

**G. Action Alternatives (G, G.1, G.2)**

The G alternatives are Transportation System Management (TSM) alternatives, including the following discrete components:

- G – This alternative would maintain Route 1 at-grade, shift the alignment of Route 1 slightly to the west, retain the traffic signals at Washington Road and Harrison Street, and provide turning lane modifications on all Route 1/Harrison Street and Route 1/Washington Road approaches. Modifications would include center turn lanes on Route 1 at Washington Road and Harrison Street. The traffic signal at Fisher Place would be removed and Fisher Place would become a right-in/right-out intersection. Alternative G would include the Vaughn Drive Connector Road.
- G.1 – This alternative would be similar to Alternative G, but it would substitute jughandles for center left-turn lanes at Washington Road and Harrison Street. The signal at Fisher Place would be removed and Fisher Place would become a right-in/right-out intersection. Alternative G.1 would include the Vaughn Drive connector road.
- G.2 – This alternative would maintain Route 1 at-grade on its existing alignment and eliminate the traffic signals on Route 1 at Harrison Street, Washington Road and Fisher Place. Each crossing would become a right-in/right-out intersection. This option would improve traffic flow on Route 1, but would eliminate east-west access across Route 1 at Washington Road, Fisher Place and Harrison Street. Alternative G.2 would not include the Vaughn Drive Connector Road.

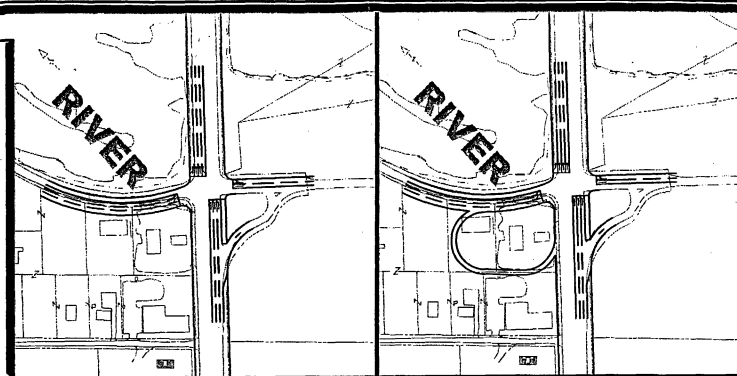
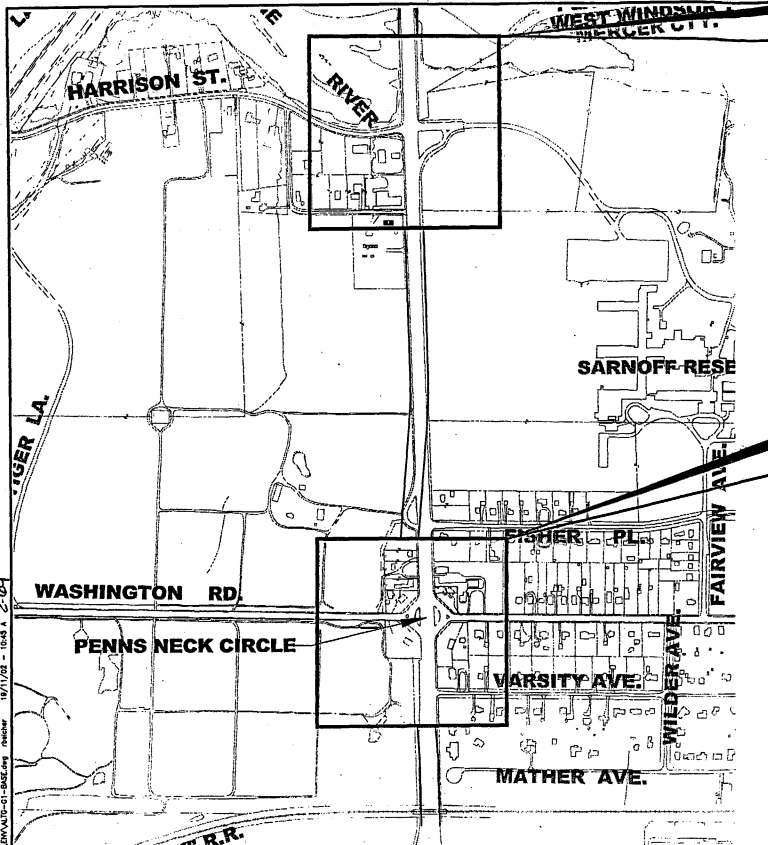
**Route 1 Access at Harrison Street**

Alternatives G and G.1 would provide direct access to and from Route 1 at a signalized intersection. G.2 would provide right-turn access only at Harrison Street west of Route 1.

