EXHIBIT NO. 1

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City of Alexandria, Virginia

MEMORANDUM

DATE: OCTOBER 8, 2002

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: PHILIP SUNDERLAND, CITY MANAGER

SUBJECT: THE EISENHOWER AVENUE-TO-DUKE STREET CONNECTOR

ISSUE: City Council consideration of (1) whether to proceed with a connector roadway between Eisenhower Avenue and Duke Street and, if so, (2) the location or locations for the connector that will be carried forward and further analyzed in the next phase of the process for constructing roadways of this nature in Virginia.

RECOMMENDATIONS: That City Council:

1. Receive this memorandum and the attached reports and materials, have a work session on the Eisenhower Avenue-to-Duke Street connector before the Wednesday, October 23, legislative meeting, conduct a public hearing on the connector on Tuesday, October 29, and decide at the Tuesday, November 12, legislative meeting (a) whether to proceed with a connector roadway and, if so, (b) the preferred location or preferred alternative locations for the connector; and

2. At the November 12 legislative meeting, adopt the recommendations that are set out at the end of this memorandum (pages 8-11), adopt the attached resolution that records those decisions (Attachment 2), and authorize the City Manager to forward the resolution to the Virginia Department of Transportation.

BACKGROUND:

The Eisenhower-to-Duke connector has been an issue facing the City for three decades. It first formally surfaced in 1973 when the City asked the federal and state governments to authorize construction of a new interchange on I-495 at Clermont Avenue. In 1975, the federal government rejected this request. In the late 1970s and early 1980s, the City addressed the serious flooding problems in Eisenhower Valley by constructing tunnels to channel Cameron Run to prevent the flooding which had made much of the land in the valley infeasible to develop.

In 1980, after updating the land use plan for Eisenhower Valley, the City again requested the construction of an interchange at Clermont Avenue, along with the extension of Clermont Avenue from Eisenhower Avenue, through the then Army-controlled land in Cameron Station, to

Duke Street. This request was approved by the federal government in 1984. By 1985 the construction of Eisenhower Avenue was completed, and the roadway was opened, making it possible to travel on Eisenhower Avenue directly from Van Dorn Street to Holland Lane.

In 1986, the City requested that the Eisenhower-to-Duke component of the now federally-approved interchange project be eliminated, and that the project terminate at Eisenhower Avenue. This request was not accepted by the federal government. In 1987, the City asked the Virginia Department of Transportation (VDOT) to proceed with the environmental analysis phase of the project process, with the understanding that, following the completion of this phase, decisions could be made regarding construction of different segments of the project. Along with this action, Council created a Clermont Interchange Task Force to facilitate citizen participation in the upcoming environmental process, and recommend positions that the City might take in the process.

In August 1992, VDOT released the "Draft Environmental Assessment--Clermont Interchange with Interstate 95." In May 1993, in Resolution 1644 (Attachment 1), Council approved construction of the Clermont Interchange, and it selected one of the alternative Eisenhower-to-Duke connectors identified in the draft assessment -- Alternative 5, a 0.61 mile connector between Eisenhower Avenue and the intersection of South Pickett Street and Edsall Road -- as the "Selected Alternative" for a connector roadway, and provided for its construction to occur after the construction of the Clermont Interchange.

The Final Environmental Assessment was released in November 1993. It provided for the Clermont Interchange project to be built in two phases: Phase I would include the construction of the interchange and the extension of Clermont Avenue to Eisenhower Avenue; Phase II would include the construction of a connector roadway from Eisenhower Avenue to Duke Street.

Construction of the Clermont Interchange began in 1996, and was completed in 1997, opening to traffic on August 1. Since then the City has approved a Coordinated Development District for Cameron Station (the site of the former Cameron Station military base), and very substantial residential, park and public facility construction has taken place at Cameron Station.[1]

In March 2001, following inquiries by VDOT as to the status of the Eisenhower-to-Duke connector, Council agreed to re-study the need and possible alternative locations for a connector. It established a nine-member ad hoc Task Force to re-examine the alternative locations and report back to Council approximately one year from the date of the first meeting of the Task Force.

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[1] In June 2000, the City broke ground for the new Ben Brenman Park, the Samuel W. Tucker Elementary School opened in the fall of 2000, and the new Armistead L. Boothe Park was dedicated in the fall of 2001. Land for these two parks was conveyed to the City by the Secretary of Interior. Prior to this conveyance, a portion of the land on the western side of Boothe Park had been reserved for the Alternative 5 right-of-way. There had not been a similar reservation in Ben Brenman Park prior to the conveyance of land for that park to the City.

(The resolution creating the Task Force and the accompanying docket memorandum are attached as Attachments 3 and 4, respectively.)

In April 2002, Council expanded the Task Force to 14 members and extended its term to October 15, 2002. The expanded Task Force was directed to continue consideration of the eight alternatives that had been identified by the original Task Force, to select its two top "build" alternatives and one top "no build" alternative no later than October 1, 2002, and to provide a report to Council as soon as possible thereafter. (The resolution revising the Task Force and the accompanying docket memorandum are attached as Attachments 5 and 6, respectively.)

Also attached to this memorandum are the report of the Task Force (Attachment 8), a report prepared by City staff on the connector which sets out staff's findings, conclusions and recommendations (Attachment 7), and a technical report on the connector prepared by the transportation engineering firm of PBS&J that has been working with the Task Force and staff for the past 18 months (Attachment 9).

DISCUSSION:

I.

The Task Force Report, and the Task Force's Conclusions and Recommendations

The Task Force, assisted by City Staff, went through a four-phase process to develop and evaluate alternative connector options. A consultant team was hired by the City to provide technical support and analysis.

In Phase I, the Task Force, City staff and the consultant team completed the data collection needed for the study.

In Phase II, the Task Force, working with staff and the consultant team, identified 14 connector alternatives for preliminary consideration. A review and screening process resulted in the selection of four "build" alternates (Alternates A, B, C and D) for detailed study and consideration, along with a "No Build" alternate. Subsequently, variations to two alternates increased the number of build alternates to six (Alternates A1, A2, B1, B2, C and D), and an additional "No Build with Improvements" alternate was introduced. The No Build with Improvements includes significant capacity improvements on existing roadways, but not a connector roadway on a new alignment. The eight alternates considered by the Task Force are described below.

> **No Build Alternate** is the existing roadway network with no new roadways or improvements to existing roadways other than those included in the Commonwealth Transportation Board's current *Six-Year Program*. The more significant improvements

near the study location that are included in the base 2020 network are the reconstruction of Springfield Interchange and replacement of Woodrow Wilson Bridge.

Alternate A1 is the locally preferred alternate from the Environmental Assessment conducted in 1993, and is the location endorsed by Council in Resolution 1644. Located just east of Van Dorn Street, this is the westernmost build alternate. Alternate A1 begins on Eisenhower Avenue at the city impound lot, extends north, crossing over the railroad on bridge structure and ends at the entrance to Cameron Station on South Pickett Street. This alternate is mostly on bridge structure, requires relocation of the South Pickett Street entrance to Cameron Station, and impacts a portion of Armistead L. Boothe Park.

Alternate A2 is similar to A1, except the alignment is shifted northwesterly to eliminate impact to Armistead L. Boothe Park and avoid relocation of the entrance to Cameron Station. However, this alternate increases impacts to existing commercial properties on South Pickett Street.

Alternate B1 is located in the central portion of Eisenhower Valley. It begins at the existing intersection of Eisenhower and Clermont Avenues, extends north to bridge over the railroad, remains elevated on a bridge structure along the eastern edge of Ben Brenman Park, and connects to the existing Duke Street flyover, which provides access to the park from Duke Street. This alternate impacts Ben Brenman Park and introduces a new signalized intersection on Duke Street.

Alternate B2 is similar to B1, except it contains a flyover ramp to Wheeler Avenue to bring northbound connector traffic to eastbound Duke Street. This ramp eliminates the need for a new traffic signal on Duke Street as required for Alternate B1.

Alternate C begins at the intersection of Eisenhower Avenue and Bluestone Road, extends north to bridge over the railroad and connects to Wheeler Avenue at a new at-grade intersection. This alternate includes a new connection into the Metro service and inspection yard.

Alternate D is the easternmost connector alternate. This alternate begins on Eisenhower Avenue just east of the Metro service and inspection yard, extends north to bridge over the railroad and Metro bridge, and connects to Duke Street at a new at-grade intersection at Roth Street, just east of Cambridge Road. This alignment is mostly on bridge structure.

No Build with Improvements Alternate was developed to evaluate significant improvements to existing roadways as an alternative to building a connector on new alignment. Improvements included in this alternate are:

1. A grade-separated urban interchange at Van Dorn and South Pickett
2. A grade-separated urban interchange at Van Dorn and Edsall
3. Frontage roads along Van Dorn from Eisenhower to north of Edsall
4. At-grade intersection improvements at Van Dorn and Eisenhower
5. At-grade intersection improvements at Van Dorn and Duke
6. An additional eastbound lane on Duke between North Quaker and the existing lane onto southbound Telegraph
7. An additional southbound lane on Telegraph from Duke to I-95/495

In Phase III, the Task Force initially developed criteria in the areas of transportation, public safety response, socio-economic effects and neighborhood impacts to be used for an evaluation matrix. The expanded Task Force broadened the criteria by putting more emphasis on neighborhood impacts and socio-economic factors. The matrix, referred to as "The Summary Matrix" (attached to the Task Force report (Attachment 8)), depicts the relative benefits and impacts of each of the six build and 2 no-build alternates.

In Phase IV, the Task Force reviewed the alternates and determined a position to forward to Council. On September 18, the Task Force voted on the alternatives. The table below summarizes the results of the voting. The voting record of individual Task Force members, along with other information relating to the work of the Task Force, is included in the Task Force Report.

Table: Vote Results

No Build	7	No Build with Imp.	7
No Build	9	B1	5
No Build With Imp.	9	B1	5
No Build	9	C	5
No Build With Imp.	9	C	5
No Build	9	D	5
No Build With Imp.	11	D	3

II.

The Staff Report and Staff's Conclusions and Recommendations

The Eisenhower-to-Duke connector has been a subject of debate, contention and controversy within Alexandria for almost three decades. Staff believe it is time for the City, one way or another, to put an end to this longstanding situation by reaching a final decision on the question of a connector and, having made the decision, whatever it is, to stay with it and move on.

The construction of new City roadways and the expansion of the capacity of the City's roadway network evokes differing, often strongly-held views.

On one hand, there is the belief that the expanded roadway capacity will enable new "cut-through" traffic to enter Alexandria which, in substantial part, will proceed to wind its way through the City using local residential streets. There also is the belief that the expanded capacity, and the new vehicles it brings, will result in more congestion on the City's existing arterial and collector roadways than would be the case without the new capacity. In the Eisenhower-to-Duke connector context, the belief is that a connector roadway will attract thousands of new vehicles into the City (i.e., vehicles which would not enter the City were there not a connector), that these will be "external-to-Alexandria" vehicles (i.e., vehicles having both an origin and a destination outside of Alexandria), and that a substantial number of these new "external-to-Alexandria" vehicles will work their way through the City using, on occasion, the residential streets (particularly, those north of Duke Street).

On the other hand, there is the belief that an Eisenhower-to-Duke connector will actually improve traffic conditions within the City's roadway network, including along major arterial and collector roadways, and will not have the kind or degree of impacts associated with the beliefs described in the previous paragraph. Also, there is a belief that the long-term economic soundness of Alexandria is dependent, in significant part, upon the City's transportation system, including its roadway network. With respect to the Eisenhower-to-Duke connector, it is believed that the ultimate development potential of Eisenhower Valley is dependent, again in significant part, on the ability of the City's roadway network to carry vehicles into and out of the Valley, and that the current network (with only two roadways, Van Dorn and Telegraph, connecting Eisenhower and Duke in a 3.5 miles stretch along Eisenhower) is inadequate. Also, there is a belief that an additional roadway connecting Eisenhower and Duke will reduce the time it takes fire, emergency medical and police vehicles and personnel to reach critical incidents occurring in Eisenhower Valley.

In making the decision on the Eisenhower-to-Duke connector, a reasonable and appropriate weighing needs to be made among a number of important, sometimes competing factors, many of which address the differing "beliefs" summarized above. This weighing is necessary in order to reach a decision that best serves the City and the public interest in the long-term. These evaluation factors address:

- the traffic benefits and harms associated with the alternative connectors;
- the alternative connectors' effect on public safety response times;
- the alternatives' impacts on nearby residential and commercial properties and their occupants, on parks, and on environmentally-sensitive and cultural resources; and
- the alternatives' effects on the City economy, along with their costs of construction (including the amount and nature of land needed to be acquired for right-of-way).[2]

The staff report (Attachment 7) addresses the two major "connector" questions identified at the outset of this memorandum: first, whether an additional connector roadway between Eisenhower Avenue and Duke Street should be constructed; and, if so, second, what is the most appropriate route or location for this roadway. Utilizing information and analysis set out in the PBS&J technical report (Attachment 9), the staff report undertakes a weighing of the evaluation factors for all the connector build alternatives, and for the "No Build" and "No Build with Improvements" alternatives, and reaches a number of conclusions and recommendations that are set out below. I urge you to read the staff report for a full explanation of the reasons and analysis that forms the foundation of these conclusions and recommendations.

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[2] We have not included among these factors the possibility that the City will be required to repay some or all of the monies incurred by state and federal governments in the design and construction of the Clermont Interchange, in the event the City were to decide not to proceed with a connector roadway between Eisenhower Avenue and Duke Street. (Repayment figures have ranged from $2 million to $14 million.) Recent correspondence from the VDOT indicates that this requirement may not be triggered as to the repayment of state monies, so long as the process used to reach a no-connector decision was open, objective and thorough. A final decision on the City's obligation to repay monies to the state would be made by the Commonwealth Transportation Board. For purposes of our analysis and this memorandum, we have assumed that the federal position on the City's repayment obligation will parallel the state's.

A. Should a New Connector Roadway Between Eisenhower Avenue and Duke Street be Constructed

In staff's professional view, the City should move forward with an additional roadway connection between Eisenhower Avenue and Duke Street because of the following conclusions (which are explained in detail in the staff report[3]):

1. **A connector will improve traffic movement on existing roadways (Van Dorn Street, Telegraph Road, Duke Street and Eisenhower Avenue).** This will in turn:
   - Make travel in the area easier for Alexandrians;
   - Reduce traffic congestion and delay in the Eisenhower Valley area; and
   - Result in less through traffic in the neighborhoods (when compared with the amount of such traffic projected to occur in the future without a connector), especially when combined with neighborhood traffic mitigation/calming measures.

2. **A connector improves connectivity between two major arterials, Eisenhower Avenue and Duke Street**:
   - It provides a needed additional point of access to and egress from Eisenhower Valley;
   - It helps create a roadway grid system that will increase the efficiency of existing roadways; and
   - Connectors between two parallel arterials typically occur approximately one mile apart; in this case, the distance between the Van Dorn and Telegraph connectors is 3.5 miles.

3. **A connector enhances public safety in the area**:
   - It provides additional routing options for responding police, fire and emergency medical service (EMS) vehicles and personnel;
   - It reduces response time for units dispatched to and from Eisenhower Valley;
   - It eliminates the need for responding units to use non-roadway points of access and egress; and
   - Locating new public safety facilities in Eisenhower Valley will help the problem, but not solve it. Mutual-aid needs will continue to necessitate travel to and from the Valley, fire units in the Valley will need to provide

[3] Most of the connector's effects on traffic, which are described in the staff and technical reports, and summarized below, are derived from a comparison of traffic conditions at different locations in the City that are projected to occur in 2020 if a connector is not built, with traffic conditions at the same locations that are projected to occur in 2020 if a connector is built.

back-up response for incidents outside the valley, and EMS units must be able to efficiently transport patients from the Valley to area hospitals.

4. **A connector potentially protects residential neighborhoods by encouraging vehicles to remain on the major roadways:**
   - Traffic intrusion into residential neighborhoods results primarily from delay and congestion on the major arterial and collector roadways; and
   - A connector reduces delay and congestion on such major roadways and, in many cases, the potential for "cut-through" traffic on residential streets (when compared with the amount of such traffic that is projected in the future without a connector).

5. **A connector relieves current and future congestion at the Telegraph Road and Van Dorn Street interchanges on I-495, helping to avoid major improvements to these interchanges:**
   - Use of the Clermont interchange is increased significantly by a connector; and
   - Demand at the Telegraph Road and Van Dorn Street interchanges is substantially reduced by a connector.

6. **A connector supports the economic vitality of Alexandria by responding to transportation needs in Eisenhower Valley:**
   - An additional access point is created for Eisenhower Valley;
   - Movement between Eisenhower Valley and the rest of Alexandria is improved and increased; and
   - Residential, employment and social/recreational opportunities are more accessible.

7. **A connector does not attract a significant amount of new traffic to Alexandria roadways; nor does it increase significantly the amount of traffic "cutting through" Alexandria.**

For these reasons, in response to the first major question, staff make the following recommendations:

1. **That the "No Build" alternate not be selected.** The "No Build" option ignores, and fails to address, Alexandria's current or future transportation needs.

2. **That the "No Build with Improvements" alternate not be selected.** This alternate calls for major infrastructure investments (on the order of $55 million) mostly in a heavily traveled corridor (Van Dorn Street) that will not materially benefit Eisenhower Valley, the City or, frankly, persons who live or work in Alexandria. The reality of this alternate is the conversion of Van Dorn Street to

Van Dorn Freeway. With multiple grade-separated interchanges, Van Dorn will become a major Beltway spur facilitating the travel of non-Alexandria commuters into and through Alexandria.

3. **That a new roadway connecting the arterials of Eisenhower Avenue and Duke Street be constructed.**

B. Where Should the New Eisenhower-to-Duke Connector Roadway be Located

As to the most appropriate location for the new connector, staff make the following recommendations:

1. **That Alternate B1** -- running from the intersection of Eisenhower Avenue and Clermont Avenue, north over the Norfolk Southern railway tracks, through the eastern edge of Ben Brenman Park, to the interchange on Duke Street that served the old Cameron Station Army facility -- **be selected as the preferred build alternate**. As explained in the staff report, this alternate:
   - Provides the best overall traffic service (as measured, in part, by the amount of traffic it pulls from Van Dorn and Telegraph, and by intersection delays and queue lengths, in 2020);
   - Is among the highest ranked alternates for overall benefits and impacts;
   - Materially improves public safety accessibility and response times; and
   - Creates a better roadway grid system being located most centrally between Telegraph and Van Dorn.

   However, Alternative B1 has significant impacts on, and within, Ben Brenman Park. It will require conversion of approximately 3.5 acres of park activity area to roadway use, and will necessitate the reconfiguration and/or relocation of some park activities. Although some of these impacts can potentially be mitigated with the acquisition of additional property for park expansion and/or the relocation of some park activities, this may not be sufficient to secure the necessary state and federal approvals of Alternate B1. As a result, staff make the following additional recommendation.

2. **That Alternate D** -- running from a point on Eisenhower Avenue just to the east of the Metro service yard, north over the Metro, CSX and Norfolk Southern railway tracks, and over the right-of-way of Roth Street (extended), to a point near the intersection of Roth and Colvin streets -- **be selected as a back-up, or "second choice," build alternate**. Because a Eisenhower-to-Duke connector roadway is needed and because Alternate B1 may prove, during further analysis, not to be environmentally feasible, staff recommend that Alternate D be selected as a backup build alternate.

3. That staff be authorized to work with VDOT to begin the next phase of this project, which is the preparation of the necessary environmental documents and the securing of all required approvals for the selected alternate. During this phase, analysis will be made of different connector designs for the selected alternate (including, for instance, making the roadway two or three lanes, rather than four, and utilizing a reversible lane) and of the different measures that can be taken to mitigate the roadway's adverse impacts (e.g., on parkland, environmental resources and nearby residences).

FISCAL IMPACT: The estimated cost of undertaking the required environmental analysis and preparing the associated documents is $750,000. Most of the funding for these costs would come from state urban funds; the City would be required to contribute 2 to 5 percent of the costs. Based on estimates prepared by PBS&J, the construction cost of Alternate B1, in 2002 dollars, is $33.5 million; the cost of Alternative D is $24.8 million. Most of the funding for the design and construction of a connector would come from state urban funds (and possibly from revenue raised through the now-proposed half cent increase in the sales tax in Northern Virginia); the City's contribution would be on the order of 2 to 5 percent of total costs. The City's current Capital Improvement Program does not provide funds for an Eisenhower-to-Duke connector; the CIP would need to be amended to provide for the required local match.

ATTACHMENTS:

1. Resolution 1644, adopted May 25, 1993
2. Proposed Resolution
3. Resolution 1995, adopted March 13, 2001
4. Docket Memorandum #15, March 13, 2001 City Council Meeting
5. Resolution 2024, adopted April 23, 2002
6. Docket Memorandum #20, April 23, 2002 City Council Meeting
7. Eisenhower Avenue-to-Duke Street Connector City Staff Report
8. Eisenhower Avenue-to-Duke Street Connector Task Force Report
9. Eisenhower Avenue-to-Duke Street Connector PBS&J Technical Report
10. Summary of Public Comments on March 27, 2002

STAFF:

Richard Baier, P.E., Director, Transportation and Environmental Services
Thomas H. Culpepper, P.E., Deputy Director, Transportation and Environmental Services

Attachment 1

CLERMONT AVENUE INTERCHANGE AND CONNECTION
BETWEEN INTERSTATE 95 AND DUKE STREET
PROJECT U000-100-109

RESOLUTION NO. 1644

WHEREAS, a Location Public Hearing was conducted on May 6, 1993, in the City of Alexandria by representatives of the Commonwealth of Virginia, Department of Transportation, after due and proper notice, for the purpose of considering the proposed location of the Clermont Avenue Interchange and connection between Interstate 95 and Duke Street, Project U000-100-109, PE103 in the City of Alexandria and Fairfax County, at which hearing aerial photographs, drawings and other pertinent information were made available for public inspection in accordance with State and Federal requirements; and

WHEREAS, all persons and parties in attendance were afforded full opportunity to participate in said public hearing; and

WHEREAS, representatives of the City of Alexandria were present and participated in said hearing; and

WHEREAS, the Council had previously requested the Virginia Department of Transportation to program this project; and

WHEREAS, the Federal Highway Administration (FHWA) is required by Federal law to establish logical project termini for environmental evaluation purposes; and

WHEREAS, the study established as logical termini Interstate 95 and Duke Street and can be considered as a two-phase project: Phase I consisting of the interchange with I-95, a connection to Eisenhower Avenue, and a bikeway connection between Eisenhower Avenue and Clermont Avenue in Fairfax County, and Phase II consisting of a connector from Eisenhower Avenue to Duke Street; and

WHEREAS, the Alexandria City Council recognizes FHWA's legal obligation to evaluate project environmental impacts between logical termini; and

WHEREAS, Section 33.1-44 of the Code of Virginia requires a local commitment of matching funds for construction urban street projects before a project is allowed to proceed; and

WHEREAS, the Virginia 2010 Statewide Highway Plan identifies a project corridor for improvements from I-95 to Duke Street in the City of Alexandria; and

WHEREAS, the Alexandria City Council understands that additional study of the transportation infrastructure for Phase II may be required before it is constructed; and

WHEREAS, the Council has considered all such matters;

NOW, THEREFORE, BE IT RESOLVED, that City Council hereby approves the location of the proposed project as presented at the public hearing and endorses Line 5 as a part of Phase II but recognizes that additional study of Phase II may be needed based on the operational experience of Phase I, and

That the Council hereby commits the City funds that are necessary to match the State and Federal shares for constructing Phase I of the project.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Alexandria, Virginia, to be affixed this 25th day of May, 1993.

ADOPTED: May 25, 1993

Patricia S. Ticer

PATRICIA S. TICER MAYOR

ATTEST:

Beverly I. Jett

Beverly I. Jett, CMC City Clerk

Attachment 2

RESOLUTION NO._____

WHEREAS, two Citizen Public Information Meetings were conducted on September 26, 2001, and February 27, 2002, within the City of Alexandria, by the Transportation and Environmental Services Department, in conjunction with The Virginia Department of Transportation (VDOT) and a City Council-appointed Task Force, for the purpose of considering alternative corridor alignments for an Eisenhower Avenue-To-Duke Street Connector (VDOT project U000-100-109, PE103), and at which meetings aerial photographs, drawings, exhibits and other pertinent information were made available for public inspection in accordance with state and federal practices and procedures; and

WHEREAS, a Council-appointed Task Force studied alternative corridor alignments for an Eisenhower Avenue-to-Duke Street Connector over an 18 month period, and, at the conclusion of its work, did not recommend any "build" alignments to City Council and split evenly between the construction of no infrastructure improvements at all between Eisenhower Avenue and Duke Street and construction of certain improvements along Van Dorn and Duke Streets only;

WHEREAS, during the 18-month life of the Task Force, 13 meetings of the Task Force were held, and City staff made over 15 presentations on the Eisenhower Avenue-to-Duke Street Connector to civic, community, business and other organizations;

WHEREAS, a public hearing was conducted by the City Council on October 29, 2002, on the alternative corridor alignments for an Eisenhower Avenue-to-Duke Street Connector;

WHEREAS, the City has an ever increasing set of mobility needs, and even with the continued provision of multiple transportation options and solutions, is faced with congestion on its major thoroughfares;

WHEREAS, the City has constrained corridor capacity on Duke Street, Van Dorn Street, and Telegraph Road because of the very limited connection roadways between Duke Street and Eisenhower Avenue;

WHEREAS, keeping through-traffic on the City's major roadways and out of residential neighborhoods, and providing public safety-related services for all City residents and businesses are of vital importance to the City;

WHEREAS, an environmental assessment conducted in the early 1990s on a project involving the construction of the Clermont Interchange on Interstate 495/95 and a connector roadway between Eisenhower Avenue and Duke Street identified the project as occurring in two phases, with phase one consisting of the interchange construction and its connection to Eisenhower Avenue, and phase two consisting of a connector roadway from Eisenhower Avenue to Duke Street;

WHEREAS, City Council understands that additional study of Phase II roadway locations is required before a connector may be constructed; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That the endorsement in Resolution No. 1644, adopted by City Council on May 25, 1993, of an Eisenhower Avenue-to-Duke Street connector via South Pickett Street ("Alternate 5") be rescinded;

2. That City staff be directed to work with the appropriate state and federal agencies in the preparation of the required environmental evaluation of a connector roadway between Eisenhower Avenue and Duke Street, and to report to Council on the results of that evaluation no later than June 30, 2004;

3. That Alternate B1, as described in the October 8, 2002, City staff report on the "Eisenhower Avenue-To-Duke Street Connector," is endorsed as the City's locally preferred connector alternate, to be considered in this environmental evaluation process;

4. That Alternate D, as described in the above-referenced October 8, 2002, staff report, is endorsed as the City's back-up locally preferred connector alternate, to be pursued in the event that Alternate B1 is found to be infeasible or unacceptable during the environmental evaluation process; and

5. That the City Manager forward this resolution to VDOT, along with a copy of the above-referenced October 8, 2002, staff report.

ADOPTED: November 12, 2002

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KERRY J. DONLEY MAYOR

ATTEST:

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Beverly I. Jett, CMC City Clerk

Attachment 3

RESOLUTION NO. 1995

WHEREAS, City Council wishes to establish a task force to reexamine the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That there is hereby established an *ad hoc* task force known as the Eisenhower Avenue-to-Duke Street Connector Task Force.

2. That the task force shall consist of nine members as follows:

2 Members of City Council

2 Alexandria business owners, or representatives of businesses, at least one of whom shall represent a business interest located in the Eisenhower Valley.

3 citizens residing generally in the area encompassing the following citizen groups:

Cameron Station
Holmes Run Committee
Wakefield Tarleton Civic Association
Strawberry Hill Civic Association
Summer's Grove
Townes of Cameron Park

2 citizens at-large

3. That the Mayor shall appoint the two members of City Council, and select a convenor, and the City Council shall appoint the citizen members of the task force.

4. That staff assistance shall be provided to the task force by the City's Department of Transportation and Environmental Services.

5. That the Virginia Department of Transportation be invited to provide technical assistance to the task force.

6. That the functions of the task force shall be:

   a. Review Alternate 5 endorsed by City Council in Resolution No. 1644 adopted by City Council on May 25, 1993.

b. Review additional, alternative alignments to Duke Street that may be feasible between Telegraph Road and South Van Dorn Street.

c. Review a no-build alternative.

d. Analyze each of the above alternatives from an economic development, environmental, traffic, neighborhood impact and financial standpoint and recommend to the City Council the best alternative to pursue.

e. Prepare for City Council a final report approximately one year from the date of the first meeting of the task force.

ADOPTED: March 13, 2001

KERRY J. DONLEY MAYOR

ATTEST:

Beverly I. Jett, CMC City Clerk

Attachment 4

REVISED VERSION AS OF 3-12-01
See Changes Identified in Redline

City of Alexandria, Virginia

15
3-13-01

MEMORANDUM

DATE: MARCH 12, 2001

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: PHILIP SUNDERLAND, CITY MANAGER PS

SUBJECT: RE-STUDY OF THE ALTERNATIVES FOR AN EISENHOWER AVENUE-TO-DUKE STREET CONNECTOR

ISSUE: Re-study of the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project.

RECOMMENDATIONS: That City Council:

(1) Approve the City proceeding with its own re-study of the Eisenhower Avenue-to-Duke Street Connector (Phase II of the Clermont Interchange Project) using City Urban Transportation funds;

(2) Adopt the attached resolution (Attachment 1) creating an *ad hoc* Eisenhower Avenue-to-Duke Street Connector Task Force to review the proposed alignment (Alternative 5) for the Eisenhower Avenue-to-Duke Street connector that was endorsed by City Council in 1993 and to explore other feasible alternative connections between Telegraph Road and Van Dorn Street, as well as a no-build alternative, and to recommend to City Council the most desirable alternative; and

(3) Adopt the attached resolution (Attachment 2) in which the City: (a) requests the Virginia Department of Transportation (VDOT) to establish an urban system highway project for the Eisenhower Avenue-to-Duke Street connector; (b) states that the City agrees to pay the City's share of the costs associated with the Eisenhower Avenue-to-Duke Street project, if built; and (c) agrees that, should the City decide to cancel the project, it would reimburse VDOT for the total costs expended by VDOT for Phase II of the Eisenhower Avenue-to-Duke Street connector project up to the date that it is notified of the project's cancellation by the City.

BACKGROUND: Improving access to and from, and along, Eisenhower Valley has been one of the City's transportation priorities since the early 1970s, when there were only two major access points to the valley, South Van Dorn Street and Telegraph Road. In the late 1970s and early 1980s the City addressed the serious flooding problems in Eisenhower Valley by constructing tunnels to channel Cameron Run and prevent the flooding which had made much of the land in the valley infeasible to

develop. By 1985 the construction of Eisenhower Avenue was completed and the roadway was opened, making it possible to travel directly from Van Dorn Street to Holland Lane. Opening complete access to the Eisenhower Valley also involved construction of an interchange at the beltway.

In 1973, City Council passed a resolution requesting VDOT to construct an interchange at I-95 and Clermont Avenue to provide an adequate transportation system for the growing development in the area. In 1980, with the adoption of the Cameron Run Valley Study, City Council again passed a resolution requesting an interchange at I-95 and Clermont Avenue, and an extension of Clermont Avenue from Eisenhower Avenue to Duke Street.

In 1984, the Federal Highway Administration (FHWA) approved an additional access point on I-95 for the construction of the Clermont Interchange, as well as improvements to extend and connect Clermont Avenue to Duke Street. Council had requested that the Clermont to Duke connector be removed from this FHWA approved project, but the National Environmental Policy Act required that the Environmental Impact Statement (EIS) address all aspects of the approved project.

In 1987, the City asked VDOT to identify transportation objectives for the project area, to design the public participation process, to identify major issues to be addressed in the EIS, and to develop a timetable. In May 1987, City Council approved Resolution No. 1237 creating the Clermont Interchange Task Force to: a) serve as the evaluating and coordinating mechanism among the residents, business community, Cameron Station and the City; b) facilitate citizen participation in the EIS process; c) formulate and recommend positions the City may take in the EIS process, including participating in the design and scope of the draft EIS and formulating recommendations the City might make in commenting on the draft EIS, including comments on the proposed alignments and the "no build" option. The Task Force consisted of two members of City Council as co-chairs (initially Councilwoman Pepper and Councilman Calhoun, who was replaced by then Councilman Donley), 10 citizen members, a representative from Cameron Station, and City staff.

In 1988,VDOT began preparation of the EIS for the construction of the Clermont Interchange and a possible connector from Eisenhower Avenue to Duke Street. The first public information meeting was held in December 1988. A list of initial build alternatives was developed and refined, and a public information meeting and public hearing were held in 1989. The original plan was to have the Draft and Final Environmental Impact Statements completed in the summer and fall of 1989, respectively. However, it was not until August 1992 that VDOT released the Draft Environmental Assessment--Clermont Interchange with Interstate 95, and the Final Environmental Assessment was released in November 1993. Environmental assessments, rather than environmental impact statements, were prepared because the FWHA had determined that assessments were appropriate because of the limited impacts of the project.

The Draft Environmental Assessment included a review of 15 preliminary Eisenhower Avenue-to-Duke Street connector alternatives (Attachment 3), and a no-build option. Each alternative was evaluated using three screening criteria: 1) improve access to Eisenhower Valley from I-95 and Duke

Street; 2) have the potential to relieve congestion on the Telegraph Road and Van Dorn Interchanges; and 3) have the potential to relieve congestion on existing roadways. A number of these alternatives were eventually removed from consideration since they did not meet the screening criteria, leaving five connector alternatives (Attachment 4) which were included in the Final Environmental Assessment, with VDOT choosing Alternative 5 as its "Selected Alternative" for the connector between Eisenhower Avenue and Duke Street. Alternative 5 is a .61 mile four-lane connector road between Eisenhower Avenue and South Pickett Street at the South Pickett Street/Edsall Road intersection (see Attachment 4).

The final environmental assessment included reference to constructing the project in two phases: Phase I would include the construction of the Clermont Interchange and the extension of Clermont Avenue to Eisenhower Avenue, and Phase II would include the construction of a connector roadway from Eisenhower Avenue to Duke Street.

On May 25, 1993, City Council adopted Resolution No. 1644 (Attachment 5) which was supported by the Clermont Interchange Task Force, VDOT and FHWA and which: (1) endorsed the location of the Clermont Interchange Phase I; (2) endorsed a connector from Eisenhower Avenue to Duke Street Phase II via South Pickett Street (Alternate 5) at a future date after additional study of the transportation infrastructure; and (3) included a bike trail between Eisenhower Avenue and Clermont Avenue in Fairfax County. The City supported the Clermont Interchange because it provided traffic relief for the overburdened Van Dorn and Telegraph Road interchanges, served large volumes of traffic in the Duke Street corridor by providing direct access to I-95, and supported the commercial and industrial growth occurring along Eisenhower Avenue.

Construction of the Clermont Interchange began in 1996. The interchange was completed in 1997, opening to traffic on August 1. Since then the City has approved a Coordinated Development District (CDD) for Cameron Station (the site of the former Cameron Station military base) where approximately one-third of the more than 2,100 dwelling units have been constructed and where approximately 15,000 square feet of neighborhood retail will be located. In June 2000, the City broke ground for the new Ben Brenman Park. The new Samuel W. Tucker Elementary School opened in the Fall of 2000.

The plans for Cameron Station show a portion of the land on the western side of Armistead L. Boothe Park reserved for Alternative 5. The reservation of this right-of-way easement was done as part of the process to transfer 62 acres of land from the U.S. Department of the Interior-National Park Service to the City to be used for Ben Brenman Park and Armistead L. Boothe Park. It should be noted that if Alternative 3, located on the eastern side of Ben Brenman Park (see Attachment 4), were to be the preferred route for an Eisenhower-to-Duke connector, it would require U.S. Department of Interior-National Park Service approval to use land from Ben Brenman Park for the connector right-of-way in exchange for releasing the right-of-way now reserved through Armistead L. Boothe Park.

DISCUSSION: Last summer, VDOT contacted the City to determine when the City would be going forward with Phase II of the Clermont Interchange Project, the connection between Eisenhower Avenue and Duke Street. VDOT had programmed $8.4 million for the design and construction of Phase II.

At Council's 2000 fall retreat, staff reviewed the background of the Clermont Interchange Project and recommended that the City engage in a re-study of Phase II before proceeding any further with this project. The study would review current land uses, including the redeveloped Cameron Station, the new school and the newly developed Ben Brenman and Armistead L. Boothe Parks. It would also examine the proposed connection (Alternative 5) endorsed by City Council in 1993, the traffic benefits produced by an Eisenhower-to-Duke connection, alternative road connections to Duke Street that may be feasible between Telegraph Road and South Van Dorn Street, as well as a no-build option, and would make a recommendation to City Council on the best alternative for the City.

At the retreat, staff also informed City Council that, according to VDOT, if Council ultimately decided not to build a connector, the City would be required to repay VDOT the monies it has already spent in Phase I for engineering, design and construction of the Clermont Interchange. This is based on the commitment Council made in Resolution No.1644 (Attachment 5) to the two phase construction project, the interchange and the connector. According to VDOT, the amount of the repayment for Phase I could be anywhere from $2 million to $11.5 million, depending upon a negotiated settlement between the City and VDOT. The final amount would be taken from City Urban Transportation funds. Obviously, this has a significant financial impact that will require serious study and discussion before we determine the final outcome.

Our study will need to take into consideration a number of factors including how to improve access to and from the Eisenhower Valley. The valley has been and continues to be viewed by the City and the business community as a prime location for economic development. The degree to which vehicles can move in and out of the Valley has a direct bearing on the success of our economic development efforts.

While we have improved access with the opening of the Clermont Interchange, and will have additional improvements with the Mill Road connection to the Beltway as part of the Woodrow Wilson Bridge Replacement Project, we still need to address access to and from the middle of the Valley to its western edge, where the only ingress and egress is by Telegraph Road on the east and South Van Dorn Street 3.2 miles to the west. Generally, in an urban area, connector roads between two parallel thoroughfares, like Duke Street and Eisenhower Avenue, occur at points closer than 3.2 miles.

In addition, the number of connectors between two thoroughfares plays a significant role in the efficient movement of traffic along the thoroughfares themselves and through their intersections. In this case, Eisenhower Avenue and Duke Street are not able to function efficiently, as traffic is forced to use either Van Dorn Street or Telegraph Road, which are heavily traveled in the a.m. and p.m. rush hours and are impacted by conditions on the Beltway and the Wilson Bridge. This results

in a substandard Level of Service (E or F) at the intersections with Van Dorn Street and Telegraph Road during peak hours.

Without another connector roadway to relieve the pressure, substantial improvements would be required at the Van Dorn Street and Telegraph Road intersections to move traffic through these intersections at an acceptable level of service. Examples could include right-of way acquisition at Van Dorn Street and Eisenhower Avenue, as well as at Van Dorn Street and Duke Street, to facilitate dual right and left turn lanes, additional through lanes or separated grade interchanges along Van Dorn Street.

Traffic on our arterial roadways is increasing at the rate of 3 to 4 % a year, and will continue to do so regardless of whether the City chooses the build or no build option for the connector road. In addition, projects such as the proposed Franconia/Van Dorn separated grade interchange in Fairfax County will put additional pressure on Alexandria's overburdened arterial network along Van Dorn Street and at its intersecting streets.

To accomplish the proposed study, I am recommending that City Council adopt the attached Resolution (Attachment 1) that establishes an *ad hoc* Eisenhower Avenue-to-Duke Street Connector Task Force composed of the following nine members:

- Two Council Members appointed by the Mayor
- One representative from each of the following organizations:
  - Eisenhower Partnership
  - Alexandria Chamber of Commerce
- ~~Two~~ Three citizens representing citizen groups as follows:
  - One citizen representing Cameron Station
  - ~~One citizen representing one of~~ Two citizens from among the following citizen groups:
    - Holmes Run Committee
    - Wakefield Tarleton Civic Association
    - Strawberry Hill Civic Association
    - Summer's Grove
    - Townes of Cameron Park
- Two citizens at large

The Task Force, with the assistance of a consultant hired by the City, would review Alternative 5 for the Eisenhower Avenue-to-Duke Street connector roadway, as endorsed in Resolution No. 1644; explore other feasible alternatives between Telegraph Road and Van Dorn Street and a no-build option; and recommend to City Council the best course of action for the City. The final report of the Task Force would be due approximately one year from the date of the first task force meeting.

Due to the importance of this issue, I am proposing that the City, rather than VDOT, undertake the study, which means that we would be responsible for its cost, currently estimated at $100,000. The $100,000 would come from the City's Urban Transportation funds. If VDOT undertakes the study, it could not begin the process until August with an expected completion date of one year. In addition, the City could engage the services of one of its own engineer of record consultants. The consultant would then be directly responsible to the City. The consultant would be tasked to analyze alternative alignments and evaluate their quality of life impacts on neighborhoods and the environment, as well as their economic development, traffic and financial impacts. VDOT would still participate in the study, providing information and data which are relevant to the work of the task force.

Because of state policy changes related to construction allocation procedures, the City must adopt the attached resolution (Attachment 2) requesting VDOT to program the Eisenhower-to-Duke connector as a new "urban system highway project." This policy change reduces the City's required match for project costs from a 5% to a 2% share. This means that the state would commit to pay 98% of the project cost if the City decided to construct a connector, and the City would commit to paying 2%. However, the City would have to reimburse VDOT for any funds VDOT expends for an Eisenhower-to-Duke connector if work began and the City decided to cancel the project. This arrangement relates only to the construction of the Eisenhower-to-Duke connector. The reimbursement issue VDOT has raised regarding the repayment of funds for the Phase I construction of the Clermont Interchange, should the City decide not to build the Eisenhower-to-Duke connector, is a separate matter.

FISCAL IMPACT: The cost to do the re-study is estimated to be $100,000 and the source of funding would be City Urban Transportation funds.

ATTACHMENTS:
1. Resolution creating the Eisenhower Avenue-to-Duke Street Connector Task Force
2. VDOT Resolution
3. Preliminary alignments for the Eisenhower Avenue-to-Duke Street connector alternatives
4. Five candidate build alternatives for the Eisenhower Avenue-to-Duke Street connector
5. Resolution No. 1644 dated May 25, 1993

STAFF: Richard J. Baier, P.E., Director, Transportation and Environmental Services

Attachment 1

RESOLUTION NO. 1995

WHEREAS, City Council wishes to establish a task force to reexamine the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That there is hereby established an *ad hoc* task force known as the Eisenhower Avenue-to-Duke Street Connector Task Force.

2. That the task force shall consist of nine members as follows:

2 Members of City Council

2 Alexandria business owners, or representatives of businesses, at least one of whom shall represent a business interest located in the Eisenhower Valley.

3 citizens residing generally in the area encompassing the following citizen groups:

Cameron Station
Holmes Run Committee
Wakefield Tarleton Civic Association
Strawberry Hill Civic Association
Summer's Grove
Townes of Cameron Park

2 citizens at-large

3. That the Mayor shall appoint the two members of City Council, and select a convenor, and the City Council shall appoint the citizen members of the task force.

4. That staff assistance shall be provided to the task force by the City's Department of Transportation and Environmental Services.

5. That the Virginia Department of Transportation be invited to provide technical assistance to the task force.

6. That the functions of the task force shall be:

   a. Review Alternate 5 endorsed by City Council in Resolution No. 1644 adopted by City Council on May 25, 1993.

   b. Review additional, alternative alignments to Duke Street that may be feasible between Telegraph Road and South Van Dorn Street.

   c. Review a no-build alternative.

   d. Analyze each of the above alternatives from an economic development, environmental, traffic, neighborhood impact and financial standpoint and recommend to the City Council the best alternative to pursue.

e. Prepare for City Council a final report approximately one year from the date of the first meeting of the task force.

ADOPTED: March 13, 2001

KERRY J. DONLEY MAYOR

ATTEST:

Beverly I. Jett, CMC City Clerk

Attachment 2

RESOLUTION NO. 1996

WHEREAS, in accordance with Virginia Department of Transportation construction allocation procedures, it is necessary that a request by council resolution be made in order that the Virginia Department of Transportation program an urban highway project in the City of Alexandria;

NOW, THEREFORE BE IT RESOLVED, that the City Council of Alexandria, Virginia, requests the Virginia Department of Transportation to establish an urban system highway project for the construction of a connector from Eisenhower Avenue to Duke Street or other primary arterial.

BE IT FURTHER RESOLVED, that the City Council of Alexandria hereby agrees to pay its share of the total cost for preliminary engineering, right-of-way and construction of the project described in the foregoing paragraph in accordance with Section 33.1-44 of the Code of Virginia, and that, if the City of Alexandria subsequently elects to cancel this project, as referenced in paragraph two of this resolution, the City of Alexandria hereby agrees to reimburse the Virginia Department of Transportation for the total amount of the costs expended by the Department on the project as referenced in paragraph two of this resolution through the date the Department is notified of such cancellation.

ADOPTED: March 13, 2001

KERRY J. DONLEY MAYOR

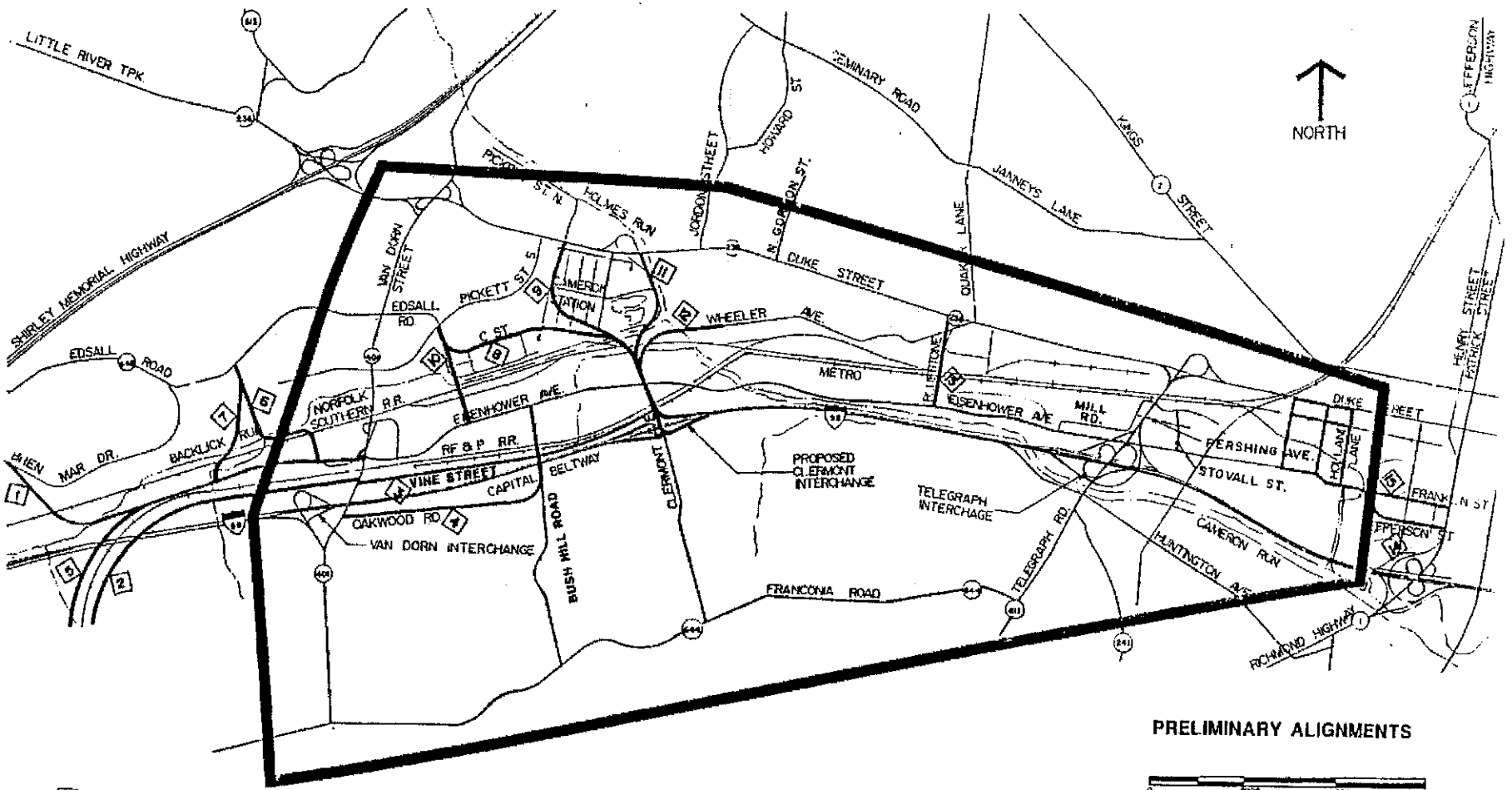
ATTEST:

Beverly I. Jett, CMC City Clerk

ATTACHMENT 3

VIRGINIA DEPARTMENT OF TRANSPORTATION

I-95 / CLERMONT AVENUE INTERCHANGE



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

ATTACHMENT 4

VIRGINIA DEPARTMENT OF TRANSPORTATION

I-95 / CLERMONT AVENUE INTERCHANGE

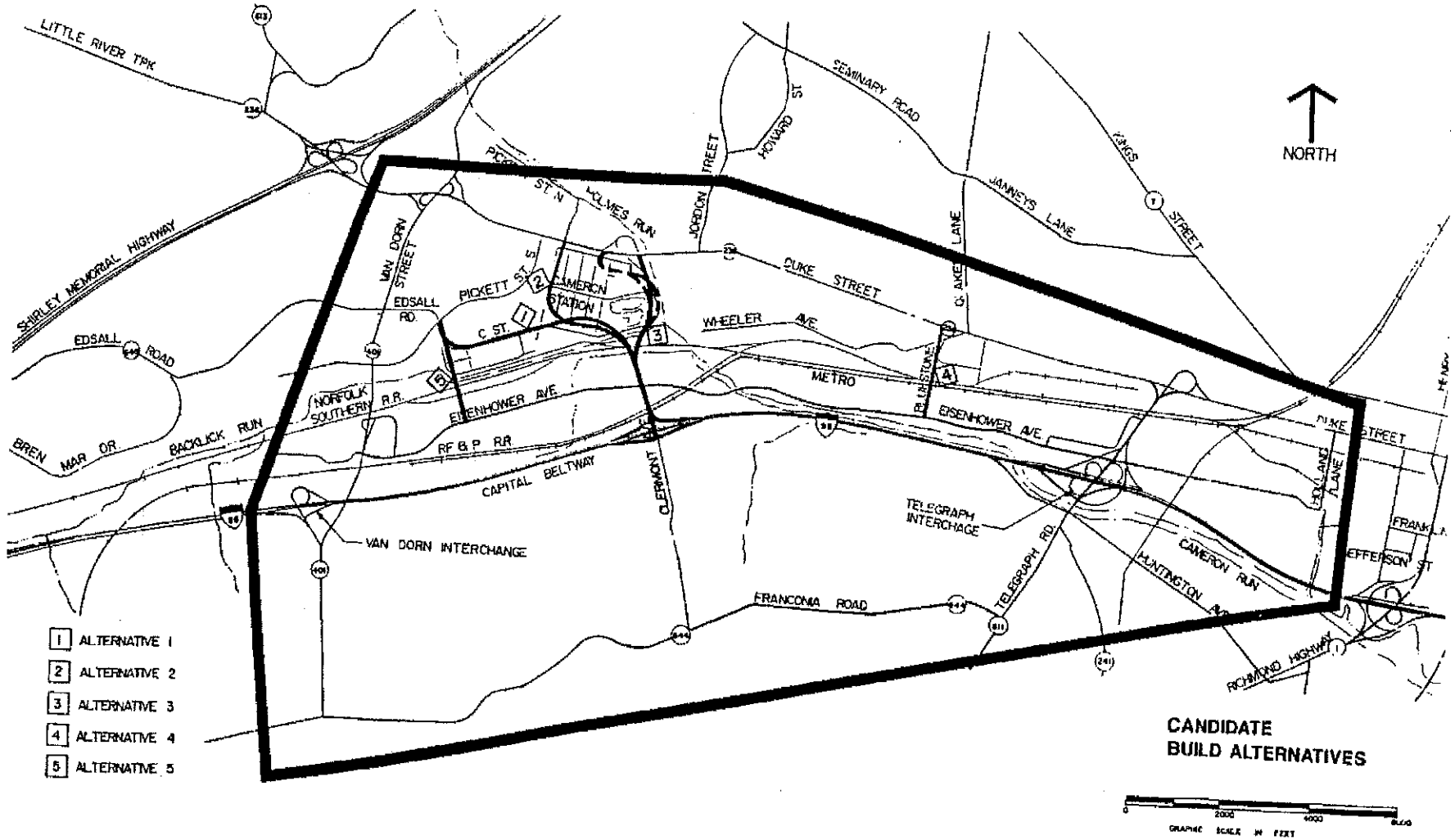


FIGURE 4

ATTACHMENT 5

CLERMONT AVENUE INTERCHANGE AND CONNECTION
BETWEEN INTERSTATE 95 AND DUKE STREET
PROJECT U000-100-109

RESOLUTION NO. 1644

WHEREAS, a Location Public Hearing was conducted on May 6, 1993, in the City of Alexandria by representatives of the Commonwealth of Virginia, Department of Transportation, after due and proper notice, for the purpose of considering the proposed location of the Clermont Avenue Interchange and connection between Interstate 95 and Duke Street, Project U000-100-109, PE103 in the City of Alexandria and Fairfax County, at which hearing aerial photographs, drawings and other pertinent information were made available for public inspection in accordance with State and Federal requirements; and

WHEREAS, all persons and parties in attendance were afforded full opportunity to participate in said public hearing; and

WHEREAS, representatives of the City of Alexandria were present and participated in said hearing; and

WHEREAS, the Council had previously requested the Virginia Department of Transportation to program this project; and

WHEREAS, the Federal Highway Administration (FHWA) is required by Federal law to establish logical project termini for environmental evaluation purposes; and

WHEREAS, the study established as logical termini Interstate 95 and Duke Street and can be considered as a two-phase project: Phase I consisting of the interchange with I-95, a connection to Eisenhower Avenue, and a bikeway connection between Eisenhower Avenue and Clermont Avenue in Fairfax County, and Phase II consisting of a connector from Eisenhower Avenue to Duke Street; and

WHEREAS, the Alexandria City Council recognizes FHWA's legal obligation to evaluate project environmental impacts between logical termini; and

WHEREAS, Section 33.1-44 of the Code of Virginia requires a local commitment of matching funds for construction urban street projects before a project is allowed to proceed; and

WHEREAS, the Virginia 2010 Statewide Highway Plan identifies a project corridor for improvements from I-95 to Duke Street in the City of Alexandria; and

WHEREAS, the Alexandria City Council understands that additional study of the transportation infrastructure for Phase II may be required before it is constructed; and

WHEREAS, the Council has considered all such matters;

NOW, THEREFORE, BE IT RESOLVED, that City Council hereby approves the location of the proposed project as presented at the public hearing and endorses Line 5 as a part of Phase II but recognizes that additional study of Phase II may be needed based on the operational experience of Phase I, and

That the Council hereby commits the City funds that are necessary to match the State and Federal shares for constructing Phase I of the project.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Alexandria, Virginia, to be affixed this 25th day of May, 1993.

