



Study Report

I-84 Commercial Vehicle Parking/Rest Area Study

December 2003

Prepared for:

Poughkeepsle-Dutchess County Transportation Council

Prepared by:

Urbitran Associates, Inc.

In association with:

Dewkett-Wheeler Engineering Group

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TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	INTRODUCTION	1
	1.1 Background	1
	1.2 Scope of Work	1
	1.3 Study Advisory Committee	3
	1.4 Study Report Structure	
2.0	IDENTIFICATION OF POTENTIAL SITES	4
	2.1 Existing Conditions	4
	2.2 NYSDOT Region 8 Rest Area Plan	7
	2.3 ConnDOT Truck Stop and Rest Area Parking Study	7
	2.4 Study Advisory Committee Meeting	7
	2.5 Field Reconnaissance	8
	2.6 Selection of Potential Sites	15
3.0	SCREENING AND REVIEW OF POTENTIAL SITES	17
	3.1 Screening Criteria	17
	3.2 Inventory and Mapping	18
	3.3 Screening Analysis and Review	19
	3.3.1 Evaluation of Site 8	19
	3.3.2 Evaluation of Site 9	20
	3.3.3 Evaluation of Site 11	20
	3.3.4 Overall Summary	21
4.0	TRAVEL DEMAND	26
	4.1 Existing Traffic Patterns	26
	4.2 Existing and Future Commercial Vehicle Parking Needs	26
5.0	CONCEPTUAL OPTIONS	33
	5.1 Options for Site 8	33
	5.2 Options for Site 9	33
	5.3 Options for Site 11	34
6.0	IMPLEMENTATION SCENARIOS	42
7.0	CONCLUSION	45

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Potential Sites Discussed at February 4, 2003 Study Advisory Committee Meeting	9-10
2	Summary of Screening Analysis and Review of Sites 8, 9 and 11	22-25
3	Existing and Future Commercial Vehicle Parking Needs in I-84 Study Area (Rounded Values)	32
4	Implementation Scenarios	43
5	Estimated Commercial Vehicle Parking Needs for Various Implementation Scenarios	44
6	Summary of Implementation Scenarios	45

LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Project Study Area	2
2	Stormville Rest Area –Trucks parked along shoulder in rest area	4
3	Existing Rest Area Spacing Along Interstate 84	6
4	Location of Potential Sites	11
5	Potential Site 8 (Looking East)	12
6	I-84 Viaduct West of Potential Site 10	13
7	Potential Site 11 (Looking South)	13
8	Potential Site 12 (Looking West)	14
9	Potential Site 13 (Northwest Quadrant of Exit 21 – Route 121)	15
10	Location of Selected Potential Sites	16
11	Hourly Traffic Volumes for East Fishkill Rest Area (Weekday and Weekend)	27
12	Hourly Distribution of Autos & Trucks for East Fishkill Rest Area (Weekday and Weekend)	28
13	Hourly Traffic Volumes for Stormville Rest Area (Weekday and Weekend)	29
14	Hourly Distribution of Autos & Trucks for Stormville Rest Area (Weekday and Weekend)	30
15	Hourly Traffic Volumes for I-84 Eastbound & Westbound Mainline	31
16	Conceptual Option 8A	35
17	Conceptual Option 8B	36
18	Conceptual Option 8C	37
19	Conceptual Options 9A, 9B and 9C	38
20	Conceptual Option 11A	39
21	Conceptual Option 11B	40
22	Conceptual Option 11C	41

APPENDICES

- A** **STUDY ADVISORY COMMITTEE MINUTES OF MEETING**
(MINUTES INCLUDE SUMMARY, AGENDA AND SIGN-IN SHEET ATTACHMENTS ONLY)

- B** **MAPPING AND INVENTORY OF SITES 8, 9 AND 11**
 - B-1** **MAPPING AND INVENTORY OF SITE 8**
 - B-2** **MAPPING AND INVENTORY OF SITE 9**
 - B-3** **MAPPING AND INVENTORY OF SITE 11**

- C** **SUMMARY OF TRAFFIC DATA FOR EAST FISHKILL AND**
STORMVILLE REST AREAS AND I-84 EASTBOUND AND WESTBOUND
MAINLINES, EAST OF REST AREAS

- D** **ESTIMATES OF EXISTING AND FUTURE COMMERCIAL VEHICLE**
PARKING NEEDS

1.0 INTRODUCTION

1.1 Background

This study was initiated by Poughkeepsie-Dutchess County Transportation Council (PDCTC) at the request of New York State Department of Transportation Region 8 (NYSDOT Region 8). It progressed from the NYSDOT Region 8 Rest Area Plan, which was developed in 1998 in response to the State's new Rest Area Policy. The Rest Area Plan called for the expansion of existing rest areas and development of new rest areas to meet the needs of the traveling public, commercial vehicles and tourism. The Plan also provided some specific recommendations for rest areas in the Interstate 84 (I-84) corridor, which are reviewed in Section 2.2.

This study built upon the NYSDOT Region 8 Rest Area Plan by: (a) developing planning level criteria for rest area design and location, and (b) identifying and analyzing a list of potential locations for the development of a new commercial vehicle parking and/or rest area along the I-84 corridor within Dutchess and Putnam counties. The limits of the study area extended west to east along I-84 from the Hudson River to the New York/Connecticut State Line, and included the towns of Fishkill and East Fishkill in Dutchess County and the towns of Kent, Patterson and Southeast in Putnam County. A schematic map of the project study area is presented in Figure 1.