**Route 1 Access at Washington Road**

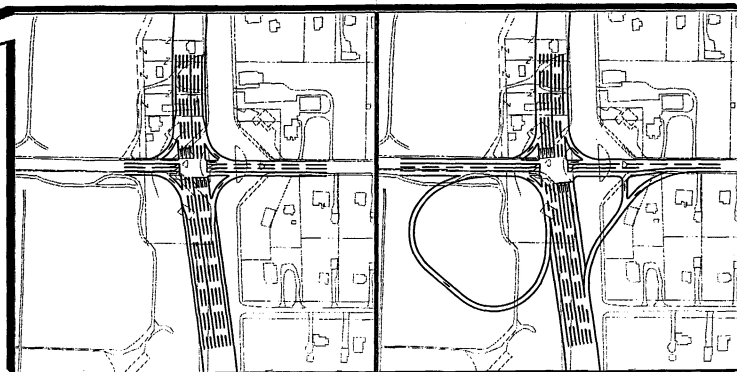
Alternatives G and G.1 would provide direct access to and from Route 1 at a signalized intersection. G.2 would provide right-turn access only in both directions.

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ALT G

ALT G.1



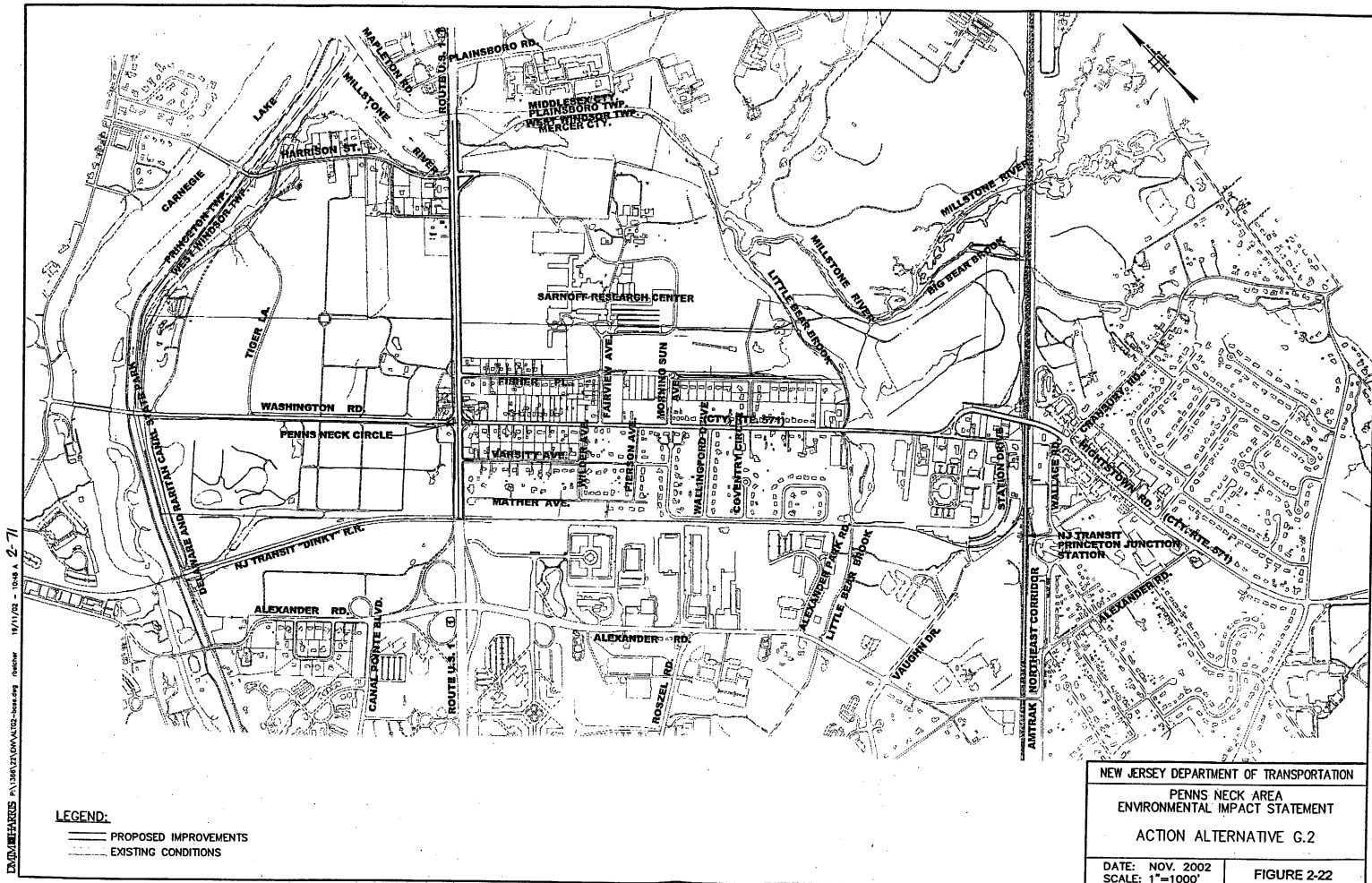
ALT G

ALT G.1

NEW JERSEY DEPARTMENT OF TRANSPORTATION	