ADOPTED: May 25, 1993

Patricia S. Ticer

PATRICIA S. TICER MAYOR

ATTEST:

Beverly I. Jett

Beverly I. Jett, CMC City Clerk

Attachment 5

RESOLUTION NO. 2024

WHEREAS, by Resolution 1995, on March 13, 2001, City Council established a task force to reexamine the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project; and

WHEREAS, the task force voted on April 11, 2002, to select two alternatives for future discussion: a connector at Roth Street (Alternative D), and a "no build" alternative with improvements to Van Dorn Street and Telegraph Road at Duke Street; and

WHEREAS, on April 11, 2002, the task force noted that its membership does not include any citizen representation from the specific neighborhoods east of Quaker Lane, and recommended that Council expand its membership by two positions to be filled by residents living within the boundaries of the Taylor Run, Clover-College Park, Quaker Hill, Seminary Hill and Rosemont Civic Associations; and

WHEREAS, the City Council has reviewed the April 11, 2002, actions of the task force and has determined to modify Resolution 1995 in the following ways;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That the term of the Eisenhower Avenue-to-Duke Street Connector Task Force be extended until October 15, 2002.

2. That five members be added to the task force from the area encompassed by the following civic and homeowner groups: Seminary Hill, Quaker Hill, Clover-College Park, Taylor Run, Rosemont, and the Carlyle Towers Condominium Unit Owners Association.

3. That the expanded task force continue to consider the eight Eisenhower-to-Duke options that have been reviewed to date by the original task force.

4. That a session for the five new task force members be held as soon as possible and no later than 10 days following their appointment, at which these members are briefed on the work of the task force to date, in particular the eight options that have been under consideration.

5. That the expanded task force, no later than October 1, 2002, select its top two "build" options and its top single "no build" option. The expanded task force shall reach these "top" selections by applying the objective evaluation criteria that have been used to date by the task force in its review of the various options. Also, in reaching these selections, the expanded task force shall consider any significant cut-through and other traffic effects north of Duke Street associated with the different options ("build" and "no build"), as well as reasonable mitigation measures designed to reduce those effects, with the effects and the measures being reported to the task force by staff and their consultants.

6. That the staff provide a report to Council, as soon as possible following the expanded task force's selection under paragraph (5), that reports on the expanded task force's selections, provides the staff's own objective analysis of the eight options considered by the task force, and provides further information and analysis to assist Council in making a final determination regarding an Eisenhower-to-Duke connector.

7. That the expanded task force shall complete its work and finalize its selections, under paragraph (5), no later than October 1, 2002.

8. That Resolution 1995 be amended by the above paragraphs of this resolution, and otherwise remain in force and effect.

ADOPTED: April 23, 2002

KERRY J. DONLEY MAYOR

ATTEST:

Beverly I. Jett, CMC City Clerk

Attachment 6

City of Alexandria, Virginia

20
4-23-02

MEMORANDUM

DATE: APRIL 17, 2002

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: PHILIP SUNDERLAND, CITY MANAGER

SUBJECT: MEMBERSHIP MODIFICATION AND TERM EXTENSION FOR THE EISENHOWER AVENUE-TO-DUKE STREET CONNECTOR TASK FORCE

ISSUE: Addition of two citizen positions to, and extension of the term of, the Eisenhower Avenue-to-Duke Street Connector Task Force.

RECOMMENDATION: That Council adopt the proposed resolution (Attachment 1) which amends Resolution No. 1995 (Attachment 2) by: (1) expanding the membership of the Eisenhower Avenue-to-Duke Street Connector Task Force by two positions for citizens residing generally within the boundaries of the following civic associations: Taylor Run, Quaker Hill, Seminary Hill, Rosemont, and Clover-College Park; and (2) extending the term of the Task Force until December 31, 2002.

DISCUSSION: The nine-member Eisenhower Avenue-to-Duke Street Connector Task Force was established by Council on March 13, 2001, to review the proposed alignment for the Eisenhower Avenue-to-Duke Street connector that was endorsed by City Council in 1993, to explore other feasible alternative connector routes between Telegraph Road and Van Dorn Street, as well as a no-build alternative, and to recommend the most desirable alternative in a final report to Council, no later than one year from the date of the first meeting of the task force (June 18, 2001). See Attachment 3.

At its April 11 meeting, the Task Force voted to select two alternatives for future discussion: a connector at Roth Street, identified as "Alternative D," and a "no-build" alternative with improvements to Van Dorn Street and Telegraph Road at Duke Street. In selecting these alternatives, the Task Force noted that the impacts of these alternatives on the residential streets and collectors north of Duke Street had not yet been studied, and that this needed to be done, as did a study of the measures which could be undertaken to mitigate those impacts. Also, because it has no members who reside generally north of Duke Street and east of Quaker Lane, a majority vote by the Task Force decided to ask City Council to expand its membership by adding two positions that would be occupied by residents living within the boundaries of Taylor Run, Clover College Park, Quaker Hill, Seminary Hill and Rosemont Civic Associations. The Task Force felt

that the addition of these two positions would allow the perspective of residents from this area to be provided in future Task Force discussions regarding "north of Duke" impacts and mitigation measures.

The expanded Task Force and staff will meet over the summer to analyze the impacts of the two alternatives on residential streets and collectors north of Duke Street, and to prepare recommendations to Council on the measures that would mitigate those impacts. No further consideration of the alternatives not selected on April 11 for further Task Force discussion will be undertaken by the Task Force. The remainder of its work will be to consider the traffic impacts north of Duke Street of the two selected alternatives, and to recommend mitigation measures. We anticipate a report on the Eisenhower Avenue-to-Duke Street connector to be docketed for City Council's consideration in the fall.

FISCAL IMPACT: None.

ATTACHMENTS:
Attachment 1: Proposed Resolution
Attachment 2: Resolution Number 1995
Attachment 3: Docket Item #15 from the March 13, 2001 City Council Meeting

STAFF:
Rose Williams Boyd, Executive Secretary for Boards and Commissions
Richard Baier, Director, Transportation and Environmental Services

PROPOSED RESOLUTION

WHEREAS, on March 13, 2001, City Council established a task force to reexamine the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project; and

WHEREAS, the task force voted on April 11 to select two alternatives for future discussion: a connector at Roth Street (Alternative D), and a "no build" alternative with improvements to Van Dorn Street and Telegraph Road at Duke Street; and

WHEREAS, the task force noted after these alternatives were selected that its membership does not include any citizen representation from the neighborhoods north of Duke Street and east of Quaker Lane, and that the task force needs the perspective of residents from this area to determine the impact of these alternatives on the residential streets and collectors in this area; and

WHEREAS, the task force has requested that Council expand its membership by two positions to be filled by residents living within the boundaries of the Taylor Run, Clover-College Park, Quaker Hill, Seminary Hill and Rosemont Civic Associations;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That there is hereby established an ad hoc task force known as the Eisenhower Avenue-to-Duke Street Connector Task Force.

2. That the task force shall consist of eleven members as follows:

   2 Members of City Council

   2 Alexandria business owners, or representatives of businesses, at least one of whom shall represent a business interest located in the Eisenhower Valley.

   5 citizens residing generally in the area encompassing the following citizen groups:

   Cameron Station
   Holmes Run Committee
   Wakefield Tarleton Civic Association
   Strawberry Hill Civic Association
   Summer's Grove
   Townes of Cameron Park
   Taylor Run

Quaker Hill
Clover-College Park
Rosemont
Seminary Hill

2 citizens at-large

3. That the Mayor shall appoint the two members of City Council, and select a convenor, and the City Council shall appoint the citizen members of the task force.

4. That staff assistance shall be provided to the task force by the City's Department of Transportation and Environmental Services.

5. That the Virginia Department of Transportation be invited to provide technical assistance to the task force.

6. The function of the expanded task force shall be to analyze the impacts of the two alternatives on residential streets and collectors north of Duke Street and to prepare recommendations to Council on the measures that would mitigate those impacts no later than December 31, 2002. No further consideration of the alternatives not selected at the April 11 meeting will be undertaken by the task force.

ADOPTED: April 23, 2002

KERRY J. DONLEY MAYOR

ATTEST:

Beverly I. Jett, CMC City Clerk

WHEREAS, City Council wishes to establish a task force to reexamine the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That there is hereby established an *ad hoc* task force known as the Eisenhower Avenue-to-Duke Street Connector Task Force.

2. That the task force shall consist of nine members as follows:

2 Members of City Council

2 Alexandria business owners, or representatives of businesses, at least one of whom shall represent a business interest located in the Eisenhower Valley.

3 citizens residing generally in the area encompassing the following citizen groups:

Cameron Station
Holmes Run Committee
Wakefield Tarleton Civic Association
Strawberry Hill Civic Association
Summer's Grove
Townes of Cameron Park

2 citizens at-large

3. That the Mayor shall appoint the two members of City Council, and select a convenor, and the City Council shall appoint the citizen members of the task force.

4. That staff assistance shall be provided to the task force by the City's Department of Transportation and Environmental Services.

5. That the Virginia Department of Transportation be invited to provide technical assistance to the task force.

6. That the functions of the task force shall be:

   a. Review Alternate 5 endorsed by City Council in Resolution No. 1644 adopted by City Council on May 25, 1993.

   b. Review additional, alternative alignments to Duke Street that may be feasible between Telegraph Road and South Van Dorn Street.

   c. Review a no-build alternative.

   d. Analyze each of the above alternatives from an economic development, environmental, traffic, neighborhood impact

e. Prepare for City Council a final report approximately one year from the date of the first meeting of the task force.

ADOPTED: March 13, 2001

KERRY J. DONLEY MAYOR

ATTEST:

Beverly I. Jett, CMC City Clerk

REVISED VERSION AS OF 3-12-01
See Changes Identified in Redline

City of Alexandria, Virginia

15
3-13-01

MEMORANDUM

DATE: MARCH 12, 2001

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: PHILIP SUNDERLAND, CITY MANAGER

SUBJECT: RE-STUDY OF THE ALTERNATIVES FOR AN EISENHOWER AVENUE-TO-DUKE STREET CONNECTOR

ISSUE: Re-study of the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project.

RECOMMENDATIONS: That City Council:

(1) Approve the City proceeding with its own re-study of the Eisenhower Avenue-to-Duke Street Connector (Phase II of the Clermont Interchange Project) using City Urban Transportation funds;

(2) Adopt the attached resolution (Attachment 1) creating an *ad hoc* Eisenhower Avenue-to-Duke Street Connector Task Force to review the proposed alignment (Alternative 5) for the Eisenhower Avenue-to-Duke Street connector that was endorsed by City Council in 1993 and to explore other feasible alternative connections between Telegraph Road and Van Dorn Street, as well as a no-build alternative, and to recommend to City Council the most desirable alternative; and

(3) Adopt the attached resolution (Attachment 2) in which the City: (a) requests the Virginia Department of Transportation (VDOT) to establish an urban system highway project for the Eisenhower Avenue-to-Duke Street connector; (b) states that the City agrees to pay the City's share of the costs associated with the Eisenhower Avenue-to-Duke Street project, if built; and (c) agrees that, should the City decide to cancel the project, it would reimburse VDOT for the total costs expended by VDOT for Phase II of the Eisenhower Avenue-to-Duke Street connector project up to the date that it is notified of the project's cancellation by the City.

BACKGROUND: Improving access to and from, and along, Eisenhower Valley has been one of the City's transportation priorities since the early 1970s, when there were only two major access points to the valley, South Van Dorn Street and Telegraph Road. In the late 1970s and early 1980s the City addressed the serious flooding problems in Eisenhower Valley by constructing tunnels to channel Cameron Run and prevent the flooding which had made much of the land in the valley infeasible to

develop. By 1985 the construction of Eisenhower Avenue was completed and the roadway was opened, making it possible to travel directly from Van Dorn Street to Holland Lane. Opening complete access to the Eisenhower Valley also involved construction of an interchange at the beltway.

In 1973, City Council passed a resolution requesting VDOT to construct an interchange at I-95 and Clermont Avenue to provide an adequate transportation system for the growing development in the area. In 1980, with the adoption of the Cameron Run Valley Study, City Council again passed a resolution requesting an interchange at I-95 and Clermont Avenue, and an extension of Clermont Avenue from Eisenhower Avenue to Duke Street.

In 1984, the Federal Highway Administration (FHWA) approved an additional access point on I-95 for the construction of the Clermont Interchange, as well as improvements to extend and connect Clermont Avenue to Duke Street. Council had requested that the Clermont to Duke connector be removed from this FHWA approved project, but the National Environmental Policy Act required that the Environmental Impact Statement (EIS) address all aspects of the approved project.

In 1987, the City asked VDOT to identify transportation objectives for the project area, to design the public participation process, to identify major issues to be addressed in the EIS, and to develop a timetable. In May 1987, City Council approved Resolution No. 1237 creating the Clermont Interchange Task Force to: a) serve as the evaluating and coordinating mechanism among the residents, business community, Cameron Station and the City; b) facilitate citizen participation in the EIS process; c) formulate and recommend positions the City may take in the EIS process, including participating in the design and scope of the draft EIS and formulating recommendations the City might make in commenting on the draft EIS, including comments on the proposed alignments and the "no build" option. The Task Force consisted of two members of City Council as co-chairs (initially Councilwoman Pepper and Councilman Calhoun, who was replaced by then Councilman Donley), 10 citizen members, a representative from Cameron Station, and City staff.

In 1988, VDOT began preparation of the EIS for the construction of the Clermont Interchange and a possible connector from Eisenhower Avenue to Duke Street. The first public information meeting was held in December 1988. A list of initial build alternatives was developed and refined, and a public information meeting and public hearing were held in 1989. The original plan was to have the Draft and Final Environmental Impact Statements completed in the summer and fall of 1989, respectively. However, it was not until August 1992 that VDOT released the Draft Environmental Assessment--Clermont Interchange with Interstate 95, and the Final Environmental Assessment was released in November 1993. Environmental assessments, rather than environmental impact statements, were prepared because the FWHA had determined that assessments were appropriate because of the limited impacts of the project.

The Draft Environmental Assessment included a review of 15 preliminary Eisenhower Avenue-to-Duke Street connector alternatives (Attachment 3), and a no-build option. Each alternative was evaluated using three screening criteria: 1) improve access to Eisenhower Valley from I-95 and Duke

Street; 2) have the potential to relieve congestion on the Telegraph Road and Van Dorn Interchanges; and 3) have the potential to relieve congestion on existing roadways. A number of these alternatives were eventually removed from consideration since they did not meet the screening criteria, leaving five connector alternatives (Attachment 4) which were included in the Final Environmental Assessment, with VDOT choosing Alternative 5 as its "Selected Alternative" for the connector between Eisenhower Avenue and Duke Street. Alternative 5 is a .61 mile four-lane connector road between Eisenhower Avenue and South Pickett Street at the South Pickett Street/Edsall Road intersection (see Attachment 4).

The final environmental assessment included reference to constructing the project in two phases: Phase I would include the construction of the Clermont Interchange and the extension of Clermont Avenue to Eisenhower Avenue, and Phase II would include the construction of a connector roadway from Eisenhower Avenue to Duke Street.

On May 25, 1993, City Council adopted Resolution No. 1644 (Attachment 5) which was supported by the Clermont Interchange Task Force, VDOT and FHWA and which: (1) endorsed the location of the Clermont Interchange Phase I; (2) endorsed a connector from Eisenhower Avenue to Duke Street Phase II via South Pickett Street (Alternate 5) at a future date after additional study of the transportation infrastructure; and (3) included a bike trail between Eisenhower Avenue and Clermont Avenue in Fairfax County. The City supported the Clermont Interchange because it provided traffic relief for the overburdened Van Dorn and Telegraph Road interchanges, served large volumes of traffic in the Duke Street corridor by providing direct access to I-95, and supported the commercial and industrial growth occurring along Eisenhower Avenue.

Construction of the Clermont Interchange began in 1996. The interchange was completed in 1997, opening to traffic on August 1. Since then the City has approved a Coordinated Development District (CDD) for Cameron Station (the site of the former Cameron Station military base) where approximately one-third of the more than 2,100 dwelling units have been constructed and where approximately 15,000 square feet of neighborhood retail will be located. In June 2000, the City broke ground for the new Ben Brenman Park. The new Samuel W. Tucker Elementary School opened in the Fall of 2000.

The plans for Cameron Station show a portion of the land on the western side of Armistead L. Boothe Park reserved for Alternative 5. The reservation of this right-of-way easement was done as part of the process to transfer 62 acres of land from the U.S. Department of the Interior-National Park Service to the City to be used for Ben Brenman Park and Armistead L. Boothe Park. It should be noted that if Alternative 3, located on the eastern side of Ben Brenman Park (see Attachment 4), were to be the preferred route for an Eisenhower-to-Duke connector, it would require U.S. Department of Interior-National Park Service approval to use land from Ben Brenman Park for the connector right-of-way in exchange for releasing the right-of-way now reserved through Armistead L. Boothe Park.

DISCUSSION: Last summer, VDOT contacted the City to determine when the City would be going forward with Phase II of the Clermont Interchange Project, the connection between Eisenhower Avenue and Duke Street. VDOT had programmed $8.4 million for the design and construction of Phase II.

At Council's 2000 fall retreat, staff reviewed the background of the Clermont Interchange Project and recommended that the City engage in a re-study of Phase II before proceeding any further with this project. The study would review current land uses, including the redeveloped Cameron Station, the new school and the newly developed Ben Brenman and Armistead L. Boothe Parks. It would also examine the proposed connection (Alternative 5) endorsed by City Council in 1993, the traffic benefits produced by an Eisenhower-to-Duke connection, alternative road connections to Duke Street that may be feasible between Telegraph Road and South Van Dorn Street, as well as a no-build option, and would make a recommendation to City Council on the best alternative for the City.

At the retreat, staff also informed City Council that, according to VDOT, if Council ultimately decided not to build a connector, the City would be required to repay VDOT the monies it has already spent in Phase I for engineering, design and construction of the Clermont Interchange. This is based on the commitment Council made in Resolution No.1644 (Attachment 5) to the two phase construction project, the interchange and the connector. According to VDOT, the amount of the repayment for Phase I could be anywhere from $2 million to $11.5 million, depending upon a negotiated settlement between the City and VDOT. The final amount would be taken from City Urban Transportation funds. Obviously, this has a significant financial impact that will require serious study and discussion before we determine the final outcome.

Our study will need to take into consideration a number of factors including how to improve access to and from the Eisenhower Valley. The valley has been and continues to be viewed by the City and the business community as a prime location for economic development. The degree to which vehicles can move in and out of the Valley has a direct bearing on the success of our economic development efforts.

While we have improved access with the opening of the Clermont Interchange, and will have additional improvements with the Mill Road connection to the Beltway as part of the Woodrow Wilson Bridge Replacement Project, we still need to address access to and from the middle of the Valley to its western edge, where the only ingress and egress is by Telegraph Road on the east and South Van Dorn Street 3.2 miles to the west. Generally, in an urban area, connector roads between two parallel thoroughfares, like Duke Street and Eisenhower Avenue, occur at points closer than 3.2 miles.

In addition, the number of connectors between two thoroughfares plays a significant role in the efficient movement of traffic along the thoroughfares themselves and through their intersections. In this case, Eisenhower Avenue and Duke Street are not able to function efficiently, as traffic is forced to use either Van Dorn Street or Telegraph Road, which are heavily traveled in the a.m. and p.m. rush hours and are impacted by conditions on the Beltway and the Wilson Bridge. This results

in a substandard Level of Service (E or F) at the intersections with Van Dorn Street and Telegraph Road during peak hours.

Without another connector roadway to relieve the pressure, substantial improvements would be required at the Van Dorn Street and Telegraph Road intersections to move traffic through these intersections at an acceptable level of service. Examples could include right-of way acquisition at Van Dorn Street and Eisenhower Avenue, as well as at Van Dorn Street and Duke Street, to facilitate dual right and left turn lanes, additional through lanes or separated grade interchanges along Van Dorn Street.

Traffic on our arterial roadways is increasing at the rate of 3 to 4 % a year, and will continue to do so regardless of whether the City chooses the build or no build option for the connector road. In addition, projects such as the proposed Franconia/Van Dorn separated grade interchange in Fairfax County will put additional pressure on Alexandria's overburdened arterial network along Van Dorn Street and at its intersecting streets.

To accomplish the proposed study, I am recommending that City Council adopt the attached Resolution (Attachment 1) that establishes an *ad hoc* Eisenhower Avenue-to-Duke Street Connector Task Force composed of the following nine members:

- Two Council Members appointed by the Mayor
- One representative from each of the following organizations:
  - Eisenhower Partnership
  - Alexandria Chamber of Commerce
- ~~Two~~ Three citizens representing citizen groups as follows:
  - One citizen representing Cameron Station
  - ~~One citizen representing one of~~ Two citizens from among the following citizen groups:
    - Holmes Run Committee
    - Wakefield Tarleton Civic Association
    - Strawberry Hill Civic Association
    - Summer's Grove
    - Townes of Cameron Park
- Two citizens at large

The Task Force, with the assistance of a consultant hired by the City, would review Alternative 5 for the Eisenhower Avenue-to-Duke Street connector roadway, as endorsed in Resolution No. 1644; explore other feasible alternatives between Telegraph Road and Van Dorn Street and a no-build option; and recommend to City Council the best course of action for the City. The final report of the Task Force would be due approximately one year from the date of the first task force meeting.

Due to the importance of this issue, I am proposing that the City, rather than VDOT, undertake the study, which means that we would be responsible for its cost, currently estimated at $100,000. The $100,000 would come from the City's Urban Transportation funds. If VDOT undertakes the study, it could not begin the process until August with an expected completion date of one year. In addition, the City could engage the services of one of its own engineer of record consultants. The consultant would then be directly responsible to the City. The consultant would be tasked to analyze alternative alignments and evaluate their quality of life impacts on neighborhoods and the environment, as well as their economic development, traffic and financial impacts. VDOT would still participate in the study, providing information and data which are relevant to the work of the task force.

Because of state policy changes related to construction allocation procedures, the City must adopt the attached resolution (Attachment 2) requesting VDOT to program the Eisenhower-to-Duke connector as a new "urban system highway project." This policy change reduces the City's required match for project costs from a 5% to a 2% share. This means that the state would commit to pay 98% of the project cost if the City decided to construct a connector, and the City would commit to paying 2%. However, the City would have to reimburse VDOT for any funds VDOT expends for an Eisenhower-to-Duke connector if work began and the City decided to cancel the project. This arrangement relates only to the construction of the Eisenhower-to-Duke connector. The reimbursement issue VDOT has raised regarding the repayment of funds for the Phase I construction of the Clermont Interchange, should the City decide not to build the Eisenhower-to-Duke connector, is a separate matter.

FISCAL IMPACT: The cost to do the re-study is estimated to be $100,000 and the source of funding would be City Urban Transportation funds.

ATTACHMENTS:

1. Resolution creating the Eisenhower Avenue-to-Duke Street Connector Task Force
2. VDOT Resolution
3. Preliminary alignments for the Eisenhower Avenue-to-Duke Street connector alternatives
4. Five candidate build alternatives for the Eisenhower Avenue-to-Duke Street connector
5. Resolution No. 1644 dated May 25, 1993

STAFF: Richard J. Baier, P.E., Director, Transportation and Environmental Services

REVISED VERSION AS OF 3-12-01
See Changes Identified in Redline

RESOLUTION NO.

WHEREAS, City Council wishes to establish a task force to reexamine the alternatives for an Eisenhower Avenue-to-Duke Street connector as part of Phase II of the Clermont Interchange Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF ALEXANDRIA, VIRGINIA:

1. That there is hereby established an *ad hoc* task force known as the Eisenhower Avenue-to-Duke Street Connector Task Force.

2. That the task force shall consist of nine members as follows:

   2 Members of City Council

   1 Citizen representative from each of the following organizations:
   Eisenhower Partnership
   Alexandria Chamber of Commerce

   ~~2~~3 Citizens representing citizen groups as follows:

   1 citizen representing Cameron Station
   ~~1~~2 citizens from among the following citizen groups:
   Holmes Run Committee
   Wakefield Tarleton Civic Association
   Strawberry Hill Civic Association
   Summer's Grove
   Townes of Cameron Park

   2 Citizens at large

3. That the Mayor shall appoint the two members of City Council, and select a convenor, and the City Council shall appoint the citizen members of the task force.

4. That staff assistance shall be provided to the task force by the City's Department of Transportation and Environmental Services.

5. That the Virginia Department of Transportation be invited to provide technical assistance to the task force.

6. That the functions of the task force shall be:

a. Review Alternate 5 endorsed by City Council in Resolution No.1644 adopted by City Council on May 25, 1993.

b. Review additional alternative alignments to Duke Street that may be feasible between Telegraph Road and South Van Dorn Street.

c. Review a no-build alternative.

d. Analyze each of the above alternatives from an economic development, environmental, traffic, neighborhood impact and financial standpoint and recommend to the City Council the best alternative to pursue.

e. Prepare for City Council a final report approximately one year from the date of the first meeting of the task force.

ADOPTED:

KERRY J. DONLEY MAYOR

ATTEST:

Beverly I. Jett, CMC City Clerk

ATTACHMENT 2

RESOLUTION NO.

WHEREAS, in accordance with Virginia Department of Transportation construction allocation procedures, it is necessary that a request by council resolution be made in order that the Virginia Department of Transportation program an urban highway project in the City of Alexandria;

NOW, THEREFORE BE IT RESOLVED, that the City Council of Alexandria, Virginia requests the Virginia Department of Transportation to establish an urban system highway project for the construction of a connector from Eisenhower Avenue to Duke Street, a distance of approximately .61 miles;

BE IT FURTHER RESOLVED, that the City Council of Alexandria hereby agrees to pay its share of the total cost for preliminary engineering, right of way and construction of the project described in the foregoing paragraph in accordance with Section 33.1-44 of the Code of Virginia, and that, if the City of Alexandria subsequently elects to cancel this project, the City of Alexandria hereby agrees to reimburse the Virginia Department of Transportation for the total amount of the costs expended by the Department through the date the Department is notified of such cancellation.

ADOPTED:

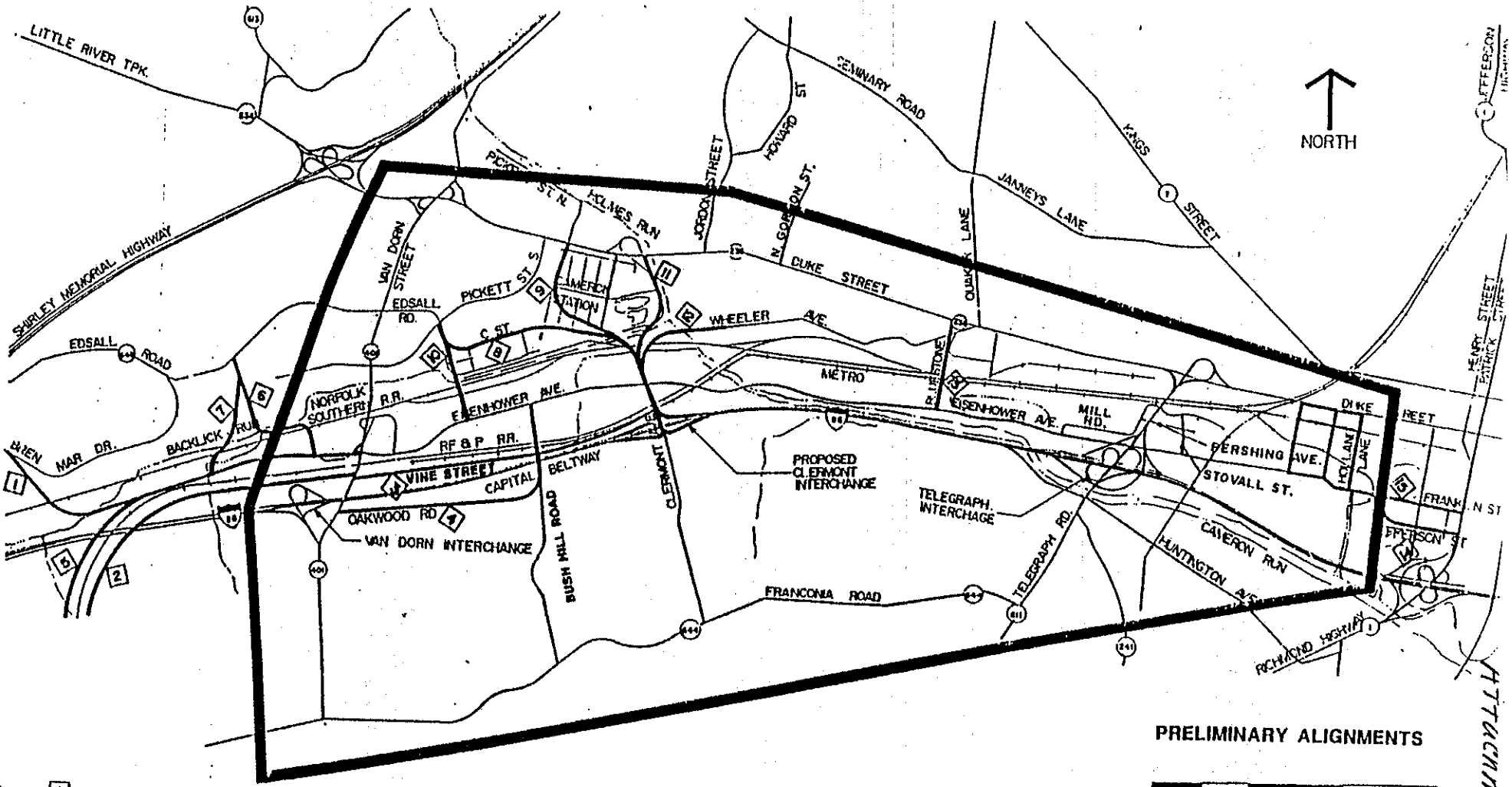
KERRY J. DONLEY **MAYOR**

ATTEST:

Beverly I. Jett, CMC City Clerk

VIRGINIA DEPARTMENT OF TRANSPORTATION

I-95 / CLERMONT AVENUE INTERCHANGE



PRELIMINARY ALIGNMENTS

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. FA TON 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 ECTOR
12. WHEELER AVE. CONNECTOR
13. BLUESTONE CONNECTOR
14. JEFFERSON ST. EXTENSION
15. FRANKLIN ST. EXTENSION

ATTACHMENT 5

16

VIRGINIA DEPARTMENT OF TRANSPORTATION

I-95 / CLERMONT AVENUE INTERCHANGE

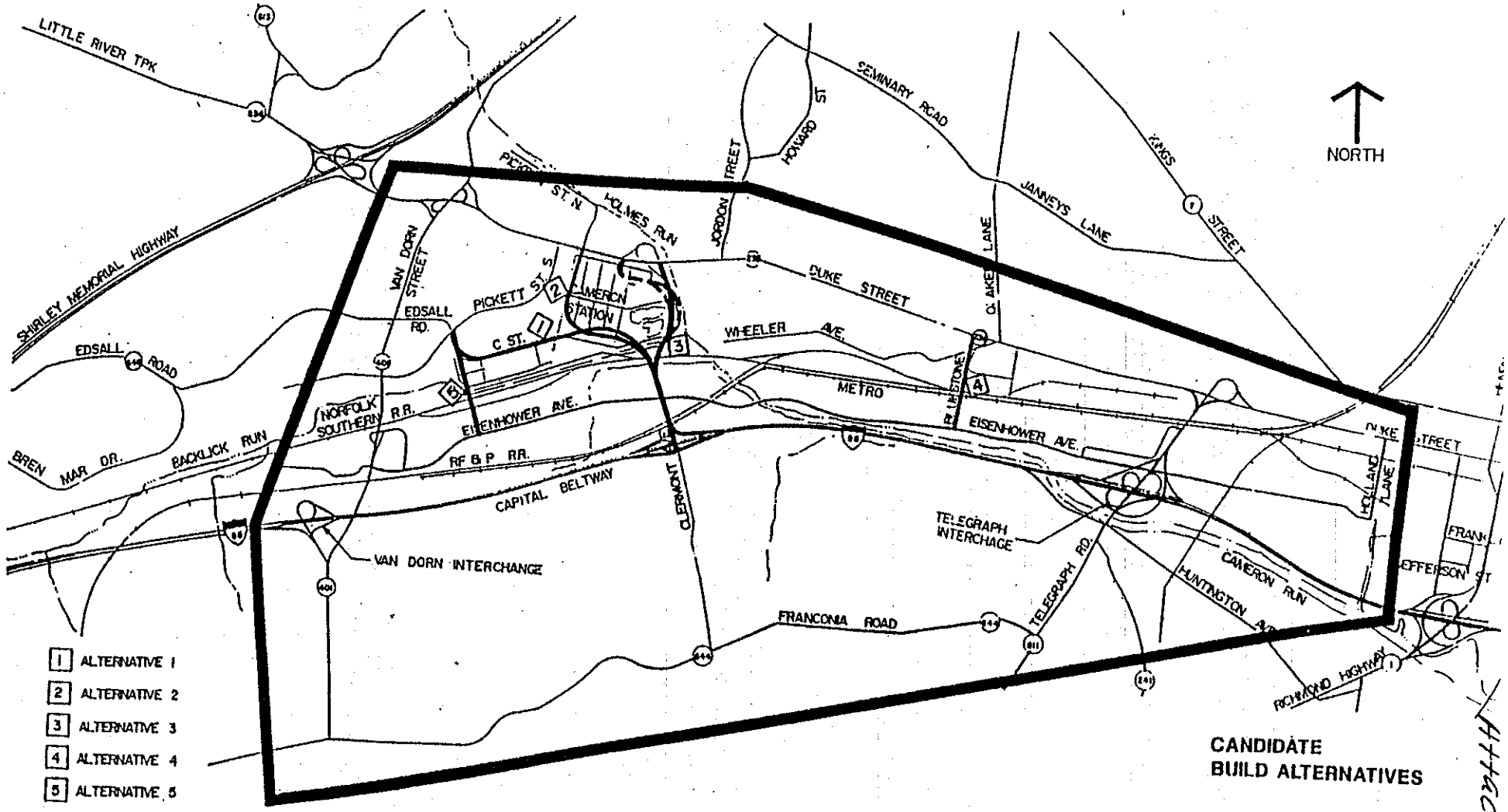


FIGURE 4

Attachment 4

ATTACHMENT 5

CLERMONT AVENUE INTERCHANGE AND CONNECTION
BETWEEN INTERSTATE 95 AND DUKE STREET
PROJECT U000-100-109

RESOLUTION NO. 1644

WHEREAS, a Location Public Hearing was conducted on May 6, 1993, in the City of Alexandria by representatives of the Commonwealth of Virginia, Department of Transportation, after due and proper notice, for the purpose of considering the proposed location of the Clermont Avenue Interchange and connection between Interstate 95 and Duke Street, Project U000-100-109, PE103 in the City of Alexandria and Fairfax County, at which hearing aerial photographs, drawings and other pertinent information were made available for public inspection in accordance with State and Federal requirements; and

WHEREAS, all persons and parties in attendance were afforded full opportunity to participate in said public hearing; and

WHEREAS, representatives of the City of Alexandria were present and participated in said hearing; and

WHEREAS, the Council had previously requested the Virginia Department of Transportation to program this project; and

WHEREAS, the Federal Highway Administration (FHWA) is required by Federal law to establish logical project termini for environmental evaluation purposes; and

WHEREAS, the study established as logical termini Interstate 95 and Duke Street and can be considered as a two-phase project: Phase I consisting of the interchange with I-95, a connection to Eisenhower Avenue, and a bikeway connection between Eisenhower Avenue and Clermont Avenue in Fairfax County, and Phase II consisting of a connector from Eisenhower Avenue to Duke Street; and

WHEREAS, the Alexandria City Council recognizes FHWA's legal obligation to evaluate project environmental impacts between logical termini; and

WHEREAS, Section 33.1-44 of the Code of Virginia requires a local commitment of matching funds for construction urban street projects before a project is allowed to proceed; and

WHEREAS, the Virginia 2010 Statewide Highway Plan identifies a project corridor for improvements from I-95 to Duke Street in the City of Alexandria; and

WHEREAS, the Alexandria City Council understands that additional study of the transportation infrastructure for Phase II may be required before it is constructed; and

WHEREAS, the Council has considered all such matters;

NOW, THEREFORE, BE IT RESOLVED, that City Council hereby approves the location of the proposed project as presented at the public hearing and endorses Line 5 as a part of Phase II but recognizes that additional study of Phase II may be needed based on the operational experience of Phase I, and

That the Council hereby commits the City funds that are necessary to match the State and Federal shares for constructing Phase I of the project.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Alexandria, Virginia, to be affixed this 25th day of May, 1993.

ADOPTED: May 25, 1993

Patricia S. Ticer

PATRICIA S. TICER MAYOR

ATTEST:

Beverly I. Jett

Beverly I. Jett, CMC City Clerk

Attachment 7

Eisenhower Avenue-To-Duke Street Connector Study

Staff Report and Recommendations

October 8, 2002

Contents

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BACKGROUND

One of the City's transportation priorities, dating back to the early 1970s, is improving access to and from, and travel within the Eisenhower Valley. Progress on this priority has been made with the Eisenhower and Van Dorn Metro stations, expansion of DASH service in the valley, development of area multipurpose trails, improvements to Eisenhower Avenue, new internal roadways in the eastern end of the valley, and Clermont interchange in the western end; however, little has been accomplished to improve transportation connectivity and accessibility between Eisenhower Valley and the remainder of Alexandria. As Alexandria area travel demand continues to increase and more of Alexandria's residential, employment and social/recreational opportunities are located in Eisenhower Valley, it has become increasingly important that accessibility to and from this area be improved and that the valley be better integrated into the urban fabric of the city.

In 1973 and again in 1980, Council passed resolutions requesting that the Virginia Department of Transportation (VDOT) construct an interchange at I-95 and Clermont Avenue. In 1984, the Federal Highway Administration (FHWA) approved an additional access point on I-95 for this interchange. A location study and environmental evaluation of the Clermont Interchange was initiated in 1988 and the *Final Environmental Assessment* was released in 1993. At that time, Council adopted Resolution 1644 which endorsed (1) the location of the Clermont Interchange and (2) the preferred alignment of a new roadway connection between Eisenhower Avenue and Duke Street. Design and construction of the Clermont Interchange was initiated as Phase I of this project, with the Eisenhower-to-Duke Connector to occur at a later time as Phase II. The Clermont Interchange (Phase I) was constructed and opened to traffic on August 1, 1997. In 2000, VDOT contacted the City to determine when the City would initiate the Eisenhower Avenue-to-Duke Street Connector (Phase II) of the project. In response, City Council initiated re-study of the preferred alignment.

In March 2001, Council agreed to re-study alternatives for an Eisenhower-to-Duke Street Connector and established a nine member ad hoc Task Force to re-examine the alternatives and report back to City Council. In April 2002, Council expanded the Task Force to 14 members and extended its term to October 15, 2002. The expanded Task Force was directed to continue consideration of the eight alternatives identified by the original Task Force, select its top two "build" alternatives and its top single "no build" alternative no later than October 1, 2002 and provide a report to Council as soon as possible thereafter.

The city's Transportation and Environmental Services (T&ES) Department provided staff support for the Task Force and retained the services of a consultant team lead by PBS&J, Inc., a consulting transportation planning and engineering firm, to provide technical assistance. Staff and the consultant team worked closely with the Task Force throughout its deliberations, attending each of the 13 Task Force meetings and providing information, data and analysis results as requested. The Task Force completed its re-study of the Eisenhower-to-Duke Connector on September 26 and is submitting its *Eisenhower Avenue-to-Duke Street Connector Task Force Report* (*Task Force Report*) to Council on October 8 as part of the Eisenhower-to-Duke Connector docket memorandum.

In an independent review of the information presented to the Task Force, staff developed the key findings presented in this of this report based on their collective professional experience. Not all material presented to the Task Force is discussed herein. For additional information, refer to the *Eisenhower Avenue-to-Duke Street Connector Technical Report* (*Technical Report*), also included with the docket memorandum.

ISSUES

In 1993, Council Resolution 1644 endorsed the *Environmental Assessment Study* "Alternate 5" as the "locally preferred alternate" for the location of the Eisenhower-to-Duke Connector. In initiating this re-study, two fundamental questions were again presented for discussion and decision:

1. Should an Eisenhower-to-Duke Connector be constructed?
2. If so, where should the Connector be located to best serve the needs of Alexandria?

These questions were the basis of the Council charge to the Task Force.

Two additional questions emerged during the re-study that are significant, but cannot be answered until a decision is made as to which alternate, if any, is preferred and the related environmental documentation is approved. These additional questions are:

1. If a "no build" alternate is selected, will Alexandria be required to repay some or all of the cost of Phase I of the Clermont Interchange Project (design and construction of the interchange)?
2. If a "build" alternate is selected, will it satisfy the requirements of the National Environmental Protection Act (NEPA)?

ALTERNATES CONSIDERED

The Task Force, city staff and consultant team, working jointly, identified 15 alternate connector locations for preliminary consideration. A review and screening process selected four "build" alternates (Alternates A, B, C and D) for detailed study and consideration, along with the No Build Alternate. Subsequently, variations to two alternates increased the number of build alternates to six (Alternates A1, A2, B1, B2, C and D), and an additional alternate, No Build with Improvements, was introduced into the study. The No Build with Improvements includes significant capacity improvements on existing roadways, but not a connector roadway on new alignment. The alternates considered by the Task Force are described below. Figure 1 shows the locations of all six build alternates and the principal improvements in the No Build with Improvements alternate. Exhibits 1 through 7 appended to this report illustrate these alternates in greater detail.

No Build Alternate is the existing roadway network with no new roadways or improvements to existing roadways other than those included in the Commonwealth Transportation Board's current *Six-Year Program*. The more significant improvements near the study location that are included in the base 2020 network are reconstruction of Springfield Interchange and replacement of Woodrow Wilson Bridge.

Alternate A1 (Exhibit 1) is the locally preferred alternate from the 1993 *Environmental Assessment Study* and the location endorsed by Council in Resolution 1644. Located just east of Van Dorn Street, this is the westernmost build alternate. Alternate A1 begins on Eisenhower Avenue at the city impound lot, extends north, crossing over the railroad on bridge structure and ends at the entrance to Cameron Station on South Pickett Street. This alternate is mostly on bridge structure, requires relocation of the South Pickett Street entrance to Cameron Station, and impacts a portion of Armistead L. Boothe Park.

Alternate A2 (Exhibit 2) is similar to A1, except the alignment was shifted northwesterly to eliminate impact to Armistead L. Boothe Park and avoid relocation of the entrance to Cameron Station. However, this alternate increases impacts to existing commercial properties on South Pickett Street.

Alternate B1 (Exhibit 3) is located in the central portion of Eisenhower Valley. It begins at the existing intersection of Eisenhower and Clermont Avenues, extends north to bridge over the railroad, remains elevated on a bridge structure along the eastern edge of Ben Brenman Park, and connects to the existing Duke Street flyover, which provides access to the park from Duke Street. This alternate impacts Ben Brenman Park and introduces a new signalized intersection on Duke Street.

Alternate B2 (Exhibit 4) is similar to B1, except a flyover ramp to Wheeler Avenue was added to serve the northbound Connector to eastbound Duke Street movement. This ramp eliminates the need for a new traffic signal on Duke Street as required for Alternate B1.

Alternate C (Exhibit 5) begins at the intersection of Eisenhower Avenue and Bluestone Road, extends north to bridge over the railroad and connects to Wheeler Avenue at a new at-grade intersection. This alternate includes a new connection into the Metro service and inspection yard.

Alternate D (Exhibit 6) is the easternmost connector alternate. This alternate begins on Eisenhower Avenue just east of the Metro service and inspection yard, extends north to bridge over the railroad and Metro bridge, and connects to Duke Street at a new at-grade intersection at Roth Street, just east of Cambridge Road. This alignment is mostly on bridge structure.

No Build with Improvements Alternate (Exhibits 7 and 8) was developed to evaluate significant improvements to existing roadways as an alternative to building a connector on new alignment. Improvements included in this alternate are:

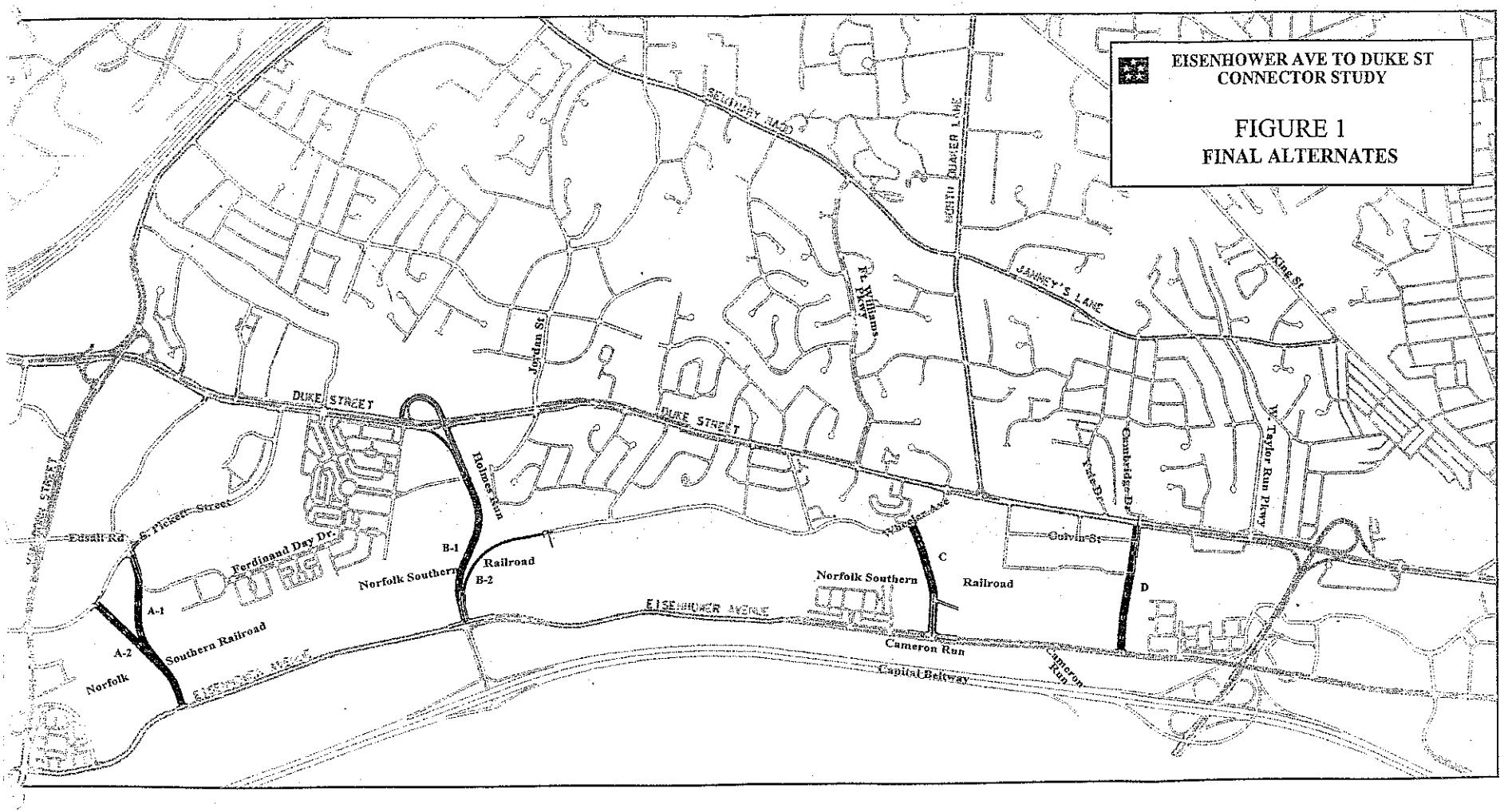
1. A grade-separated urban interchange at Van Dorn and South Pickett
2. A grade-separated urban interchange at Van Dorn and Edsall
3. Frontage roads along Van Dorn from Eisenhower to north of Edsall
4. At-grade intersection improvements at Van Dorn and Eisenhower
5. At-grade intersection improvements at Van Dorn and Duke
6. An additional eastbound lane on Duke between North Quaker and the existing lane onto southbound Telegraph
7. An additional southbound lane on Telegraph from Duke to I-95/495

During the course of this location re-study, all build alternates (A1, A2, B1, B2, C and D) were evaluated based on a typical roadway section with at most four travel lanes and a 10 foot multipurpose trail. Selection of this section for evaluation was based on projected 2020 traffic needs and consistency with the 1993 *Environmental Assessment Study*. If a "build" alternate is selected, following approval of environmental documentation a preliminary engineering study will evaluate typical sections with reduced number of travel lanes (i.e. three lanes with one reversible and two lanes).

Figure 1

Connector Alternates

11"x17" graphic showing the locations of all alternates


EISENHOWER AVE TO DUKE ST
CONNECTOR STUDY
FIGURE 1
FINAL ALTERNATES
SEMINARY ROAD
NORTH QUAKER LANE
JANNEY'S LANE
King St
Ft. Williams Pkwy
Jordan St
DUKE STREET
DUKE STREET
Holmes Run
Cambridge Dr
W. Taylor Run Pkwy
Edsall Rd
S. Pickett Street
Ferdinand Day Dr.
B-1
Norfolk Southern
Railroad
B-2
Wheeler Ave
C
Norfolk Southern
Railroad
Colvin St
D
A-1
A-2
Southern Railroad
Norfolk
EISENHOWER AVENUE
EISENHOWER AVENUE
Cameron Run
Cameron Run
Capital Beltway

5a

KEY FINDINGS AND OBSERVATIONS

During the 18-month re-study process, staff and the consultant team developed and provided the Task Force with considerable technical information, data and analysis results for their consideration in evaluating the alternatives for the Eisenhower-to-Duke Connector. These materials were grouped into five general categories for evaluation purposes based on the major areas of interest defined by the Task Force:

- Transportation Benefits and Impacts,
- Impacts to the Natural Environment,
- Socio-Economic Benefits and Impacts,
- Impacts on Cultural Resources, and
- Construction and Engineering Costs.

These technical materials were provided to the Task Force for consideration as referenced in the *Task Force Report* and documented in the *Technical Report*.

Up to its September 4, 2002 decision to adopt an alternate means of identifying its preferences among the connector alternatives and formulating its recommendations to Council, the Task Force developed and maintained a matrix summarizing the benefits and impacts of the various alternates. The relative magnitudes of these benefits and impacts were determined to be considerable, moderate or minimal based on criteria adopted by the group. Although not specifically used in their final decision-making process, the Task Force members individually considered these results in their voting among the alternates. The Task Force evaluation criteria and summary evaluation matrix are included in the Task Force report submitted to Council.

In an independent review and evaluation of the information, data and analysis results prepared for the Task Force, staff has developed the major findings presented in the remainder of this section based on our collective professional experience. Not all study findings are necessarily repeated in this report. For additional information, refer to the *Technical Report* and *Task Force Report*.

Connector Traffic Demand

The need for a connector and its benefits for other roadways in Alexandria are in part indicated by the amount of traffic it would serve and how much of that traffic would be attracted from other area roadways. Table 1 on the following page presents the projected 2020 average daily traffic (ADT) for each of the six build alternates and shows the sources of that traffic. The methodology for developing these projections is described in the *Technical Report*. The projected demands range from 21,000 (Alt. A2) to over

37,000 (Alt. B1) vehicles per day, indicating a significant amount of Alexandria-area travel would use a connector rather than other area roadways.

Table 1. 2020 Connector Traffic Demand

Roadway	2020 Average Daily Traffic (ADT)[1]					
	Alt. A1	Alt. A2	Alt. B1	Alt. B2	Alt. C	Alt. D
2020 ADT						
Connector	23,400	21,000	37,200	33,200	31,500	29,500
Reduction in 2020 ADT						
Van Dorn Street	12,000	12,000	11,400	8,300	4,300	4,300
Telegraph Road	1,100	1,100	6,000	4,000	13,200	12,000
Other Alexandria Roadways[2]	8,300	6,700	14,600	15,500	10,200	9,600
Other Roadways[3]	2,000	1,200	5,200	5,400	3,800	3,600

1. Average Daily Traffic (ADT) is the total 24-hour traffic volume during a typical weekday.
2. Route 1, Washington Street and Holland Lane.
3. I-395 and other roadways outside Alexandria.

Table 1 also shows the amount of traffic that each build alternate is projected to divert from Van Dorn Street, Telegraph Road and other Alexandria roadways. While each alternate affects individual roadways differently, the overall diversion from Alexandria roadways is significant, varying from 20,000 (Alt. A2) to over 30,000 (Alt. B1) vehicles per day. Also, 84 to 94 percent of the connector traffic is traffic that would otherwise travel on other Alexandria roadways. Only six to 16 percent of the connector traffic (1,200 to 5,400 vehicles per day) is attracted from non-Alexandria roads and represent "new" trips that are attracted to the City by the connector.

Reduction of Traffic on Adjacent Roadways

One of the primary objectives in building a connector is to relieve traffic congestion on Van Dorn Street and Telegraph Road by reducing the traffic demand on those roadways. Table 2 on the following page summarizes the effects of the alternates on 2020 daily traffic demands on these adjacent roadways.

These results show the combined 2020 traffic volume on Telegraph Road and Van Dorn Street is reduced by 10 to 14 percent by the various build alternates. In contrast, the No

Build with Improvements alternate increases the combined traffic demand on these roadways by approximately 11 percent.

Table 2. 2020 Van Dorn Street and Telegraph Road Traffic Demand

Alternate	2020 Average Daily Traffic (ADT) (vehicles per day)			
	Van Dorn	Telegraph	Total	% Change
No Build	58,700	63,200	121,900	N/A
No Build w/ Imp.	63,800	71,600	135,400	11%
Alternate A1	46,700	62,100	108,800	-11%
Alternate A2	46,700	62,100	108,800	-11%
Alternate B1	47,300	57,200	104,500	-14%
Alternate B2	50,400	59,200	109,600	-10%
Alternate C	54,400	50,000	104,400	-14%
Alternate D	54,400	51,200	105,600	-13%

By increasing connectivity and moving the street network toward a more grid-like pattern, drivers have more route-choice alternatives. In turn, their ability to move more easily between parallel roadways helps increase system efficiency by minimizing underutilized capacity. Without this connectivity, drivers are forced to stay on congested roadways, while nearby capacity is wasted. In areas such as Alexandria with a limited number of major arterial roadways, it is important from a system efficiency standpoint that these arterials be as interconnected as possible.

