, regrade areas to surrounding natural contours; seed area with a wildlife mixture and replant stream side with riparian vegetation. This should be done for all bridge removals unless access is required for recreation purposes as recommended by the Division of Parks and Recreation.
6) Minimize instream piers.
7) Align instream piers with stream flow.
8) Cofferdams and causeways are to be constructed out of non-erodible materials.
9) A permit is needed to cover cofferdams and causeways.
10) Any additional support work needed requires a permit, i.e. haul roads and temporary detours.
11) Utility lines need to be coordinated with the permit.

The National Marine Fisheries Service strongly recommended selection of either Alternatives 4 or 5, as both avoid any wetland displacement. The Environmental Protection Agency agreed with National Marine Fisheries and in addition requested that the new air regulations that will be published in November be addressed.

The Virginia Division of Conservation Resources stated that an Erosion and Siltation Control Plan and Stormwater Statement for the selected alternative will be needed. Also, they requested additional analysis of park impacts. Finally, the Council on the Environment concurred with the Division of Conservation Resources.

All comments received at the Interagency Meeting have been addressed in the Final Environmental Assessment and are centered around the Selected Alternative.

D. PUBLIC INVOLVEMENT

During the development the of this project, the public has had opportunity for involvement and comment through two public information meetings. At these meetings, which were held on December 7, 1988 and April 17, 1989, the public was given a review of the project along with information concerning the scoping process. As a result of these meetings and other elements of the public involvement process that included two newsletters and a project "Hotline",

comments were received from 432 individuals regarding the project. Of these comments 408 supported the project, also 378 favored CBA No. 3 while 375 opposed CBA No. 5.

In addition, the public had an opportunity to review the project and provide comments at a Location Public Hearing held on May 6, 1993. Seventy individuals attended the meeting; 13 verbal comments, 229 written comments, and one petition was received for the record. Of the majority of those who provided comments, 197 supported Alternative No. 5 as presented at the Hearing.

Another component of public involvement was the development of the Clermont Avenue Task Force. The Task Force consisted of Alexandria citizens, community and civic leaders, and local government officials. Six Task Force meetings were held beginning October 1988 to ensure public input into the project.

V. REFERENCES

1) Traffic Forecasting and Analysis Report - June 1990. LBA. Prepared for Virginia Department of Transportation, Richmond, VA.

2) Water Quality and Ecology Technical Report - June 1991. LBA. Prepared for Virginia Department of Transportation, Richmond, VA.

3) Noise Technical Report - June 1991. LBA. Prepared for Virginia Department of Transportation, Richmond, VA.

4) Socioeconomics and Land Use Technical Report - March 1991. LBA. Prepared for Virginia Department of Transportation, Richmond, VA.

5) Air Quality Technical Report - June 1991. LBA. Prepared for Virginia Department of Transportation, Richmond, VA.

6) Preliminary Engineering Report - June 1990. LBA. Prepared for Virginia Department of Transportation, Richmond, VA.

APPENDIX I

OTHER PROPOSED IMPROVEMENTS

OTHER PROPOSED IMPROVEMENTS

In recognition of the growing traffic problems in Eisenhower Valley and the surrounding area, the Virginia Department of Transportation, the City of Alexandria, Fairfax County, regional planning agencies and local developers have programmed, planned or are studying several projects in addition to the Clermont Avenue Interchange and connector to Duke Street to relieve congestion and improve access in the study area.

I. Programmed Improvements

Programmed improvements are projects which have been approved by the appropriate jurisdiction, funded, and scheduled for construction.

- VDOT Project #0236-100-107; Route 236 Duke Street from Henry Street to Elizabeth Street: This project at the northeastern end of the study area widened Duke Street to four lanes for a distance of 0.6 miles. The project was completed in October 1990.

- VDOT Project #U000-100-109; Clermont Avenue/Richmond Fredericksburg & Potomac Railroad (RF&P) Underpass: This project, completed in December 1988, provided a four lane underpass at the RF&P Railroad.

- VDOT Project #0095-100-104; I-95 City of Alexandria Traffic Surveillance and Control System (I-395) to Woodrow Wilson Bridge: This system, completed in May 1990, was installed to monitor traffic through the use of detectors and closed circuit television, to control traffic flow through ramp metering, and to provide motorist advisories through variable message signs. This system is part of an overall Capital Beltway Traffic Management System.