PENNS NECK AREA	
ENVIRONMENTAL IMPACT STATEMENT	
ACTION ALTERNATIVE G, G.1	
DATE: NOV. 2002	FIGURE 2-21.
SCALE: 1"=1000'	

**LEGEND:**

- PROPOSED IMPROVEMENTS
- EXISTING CONDITIONS



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PENNS NECK AREA  
ENVIRONMENTAL IMPACT STATEMENT  
ACTION ALTERNATIVE G.2

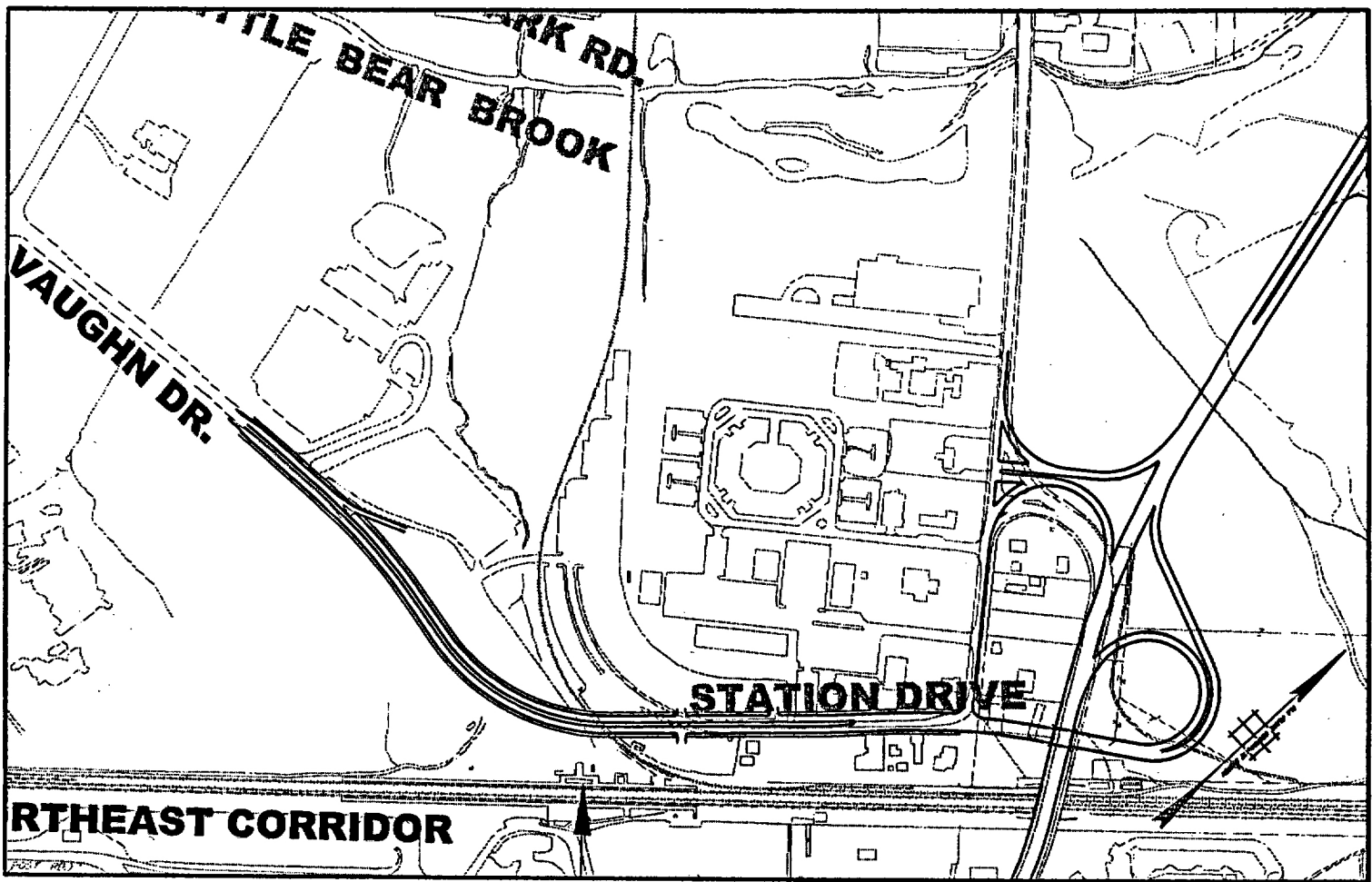
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FIGURE 2-22