Utilization of Clermont Interchange

The Clermont Interchange is a facility with underutilized capacity and a transportation investment with unrealized return compared to other I-95 interchanges serving Alexandria (Van Dorn, Telegraph and Route 1). To reduce existing and future congestion at these interchanges, increased use of Clermont interchange is needed. The various connector alternates affect the projected traffic demand at Clermont interchange to significantly differing degrees. Table 3 on the following page presents the projected 2020 traffic demand at Clermont interchange for each of the study alternates.

Compared to the No Build Alternate, Alternates A1, A2, B1 and B2 increase the projected use of Clermont interchange by 30 to 85 percent. This additional demand served by Clermont interchange reduces traffic demand, and thereby congestion, at other Alexandria interchanges. The No Build with Improvements Alternate has the opposite effect, reducing use of Clermont interchange by over 30 percent. This unmet demand

would then be accommodated at other Alexandria interchanges, primarily Van Dorn Interchange as a result of the increased capacity which this alternate adds to Van Dorn Street.

Table 3. 2020 Traffic Demand at Clermont Interchange

Alternate	2020 ADT (vehicles per day)	% Change
No Build	25,400	N/A
No Build w/ Imp	17,600	-31%
Alternate A1	33,500	+32%
Alternate A2	33,500	+32%
Alternate B1	47,100	+85%
Alternate B2	43,100	+70%
Alternate C	26,500	+4%
Alternate D	26,500	+4%

Improved Traffic Flow on Area Roadways

A critical consideration in deciding whether to build a connector or any other roadway is its potential effects on traffic flow on nearby roadways. The associated changes in travel demand and traffic patterns can significantly traffic flow, levels of congestion and travel delay. The Task Force examined two operational impacts of the connector on area roadways, traffic delay and traffic queuing at key intersections.

Based on projected traffic demands, traffic simulation models were used to estimate the effects of the connector alternates on traffic delay at intersections along selected routes (Van Dorn Street, Duke Street, Eisenhower Avenue and Seminary Road/Janney's Lane) and within the overall study area (original and expanded) road network. Table 4 on the following page summarizes the results of these delay analyses.

These results show that all build alternates, including the No Build with Improvements can significantly reduce traffic congestion on nearby Alexandria arterials and the resulting travel delays at intersections and overall time for Alexandrians to travel through the study area.

Compared to the No Build alternate, total network delay is most reduced by Alternates B1 and B2 at 44 and 47 percent, respectively. The No Build with Improvements and C alternates reduce network delay by approximately 35 percent. Alternates A1/A2 and D provide the least reduction in network delay at less than 25 percent.

Table 4. 2020 Intersection Wait Time and Network Travel Delay

Location	Intersection Wait Time and Network Delay 2020[1] (seconds per vehicle)						
	No Build	No Build w/ Imp	Alts. A1/A2	Alt. B1	Alt. B2	Alt. C	Alt. D
	Average Intersection Wait Time[2,3]						
Eisenhower Avenue *at*							
Van Dorn Street	206	11	54	97	101	194	163
Clermont Avenue	112	122	87	86	119	137	118
Van Dorn Street *at*							
Mall Entrance	218	120	166	133	120	263	162
Edsall Road	120	102	203	98	99	96	97
S. Pickett Road	116	43	196	80	92	123	132
Duke Street *at*							
South Pickett Street	26	29	15	32	35	25	38
N. Pickett/Cameron	17	17	19	15	18	17	20
Jordan Street	95	31	23	18	18	19	16
North Quaker Lane	87	30	36	38	26	34	31
South Quaker Lane	15	17	15	19	18	19	16
Sweeley Street	53	30	44	43	50	34	41
Cambridge Road	70	15	33	50	40	42	31
West Taylor Run	21	11	16	13	11	11	7
Seminary Road/Janney's Lane *at*							
Jordan Street	38	15	27	17	18	22	17
Ft. Williams Parkway	14	11	7	7	9	7	9
North Quaker Lane	34	45	62	46	45	37	35
Yale Drive	50	33	61	41	42	61	35
	Average Network Delay[4]						
Overall Network	336	219	284	188	177	228	256

1. Weighted averages based on affected traffic volume.
2. Includes both traffic and signal control delay.
3. Intersection signal timings were optimized for each alternate.
4. Average total delay for all vehicles traveling through the study area regardless of route and number of traffic signals encountered.

All build alternates significantly reduce intersection delays. On Duke Street, all build alternates reduce delay 50 percent or more. No Build with Improvements reduces delay slightly over 60 percent, primarily due to the increased capacity of Duke Street with this alternate. On Van Dorn, intersection delays are reduced 45 percent by No Build with Improvements, approximately 40 percent by Alternates B1 and B2, 30 percent by

Alternate D, and less than 10 percent by Alternates A1, A2 and C. Intersection delays on Eisenhower Avenue are reduced approximately 70 percent by Alternates A1, A2 and No Build with Improvements, 50 to 60 percent by Alternates B1 and B2, 37 percent by Alternate D, and 25 percent by Alternate C.

The second operational impact considered was the length of traffic queues or back-ups at major intersections. As traffic volumes increase, intersections are usually the first locations at which congestion begins to develop. With the onset of congestion, the heavier traffic movements begin to experience greater delay and often back-up to the point of interfering with traffic movement at adjacent intersections.

The Task Force was interested in the effects of the connector alternates on traffic queues during peak periods at five specific locations. These queue lengths were estimated using traffic simulation models and the results are presented in Table 5.

Table 5. 2020 Traffic Queue Reduction at Selected Intersections

Intersection	Direction	Alternate	Queue Length During Peak Period (feet)				
		No Build	No Build w/ Imp.	Alts A1/A2	Alts B1/B2	Alt C	Alt D
Duke at Daingerfield	EB	1,542	1,542	1,400	1,141	600	600
North Quaker at Duke	SB	1,746	216	497	429	300	290
Van Dorn at Edsall	SB	580	104	579	535	348	524
Van Dorn at South Pickett	SB	176	25	164	112	143	179
Duke at Telegraph	EB	3,540	1,180	2,222	1,130	1,040	1,010

1. *EB = Eastbound, SB = Southbound*
2. *All values are for PM peak period, except Duke at Daingerfield which is for AM peak period.*

As can be seen from these results, with the No Build alternate, significant traffic queues can be expected to develop at key intersections in 2020. Queues of one-half mile or more are projected to be recurring conditions at three of the five intersections. Overall, the build alternates and No Build with Improvements will reduce the congestion reflected by this queuing. At these locations, eastbound Duke at Daingerfield is the least improved by any alternate. This is due to capacity restrictions on Duke Street east of this intersection. The projected queue length reductions for the No Build with Improvements alternate are primarily due to the increased capacity it produces on Duke and Van Dorn Streets. For the build alternates, the queue reductions result from reduced demand.

Reducing congestion and delay in street network is important for several reasons. First, roadways operate at maximum capacity when vehicles are moving smoothly at moderate speed (typically 25 to 35 mph). As congestion increases, speeds decrease and the volume of traffic moved also decreases. As congestion continues to increase, traffic queues begin to develop and a "breakdown" condition occurs. Once this happens, it normally takes considerably more time for congestion to clear as demand decreases than it did to develop initially. During these periods, the network's efficiency and its ability to carry traffic decrease considerably.

Congestion is a root cause of "cut-through" traffic. Given equal choice, most drivers choose to travel on the higher capacity arterials rather than neighborhood residential streets. However, as increasing delay leads to driver frustration, alternate routes are selected. Often these involve travel through neighborhoods on residential streets. Reducing congestion and delay on arterials minimizes neighborhood cut-through traffic.

Public Safety Considerations

Currently, there are no fire or EMS facilities located in the Eisenhower Valley. Stations 207 (South Quaker) and 208 (Paxton Street), along with other area units that provide these public safety services to the valley, are limited in their options for routing responding personnel and equipment. EMS cases requiring medical treatment must be transported to facilities outside the valley with limited routing alternatives. The Alexandria Police Department, located in the eastern end of the valley, is similarly limited when dispatching officers from its headquarters in the Public Safety Center.

An important benefit that a new connector would provide is an additional point of access to and egress from Eisenhower Valley that would allow more direct routing options for responding emergency personnel and corresponding reductions in travel distance and response time. In addition, any reductions in general roadway congestion and delay would translate to equal or greater reductions in public safety emergency response times.

In order to evaluate the potential benefits of the connector alternates on emergency response times, traffic simulations were conducted for fire/EMS response to incidents at centrally located points on Eisenhower Avenue within the primary response areas for Stations 207 and 208. The results of these simulated incident responses indicate that all build alternates provide significant reductions in emergency response times. Alternates A1, A2, B1, B2 and D reduced response times by approximately two minutes during off-peak travel periods. Alternate C reduced response time by over three minutes. During peak traffic periods, reductions in response times will be greater.

Anecdotal information provided by Alexandria Police Department indicated that any general reduction in traffic congestion and delay would provide greater reductions in their emergency response times. In addition, during congestion, it is not uncommon for responding officers to be forced to use the multipurpose trail along Cameron Run to exit Eisenhower Valley and access Duke Street through the Wakefield/Tarlton neighborhood. An additional roadway connection between Eisenhower Avenue and Duke Street would eliminate the need for this type of measure.

It should also be noted that the possible location of a fire/EMS facility in Eisenhower Valley would not negate the potential benefits of improved access offered by the connector alternates. Emergency response, particularly for fire, regularly requires response from multiple units due to limitations of personnel and equipment, and the availability of specialized equipment that is not available in all locations. In addition, mutual-aid agreements among adjacent jurisdictions frequently necessitate responses outside a unit's primary response area.

Impacts to Neighborhoods

Existing cut-through traffic on neighborhood residential streets north of Duke Street was measured using a license plate survey during May 2002. The survey was conducted in the expanded study area, bounded by Duke Street, Jordan Street, Seminary Road/Janney's Lane and West Taylor Run Parkway. This survey revealed that:

1. The volume of cut-through traffic on residential streets (West Taylor Run, Cambridge, Yale and Fort Williams) was low, generally below 200 vehicles during the peak hour;
2. The volume of cut-though traffic on Jordan Street, a major collector, was approximately 350 vehicles during the peak hour.
3. Existing cut-through volumes were low and treatable by traffic calming measures.

Potential neighborhood impacts of increased cut-through traffic in 2020 were evaluated for the Task Force. For this evaluation, a microscopic traffic simulation model with dynamic route selection capability was used to measure potential traffic spillover onto residential streets during the evening peak traffic period for the No Build and all build alternates. The results of this analysis are presented in Table 6 on the following page for selected roadways.

Table 6. 2020 Potential Peak Hour Cut-Through Traffic Volumes

Street	Neighborhood Cut-Through Traffic (vehicles per hour)					
	No Build	No Build w/ Imp.	Alts. A1/A2	Alts. B1/B2	Alt. C	Alt. D
West Taylor Run	430	780	310	350	200	420
Cambridge[1]	130	20	120	110	80	40
Fort Williams	120	80	190	190	50	40
Jordan	290	340	500	360	450	140

1. Alternate D includes prohibition of through movements between connector and Cambridge.

These results indicate that increasing congestion on Duke Street may result in some future increases in neighborhood cut-through traffic. For the six build alternates, the potential for cut-through traffic on residential neighborhood streets is not increased, except for Fort Williams Drive under Alternates A1, A2, B1 and B2. However, this increase is modest and readily treatable with traffic calming measures. As a major collector, Jordan Street may experience some modest increase in cut-through traffic with the build alternates. In view of the character and function of Jordan Street, this potential for increased cut-through traffic is not significant.

Service to Non-Alexandria Traffic

The potential increase in non-Alexandria traffic (i.e. traffic that does not originate in or is destined to locations in the City) that would result from a connector was considered at two locations, the connector itself and on North Quaker Lane below its intersection with King Street and Braddock Road. Table 7 on the following page presents the results of this evaluation.

These results show that only 30 to 38 percent of the traffic projected to use the connector would be non-Alexandria traffic. In comparison, on North Quaker Lane – a similar north/south arterial roadway – approximately 45 percent of the existing traffic is non-Alexandria traffic. The differences among the alternates in this regard are not considered to be significant.

On North Quaker Lane, 45 percent of the existing demand is non-Alexandria travel. As Alexandria-based travel continues to grow, this percentage is projected to decrease to approximately 34 percent by 2020. The connector alternates are not expected to increase the proportion of non-Alexandria travel on North Quaker. Changes in the volume of non-Alexandria travel on North Quaker are expected to range between –200 and +1,600

vehicles per day. During peak travel periods, this change is estimated to be less than 150 vehicles per hour.

Table 7. External Traffic on Connector and North Quaker Lane

	Existing	Alternate 2020					
		No Build	No Build w/ Imp.	Alts A1/A2	Alts B1/B2	Alt C	Alt D
Duke-to-Eisenhower Connector							
External to Study Area	N/A	N/A	N/A	57%	67%	76%	66%
External to City	N/A	N/A	N/A	35%	38%	33%	30%
North Quaker Lane							
External to Study Area	N/A	43%	44%	43%	44%	43%	43%
External to City	45%	34%	35%	34%	35%	34%	33%
Average Daily Traffic Volume	22,000	28,500	30,200	28,500	32,900	31,500	32,000
Volume External to City	9,900	9,700	10,700	9,800	11,500	10,600	10,600
Percent Change	Base	-2%	+8%	-1%	+16%	+7%	+7%

The" study area" is both the original and extended study areas as defined in the Technical Report.

Financial Considerations

The alternates under consideration have financial implications that were, in part, considered by the Task Force. These implications were (1) the impact of the alternates on commercial properties and (2) estimated right-of-way and construction costs.

The potential impact on commercial property varies significantly among the alternates. Table 8 presents current assessed value of commercial properties that will be impacted by each alternate and the City's current property tax revenue for those properties.

The potential impact of the No Build with Improvements alternate is particularly significant. Over $22 million of commercial will be impacted, with an annual loss of tax revenue to the City up to approximately $0.25 million. Alternates A1 and A2 impact lesser amounts of commercial property and have corresponding lower potential losses of tax revenue. The remaining alternates, B1, B2, C and D, impact little or no commercial

property. Alternates B1, B2 and C impact City-owned properties with no tax revenue implications. Alternate D impacts only a very limited amount of commercial property.

Table 8. Impact to Commercial Property

Alternate	Commercial Property Impacted		
	Number of Parcels	Assessed Value[1]	Annual Tax Revenue
No Build	0	0	0
No Build with Improvements	9	$ 22,242,000	$ 240,200
Alternate A1	8	7,608,000	78,300
Alternate A2	9	7,258,000	74,500
Alternate B1	0	0	0
Alternate B2	0	0	0
Alternate C	4	14,810,000	0[2]
Alternate D	3	513,000	5,500

1. *Assessments rounded to nearest $1,000. Tax revenues rounded to nearest $100.*
2. *Full parcel assessments only. Does not reflect partial impacts or takings.*
3. *Alternate C impacts City-owned properties only.*

A second Task Force consideration was the cost of acquiring the necessary right-of-way and constructing the build alternates. These costs, estimated based on the conceptual plans developed for each alternate, are presented in Table 9.

Table 9. Estimated Construction Costs

Alternate	Estimated Cost[1]		
	Right of Way[2]	Construction[3]	Total
No Build	0	0	0
No Build with Improvements	$ 17,000,000	$ 38,000,000	$ 55,000,000
Alternate A1	8,100,000	26,900,000	35,000,000
Alternate A2	16,600,000	19,000,000	35,600,000
Alternate B1	500,000	33,000,000	33,500,000
Alternate B2	500,000	35,200,000	35,700,000
Alternate C	3,000,000	15,700,000	18,700,000
Alternate D	5,800,000	19,000,000	24,800,000

1. *All costs in 2002 dollars.*

2. *Right-of-way includes land ($1,000,000 per acre), value of improvements and relocation.*
3. *Construction costs include 25% contingency.*

The No Build with Improvements is the most costly alternate with highest right-of-way and construction costs. Conversion of Van Dorn Street to a freeway-type facility is the largest cost element for this alternate. Widening Duke Street and Telegraph Road are lesser costs, and the remaining intersection improvements are relatively minor cost elements. Alternates A1, A2, B1 and B2 have similar total costs, ranging between $33 and $36 million each. The respective right-of-way and structure (bridge) costs are the primary variants among these alternatives. Alternatives C and D are the lowest cost options at $18.7 and $24.8 million, respectively.

Summary of Benefits and Impacts

Re-study of the location of an Eisenhower-to-Duke Connector brought forward a considerable amount of information as the basis for a decision, as does any corridor location study. In order to synthesize this information in a more useful format for selected preferred alternates, a summary evaluation matrix was created by the Task Force. Staff used a similar approach, and adopted the format and most of the information in the Task Force matrix to develop a summary of the many decision issues. The staff-generated summary matrix is presented in Table 10 on the following page for reference.

This summary matrix identifies the evaluation criteria considered by staff and an assessment of the relative degree (High, moderate or low) of benefit or impact of each criterion for each alternate.

Legend
○ Significant Benefit / Minimal Impact
◉ Moderate Benefit / Moderate Impact
● Minimal Benefit / Significant Impact

Table 10. Summary of Benefits and Impacts

Criteria	Alternate							
	No Build	No Build w/ Imp	A1	A2	*B1*	B2	C	D
Traffic Service								
ADT reduction - Telegraph	●	●	●	●	◉	◉	○	○
ADT reduction – Van Dorn	●	●	○	○	○	◉	●	●
Balanced interchange demand	●	●	○	○	○	○	◉	◉
Delay reduction - Network	●	◉	◉	◉	○	○	◉	◉
Delay reduction – Van Dorn	●	○	●	●	○	○	◉	◉
Delay reduction - Duke	●	◉	◉	◉	◉	◉	◉	◉
Service to East Eisenhower	●	◉	●	●	●	●	◉	○
Service to external traffic	◉	◉	○	○	◉	◉	◉	◉
Potential for cut-through traffic	●	●	◉	◉	◉	◉	○	○
Completion of roadway grid	●	●	◉	◉	○	○	◉	◉
Natural Environment								
Wetland impacts	○	○	○	○	○	○	○	○
Permit challenges	○	◉	●	◉	◉	◉	○	○
Forest impacts	○	◉	◉	○	◉	◉	○	○
Floodplain impacts	○	○	◉	●	◉	●	○	○
RPA and stream crossings	○	○	●	●	●	●	○	○
Socio-Economic								
Public safety response time	●	●	◉	◉	○	○	○	○
Community facilities served	●	●	○	○	○	○	○	○
Trails connected	●	●	○	○	○	○	○	○
Impacts to park land	○	○	●	○	●	●	○	○
Impacts to park activities	○	○	◉	○	●	●	○	○
Proximity to noise receptors	○	○	○	○	◉	◉	◉	◉
Connectivity to Eisenhower	●	◉	●	●	○	○	○	○
Residential takings	○	●	○	○	○	○	○	○
Commercial takings	○	●	◉	●	○	○	◉	◉
Cultural Resources								
Historic/prehistoric resources	○	◉	◉	◉	◉	◉	◉	◉
Archaeological sites	○	○	○	○	◉	◉	◉	○
Listed/eligible historic sites	○	○	○	○	○	○	○	○
Construction								
Construction cost	○	●	◉	○	●	●	○	○
Right of way cost	○	●	◉	●	○	○	◉	◉
Disruption of existing traffic	○	●	◉	◉	○	○	◉	○

CONCLUSIONS AND RECOMMENDATIONS

Based on review and consideration of information developed for the Task Force and related materials, staff have reached the following conclusions and recommendations regarding the Eisenhower-to-Duke Connector.

Ranking of Alternates

As guidance in formulating conclusions and a final recommendation, staff developed an alternatives ranking chart similar to what the Task Force originally adopted for its decision-making process. This chart was developed by assigning relative weights to each evaluation criterion in the summary matrix and ranking the relative benefit or impact of each alternate on a scale of zero to ten. The total weights of the benefits and impacts criteria were each limited to 100 points each, and within each category, the relative weights of the individual criteria were assigned. The total "points" assigned to an individual alternate indicates its overall ranking, with higher point totals indicating higher overall rankings. The final ranking matrix is presented in Table 11 on the following page for reference. It should be noted that this ranking process is intended to provide guidance in reaching a final decision, rather than a definitive decision in and of itself.

As seen from the results of this ranking process, the No Build and No Build with Improvements alternates are the lowest ranked alternates. Neither is seen as a desirable course of action in comparison with the build alternates. Among the build alternates, A1 and A2 are the lower ranked alternates. These alternates, while having some desirable characteristics, do not provide a strong candidate solution to Alexandria's transportation needs. Alternates B1, B2, C and D are comparably ranked. Although the B alternates are higher ranked from a traffic service standpoint, they have more significant impacts than Alternates C and D, resulting in comparable overall rankings. The small differences among the overall rankings for Alternates B1, B2, C and D are not seen as significant decision differences.

Table 11. Ranking of Alternatives

Criteria	Criteria Weight	Alternate							
		No Build	No Build w/ Imp	A1	A2	B1	B2	C	D
Traffic Service Benefits	65	**10**	**147**	**260**	**262**	**477**	**477**	**305**	**245**
ADT reduction - Telegraph	6	0	-3	2	2	5	4	8	7
ADT reduction – Van Dorn	6	0	-3	9	9	8	7	3	3
Balanced interchange demand	12	0	0	5	5	10	9	2	2
Delay reduction - Network	12	0	5	2	2	8	9	5	3
Delay reduction – Van Dorn	5	0	9	0	0	7	7	3	3
Delay reduction - Duke	6	0	7	7	7	5	7	7	4
Service to East Eisenhower	4	0	5	2	2	4	4	5	6
Service to external traffic	2	5	0	8	9	3	3	5	5
Potential for cut-through traffic	4	0	4	5	5	6	6	7	7
Completion of roadway grid	8	0	0	3	3	9	9	5	3
Socio-Economic Benefits	35	**0**	**35**	**136**	**136**	**244**	**262**	**248**	**250**
Public safety response time	16	0	0	5	5	8	8	9	8
Community facilities served	6	0	0	3	3	4	5	4	7
Trails connected	6	0	0	4	4	6	8	4	4
Connectivity to Eisenhower	7	0	5	2	2	8	8	8	8
Natural Environment Impacts	23	**230**	**190**	**110**	**140**	**120**	**110**	**230**	**230**
Wetland impacts	7	10	10	10	10	10	10	10	10
Permit challenges	2	10	5	0	5	5	5	10	10
Forest impacts	6	10	5	5	10	5	5	10	10
Floodplain impacts	2	10	10	5	0	5	0	10	10
RPA and stream crossings	6	10	10	0	0	0	0	10	10
Socio-Economic Impacts	37	**370**	**290**	**245**	**365**	**198**	**185**	**286**	**328**
Impacts to park land	8	10	10	3	10	1	0	10	10
Impacts to park activities	8	10	10	8	10	0	0	10	10
Proximity to noise receptors	5	10	10	9	9	6	5	6	8
Residential takings	8	10	10	10	10	10	10	10	10
Commercial takings	8	10	0	4	10	10	10	2	6
Cultural Resource Impacts	17	**170**	**140**	**140**	**140**	**115**	**115**	**115**	**140**
Historic/prehistoric resources	6	10	5	5	5	5	5	5	5
Archaeological sites	5	10	10	10	10	5	5	5	10
Listed/eligible historic sites	6	10	10	10	10	10	10	10	10
Construction Costs and Impacts	23	**230**	**0**	**152**	**120**	**169**	**168**	**152**	**137**
Construction cost	8	10	0	8	8	5	4	8	7
Right of way cost	8	10	0	4	0	10	10	4	4
Disruption of existing traffic	7	10	0	8	8	7	8	8	7
Total Points		**1010**	**802**	**1043**	**1163**	**1323**	**1317**	**1336**	**1330**

Conclusions

Based on our independent review of Eisenhower-to-Duke Connector issues, staff has reached the following conclusions.

Should the City proceed with design and construction of a connector?

The City should proceed with a connector between Eisenhower Avenue and Duke Street because:

1. A connector will improve traffic movement on existing roadways (Van Dorn Street, Telegraph Road, Duke Street and Eisenhower Avenue). This will in turn:
    - Make travel in the area easier for Alexandrians.
    - Reduce traffic congestion and delay in the Eisenhower Valley area.
    - Result in less through traffic in the neighborhoods, especially when combined with neighborhood traffic mitigation/calming measures.

2. A connector improves connectivity between two major arterials (Eisenhower and Duke).
    - It provides a needed additional point of access to and egress from Eisenhower Valley.
    - It helps create a roadway grid system that will increase the efficiency of existing roadways.
    - Typically, connectors between two parallel arterials occur approximately one mile apart. In this case, the distance between connectors is 3.5 miles.

3. It enhances public safety in the area.
    - It provides additional routing options for responding police, fire and emergency medical vehicles and personnel.
    - It reduces response time for units dispatched to and from Eisenhower Valley.
    - It eliminates the need for responding units to use non-roadway points of access and egress.
    - Locating new facilities in Eisenhower Valley will help the problem, but not solve it. Mutual-aid needs will continue to necessitate travel to and from Eisenhower Valley. Fire units in the valley will provide back-up response for incidents outside the valley and EMS must be able to efficiently transport patients to area hospitals.

4. It protects residential neighborhoods by encouraging vehicles to remain on the major roadways.
   - Traffic intrusion into residential neighborhoods results primarily from delay and congestion on the major roadways.
   - A connector reduces delay and congestion on the major roadways and, in most cases, the potential for "cut-through" traffic on residential streets.

5. It relieves current and future congestion at the Telegraph Road and Van Dorn Street interchanges, helping to avoid major improvements to these interchanges.
   - Use of the Clermont interchange is increased significantly.
   - Demand at the Telegraph Road and Van Dorn Street interchanges is substantially reduced.

6. It supports the economic strength of Alexandria by responding to transportation needs in Eisenhower Valley.
   - An additional access point is created for Eisenhower Valley.
   - Movement between Eisenhower Valley and the rest of Alexandria is increased.
   - Residential, employment and social/recreational opportunities are more accessible.

7. It does not attract a significant amount of new traffic to Alexandria roadways, nor does it increase the amount of traffic "cutting through" Alexandria.

Recommendations

As a result of this re-study, staff recommends the following with regard to the Eisenhower-to-Duke Connector:

1. That the No Build alternate not be selected. It simply fails to address Alexandria's current or future transportation needs.

2. That the No Build with Improvements alternate not be selected. This alternate calls for major infrastructure investments in a heavily traveled corridor (Van Dorn Street) that does not materially benefit Eisenhower Valley, the City or, frankly, Alexandrians. The reality of this alternate is the conversion of Van Dorn Street to Van Dorn Freeway. With multiple grade-separated interchanges and frontage roads to serve local traffic, Van Dorn will become a Beltway spur into and through Alexandria.

3. That Alternate B1 be selected as the preferred build alternate. This alternate:
   - Provides the best overall traffic service.
   - Is among the highest ranked alternates for overall benefits and impacts.
   - Materially improves public safety accessibility and response times.
   - Creates a better roadway grid system being located most centrally between Telegraph and Van Dorn.

4. That Alternate D be selected as the "second choice" build alternate. This recommendation stems from the impacts of Alternate B1 on Ben Brenman Park. Alternate B1 will require conversion of approximately 3.5 acres of activity area to roadway use and necessitate reconfiguration and/or relocation of some park activities. Although this impact can potentially be mitigated with acquisition of additional property for park expansion and reorganization of some park activities, this may not be sufficient to secure the necessary state or federal approvals of Alternate B1. Because a connector roadway is needed and because Alternate B1 may prove not to be feasible, staff recommends that Alternate D be selected as a backup build alternate.

5. That staff be authorized to work with VDOT to begin the next phase of this project, which is the preparation of the necessary environmental documents and securing of all required approvals of the selected alternate.

Prepared by: Richard J. Baier, P.E., Director
Transportation and Environmental Services
Thomas H. Culpepper, Ph.D., P.E., Deputy Director
Transportation and Environmental Services

Exhibits 1 through 7

**Plan view layouts of alternates,
including No Build with Improvements**

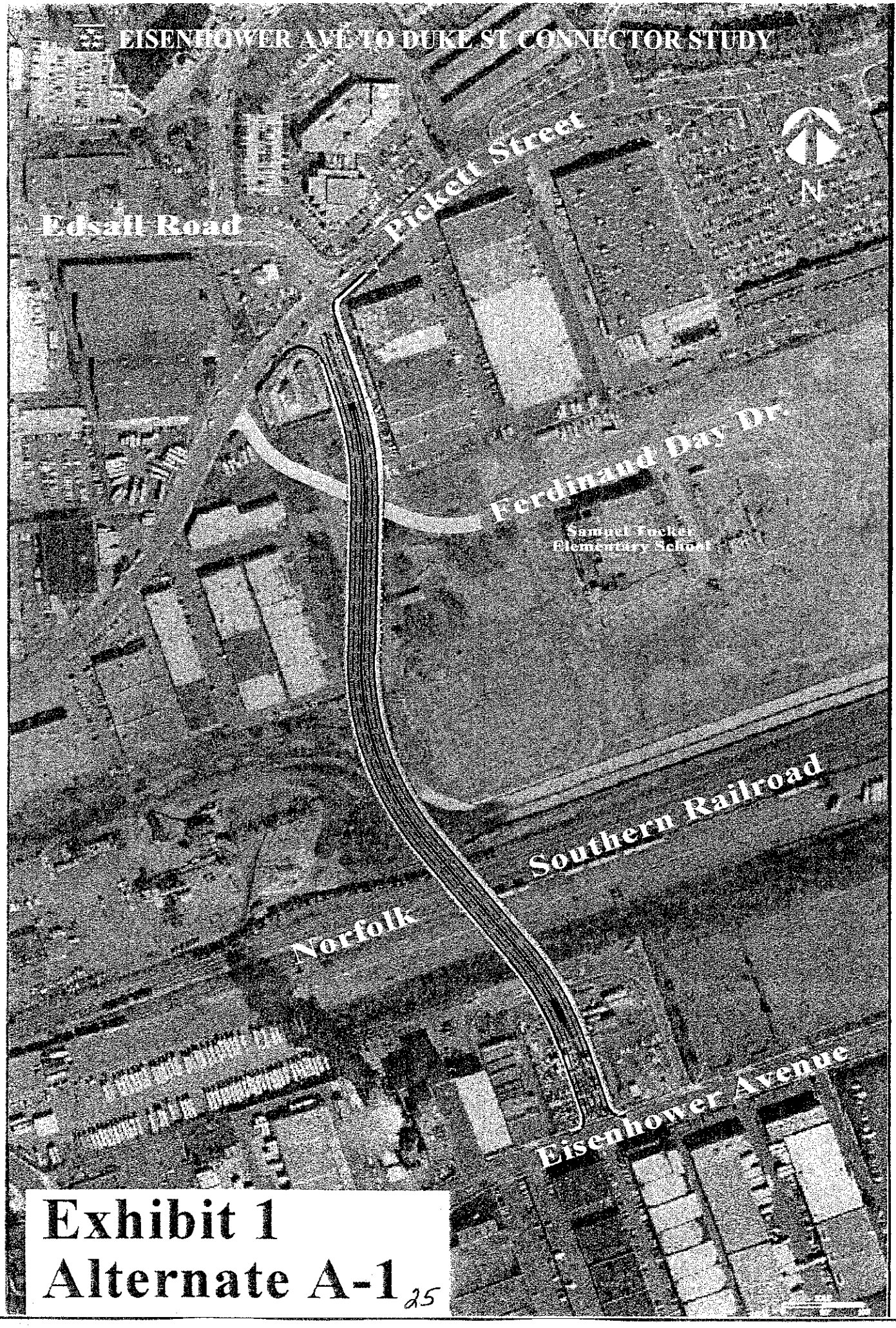


Exhibit 1
Alternate A-1

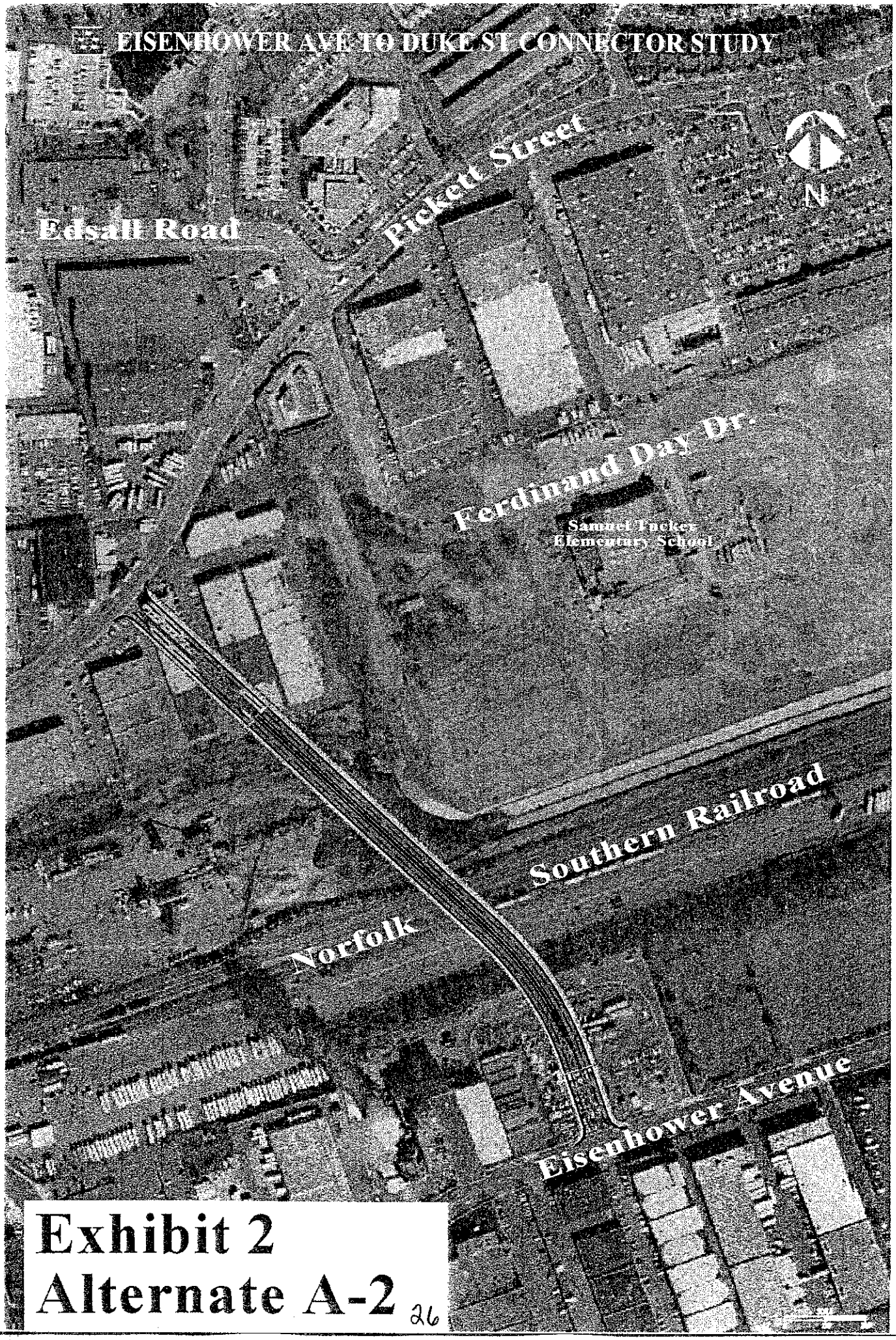


Exhibit 2
Alternate A-2

26

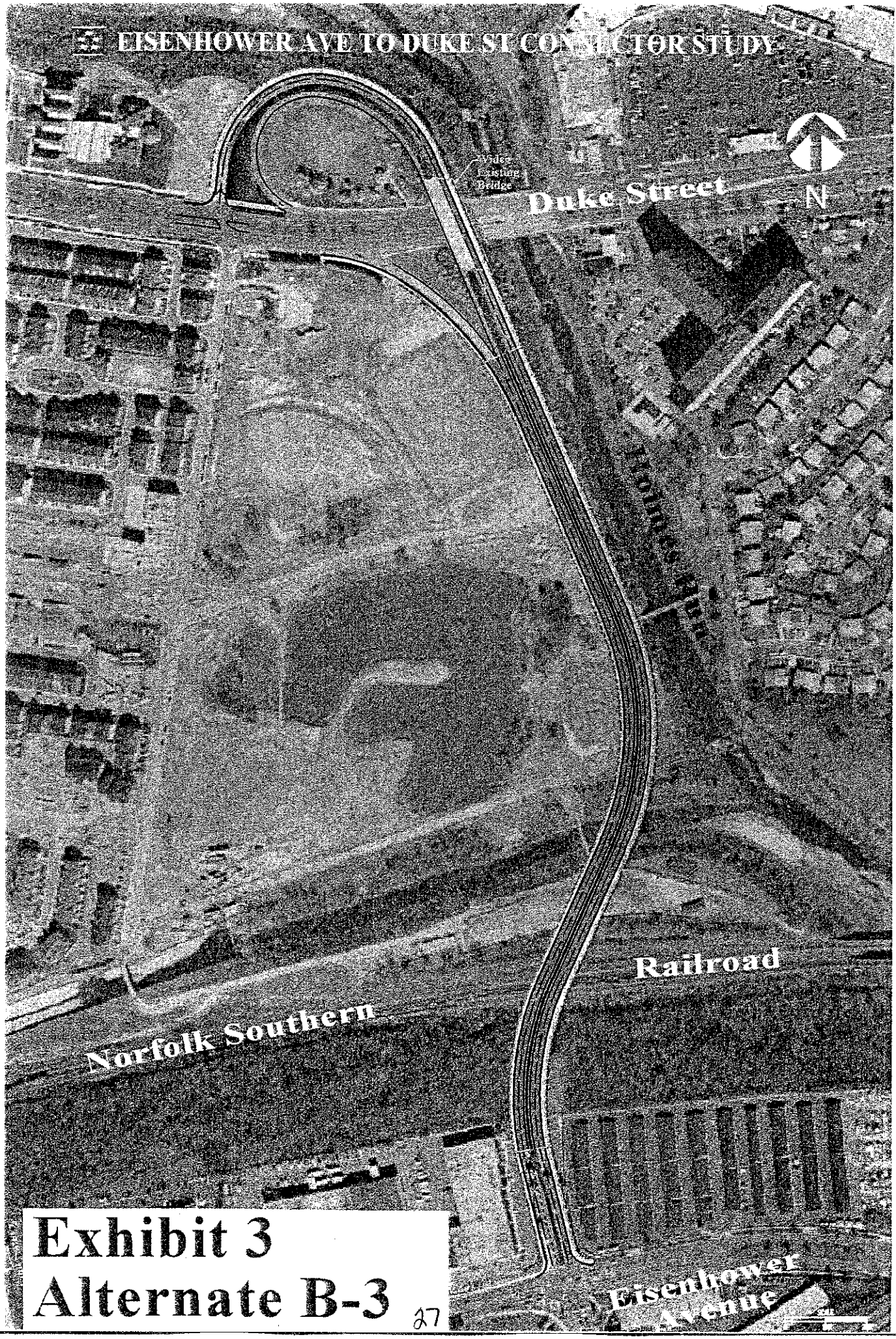


Exhibit 3
Alternate B-3

27

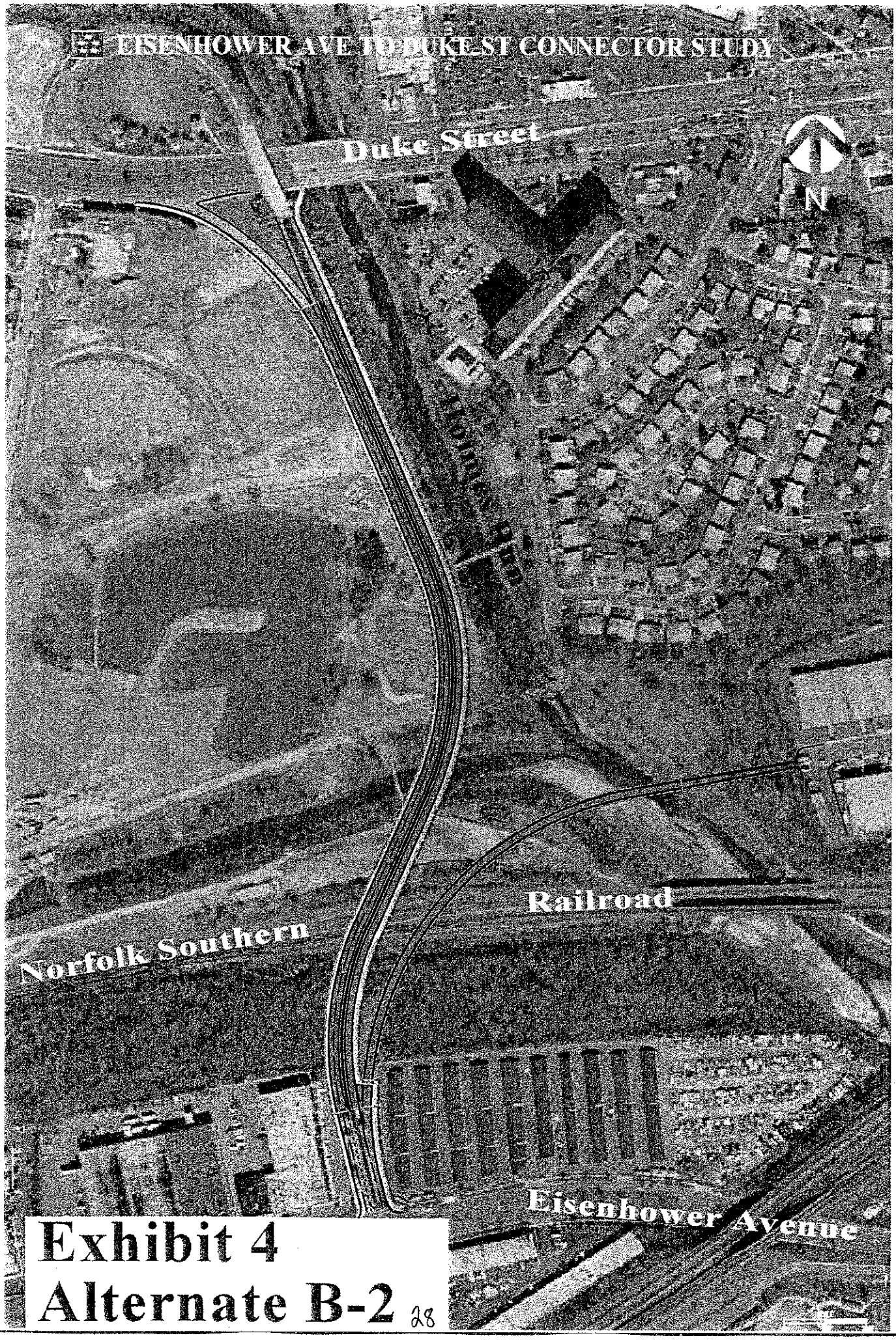


Exhibit 4
Alternate B-2

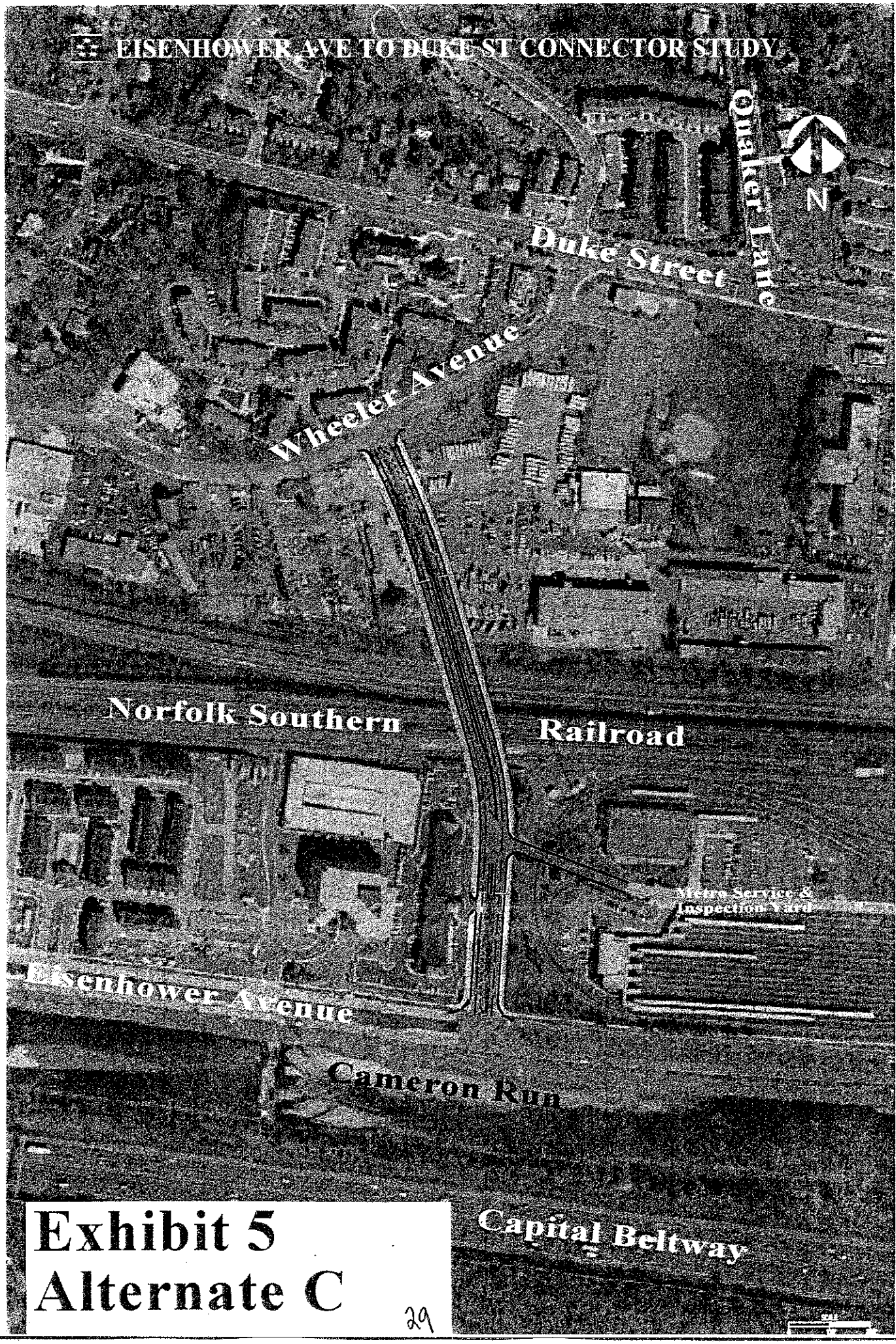


Exhibit 5
Alternate C

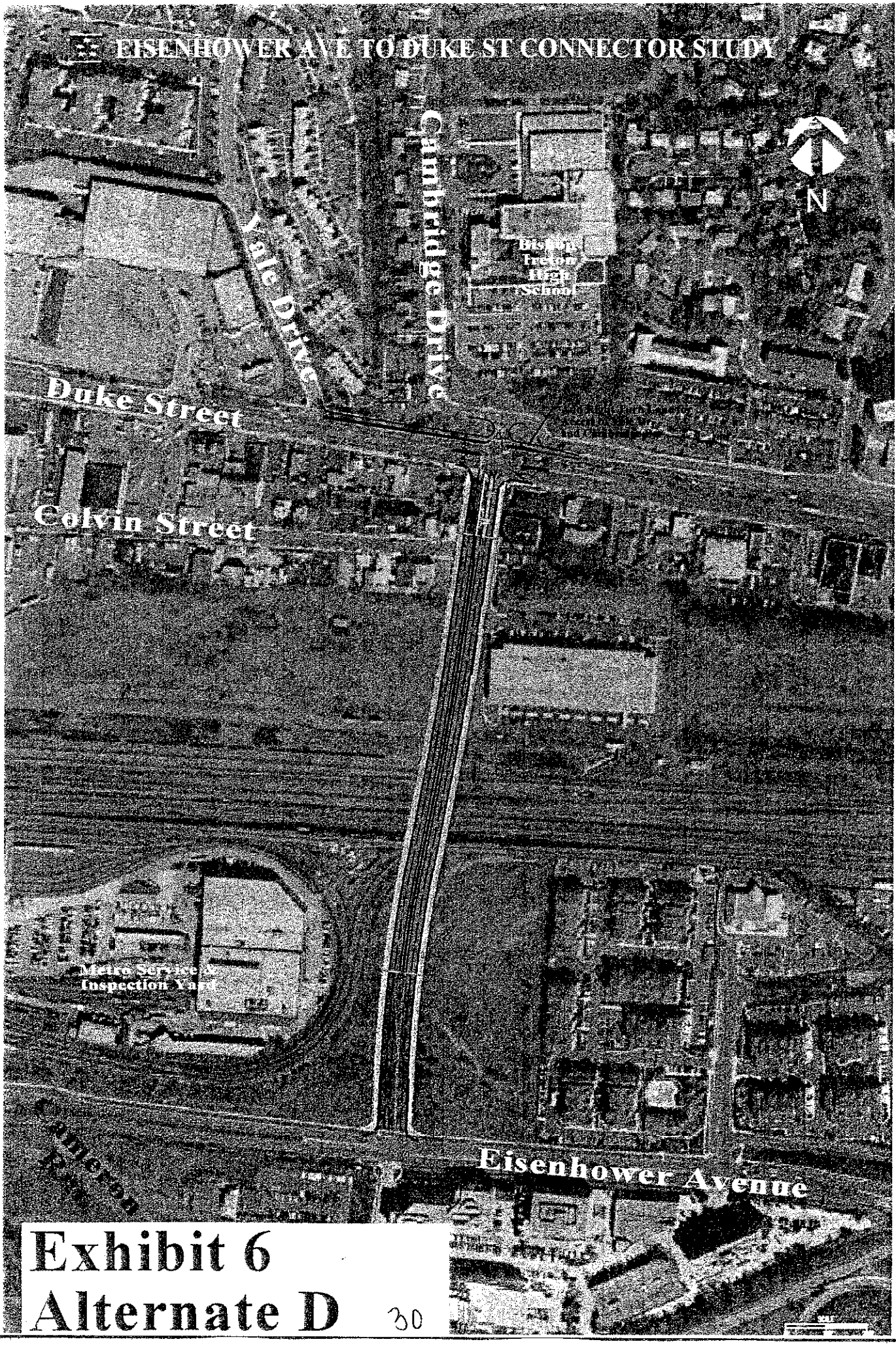


Exhibit 6
Alternate D

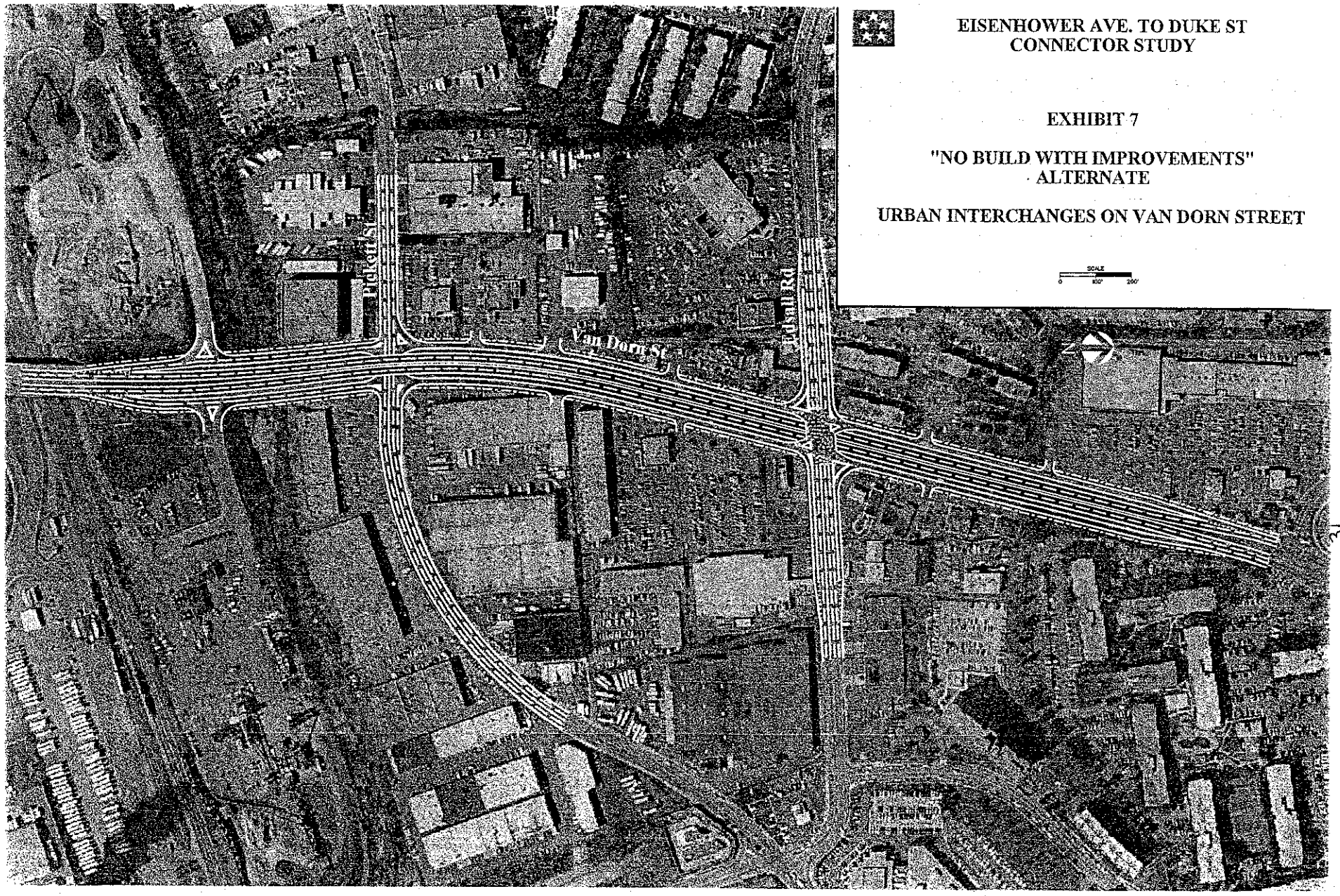
30

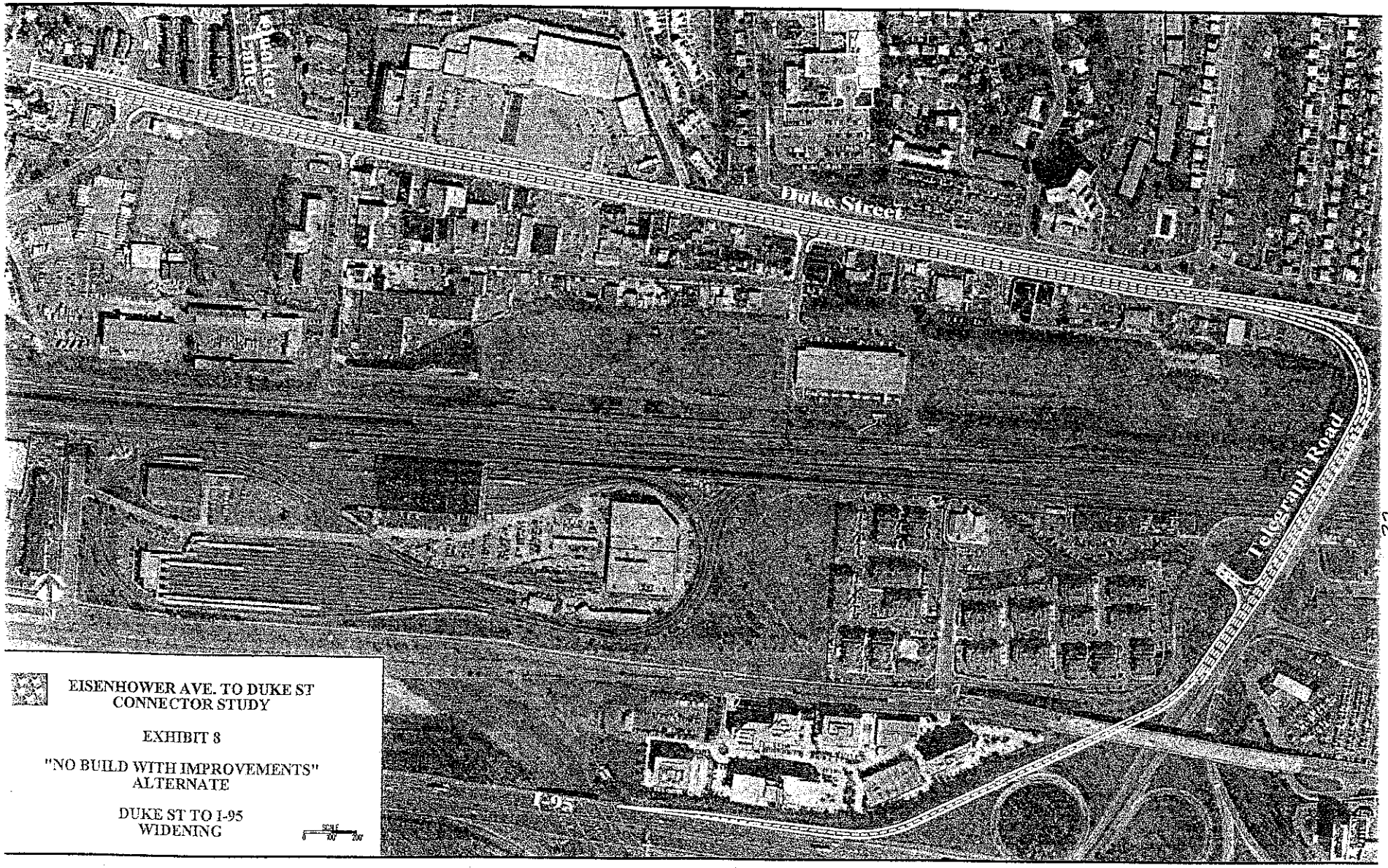
EISENHOWER AVE. TO DUKE ST
CONNECTOR STUDY

EXHIBIT 7

"NO BUILD WITH IMPROVEMENTS"
ALTERNATE

URBAN INTERCHANGES ON VAN DORN STREET





EISENHOWER AVE. TO DUKE ST
CONNECTOR STUDY

EXHIBIT 8

"NO BUILD WITH IMPROVEMENTS"
ALTERNATE

DUKE ST TO I-95
WIDENING

SCALE
0 100' 200'

Attachment 8

Eisenhower Avenue-To-Duke Street Connector Study

Task Force Report

October 8, 2002

Task Force Background

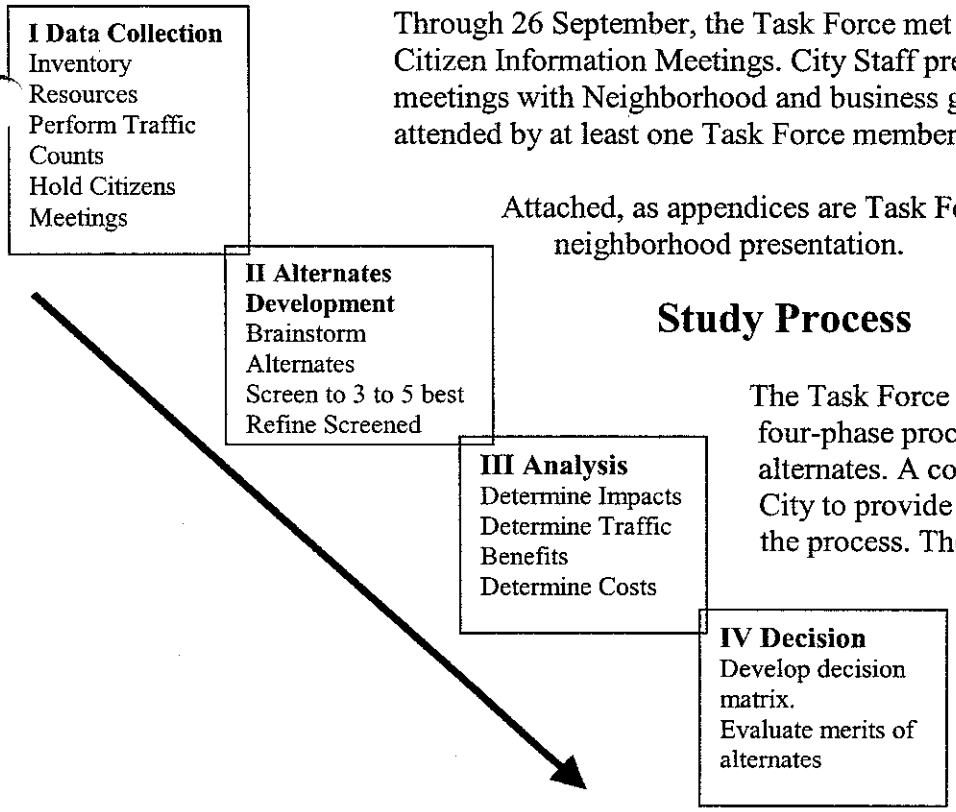
The City Council established the ad hoc Eisenhower Avenue to Duke Street Task Force in March 2001 with the directive to 1) Review Alternative Five of the 1993 Final Environmental Assessment 2) Explore other feasible alternative locations and 3) Explore a no-build alternative. The Task Force was led by Mayor Donley and Councilwoman Pepper and consisted of 9 members.