1.2 Scope of Work

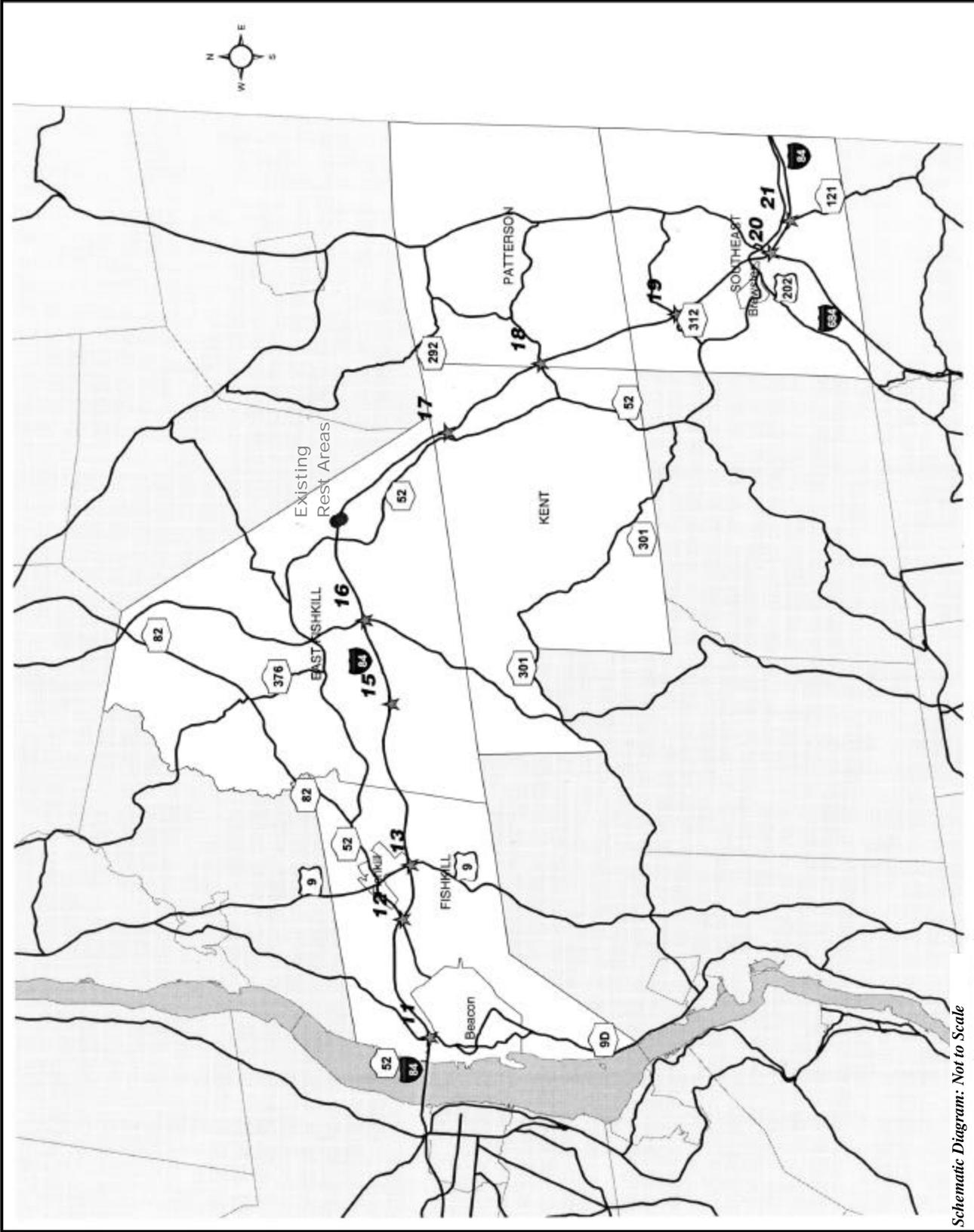
The study was structured into six phases:

- Phase 1:** Inventory and Reconnaissance
- Phase 2:** Conceptual Design of Rest Area Footprint
- Phase 3:** Screening Analysis and Review of Potential Sites
- Phase 4:** Alignment Study
- Phase 5:** Coordination
- Phase 6:** Study Report

1.3 Study Advisory Committee

In addition, each phase of the project was guided by a Study Advisory Committee (SAC), which includes representatives from these public agencies:

- Poughkeepsie-Dutchess County Transportation Council
- New York State Department of Transportation (Region 8)
- New York State Thruway Authority (New York Division)
- Mid-Hudson South Transportation Coordinating Committee
- Putnam County Planning Department
- City of Beacon
- Town of Fishkill
- Town of East Fishkill
- Town of Kent
- Town of Patterson
- Town of Southeast



Schematic Diagram: Not to Scale

Figure 1: Project Study Area

During the study process, there were four SAC meetings, one progress meeting and two town board presentations. Each meeting (and its purpose) is presented in chronological order:

SAC Meeting #1 (February 4, 2003): To provide an introduction to the study and to initiate a discussion of likely potential site locations.

SAC Meeting #2 (May 20, 2003): To present the development and identification of potential sites to be considered for further screening and review and to preview the evaluation criteria to be considered in the screening analysis of these potential sites.

SAC Meeting #3 (August 21, 2003): To present for the three potential sites the inventory and mapping, the screening analysis and review, the conceptual footprints for a commercial vehicle parking facility and a welcome center, and the proposed implementation plans.

Progress Meeting #1 (September 25, 2003): To discuss further the feedback, which was received from the SAC meeting on August 21, 2003. Meeting topics also included finalizing the conceptual options and implementation plans for the three potential sites, and to review a draft presentation to the town boards of East Fishkill and Southeast.