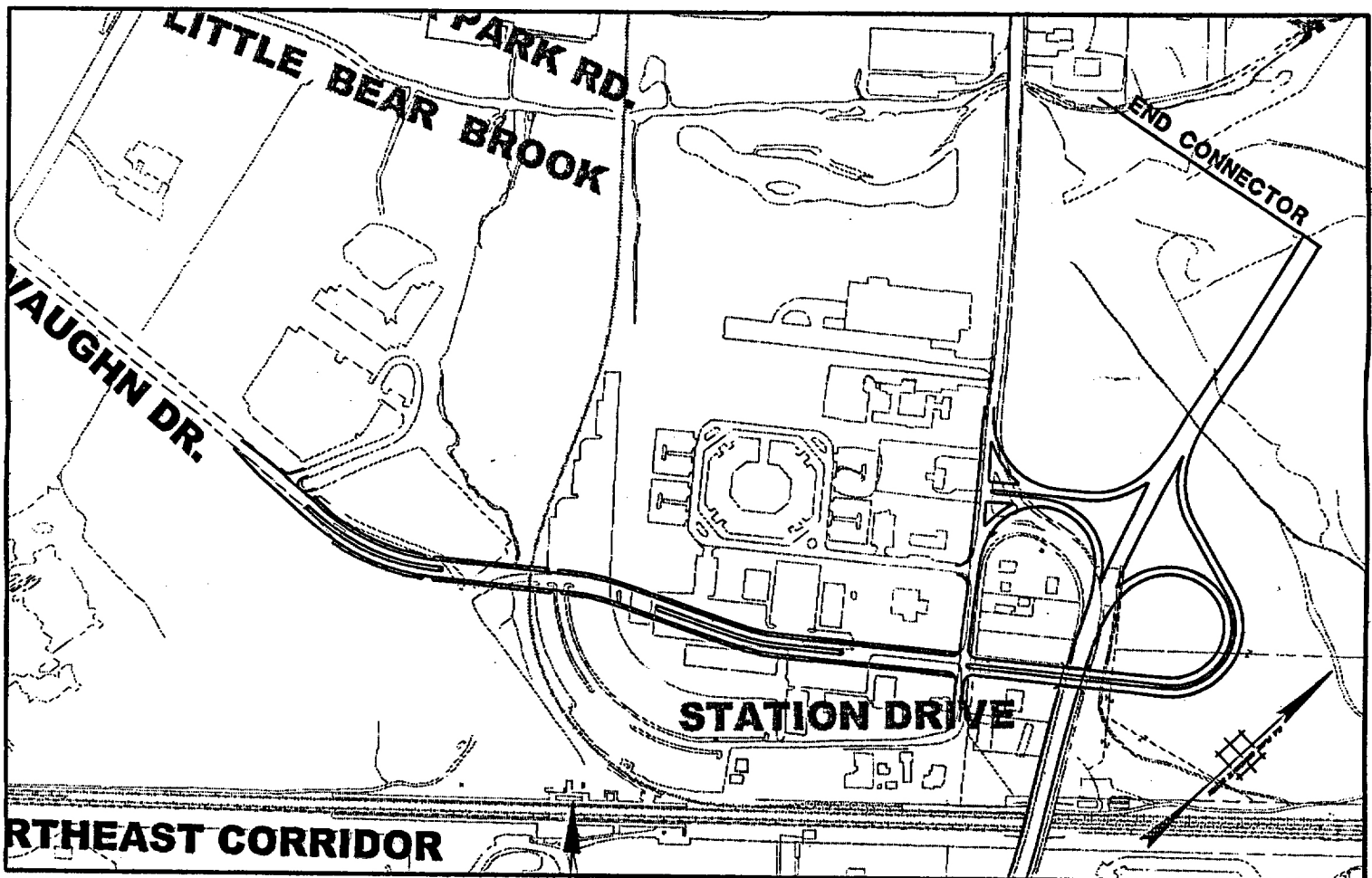


LEGEND:  
PROPOSED IMPROVEMENTS  
EXISTING CONDITIONS

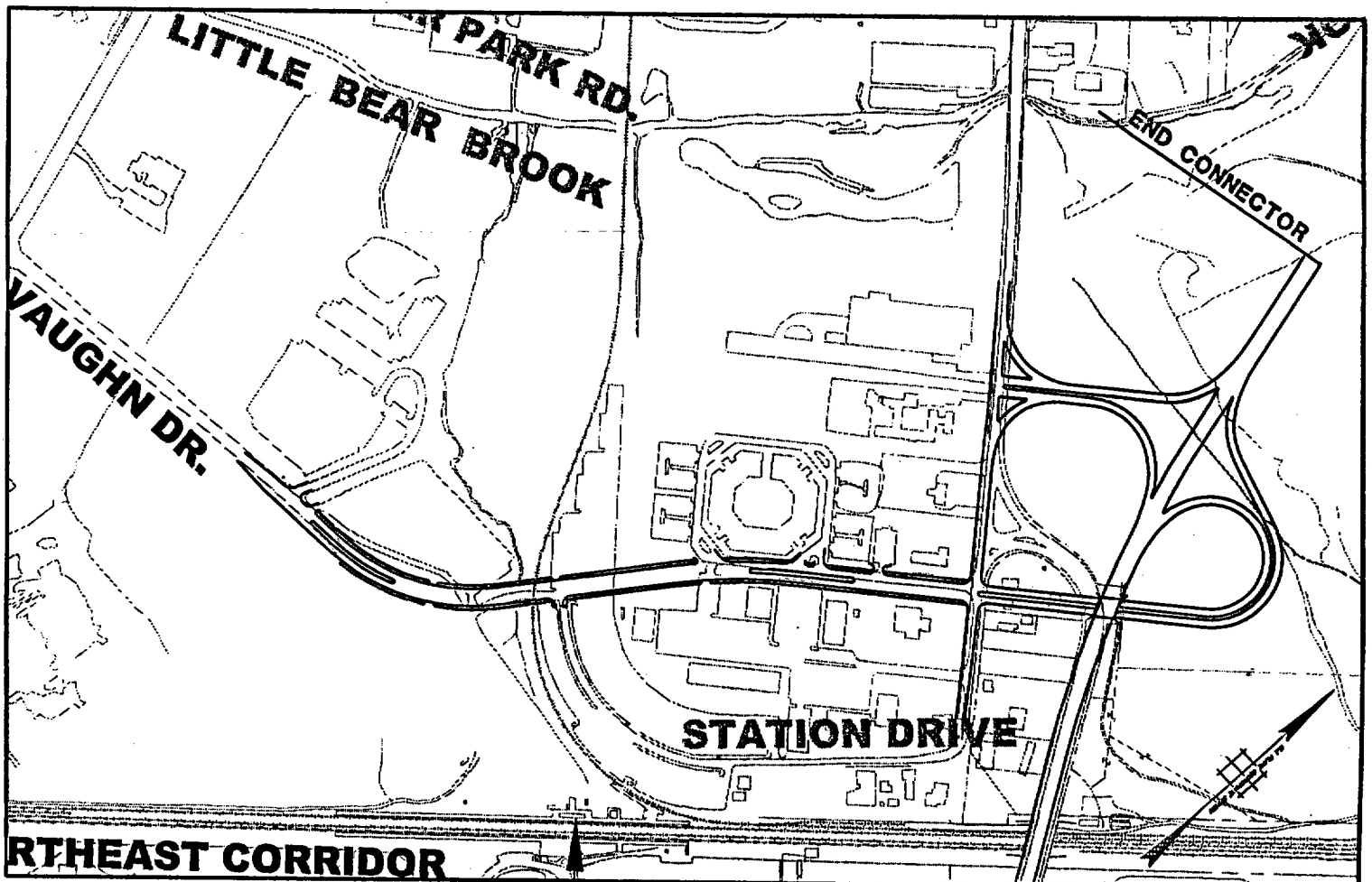
ALIGNMENT 1



ALIGNMENT 2



ALIGNMENT 3



NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA  
ENVIRONMENTAL IMPACT STATEMENT

VAUGHN DRIVE CONNECTOR  
ACTION ALIGNMENTS 1, 2 & 3

DATE: NOV. 2002  
SCALE: 1"=1000'

FIGURE 2-23

## **2.4 Complementary Strategies**

### **2.4.1 Penns Neck Area EIS Commute Options Package**

As explained in earlier sections of this chapter, a variety of complementary travel demand management strategies, transit improvements, and bicycle and pedestrian enhancements have been considered as possible actions to address Penns Neck area mobility constraints. Based on an initial consideration of these actions, a "Commute Options" package was developed for the EIS.

Each road-based alternative examined in the EIS was analyzed assuming concurrent implementation of a "Commute Options" package. For transportation modeling purposes, a trip "credit" was taken against future travel demand. In simple terms, the modeling assumed that 