In May 2002, the Council extended the term of the Task Force and expanded its membership to 14 members to add representation from neighborhoods north of Duke Street. The resolution directed the Task Force to use objective criteria to select its top two build options and its top no-build option, while considering the traffic effects north of Duke Street.

Through 26 September, the Task Force met 13 times and participated in two Citizen Information Meetings. City Staff presented at over 30 additional meetings with Neighborhood and business groups; most of which were attended by at least one Task Force member.

Attached, as appendices are Task Force minutes and the most recent neighborhood presentation.

Study Process



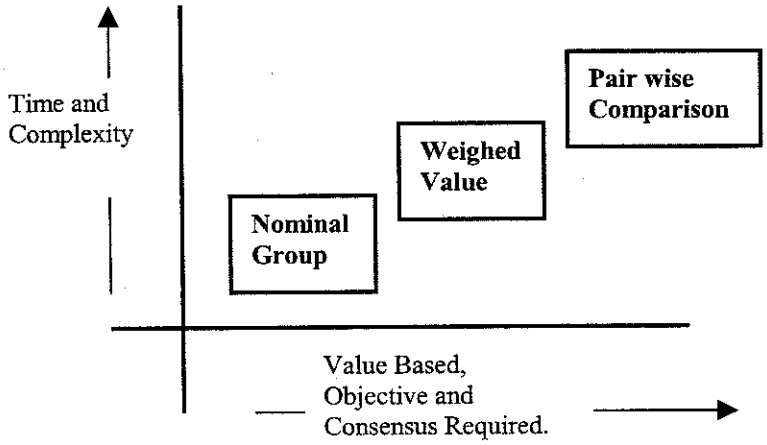
The Task Force and City Staff went through a four-phase process to develop and evaluate the alternates. A consultant team was hired by the City to provide analysis and support throughout the process. The results of each step were reviewed by the Task Force. The development of Alternates, Phase II, was performed largely by the Task Force in working session.

In Phase III, the Task Force developed criteria to be the basis for an evaluation matrix. The expanded Task Force expanded the criteria. The matrix, referred to as "The Summary Matrix", shows the

relative benefits and impacts of each of the alternates and is included in the Appendices.

Decision Making Process

The staff presented three methods for reaching a decision. They were the Nominal Group, the Weighed Value and Pairwise Comparisons. With the Nominal Group method, individual members vote their preferences, hence this method is the quickest. The Weighed Value requires a consensus on the relative values of criteria; hence, it is more involved. The third method, Pairwise Comparisons develops criteria weights and alternative scores through pairwise comparisons. It is the most objective, but also the most time consuming of the three methods.



The Task Force initially selected the Weighed Value method at the March 2002 meeting by a vote of 4 to 3. The expanded Task Force voted 7 to 6 to change the process to the Nominal Group method. To make its recommendations to the Council, the expanded Task Force chose, by a 7 to 6 vote, to first vote between the two "No Build" alternates and then vote each of the Connector alternates against the favored "No Build" alternate.

The expanded Task Force adopted the following mission statement to help define its work:

"To improve access and ease traffic congestion along the Eisenhower Avenue and Duke Street corridors to meet current and future traffic demands while minimizing visual and environmental impacts and avoiding degradation of neighborhoods."

Results of the 18 September Vote

The Task Force met on 18 September to determine the prefered alternates and to make recommendations to the City Council.

The voting did not reveal a preference for either No Build Alternate or any Connector Alternate. **The voting was split 7-7 between "No Build" and "No Build with Improvements". Furthermore, seven would prefer one of the Connector alternates to either of the No Build alternates, although votes on each failed by at least 9 to 5.** The support for the Connectors was approximately evenly split between B-1, C and D.

The voting record is as follows:

Task Force Member	NB vs. NBI	NB vs. Alt D	NBI vs. Alt D	NB vs. Alt C	NBI vs. Alt C	NB vs. Alt B-1	NBI vs. Alt B-1
Mayor Donley	NBI	D	D	NB	NBI	NB	NBI
Councilwoman Pepper	NBI	NB	NBI	NB	NBI	NB	NBI
Joe Bennett	NB	D	D	C	C	NB	NBI
Judy Miller	NBI	NB	NBI	NB	NBI	B-1	B-1
Jim Cisco	NBI	NB	NBI	NB	NBI	NB	NBI
Joanne Tomasello	NBI	NB	NBI	NB	NBI	NB	NBI
Ron Holder	NB	NB	NBI	NB	NBI	NB	NBI
Lois Walker	NB	D	D	C	C	B-1	B-1
Sharon Hodges	NB	NB	NBI	C	C	B-1	B-1
Ginny Hines Parry	NBI	NB	NBI	NB	NBI	NB	NBI
George Foote	NBI	NB	NBI	NB	NBI	NB	NBI
Tom Raycroft	NB	NB	NBI	NB	NBI	NB	NBI
Bill Harvey	NB	NB	D	C	C	B-1	B-1
Converse West	NB	NB	D	C	C	B-1	B-1
	7-7	**11-3**	**9-5**	**9-5**	**9-5**	**9-5**	**9-5**

NB – No Build
NBI – No Build with Improvements

The Task Force considered the traffic data and other studies conducted as well as relying on the Matrix Data developed by the Task Force and staff. The Task Force discussed each alternate as follows:

No Build:

Discussion in favor

- Will not encourage additional traffic into the Valley.
- No impacts or costs.
- It is better to do nothing than the high impact and very costly No Build with improvements.

Discussion opposed

- Something must be done; this alternate ignores reality.

No Build with Improvements:

Discussion in favor

- These improvements solve the problem.
- These improvements will be done by VDOT anyway.
- The improvements could be phased to minimize impacts.

Discussion opposed

- These improvements have such large costs that they will never be affordable.
- The City will lose money, as these improvements would be done anyway.
- There will be major delays and inconvenience during construction.
- There will be a large reduction in revenues to the City.
- These projects may not have the desired effects unless they are all done as a package.

There was also a discussion that the No Build with Improvements is actually an alternative with its own costs, impacts and benefits. And furthermore, this alternate should be treated in the same manner as the Connector Alternates.

The Task Force also discussed information that revealed that, contrary to earlier understanding, the City might not have an obligation to repay costs of the Clermont Interchange in the even no connector is built. According to the Virginia Department of Transportation (VDOT), "it is very unlikely

repayment will be necessary provided a good faith effort is made in considering the merits of each option, including "no build" and public participation, is factored in the decision." The VDOT letter is attached to the report.

Alternate A1, A2 and B2. Little discussion was conducted about these alternates. In the interest of expediting the process the Mayor asked if there was support for these alternates. No Task Force member voiced support for these alternates.

Alternate B1:

Discussion in Favor

- This alternate is the most central and alleviates the most traffic congestion.
- The loss of parkland could be easily mitigated with the purchase of the CSX property south of Ben Brenman Park.
- This alternate does not affect businesses and uses existing roadways at its termini.
- This alternate is the best for public safety and emergency response time. Firehouses give each other mutual aid and a connector is needed to facilitate this.
- The majority of the people using the connector would be from Alexandria.

Discussion opposed

- This alternate will encourage additional traffic on Quaker Lane.
- This alternate will destroy the park.
- A fire station is needed in the Valley regardless.
- This alternate will degrade conditions on Duke Street.
- This alternate may not be feasible under the conditions the park was created.
- This alternate will be an eyesore to residences in Cameron Station, Wakefield / Tarleton and park users.

Alternate C:

Discussion in Favor

- This is the least costly and simplest option
- This alternate provides support to East Eisenhower.
- This alternate really helps backups on Duke east of Telegraph
- This alternate will not increase cut through traffic in neighborhoods.

Discussion opposed

- The weave between Wheeler and N. Quaker would be horrendous.
- This alternate provides a direct route for through traffic.
- This alternate will encourage traffic to divert through the neighborhoods.
- Even if traffic could be prevented from turning left on North Quaker, they will do it anyway.

Alternate D:

Discussion in Favor

- This alternate offers good connectivity for the Valley.
- Without a connector there are only three real connections between Duke and Eisenhower.
- This alternate helps Duke Street east of Telegraph as evidenced by the queue lengths at Daingerfield.
- This alternate serves East Eisenhower the best.

Discussion opposed

- This alternate will result in a very high bridge.
- This alternate will be near a 460-unit apartment complex and will offer no buffer or barrier.
- The terminus will be near schools.
- This alternate will increase traffic on Quaker Lane.

The table below shows summary results of the voting on 18 September. The voting record of individual Task Force members was included previously in this document.

Table: Vote Results			
No Build	7	No Build With Imp.	7
No Build	9	B1	5
No Build With Imp.	9	B1	5
No Build	9	C	5
No Build With Imp.	9	C	5
No Build	9	D	5
No Build With Imp.	11	D	3

Appendices

1. Summary Matrix
2. Meeting Minutes
3. Presentation made at Bishop Ireton High School
4. Traffic Tables
5. Study Team Findings and Conclusions
6. Fuller Study
7. List of Public Presentations
8. VDOT Letter Regarding Waiver of Repayment

Eisenhower Avenue
To Duke Street Connector Study

Summary Matrix - September, 2002

Criteria	No Build	Improve Exist. Align.	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D
Traffic Service – 2020								
ADT Reduction on Telegraph Road	●	●	●	●	⊙	⊙	○	○
ADT Reduction on Van Dorn	●	●	○	○	○	○	⊙	⊙
Reduction in Delay – Van Dorn	●	○	●	●	⊙	⊙	●	●
Reduction in Delay – Duke Street	●	●	⊙	⊙	●	●	●	○
Reduction in Unserved Vehicles	●	⊙	●	●	●	●	●	⊙
Reduction in Queue Length – EB Duke @ Diagonal	●	●	⊙	⊙	⊙	⊙	○	○
Reduction in Queue Length – SB Quaker @ Duke	●	○	○	○	○	○	○	○
Reduction in Queue Length – SB Van Dorn @ Edsall	●	○	●	●	⊙	⊙	⊙	⊙
Growth in External – External: North Quaker	○	⊙	○	○	⊙	⊙	⊙	⊙
Potential increase in Cut Through	⊙	●	⊙	⊙	⊙	⊙	○	○
Natural Environment								
Wetland Impact	○	○	○	○	○	○	○	○
Permitting Challenge	○	⊙	●	⊙	⊙	⊙	○	○
Acres of forests taken	○	⊙	⊙	○	⊙	⊙	○	○
Acres in Floodplain	○	○	⊙	●	⊙	●	○	○
Acres within 100' waterway 'buffer'	○	○	●	●	●	●	○	○
Stream Crossings	○	○	●	●	●	●	○	○
Socio-Economic Benefits								
Change in emergency response time to Point East Eisenhower Location	●	●	-	-	-	-	○	○
Change in emergency response time to Point West Eisenhower Location	●	●	⊙	⊙	○	○	-	-
Community facilities within ½ mile of termini	●	●	○	○	○	○	○	○
Bicycle or general use trails connected	●	●	○	○	○	○	○	○
Socio-Economic Impacts								
Acres of Parks taken	○	○	●	○	●	●	○	○
Park activities impacted	○	○	⊙	○	●	●	○	○
Number of residences taken	○	●	○	○	○	○	○	○
Number of businesses taken	○	●	⊙	●	○	○	⊙	●
Number of sensitive noise receptors ¼ mile	○	○	○	○	⊙	⊙	⊙	⊙
Cultural Resources								
Potential for archeological resources	○	⊙	⊙	⊙	●	●	●	⊙
Known archeological sites within 100'	○	○	○	○	⊙	⊙	⊙	○
Registered historic resources within ¼ mile	○	○	○	○	○	○	○	○
Engineering and Estimated Costs								
Construction Cost	○	●	⊙	○	●	●	○	○
Right of Way Cost	○	●	⊙	●	○	○	⊙	⊙
Length on existing roadways	○	●	●	●	○	●	⊙	○

Legend:
○ Minimal Impact or Considerable Benefit
⊙ Moderate Impact or Modest Benefit
● Considerable Impact or Minimal Benefit

Decision Criteria for use in Summary Matrix

Criteria	Minimal Impact or Considerable Benefit	Moderate Impact or Modest Benefit	Considerable Impact or Minimal Benefit	Measure
	○	⊙	●	
Traffic Service				
ADT Reduction on Telegraph	Over 10%	5% to 10%	Less than 5%	% Reduction
ADT Reduction on Van Dorn	Over 10%	5% to 10%	Less than 5%	
Reduction in Delay – Van Dorn	Over 60%	40% to 60%	Less than 40%	
Reduction in Delay – Duke Street	Over 20%	0% to 20%	Less than 0%	
Reduction in Unserved Vehicles	Over 20%	5% to 20%	Less than 5%	
Reduction in Queue Length – EB Duke	Over 40%	5% to 40%	Less than 5%	
Reduction in Queue Length – SB Quaker	Over 40%	5% to 40%	Less than 5%	
Reduction in Queue Length – SB Van Dorn	Over 40%	5% to 40%	Less than 5%	
Growth in External – External – Quaker	Less than 0%	0% to 20%	Over 20%	
Potential increase in Cut Through	Less than 0%	0% to 20%	Over 20%	
Natural Environment				
Wetland Impact	None or temporary impacts to buffer	Temporary impacts to wetlands or permanent impacts to buffer	Permanent wetland impacts	Duration of Impact
Permitting Challenge	(exemptable)	(General Permit)	(Individual Permit)	Nature of Permit
Acres of forests taken	Less than 1 acre	Less than 2 acres	Over 2 acres	Acres
Acres in Floodplain	Less than .5 acre	Less than 1 acre	Over 1 acre	Number
Acres within 100' waterway 'buffer'	Less than ½ acre	Less than 2 acres	Over 2 acres	Acres
Stream Crossings	None	1	2	Number
Socio-Economic Benefits				
Change in emergency response time to Point East Eisenhower Location	Decrease > 2 min	1-2 Min Decrease	Decrease < 1 Min	Minutes
Change in emergency response time to Point West Eisenhower Location	Decrease > 2 min	1-2 Min Decrease	Decrease < 2 Min	Minutes
Community facilities within ½ mile of termini	2 or more	One	None	Number
Bicycle or general use trails connected	2 or more	One	None	Number
Socio-Economic Impacts				
Acres of Parks taken	None	Less than .25 acre	Over .25 acre	Acres
Park activities impacted	None	One	2 or more	Number
Potential for through traffic in residential areas.	Low or none	Medium	High	High, Med, Low, None
Number of residences taken	None	Less than 3	More than 3	Number
Number of businesses taken	None	Less than 2	More than 2	Number
Number of sensitive noise receptors ¼ mile	Less than 2	2 to 5	More than 5	Number
Cultural Resources				
Potential for archeological resources	Low	Medium	High	High, Medium, Low
Known archeological sites within 100'	None	Less than 2	More than 2	Number
Registered historic resources within ¼ mile	None	Less than 2	More than 2	Number
Engineering and Estimated Costs				
Construction Cost	Less than $20 M	Less than $30 Million	More than $30 M	Dollars
Right of Way Cost	Less than $5 M	Less than $20 Million	More than $20 M	Dollars
Length on existing roadways	Less than 200 feet	Less than 1,250 feet	More than 1,250 feet	Feet

Eisenhower Avenue-to-Duke Street Connector Study

Date: September 27, 2002

To: Attendees, File

Subject: Record of the Thirteenth Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: September 26, 2002
Time: 6:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Joe Bennett - Task Force Member
Converse West – Task Force Member
Judy Miller – Task Force Member
Jim Cisco - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Ginny Hines Parry – Task Force Member
George Foote – Task Force Member
Tom Raycroft – Task Force Member
Bill Harvey – Task Force Member
Rich Baier - Director T & ES, City of Alexandria
Tom Culpeper - City of Alexandria
Doug McCobb – City of Alexandria
Reggie Beasley - VDOT Urban Division
David D. Metcalf - PBS&J
Neil Freschman - PBS&J
About 20 other people attended

//

1. Mayor Donley officially commenced the thirteenth Task Force meeting at approximately 6:30 PM.

2. There were requests for revisions to the September 18, 2002 minutes. The revised minutes for the September 18 meeting are attached.

3. The amended minutes were then accepted by the Task Force.

4. The next part of the meeting was a review of the Draft Task Force Report. The draft report was distributed to the Task Force before the meeting. Several Task Force members had verbal comments regarding revisions and Mr. Foote distributed written comments. These revisions will be included in the Final Report and are in progress.

5. There was some further discussion beyond the revisions in the Draft Report. Ginny Hines-Parry requested that any new or revised build alternates that are developed get careful study and scrutiny equal to the job that the Task Force did.

6. Councilwoman Del Pepper requested that we add to these minutes a statement that she felt that adequate time was not given to the discussion and understanding of the No Build with Improvement alternate. Councilwoman Pepper supports the Van Dorn Street improvements but does not necessarily support the improvements to Duke Street or Telegraph Road.

7. The Mayor added to the record that he does not support the Van Dorn Street improvements because it has major impacts to businesses, housing (including moderate income housing) and facilitates commuter traffic from outside of the City.

8. The next steps for this project are scheduled as follows:

   - October 23 City Council Work Session
   - October 29 City Council Public Hearing
   - November 12 City Council Meeting

9. The meeting adjourned at approximately 9 PM.

Revised
Per Task Force Vote

Date: October 1, 2002

To: Attendees, File

Subject: Minutes for the Twelfth Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: September 18, 2002
Time: 6:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Joe Bennett - Task Force Member
Converse West – Task Force Member
Judy Miller – Task Force Member
Jim Cisco - Task Force Member
Joanne Tomasello - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Ginny Hines Parry – Task Force Member
George Foote – Task Force Member
Tom Raycroft – Task Force Member
Bill Harvey – Task Force Member
Rich Baier - Director T & ES, City of Alexandria
Beverly Steele - City of Alexandria
Tom Culpeper - City of Alexandria
Doug McCobb – City of Alexandria
Bill Skrabak - City of Alexandria
Reggie Beasley - VDOT Urban Division
David D. Metcalf - PBS&J
Neil Freschman - PBS&J
Sasidhar Karavadi – PBS&J
Chris Gay - BMI
Eileen Hughes

About 30 other people attended

1. Mayor Donley officially commenced the eleventh Task Force meeting at approximately 6:30 PM.

2. There were requests for revisions to the September 4, 2002 minutes. **Item 9** from those minutes should be revised to reflect that the weighted value method was selected by the original 9 member Task Force. Also it should be noted that the votes will be based on objective criteria.

   *"David Metcalf presented the proposed methodology to be used to rank the alternates. George Foote put forward a motion to change the decision process. (The **original 9-member** Task Force decided at the March meeting to use the Weighted Value Method – the 9-member task force, however, did not use the weighted value method at its April meeting.) The motion stated that a vote would be taken between No-Build and No-Build with Improvements. Votes would then be taken between the top "No-Build" alternate and each of the Build alternates **based on objective criteria** (A series of six separate votes). The top vote getter would then be the Task Force recommendation. The Task Force voted on this motion and it passed 7 to 6."*

3. A question was raised as to whether the Task Force had legitimately approved a new decision method since no vote was ever taken to reverse the motion that approved the original decision method. The City Attorney office gave his opinion that since the Task Force was reconstituted by the Council, a reversal of the original motion was not required. The Task Force could proceed with the method approved in the September 4 meeting.

4. Analysis data was distributed to the Task Force before the meeting. At the meeting, Rich Baier distributed several new items to the Task Force. The first item was data regarding commercial properties that might be impacted by the various alternates. Next was a letter from Mr. Thomas A. Farley, District Administrator of VDOT regarding the potential repayment to VDOT of monies spent on the Clermont interchange. Mr. Farley wrote that "it is very unlikely repayment will be necessary provided a good faith effort is made in considering the merits of each option, including "no build" and public participation, is factored in the decision." Representatives from the City and the Task Force will meet with Mr. Farley to discuss these issues in person. Possible repayment to VDOT should not be a deciding factor in the Task Force decision process. A copy of the Farley letter is attached to these minutes.

5. The Task Force had a discussion about the recreation fields near Roth Street. These are being paid for as part of the Woodrow Wilson Bridge Project. The park will include two multi-purpose fields, a maintenance building, 145 parking spaces and a softball field. This should be completed by 2005. The Alternate D bridge would be about 350 feet from the new fields. Mr. Bennett explained that the fields could be replaced with fields in other locations. Mr. Baier explained that

the fields could not be relocated because they are part of the City's agreement regarding the Woodrow Wilson Bridge.

6. The next phase of the meeting was to discuss the alternates and to vote. The first discussion item was the No Build With Improvement (NBI) Alternate. Some of the Task Force comments about the NBI alternate included:

   - These improvements could be phased.
   - There would be major impacts during construction.
   - Some of these improvements would be done regardless of what is decided by this Task Force.
   - The proposed improvements are constructible but they may not be feasible due to cost and impacts.
   - Voting for this plan would squander an opportunity to get the State to pay for the new connector.
   - The intersections on Duke Street should be fixed first.
   - The NBI alternate should really be considered a Build alternate.

7. A vote was taken to decide whether to select the No Build or the No Build with Improvements. The vote was tied at 7-7. (Detailed voting information is included at the end of this document).

8. Councilwoman Pepper suggested that since the vote was tied, the Task Force should compare each of the build alternates with both the No Build and the No Build with Improvements. The Mayor suggested that we winnow the Build selections down to only those that have support.

9. The Task Force determined that there was no support for Alternates A-1, A-2 and B-2. By unanimous consent, these were eliminated from further consideration.

10. The next discussion item was Alternate D. Some of the Task Force comments about Alternate D included:

    - D would be the highest-level bridge due to the Metro Train tracks.
    - This alternate would run near a 460-unit apartment complex on Eisenhower Avenue.
    - This Duke Street terminus would be across from a High School and near an Elementary School.
    - This alternate offers good connectivity for East Eisenhower Valley.
    - Alternate D would increase traffic on Quaker Lane.

11. A vote was taken to compare the two No Build alternates with Alternate D. The vote was as follows:

No Build	11
Alternate D	3
No Build With Improvements	9
Alternate D	5

(Detailed voting information is included at the end of this document).

12. The next discussion item was Alternate C. Some of the Task Force comments about Alternate C included:

- This is the worst alternate – weaving problems on Duke Street.
- This alternate offers a straight shot through the City.
- Alternate C provides relief for East Eisenhower Valley.
- This is the least costly option.
- This alternate could take traffic onto a residential road at Wheeler Avenue.

13. A vote was taken to compare the two No Build alternates with Alternate C. The vote was as follows:

No Build	9
Alternate C	5
No Build With Improvements	9
Alternate C	5

(Detailed voting information is included at the end of this document).

14. The next discussion item was Alternate B-1. Some of the Task Force comments about Alternate B-1 included:

- Build a Fire Station in Eisenhower Valley regardless of what is selected.
- This is the worst alternate – affects ball fields, the dog run and the picnic pavilion.
- Additional roads would be required to access the park.
- This alternate would be across a stream from residences.
- The Park was just constructed at a cost of $3.5 million. This would destroy the new park.
- This alternate would bring vehicles from the Beltway to Quaker Lane.
- The loss of Parkland could be mitigated – perhaps by purchasing the Claremont Cove parcel.
- This alternate would not impact any businesses.

- A connector is needed for safety – Police, Fire and EMS.
- The park could be reconfigured to still be usable.
- The majority of people using the new connector would be Alexandrians.
- This alternate would add an additional signal on Duke Street.
- Alternate B-1 is the most centrally located.
- This alternate may need Department of Interior approval.
- Perhaps a connector could be used only during peak periods. It could be for pedestrians only at other times.

15. A vote was taken to decide whether to compare the two No Build alternates with Alternate B-1. The vote was as follows:

No Build	9
Alternate B-1	5
No Build With Improvements	9
Alternate B-1	5

(Detailed voting information is included at the end of this document).

16. After the series of votes there was some additional discussion about what all of this means. Mayor Donley expressed the opinion that the votes were inconclusive and that the task force could not come to agreement. Councilwoman Pepper pointed to the 9-5, 9-3 and 11-3 votes as indicating that the Task Force would recommend none of the proposed routes. Mr. Bennett suggested that there might be more support in the Task Force for the No Build with Improvements approach if the improvements were guaranteed to be built.

- A request was made to make all background material made available to the public.
- Councilwoman Pepper stated that she expected all background material would be made available to the public.
- Note: FOIA may be applicable.

17. The Task Force meeting adjourned at approximately 9:00 PM.

18. The next Task Force meeting will be on September 26 at 6:30 PM.

Voting Record – The following information reflects the votes at the September 18 Task Force Meeting

Task Force Member	NB vs. NBI	NB vs. Alt D	NBI vs. Alt D	NB vs. Alt C	NBI vs. Alt C	NB vs. Alt B-1	NBI vs. Alt B-1
Mayor Donley	NBI	D	D	NB	NBI	NB	NBI
Councilwoman Pepper	NBI	NB	NBI	NB	NBI	NB	NBI
Joe Bennett	NB	D	D	C	C	NB	NBI
Judy Miller	NBI	NB	NBI	NB	NBI	B-1	B-1
Jim Cisco	NBI	NB	NBI	NB	NBI	NB	NBI
Joanne Tomasello	NBI	NB	NBI	NB	NBI	NB	NBI
Ron Holder	NB	NB	NBI	NB	NBI	NB	NBI
Lois Walker	NB	D	D	C	C	B-1	B-1
Sharon Hodges	NB	NB	NBI	C	C	B-1	B-1
Ginny Hines Parry	NBI	NB	NBI	NB	NBI	NB	NBI
George Foote	NBI	NB	NBI	NB	NBI	NB	NBI
Tom Raycroft	NB	NB	NBI	NB	NBI	NB	NBI
Bill Harvey	NB	NB	D	C	C	B-1	B-1
Converse West	NB	NB	D	C	C	B-1	B-1
	7-7	**11-3**	**9-5**	**9-5**	**9-5**	**9-5**	**9-5**

NB – No Build
NBI – No Build with Improvements

Date: September 9, 2002

To: Attendees, File

Subject: Minutes for the Eleventh Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: September 4, 2002
Time: 6:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Joe Bennett - Task Force Member
Judy Miller – Task Force Member
Jim Cisco - Task Force Member
Joanne Tomasello - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Ginny Hines Parry – Task Force Member
George Foote – Task Force Member
Tom Raycroft – Task Force Member
Bill Harvey – Task Force Member
Rich Baier - Director T & ES, City of Alexandria
Beverly Steele - City of Alexandria
Tom Culpeper - City of Alexandria
Doug McCobb – City of Alexandria
Bill Skrabak - City of Alexandria
Reggie Beasley - VDOT Urban Division
David D. Metcalf - PBS&J
Neil Freschman - PBS&J
Sasidhar Karavadi – PBS&J
Chris Gay - BMI

About 15 other people attended

1. Mayor Donley officially commenced the eleventh Task Force meeting at approximately 6:30 PM. Minutes from the May meeting were approved.

2. A City Council hearing date has not yet been set for this project. The Task Force will be informed as soon as a date is set.

3. George Foote requested that we review the study data and conclusions first and delay discussion

of the decision-making process until the end of the meeting. The Task Force agreed and that is how the discussion proceeded.

4. The first topic of discussion was to review the twelve proposed Study Team conclusions. Discussion items included the ultimate level of East Eisenhower development, external to external traffic, emergency response routes and times and a review of the No-Build with Improvements Alternate.

5. The Task Force requested two pieces of information that were not presented at this meeting – Queuing information for Duke Street at Telegraph Road and volumes for the Claremont interchange. This information will be distributed to the Task Force on September 11.

6. A new study purpose was agreed to by the Task Force.

   "To improve access and ease traffic congestion along the Eisenhower Avenue and Duke Street corridors to meet current and future traffic demands while minimizing visual and environmental impacts and avoiding degradation of neighborhoods."

7. The next topic of discussion was to review the proposed Benefits and Impacts criteria to be used to evaluate the study alternates. Some additional criteria were proposed by the Task Force.

8. The Mayor requested that City Staff contact Delta Associates to see if they can help determine the economic benefits or impacts of a connector vs. the No-Build alternate.

9. David Metcalf presented the proposed methodology to be used to rank the alternates. George Foote put forward a motion to change the decision-making process. (The Task Force decided at the April meeting to use the Weighted Value Method.) The motion stated that a vote would be taken between No-Build and No-Build with Improvements. Votes would then be taken between the top "No-Build" alternate and each of the Build alternates (a series of six separate votes). The top vote-getter would then be the Task Force recommendation. The Task Force voted on this motion and it passed 7 to 6.

   Those voting in favor of the Foote motion included:

   1. Councilwoman Del Pepper
   2. Joanne Tomasello
   3. George Foote
   4. Tom Raycroft
   5. Jim Cisco
   6. Ginny Hines Parry
   7. Ronald Holder

   Those voting against the Foote motion included:

1. Mayor Kerry Donley
2. Bill Harvey
3. Lois Walker
4. Sharon Hodges
5. Joe Bennett
6. Judy Miller

This methodology will be used on September 18th to develop the Task Force recommendations.

10. The Task Force meeting adjourned at approximately 10:30 PM.

11. The next Task Force meeting will be on September 18 at 6:30 PM in the Council Workroom.

EISENHOWER AVENUE-TO -DUKE STREET CONNECTOR TASK FORCE MINUTES

MAY 29, 2002 MEETING

Mayor Donley officially commenced the eighth Task Force meeting at approximately 7:00 PM. Minutes from the April 11 meeting were approved.

Rich Baier and David Metcalf proposed additions to the Summary Matrix. These additions are:

Traffic Impacts:

Increase of External to External Traffic
Potential for cut through traffic in neighborhoods east of Quaker
Potential for cut through traffic in neighborhoods west of Quaker

Traffic Benefits:

Queue length at Diagonal and Duke
Queue length at Pickett and Van Dorn
Volume of traffic at Clermont Interchange

After considerable discussion the Task Force decided to add:

Queue length at Quaker and Duke
Queue length at Duke and Telegraph (to be gauged at West Taylor Run)

There was considerable discussion about safety and increased traffic in the vicinity of the schools. It was decided that this is an important consideration, but too detailed an element to be included in the Summary Matrix.

George Foote suggested that the study also include an evaluation of congestion and impacts at the intersection of Braddock, King and Quaker. Rich Baier emphasized that a detailed study of that area is outside the scope of this study.

Councilwoman Pepper suggested that the widening of Duke Street encompasses takings from both sides of the street. David Metcalf stated that the study team would consider all widening alternates and attempt to minimize right-of-way impacts.

Task Force members expressed concern that the results of the study and the decision would need to be made in too short a time frame. Rich Baier stated that any early study information, if available,

would be given to the Task Force in August.

Next meeting dates and tentative agendas were approved as follows:

Sept 4:	Review interim study results.
Sept 18:	Decide decision criteria and decision weights
	Select Task Force preferred alternates
Sept 26:	Review and edit Executive Summary and final Summary Matrix

Each meeting will begin at 6:30 p.m. in the Council Workroom.

Date: April 16, 2002

To: Attendees, File

Subject: Minutes for the Eighth Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: April 11, 2002
Time: 6:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Converse West - Task Force Member
Joe Bennett - Task Force Member
Jim Cisco - Task Force Member
Joanne Tomasello - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Beverly Steele - City of Alexandria
Doug McCobb - City of Alexandria
Rich Baier - Director T & ES, City of Alexandria
Bill Skrabak - City of Alexandria
Reggie Beasley - VDOT Urban Division

David D. Metcalf - PBS&J
Neil Freschman - PBS&J
Sasidhar Karavadi - PBS&J

Public:
Ginny Hines Parry - Clover-College Park Civic Association
Bill Dickinson-Seminary Hill Association
Sandy Wiener - Taylor Run Association
Marguerite Lang - Rosemont Citizens Association
Judy Miller - Rosemont Citizens Association
Agnes Artemel - Eisenhower Partnership
Jim Lowenstern

1. Mayor Donley officially commenced the eighth Task Force meeting at approximately 6:30 PM.

2. Councilwoman Del Pepper made a disclaimer to the Task Force that she owns property at 4600 Duke Street, but that she does not have a conflict of interest and can participate

in the Task Force and vote on the City Council regarding this project. She stated that she would be able to remain objective in this matter.

3. The Mayor summarized the following concerns the Clover - College Park neighborhood has with the study to date:

   Alternate D was developed by this Task Force with no input from the Clover - College Park neighborhood.

   This study has not included a comprehensive analysis of traffic conditions north of Duke Street.

   Neighborhood traffic mitigation has not been looked at in a comprehensive manner.

4. The Mayor said he thought these were valid concerns and proposed that the Task Force consider the following plan as a way of addressing these concerns:

   Eliminate some options. Proceed with only two alternates - a "Build" alternate and the "No- Build with improvements to the existing roadways". The Mayor suggested that the only "Build" alternate that has enough support is Alternate D.

   Add two additional Task Force members, from each area represented by Clover - College Park, Taylor Run and Rosemont.

   Analyze the traffic impacts north of Duke Street.

   Develop mitigation measures for cut-through traffic in the neighborhoods north of Duke Street.

   Continue meeting through the summer, completing the study in early Fall, and then presenting the findings and recommendations for two alternates to City Council for its consideration in making a final decision.

   Add more detail to better define the "No- Build with improvements to existing roadways" alternate.

5. There was considerable discussion regarding the Mayor's proposed plan. Task Force comments included:

   The new Task Force members should be able to review all of the materials from the beginning of the study.

   The "No Build" with improvements alternate does not fulfill the requirement of a new connection between the Claremont interchange and Duke Street.

Would need an additional Citizens Information Meeting.

The current Task Force should make a recommendation to the Council and let City Council decide how to proceed.

Should add additional analysis to review the effect of the various alternates on traffic heading to the East Eisenhower Valley.

Show all the alternates on the City's master plan even if they are never built.

Look at connections from the Van Dorn Metro station to Cameron Station.

Add a Task Force member from Avalon Bay.

Some Task Force members will not be able to meet through the summer. Mr. West will be unavailable for most of the summer.

6. After the discussion, the Task Force voted on whether to: 1) proceed with the modified plan proposed by the Mayor or 2) proceed with the original plan to have the current Task Force vote on the alternates and forward its recommendations to City Council no later than June. The vote was six in favor of the Mayor's modified plan, and three opposed.

7. The next Task Force meeting will be May 29 at 7:30 p.m. in the City Council Workroom. PBS&J will develop a scope of services for the additional work.

8. Minutes from the March 27th meeting were approved. The Task Force meeting adjourned at 7:45 p.m.

Date: April 2, 2002

To: Attendees, File

Subject: Minutes for the Seventh Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: March 27, 2002
Time: 7:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Joe Bennett - Task Force Member
Jim Cisco - Task Force Member
Joanne Tomasello - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Beverly Steele - City of Alexandria
Doug McCobb - City of Alexandria
Rich Baier - Director T & ES, City of Alexandria
Bill Skrabak - City of Alexandria
Reggie Beasley - VDOT Urban Division
Barry Schiftic - Alexandria Police Dept.
Ginny Hines Parry - Clover-College Park Civic Association
Roland Gonzales - Cameron Station Civic Association
Bill Dickinson
David D. Metcalf - PBS&J
Neil Freschman - PBS&J

Public:
Annabelle Fisher
David & Erna Harris
Joanne Lepanto
Jeff Bernhelz - BSUCA
Mark Fields - Archaeology Commission
Elizabeth Wright - WTCA
Stephen Fuller - Eisenhower Ave. Partnership
Patrick Warren, Sr. - BSVAC Exec.
J. Noritake - Parks & Recreation Commission
W. Dale Stump, Jr. -City Staff
Cindy Chambers
Althea Burns - HARC
Lois Garrity

Tom Kerester
Daniel M. Kelly
Charles Trozzo -Alexandria Historical Restoration & Preservation Commission

1. Mayor Donley officially commenced the seventh Task Force meeting. Minutes from the January 23rd meeting were approved.

2. This meeting began with public comments. There were a total of 12 speakers. Following is a brief description of the speaker comments.

Speaker 1 - Mark Fields - Archaeology Commission

No Opinion on which alternate is preferred. Wants EIS to emphasize archaeological issues.

Speaker 2 - Judy Noritake - Parks and Recreation Commission

Alternate B options impact parks. Parks & Recreation Commission stand opposed to anything that impacts the parks. She submitted a letter for the public record.

Speaker 3 - Roland Gonzalez - Cameron Station Civic Association

Does not support Alternates A1 & A2 since these alternates do not intersect with Duke Street. He is also opposed to Alternates B1 & B2. He stated that these alternates would help Beltway to Duke Street traffic and would be mainly for outsiders. He was also concerned that Alternate B would damage the park. He was opposed to Alternate C due to its proximity to Quaker Lane. Alternate D is the preferred choice of his civic association. Mr. Gonzalez would also like to see improvements on Van Dorn St.

Speaker 4 - Jeff Bernholz - Brookeville Seminary Valley Citizens Association

Opposed to Alternates B1 & B2. He will not endorse any Alternate. He supports improvements on Existing Alignment Alternate.

Speaker 5 - Dick Hobson of Seminary Valley

Stated that the civic association board has not voted. In the mid 1980's there was extensive debate. Alternates A, B & C were considered. The outcome in April 1986 was that Wheeler Avenue was excluded from further study so no one should be looking at this. Supports only No Build Alternate. Alternate D will affect Cambridge & Yale. Instead, he suggests building fire/emergency station in the Eisenhower Valley. Rich Baier states that no alternate that pushes traffic through local neighborhoods. Islands would be constructed to protect both Cambridge & Yale.

Speaker 6 - Elizabeth Wright - Wakefield/Tarleton

Wants connector - No Build is the "ostrich" approach. Worst and most objectionable connector is Alternate B-2 due to impacts on Tarleton Park. Also what would happen to the Wheeler Industrial businesses? Ms. Wright stated that

the 2nd worst Alternate is B-1 because of the elevated bridge. The 3rd worst is Alternate C and the 4th worst is Alternates A1 and A2 because they are not a good solution. Alternate D is the most effective and has least impacts. If the No Build Alternate is approved, use mass transit.

Speaker 7 - Ginny Hines Parry - Clover College Park

Opposes Alternate D because of possible cut-through traffic on Cambridge/Yale. There are no alternates that improve the existing cut-through traffic. Direct through traffic to Quaker Lane.

Speaker 8 - Lois Hunt - Taylor Run

Build Nothing. Comprehensive policy and plan should come first. Improve pedestrian access. Alternates dump traffic onto Duke Street.

Speaker 9 - Elizabeth Moore - 4600 Duke Street

Disagrees with Alternates B1 & B2. Does not like elevated road. Prefers the No Build Alternate with Improvements or Alternate D.

Speaker 10 - Steven Fuller - Eisenhower Partnership

States that this will be the growth area. He supports more industrial uses. Need a connector to reach development. Look at this property like it's a scarce resource. In support of Alternate B1 & B2 because they are in the middle of the study area and they add development potential.

Speaker 11 - Julie Crenshaw

Supports No Build Alternate. States that parks and waterways need attention. Need less cars and better pedestrian/bike access. Look at all impacts - not just economics.

Speaker 12 - Barry Shiftic - City of Alexandria Police

The police facility is choked off. A connector is needed. Alternates A1, A2 & D are not useful. He wants something in the middle of the study area.

3. After the speakers were finished, David Metcalf gave a summary of responses to the Citizen's Information Meeting questionnaire. He stated that the meeting was mostly attended by residents of Cameron Station and that the comments were not necessarily indicative of the community at large. Based on the comments received to date, Mr. Metcalf did not think that there was a consensus.

4. Joanne Tomasello stated that there was a consensus and that it is all about interpretation. Alternates C&D together have majority.

5. Mr. Metcalf distributed an additional summary of citizen comments (Item 8 - Observations and Trends).

6. The next part of the meeting was to discuss the decision making process for the Task Force. The goal is to make a decision at the April 11th meeting and the take the decision to the May 28th City Council Work Session.

7. The Task Force reviewed three types of decision processes. Nominal Group, Pair-wise Comparison and Weighted Score. The task force did not like Pair-wise comparison. There was some discussion regarding which of the two remaining methods to use. The nominal group is simpler and easier to understand - it is basically a voting method. Concern was voiced about what would happen is there is no clear winner (ie. a 4 - 3 - 2 vote). Weighted score takes longer and is more detailed but gives more information to the Council about the qualitative reasons behind the Task Force decision.

8. The Task Force voted on the type of decision process to be used. Pair-wise was not supported and was therefore not one of the two choices. A vote was taken between Nominal Group and Weighted Score. The winner was Weighted Score with 4 votes. Nominal Group had 3 votes.

9. After the vote the Task Force spent some time discussing the alternates to share concerns and opinions.

10. The plan for April 11th is to use the first half of meeting for discussion and to assign weighted points and the second half for individual scoring.

11. The next meeting will be April 11th at **6:30 pm**. The Task Force will be prepared to do the weighting process. There is the possibility that we will shift to the nominal group process.

12. The Task Force meeting adjourned at approximately 10:30 PM.

Date: January 23, 2002

To: Attendees, File

Subject: Minutes for the Sixth Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: January 23, 2002
Time: 7:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Joe Bennett - Task Force Member
Jim Cisco - Task Force Member
Converse West - Task Force Member
Joanne Tomasello - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Beverly Steele - City of Alexandria
Doug McCobb - City of Alexandria
Rich Baier - Director T & ES, City of Alexandria
Bill Skrabak - City of Alexandria
Reggie Beasley - VDOT Urban Division
Officer Kammy Knox - Alexandria Police Dept.
Barry Schiftic - Alexandria Police Dept.
Patrick Devereux - Brookville Seminary Valley Civic Assoc.
Ginny Hines Parry - Clover-College Park Civic Association
Roland Gonzales - Cameron Station Civic Association
Tom Roycroft - Taylor Run Civic Association
Bill Dickinson
Aggomez-Bennett
Poul Hertel
Christopher B. Gay-BMI
Eileen Hughes - Straughen Environmental Services
David D. Metcalf - PBS&J
Neil Freschman-PBS&J
Laura Slaughter-PBS&J

1. Councilwoman Pepper officially commenced the sixth Task Force meeting. The minutes from the December 5 meeting were approved.

2. Mr. Metcalf began his presentation with a brief description of the Alternates. A

comment was made that the length of the alternates was relatively short for such big osts. Mr. Metcalf noted that right of way and structure costs are a large part of the costs.

3. The discussion then moved on to the traffic analysis results. The latest traffic volumes were included in the presentation. A request was made to show actual traffic volume increases rather than percentage increases. Refinements to the traffic analysis are continuing. The 2020 projected traffic volumes for the Improvement to Existing Alignments case will increase.

4. The floor was opened to Task Force Members for a general discussion about traffic issues. Some items that were discussed were:
   - We don't want the Eisenhower Valley to be isolated. A connector would help.
   - Would two connectors offer more benefit than one? - Yes - two connectors would offer more traffic mitigation to Telegraph Road and Van Dorn Street.
   - The improvement to the existing alignment would include grade separations.

5. Group Discussion moved on to the Summary Matrix. Results were presented for each alternate along with discussion.

6. Mayor Donley stressed the importance of the Emergency Response criteria as a valuable indicator for safety and connectivity.

7. Comments on Alternates A1 and A2:
   - Both A1 & A2 would be close to Van Dorn and would not connect directly to Duke Street.
   - Pickett Street would need improvements if either A-1 or A-2 were built.

8. Comments on Alternates B-1 and B-2:
   - There was discussion about why we did not propose a depressed roadway for this alternate. Dave Metcalf stated that for a tunnel or depressed roadway to work it would have to begin at the Beltway.
   - There was concern about the Park impacts with either of these alternates.
   - Alternate B-2 would connect to Wheeler Avenue. There was concern that this would lead to cut-thorough traffic in the neighborhoods along Wheeler Avenue.

9. Comments on Alternate C (Bluestone):
   - The Task Force had concerns with safety regarding the weave movement from Wheeler Avenue to north bound Quaker Lane. Dave Metcalf suggested a design that would prohibit that movement. Concern was raised that at some future date any restrictions could be "undone".

10. Comments on Alternate D:
    - Would freezing/slippery roadways be an issue with the bridges on all of the alternates? Mr. Metcalf responded that any super-elevated bridge could ice up. A Task Force member asked if there was a benefit to Telegraph Road traffic volumes if Alternate D were selected. Mr. Metcalf responded by saying that this

Date: December 10, 2001

To: Attendees, File

Subject: Minutes of the Fifth Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: December 5, 2001
Time: 7:30 PM
Location: City Council Chambers

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley - Task Force Member
City Councilwoman Del Pepper - Task Force Member
Joe Bennett - Task Force Member
Joanne Tomasello - Task Force Member
James W. Cisco - Task Force Member
Converse West - Task Force Member
Ronald Holder - Task Force Member
Lois Walker - Task Force Member
Sharon Hodges - Task Force Member
Rich Baier - Director T & ES, City of Alexandria
Doug McCobb - City of Alexandria
Bev Steele - City of Alexandria
Kimberley Fogle - City of Alexandria
Kammy Knox - City of Alexandria
Mary Canoyer - City of Alexandria
Poul Hertel - Alexandria Federation of Civic Associations
Bill Skrabak, City of Alexandria
Barry Schiftic, City of Alexandria
Ginny Hines Parry
Reggie Beasley - Virginia VDOT
David D. Metcalf - PBS&J
Neil Freschman - PBS&J
Chris Gay - BMI

1) Councilwoman Pepper officially commenced the fifth Task Force Meeting. The minutes from the October 24 meeting were approved (with one spelling revision).

2) The first agenda item was discussion of whether to proceed with an opinion survey. Members of the Task Force reported on what their organizations thought about having a survey. After much discussion regarding the cost, the benefits and the limitations of a survey, it was decided to defer a decision about a formal survey until later in the study process. Community outreach will continue during the entire study.

3) A presentation was given by Mr. Metcalf reviewing the existing traffic data and the traffic simulation model. The traffic model represents the existing AM and PM peak hours in the study area. Mr. Metcalf summarized the congestion along Van Dorn Street and Telegraph Road. The main points of the traffic discussion were:

a) Significant traffic is traveling **through** the City (65 percent).
b) The Beltway is not modeled but we can calibrate the ramps leading to the Beltway to represent actual conditions.
c) *Q. Will a new intersection cause gridlock on Duke Street?* A. A connector will offer new north-south capacity to the roadway network.
d) *Q. How long is the peak hour?* A. This has been increasing. At several locations the PM peak extends to 6:30 or 7:00 PM.
e) Pickett Street to Van Dorn Street is a heavy movement. Van Dorn Street is very congested from Pickett Street to the Beltway.

4) Kim Fogle of the Planning Department then presented data about planned development in the Eastern end of the Eisenhower Valley. (Telegraph Road east to Holland Lane) This development was divided into three categories:

i) Existing Development - 3.2 million square feet
ii) Additional Approved Development - 5.1 million square feet (By 2010)
iii) Additional Possible Development - 3 to 8 million square feet based on zoning (By 2020)

This development is equal to ½ of Downtown Philadelphia. As the development continues more of the trips will be internal to this area rather than external. The City is working to ensure that the planned development is mixed use and transit oriented. This will minimize the traffic impacts of development.

5) The next agenda item was a discussion of the evaluation criteria for the six connector alternates and the no-build alternative. The Mayor requested that PBS&J add footnotes to the evaluation criteria to give more complete information. A note will also be added that the evaluation matrix is just a tool and will not determine the selected alternate. The "No Build" base case alternate includes some roadway improvements and will therefore have impacts, costs and benefits. Any other comments on the matrix should be submitted by December 14.

6) The next Task Force meeting will be held on Wednesday, January 23 - 7:30 PM in the City Council Workroom. At that meeting, PBS&J will present preliminary results of the projected 2020 no-build for the study area, and build traffic simulations. PBS&J will also present preliminary evaluation results for the no-build and build alternates.

7) The meeting adjourned about 9:30 PM.

alternate would be a compliment to Telegraph Road and would reduce Telegraph Road volumes.

- The Mayor requested that the Study Team consider restricting the movement from the Connector to Cambridge Street across Duke Street.

- The Mayor also mentioned to the Task Force that the City has a policy to "Put traffic on roads designed to handle traffic." Connector alternates should not encourage traffic through neighborhood streets.

11. The Task Force requested that the Study Team prepare an 11"x17" Summary Matrix that presents all of the results on one page.

12. The subject of VDOT property arose. There was some confusion as to where the VDOT property was located and if it could easily be allocated for one of the alternates. Mr. Beasley stated that if the property were not being used, the price may be cheaper for the property.

13. Discussion shifted to the Citizens Information Meeting:

    The meeting is proposed for February 27th from 5 PM to 8 PM at the Tucker Elementary School. The snow date will be March 6.

    - In response to a suggestion that time be set aside for the public to give testimony directly to the Task Force, Rich Baier stated that one-way conversation is difficult and undesirable.

    - The Mayor suggested a computer presentation and said it would be highly beneficial to have Synchro run through the alternates because people would better understand the concepts if they could see them in action graphically.