SAC Meeting #4 (November 25, 2003): To present the proposed implementation scenarios for the three potential sites and to preview the presentations to the town boards of East Fishkill and Southeast with the attending SAC members.

Presentation to Town Board of East Fishkill (December 11, 2003): A presentation was made to the town board members of East Fishkill on the study process and findings. The presentation also gave town members the opportunity to comment and ask questions.

Presentation to Town Board of Southeast (February 5, 2004): A presentation will be made to the town board members of Southeast on the study process and findings. The format of the presentation will be similar to the presentation made to the Town Board of East Fishkill in December 2003.

Minutes of meetings from all four SAC meetings and the one progress meeting are provided in Appendix A.

1.4 Study Report Structure

This report presents a summary of the study process and includes the following sections:

Section 1.0	Introduction
Section 2.0	Identification of Potential Sites
Section 3.0	Screening and Review of Potential Sites
Section 4.0	Travel Demand
Section 5.0	Conceptual Options
Section 6.0	Implementation Scenarios
Section 7.0	Conclusions

2.0 IDENTIFICATION OF POTENTIAL SITES

The identification of potential sites was based on an assessment of available space and its relationship to existing rest areas in the I-84 corridor, a review of the NYSDOT Region 8 Rest Area Plan, a review of the ConnDOT Truck Stop and Rest Area Study, guidance from the Study Advisory Committee, and a field reconnaissance.

2.1 Existing Conditions

In the I-84 corridor, rest areas are presently inadequate for current and future needs, particularly east of the Hudson River. The two existing rest areas (East Fishkill and Stormville) between Exits 16 and 17 in Dutchess County have been rehabilitated; however, the facilities have problems with limited sewer expansion and no room for facility and parking expansion.

Both facilities provide vending machines, rest rooms, telephones, a picnic area, a dog walk and an information map. The East Fishkill Rest Area (eastbound direction) has 36 marked parking spaces for cars (including two handicapped spaces) and an area for truck parking (about 18 unmarked spaces according to the NYSDOT Region 8 Rest Area Plan). The Stormville Rest Area (westbound direction) has 37 marked parking spaces for cars (including two handicapped spaces) and area for truck parking (about 18 unmarked spaces).

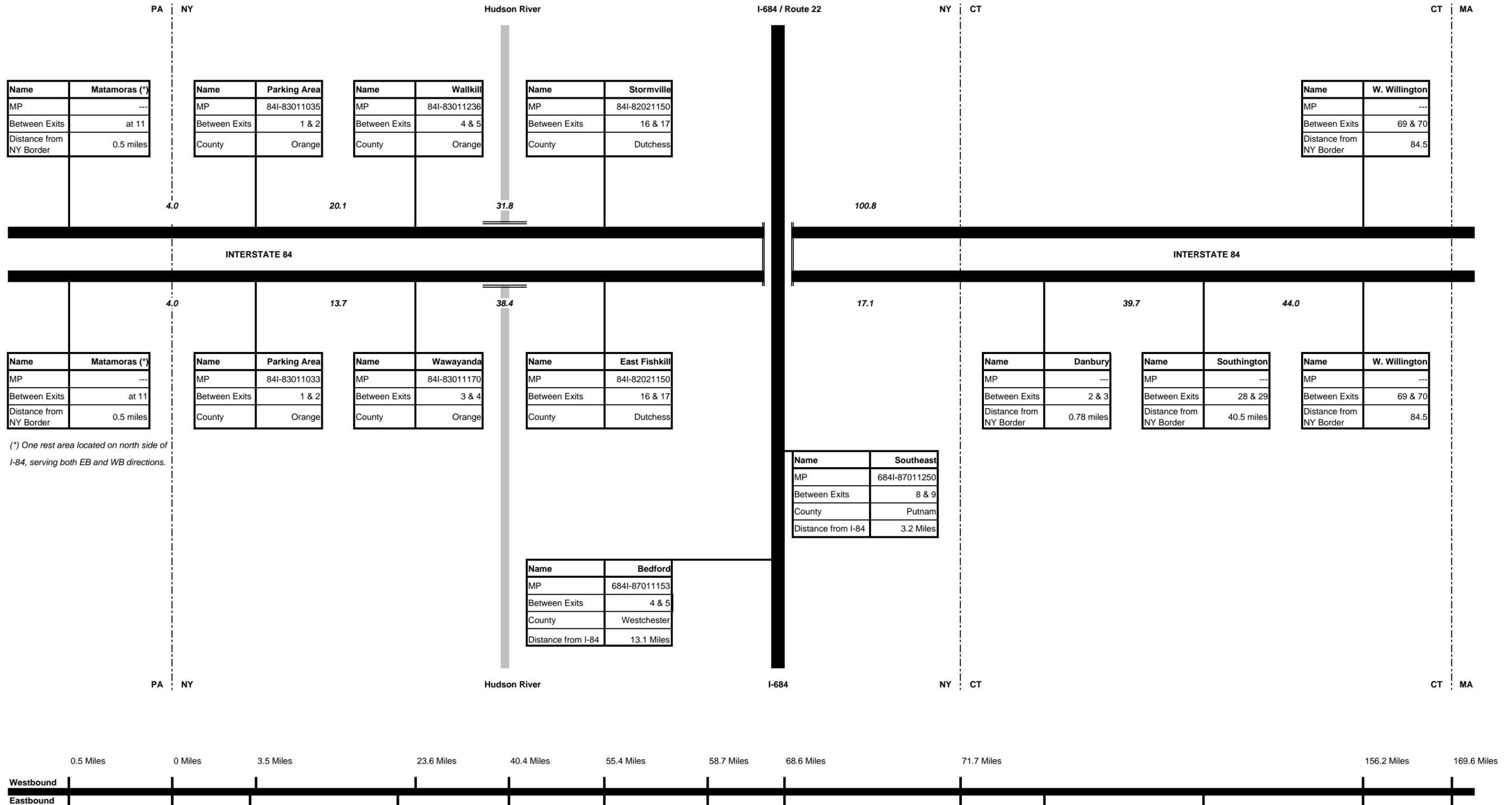
As depicted in Figure 2, truck parking is very limited and overcrowding is routine. The facilities also do not provide for separate areas for cars and trucks.