4-5% of peak period work trips will be diverted from single-occupant vehicle travel to other modes of commuting. This percentage is consistent with the findings of the 1998 Congestion Management System (CMS) Study and the trip reduction factors presented in New Jersey's current Long-Range Transportation Plan, Transportation Choices 2025, for Mercer and Middlesex Counties. It is also consistent with the findings of the recently completed Central Jersey Transportation Forum Bus Rapid Transit (BRT) study.

While travel and mode choice decisions are made by individuals and cannot be dictated by policy-makers, the proposed "Commute Options" package is intended to encourage the use of alternative modes of commuting, help decrease growth in single-occupant vehicle use in the Penns Neck area, help reduce peak-hour traffic congestion, provide traffic mitigation during construction and ensure the sustainability of the significant investment in roadway infrastructure contemplated as an outcome of the EIS process.

The proposed package is specifically designed to be consistent with the recommendations of the CMS, to complement existing TDM programs and activities undertaken by the Greater Mercer Transportation Management Association (GMTMA) and Keep Middlesex Moving, Inc. (KMM); enhance and expand existing transit services in the study area; improve conditions for pedestrians and bicyclists; and target commute option programs to the employment core areas located along and near the Route 1 corridor in West Windsor and Plainsboro Townships.

For the purposes of the EIS, it is assumed that, if a "Commute Options" package is approved for implementation in the Final EIS, the NJDOT will work with GMTMA, KMM, NJ TRANSIT and the appropriate Metropolitan Planning Organizations to develop final implementation plans, fund and implement a "Commute Options" package prior to or concurrent with construction of the preferred alternative selected in the Final EIS. It would serve as a three-year demonstration program.

The "Commute Options package is considered complementary to the road improvements considered in the EIS. The following is a description of the specific components of the proposed "Commute Options" package.