    - After some discussion, a decision was made to have a continuous play PowerPoint presentation explaining the traffic, summary matrix and other topics and a separate station to present traffic data and run through the Synchro models.

    - The Study Team will prepare a brochure with color illustrations along with an 11"x17" Summary Matrix.

    - A graphic will be prepared illustrating "Improvement to Existing Alignment" (formerly known as Alternate E).

    - PBS&J will prepare a mail-back questionnaire. It was suggested that the questions be yes/no and direct questions that would propel people to respond. Examples of these questions would be "What do you value about your area?" "What are your traffic concerns?" and "Is emergency response an important issue to you?"

14. The Task Force meeting adjourned at approximately 9:45 PM.

Date: November 16, 2001

To: Attendees, File

Subject: Minutes of the Fourth Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: October 24, 2001
Time: 7:30 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley — Task Force Member
City Councilwoman Del Pepper—Task Force Member
Joe Bennett—Task Force Member
Jim Cisco—Task Force Member
Converse West—Task Force Member
Ronald Holder—Task Force Member
Lois Walker—Task Force Member
Sharon Hodges—Task Force Member
Rich Baier—Director T & ES, City of Alexandria
Doug McCobb—City of Alexandria
Bev Steele —City of Alexandria
Kimberly Fogle—City of Alexandria
Mark Canoyer—City of Alexandria – Police Department
Rob Prunty —Wilbur Smith and Assoc.
Lance Hartland —Wilbur Smith and Assoc.
Sandra Chaloux —Chaloux Environmental Communications
Roger Windschiff—Straughan Environmental Services
Bill Dickinson—Seminary Hill
Poul Hertel – Alexandria Federation of Civic Associations
David D. Metcalf—PBS&J
Neil Freschman—PBS&J

1. Mayor Donley officially commenced the fourth Task Force Meeting. The minutes from the October 4 meeting were approved.

2. In response to Jonanne Tomasello's suggestion that a survey or questionnaire be conducted to complement the Task Force's decision making process, Sandra Chaloux from Chaloux Environmental Communications presented information about different types of surveys (Qualitative vs. Quantitative). This information is included in the attached slides.

3. Several questions and comments regarding surveys were discussed:

Q. How do we protect the integrity of an internet survey?
A. Offset the results against another method, such as a telephone survey or focus group.

Q. Who will be part of the survey?
A. Mainly residences in the study area. If data is desired from commuters and businesses then other methods need to be used.

Q. What will be used as the study / survey area?
A. This will have to be decided by the Task Force.

Q. How do we handle the visual aspect of the alternates? Will we have to mail maps showing the alternates to all survey subjects?
A. This can be handled in a few ways. The alternates could be discussed generically or a methodology such as Focus Groups or Community Interviews could be used.

Q. How much will this cost?
A. Proposed costs are outlined in the attached slides.

Task Force members voiced concerns about the usefulness of the survey, rates of response and the difficulty in performing a quantitative survey on this complicated study. Sandra Chaloux recommends starting with interviews and perhaps doing a statistical survey later in the study.

The Task Force decided to defer this decision until the next Task Force meeting. The Mayor asked the Task Force members to ascertain from their group what they thought about the survey. The Task Force members are to report their findings at the December 5 meeting.

4. Rob Prunte from Wilbur Smith Associates gave a presentation about their ongoing study at the east end of the Eisenhower Valley. That study includes consideration of the proposed ramp from the Beltway to Mill Road, the Woodrow Wilson Bridge improvements and the Telegraph Road interchange improvements. The planned improvements will not solve all of the existing transportation problems in that area. About 45,000 additional vehicles are expected in the Eisenhower Valley by 2010. The model takes into account transit use, carpooling and walking.

5. David Metcalf began a discussion of the Evaluation Criteria list that was handed out. The Task Force wants the final matrix to evaluate **relative** merits or impacts of each alternate and not just provide the numbers. This analysis should help to explain what the measured benefits or impacts mean.

   Comments on the Evaluation Criteria Include:

   Q. What is a complex structure?
   A. A bridge with complex geometry – flyover or curved bridge for example.

   Q. What time of day is travel time measured?
   A. This will be the peak hour travel time – most traffic criteria will be for the AM and PM peak hours. A traffic simulation will be prepared to show movements and delays.

Q. What does "feet" refer to for archaeological resources?
A. This should actually be acres. It makes more sense.

Comment. Business impacts should be based on some other criteria than "number of businesses."
Response: It was generally decided that number of employees would be the best criteria. The City should have this information.

The Task Force will submit any other comments on the evaluation criteria before the next meeting.

6. A copy of the slides from this meeting have been forwarded to Joanne Tomasello.

7. Sharon Hodges of the Eisenhower Partnership would like to have a map of the alternates for the Partnership's annual meeting. This was approved. A representative from the City will attend to answer questions.

8. Councilwoman Pepper requested that the minutes and agenda be mailed to the Task Force before each meeting.

9. The summary of the September 26 Citizens Information Meeting results will be amended to state that the alignments shown at the meeting were from the 1993 VDOT Environmental Assessment (EA) and are not the current design alternates. Also not all attendees noted their preference for any of the EA alignments.

10. The next Task Force meeting will be held on Wednesday, December 5. At that meeting, PBS&J will present preliminary results of the traffic simulation. Other items to be discussed on December 5 will include the proposed survey and evaluation criteria revisions.

The meeting adjourned at 9:30 p.m.

Date: October 4, 2001

To: Attendees, File

Subject: Minutes for the Third Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: October 4, 2001
Time: 7:300 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
City Councilwoman Del Pepper-Task Force Member
Joe Bennett-Task Force Member
Jim Cisco-Task Force Member
Converse West-Task Force Member
Joanne Tomasello-Task Force Member
Ronald Holder-Task Force Member
Lois Walker-Task Force Member
Sharon Hodges--Task Force Member
Doug McCobb-City of Alexandria
Rich Baier-Director T & ES, City of Alexandria
Kimberly Fogle-City of Alexandria
Reggie Beasley - VDOT Urban Division
Christopher B. Gay-BMI
Dan Goldfeld-BMI
Eileen Hughes-Straughan Environmental Services
David D. Metcalf-PBS&J
Nick Alexandrow-PBS&J

1. Councilwoman Pepper officially commenced the third Task Force Meeting.

2. The group discussed the general results of the Citizens Information Meeting on September 26. It was agreed that the attendees were generally positive towards a Connector between Eisenhower Avenue and Duke Street. Furthermore, there was no consensus where a proposed Connector should be.

3. Sharon Hodges asked about additional public comments and comments sent by email. Doug McCobb stated that all comments would be considered and incorporated.

4. Councilwoman Pepper commented that most people at the Citizens Information Meeting were there for information purposes, to find out exactly what was being considered and what

has been proposed to be done.

5. Joanne Tomasello began a discussion of a survey or questionnaire to complement the decision making process. It was decided that a survey should be considered at a later time.

6. The Study Team and the Task Force made other comments concerning the meeting. Joe Bennett mentioned the fact that the 1993 EA alternatives were confusing to the citizens, that they thought that those were the final chosen alternative solutions. Eileen Hughes brought up that many citizens were interested in protecting the City's parks, especially Ben Brennan Park at Cameron Station. Sharon Hodges said that some citizens did not like the fact that the meeting took place on Yom Kippur (unavoidable since the meeting had to be rescheduled after the events of September 11).

7. Mr. Metcalf then went through the Proposed Process for Screening and Developing Alternatives, which was detailed on the last page of the handout that the attendees received.

8. The Task Force then moved to the front of the room, near the board with an aerial photo of the study area to decide on Preliminary Alternates. Using a "brain-storming" process the Task Force proposed 13 Preliminary Alternatives.

9. The Task Force next eliminated unreasonable and flawed alternatives. The remaining alternatives were screened through pairwise comparisons. Alternatives with the same traffic benefits were compared against each other, and the alternative with greater costs and impacts was eliminated.

10. The following Alternates remained and will be reviewed by the study team in greater detail: A1, A2, B1, B2, C, and D. Please see attached exhibit for locations.

11. Sharon Hodges then brought up the letter that was sent by the Police Association. The Police Association favors EA Alternate #3, which is now being considered as Alternate B1.

12. Before Councilwoman Pepper adjourned the meeting, she told everyone that the next Task Force Meeting would be on October 24. The primary agenda for this meeting will be to establish evaluation criteria.

Date: August 28, 2001

To: Attendees, File

Subject: Minutes for the Second Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector

Date of Meeting: August 27, 2001
Time: 6:00 PM
Location: City Council Workroom

From: David D. Metcalf, PBS&J

Attendees:
Mayor Kerry Donley-Task Force Member
City Councilwoman Del Pepper-Task Force Member
Joe Bennett-Task Force Member
Jim Cisco-Task Force Member
Converse West-Task Force Member
Joanne Tomasello-Task Force Member
Ronald Holder-Task Force Member
Lois Walker-Task Force Member
Sharon Hodges--Task Force Member
Beverly Steele-City of Alexandria
Doug McCobb-City of Alexandria
Rich Baier-Director T & ES, City of Alexandria
Reggie Beasley - VDOT Urban Division
Christopher B. Gay-BMI
Eileen Hughes-Straughen Environmental Services
David D. Metcalf-PBS&J
Nick Alexandrow-PBS&J

1. The meeting began with a bus tour of the study area.

2. After the bus tour was taken, the Task Force convened in the Council Workroom, and David Metcalf made a presentation explaining why connectors are beneficial to roadway networks. He showed where the high growth area in the Eisenhower valley is projected to be as reported early this summer during a Planning Commission meeting. The build out could be as much as 14 million square feet, although much of this is east of the study area. Mr. Metcalf then showed which intersections in the study area are currently challenged.

3. Joanne Tomasello was concerned that adding connectors would add intersections on the two major corridors, thereby causing more stop and go and reducing flow. Rich Baier explained that the challenged intersections were where failure occurred and

where bottlenecks originated on the network. Mr. Baier further explained that we are looking at the corridor and network as a whole, and that adding connectors will help alleviate problems at the challenged intersections, which are the "bottle-necks" for several corridors.

4. David Metcalf moved on to discussing the Citizens' Information Meeting to be held on September 12, 2001. He explained that there would be three separate stations with exhibits where consulting personnel would be present to answer any specific questions that the citizens might have. He said that the meeting was being held to gather comments and concerns from those citizens who will be affected by any roadway improvements before any "lines on a map" are drawn, showing where possible new roadways could be built. He stressed the citizens' comments will be included in the process for generating alternatives.

5. Rich Baier said that there will be an environmental assessment station, a study background station, and a transportation issues station. He also stated that there would be no formal presentation by the Study Team at the meeting.

6. Mayor Donley stressed that the meeting would be a two-way discussion between the Study Team and the citizens. In addition, he was concerned that one of our proposed exhibits, showing the Environmental Assessment (EA) Alternates from 1993, had "lines on a map" and that this would cause concern from the citizens. Rich Baier said this needed to be shown for historical purposes. The Mayor suggested the exhibit clearly state that the alternates were from 1993, and that the number 1993 be a clear focus of the exhibit. He also suggested that a narrative explaining the process of the EA Alternates and what has happened since then be included as part of the exhibit and that all pictures and information included in the exhibit are correct and up to date.

7. Joanne Tomasello asked if we could have an exhibit showing projected mass transit for the area. After discussion it was decided that mass transit would not make an appropriate exhibit.

8. David Metcalf explained the boards that will be made for the Citizens' Information Meeting. He had brought a scaled-down version of each of the graphics that will be used at the meeting, and he explained the relevance of each one.

9. Mr. Metcalf stated that comment cards would be available for the citizens. A discussion ensued concerning how long citizens should have to return the cards. Rich Baier said that a definitive date to return the cards should be stated on the cards. Reggie Beasley suggested that 10 days is the usual amount of time allotted by VDOT for this purpose.

10. Mayor Donley asked about how the meeting would be publicized. David Metcalf explained that flyers would be sent to all neighborhood associations in the study area

that are directly affected by the study. He also said that variable message boards and a press release would be used to publicize the meeting.

11. The time for the September 17, 2001 Task Force Meeting was set for 7:30 PM. It was asked of everyone to bring ideas for alternatives, as the generation of alternatives will be the purpose of the meeting. The fourth Task Force Meeting was scheduled for Wednesday, October 24, 2001 at 7:30 PM.

The Task Force meeting adjourned at approximately 9:15pm.

Eisenhower Avenue Connector Study

8 Aug, 2002

City of Alexandria

Background

- 1970's – Eisenhower Valley Potential Understood
- 1980's – Improved Flood Control and infrastructure
- 1990's – Phase I Interchange with I-95

Study Background

- Council Resolution
- Nine member Task Force
- Five new members added in May
- Purpose: Determine optimal solution

The Study:
Public Interaction

27 Public Meetings

47

Why Study a Connector?

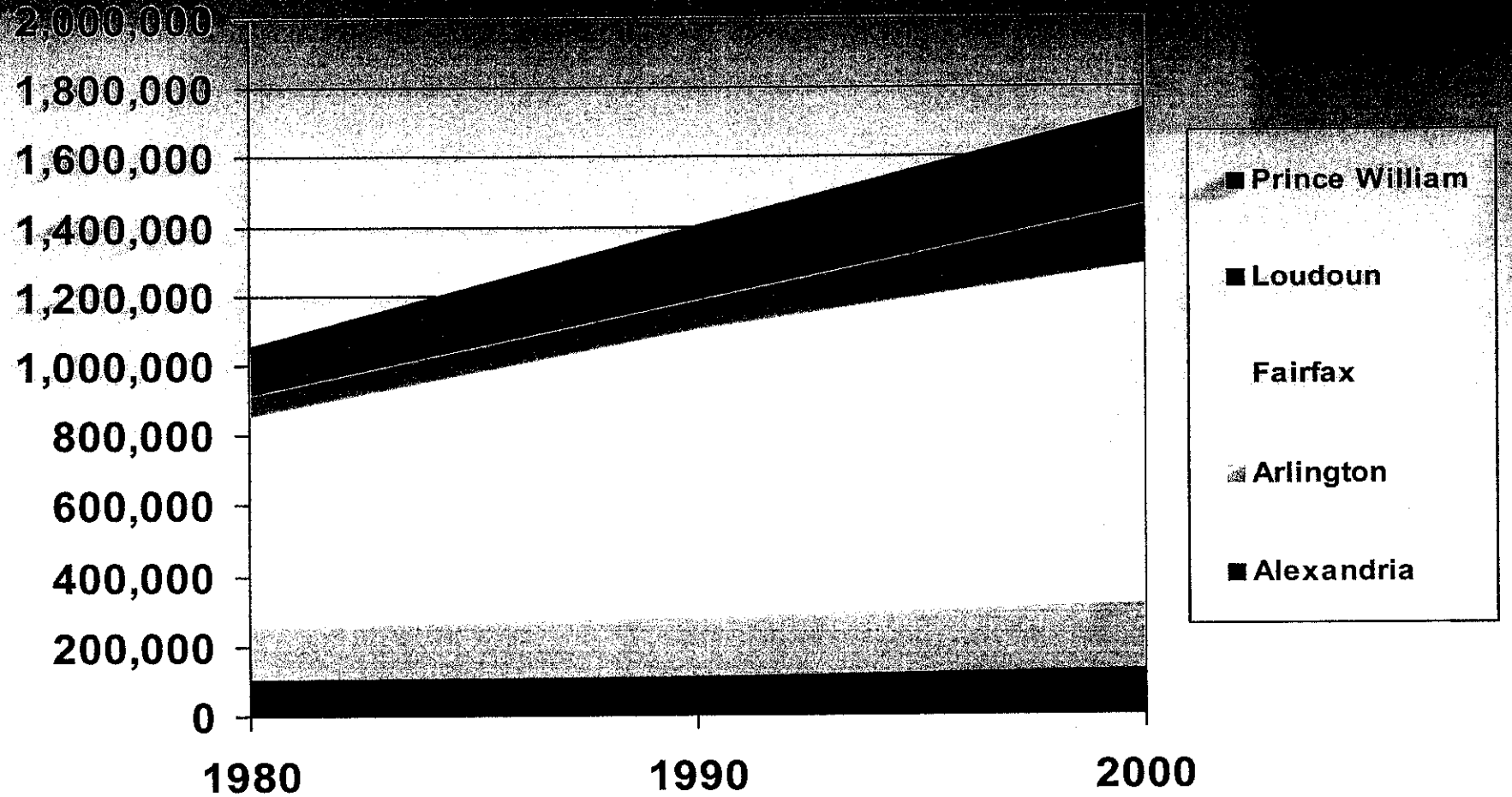
- General Population Increases
- Traffic Increases
- Support Growth
- Improve Connectivity

Why Study a Connector?

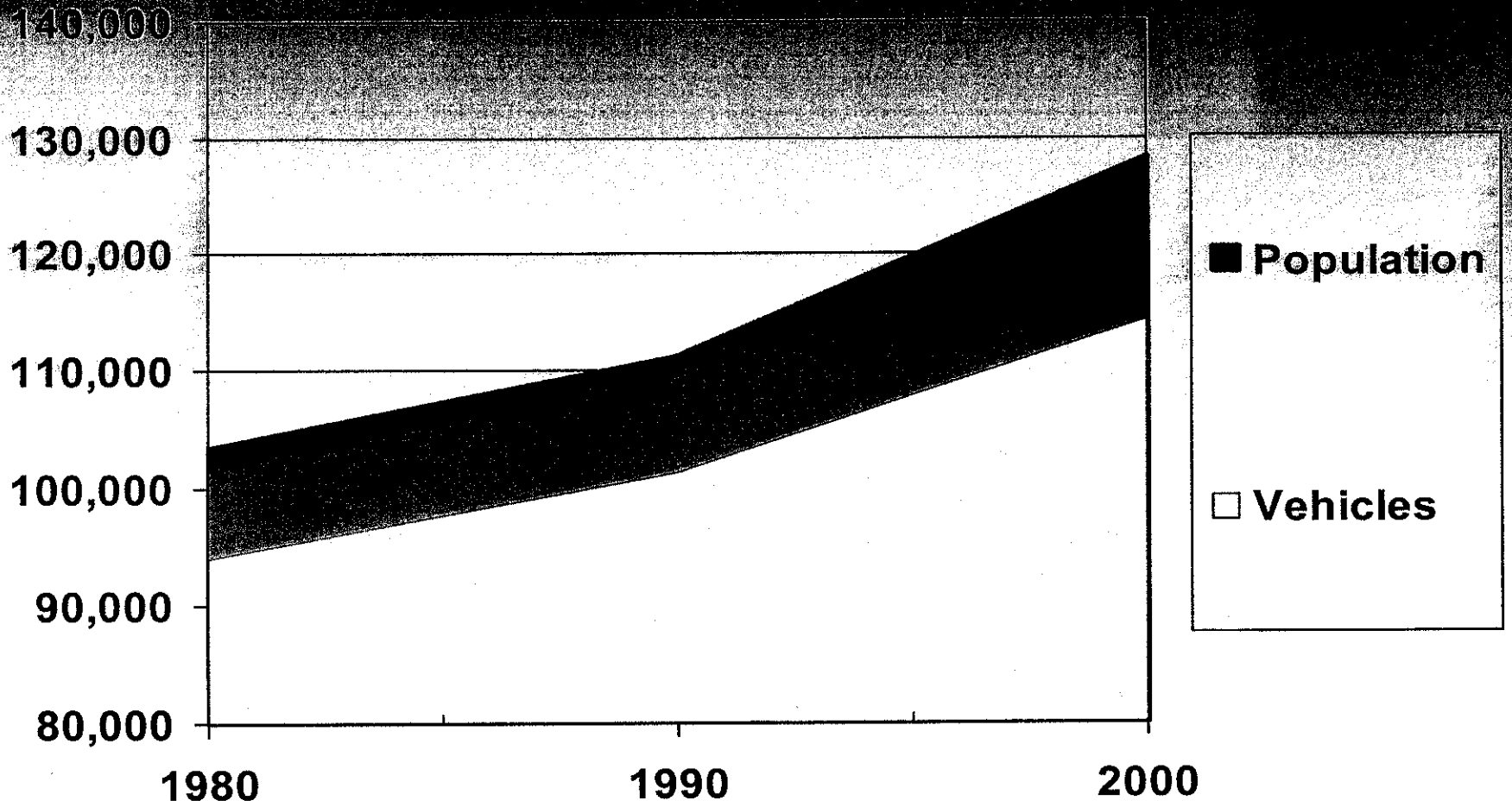
- General Population Increases

Population Growth

Total for Northern Virginia



Population & Vehicle Growth
City of Alexandria



Growth in Per Capita Trips

- Local Person Trips (per capita, one way)
  - 1977 – 2.9 Trips
  - 1990 – 3.8 Trips
  - 1995 – 4.3 Trips
- Local Person Miles (per capita – annually)
  - 1977 – 9,470 Miles
  - 1995 – 14,115 Miles

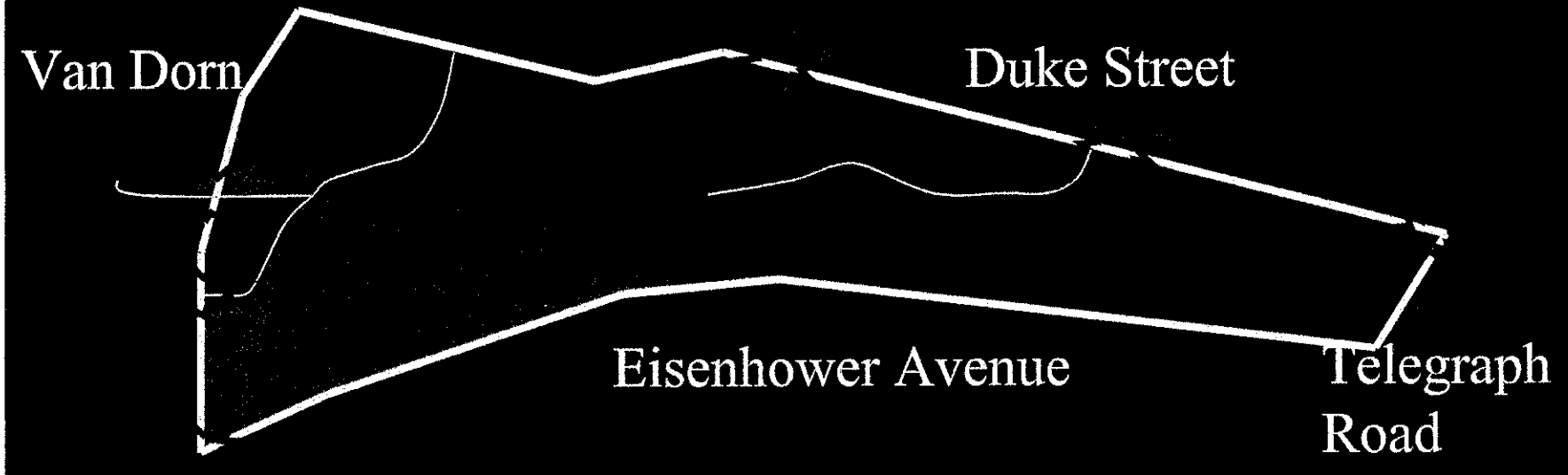
Why Study a Connector?

- Traffic Increases

Traffic Increases

- Traffic is projected to increase:
  - 43% on Van Dorn
  - 23% on Duke Street
  - 62% on Telegraph
  - 173% on Eisenhower

Challenged Intersections…



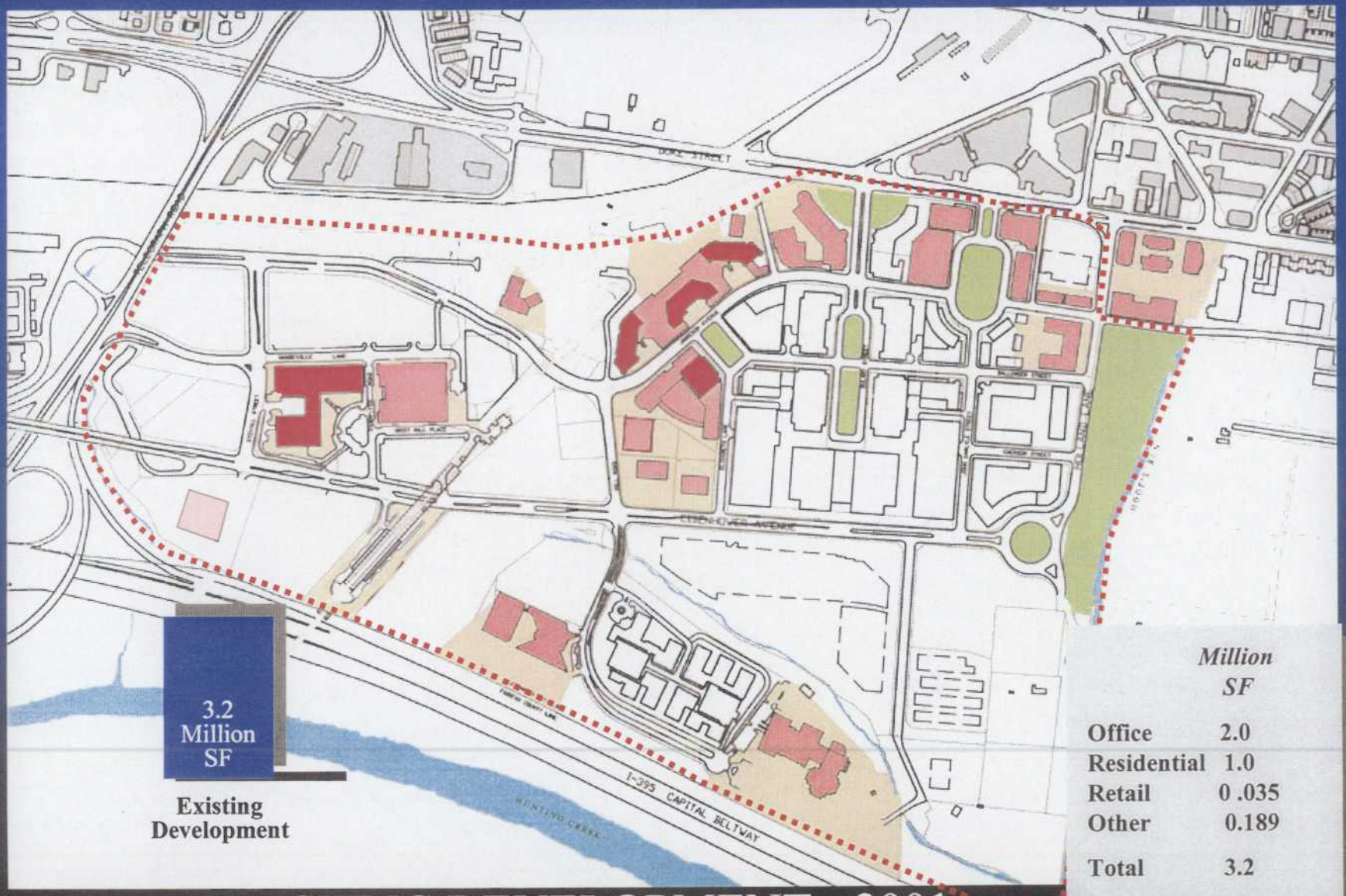
Traffic Increases

- Balance Transportation Modes:
  - Potential for additional bus service
  - Improved access to two metro stations
  - Connect bike trails

Why Study a Connector?

- Support Growth

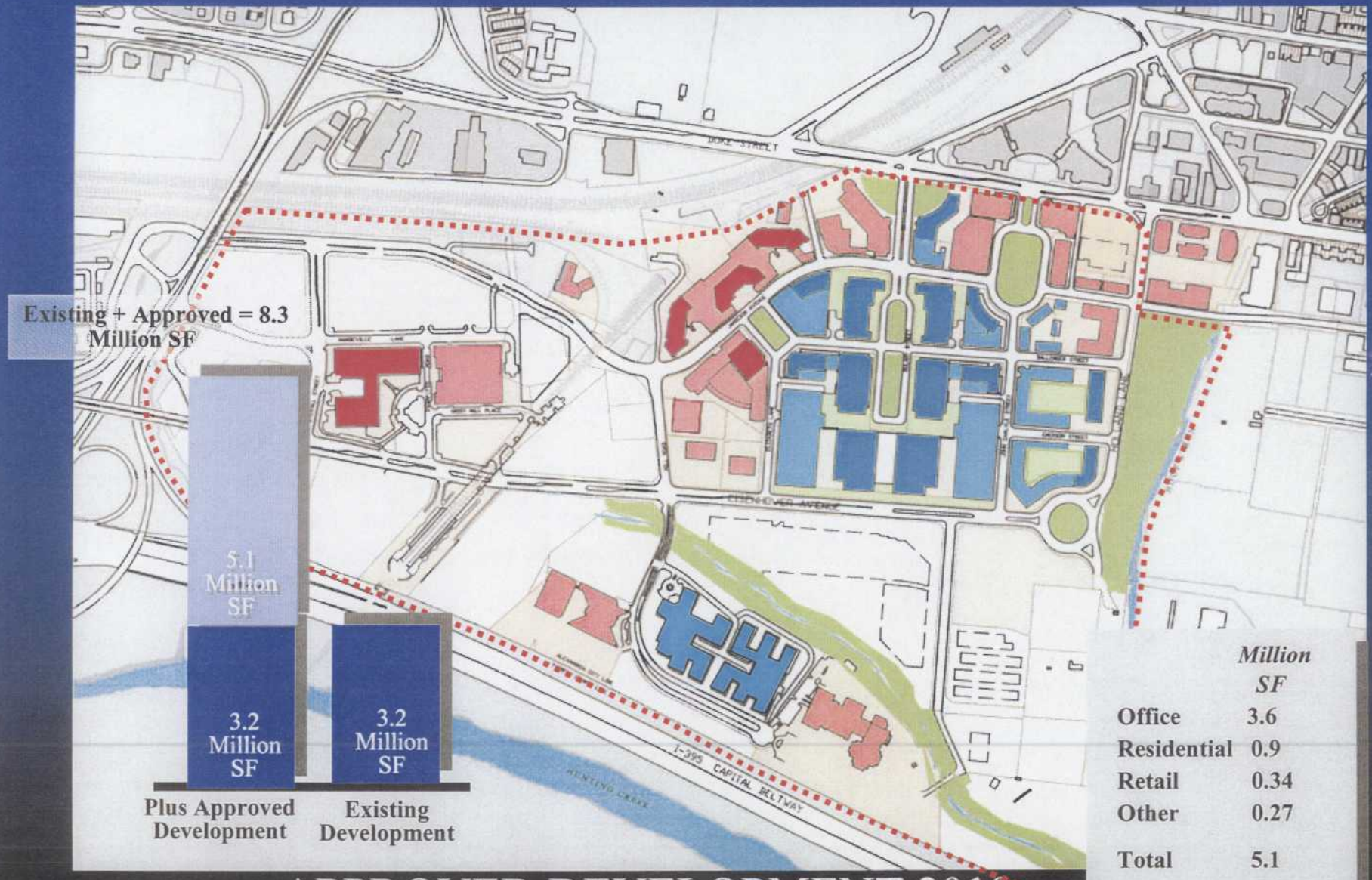
Eisenhower Avenue-to-Duke Street Connector Study



	Million SF
Office	2.0
Residential	1.0
Retail	0 .035
Other	0.189
Total	3.2

EXISTING DEVELOPMENT - 2001

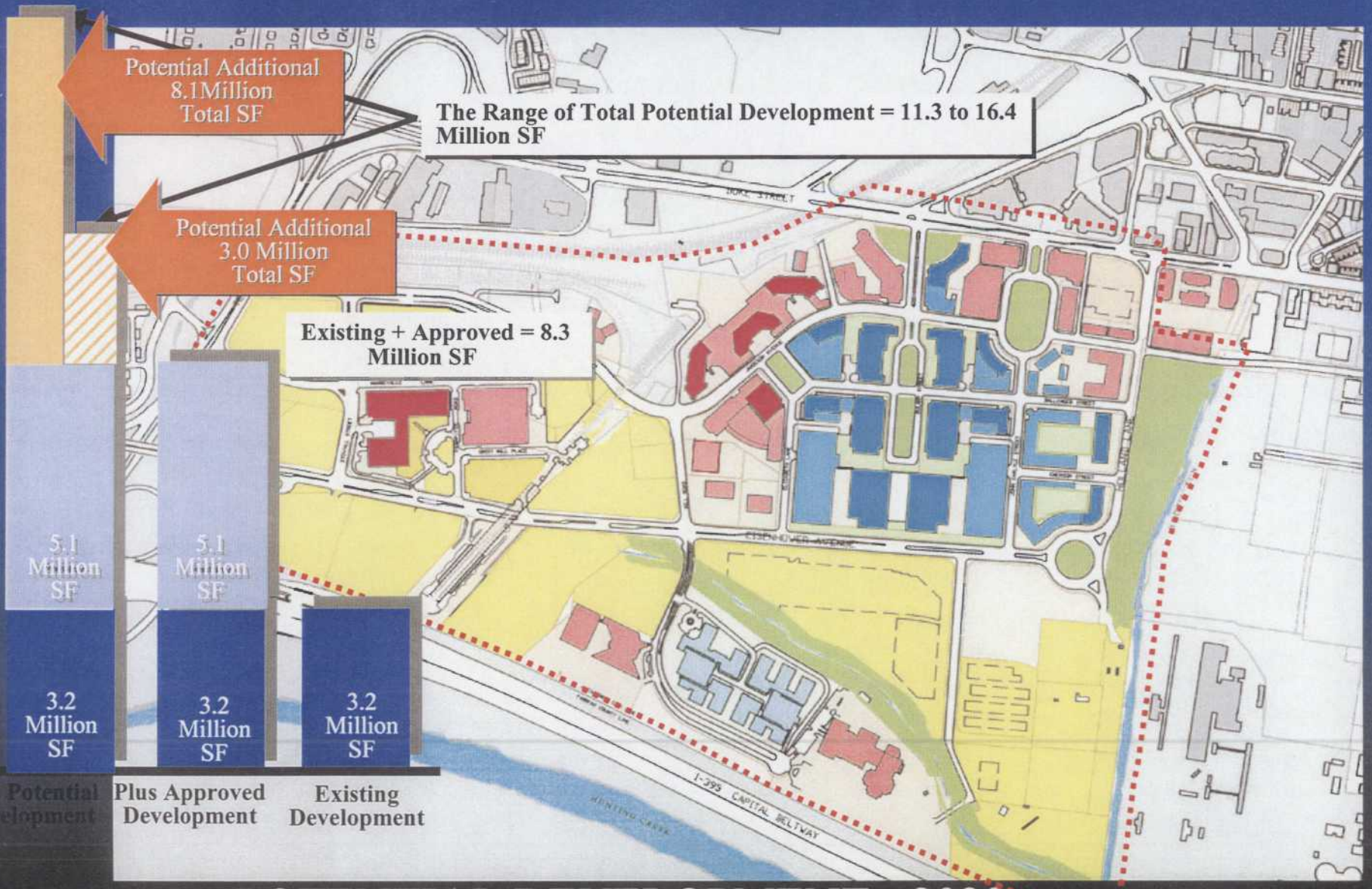
Eisenhower Avenue-to-Duke Street Connector Study



	Million SF
Office	3.6
Residential	0.9
Retail	0.34
Other	0.27
Total	5.1

APPROVED DEVELOPMENT 2010

Eisenhower Avenue-to-Duke Street Connector Study



POTENTIAL DEVELOPMENT - 2020

09

Why Study a Connector?

- Improve Connectivity

Eisenhower Avenue-to-Duke Street Connector Study

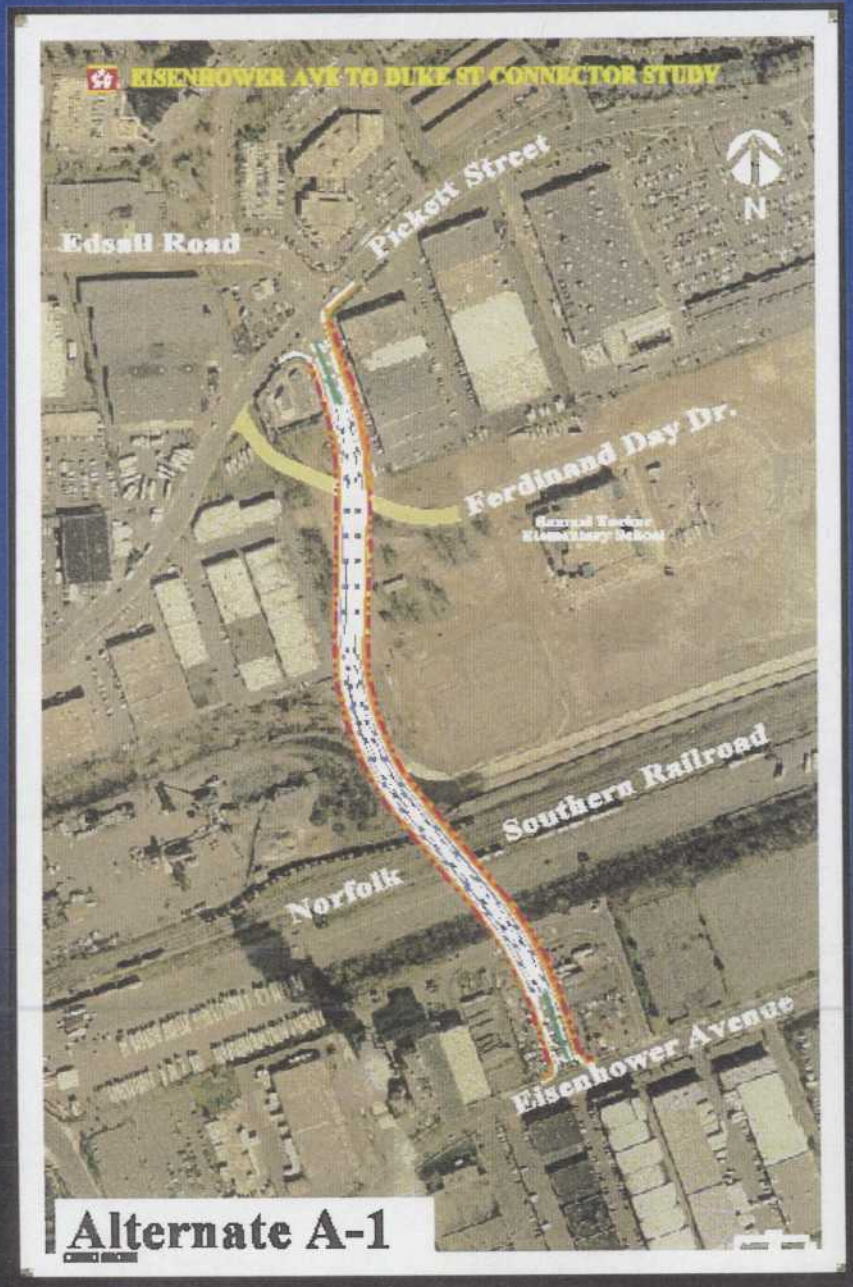
Connectivity Issues

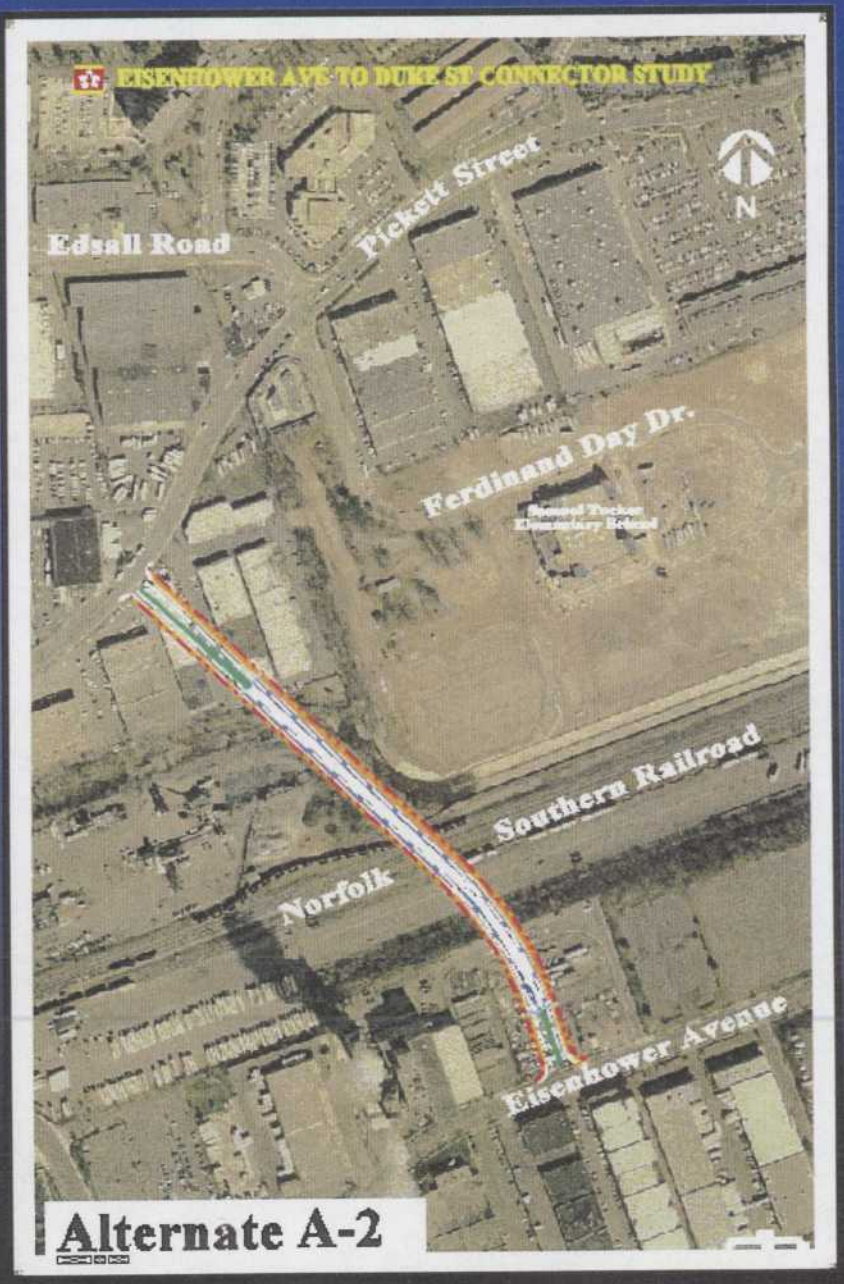
Other Roadways

- Route 1
- Holland Street
- Washington Street
- I – 395

Alternate A1 & A2

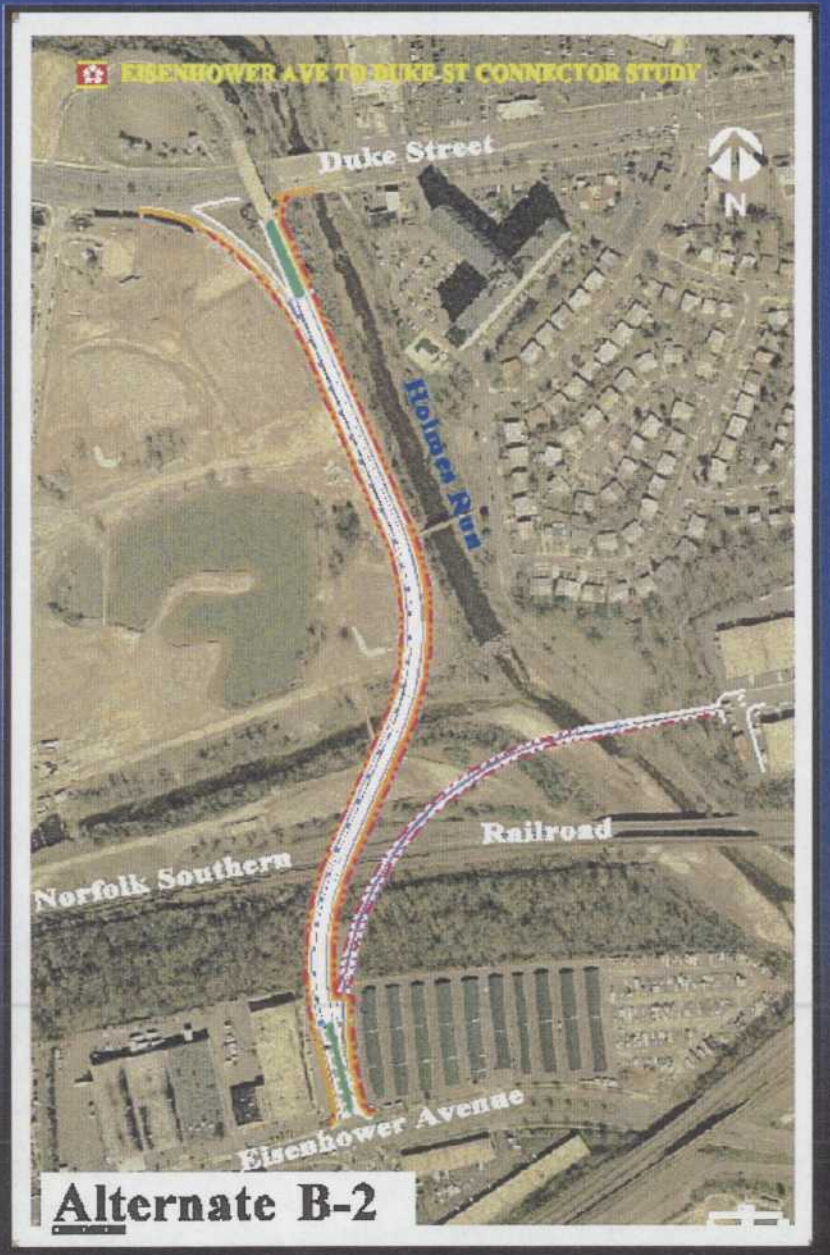
Eisenhower Avenue-to-Duke Street Connector Study



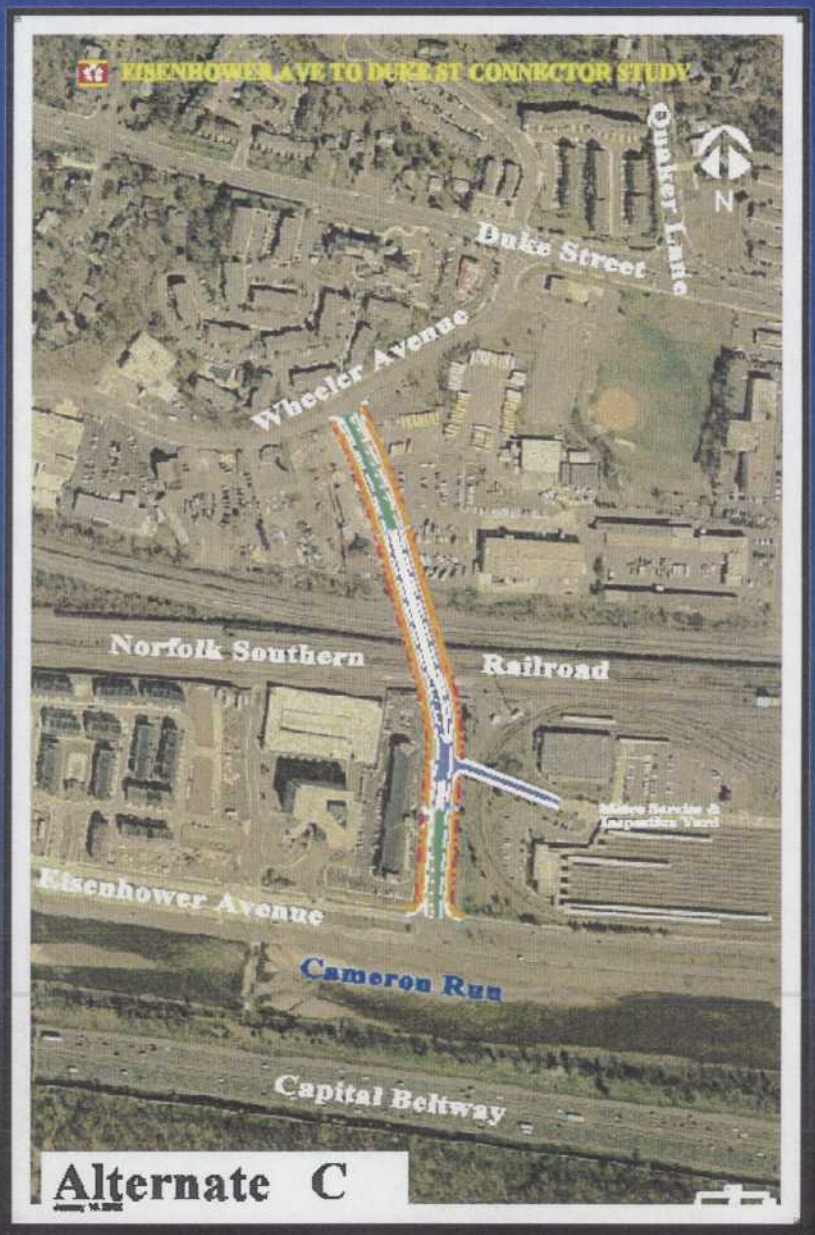


Alternate B1 & B2

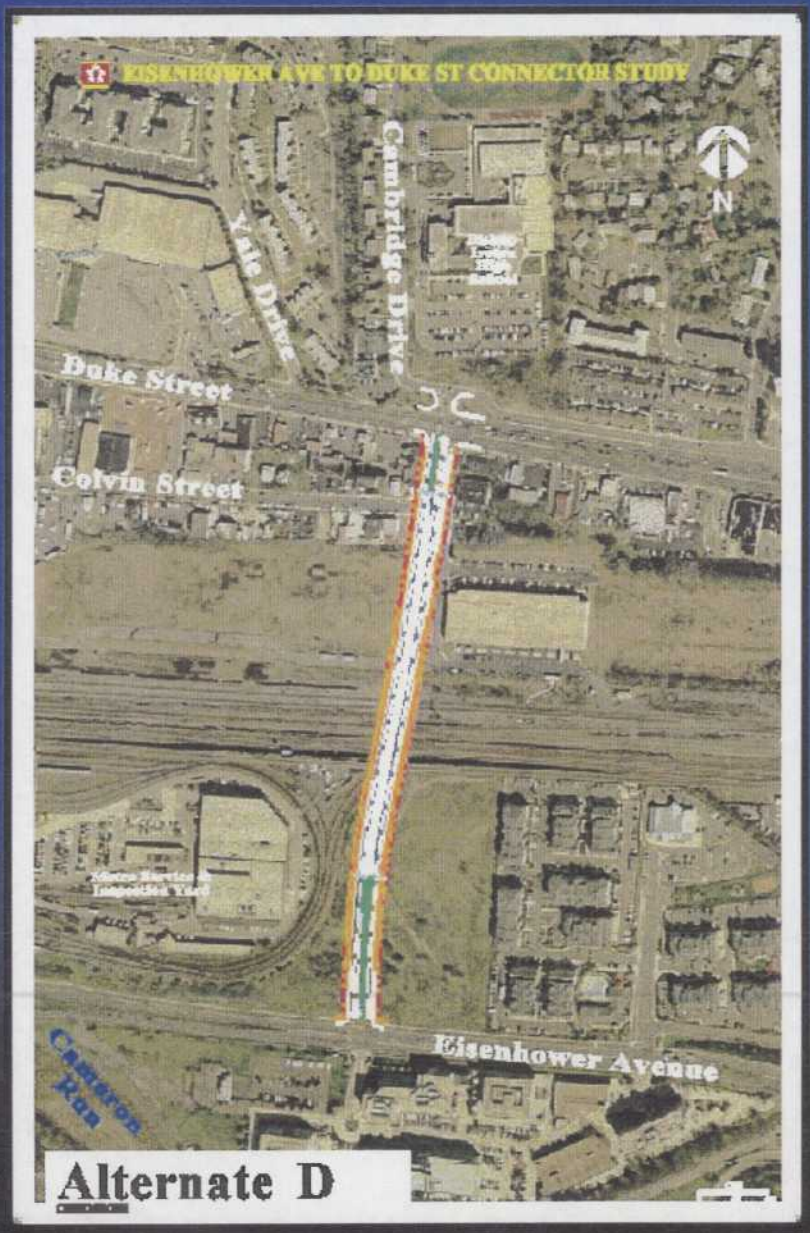
Eisenhower Avenue-to-Duke Street Connector Study



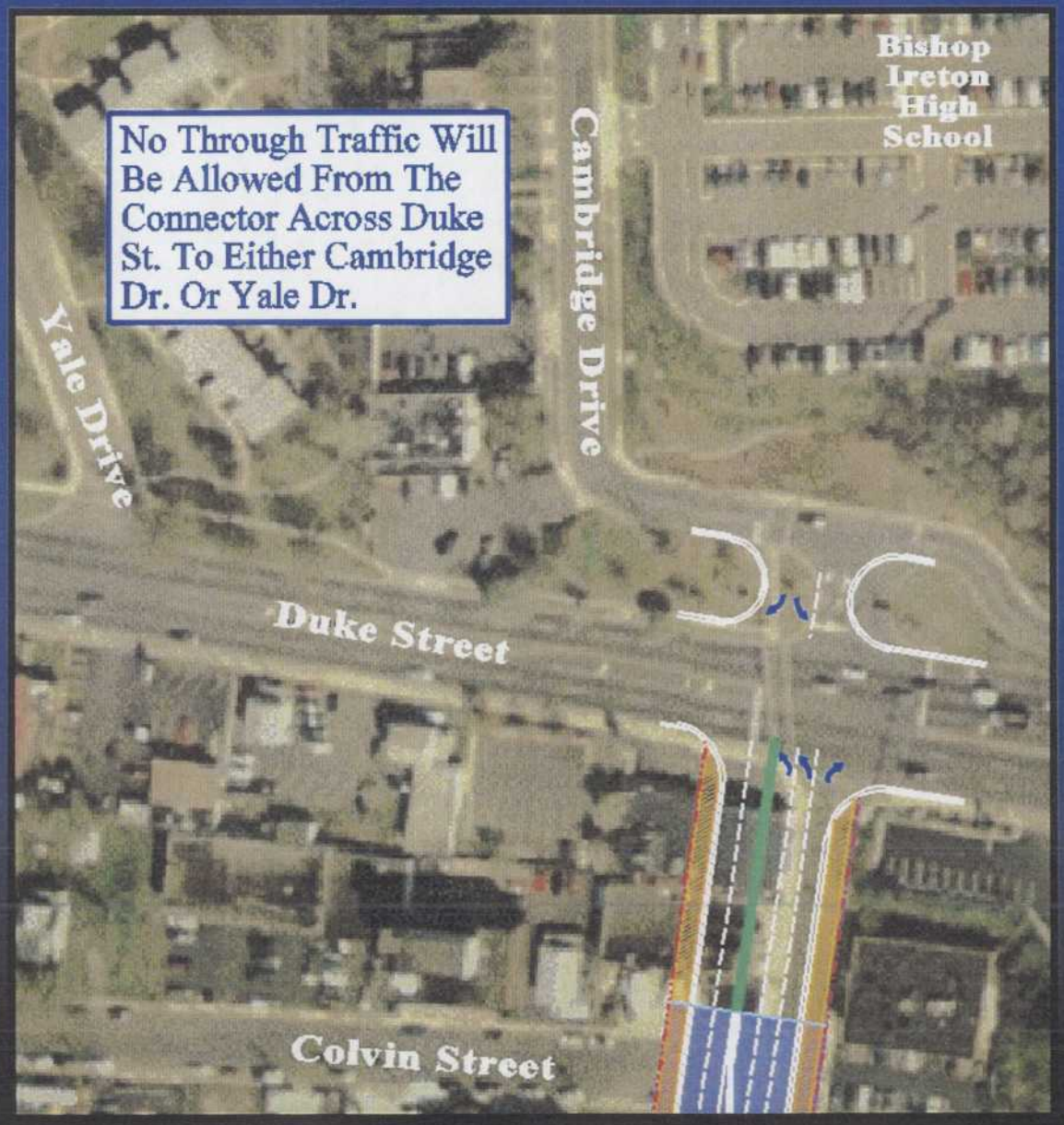
Alternate C


EISENHOWER AVE TO DUKE ST CONNECTOR STUDY
Duke Street
Wheeler Avenue
Norfolk Southern
Railroad
Eisenhower Avenue
Cameron Run
Capital Beltway
Alternate C

Alternate D


EISENHOWER AVE TO DUKE ST CONNECTOR STUDY
Cambridge Drive
Yale Drive
N
Duke Street
Colvin Street
Eisenhower Avenue
Cameron Run
Alternate D

Alternate D


No Through Traffic Will Be Allowed From The Connector Across Duke St. To Either Cambridge Dr. Or Yale Dr.
Bishop Ireton High School
Cambridge Drive
Yale Drive
Duke Street
Colvin Street

No Build

Improvements on Existing Roadway

- Improvements at Eisenhower and Van Dorn
- Urban Interchange at Van Dorn and Pickett
- Urban Interchange at Edsall Road and Van Dorn
- Additional lane on Duke Street eastbound from Quaker to Telegraph
- Additional lane on Telegraph southbound from Duke Street to I-95

Connector Volumes - 2020

Average Daily Traffic (ADT)

- A - 23,000
- B - 37,000
- C - 32,000
- D - 30,000

❖ *Point of Reference: Van Dorn currently has 41,000 to 52,000 ADT*

Connector Sources of Traffic*

Average Daily Traffic (ADT)

- From Van Dorn - 11,000
- From Telegraph - 6,000
- From other roadways - 20,000
- Total - 37,000

** This example is Alternate B*

Next Steps

- Three task force meetings in Sept:
  - 4 Sept,18 Sept and 26 Sept
- Study Team perform analysis over Summer
- City Council Consideration in October

Thank You!