Figure 2: Stormville Rest Area – Trucks parked along shoulders in rest area

In addition, existing rest area spacing is also a problem along the I-84 corridor, more so in the westbound direction, where the distance is nearly 100 miles between the West Willington Rest Area in the State of Connecticut and the Stormville Rest Area. (Motorists and truckers traveling northbound on I-684 towards I-84 do have the opportunity to use the Brewster Rest Area located approximately 3 miles south of the I-84/I-684 Interchange.) The next I-84 rest area in the westbound direction is the Wallkill Rest Area situated between Exits 4 and 5 in Orange County, New York. The distance between the Stormville and Wallkill rest areas is approximately 30 miles. In the eastbound direction, the spacing between rest areas is not as problematic. Figure 3 shows schematically the spacing of rest areas along the I-84 corridor through the States of New York and Connecticut.

FIGURE 3
EXISTING REST AREA SPACING ALONG INTERSTATE 84
 (Schematic Diagram - Not to Scale)
 (Distances are in miles and are approximate)



(*) One rest area located on north side of I-84, serving both EB and WB directions.

2.2 NYSDOT Region 8 Rest Area Plan

The NYSDOT Region 8 Rest Area Plan does not make specific recommendations for the two existing rest areas in Dutchess County. However, the Plan does recommend the following mid-term (5-10 years) improvements:

“Phase II of the program proposes mid-term capital improvements to be initiated five (5) to ten (10) years from the date of acceptance of the overall program. These mid-term improvements will include construction of one new welcome center/rest area on I-84 westbound near the Connecticut border (if the MIS for the widening of I-84 is completed and a widening alternate scoped sufficiently to allow construction) and expansion of the I-84 eastbound Middletown rest area close to the Pennsylvania border. The new I84 westbound rest area and the expanded and improved I84 eastbound rest area will be situated and constructed to function as “welcome/tourist centers”, provide appropriate services and information to travelers, including new truck inspection and parking facilities. Existing truck inspection and parking areas will be improved during this phase.”

2.3 ConnDOT Truck Stop and Rest Area Parking Study

A review of the ConnDOT document, *“Truck Stop and Rest Area Parking Study”*, final report dated April 2001, identified two sites along I-84 in the towns of Newtown and Southbury for construction of new facilities for additional truck rest area parking. From the final report:

“The site in Newtown off Interchange 11 of I-84 was identified through a recently completed (June 2000) study of transportation needs and deficiencies of the I84 corridor between Danbury and Newtown. The study proposes modifications to Interchange 11. It is anticipated that, should the proposed modifications be pursued, sufficient land could possibly be made available within the highway property limits to provide a new rest area. The site in Southbury on I-84 was identified through an existing study, which is being conducted to identify needs and deficiencies of I-84 between Waterbury and Newtown. Undeveloped land was identified along I-84 west, which may be adequate to construct a possible new rest area. This site is also along a portion of I-84, whereby the shoulder and adjacent area is regularly used by truckers to park and rest, particularly during the evening.”

As of December 2003, ConnDOT indicated to PDCTC that there are no updates to the truck study and the Department was not pursuing any new areas (along I-84) at this time.

2.4 Study Advisory Committee Meeting

A SAC meeting was held at the office of the PDCTC on February 4, 2003. The main purpose of this meeting was to engage the attending members in an open discussion of potential sites along the I-84 corridor.

Table 1 lists twelve potential sites, identified in discussions with the members of the SAC, along with remarks and comments made at the meeting. The main issues involved:

- Water, sewer and other utility connections
- Croton Watershed
- Wetlands and floodplains
- Contamination and pollution
- Topography
- Site accessibility and traffic impacts
- Public acceptance

Twelve potential sites were identified in the Towns of Fishkill, East Fishkill and Southeast. One of these sites involved modifications to the existing rest areas, Stormville and East Fishkill, between Exit 16 – Taconic State Parkway and Exit 17 – CR 43 (Ludingtonville Road). Potential sites along the I-84 corridor in the towns of Kent, Patterson, and the western section of Southeast were not considered viable due to topography constraints and dense concentration of commercial and residential developments.

There were also discussions at the SAC meeting regarding potential rest area sites at Dutchess Mall and Meadowbrook Corporate Park Property. However, it was determined that ownership and accessibility issues would mostly likely discourage their selection as suitable locations. These sites are not recommended for further consideration in this study.

Based on the meeting discussions and review of Table 1, the following five sites (including the two existing rest areas) were advanced for further consideration:

- Site 8:** Southeast Quadrant of Exit 15 – CR 27 (Lime Kiln Road)
(Town of East Fishkill, Dutchess County)
- Site 9:** Stormville and East Fishkill Rest Areas between Exit 16
– Taconic State Parkway and Exit 17 – CR 43 (Ludingtonville Road)
(Town of East Fishkill, Dutchess County)
- Site 10:** I-84/I-684 Interchange
(Town of Southeast, Putnam County)
- Site 11:** North Side of I-84, East of Exit 21 – Route 121
(Town of Southeast, Putnam County)
- Site 12:** North Side of I-84 near NY/CT State Line
(Town of Southeast, Putnam County)

The approximate location of each site is presented in Figure 4.