#### **Enhanced Transportation Management Association (TMA) Services**

Existing TMA services and programs would be expanded and enhanced in the following ways:

- **Comprehensive employee survey** – A comprehensive employee survey would be undertaken. The survey would target employees working in the Carnegie Center/Alexander Road employment core in West Windsor Township and the Forrestal Center employment core in Plainsboro Township. In addition, employees of Princeton University and Sarnoff Corporation would be surveyed. At a minimum, the survey would query employees regarding residence location, mode of travel, time of travel, decision factors affecting mode choice and attractiveness of potential commute option incentives. Survey data would then be used to inform the planning and implementation of enhanced and strategically targeted TMA services.
- **Enhanced rideshare services** – Consistent with CMS Commitment #3, existing rideshare services would be reviewed, coordinated, modified, enhanced and expanded, as needed, to target the West Windsor and Plainsboro employment cores. This would include investigating new information technology solutions, such as real-time, on-line ride matching.
- **Enhanced marketing and outreach to employers and commuters** – Consistent with CMS Commitment #3, a comprehensive commute options marketing campaign and special promotion efforts would be developed to expand the use of various employee incentive programs, such as commuter tax benefits and Transit Pass. The marketing campaign would be targeted to employers and employees working in the West Windsor and Plainsboro employment cores. In addition, an effort would be made to encourage employers to permit and promote work alternative arrangements, such as telecommuting, flexible work hours and compressed work weeks.
- **Expanded vanpool incentives** – Consistent with CMS Commitment #4, promotion and recruitment efforts related to NJ TRANSIT's vanpool subsidy program would be expanded, and new incentives to recruit volunteer drivers and coordinators would be explored.
- **Enhanced transit information program** – Consistent with CMS Commitment #4, new transit marketing materials, a web-based transit information clearinghouse, and an information kiosk at the Princeton Junction train station would be planned and implemented.
- **Parking Cash-Out Incentives** – Parking cash-out involves providing financial incentives to employees to forgo their right to drive alone and park at an employment destination. These incentive most often are monthly or annual cash bonuses for participating in the program. Ordinarily the cost of such

financial incentives is borne by the employer. A voluntary parking cash-out program would be investigated and implemented targeting employers in the West Windsor and Plainsboro employment cores. Such a program would include subsidies to employers to offset some of the cost of the program and the identification and recruitment of one or more "leadership" employers to participate in the program.

### **New Jitney/Shuttle Services**

Consistent with CMS Commitment #4, existing public and private jitney/shuttle services would be coordinated, expanded and supplemented. This effort would include service planning, negotiation of service contracts and operational subsidies for up to three new demonstration services. New jitney/shuttle services would be designed to:

- enhance the use of the Northeast Corridor rail line for reverse and peak direction peak period commuting to work sites in the West Windsor and Plainsboro employment cores;
- provide alternative travel modes for targeted commuter markets; and
- enhance daytime access to area retail and restaurant locations (e.g., noon-time shuttle service).

Service expansion would be designed in the context of the recently completed preliminary BRT studies conducted by NJ TRANSIT and GMTMA.

### **Modifications to Existing Fixed-Route Transit Services**

In the context of the service planning for new jitney/shuttle services, existing fixed-route services operating in the primary study area would be analyzed and modified, as warranted.

### **Bicycle/Pedestrian Enhancements**

Consistent with CMS Commitment #1, all road-based improvements would include facilities to accommodate pedestrians and bicyclists. These facilities would be designed and constructed to integrate with existing and other planned bicycle and pedestrian facilities. In addition, other improvements to the pedestrian and bicycle network in the Penns Neck area will be investigated and implemented.

Pedestrian facility improvements – In addition to providing pedestrian accommodations as part of new road construction, other pedestrian facility improvements in the Penns Neck and Princeton Junction neighborhoods will be investigated in consultation with West Windsor Township. Improvements could include but would not be limited to: repair of existing sidewalks, construction of new sidewalks, cross-walk striping, traffic calming and traffic signal upgrades to include pedestrian crossing phases.

Bicycle network improvements – Potential bicycle commuter routes within a five-mile radius of the West Windsor and Plainsboro employment cores will be

investigated and implemented in consultation with the affected municipalities. Improvements could include, but would not be limited to: striped bike lanes, new dedicated bike paths, signage, and other amenities intended to promote the use of biking as a commute option in the Penns Neck area.