Summary Matrix

- 30 Elements in Six General Areas
  - Traffic Service
  - Natural Environment Impacts
  - Socio-Economic Benefits
  - Socio-Economic Impacts
  - Cultural Resource impacts
  - Engineering and Costs
- In process of being modified with new analysis

Current Study Status

- Task Force presented interim recommendations.
- Council directed:
  - More detailed study of neighborhood impacts
  - More details "On Existing Alignment"
  - 5 new Task Force Members
  - Decision based on objective facts

EISENHOWER AVENUE TO DUKE STREET CONNECTOR STUDY

Contents:

1. License Plate Survey
2. Delay and LOS in 2020
3. Connector Traffic and Sources
4. External Traffic on the Connector and North Quaker
5. Reduction in Telegraph Road Traffic
6. Reduction in Van Dorn Traffic, 2020
7. Connector Service to East Eisenhower, 2020
8. Summary of North Duke Area Analysis
9. Summary of License Plate Survey
10. Measure of Potential Cut Through Traffic
11. North Quaker External - External Analysis
12. Reduction in Queue lengths at selected locations and direction
13. Revised Intersection Delay Table
14. 2020 ADT Traffic on Clermont
15. Inbound capacity for Eisenhower Valley

1. License Plate Survey Results (following page).

The AM and PM tables show the vehicles that entered each station and the number that were "matched" at another station. Matched vehicles are analogous to Through traffic, although it is possible that some of these trips stop in the area.

Timeframe: existing.
Units are number of vehicles over 2 hour peak period.

2. Delay and LOS in 2020

Traffic congestion is governed by intersection performance, this table shows key intersection performance and growth in traffic volumes.

Timeframe is 2020.
Units are average delay in seconds.

Table 2: Delay and LOS in 2020

Intersection	LOS/Delay *AM*	LOS/Delay *PM*	% Growth	Critical Movement
Eisenhower Ave				
Van Dorn	F / 104	F / 110	34%	NB Thru on Vandorn St
Clermont	C / 31	D / 37	73%	WB Left Onto Eisenhower Connector and NB Left Onto Eisenhower Avenue
Van Dorn				
Duke Street	C / 25	D / 38	24%	WB Left Onto Van Dorn St and NB Left Onto Duke
Pickett St	F / 90	F / 118	28%	EB and WB Thru and Left Onto Vandorn St.
Duke Street				
Jordan	E / 60	F / 97	41%	
N Quaker Ln	D / 53	E / 79	95%	EB Left Onto N Quaker and SB Left Onto Duke St
Cambridge St	B / 17	F / 97	13%	WB Thru and Right On Duke and SB Thru and Left onto Duke St
Seminary/ Janneys				
N Quaker Ln	na	C / 23	11%	

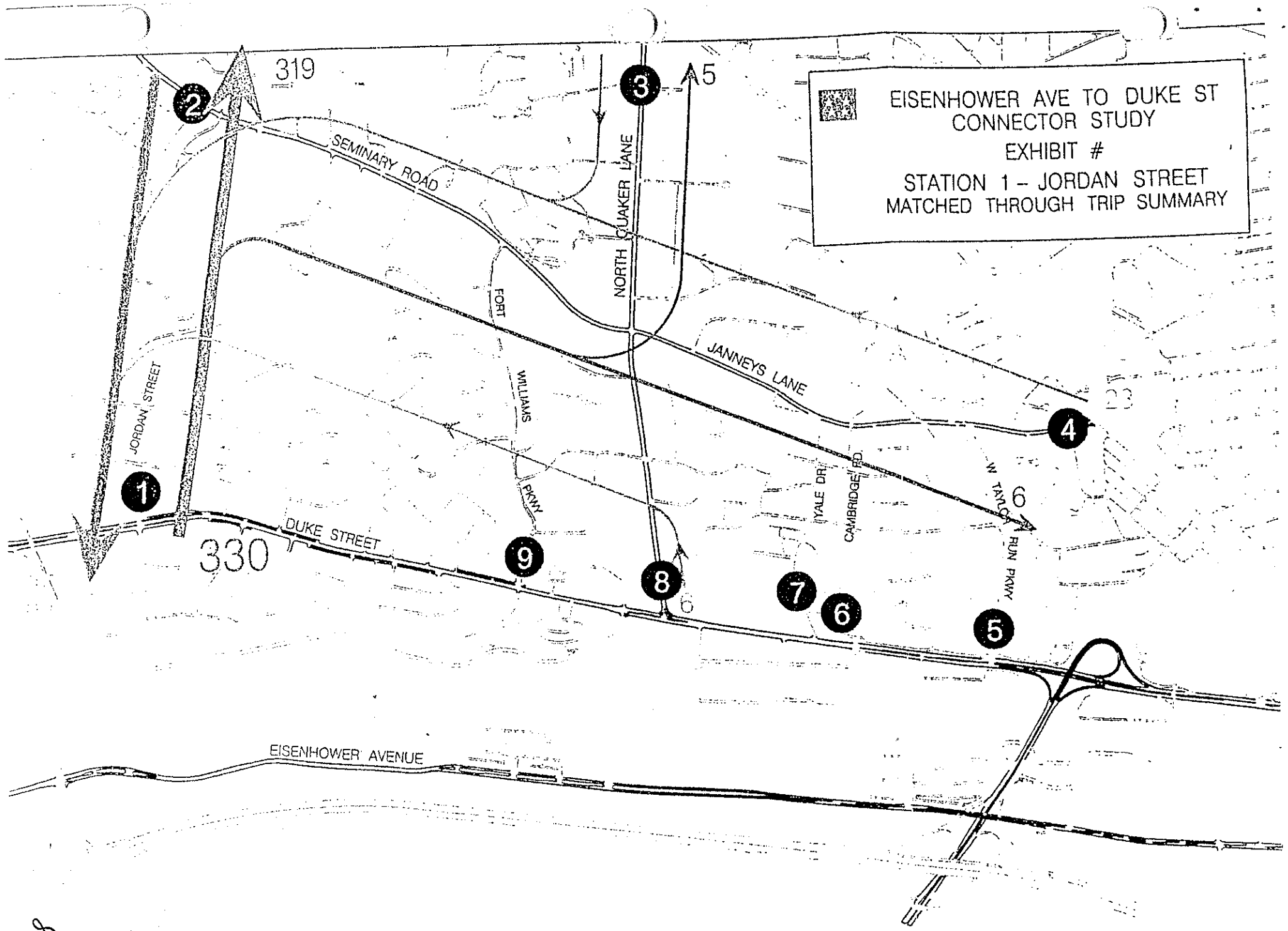

EISENHOWER AVE TO DUKE ST
CONNECTOR STUDY
EXHIBIT #
STATION 1 – JORDAN STREET
MATCHED THROUGH TRIP SUMMARY
319
A5
SEMINARY ROAD
NORTH QUAKER LANE
FORT
WILLIAMS
PKWY
JANNEYS LANE
JORDAN STREET
DUKE STREET
330
YALE DR
CAMBRIDGE RD
W TAYLOR RUN PKWY
EISENHOWER AVENUE
1
2
3
4
5
6
7
8
9

Table 1. AM Peak Period O-D Summary

	Exit Station									Through Match	U Turns	Total Match	Un-matched	Total Traffic
Entry Station	1S	2W	3N	4E	5S	6S	7S	8S	9S					
1N (Jordan St.)	62	319	5	6	0	0	0	0	0	330	62	392	679	1071
2E (Seminary Rd.)	47	130	26	149	49	13	12	303	7	606	130	736	843	1579
3S (Quaker Ln. to north)	3	40	40	20	51	13	6	621	4	758	40	798	294	1092
4W (Janneys Lane)	3	66	9	45	62	15	5	17	1	178	45	223	165	388
5N (W. Taylor Run Pkwy.)	0	22	14	170	12	0	0	0	0	206	12	218	232	450
6N (Cambridge Rd.)	0	106	112	72	0	113	0	5	0	295	113	408	399	807
7N (Yale Dr.)	0	9	21	22	0	0	9	4	0	56	9	65	71	136
8N (Quaker Ln. @ Duke)	4	684	949	48	3	13	12	51	2	1715	51	1766	716	2482
9N (Ft. Williams Pkwy.)	0	38	25	4	0	0	0	13	19	80	19	99	131	230
Through Match	57	1284	1161	491	165	54	35	963	14	4224	481	4705	3530	8235
U Turns	62	130	40	45	12	113	9	51	19	481				
Total Match	119	1414	1201	536	177	167	44	1014	33	4705				
Unmatched	429	1173	399	528	147	124	70	237	41	3148				
Total Traffic	548	2587	1600	1064	324	291	114	1251	74	7853				

Table 2. PM Peak Period O-D Summary

	Exit Station									Through Match	U Turns	Total Match	Un-matched	Total Traffic
Entry Station	1S	2W	3N	4E	5S	6S	7S	8S	9S					
1N (Jordan St.)	106	166	6	6	0	0	0	9	0	187	106	293	703	996
2E (Seminary Rd.)	480	173	49	114	65	104	14	283	34	1143	173	1316	1025	2341
3S (Quaker Ln. to north)	11	45	49	35	63	120	19	870	61	1224	49	1273	364	1637
4W (Janneys Lane)	23	173	32	48	89	23	46	27	14	427	48	475	286	761
5N (W. Taylor Run Pkwy.)	0	42	39	69	10	0	0	0	0	150	10	160	174	334
6N (Cambridge Rd.)	0	61	93	17	0	44	0	6	0	177	44	221	119	340
7N (Yale Dr.)	0	8	14	8	0	0	28	6	0	36	28	64	87	151
8N (Quaker Ln. @ Duke)	6	316	768	13	4	3	12	13	11	1133	13	1146	279	1425
9N (Ft. Williams Pkwy.)	0	21	14	4	0	0	0	12	31	51	31	82	57	139
Through Match	520	832	1015	266	221	250	91	1213	120	4528	502	5030	3094	8124
U Turns	106	173	49	48	10	44	28	13	31	502				
Total Match	626	1005	1064	314	231	294	119	1226	151	5030				
Unmatched	662	763	299	182	151	202	60	291	95	2705				
Total Traffic	1288	1768	1363	496	382	496	179	1517	246	7735				

3. Connector Traffic and Sources.

This table shows the projected volume on each connector and estimates the sources of the traffic. All volumes are Average Daily Traffic, ADT. Other Roadways in the City consists of Rt 1, Washington Street and Holland Street.

Timeframe is 2020.
Units are Average Daily Traffic, ADT.

Table 3: Connector Traffic and Sources Average Daily Traffic, 2020

	A1	A2	B1	B2	C	D
Total Connector ADT	***23,400***	***21,000***	***37,200***	***33,200***	***31,500***	***29,500***
Van Dorn Street	12,000	12,000	11,400	8,300	4,300	4,300
Telegraph Road	1,100	1,100	6,000	4,000	13,200	12,000
Other Roadways in Alexandria	8,300	6,700	14,600	15,500	10,200	9,600
I – 395 or Roadways outside Alexandria	2,000	1,200	5,200	5,400	3,800	3,600

4. External Traffic on the Connector and North Quaker.

The top portion of this table shows traffic that has a destination and origin outside the City. The bottom portion shows traffic that has a destination and origin outside the Study Area. Time frame is 2020.

Table 4: External Traffic on the Connector and North Quaker, 2020

External Traffic outside the City of Alexandria

	NB	Alt-A	Alt-B	Alt-C	Alt-D	No Build w improvement
Connector	-	35%	38%	33%	30%	-
N. Quaker	34%	34%	35%	34%	33%	35%

Timeframe is 2020
Units are seconds.

Table 6: Reduction in Van Dorn Traffic, 2020					
	Van Dorn / Pickett	Van Dorn/ Eisen	Van Dorn / Edsall	Avg	Reduction
2020 Base Case	95	230.8	180	169	
Alt A1	121.7	41	217.4	127	25%
Alt A2	113.6	63.1	189.9	122	28%
Alt B1	77.2	63	144.7	95	44%
Alt B2	71.2	62	147.6	94	44%
Alt C	145.6	150.2	146.8	148	12%
Alt D	110.1	149.5	128.8	129	23%
No Build w Imp.	58.2	26.2	15.5	33	80%

7. Connector service to East Eisenhower, 2020.

This table shows the percentage of traffic on each connector that has an origin or destination in the East Eisenhower area. Timeframe is 2020.

Table 7: Connector Service to East Eisenhower	
Alt-A	5%
Alt-B	5%
Alt-C	15%
Alt-D	20%

8. Summary of North Duke Area Analysis

A separate analysis was performed for Duke Street , Quaker Lane, Seminary Road and Janney's lane. The North Area Trips is a measure of how much traffic is in this area in the peak hour. The average delay per mile is a measure of the delay on Duke, Quaker, Seminary, Janney's and the area local streets.

External Traffic outside the Study Area	NB	Alt-A	Alt-B	Alt-C	Alt-D	No Build w improvement
Connector	-	57%	67%	76%	66%	-
N. Quaker	43%	43%	44%	43%	43%	44%

5. Reduction in Telegraph Road Traffic

This table shows the reduction in ADT as result of the alternates as compared with the 2020 No Build Volume.

Timeframe is 2020.
Units are Average Daily Traffic.

Table 5: Reduction in Telegraph Road ADT

2020 Base Case	63,200	0%
A1	62,100	2%
A2	62,100	2%
B1	57,200	9%
B2	59,200	6%
C	50,000	21%
D	51,200	19%
No build w improvements	71,600	-13%

6. Reduction in Van Dorn Traffic, 2020

This table shows the three congested Van Dorn intersections, and the projected improvement in average delay per vehicle.

Table 8: Summary of North of Duke Neighborhood Area Analysis, 2020		
Alternate	Vehicles Served	Average Delay per mile
Existing (model)	10,300	1:33 min:sec
No Build 2020	13,400	3:51
A	12,900	3:05
B	16,000	3:48
C	14,300	3:26
D	14,300	3:55
No build w improvements	14,200	3:51

9. Summary of License Plate Survey

This table is a summary of Table 1. It is presented here to compare with the next table.

Timeframe is existing.
Units are vehicles over 2 hour peak period.

Table 9: Summary of License Plate Survey				
	Through	Local	Total	% Through
West Taylor Run	371	325	696	53%
Cambridge	427	321	748	57%
Yale	127	147	274	46%
Fort Williams	171	152	323	53%
Jordan	707	1365	2072	34%

10. Measure of Potential Cut Through

This table shows volumes of 2020 cut through traffic. These volumes are comparable to the Through volumes in table 9, however they are generated from a micro simulation computer program.

Timeframe is 2020.
Units are vehicles over 1 hour peak period.

Table 10. Measure of Potential Cut Through Traffic				
	West Taylor Run	Cambridge	Fort Williams	Jordan
No Build	430	130	120	290
A	310	120	190	500
B	350	110	190	360
C	200	80	50	450
D*	420	40	40	140
No Build w Improvements	780	20	80	340

* No through movements permitted between Connector D and Cambridge.

11. North Quaker External – External Analysis
Units: Average Daily Traffic (ADT)
Existing and 2020

Table 11: North Quaker External – External Analysis							
	Existing	**No Build**	**A**	**B**	**C**	**D**	**NB with Imp**
ADT	22,000	28,500	28,500	32,900	31,500	32,000	30,200
X-X to The City	9,900	9,700	9,800	11,500	10,600	10,600	10,700
% Growth from Existing	N/A	-2.0%	-1.0%	16.2%	7.1%	7.1%	8.1%

12. Reduction in Queue lengths at selected locations and directions.
    Units: Feet.
    Timeframe: 2020

Table 12: 2020 Queue Lengths

	Direction	No Build	A Alts	B1	C	D	NB w Imp
Duke/ Dangerfield	East Bound	1,542	1,400	1,141	600	600	1,542
Duke/ Quaker	South Bound	1,746	497	429	300	290	216
Van Dorn/ Edsall	South Bound	580	579	535	348	524	104
Van Dorn/Pickett	South Bound	176	164	112	143	179	25
Telegraph at Duke*	East Bound	3,540	2,222	1,130	1,040	1,010	1,180

* *HCM unsignalized intersection methodology used to calculate queue length. Volumes calculated from AIMSUN2 with diverted volumes.*

13. Revised Intersection Delay Table.
    Units: Seconds
    Timeframe – 2020 PM

Table 13 **Intersection Average Delay, 2020 PM* (Control and traffic)**

Intersection	No Build	Alt A	Alt B 1	Alt B 2	Alt C	Alt D	No Build w/
Eisenhower Ave							
Van Dorn	251	49	100	96	205	168	12
Clermont	193	82	90	123	59	37	60
Van Dorn Street							
Mall	252	251	127	114	172	166	95
Edsall	140	195	91	88	96	117	32
Pickett St	90	75	51	65	74	83	46
Duke Street							
S Pickett	26	13	37	29	22	36	33
Pickett/ Cameron	18	23	15	15	21	24	15
Jordan	122	23	17	19	19	18	37
N Quaker Ln	119	39	34	24	34	29	20
S Quaker Ln	15	15	17	14	21	16	17
Sweely St	71	27	54	50	29	46	30
Cambridge St	62	23	21	20	22	34	14
W. Taylor Run Pk	25	12	12	11	11	9	6
Seminary Rd/Janeys Ln							
Jordan	42	21	15	15	21	13	16
Ft Williams Pkwy	7	9	6	10	7	12	10
N Quaker Ln	31	54	54	46	34	37	48
Yale St	56	48	46	45	65	35	35
Total Network Delay	336	286	195	187	213	240	210

* These delays were calculated using the expanded Study Area and SIMTRAFFIC. Table 6 uses the original study area and SYNCHRO. Results will differ slightly.

Table 14 2020 ADT Traffic on Clermont (1,000's)	
No Build	25.4
Alternate A	33.5
Alternate B1	47.1
Alternate B2	43.1
Alternate C	26.5
Alternate D	26.5
No Build w/ Improvements	17.6

Table 15 Inbound capacity for Eisenhower Valley

From Duke/City	*Limit*	*Capacity*	*From County*	*Limit*	*Capacity*
Van Dorn	Single left Turn onto Eisenhower and right turn from Metro Road	1400	Van Dorn	Right turn onto Van Dorn and right turn from Metro Road	1500
Telegraph / Mill Rd	Single lane local roadway	1200	I 495 / Telegraph Stovall St	Single lane ramp with intersections	1500
John Carley	Single right turn lane	800	Clermont	Three lanes at signal from ramp	1800
Mill Rd	Single right turn lane	750	New Mill Road Interchange	Two through lanes and one right from ramp	1900
Holland	Single right turn lane	800			
Metro*		1000	Metro*		2000
Total		**5950**			**8700**

* Metro assumed rider ship

V. General Information Tables: Level of Service criteria for Intersection Delay and Functional Classification.

Intersection Level of Service Definition	
LOS	Average Delay per Vehicle Seconds
A	Less than or equal to 10
B	Between 10 and 20
C	Between 20 and 35
D	Between 35 and 55
E	Between 55 and 80
F	Greater than 80

Functional Classification Descriptions (Areas with population of 5,000 or more) *Source: A Policy on Geometric Design of Highways and Streets, 2001*	
Local Street	Permits direct access to abutting lands and connections to higher order systems. Service to through traffic movement is usually deliberately discouraged.
Collector Street	Provides both land access and traffic circulation within residential neighborhoods and commercial and industrial areas. In the central business district and other areas of similar development and traffic density, the collector system may include the entire street grid.
Minor Arterial Street	Interconnects and augments Principal Arterials. Provides intercommunity continuity. Normal spacing is 2 to 3 miles in the suburban fringes and .1 to .5 miles in the central business district.
Principal Arterial	Consists of interstate, other freeways and principal arterials. Serves major centers of activity. Service to abutting land is subordinate to major traffic movements.

Eisenhower Avenue
To Duke Street Connector Study

I. STUDY TEAM FINDINGS AND CONCLUSIONS
4 September, 2002 *updated 9/25*

1. Without roadway improvements the Eisenhower Valley will experience excessive congestion during peak and non-peak periods.
    a. Van Dorn will have gridlock conditions during peak periods
    b. Backups on Telegraph Road will degrade conditions on Duke Street and in east Eisenhower.

2. Build alternates eases congestion for the City of Alexandria.
    a. Build alternates improve LOS throughout the Study Area
    b. Connectors carry 20 to 30 thousand Average Daily Traffic (ADT) most of which is traffic diverted from City roadways.
    c. No build w/ connector is focused on the most congested intersections in the study area.
    d. New traffic without a destination or origin in the City will be less than 2,000 vehicles per day on N Quaker.

3. Connectors do not increase total cut through traffic, in some cases decrease the potential for cut through traffic.
    a. Average delay for Duke and the neighborhoods north to Seminary and Janeys is not increased.
    b. Access to Telegraph is improved. This results in decreased potential for cut through traffic on Yale, Cambridge and West Taylor Run.

4. Connectors improve emergency response times for Police, Fire and EMS services.
    a. Under normal circumstances an average of 2 to 3 minutes.
    b. During peak hours improvement will be greater.

5. Connectors support by right development in east Eisenhower.
    - 5% to 20% of connector traffic will be to or from east Eisenhower.

6. No Build w/ improvements will solve congestion on Van Dorn by improving intersection capacity. However, No Build w/ improvements does not create more efficient traffic patterns or improve connectivity.
    a. Van Dorn delay is improved up to 80%.
    b. Van Dorn at Pickett, Edsall and Eisenhower LOS will be D or better.
    c. SB Duke onto Telegraph PM queues reduced.

7. No build w/ improvements to Van Dorn at Edsall and Pickett may not be feasible as a result of costs and impacts.
    a. Spot improvements do not change LOS.
    b. Tight grade separations (urban interchanges) have large impacts to businesses and residences.
    c. Costs will be over $50 million. This is substantially higher than the Connector costs.
    d. Construction will be disruptive.

8. Other non-connector improvements will result in improved operations without major construction.
    a. Improvement to LOS at Eisenhower and Van Dorn can be accomplished without major construction.
    b. Widening of Duke Street between Quaker and Telegraph can avoid impacts by using service road buffer area.

9. Relative to the scope of the project, environmental impacts are not large.
    a. Wetland impacts are expected to be avoided.
    b. No protected species or habitat is known to be in the study area.
    c. Floodplain and Forest impacts are less than 2 acres for any alternate.

10. However, the B alternates do pass through or close to a pocket of stream and wooded resources valued by the City.

11. Connector cultural and community resource impacts are not large, parkland takings are the single most significant impact.
    a. No known prehistoric or historic sites on potential alignments
    b. No residences and few businesses taken
    c. A1 and B alternates have park impacts, up to 3.6 acres.

12. Community will benefit as a result of connectivity from connectors.
    a. Trails and parks are connected.
    b. Improved pedestrian and bike access to metro.

Connects residential, recreation and commercial land uses.

The Economic and Fiscal Impacts of the Proposed Duke Street Connector Alternatives

Prepared for the Eisenhower Partnership

By

Stephen S. Fuller, Ph.D.
University Professor, School of Public Policy
George Mason University
March 27, 2002

Summary of Findings

The current development pattern along Eisenhower Avenue Corridor, west of Telegraph Road, does not reflect its zoned build out potential or full real property valuation. As a result, the City's fiscal base is significantly smaller and the real property taxes paid by City residents are higher. In spite of important improvements to the Corridor's transportation services and access to regional markets, it remains isolated from the city's other major employment and commercial centers to the north. Being disconnected from the City's arterial highway system represents a significant barrier to the Corridor's development consistent with its "highest and best use." The economic and fiscal costs of the Corridor's current development pattern are reflected in its low density and below market-potential valuation. The under utilization of the Corridor and its resultant costs can be summarized as follows:

- current development density in the Corridor, west of Telegraph Road, is only 56.5 percent of land area and only 37.7 percent of permitted FAR;
- real property values increased slower in the Corridor between 1997 and 2001 than for the City as a whole (29.3% vs. 31.0%) and real property valuation between Cameron Run and the Van Dorn Metro Station increased only 26.4%;
- the average value per square foot of building area in the Corridor is $79.185, well below the values associated with zoned land uses of more than $150.00 per building square foot;
- if the Corridor was built out to zoned densities, its real property valuation at current per square foot values would total $352.9 million or two times its current value or if the Corridor was built out at it full potential market values, its total real property valuation would be $668.4 million or five times current value;
- with the Corridor's full development valuation, the City would be able to lower the real property tax rate by 3.5 cents and save the average home owner $100 annually; however,

- these economic and fiscal benefits will not be achieved until the Corridor's isolation from the remainder of the City is ameliorated with this being done in a manner that catalyzes the regional market forces in the development void between Van Dorn Street and Telegraph Road; Alternative B is the only alternative that achieves the market integration required to realize the Corridor's significant economic and fiscal potential.

Eisenhower Avenue's Economic Context

The key to building and sustaining a strong economy for the City of Alexandria is the generation of high value-added jobs. A growing job base not only underpins the City's residential values but it will enable the City to increase the public services it provides its citizens without proportional increases in taxes. With the City's real property comprising only 47.3 percent of total City revenues, the City already benefits from a diversified tax base. However, it is the mix of this real property valuation between residential and commercial uses that will determine the tax burden local residents will face in the future. Recently, residential values have accelerated relative to commercial values shifting the tax burden to residents. The realization of the City's commercial development potentials has long been one of its primary objectives. Its aggressive investment in economic development and tourism are a good measure of this commitment.

As the City approaches build out, how it uses its remaining commercially zoned properties will determine its fiscal vitality and the distribution of the real property tax burden between residential and commercial properties. One of the remaining under-developed portions of the City is the Eisenhower Avenue Corridor, especially its western extension between Telegraph Road and Van Dorn Street. Whether the developable properties lying along this section of Eisenhower Avenue are able to realize their full investment potential will be a function of its access to labor, suppliers, and consumers elsewhere within the City and surrounding sub-markets. That the current pattern of development within this corridor has not generated FARs exceeding 1.0 and recently has favored residential uses over commercial development is a good measure of the area's uncompetitive position within the broader economy.

Can the City afford to continue this pattern of under utilization given its limited supply of commercial land and its need to build a sound and balanced economic and fiscal base? If the answer to this question is NO—the City cannot afford to waste its economic development and fiscal resources—then the next question is: what will be required to realize the full development potential of the Eisenhower Avenue Corridor?

Current Patterns of Development

The Eisenhower Avenue Corridor between Telegraph Road and Van Dorn Street has not experienced increases in real property valuation equal to the gains reported for the City as a whole. Between 1997 and 2001, real property valuation in the City increased 31.0 percent while the values of properties located along Eisenhower Avenue, west of

Telegraph Road to Van Dorn Street, increased 29.3 percent. The properties located between Cameron Run and the Van Dorn Metro Station, excluding two sites on which apartments are currently under construction, experienced only a 26.4 percent increase in value between 1997 and 2001. The value of these properties has not kept pace with the Citywide average in spite of the opening of the Clermont interchange with I-95 in 1997. These properties have an average value of $79.185 per square foot of building area, well below their imputed zoned land use value of more than $150.00 per building square foot.

The properties located along this section of Eisenhower Avenue (from Cameron Run west to the Metro station) currently occupy only 56.5 percent of the land area. Compared to their permitted FAR, their square foot utilization rate is only 37.7 percent.

Fiscal Potential

What is the fiscal cost of under-development within the Eisenhower Avenue Corridor? The best measure of the supportable level and mix of development along the Corridor, especially west of Cameron Run, is what the market has supported. This pattern of use reflects all of the investments (Metro, the new I-95 interchange, and improvements to Eisenhower Avenue) designed to improve and capture the Corridor's development potential. That the current level of development does not reflect its planned and zoned maximums strongly suggests that there are still significant barriers to development that have disadvantaged the Corridor in comparison to other locations.

Given the continuation of this unrealized market potential, the fiscal cost to the City can be calculated. In 2001, the properties located between 4536 and 5020 Eisenhower Avenue (excluding 4840 and 5020 on which apartments are currently under construction) had a total assessed value of $132.9 million. If these properties were built out to their permitted FAR at current square foot values, they would have generated $352.9 million in assessed valuation. The difference between current and build-out value is $220 million; this amount represents these properties' unrealized value. At present, these properties are generating only 37.7 percent of their value potential, given the current $79.18 per built square foot.

However, the fiscal cost to the City of these properties under utilization is actually much larger. If these properties were developed for office uses reflecting the quality and values present between Cameron Run east to Telegraph Road, they would have a build out value of $688.4 million and an unrealized value totaling $535.5 million. Compared to this build out value, these same properties today are only generating an assessed value equivalent to 20 percent of their potential value.

How important is this unrealized $535.5 million in commercial property value? In 2001, it would have represented 3.66 percent of the City's total real property assessment. If this commercial value substituted for residential value, it would have changed the residential/commercial split from 74.6 and 24.4 percent to 71.9 and 28.7 percent. That change would represent a 15 percent increase in the total value of commercial properties with an off setting decrease in total residential values of 4.84 percent. This increase in

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commercial property value would be the equivalent of a 3.5 cents decrease in the tax rate and an annual savings of $100.15 for the owner of an average-priced single-family home and $38.81 savings for the owner of an average-priced condominium.

How Can This Property Value Potential Be Realized?

The Northern Virginia economy will be generating approximately 45,000 net new jobs a year over the next twenty years. Demand for commercial space will be strong in those sub-markets offering comparative advantages. In order to be competitive, sites must have favorable regional and local access to urban and suburban markets. The one missing prerequisite in the Eisenhower Avenue Corridor to being locational competitive within the Northern Virginia sub-markets (once the I-95 and Wilson Bridge improvements are completed) is multiple-direction access within the immediate market. The existing access provided sites in the Eisenhower Avenue Corridor is inadequate and does not provide these sites comparability to alternative locations in Northern Virginia. The present mix and quality of development in the Corridor provides the best measure of its current market position.

The importance of a connection to the north and to Alexandria's other major employment and commercial centers should be easily deduced from the Corridor's recent development history. To evaluate which proposed connector would achieve the Corridor's maximum comparative advantage requires that each alternative be assessed against considerations of (1) maximizing the reduction of travel friction at the points of connection and (2) maximizing the impact on the level of service to the developable and under-utilized properties along the Eisenhower Avenue Corridor.

Only Alternative B achieves these maximums with minimum turning conflicts to achieve regional access (from I-95 and Duke Street) while enabling the maximum diversion of traffic along Duke Street and Eisenhower Avenue. The other alternatives do not enhance the potential for realizing the build out of the under-utilized properties from Cameron Run west to the Metro Station with their focus at the Clermont intersection. Only Alternative B achieves the required accessibility to catalyze the regional and City wide transportation services at Eisenhower Avenue east and west from its intersections with Clermont Avenue and can achieve the significant fiscal and economic potentials present in this section of the Eisenhower Avenue Corridor.

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Fiscal Impact of Full Development Of Eisenhower Avenue*
Current Development versus Zoned Development

Variable	Value
Lot Area (square feet)	2,970,792
Current Building Area (sf)	1,678,221
Building Area as % of Lot Area	56.5
Permitted Building Area (sf)	4,456,188
Current Bldg Area/Permitted SF	37.7
Current Real Property Value (2001)	$132,890,000
Percent Increase from 1997	26.4
Assessment/SF Building Area	$79.185
Total Build-Out Value @ Current Assessed Value per Building SF	$352,863,250
Cost of Underdevelopment @ Current Assessed Valuation	$219,973,250
Unrealized Value	62.3
Total Build-Out Value @ Average Office Assessment ($150.0/sf)	$668,428,200
Unrealized Value	$535,538,200
Current Assessed Value as Percentage of Build-Out Value	20.0

*includes all properties from 4536 to 5020 excluding two that are currently underdevelopment for apartment use: 4840 and 5020 Eisenhower; these are not included in any calculation.

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History of Presentations

Task Force Meetings

June 18, 2001
August 27, 2001
October 4, 2001
October 24, 2001
December 5, 2001
January 23, 2002
March 27, 2002
April 11, 2002
May 23, 2002
May 29, 2002
September 4, 2002
September 18, 2002
September 26, 2002

May 25, 1993 - Public Hearing - Resolution #1644
March 13, 2001 - to City Council - Resolution # 1995
April 23, 2002 - Public Hearing - Expand Board - Resolution #2024
January 24, 2002 - Eisenhower Partnership

November 3, 2001 - Council Retreat
November 15, 2001 - Seminary Hill
February 27, 2002 - Public Meeting Citizen Information - Tucker Elementary
February 16, 2002 - Chamber of Commerce
April 8, 2002 - Brookville Seminary Citizen Association
September 9, 2002 - North Ridge Citizen Association
September 20, 2002 - Chamber of Commerce
September 26, 2002 - Public Meeting Citizen Information
October 4, 2002 - Chamber of Commerce
March 22, 2002 - Clover-College Park Board

March 7, 2002 - Cameron Station
March 20, 2002 -Wakefield Tarleton
May 22, 2002 - Patrick Henry - Special City Council Town Meeting

August 8, 2002 - Bishop Ireton - Clover-College Park
September 11, 2002 - Rosemont Citizen Association Board
September 19, 2002 - Rosemont Citizen Association

City of Alexandria, Virginia

MEMORANDUM

DATE: SEPTEMBER 17, 2002

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

THROUGH: PHILIP SUNDERLAND, CITY MANAGER

FROM: RICHARD J. BAIER, P.E., DIRECTOR
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: VDOT LETTER REGARDING CLERMONT INTERCHANGE

Attached is a copy of a letter from Tom Farley, VDOT District Administrator, we received last Friday. The letter addresses the possible repayment by the City of the $14 million of federal and state funds that were expended on the construction of the Clermont Interchange. According to the letter, whether the City will need to repay any or all of those funds in the event a decision is made not to build an Eisenhower-Duke connector will depend on "[t]he process for reaching the decision, rather than the decision itself ...." The letter goes on to state that it "is very unlikely repayment will be necessary provided a good faith effort is made in considering the merits of each option, including 'no build,' and public participation is factored into the decision."

Upon receipt of the letter, I phoned Tom Farley, and he confirmed two important points:

- A "no build" or "no-build with improvements" decision with regard to the connector will not automatically cause the City to be responsible for the repayment of some or all of the $14 million expended in constructing the interchange.

- The integrity of the process leading up to the decision will ultimately be the key determinant used by VDOT in considering the question of repayment. The two most important aspects of the process are (i) public involvement in the process and (ii) the "analytical methodology" used by the decision makers. Mr. Farley stated that the process should be "as quantifiable" as possible. On this matter, Mr. Farley stated that the information sent to him by George Foote, which related to the weighted matrix decision process to be used by the task force, appeared to meet the type of process that VDOT and FHWA have used previously. As the information Mr. Foote sent related to the ranking process that the task force decided not to use at its last meeting, Mr. Farley could not comment on the ranking process that the task force will now use.

I have asked Reggie Beasley of VDOT to be prepared for questions on this "repayment" matter at the September 18 task force meeting. I suspect that the task force members will have questions since Mr. Farley's September 12 letter presents a reversal of VDOT's earlier position on the "repayment" matter.

If you have any questions, please do not hesitate to give me a call at 703-838-4966.

Attachment VDOT Letter dated September 12, 2002

cc: Mark Jinks, Assistant City Manger
Ignacio Pessoa, City Attorney
Eisenhower Avenue-to-Duke Street Task Force Members

CITY MANAGER'S OFFICE
ALEXANDRIA, VA
2002 SEP 13 A 11:00

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
14685 Avion Parkway
Chantilly, VA 20151
(703) 383-VDOT (8368)

LIP A. SHUCET
OMMISSIONER

THOMAS F. FARLEY
DISTRICT ADMINISTRATOR

September 12, 2002

Mr. Philip Sunderland
City Manager, City of Alexandria
301 King Street
Alexandria, VA 22314

Dear Mr. Sunderland:

Recent concern regarding the repayment of Federal and State funds to construct the Clermont Interchange have been made in association with the decision to construct a connector between Eisenhower Avenue and Duke Street. The purpose of this letter is to address these and assist those in choosing a preferred option.

The original environmental assessment for the Clermont Interchange included a connection between Eisenhower Avenue and Duke Street. Construction was split into two phases. The interchange with the Capital Beltway has since been completed. Approximately 14 million dollars of Federal and Sate funds were allocated for this purpose. Various options, including a "no build" option, are currently under review for the connector. Concerns have been voiced that selecting the "no build" option will require the repayment of Federal and State monies by the City of Alexandria. This is not correct.

The process for reaching the decision, rather than the decision itself, will be the determining factor on reimbursement. It is very unlikely repayment will be necessary provided a good faith effort is made in considering the merits of each option, including "no build" and public participation, is factored in the decision. To this end, information has been provided by Mr. George M. Foote describing the process to date. Further coordination will occur between the State's representative, Mr. Reginald Beasley, and City of Alexandria staff as the recommendation of the Duke Street Connector Taskforce is made to the City Council. Finally, the repayment concerns should not be a determining factor in the decision

I trust the above is helpful for the City Council in making a decision. Please do not hesitate in contacting me if I can be of further assistance,

Sincerely,

Thomas F. Farley

cc: Roberto Fonseca-Martinez, FHWA
Commissioner Philip A. Shucet, VDOT
Richard Baier, City of Alexandria

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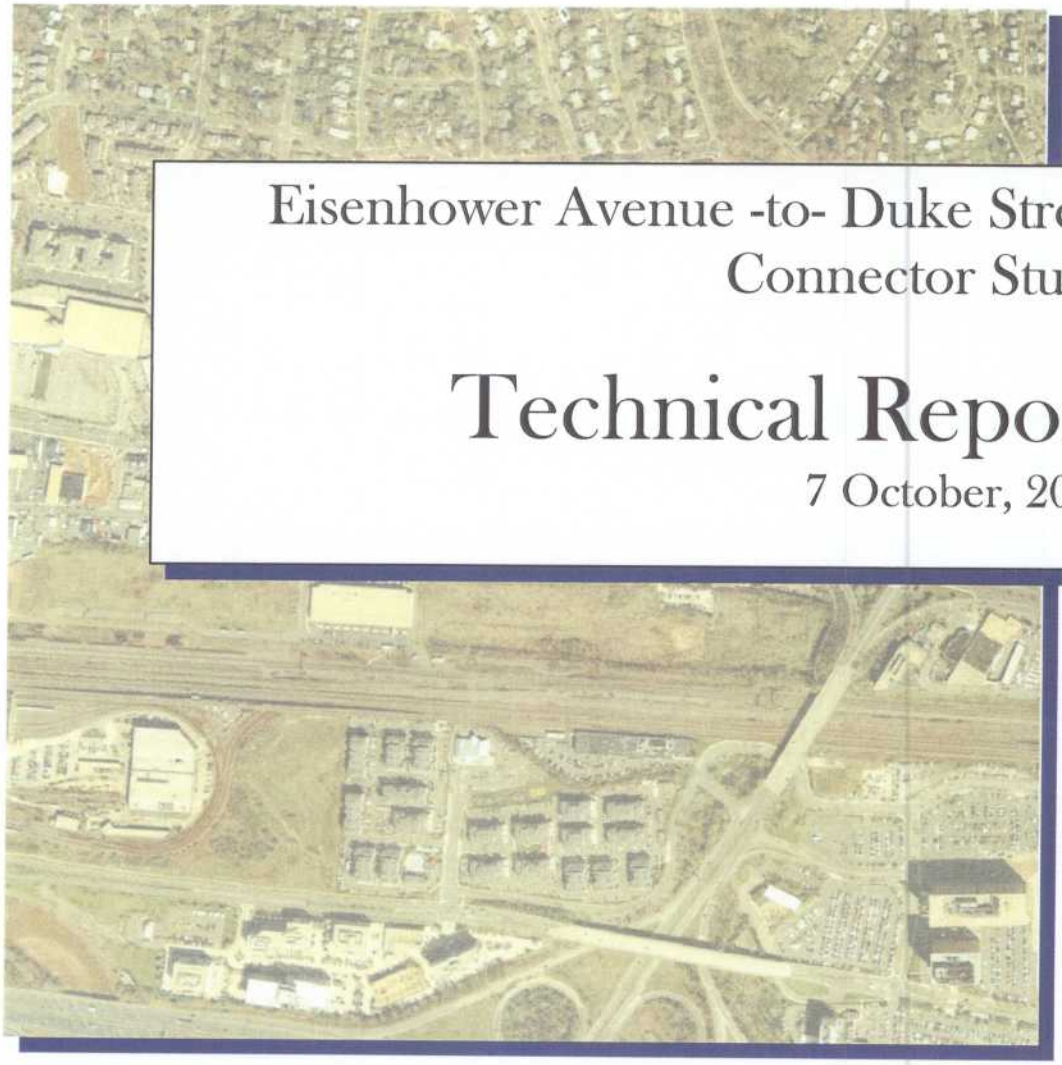
Attachment 9

Eisenhower Avenue
To Duke Street Connector Study



Eisenhower Avenue -to- Duke Street Connector Study

Technical Report

7 October, 2002

CITY OF ALEXANDRIA VIRGINIA

COMMONWEALTH OF VIRGINIA
NEIL SCOTT FRESCHMAN
No. 35035
PROFESSIONAL ENGINEER

PBS&J

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Exhibit II-2	License Plate Survey Cordon
Exhibit III-1	2001 and 2020 Average Daily Traffic
Exhibit IV-1	Preliminary Alternates
Exhibit IV-2	Final Alternates
Exhibit IV-3	A Alternates
Exhibit IV-4	B Alternates
Exhibit IV-5	Alternate C
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I BACKGROUND

I-1 Project History

Until the late 1970s, development in the Eisenhower Valley was limited due to frequent flooding and a lack of accessibility. Cameron Run, Interstate I-95 and the CSX railroad tended to make the area difficult to get to, and unattractive for commercial or residential development. Since then a number of improvements have converted the Valley into the City of Alexandria's primary area for growth.

The timeline below summarizes the events that have led to the Eisenhower Valley becoming the City of Alexandria's high growth area.

Late 70s / early 80s	Improved flood control implemented on Cameron Run
1973, 1980	City Council requests VDOT to construct interchange at I-95 and Clermont Ave
1983	Yellow line opens Eisenhower Avenue station
1984	FHWA approves interchange but requires improvements to connect Clermont Ave and Duke St
1991	Blue line extended, Van Dorn Avenue Station opened
1997	Clermont Interchange construction completed
2000	Cameron Station Redevelopment, Ben Brenman Park, and new elementary school completed City Council approves Patent Trademark Office for East Eisenhower Valley

The Clermont Avenue Interchange (now called the Eisenhower Connector) was built as Phase I of a two-phase project. Phase II will connect Eisenhower Avenue with Duke Street. The current terminus of the interchange on Eisenhower Avenue is not considered an acceptable terminus; interstate interchanges are required to be connected with primary roadways, such as Duke Street, and Eisenhower Avenue is designated a secondary roadway.

In November 1993, the Virginia Department of Transportation (VDOT) released the Final Environmental Assessment (EA) of the Clermont

Interchange and the Interchange connection to Duke Street. The preferred alternative from the EA was Alternative 5. Alternative 5 connected Eisenhower Avenue to South Pickett at the east end of Eisenhower Valley.

In March 2001, the City of Alexandria Council decided the City should re-evaluate the preferred alternate of the 1993 EA. Council established an ad-Hoc Task Force and directed the Task Force to:

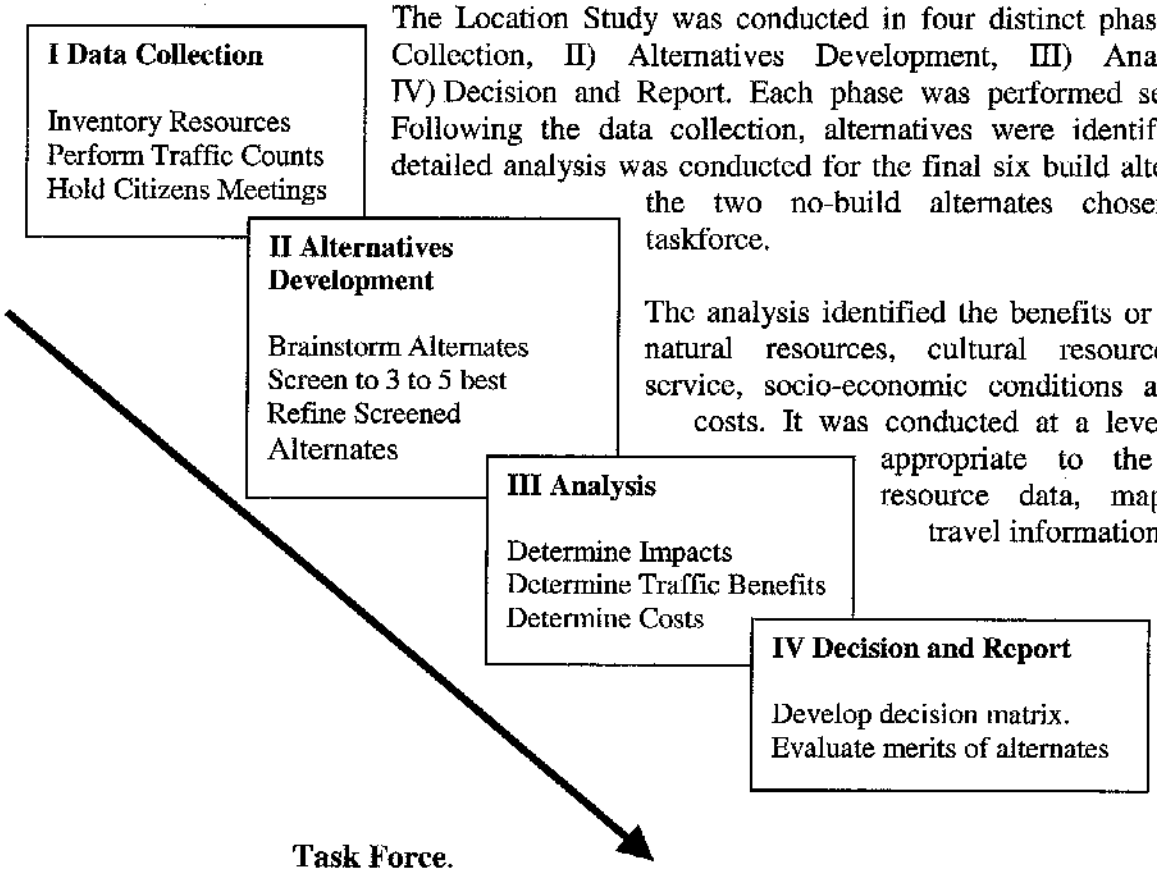
- Review Alternative 5
- Evaluate other feasible alternative connections
- Evaluate a no-build alternative

In May 2001, the City contracted with the Engineering firm PBS&J to provide technical support for a study to determine the preferred location for a new connector. In June 2001 the Eisenhower Avenue-to-Duke Street Task Force, consisting of elected officials, residential neighborhood representatives and business representatives, was formed to support the study and to recommend a course of action to the Council.

PBS&J led the consultant study and performed preliminary engineering, cost estimates, micro-simulations and intersection traffic analysis. ***BMI*** used the Washington Council of Governments (WASH COG) Travel Demand Forecast model to determine future traffic volumes. **Straughan Environmental Services** (SES) determined environmental and cultural resource inventories and impact estimates.

I-2 Study Methodology

Overview.



The Location Study was conducted in four distinct phases: I) Data Collection, II) Alternatives Development, III) Analysis, and IV) Decision and Report. Each phase was performed sequentially. Following the data collection, alternatives were identified, and a detailed analysis was conducted for the final six build alternates and the two no-build alternates chosen by the taskforce.

The analysis identified the benefits or impacts to natural resources, cultural resources, traffic service, socio-economic conditions and project costs. It was conducted at a level of detail appropriate to the available resource data, mapping and travel information.

Task Force.

The Study made extensive use of the City Council-appointed Task Force. Initially, the Task Force consisted of nine original members, but in May 2002, five additional members from neighborhoods East of Quaker Lane were added by City Council.

Impact Analysis.

Impacts to the natural environment, historical and archeological resources and community facilities resources in the study area were inventoried to help locate alternates that would minimize impacts. The inventory was then used to estimate the environmental impact of each alternate. The inventory and impact analysis provided general and relative impacts. Detailed field surveys were not necessary to evaluate the relative merits of the alternates. A summary of the environmental elements analyzed and the sources used are shown in Table I-1.

TABLE I-1: SOURCES OF DATA	
ELEMENT	**SOURCE OF DATA**
Rare, Threatened and Endangered Species	US Fish and Wildlife Service VA Depart of Game and Inland Fisheries
Surface Water Resources	Field observation and VA Depart of Environmental Quality List of Impaired Waters
Wetlands	National Wetlands Inventory and City GIS
Floodplains	City of Alexandria GIS, FEMA mapping
Noise receptors	Field Observation
Cultural and Historic Resources	VA Department of Historic Resources inventory.
Community Resources	Field Observation and City GIS
Hazardous Materials	Active list of LUST, RCRIS CERCLIS and CORRACTS sites
Environmental Justice Populations	Census data

Traffic Projections.
Volumes were projected for the year 2020 using standard travel demand forecasting processes using the approved WASH COG regional travel demand forecast model. The initial forecast was post processed using the processes in NCHRP Technical Report 255. Additional detail was added to the WASH COG model by adding links and updated Eisenhower Valley land uses.

Network Analysis.
Delay, Level of Service and other traffic congestion indicators were calculated for individual intersections and the study area roadway network using the computer automated programs SYNCHRO and SIMTRAFFIC. These programs were used to evaluate existing and future conditions for each of the alternates. For the existing conditions, actual signal timings were not used. Optimized signal timings were calculated for the observed traffic. These signal timings were calculated using SYNCHRO. Future signal timings used SYNCHRO calculated signal timings also.

Traffic counts were conducted for the study area intersections shown in Exhibit I-1. Future intersection turning movements were calculated by increasing approach volumes in the same proportion as the Average Daily Traffic (ADT) growth. Through, left and right turns were then adjusted so that the volume exiting an intersection approximated the downstream approach volume.

Cut-Through Potential Analysis.
To determine the potential for cut through traffic, an automated computer program with dynamic route assignment capability was used. This program is AIMSUN2 and is owned by Transport Simulation Systems, a Spanish simulation firm.

With dynamic route assignment, each vehicle is modeled and has a distinct origin and destination. The route chosen may change depending on estimated travel times. The model updates the travel times at a specified interval, hence the route may change after the vehicle has entered the network.

This program mimics driver behavior at a micro level. Although driver decisions are more complex than can be fully duplicated, the process provides very reliable *comparative* results. To determine the potential for cut through traffic of various alternates, the process is excellent.