2.5 Field Reconnaissance

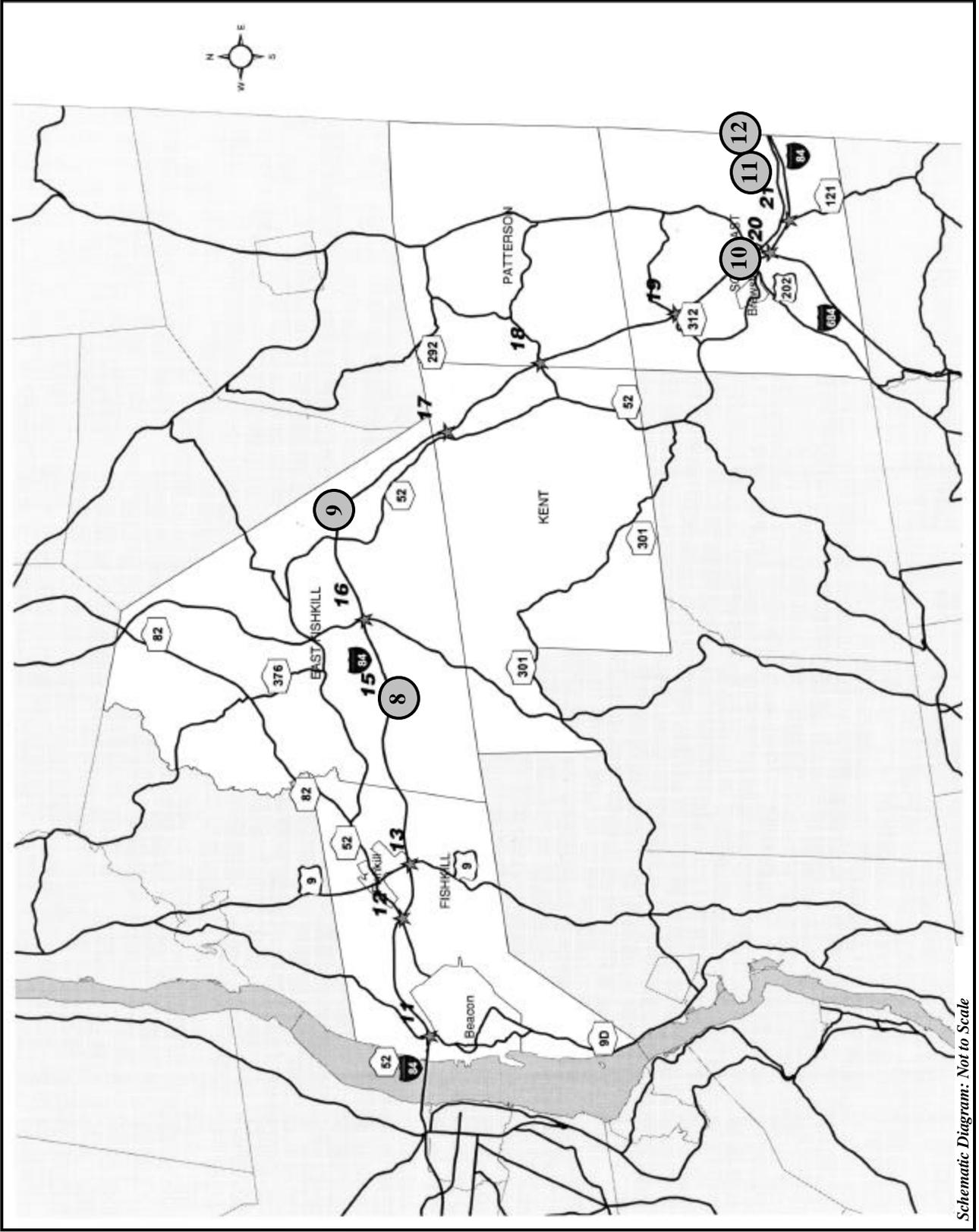
A field reconnaissance of the potential sites was conducted on April 14, 2003 to verify and confirm the information presented in Table 1, and to identify any other issues and/or opportunities. The following observations were made:

Table 1: Potential Sites Discussed at February 4, 2004 Study Advisory Committee Meeting