Route 1 Pedestrian/Bicycle Crossing - Consistent with CMS Commitment #1, a study to investigate the need for and feasibility of a grade-separated pedestrian/bicycle crossing of Route 1 in the Penns Neck area will be undertaken. If the feasibility study determines that the crossing is warranted, a location for the crossing will be determined, and implementation of the crossing would occur with the construction of the Penn Neck area improvement project.

## 2.5 Value Engineering Alternatives

As a required step in the conceptual design process, the Value Engineering (VE) Unit of NJDOT conducted a review of the Penns Neck Area EIS project. The VE Unit is responsible for examining alternatives in the context of achieving the project purpose and need at a reasonable cost. The VE evaluation process can be useful in identifying options to key project components. The VE evaluation focuses on traffic and cost issues, leaving the NEPA process to assess the consequences to the natural and built environments.

The VE evaluation recognized key project goals: improving the flow of traffic on Route 1 and east-west cross streets; and balancing the traffic using Alexander Road, Washington Road and Harrison Street. On the basis of its review, the VE evaluation determined that these goals could be achieved with an at-grade Route 1, a centrally located interchange with Route 1 to best balance the traffic between Alexander Road, Washington Road and Harrison Street, an east-side connector road and a Vaughn Drive connector road. The VE evaluation developed two modified alternatives along with other independent elements. These alternatives are summarized below. The reader is referred to the VE Unit memorandum in Appendix C for more detailed discussion of these recommendations.

- **Modified Alternative B** – Using the northernmost element for the east-side connector, this alternative would locate the Route 1 interchange and corresponding ramp locations slightly to the south of the interchange location in the B series alternatives. Collector-distributor roads could be provided on Route 1 to accommodate the proposed interchange. A west-side connector would parallel Route 1 to the west and connect to Washington Road. Also, a Harrison Street connector road would connect the west-side connector to Harrison Street. The alignment of the Harrison Street connector could be aligned to bypass much of Harrison Street.
- **Modified Alternative B (B.2).** The significant difference between this alternative and Modified Alternative B is that, in lieu of the loop ramp from the proposed east-side connector westbound to Route 1 southbound, a new

bridge would be provided allowing the westbound to southbound move to cross under the eastbound roadway and enter Route 1 southbound further south. This would eliminate the weave that is introduced in Modified Alternative B (on Route 1 southbound between the proposed loop ramps). In addition, it would reduce potential impacts to the utility sub-station.

- **Modified Alternative E (Option 1)** – This alternative contains a partial east-side connector road on the ESC 3 alignment, which uses existing Washington Road between Little Bear Brook and Morning Sun Avenue. A new section of roadway would be required between Little Bear Brook and the Amtrak Northeast Corridor Bridge. West of Morning Sun Avenue, a new roadway section would turn north, joining the alignment of Alternative E. A full interchange would be provided at Route 1, and a west-side connector road would parallel Route 1 to the west and join Washington Road. A connector road would be provided on the east side of Route 1 to service both the interchange and the Sarnoff property. As in Modified Alternative B, a Harrison Street connector is proposed on the west side of Route 1. This alternative would also provide collector-distributor roads on Route 1 to better accommodate the weaving movements.
- **Modified Alternative E (Option 2)** – The significant difference between this and Option 1 is that Option 2 would follow the east-side connector alignment of Alternate E.
- **Vaughn Drive** – Relocate the Vaughn Drive connector further west than the three current alternatives and provide a typical “trumpet” style interchange with the proposed CR 571 alignment.

An evaluation of the potential impacts of the Value Engineering recommendations is presented in Chapter 5.

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Modified Alternate B.2  
Optional Interchange Connections



- \_\_\_\_\_ PROPOSED IMPROVEMENTS  
 \_\_\_\_\_ EXISTING CONDITIONS

# PENNS NECK AREA ENVIRONMENTAL IMPACT STATEMENT

VALUE ENGINEERING  
MODIFIED ALTERNATIVE B

DATE: NOV. 2002  
SCALE: 1"=1000'

FIGURE 2-24