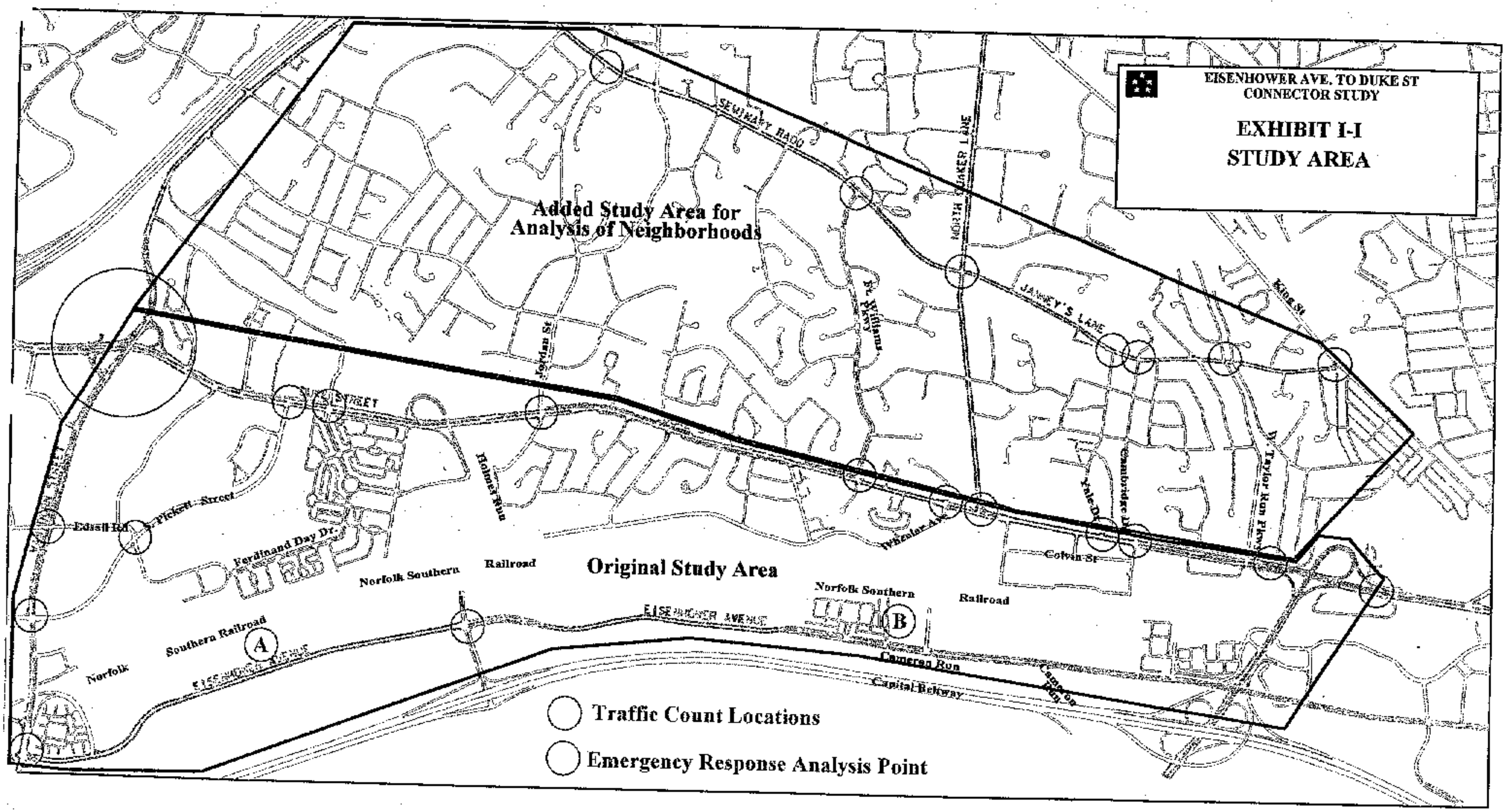
Engineering and Cost estimates.
Each alternate was designed to a level of detail necessary to:

- Determine general and relative environmental impacts;
- Determine potential residential and commercial impacts;
- Insure complex and unusual engineering structures are not required;
- Estimate construction and right of way cost.

Each connector alternate crossed the CSX railroad and Cameron Run. To estimate bridge length and insure sufficient room to make the necessary elevations, a centerline profile of each roadway was developed. AASHTO and VDOT roadway design standards were used.

Study Area.
Inventories, impacts and benefits were confined to a study area generally bound by Van Dorn Street, Eisenhower Avenue, Telegraph Road and Duke Street. Exhibit I-1 shows the study area boundary.

In May 2002 the City Council directed that neighborhood impacts north of Duke Street be examined. This expanded study area is shown in Exhibit I-1 as well.



EISENHOWER AVE. TO DUKE ST CONNECTOR STUDY
EXHIBIT I-I
STUDY AREA
Added Study Area for Analysis of Neighborhoods
Original Study Area
SEMINARY ROAD
NORTH QUAKER LANE
JANNEY'S LANE
King St
Ft. Williams Pkwy
W. Taylor Run Pkwy
Cambridge Dr
Yale Dr
Colvin St
Wheeler Ave
Jordan St
Holmes Run
Ferdinand Day Dr.
Edsall Rd
S. Pickett Street
Norfolk Southern Railroad
EISENHOWER AVENUE
Cameron Run
Capital Beltway
A
B
Traffic Count Locations
Emergency Response Analysis Point

II EXISTING CONDITIONS

II-1 Land Use

Currently, significant office and residential development is occurring primarily in the eastern portion of the Eisenhower Valley (east of Telegraph Road). Exhibit II-1 shows this potential growth graphically. For travel demand forecasting purposes 10 million SF was assumed for East Eisenhower.

In the rest of the study area many parcels are developing with three and four story residential apartment buildings. Cameron Station has been redeveloped to a townhome community with small retail and recreational facilities.

II-2 Natural Environment Resources in the Study Area

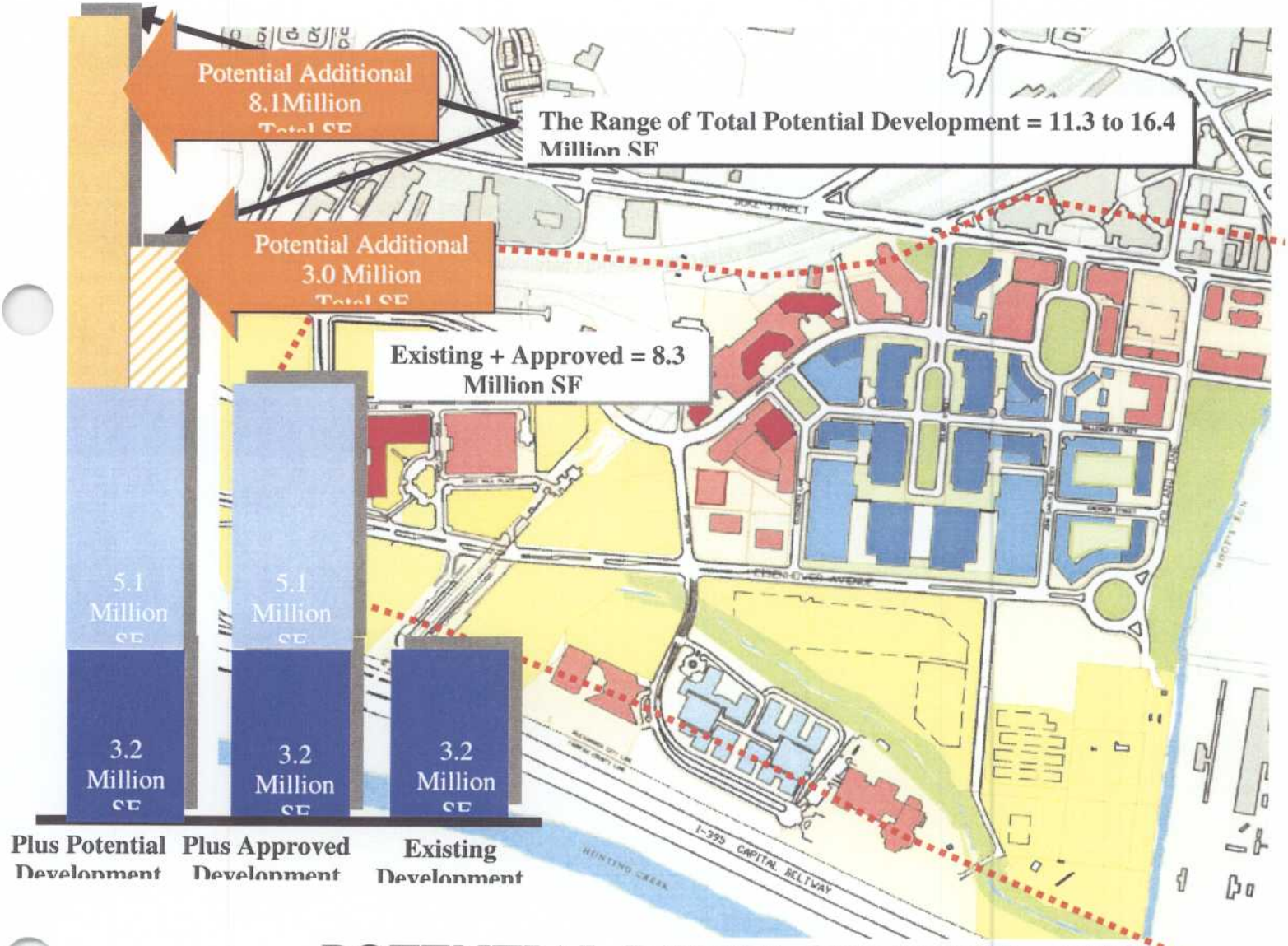
The Eisenhower Valley is in an urbanized area and lacks exceptional or unspoiled natural resources. The principal natural resources are Cameron Run, Holmes Run and isolated stands of forested areas. These resources are valued by the community because there are so few natural water courses and forested areas in the City.

Rare, Threatened, and Endangered Species and Natural Heritage Resources.
The study team contacted the following agencies to identify the potential presence of any federal or state-listed rare, threatened, or endangered species, their habitats, and natural heritage resources within the study area:

- United States Fish and Wildlife Service (USFWS);
- Virginia Department of Conservation and Recreation (VDCR);
- Virginia Department of Agriculture and Consumer Services (VDACS); and
- Virginia Department of Game and Inland Fisheries (VDGIF).

USFWS reported that no federally-listed rare, threatened, or endangered species are known to exist in the City of Alexandria (see appendix for additional information and copies of correspondence with agencies). VDCR also reported that a proposed connector would not impact any documented state-listed plants or insects. VDGIF noted the presence of five state sensitive fish and bird species within 2 miles of the project location.

Exhibit II-1
Potential Development East Eisenhower



POTENTIAL DEVELOPMENT - 2020

//

VDCR defines natural heritage resources as the "habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geological formations."[1] No natural heritage resource areas have been documented in the study area (see appendix for additional information).

Prime and Unique Farmlands.
No prime or unique farmlands are located in the study area. USDA's Soil Conservation Service provides soil classifications for most areas of the country, but it has not classified the soils in the City of Alexandria. The City of Alexandria itself has identified only marine clay soils in the study area.[8] No other soil descriptions are available for the study area.

Marine clay soils exist in the study area, especially between the CSX railroad tracks and Duke Street, southwest of the intersection of Duke and Van Dorn Streets, and in the vicinity of the Van Dorn Street Metro station. Marine clays are considered problem soils because they have a high shrink/swell potential, do not drain well, and pose difficulties during construction.[9]

Surface water resources.
Surface water resources within the study area include several perennial streams (those that flow all year long) that are tributaries of the Potomac River and two lakes (Lake Cook and an unnamed lake in Ben Brenman Park). All streams in the study area exist within a heavily developed urban setting and have been modified substantially by flood control programs since the 1970s. This section summarizes the water resources within the study area and their characteristics.

Water resources within the study area lie entirely within the Potomac River Drainage Basin, which is part of the Middle Potomac-Anacostia-Occoquan Watershed. Backlick Run and Holmes Run converge in the western portion of the study area to form Cameron Run, which flows east through the study area. Lake Cook is within Cameron Run Regional Park and drains into Cameron Run. The unnamed lake in Ben Brenman Park functions as a stormwater management pond, which also drains into Cameron Run.

Table II-1 presents the aquifers and streams that lie within the project area.

---

[1] Correspondence from Department of Conservation and Recreation; July 9, 2001.
[2] *Marine Clay Areas* map, City of Alexandria, Department of Transportation and Environmental Services, November, 1976.
[3] Fairfax County Department of Planning and Zoning.
www.co.fairfax.va.us/gov/ocp/homepage.htm.

TABLE II-1: CHARACTERISTICS OF THE POTOMAC RIVER DRAINAGE BASIN			
Watershed	**USGS Cataloging Unit**	**Aquifers**	**Perennial Streams**
Middle Potomac-Anacostia-Occoquan	02070010	Early Mesozoic Basin Northern Atlantic Coastal Plain Some areas served by no principal aquifer.	Cameron Run Backlick Run Holmes Run

Source: US EPA Enviromapper website,
http://cfpub1.epa.gov/surf/huc.cfm?huc_code=02070010

The Virginia Department of Environmental Quality (VDEQ) applies numerical water quality criteria to waters in the State of Virginia to indicate the extent of water quality impairment. The streams in the study area are all classified as Class III freshwater, non-tidal streams. According to VDEQ, Cameron Run and its tributaries are not listed as impaired waters. However, Cameron Run converges with an unnamed stream to form Hunting Creek southeast of the study area. Hunting Creek is on VDEQ's 303(d) List of Impaired Waters[4] because it violates fecal coliform standards and exceeds the federal chlorophyll-a criterion. All other streams in the areas are drainage ways to unnamed tributaries that flow into the Potomac River, which is within one-mile of the study area boundary.

Wetlands.
The study team consulted National Wetlands Inventory (NWI) maps and City of Alexandria Geographical Information System (GIS) data. Although NWI identifies no wetlands within the study area, a field investigation should be performed during later planning phases for the Eisenhower Avenue Connector. Conversations with the community provided anecdotal information that wetlands may exist adjacent to Holmes Run.

[4] Virginia Department of Environmental Quality, 1998 303(d) List of Impaired Waters. *http://www.deq.state.va.us/tmdl/maps/lowres/potrvr/pocco.html.*

Floodplains.
Portions of the 100- and 500-year floodplain for Cameron Run and its tributaries are located in the Eisenhower Valley.[5] Construction within, and impacts to floodplains, are regulated by United States Corps of Engineers (USCOE) and the State and would require a Section 404 permit authorizing the activity.

Trout Streams.
Based on information obtained from the VDGIF,[6] no streams in the study area support trout fishing. However, Lake Cook in Cameron Run Regional Park is stocked with trout as part of the VDGIF's Urban Fishing Program.

Wild and Scenic Rivers.
The Wild and Scenic Rivers Act (PL 90 542, as amended) provides protection for rivers that are free-flowing, and possess "outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values". It requires that all projects receiving federal funding be evaluated for potential impacts to Wild and Scenic Rivers. The U.S. Department of the Interior maintains a national inventory of river segments which appear to qualify for inclusion in the National Wild and Scenic River System; VDGIF maintains a database of Wild and Scenic Rivers for the State. Based on information obtained from VDGIF,[7] no Wild and Scenic Rivers are present within the study area.

II-3 Cultural and Historic Resources

The Study Team requested an archive search at the Virginia Department of Historic Resources (VDHR) to identify historic structures and prehistoric and historic archaeological resources. VDHR identified four historic structures, one historic cemetery, one Civil War era archaeological site, three historic archaeological sites, and one prehistoric and historic archaeological site. Table II-2 presents historic structures and archaeological resources in the study area with their National Register status. Historic resources on or eligible for the National Register of Historic Places are protected by Section 106 of the National Historic Preservation Act of 1966. Historic and prehistoric resources with an "undetermined" status on the National Register of Historic Places would require further investigation if project impacts are expected.

[5] City of Alexandria GIS Data, Version 1, May 15, 2001.
[6] Virginia Department of Game and Inland Fisheries, Urban Fishing, 2000. http://www.dgif.state.va.us/fishing/2001TroutGuide/urban_fishing.htm.
[7] Ibid.

TABLE II-2:
ARCHAEOLOGICAL AND HISTORIC RESOURCES LISTED OR POTENTIALLY ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

Resource Name	Resource Address	Site Number	Resource Type	National Register Status
Residence	3220 Colvin Street	100-0180-000	Historic structure	listed
Residence	126 North Longview Drive	100-0215-000	Historic structure	listed
Residence	200 North Longview Drive	100-0216-000	Historic structure	listed
Old Dominion Grist Mill	3610 Wheeler Avenue	100-0277-000	Historic structure	listed
Bush Estate	Bush Hill Drive (same location as Holly Hill School)	44-AX-111	Historic Archaeological Site	undetermined
Residence	3449 Duke Street	44-AX-118	Historic Archaeological Site	undetermined
Eisenhower Avenue Earthworks	Eisenhower Avenue	44-AX-54	Civil War Era Archaeological Site	undetermined
Alexandria Business Center	Within CSX Rail Yard	44-AX-127	Prehistoric and Historic Archaeological Site	undetermined
Bloxham Family Cemetery	Within CSX Rail Yard	44-AX-128	Archaeological Site (Cemetery)	undetermined
Van Dorn	Van Dorn Street at Eisenhower Avenue	44-AX-178	Historic Archaeological Site	undetermined

Source: Virginia Department of Historic Resources.

II-4 Community Resources and Facilities

Community resources and facilities (including parklands) were identified through review of City GIS data, the Fairfax County ADC map, and by site visits. Table II-3 identifies the public facilities in the study area.

Table II-3: Public Facilities Within the Study Area	
Libraries	**Transportation**
Alexandria Public Library	Virginia Department of Motor Vehicles
Schools	Van Dorn Street Metro Station
Samuel W. Tucker Elementary School	Metro Service and Inspection Yard
Bishop Ireton High School	**Post Offices**
Strayer University, Alexandria Campus	The Trade Center Post Office
Police	**Fire**
Alexandria Satellite Police Station	Alexandria Company 7
Police Pistol Range	**Religious Institutions**
	New Apostolic Church

Parklands.
The study area contains several city and regional parks that serve a variety of functions, including a water park, a golf putting course, ball-fields and other facilities for active sports and recreation, natural areas for passive recreation, and Resource Protection Areas (RPAs) to prevent soil erosion. RPAs include vegetated areas within 100 feet of a stream or adjacent wetland. The following parks are located in or adjacent to the study are[8]:

- Cameron Run Regional Park
- Joseph Hensley Park
- Clermont Natural Park
- Brook Valley Park
- Ben Brenman Park
- Lake Cook Park
- Ewald Park
- Armistead L. Boothe Park
- Fort Williams Park
- Cameron Station West End Park

II-5 Socio Economic and other Features

Air Quality.
To determine existing air quality in the study area, the study team obtained data from VDEQ. VDEQ data indicated that the one-hour ozone standard of 124 parts per billion for the City of Alexandria was not violated in the years 2000 and 2001.[9] However, the 8-hour ozone standard was exceeded twice in

[8] Alexandria Drafting Company, Northern Virginia Area Map, 2001.
[9] Virginia Department of Environmental Quality, *http://www.deq.state.va.us.*

2000 and has been exceeded six times in 2001 as of August 9, 2001. VDEQ has recommended that the City of Alexandria be listed as a locality that is a non-attainment area for meeting ozone standards.

VDEQ's closest monitoring location for $PM_{2.5}$ data is at Lee District Park, approximately 2 miles south of the study area in Fairfax County. VDEQ data indicate that the $PM_{2.5}$ standard has not been violated at this location since the monitor was installed in January 1999.

Noise-sensitive areas.
Noise-sensitive areas in the study area include residential neighborhoods, parks, places of worship, and community facilities. Portions of the study area south of Duke Street and north of the CSX railroad tracks contain medium- to high-density residential areas, including new and planned townhouse communities at Cameron Station.

Demographics and Environmental Justice Populations.
The study team identified minority and low-income populations in the project study area using guidance provided in the Council on Environmental Quality's (CEQ's) *Environmental Justice Guidance Under the National Environmental Policy Act.*[10]

Using 1990 and 2000 Census data, the study team identified Census tract block groups with significant environmental justice populations. A significant environmental justice population was defined as a minority population comprising 50 percent or more of the overall population, or low-income populations below the poverty level in the Census data. According to the 2000 Census data, minority environmental justice populations exist in five Census block groups within the project area:

Census Tract 2004.01, Block Groups 1 and 4
Census Tract 2006, Block Groups 3, 4, and 5

According to census data, the poverty rate is generally lower within the study area than in the City of Alexandria as a whole. The poverty rate ranged from 2.4% to 9.2% among the block groups. Alexandria, as a whole, had a poverty rate of approximately 7.3% in 1990. Of the nine block groups, one block group had poverty rates higher than the City as a whole. This was Census Tract 2006, Block Group 2.

[10] Council on Environmental Quality, April 10, 1997. *Environmental Justice Guidance under the National Environmental Policy Act.*

Hazardous Materials.
The study team obtained information from a database of hazardous material sites provided by Environmental Data Resources, Inc. The study team reviewed the databases, determined whether the study area contained any open leaking underground storage tank (LUST) cases or sites, any Resource Conservation and Recovery Information System (RCRIS) sites, or any Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites as well as CERCLIS sites that have Corrective Action Reports (CORRACTS). Based on this research, 13 known hazardous waste sites were identified in the study area (see Table II-4). Based on distance, topographic gradient, and/or reported regulatory status, the remaining cases are not considered to be environmental concerns.

Table II-4
Hazardous Material Sites

Type of Site	Name and Address
LUST, RCRIS	Stohlman Oldsmobile 200 S. Pickett Street
LUST	Crown # VA-008 (Manhole) 4109 Duke Street
RCRIS	Auto Craft Body & Paint Company 460 S. Pickett Street
LUST	Newton Asphalt Company, Inc. 5601 Courtney Avenue
RCRIS	MAACO Auto Painting 5430 Eisenhower Avenue
RCRIS	AAA Auto Body 628 S. Pickett Street
LUST	Stuart Petroleum Station #322 420 South Van Dorn Street
RCRIS	Kline Chevrolet, Inc. 5800 Edsall Road
RCRIS	Jiffy Lube Store 110 511 South Van Dorn Street
LUST	National Linen Service 725 S. Pickett Street
RCRIS	Alexandria Board of Education 3540 Wheeler Avenue
LUST	Richard Dwyer Property 3228 Duke Street
CERCLIS, CORRACTS	USA Cameron Station 5010 Duke Street

II-6 Transportation Infrastructure

The Eisenhower Valley is served by four main highways (Eisenhower Avenue, Duke Street, Van Dorn Street and Telegraph Road), and two metro rail stations (Van Dorn Street and King Street). These highways have access to nearby I-95 and I-395 by three interchanges: Van Dorn, Clermont, and Telegraph.

The most dominant transportation factor in the Valley is the lack of access between Duke Street and Eisenhower Avenue. These two roadways are generally parallel for 3.5 miles without a connection. The two north-south connections, Van Dorn and Telegraph have severe capacity restrictions and substandard geometric features.

The ramp junctions, shoulders and other geometric characteristics of the two north-south roadways are substandard by VDOT standards. Van Dorn has substandard shoulders in areas with heavy truck traffic. In the study area, Telegraph Road is only 0.5 miles in length; however in this small stretch are two short weave sections, and a substandard ramp connection to I-95.

The two principal east-west roadways, Duke Street and Eisenhower Avenue, are by comparison in much better repair and more suited for their roles. Eisenhower Avenue has a closed curb and gutter section through much of its length that is in good repair. Duke Street has both 4- and 6-lane sections and service roads through much of its length.

The two metro stations are placed in close proximity to Eisenhower Avenue. Access to Duke Street from the Eisenhower Avenue or the Van Dorn metro station is difficult.

Top picture – Telegraph Road. Short weave for Vehicles entering from I-95.
Bottom Picture – Eroded shoulder on Van Dorn.

II-7 Traffic

Intersection Existing Conditions

Large backups are currently observed on Duke Street, Telegraph Road and Van Dorn Street during both the AM and PM peak hours. However, many of these backups are caused by conditions outside of the study area. Traffic counts show only a few intersections that are currently overcapacity.

Table II-5 shows LOS and delay at select intersections. The intersections at Van Dorn Street/South Pickett Street and Duke Street/Cambridge Road are LOS F during the PM peak hour. Southbound Quaker Lane at Duke Street, eastbound Duke Street at Diagonal Road and the ramp from Telegraph Road to Duke Street all experience excessive delays, however these backups are generally due to lack of capacity at adjacent intersections or by lack of access to I–495. Duke at Quaker, for example, should be able to handle the observed volumes (LOS B). However, vehicles traveling southbound on Quaker Lane and making a left turn onto Duke Street East often backup from the ramp to Telegraph Road.

TABLE II-5
EXISTING
INTERSECTION DELAY AND LOS

Intersection	LOS/Delay		Critical Movement
	AM	PM	
Eisenhower Ave			
Van Dorn	E / 76	D / 46	NB Thru on Van Dorn St
Clermont	B / 20	E / 65	WB Left onto Eisenhower Connector
Van Dorn Street			
Duke St	B / 20	B / 18	WB Left Onto Van Dorn St and NB Left Onto Duke Street
Pickett St	E / 60	F / 83	EB and WB Thru and Left Onto Van Dorn St.
Duke Street			
Jordan	D / 42	D / 53	EB and WB Thru and Left Onto Jordan St
N Quaker Ln	B / 12	B / 11	SB Left onto Duke Street
Cambridge St	A / 8	C / 30	SB Through
Seminary/ Janneys			
N Quaker Ln	C / 29	C / 32	NB and SB Thru and Right on N Quaker Ln

NB:Northbound WB:Westbound EB:Eastbound SB:Southbound

Neighborhood Traffic Trends

Neighborhoods are located throughout the study area. The neighborhoods south of Duke Street have little, if any, through traffic. Through traffic for this discussion is traffic that passes through a neighborhood, using a local street or local collector rather than a nearby arterial.

The neighborhoods north of Duke Street were added to the study area because of a concern about through traffic. The area added is shown in Exhibit I-1. A license plate survey was conducted to determine the baseline through traffic.

The license plate survey was conducted on 21 May 2002 from 6:30 to 9:30 am and 4:00 to 7:00 pm. Nine survey stations were set up and license plates were video taped entering and exiting the area encompassed by the stations. The station locations and the area cordoned by the stations are shown in Exhibit II-2.

The license plate survey matched vehicles that entered one of the stations and was recorded exiting one of the other stations. In Table II-6, the "through" traffic is this matched traffic. Local traffic is that traffic that entered or exited the cordoned area but was unmatched.

The table shows that a large portion, in some cases over 50%, traveled through the cordoned area. However, the total number of trips is low; only Jordan averages over 200 vehicles per hour.

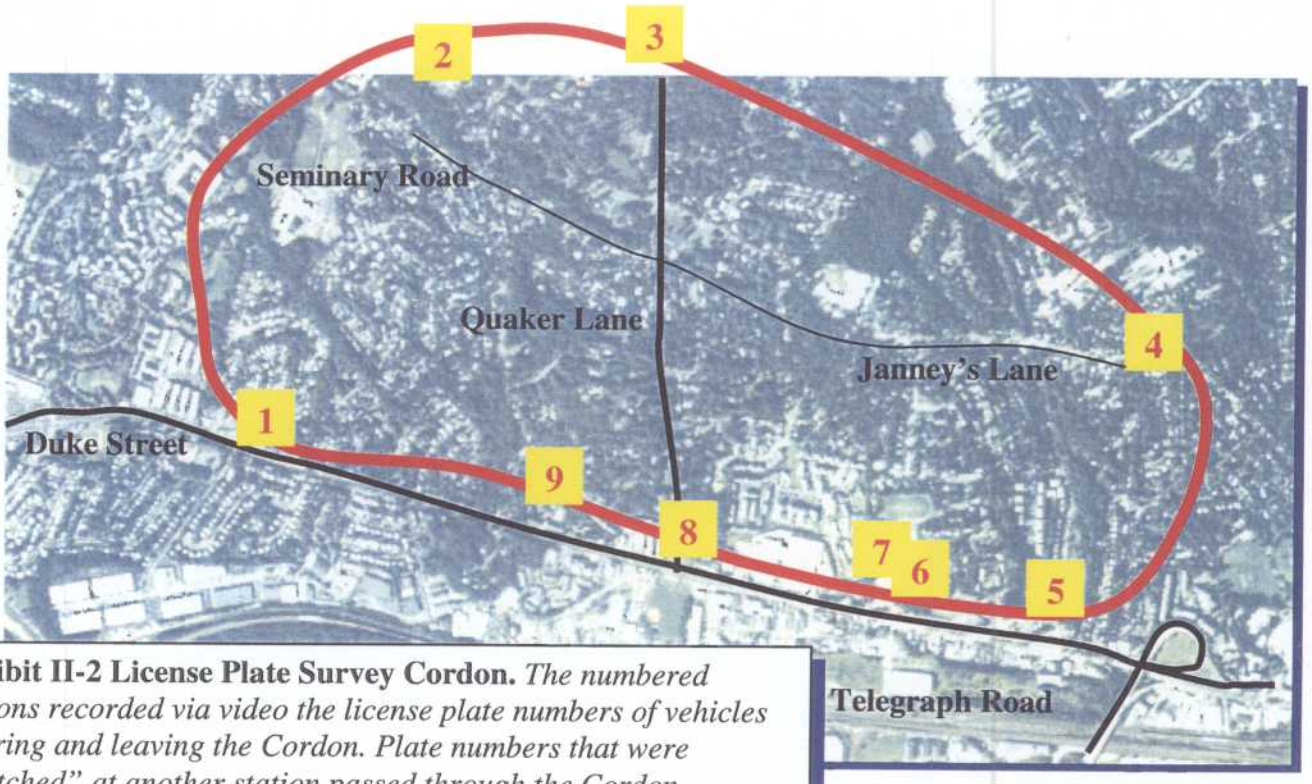


Exhibit II-2 License Plate Survey Cordon. *The numbered stations recorded via video the license plate numbers of vehicles entering and leaving the Cordon. Plate numbers that were "matched" at another station passed through the Cordon.*

TABLE II-6:
Summary of License Plate Survey
3 Hour PM Period

	Through	Local	Total	% Through
West Taylor Run	371	325	696	53%
Cambridge	427	321	748	57%
Yale	127	147	274	46%
Fort Williams	171	152	323	53%
Jordan	707	1365	2072	34%

III Traffic Projections

III-1 Arterial Traffic Trends

Traffic on study area arterials are projected to grow in varying amounts between 2001 and 2020. On average, study area arterials grow by 55% and by just less than 15,000 vehicles per day.

Volumes were projected for the year 2020 using standard travel demand forecasting processes using the approved WASH COG regional travel demand forecast model. The initial forecast was post processed using the processes in NCHRP Technical Report 255. Additional detail was added to the WASH COG model by adding links and updated Eisenhower Valley land uses.

Table III-1: Growth in Arterial Average Daily Traffic (ADT)

		2020	2001
South Van Dorn	AADT	58,700	41,000
	% Growth		43%
N Quaker at Duke	AADT	41,100	22,400
	% Growth		83%
East Duke	AADT	51,800	43,000
	% Growth		20%
East Eisenhower	AADT	31,200	11,400
	% Growth		174%
West Eisenhower	AADT	27,800	18,000
	% Growth		54%
Average	AADT	42,120	27,160
	% Growth		55%

Exhibit III-1 shows the Average Daily Traffic for 2001 and projected for 2020.

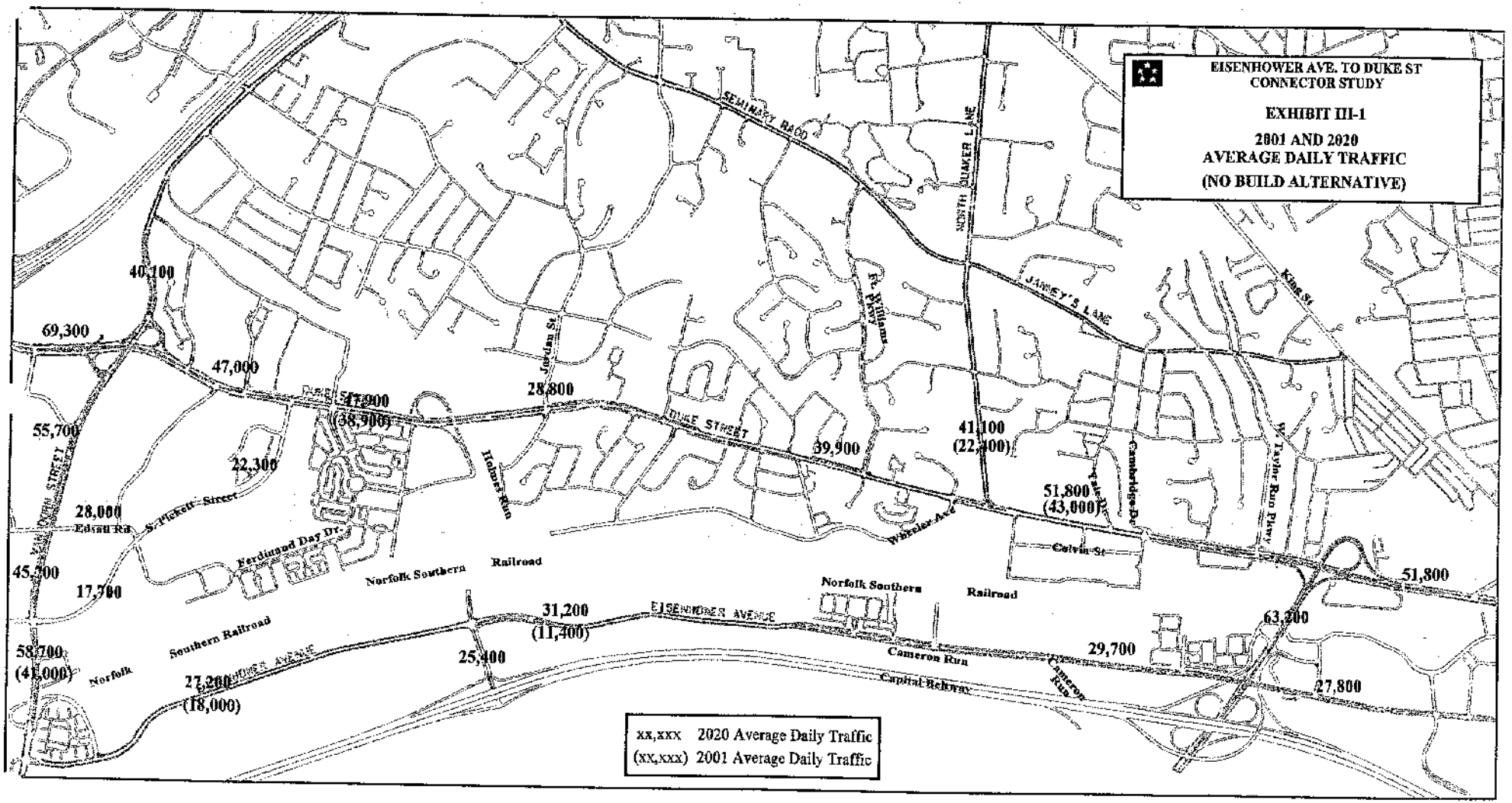
III-2 Intersection Performance

As a result of the overall increase in traffic by 2 to 3 % per year (see Exhibit III-1), most of the study area intersections will function over capacity by the year 2020. This will result in congestion during peak hours and off peak hours, increased traffic on residential roadways, and a loss in the commercial and residential attractiveness of the area.

TABLE III-2: 2020 INTERSECTION DELAY AND LOS

Intersection	LOS/Delay *AM*	LOS/Delay *PM*	Critical Movement
Eisenhower Ave			
Van Dorn	F / 104	F / 128	NB Thru on Van Dorn St
Clermont	C / 31	E / 65	WB Left Onto Eisenhower Connector and NB Left Onto Eisenhower Avenue
Van Dorn			
Duke Street	C / 25	D / 38	WB Left Onto Van Dorn St and NB Left Onto Duke
Pickett St	F / 90	F / 143	EB and WB Thru and Left Onto Vandorn St
Duke Street			
Jordan	E / 60	F / 108	
N Quaker Ln	D / 53	F / 88	EB Left Onto N Quaker and SB Left Onto Duke St
Cambridge St	B / 17	E / 70	WB Thru and Right On Duke and SB Thru and Left onto Duke St

NB:Northbound WB:Westbound EB:Eastbound SB:Southbound


EISENHOWER AVE. TO DUKE ST
CONNECTOR STUDY
EXHIBIT III-1
2001 AND 2020
AVERAGE DAILY TRAFFIC
(NO BUILD ALTERNATIVE)
SEMINARY ROAD
NORTH QUAKER LANE
JANNEY'S LANE
King St
Ft. Williams Pkwy
Jordan St
DUKE STREET
Holmes Run
Wheeler Ave
Cambridge Dr
Calvin St
W. Taylor Run Pkwy
Norfolk Southern Railroad
EISENHOWER AVENUE
Cameron Run
Capital Beltway
S. Pickett Street
Edsall Rd
Ferdinand Day Dr.
40,100
69,300
47,000
47,900
(38,900)
28,800
39,900
41,100
(22,400)
51,800
(43,000)
55,700
22,300
28,000
45,700
17,700
58,700
(41,000)
27,200
(18,000)
25,400
31,200
(11,400)
29,700
63,200
27,800
51,800
xx,xxx 2020 Average Daily Traffic
(xx,xxx) 2001 Average Daily Traffic

25

IV Alternates

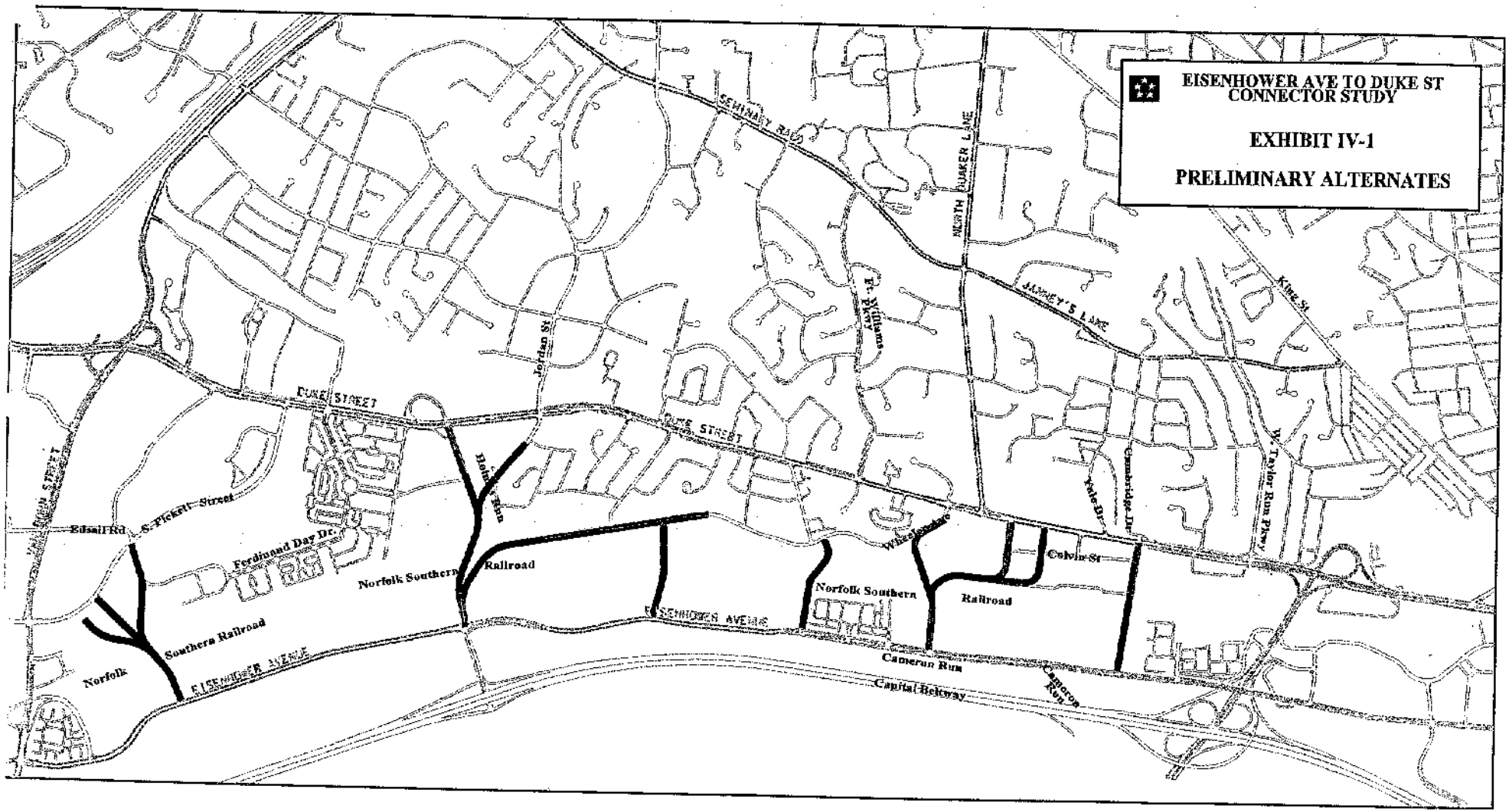
IV-1 Description

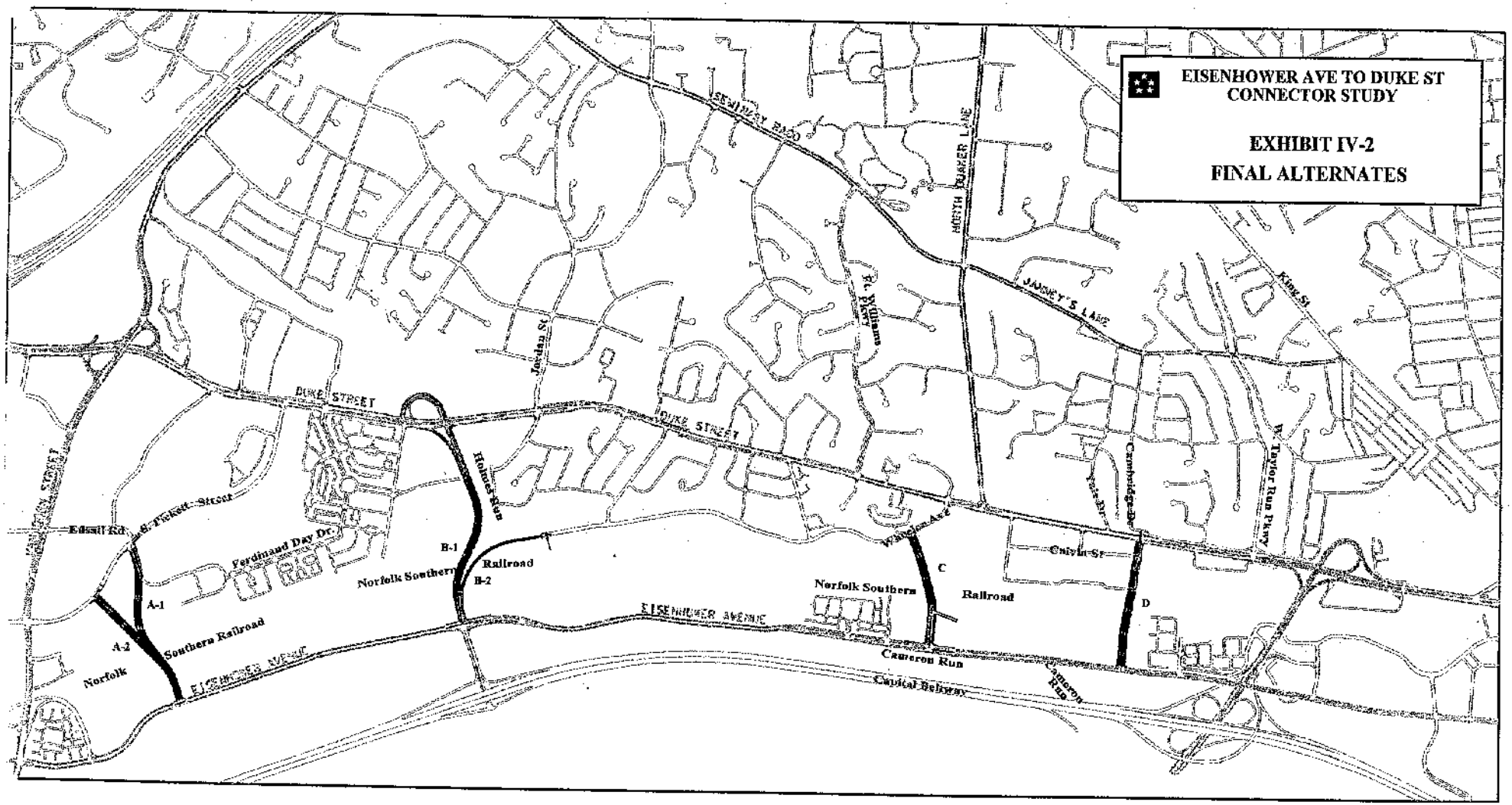
IV-1.1 Preliminary Alternates

The Task Force, study team and city staff proposed 14 preliminary alternates for consideration. Using a blank map, the expanded group proposed every conceivable alternate. Exhibit IV-1 below show the 14 preliminary alternates proposed by the group.

The screening process compared similar alternates. Alternates that performed the same traffic function, but were more costly or had more impacts than a competing alternate were eliminated. Alternates with different benefits were not compared. Alternates with similar benefits, but not clearly more costly or having more impacts were not eliminated.

These alternates were screened to four basic alternates, labeled A, B, C and D. Variations to A and B were proposed, so the two A alternates are designated A1 and A2 and the two B alternates B1 and B2. All proposed alternates are shown in Exhibit IV-2. Larger scale conceptual plans and profiles are in the *Alternate Plan and Profile Appendix.*


EISENHOWER AVE TO DUKE ST
CONNECTOR STUDY
EXHIBIT IV-1
PRELIMINARY ALTERNATES
SEMINARY ROAD
NORTH QUAKER LANE
JANNEY'S LANE
King St
Ft. Williams Pkwy
Jordan St
DUKE STREET
DUKE STREET
Holmes Run
Edsall Rd
S. Pickett Street
Ferdinand Day Dr.
Norfolk Southern
Railroad
Southern Railroad
Norfolk
EISENHOWER AVENUE
EISENHOWER AVENUE
Norfolk Southern
Railroad
Wheeler Ave
Colvin St
Yale Dr
Cambridge Dr
W. Taylor Run Pkwy
Cameron Run
Cameron Run
Capital Beltway

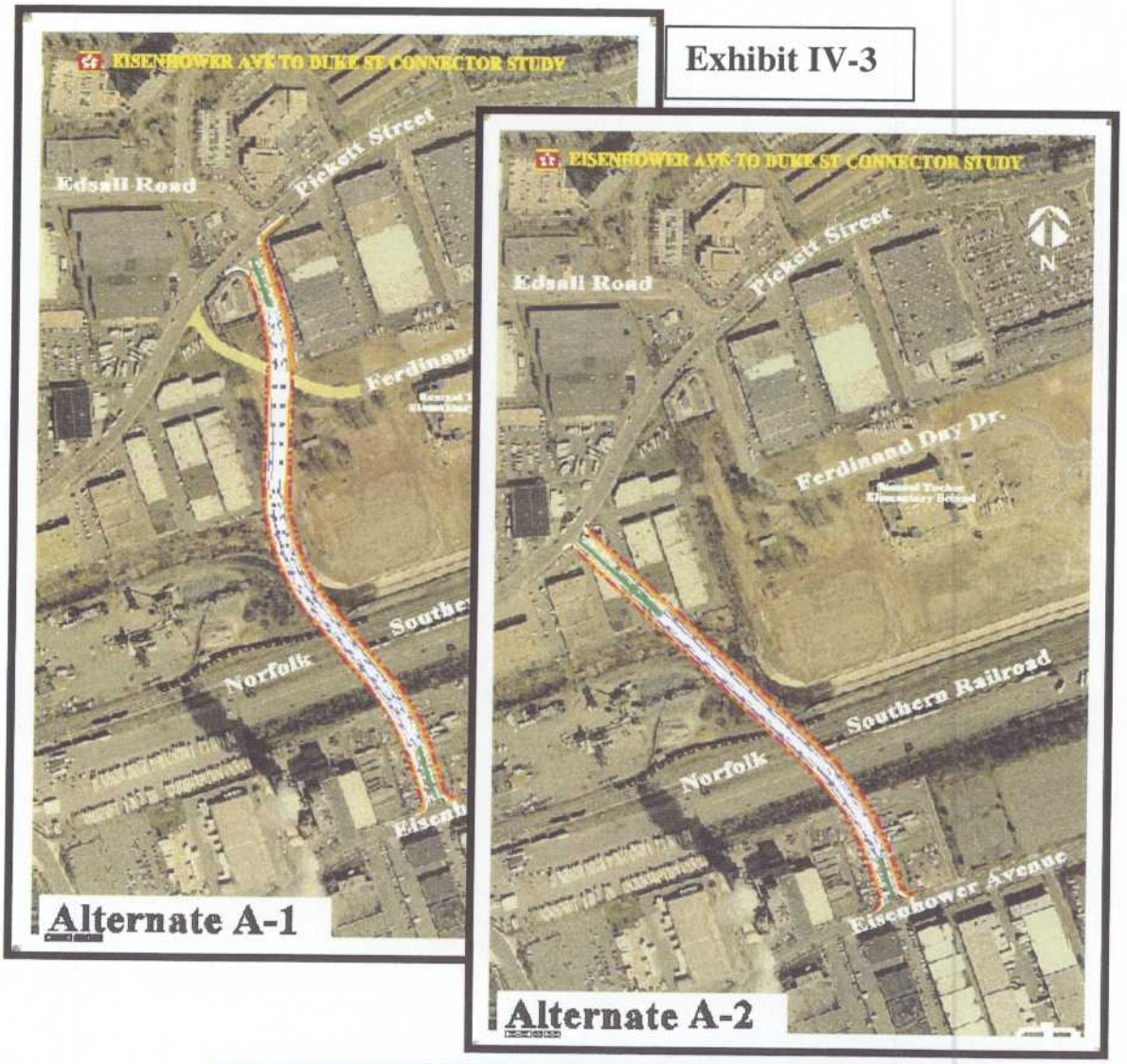

EISENHOWER AVE TO DUKE ST
CONNECTOR STUDY
EXHIBIT IV-2
FINAL ALTERNATES
DUKE STREET
DUKE STREET
EISENHOWER AVENUE
EISENHOWER AVENUE
JANNEY'S LANE
NORTH QUAKER LANE
Jordan St
Rt. Williams Pkwy
King St
W. Taylor Run Pkwy
Cambridge Dr
Calvin St
Edsall Rd
S. Pickett Street
Ferdinand Day Dr.
Holmes Run
Norfolk Southern
Railroad
Norfolk Southern
Railroad
Southern Railroad
Norfolk
Cameron Run
Cameron Run
Capital Beltway
A-1
A-2
B-1
B-2
C
D

IV-1.2 A Alternates

Alternate A1 is an alternate on the western portion of the study area. From the south this alternate begins on Eisenhower Avenue at the city impound lot, crosses the CSX Railroad and finishes at the Cameron Station entrance on Pickett Street. The Alternate is largely elevated and the Cameron Station Entrance will need to be relocated.

Alternate A2 is similar to A1 and was developed to avoid all impacts on the Armistead L. Boothe Park. The alternate stays west of the ball field and parking in the Park and instead impacts commercial areas on the south side of Pickett Street. The A Alternates are shown in Exhibit IV-3.

Exhibit IV-3



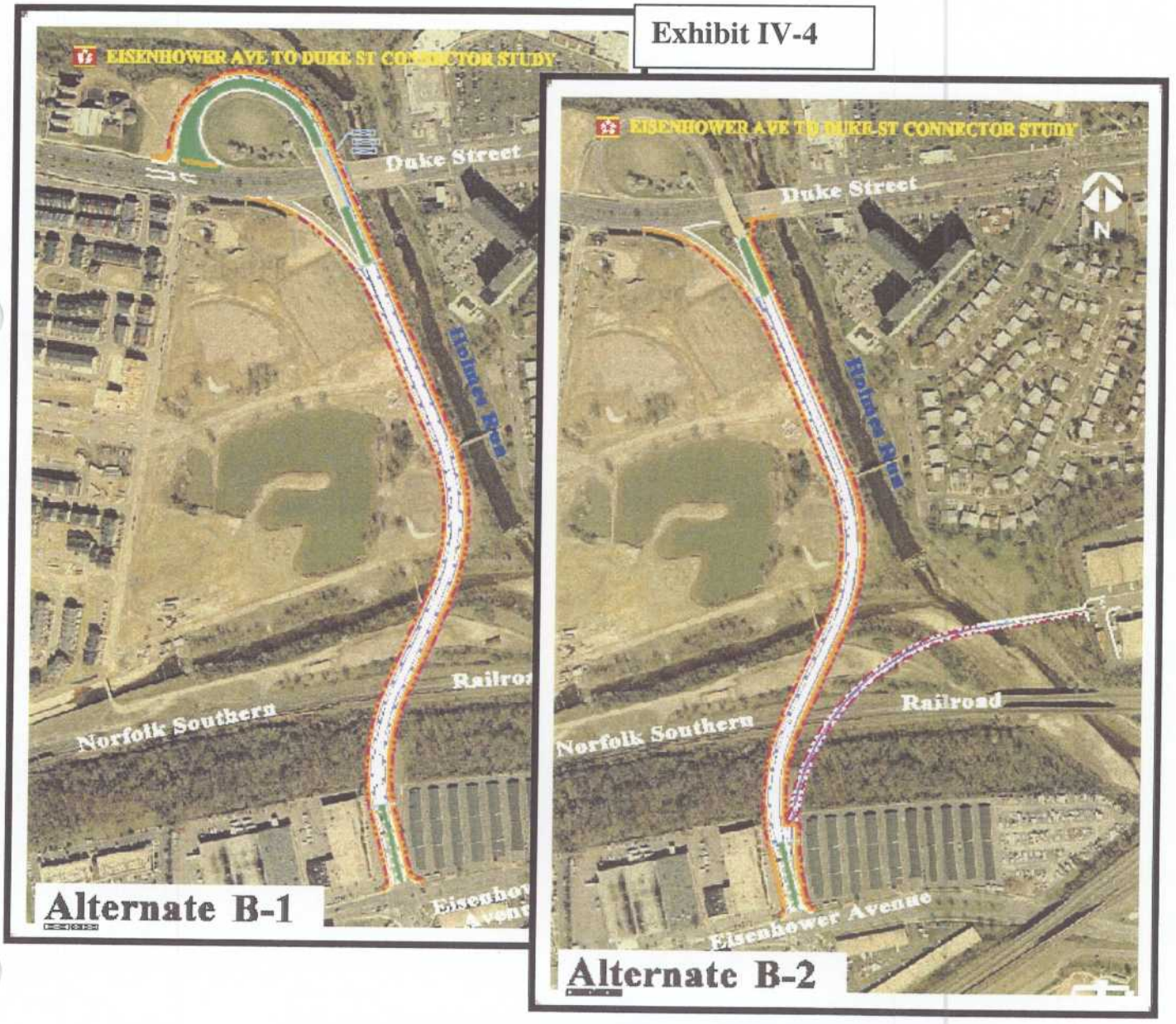
35

IV-1.3 B Alternates

Alternate B1 begins at the intersection of Eisenhower Avenue and Clermont. The roadway crosses over the CSX Railroad and stays elevated through Ben Brenman Park. The alternate ties-in with the existing interchange at Duke Street and will require a new signal on Duke Street.

Alternate B2 is similar to B1 except for the treatment of northbound to eastbound traffic. In alternate B2, northbound to eastbound traffic will use a ramp to Wheeler Avenue. This ramp will eliminate the need for a new intersection on Duke Street. The B Alternates are shown in Exhibit IV-4.