Site No.	Property Description	Location	Potential Use	Directions Served	Remarks/Comments	Advanced for Further Investigation
1	Dutchess County Intermodal Center	North Side of I-84 East of Exit 11 – Route 9D South Side of Route 9D <i>(Town of Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Westbound	<ul style="list-style-type: none"> • Site accessibility may be difficult • May involve major capital improvements in vicinity of Exit 11 – Route 9D and Exit 12 – Route 52 to accommodate access to and from potential site (possible frontage road) • Limited space of potential site • Located next to community facility (Dutchess Stadium) 	No
2	Beacon Jail Property	South Side of I-84 East of Exit 11 – Route 9D Fishkill Correctional Facility <i>(Town of Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Eastbound	<ul style="list-style-type: none"> • Site accessibility may be difficult 	No
3	Vacant Parcel	North Side of I-84 Between Exit 12 – Route 52 and Exit 13 – Route 9 <i>(Town of Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Westbound	<ul style="list-style-type: none"> • Direct access may not be feasible from Interstate due to limited distance between Exit 12 – Route 52 and Exit 13 – Route 9 • May impact wetlands • May impact floodplain 	No
4	Vacant Parcel	South Side of I-84 Between Exit 12 – Route 52 and Exit 13 – Route 9 <i>(Town of Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Eastbound	<ul style="list-style-type: none"> • 46-acre parcel of land • Direct access may not be feasible from Interstate due to distance between Exit 12 – Route 52 and Exit 13 – Route 9 • May impact wetlands • May impact floodplain 	No
5	Dutchess Mall	South Side of I-84 Southwest Quadrant of Exit 13 – Route 9 <i>(Town of Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Eastbound Westbound	<ul style="list-style-type: none"> • Underutilized site is readily available • Site has existing utilities • Access to site via Exit 13 – Route 9 • Mixes Interstate trucks with local traffic on Route 9 • Would involve multiple property owners • Possible interim solution 	No
6	Behind Hess Gas Station	South Side of I-84 Southeast Quadrant of Exit 13 – Route 9 <i>(Town of Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Eastbound Westbound	<ul style="list-style-type: none"> • 11-acre parcel of land • Site has existing utilities • Access to site via Exit 13 – Route 9 • Mixes Interstate trucks with local traffic on Route 9 	No
7	Meadowbrook Corporate Park Property	North Side of I-84 Northeast Quadrant of Exit 15 – CR 27 (Lime Kiln Rd.) <i>(Town of E. Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Eastbound and/or Westbound	<ul style="list-style-type: none"> • Existing and new utilities in area • Access to site via Exit 15 – CR 27 (Lime Kiln Rd.) • Mixes Interstate trucks with local traffic on CR 27 (Lime Kiln Rd.) • Would involve property owner • May impact wetlands 	No
8	Vacant Parcel	South Side of I-84 Southeast Quadrant of Exit 15 – CR 27 (Lime Kiln Rd.) <i>(Town of E. Fishkill, Dutchess Co.)</i>	Commercial Vehicle Parking	Eastbound and/or Westbound	<ul style="list-style-type: none"> • Utilities in area would need to be extended into site • Access to site via Exit 15 – CR 27 (Lime Kiln Rd.) • Mixes Interstate trucks with local traffic on CR 27 (Lime Kiln Rd.) • Conceptual plan developed by private owner • Conceptual plan involves reconfiguration of I-84 eastbound entrance and exit ramps in order to combine two separate parcels 	Yes

Table 1: Potential Sites Discussed at February 4, 2004 Study Advisory Committee Meeting

Site No.	Property Description	Location	Potential Use	Directions Served	Remarks/Comments	Advanced for Further Investigation
9	Stormville and East Fishkill Rest Areas	North and South Sides of I-84 Between Exit 16 – Taconic State Parkway and Exit 17 – CR 43 (Ludingtonville Rd.) <i>(Town of E. Fishkill, Dutchess Co.)</i>	A. Two Comfort Stations <i>(Existing Service)</i> B. One Comfort Station <i>(Modified Service by Utilizing Existing Utilities from both Rest Areas)</i>	Eastbound and/or Westbound	<ul style="list-style-type: none"> Existing site limitations (i.e., rest area capacity and utilities) May involve closure of one rest area to improve water and sewer services at the remaining one Involves trenching under Interstate for utility connections 	Yes
10	I-84/I-684 Interchange	North Side of I-84 Northwest Quadrant of Exit 20 – Interstate 684 <i>(Town of Southeast, Putnam Co.)</i>	Rest Area/ Commercial Vehicle Parking	Westbound	<ul style="list-style-type: none"> Reduces distance between rest areas in westbound direction May have accessibility restrictions May have size limitation Located within the Croton Watershed 	Yes
11	Vacant Parcel	North Side of I-84, East of Exit 21 – Route 121 Between I-84 and Route 6 <i>(Town of Southeast, Putnam Co.)</i>	Rest Area/ Commercial Vehicle Parking	Westbound	<ul style="list-style-type: none"> Reduces distance between rest areas in westbound direction May have accessibility restrictions May have size limitation Located within the Croton Watershed 	Yes
12	Vacant Parcel	North Side of I-84 NY/CT State Line <i>(Town of Southeast, Putnam Co.)</i>	Welcome Center with or without Commercial Vehicle Parking	Westbound	<ul style="list-style-type: none"> 28-acre parcel of land Provides full service facility at NY/CT State Line Access ramp to facility may extend into CT jurisdiction May have size limitation Located within the Croton Watershed 	Yes



Schematic Diagram: Not to Scale

Figure 4: Location of Potential Sites

For **Site 8**, a private developer has proposed to construct a commercial vehicle parking facility on two vacant and separate parcels in the southeast quadrant of Exit 15 – CR 27 (Lime Kiln Road). His initial plans were for mixed uses with parking, restaurants and a repair facility for trucks. His intentions were to serve both cars and trucks and to provide parking for at least 100 trucks. The developer has met with the Town of East Fishkill; but there have not been any formal submittals. The parcel is shown in Figure 5.



Figure 5: Potential Site 8 (Looking East)

Site 10 is a vacant parcel located in the northwest quadrant of the I-84/I-684 Interchange. A major disadvantage is site accessibility. Access to and from this potential rest area site would be within the interchange area. Shifting access to the west would not be feasible. To the west of the site, I-84 is located on a major viaduct structure with the Village of Brewster located below. Therefore, this site does not appear to be viable. A view of the viaduct is shown in Figure 6.