- Fairfax County Project; South Van Dorn Street From Bent Willow to Franconia Road: Fairfax County is currently widening South Van Dorn Street to six lanes from Bent Willow south of I-95 to Franconia Road. This project was completed in 1990. Construction of temporary improvements to South Van Dorn from Bent Willow north to the I-95 Interchange is also being considered by the County.

- Fairfax County Project; Telegraph Road from Franconia Road to I-95: This County widening project, which has been completed, improved Telegraph Road from just south of Franconia Road to I-95. The project includes widening to six lanes, raised medians, directional islands, turning lanes, curbs, gutters and sidewalks.

- Washington Metropolitan Area Transit Authority Project; Van Dorn Street Station and Metrorail Yellow Line: The Washington Metropolitan Area Transit Authority (WMATA) has constructed a new Van Dorn Street Station just east of Van Dorn Street which extends transit rail service on the Yellow Line through the Eisenhower Valley.

II. Planned Improvements

Planned improvements are projects which do not have either approvals, funding, or scheduling.

- VDOT Project; Telegraph Road - Franconia Road to Route 1: This planned improvement would begin just south of Franconia Road, tying into the above noted Fairfax County Telegraph Road project, and would widen the existing two-lane roadway to four lanes south to Route 1 - a distance of approximately nine miles. This project is not currently scheduled by the Virginia Department of Transportation.

- Fairfax County Project; Franconia Road from Telegraph Road to Twain Intermediate School: The planned Franconia Road project would widen the roadway from two to four lanes between existing four-lane sections at Twain Intermediate School and Telegraph Road. This project is currently in preliminary design but has, to date, not been funded or scheduled for construction.

- Carr/Norfolk Southern Project - Private Developer; Mixed-Use Commercial/Residential Development: The planned Carr/Norfolk Southern Project located in the eastern Eisenhower Valley would fund or participate in the funding of several transportation improvements in the area including: (1) a two-lane frontage road on the northside of the Capital Beltway through the Route 1 and Telegraph Road Interchange, (2) Eisenhower Avenue extension through the development site, and (3) Holland Lane widening to four lanes. The planned development would also include a Transportation Management Plan in accordance with the City of Alexandria's Ordinance.

III. Improvement Studies

- VDOT Project #0095-96A-101, Capital Beltway Study - Route 495/395 to Maryland State Line: The Capital Beltway Study, begun in 1987, is a coordinated study being developed in conjunction with local jurisdiction and regional planning agencies including the city of Alexandria, Fairfax County, Arlington County, District of Columbia, Northern Virginia Transportation Commission, Council of Governments, State of Maryland National Park Service, Maryland and Virginia State Police and the U.S. Coast Guard. The study's objectives are to (1) identify Beltway improvement needs on a short-term and long-term basis, and (2) to develop and evaluate a full range of conceptual improvements which should be considered in order to alleviate existing, mid-term and long-term deficiencies. In the Clermont Avenue study area, several improvement concepts are addressed in the Phase II Draft Interim Report:

- improving the signage system for motorists, particularly travelers unfamiliar to the route or area;
- increasing capacity of the Capital Beltway by adding a fifth lane in each direction;
- designating High Occupancy Vehicle (HOV) lanes and/or truck restrictions in conjunction with five laning the Beltway;
- major reconstruction of the Van Dorn Interchange (see following Fairfax County Project);
- constructing a Slow Vehicle Lane from Shirley Highway to Van Dorn Street by utilizing the right shoulder;
- correcting unsatisfactory weaving distance at Telegraph Road and Pershing Avenue immediately north of the I-95 Telegraph Road Interchange;
- constructing a continuous auxiliary lane on I-95 from Telegraph Road to Route 1 on reinforced right shoulder.
- Fairfax County Bond Project, I-95 Van Dorn Interchange: Fairfax County is studying several alternate designs to widen South Van Dorn Street south of I-95 and to improve access to I-95. The project would include relocating Oakwood Drive, widening South Van Dorn Street from I-95 to Bent Willow, and altering access to I-95 by reconfiguring and adding ramps to the existing interchange. This project is in the feasibility study stage and has not been presented to the Federal Highway Administration for change of access approval at I-95.

These studies are concepts in the early development stage and therefore may be dropped from further consideration, modified significantly or carried forward to seek the necessary approvals and funding.