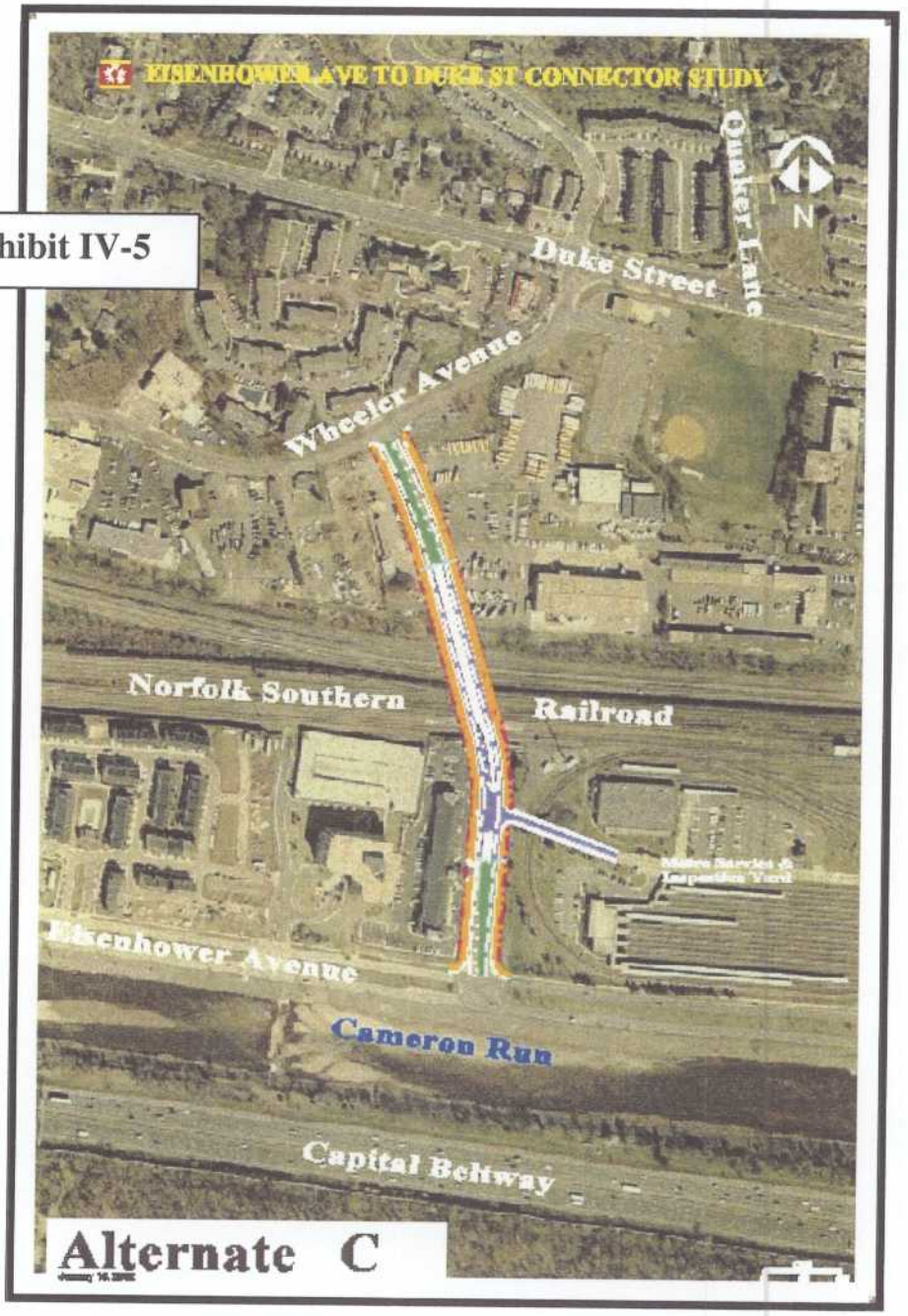
Exhibit IV-4



IV-1.4 Alternate C

Alternate C begins at Bluestone on the south, crosses the CSX Railroad and connects with Wheeler Avenue. Alternate C is shown in Exhibit IV-5.

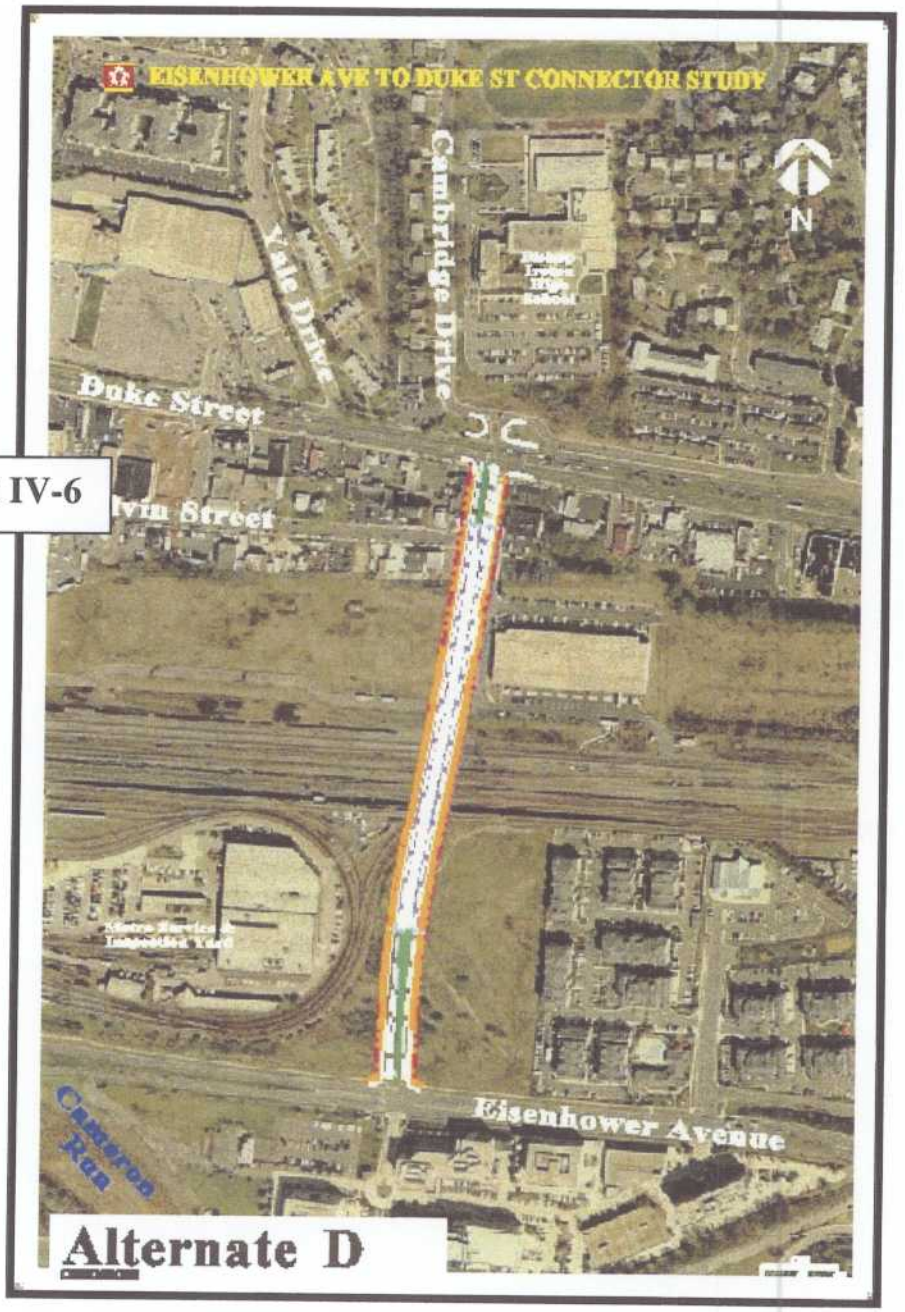
Exhibit IV-5



IV-1.5 Alternate D

Alternate D is the furthest east of the alternates. This alternate begins on Eisenhower Avenue near the Metro maintenance yard. The roadway would cross over the Metro rail bridge and connect with Duke Street, largely on bridge. Alternate D is shown in Exhibit IV-6.

Exhibit IV-6



IV-1.6 "No-Build with Improvements to Existing Roadway" Alternate

The "No Build with Improvements to the Existing Roadway" consists of five (5) separate major roadway improvements. These improvements were developed to avoid construction of a connector on new alignment. They are as follows:

- Intersection improvements at Eisenhower Avenue and South Van Dorn Street.
- Urban interchange (elevated) at intersection of South Van Dorn Street and South Pickett Street.
- Urban interchange (depressed) at intersection of Edsall Road and South Van Dorn Street.
- Addition of frontage roads along northbound and southbound South Van Dorn Street.
- Intersection improvements at South Pickett and Duke Street.
- Additional lane on Duke Street eastbound from Quaker Lane to Telegraph Road.
- Additional lane on Telegraph Road southbound from Duke Street to I-95.

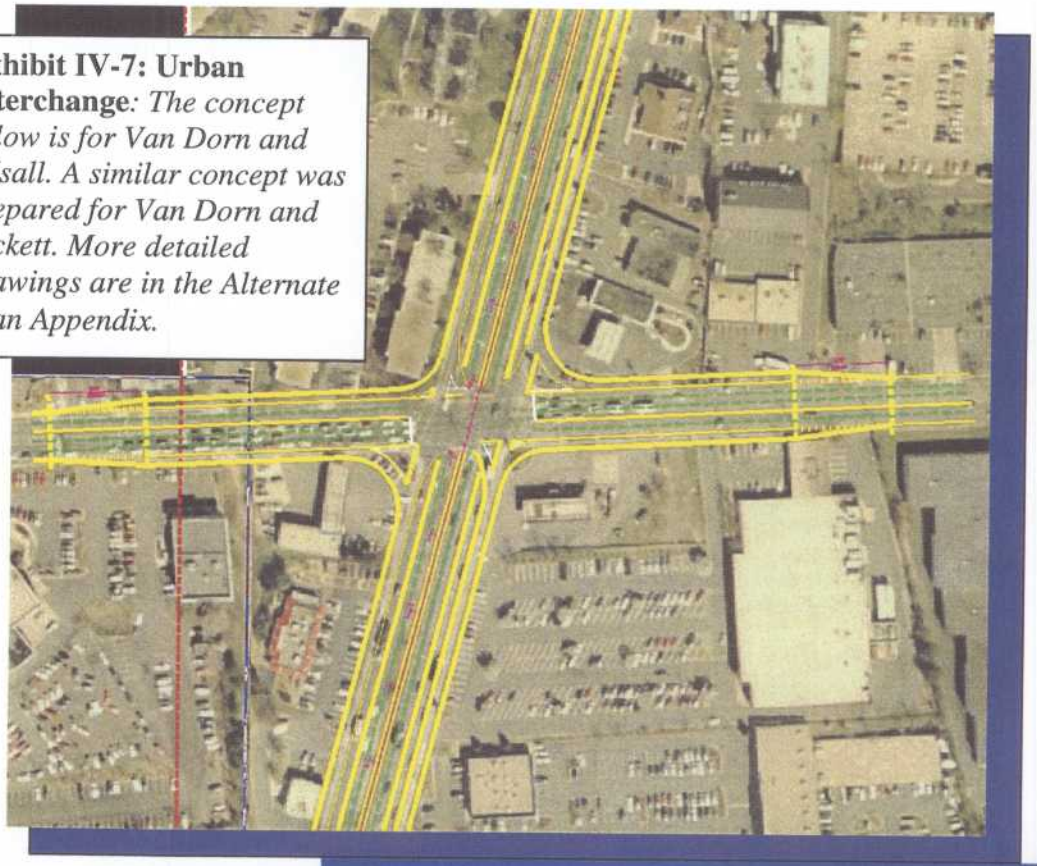


Exhibit IV-7: Urban Interchange: *The concept below is for Van Dorn and Edsall. A similar concept was prepared for Van Dorn and Pickett. More detailed drawings are in the Alternate Plan Appendix.*

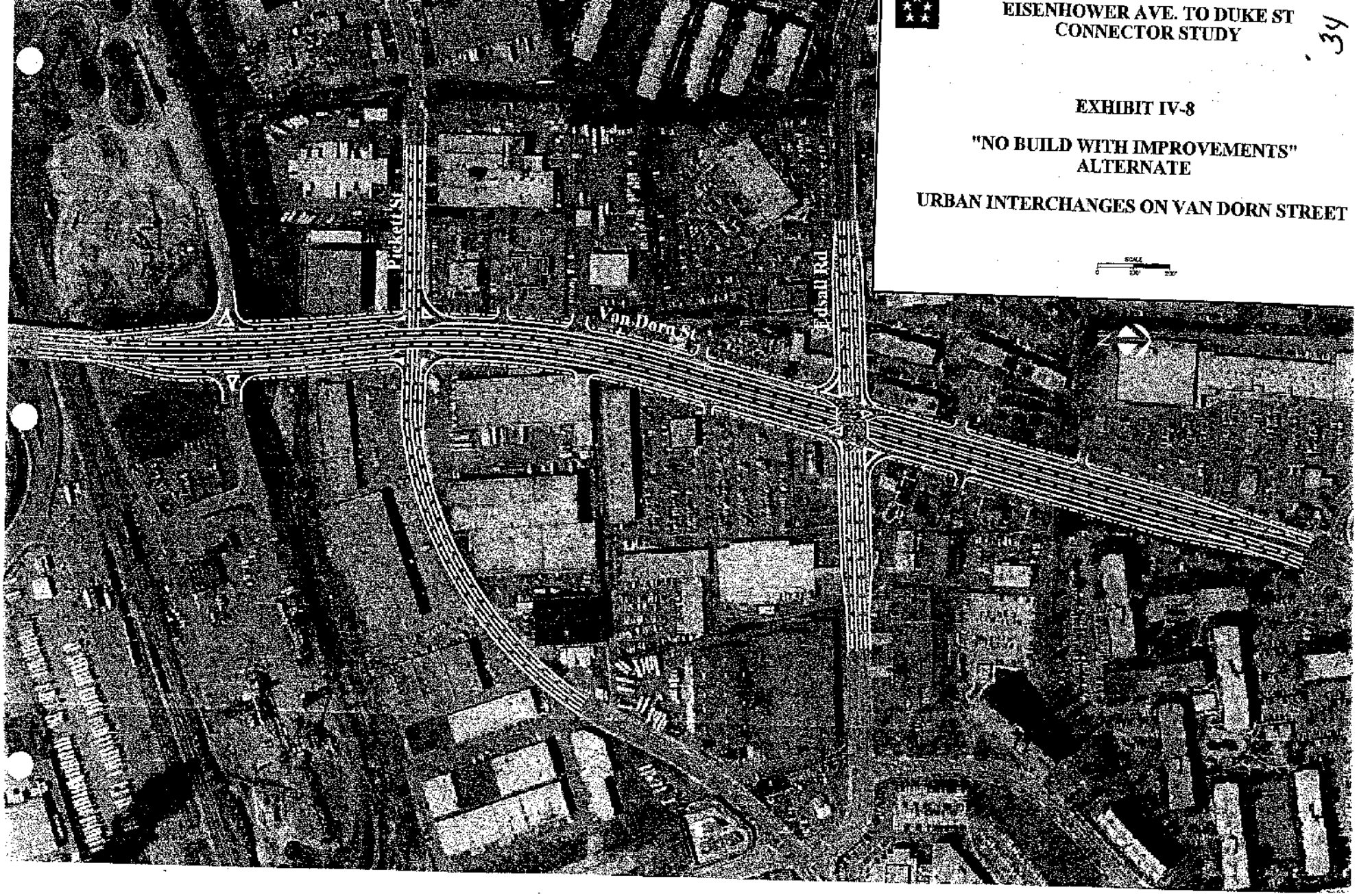
Exhibit IV-7 shows an urban interchange and Exhibits IV-8 and IV-9 show the improvements proposed for Van Dorn Street and Duke Street, respectively.

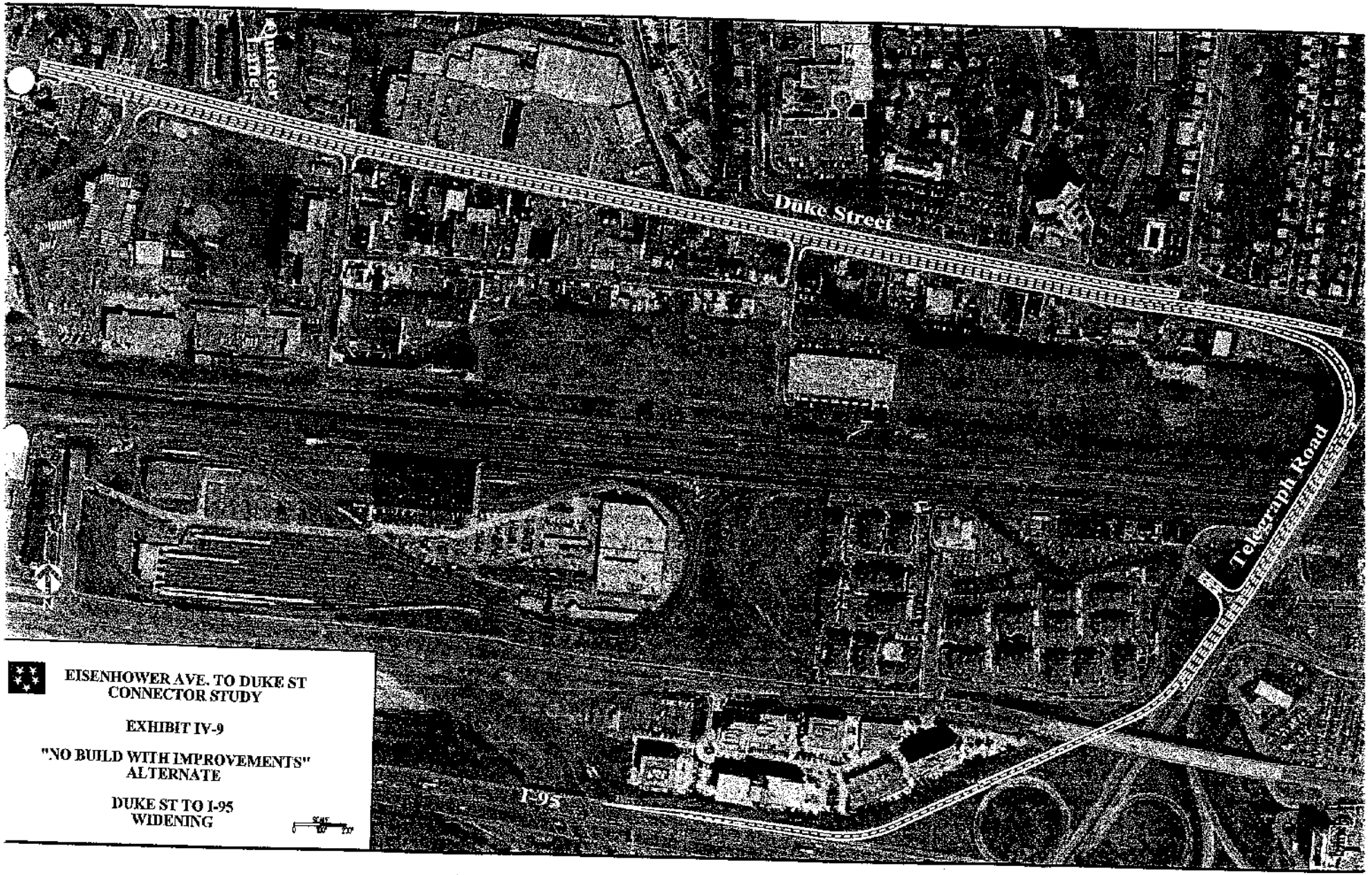
EISENHOWER AVE. TO DUKE ST
CONNECTOR STUDY

EXHIBIT IV-8

"NO BUILD WITH IMPROVEMENTS"
ALTERNATE

URBAN INTERCHANGES ON VAN DORN STREET





EISENHOWER AVE. TO DUKE ST
CONNECTOR STUDY

EXHIBIT IV-9

"NO BUILD WITH IMPROVEMENTS"
ALTERNATE

DUKE ST TO I-95
WIDENING

IV-1.7 "No-Build" Alternate

The "No-Build" alternate comprises no new improvements, except what is currently programmed in VDOT's Six Year Plan.

IV-1.8 Typical Sections

A consistent typical section was used for the connector to measure impacts and determine costs. This typical section may be modified during the design process. It is important to note that most of the alternates are on bridge sections.

A four lane typical section was assumed for analysis purposes, and is shown below. A smaller two lane section or reversible lanes may have merit, and should be considered during the design process. A six-lane section would not be appropriate for the traffic volumes projected.

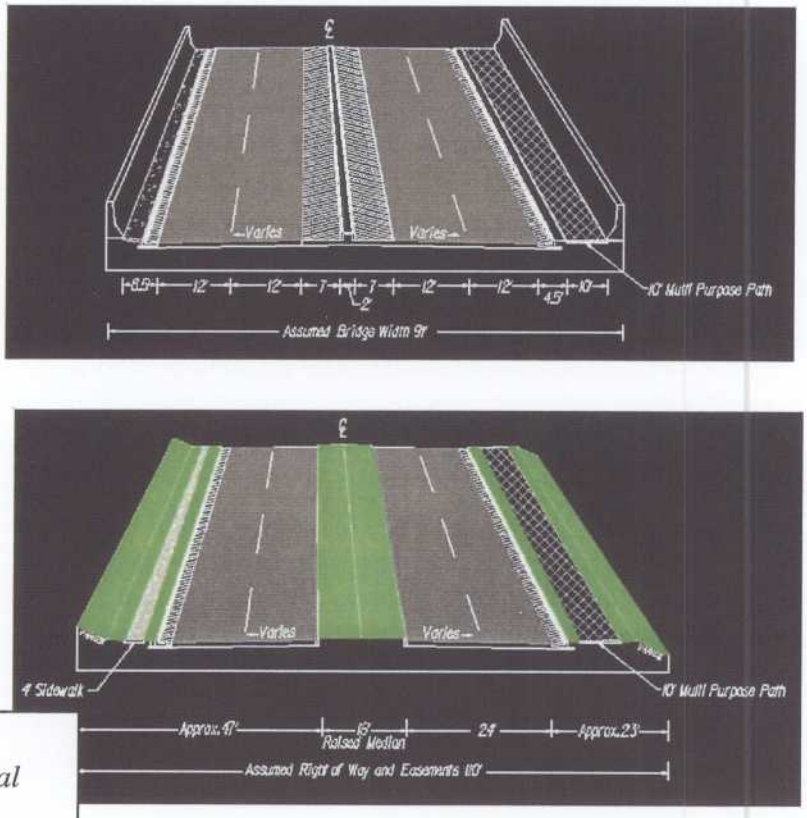


Exhibit IV-10 Typical Sections: *These two typical sections were used for analysis purposes. The upper section is for bridge sections. The lower one is for section on grade. Both include a 10-ft multi-purpose trail.*

IV-2 Resource Impacts

This section and the following sections describe the impacts, benefits and traffic analysis results of the alternates defined in the previous section.

Resource impacts considered in this study consist of impacts to the:

- natural environments (streams, floodplains, RPAs and forests); and
- cultural resources (archeological or historical sites).

Table IV-1 presents a summary of the results.

IV-2.1 Natural Resources

Impacts to natural resources were determined using aerial photography, published information, and conceptual engineering designs. Although no field studies were undertaken, this approach allows for comparisons of alternates to be made as well as initial assessments.

Streams, Floodplains, RPAs and Forests
Alternates B1 and B2 have the highest potential to adversely impact natural resources in the study area. Both alternates parallel the Holmes Run stream valley and impact forested areas, floodplains, and Resource Protection Areas (RPAs). They both impact over eight (8) acres of contiguous RPAs, and approximately 1.25 acres of forests. Both alternates cross streams; Alternate B1 crosses two streams and Alternate B2 crosses five. However, both would fall within the requirements of a General Permit.

The A alternates require crossing streams and would impact forests, floodplains, and RPAs. Unlike RPAs impacted by the B alternates, those impacted by the A alternates are fragmented, and are thus considered less critical. Alternate A1 impacts up to 1.6 acres of forests, and requires three stream crossings (the crossing over 500 linear feet of stream channel). This may require an Individual Permit, an indicator of a greater level of impact to the stream's health. Alternates A2 and A1 impact approximately 1½ and ½ acre of floodplain, respectively. These estimates of floodplain impacts are based on published data and not recent field survey.

Alternates C, D and No Build with Improvements traverse heavily urbanized areas, and present almost no impact on streams, floodplains, RPAs, or forests. Alternate A impacts less than a ¼ acre of forested area that provides a buffer between the Tucker Elementary School and the existing rail tracks.

TABLE IV-1
RESOURCE IMPACTS BY ALTERNATE

	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D	NB w/
Natural Environment							
Wetland Impacts	0	0	0	0	0	0	0
Permit Challenge	Individual	General	General	General	None	None	General
Forests Impacts (acres)	1.609	.524	1.27	1.39	.183	None	1.21
Floodplain (acres)	.528	1.652	0.578	1.016	None	None	None
RPA (Waterway Buffer) (acres)	4.6	5.63	8.1	8.47	None	None	0.06
Stream Crossings	3	2	2	5	None	None	None
Cultural Resources							
Potential for Disturbing Historic/Prehistoric Archeological Resources	Medium Potential	Medium Potential	High Potential	High Potential	High Potential	Medium Potential	Medium Potential
Known Archaeological Sites Within 100'	No known sites	No known sites	2 known sites	2 known sites	2 known sites	No known sites	No known Sites
Potential for Disturbing Historic Resources eligible or listed on the National Register	None	None	None	None	None	None	None

IV-2.2 Cultural Resources

According to the City of Alexandria archeology staff, the entire project area has the potential to contain archeological resources; therefore, all of the alternates have some potential for disturbing these resources. Alternates B1, B2, and C have a higher potential for disturbing the historical resources because their alignment would pass over two known archeological resources. The alignment area for Alternates A1, A2, and D contain no known resources; therefore there is only a medium potential for disturbing these resources. None of the Alternates would pass within ¼ mile of a National Register or locally significant historic resource.

IV-3 Socio-Economic Benefits and Impacts

Table IV-2 presents a summary of the benefits and impacts of each of the alternates.

IV-3.1 Socio-Economic Benefits

Socio-economic benefits considered for this study consist of:

- improvement in emergency response; and
- access to community facilities.

Emergency response.
Portions of Eisenhower Valley are not easily reached for fire or police service during congested conditions. City Fire and Police officials consider this a serious issue.

For Table IV-2 emergency response time was estimated for vehicles originating at Fire Stations 207 and 208 to points east and west of Clermont on Eisenhower Avenue. The response time with the addition of Alternates C and D decreases by 3.33 and 2.03 minutes, respectively, to a point west of Clermont. The response time with the addition of Alternates A1, A2, B1 and B2 decreases by approximately two (2) minutes to a point east of Clermont.

Community facilities/trails. The number of community facilities (e.g., schools, libraries) within a half mile of the ends of the proposed connector alternate varies between seven (7) for Alternate D and three (3) for Alternates A1 and A2. Alternates B1 and B2 allow for the most connection to existing trails, resulting from their location near Ben Brenman Park.

IV-3.2 Socio Economic Impacts

Parks. Alternates A1, B1 and B2 have an impact on adjacent parks. Alternate A1 impacts approximately one (1) acre of Armistead L. Boothe Park in the vicinity of the parking lot, and baseball diamond.

Alternates B1 and B2 impact approximately 3.5 acres of Ben Brenman Park, on the eastern edge, and the south side of the pedestrian bridge, impacting the baseball diamond and activities in the dog park. In addition to affecting active recreation, the taking would also require reconfiguration of the footpath/jogging trail that runs north-south along the edge of Ben Brennan Park. During public meetings regarding this project, many residents expressed concern over impacts to this Park.

Noise and Visual Impacts. Two criteria were measured, sensitive noise receptors within ¼ mile, and residences within 500 feet. Sensitive noise receptors are defined as public facilities such as parks, hospitals, senior citizen facilities, libraries and schools.

Alternate B1 and B2 are within ¼ mile of the most sensitive noise receptors as a result of proximity to two parks. A1 and A2 are approximately 600 feet within Tucker Elementary School and D will terminate within 500 feet of Bishop Ireton High School.

A large number of residences are within 500' of most of the Connector Alternates. Only A1 and A2 are not near apartment complexes. One of the larger apartment complexes in the study area is near B1 and B2. Three hundred residences from that building (7600 Duke Street) were estimated to be within 500' of B1 and B2.

Businesses. Table IV-3 presents the impact of the alternates on commercial properties. The "No-Build with Improvements" Alternate (on existing roadways) has the greatest impact on businesses in the area, and would require over $22 million in takings, and a loss of nearly a quarter million dollars in annual taxes. Alternate C is also relatively high ($15 million), however it represents the taking of only City of Alexandria property.

TABLE IV-2
SOCIO-ECONOMIC BENEFITS AND IMPACTS BY ALTERNATIVE

	Alt A1	Alt A2	Alt B1	Alt B2	Alt C	Alt D	NB w/
Socio Economic Benefits							
Change in emergency response time to Point A	N/A	N/A	N/A	N/A	-3.33	-2.33	Zero
Change in emergency response time to Point B	-1.96	-1.68	-2.07	-2.15	N/A	N/A	Zero
Community facilities within ½ mile of termini	3	3	4	5	4	7	N/A
Bicycle or general use trails connected	2	2	3	4	2	2	Zero
Cultural Resources							
Acres of Parks taken	1.99	0	3.27	3.63	0	0	0
Park activities impacted	1	0	2	2	0	0	0
Potential for through traffic in residential areas	Low	Low	Low	Medium	Medium	---	None
Number of residences taken	0	---	0	0	0	0	0
Number of businesses taken	8	9	0	0	4	3	9
Number of sensitive noise receptors ¼ mile	1	1	3	3	2	1	---
Number of residences within 500'	11	0	331	325	156	145	---

TABLE IV-3: IMPACT ON COMMERCIAL PROPERTIES			
Alternate	**Properties Impacted**	**Assessed Value[1] ($)**	**Annual Tax ($)**
A1	8	7,608,500	78,300
A2	9	7,258,500	74,520
B1	0	-	-
B2	0	-	-
C	4	14,809,600	0[2]
D	3	513,000	5,540
No Build w/ Improvements	9	22,241,700	240,210

Note:
(1) Includes both full and partial takings.
(2) Alternate C impacts only City of Alexandria properties.

IV-3.3 Alternate Costs

The following costs consist of construction and right-of-way costs for each alternate. The right-of-way costs below are for replacement value and land, and differ slightly from Table IV-3 above. All values are $ million.

Alternate	Right of Way	Construction	Total
A1	8.1	26.9	35.0
A2	16.6	19.0	35.6
B1	.5	33.0	33.5
B2	.5	35.2	35.7
C	3.0	15.7	18.7
D	5.8	19.0	24.8
No Build w/ Improvements	17.0	38.0	55.0

IV.4 Comparison of Future Traffic Conditions

This section compares:

IV-4.1 Total connector traffic and Sources
IV-4.2 External traffic
IV-4.3 Service to East Eisenhower
IV-4.4 Queue lengths for selected movements
IV-4.5 Potential cut through traffic
IV-4.6 Intersection performance

IV-4.1 Sources of Connector Traffic

Each connector is projected to carry significant traffic in 2020. In doing so connectors draw significant traffic from Van Dorn Street and Telegraph Road.

An east-west "cut line" was drawn to determine sources of traffic. This "cut line" analysis assumes that total north south traffic across the cut line is the same for the No-Build and each connector. The traffic reduction in Van Dorn, Telegraph, Route 1, Washington Street and Holland Avenue was assumed to be the source of traffic for each Connector. Traffic not accounted for by these roadways is shown as "I-395 or Roadways outside the City" in Table IV-4.

The row labeled "I-395 or Roadways outside the City" is traffic that without a connector would not be in the original study area. The B Alternates attract the most of this new external traffic with 5,400 trips per day. The A alternates divert the most traffic from Van Dorn and Alt C the most from Telegraph.

Table IV-4 : Connector Traffic and Sources Average Daily Traffic, 2020

	A1	A2	B1	B2	C	D
Total Connector ADT	***23,400***	***21,000***	***37,200***	***33,200***	***31,500***	***29,500***
Van Dorn Street	12,000	12,000	11,400	8,300	4,300	4,300
Telegraph Road	1,100	1,100	6,000	4,000	13,200	12,000
Other Roadways in Alexandria	8,300	6,700	14,600	15,500	10,200	9,600
I – 395 or Roadways outside Alexandria	2,000	1,200	5,200	5,400	3,800	3,600

4/3

IV-4.2 External Traffic

External traffic is traffic with neither an origin nor destination in the area. Table IV-5 shows projected traffic external to the City of Alexandria and to the expanded study area. This was performed by analyzing the origins and destinations of traffic assigned to North Quaker Lane and each Connector. North Quaker Lane was selected because of concern a connector would encourage traffic from I-395 to use Quaker lane to access I-95.

Table IV-5:
External Traffic on the Connector and North Quaker, 2020

External Traffic outside the City of Alexandria

	NB	Alt-A1/A2	Alt-B1/B2	Alt-C	Alt-D	No Build w improvement
Connector	-	35%	38%	33%	30%	-
N. Quaker	34%	34%	35%	34%	33%	35%

External Traffic outside the expanded Study Area

	NB	Alt-A1/A2	Alt-B1/B2	Alt-C	Alt-D	No Build w improvement
Connector	-	57%	67%	76%	66%	-
N. Quaker	43%	43%	44%	43%	43%	44%

External traffic with each of the connectors is not expected to increase as a percentage of volume on North Quaker (Table IV-5). Some additional external traffic is expected with each of the connectors. The increase due to the B alternates is the greatest; the external traffic grows from 9,700 (No Build) to 11,500 for the B alternates (Table IV-6, below).

Table IV-6:
North Quaker External – External Analysis

	Existing	No Build	A	B	C	D	NB with Imp
ADT	22,000	28,500	28,500	32,900	31,500	32,000	30,200
X-X to The City	9,900	9,700	9,800	11,500	10,600	10,600	10,700
% Growth from Existing	N/A	-2.0%	-1.0%	16.2%	7.1%	7.1%	8.1%

External traffic on North Quaker Lane is expected to slightly *decrease* between 2002 and 2020. This is due to the growth in Alexandria destinations and origins, such as East Eisenhower. North Quaker will become a slightly less attractive route for external traffic with the additional Alexandria traffic.

The second highest growth in external traffic is No Build with Improvements. This is due to the improved access to and from I-95 (Beltway) from both Van Dorn and Telegraph Road.

Table IV-5 shows the percentage of External traffic on each connector and North Quaker. Table IV-6 shows the ADT traffic on North Quaker. The top portion of Table IV-5 shows traffic that has a destination and origin outside the City. The bottom portion shows traffic that has a destination and origin outside the Study Area. Time frame for both tables is 2020.

IV-4.3 Service to East Eisenhower

East Eisenhower is just outside the expanded study area; however, service to east Eisenhower is a benefit to the City. Consequently, additional analysis was conducted to determine how much East Eisenhower traffic uses each connector.

The traffic projected was analyzed for either an origin or destination in the East Eisenhower transportation analysis zone. Table IV-7 shows the percentage of total traffic with an east Eisenhower origin or destination. A large portion of Alternate D traffic is bound to or from east Eisenhower.

Table IV-7: Connector Service to East Eisenhower, 2020

Alternate	Percentage
Alt-A	5%
Alt-B	5%
Alt-C	15%
Alt-D	20%

IV-4.4 2020 Queue Lengths for Selected Movements

High volume movements at key intersections heavily affect traffic congestion in the study area. These high volume movements often back up, or queue and interfere with the operation of other intersections.

The change in queue lengths was studied for five selected movements. These movements were selected because they are projected to have excessive queues and affect other intersections.

1. Eastbound AM at Duke and Dangerfield
2. Southbound PM at Duke and Quaker
3. Southbound PM at Van Dorn and Edsall
4. Southbound PM at Van Dorn and Pickett
5. Eastbound PM on ramp to Telegraph

Intersections 2,3, 4 and 5 were analyzed using a network micro-simulation. Intersection 1 is outside the study area and was analyzed as a stand alone intersection.

Eastbound AM at Duke and Dangerfield. Alternates C and D provide the greatest relief to this movement. The A and No Build Alternates result in excessive backups and congestion.

Southbound PM at Duke and Quaker. All of the alternates improve conditions on Duke Street between Duke and Telegraph. As a result each alternate improves Quaker queue lengths. No Build with Improvements shows the most improvement.

Southbound PM at Van Dorn and Edsall. Only No Build with Improvements alleviates congestion at Van Dorn and Edsall. The A alternates do not provide relief despite their proximity to Van Dorn as connector traffic uses Edsall road. Alternate C provides some relief for this movement.

Southbound PM at Van Dorn and Pickett. Only No Build with Improvements alleviates congestion at Van Dorn and Pickett. The B Alternates also provide noticeable improvements.

Eastbound PM onramp to Telegraph. With the exception of the A alternates, all of the build alternates improve queue lengths significantly.

Table IV-8 shows each of the projected 2020 queue lengths in feet.

Table IV-8: 2020 Queue Lengths (ft.)							
	Direction	No Build	A1/A2	B	C	D	NB w Imp
Duke/ Dangerfield	AM East Bound	1,542	1,400	1,141	600	600	1,542
Duke/ Quaker	PM South Bound	1,746	497	429	300	290	216
Van Dorn/ Edsall	PM South Bound	580	579	535	348	524	104
Van Dorn/ Pickett	PM South Bound	176	164	112	143	179	25
Telegraph at Duke*	PM East Bound	3,540	2,222	1,130	1,040	1,010	1,180

** HCM unsignalized intersection methodology used to calculate queue length. Volumes calculated from AIMSUN2 with diverted volumes.*

IV-4.5 Potential Cut Through Traffic

The potential for cut through traffic in the neighborhoods north of Duke Street was studied in detail. AIMSUN2 with dynamic route guidance is used to measure the potential for cut through traffic.

This program mimics driver behavior at a micro level. Although driver decisions are more complex than can be fully duplicated, the process provides very reliable *comparative* results. To determine the potential for cut through traffic of various alternates, the process is excellent.

Increased volumes or congestion on Duke Street greatly increased the potential for cut through traffic. The AIMSUN2 model was particularly sensitive to congestion; a single congested intersection could cause large numbers of cut through trips.

Generally, none of the Alternates increase the overall potential for cut through traffic. Only Jordan has increased potential for cut through traffic with Alternates A, B and C. Other local roads have a decreased potential for cut through traffic as a result of improved circulation and alternate routes.

Table IV-9 summarizes the result of the analysis. This table shows 2020 vehicles per hour and is based on the PM simulation.

Table IV-9. Measure of Potential Cut Through Traffic				
	West Taylor Run	Cambridge	Fort Williams	Jordan
No Build	430	130	120	290
A	310	120	190	500
B	350	110	190	360
C	200	80	50	450
D	420	40	40	140
No Build w Improvements	780	20	80	340

No Build with Improvements increases the potential for cut through traffic on West Taylor Run. This is a result of a degradation of conditions on Duke from increased traffic from and to Telegraph.

Alternate D, which terminates directly opposite Cambridge on Duke Street, significantly decreased the potential for cut through on Cambridge. This Alternate prohibits traffic to pass to or from Cambridge to the Connector, as a result potential cut through traffic avoiding Cambridge to travel on the Connector.

IV-4.6 Intersection Performance

Traffic simulations were performed to determine the interaction of intersections and total network delay throughout the entire study area. The result of this simulation are shown in Table IV-10.

The last row, Network Wait per Vehicle, summarizes the performance of the network. Network Wait per Vehicle is the total wait time for all vehicles in the network divided by the number of vehicles in the network.

On average, B1, B2 and No Build with Improvements produce the best results. The average system delay for these alternates is less than 200 seconds. This is a significant improvement over No Build with 336 seconds.

Van Dorn remains the most congested arterial in the study area. Table IV-11 summarizes the results for Van Dorn. No Build with Improvements provides the best improvement. Alternate A1 and A2 provide significant improvement to the intersections of Van Dorn / Eisenhower, however this alternate will have increased congestion at Van Dorn / Edsall and Van Dorn / Pickett.

Table IV-11 : Reduction in Van Dorn Traffic, 2020 Simulations Results, Average wait in seconds

	Van Dorn / Pickett	Van Dorn/ Eisenhower	Van Dorn / Edsall	Avg	Reduction
2020 No Build	116	206	120	147	
Alt A1	196	54	203	151	-2%
Alt A2	196	54	203	151	-2%
Alt B1	80	97	98	92	38%
Alt B2	92	101	99	97	34%
Alt C	123	194	96	138	7%
Alt D	132	163	97	131	11%
No Build w Imp.	43	11	102	52	65%

Table IV-10
Simulation Results, 2020 PM
Average wait in seconds

	NB	Alt A	Alt B1	Alt B2	Alt C	Alt D	NB w/ I
Eisenhower Ave							
VanDorn St	206	54	97	101	194	163	11
Clermont	112	87	86	119	137	118	122
VanDorn Street							
Mall	218	166	133	120	263	162	120
Edsall Rd	120	203	98	99	96	97	102
Pickett St	116	196	80	92	123	132	43
Duke Street							
S Pickett St	26	15	32	35	25	38	29
Pickett/ Cameron	17	19	15	18	17	20	17
Jordan St	95	23	18	18	19	16	31
N Quaker Ln	87	36	38	26	34	31	30
S Quaker Ln	15	15	19	18	19	16	17
Sweeley St	53	44	43	50	34	41	30
Cambridge St	70	33	50	40	42	31	15
W. Taylor Run Pkwy	21	16	13	11	11	7	11
Seminary Rd/Janneys Ln							
Jordan St	38	27	17	18	22	17	15
Ft Williams Pkwy	14	7	7	9	7	9	11
N Quaker Ln	34	62	46	45	37	35	45
Yale St	50	61	41	42	61	35	33
Network Wait per vehicle	336	284	188	177	228	256	219

IV-4.7 Traffic Summary by Alternate

No Build. Without improvements congested conditions are expected throughout the study area. Excessive delays at critical intersections will cause gridlock like conditions for extended periods of time. Growth in the area will be limited by congestion and a lack of alternates.

Public safety will be adversely affected. Portions of Eisenhower Avenue will not be easily reached by fire, police or medical services and response times will be increased.

No Build with Improvements. No Build w/ improvements will ease congestion on Van Dorn by improving intersection capacity. However, No Build w/ improvements does not create more efficient traffic patterns, improve connectivity or provide alternate travel routes.

The additional lanes on Duke Street and Telegraph Road are projected to significantly reduce congestion on eastbound Duke, and improve operations at several intersections. However, for this benefit to be fully realized Telegraph Road ramps onto I-95 must not back up. Furthermore, the intersection of Telegraph and Huntington Avenue, just outside the City, must also be improved.

No Build with Improvements diverts similar amounts of new traffic to North Quaker Lane as other alternates. It will increase the use of Telegraph Road and increase the potential for cut through traffic on West Taylor Run.

This alternate does little to improve emergency access by fire, police or medical services.

Alternate A1 and A2. These alternates improve circulation and traffic flow in the western portion of the original study area and improve access to the Clermont interchange. These alternates are not expected to support new development in East Eisenhower or alleviate congestion on Telegraph Road.

Despite improving mobility in the vicinity of Van Dorn, traffic must access or egress the alternate from Pickett or Edsall. The additional traffic at Van Dorn/Pickett and Van Dorn/Edsall degrade conditions at these intersections.

Less external traffic is projected to use this alternate than the other build alternates. External traffic on North Quaker is expected to actually decrease slightly. However, this alternate will increase the number of through trips on Jordan.

Alternate B1 and B2. These alternates provide the best traffic service to the study area. They provide measurable improvement to both Van Dorn Street and Telegraph Road, and reduce overall network delay.

Although B1 and B2 are projected to have the greatest external traffic at North Quaker, it is not expected to be large and it is only marginally greater than the other alternates. In 2020 9,700 external trips use North Quaker, this is projected to increase to 11,500 with these alternates.

Average Daily Traffic (ADT) is projected to increase by 4,400 on North Quaker with B1 and B2 as compared with No Build. However, the potential for cut through trips in the neighborhoods north of Duke Street is unchanged. This is due to improved circulation and conditions on Duke Street.

Alternate C. This alternate is projected to carry nearly as many daily trips as Alternates B1 and B2. This alternate will divert the most trips from Telegraph Road and is second to D in providing service to East Eisenhower.

The travel demand model projects an increase of daily traffic on North Quaker from 28,500 to 31,500 with Alternate C. However, new external traffic is projected to be only 900 additional vehicles per day on North Quaker. In essence, North Quaker capacity will be filled primarily by trips that have either an origin or destination in the City of Alexandria; not by I-395 or I-95 through traffic.

The northern terminus at Duke Street and Wheeler Avenue will be very close to the intersection of Duke and North Quaker. Movements may need to be eliminated due to the limited weave distance between Wheeler and North Quaker. Detailed intersection analysis will be required to determine what limits are necessary and how they would impact the value of this alternate as a connector.

Alternate D. This alternate provides the best service to East Eisenhower. Other benefits are similar to Alternate C: large diversions of trips from Telegraph, reduction in system delay and few external trips on North Quaker.

Currently, there is no direct connection between Eisenhower Avenue and Telegraph Road. Alternate D would provide a more direct connection than the current roadways.

V Findings and Conclusions

1. Without roadway improvements the Eisenhower Valley will experience excessive congestion during peak and non-peak periods.
   - Van Dorn will have gridlock conditions during peak periods.
   - Backups on Telegraph Road will degrade conditions on Duke Street and in east Eisenhower.

2. Build alternates eases congestion for the City of Alexandria.
   - Build alternates improve LOS throughout the Study Area.
   - Connectors carry 20 to 30 thousand Average Daily Traffic (ADT) most of which is traffic diverted from City roadways.
   - No build w/ improvements is focused on the most congested intersections in the study area.
   - New traffic without a destination or origin in the City will be less than 2,000 vehicles per day (at North Quaker).

3. Connectors do not increase total cut through traffic, in some cases decrease the potential for cut through traffic.
   - Average delay for Duke and the neighborhoods north to Seminary and Janneys is not increased.
   - Access to Telegraph is improved. This results in decreased potential for cut through traffic on Yale, Cambridge and West Taylor Run.

4. Connectors improve emergency response times for Police, Fire and EMS services.
   - Under normal circumstances an average of 2 to 3 minutes.
   - During peak hours improvement will be greater.

5. Connectors support by right development in east Eisenhower.
   - 5% to 20% of connector traffic will be to or from east Eisenhower.

6. No Build w/ improvements will reduce congestion on Van Dorn by improving intersection capacity. However, No Build w/ improvements does not create more efficient traffic patterns or improve connectivity.
   - Van Dorn delay is improved up to 80%.
   - Van Dorn at Pickett, Edsall and Eisenhower LOS will be D or better.
   - SB Duke onto Telegraph PM queues reduced.

7. No build w/ improvements to Van Dorn at Edsall and Pickett may not be feasible as a result of costs and impacts.
   - Spot improvements do not change LOS.
   - Tight grade separations (urban interchanges) have large impacts to businesses and residences.
   - Costs will be over $50 million. This is substantially higher than the Connector costs.
   - Construction will be disruptive.

8. Other non-connector improvements will result in improved operations without major construction.
   - Improvement to LOS at Eisenhower and Van Dorn can be accomplished without major construction.
   - Widening of Duke Street between Quaker and Telegraph can avoid impacts by using service road buffer area.

9. Little of the natural environment remains in the study area, therefore environmental impacts will be limited.
   - Wetland impacts are expected to be avoided.
   - No protected species or habitat is known to be in the study area.
   - Floodplain and Forest impacts are less than 2 acres for any alternate.

10. However, the B alternates do pass through or close to a pocket of stream and wooded resources valued by the City.

11. Connector cultural and community resource impacts are not large, parkland takings are the single most significant impact.
   - No documented prehistoric or historic sites lie within potential alignment footprints.
   - No residences and few businesses taken.
   - A1 and B alternates have park impacts, up to 3.6 acres.

12. Community will benefit as a result of connectivity from connectors.
   - Trails and parks are connected.
   - Improved pedestrian and bike access to metro.
   - Connects residential, recreation and commercial land uses.

Attachment 12

Date:	April 2, 2002
To:	Attendees, File
Subject:	Minutes for the Seventh Task Force Meeting, Eisenhower Avenue-to-Duke Street Connector
Date of Meeting:	March 27, 2002
Time:	7:30 PM
Location:	City Council Workroom
From:	David D. Metcalf, PBS&J
Attendees:	Mayor Kerry Donley - Task Force Member City Councilwoman Del Pepper - Task Force Member Joe Bennett - Task Force Member Jim Cisco - Task Force Member Joanne Tomasello - Task Force Member Ronald Holder - Task Force Member Lois Walker - Task Force Member Sharon Hodges - Task Force Member Beverly Steele - City of Alexandria Doug McCobb - City of Alexandria Rich Baier - Director T & ES, City of Alexandria Bill Skrabak - City of Alexandria Reggie Beasley - VDOT Urban Division Barry Schiftic - Alexandria Police Ginny Hines Parry - Clover-College Park Civic Association Roland Gonzales - Cameron Station Civic Association Bill Dickinson - Seminary Hill Association David D. Metcalf - PBS&J Neil Freschman - PBS&J
	Public: Annabelle Fisher David & Erna Harris Joanne Lepanto Jeff Bernhelz - Brookville-Seminary Valley Mark Fields - Archaeology Commission Elizabeth Wright - Wakefield Tarleton Stephen Fuller - Eisenhower Ave. Partnership Patrick Warren, Sr. - Brookville - Seminary Valley J. Noritake - Park & Recreation Commission W. Dale Stump, Jr. Cindy Chambers - Environmental Policy Commission Althea Burns - Historic Alexandria Resources Commission

Lois Garrity
Tom Kerester
Daniel M. Kelly
Charles Trozzo -Alexandria Historical Restoration & Preservation Commission

1. Mayor Donley officially commenced the seventh Task Force meeting. Minutes from the January 23rd meeting were approved.

2. This meeting began with public comments. There were a total of 12 speakers. Following is a brief description of the speaker comments.

Speaker 1 - Mark Fields - Archaeology Commission

No Opinion on which alternate is preferred. Wants EIS to emphasize archaeological issues.

Speaker 2 - Judy Noritake - Park and Recreation Commission

Alternate B options impact parks. Park & Recreation Commission stands opposed to option that impacts the parks. She submitted a letter for the public record.

Speaker 3 - Roland Gonzalez - Cameron Station Civic Association

Alternate D is the preferred choice of his civic association. Does not support Alternates A1 & A2 since these alternates do not intersect with Duke Street. He is also opposed to Alternates B1 & B2. He stated that these alternates would help Beltway to Duke Street traffic and would be mainly for outsiders. He was also concerned that Alternate B would damage the park. He was opposed to Alternate C due to its proximity to Quaker Lane. Mr. Gonzalez would also like to see improvements on Van Dorn Street.

Speaker 4 - Jeff Bernholz - Brookeville-Seminary Valley Citizens Association

Supports improvements on Existing Alignment Alternate. Opposed to Alternates B1 & B2. He will not endorse any Alternate.

Speaker 5 - Dick Hobson - Seminary Hill

Stated that the civic association board has not voted. In the mid 1980s there was extensive debate. Alternates A, B & C were considered. In April 1987 a resolution was adopted excluding Bluestone from further study, so no one should be looking at this. Supports only No Build Alternate. Alternate D will affect Cambridge & Yale. He suggests building fire/emergency station in the Eisenhower Valley. Rich Baier stated that islands would be constructed to protect both Cambridge & Yale from through traffic.

Speaker 6 - Elizabeth Wright - Wakefield Tarleton

Wants connector - No Build is the "ostrich" approach. Alternate D is the most

effective and has the least impact. Worst and most objectionable connector is Alternate B-2 due to impacts on Tarleton Park. Also what would happen to the Wheeler Industrial businesses? Ms. Wright stated that the 2nd worst Alternate is B-1 because of the elevated bridge. The 3rd worst is Alternate C and the 4th worst is Alternates A2 and A1 because they are not a good solution. If the No Build Alternate is approved, then massive amounts of money need to go into mass transit.

Speaker 7 - Ginny Hines Parry - Clover College Park

Supports Alternate C but opposes Alternate D because of possible cut-through traffic on Cambridge/Yale. There are no alternates that improve the existing cut-through traffic. Direct through traffic to Quaker Lane.

Speaker 8 - Lois Hunt - Taylor Run

Opposes all alternatives. A&B destroy parkland. The City's Comprehensive Transportation Policy and Plan should come first. Improve pedestrian access. Alternates dump traffic onto Duke Street.

Speaker 9 - Elizabeth Moore - 4600 Duke Street

Prefers the No Build Alternate with Improvements or Alternate D. Disagrees with Alternates B1 & B2. Does not like elevated road.

Speaker 10 - Steven Fuller - Eisenhower Partnership

In support of Alternates B1 & B2 because they are in the middle of the study area and they add development potential. Moving to the edge of the area doesn't improve access. States that this will be the growth area. Area under developed because it is not connected to the rest of the City. Look at this property like it's a scarce resource.

Speaker 11 - Julie Crenshaw

Supports No Build Alternate. States that parks and waterways need attention. Need less cars and better pedestrian/bike access. Infrastructure needs repair. Look at all impacts - not just economics.

Speaker 12 - Barry Shiftic - Alexandria Police

Need connector to get emergency vehicles out of the valley. The police facility is choked off. A connector is needed. Alternates A1, A2 & D are not useful. He wants something in the middle of the study area.

3. After the speakers were finished, David Metcalf gave a summary of responses to the Citizens Information Meeting questionnaire. He stated that the meeting was mostly attended by residents of Cameron Station, and that the comments were not necessarily indicative of the community at large. Based on the comments received to date, Mr. Metcalf did not think that there was a consensus.

4. Joanne Tomasello stated that there was a consensus and that it is all about interpretation. Alternates C&D together have majority.

5. Mr. Metcalf distributed an additional summary of citizen comments (Item 8 - Observations and Trends).

6. The next part of the meeting was to discuss the decision making process for the Task Force. The goal is to make a decision at the April 11th meeting and the take the decision to the May 28th City Council Work Session.

7. The Task Force reviewed three types of decision processes. Nominal Group, Pair- wise Comparison and Weighted Score. The Task Force did not like Pair-wise comparison. There was some discussion regarding which of the two remaining methods to use. The Nominal Group is simpler and easier to understand - it is basically a voting method. Concern was voiced about what would happen if there is no clear winner (i.e., a 4 - 3 - 2 vote). Weighted Score takes longer and is more detailed, but gives more information to the Council about the qualitative reasons behind the Task Force decision.

8. The Task Force voted on the type of decision process to be used. Pair-wise was not supported and was therefore not one of the two choices. A vote was taken between Nominal Group and Weighted Score. The winner was Weighted Score with 4 votes; Nominal Group had 3 votes.

9. After the vote the Task Force spent some time discussing the alternates to share concerns and opinions.

10. The plan for April 11th is to use the first half of the meeting for discussion and to assign weighted points and the second half for individual scoring.

11. The next meeting will be April 11th at **6:30 pm**. The Task Force will be prepared to do the weighting process. There is the possibility that we will shift to the Nominal Group process.

12. For the April 11 meeting, PBS&J will:

    a) Pull out traffic information that shows how much traffic comes from Alexandria and the Beltway.

    b) Do a synopsis of what is gotten from the no-build alternative with improvements.

    c) Furnish the Task Force with the Matrix and provide a narrative on how each Alternate is graded. Include traffic in this as well.

d) Give a summary of the weighted score process and the steps the Task Force will have to follow.

The Task Force requested that they receive this information a week in advance of the April 11 meeting.

13. The Task Force meeting adjourned at approximately 10:30 PM.