Figure 6: I-84 Viaduct West of Potential Site 10

Site 11 is a vacant parcel located between I-84 and Route 6 (north side of the interstate) and east of Exit 21 – Route 121. The site topography is flat and larger than Site 12. Access to and from the site would need to be further investigated (i.e., distance between the westbound entrance ramp from Saw Mill Road in Connecticut and the westbound exit ramp to Route 121 in New York, Exits 1 and 21, respectively). Site 11 is shown in Figure 7. (I-84 is located behind the tree line.)



Figure 7: Potential Site 11 (Looking South)

Site 12 is another vacant parcel located between I-84 and Route 6 (north side of the interstate) and west of Exit 1 – Saw Mill Road in the State of Connecticut. However, this site is narrow and slopes downward to Route 6. Site accessibility appears to be an issue. Location of the rest area ramps would probably conflict with the westbound traffic entering from Saw Mill Road. In addition, the site is located close to the Connecticut/New York State Line, which may involve both States’ design guidelines and approvals. Therefore, this site does not appear to be viable. Site 12 is shown in Figure 8.



Figure 8: Potential Site 12 (Looking West)

The field reconnaissance also helped to identify an additional potential site near the New York-Connecticut State Line. **Site 13** is located on the north side of I-84 at Exit 21 – Route 121 (northwest quadrant). Exit 21 – Route 121 is a partial interchange with ramps only to and from the east on I-84. To provide full access to the site in both directions on I-84, the interchange would need to be reconstructed to a full diamond interchange (i.e., new entrance and exit ramps to serve motorists to and from the west on I-84). This potential site also provides a scenic view of the East Branch Reservoir. Site 13 is shown in Figure 9. The Town of Southeast has indicated that there are development plans anticipated for the site. Therefore, this site does not appear to be viable.



Figure 9: Potential Site 13 (Northwest Quadrant of Exit 21 - Route 121)

While Sites 10, 12 and 13 did not appear to be suitable locations, Sites 8 and 11 were retained for further screening and review.

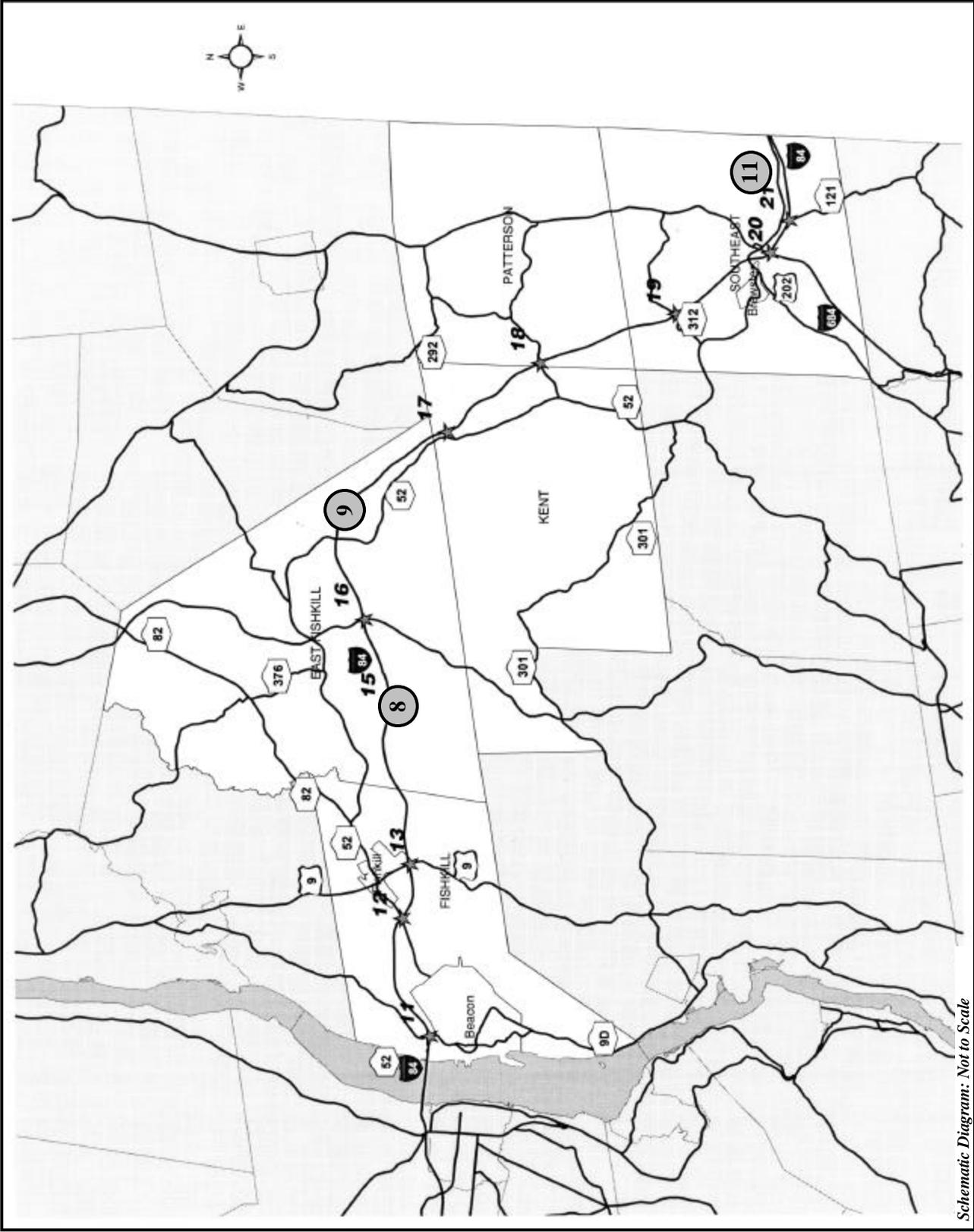
2.6 Selection of Potential Sites

The following three sites (including possible modifications to the Stormville and/or East Fishkill rest areas) were recommended for further screening and evaluation as potential locations for rest areas and/or commercial vehicle parking:

- Site 8 - Southeast Quadrant of Exit 15 – CR 27 (Lime Kiln Road)
Town of East Fishkill, Dutchess County
- Site 9 - Stormville and East Fishkill Rest Areas between Exit 16 – Taconic State Parkway and Exit 17 – CR 43 (Ludingtonville Road)
Town of East Fishkill, Dutchess County
- Site 11 - North Side of I-84, East of Exit 21 – Route 121
Town of Southeast, Putnam County

The approximate location of these sites is presented in Figure 10.

The selection of the three sites was presented and reviewed at the second SAC meeting on May 20, 2003. The meeting minutes are provided in Appendix A.



Schematic Diagram: Not to Scale

Figure 10: Location of Selected Potential Sites

3.0 SCREENING AND REVIEW OF POTENTIAL SITES

3.1 Screening Criteria

The next step in the process was the screening and review of the sites for reasonableness and potential. The following screening categories and evaluation criteria were used to analyze each of the three potential sites:

1. Physical Site Features
 - Topography
 - Ridges and Steep Slopes
 - Forestation, Rock Outcrops and Other Unusual Features
 - Streams and Watercourses
 - Soil Conditions
 - Depth to Groundwater/Bedrock
 - Visual Evidence of Pollution
 - Accessibility
 - Right-of-Way Opportunities
 - Expansion Capabilities
2. Site Quality
 - Site Aesthetics
 - Welcome Area Potential
 - Trucking Support Facilities
 - Natural and Scenic Features
 - Historical and Cultural Attraction
 - Archeological Features
3. Utilities Available or Obtainable
 - Potable Water
 - Wastewater Disposal
 - Electrical Service
 - Gas Service
 - Telephone Service
4. Site Spacing in relation to other Rest Areas
5. Corridor Geometry
 - Horizontal and Vertical Alignment
 - Ramp Spacing in relation to Mainline Exits and Entrances
 - Traffic Operations
6. Potential Environmental Impacts
 - Watersheds and Aquifers
 - Federal and State Wetlands
 - Federal and State Endangered Species
 - Floodplains
 - Storm Sewers and Drainage Concerns
 - Abutting Land Use and Zoning

- Hazardous Waste Sites
- Special Local Concerns

Prior to progressing with the screening and evaluation of the three potential sites, the criteria and analysis procedure were presented to and discussed at the second SAC meeting on May 20, 2003. The meeting minutes are provided in Appendix A.

3.2 Inventory and Mapping

Using existing sources and new data, as required, an inventory of each potential site was prepared and mapped. The inventory and site mapping included the following items:

1. Transportation Network – location and physical characteristics of nearby interchanges, bridges and adjacent major streets, traffic volumes from secondary sources, and speed limits near potential sites
2. Existing Land Use – identification and mapping of existing land use, community features, and zoning surrounding potential sites
3. Infrastructure Availability – identification and mapping of existing utility services (i.e., water, sanitary sewer, electrical and telephone) in vicinity of potential sites
4. Environmental Constraints - identification and mapping of existing environmental features (i.e., wetlands, watersheds, scenic and historic features, soil contaminations) in vicinity of potential sites
5. Other Important Features – identification and mapping of important community facilities in vicinity of potential sites
6. Future Plans – identification of future highway, infrastructure and development projects and changes

The following agencies were contacted to obtain information and data to support the inventory and mapping of the three potential sites:

1. Poughkeepsie-Dutchess County Transportation Council (PDCTC)
2. New York State Department of Transportation (NYSDOT)
3. New York State Thruway Authority (NYSTA)
4. Connecticut Department of Transportation (ConnDOT)
5. Putnam County Planning Department
6. Town of East Fishkill
7. Town of Southeast
8. Southeast Conservation Commission
9. New York State Department of Environmental Conservation
10. New York State Office of Parks, Recreation and Historic Preservation
11. U.S. Fish and Wildlife Service
12. Army Corps of Engineers
13. Federal Emergency Management Agency

14. Dutchess County Water and Waste water Authority
15. Central Hudson Gas and Electric Corporation
16. New York State Electric and Gas
17. Verizon
18. Toxic Targeting Corporation

Appendix B includes the inventory and mapping of Sites 8, 9 and 11. For each site, the following drawings were prepared:

1. Site Location
2. Topography
3. Transportation Network
4. Environmental Features
5. Land Use
6. Zoning
7. Utilities
8. Soil Types
9. Toxic Targeting Selected Toxic Sites for the Town of East Fishkill

3.3 Screening Analysis and Review

Table 2 provides a summary of the screening analysis and review of Sites 8, 9 and 11. The mapping and inventory of the sites provided the basis for the evaluation of the three potential sites. (Table 2 is shown at the end of this section.)

3.3.1 Evaluation of Site 8

For Site 8 located in the southeast quadrant of Exit 15 at CR 27 (Lime Kiln Road) in the Town of East Fishkill, Dutchess County, the main findings of the screening analysis are listed as follows:

Positive Attributes

- Vacant parcel has relatively flat topography and appears suitable for construction, particularly for commercial vehicle parking
- Utilities are available and obtainable
- Full interchange access to and from I-84 via CR 27 (Lime Kiln Road)
- Conceptual plan for a commercial vehicle parking facility and associated uses has been proposed by a private developer
- Consistent with surrounding land uses

Issues and Concerns

- Development of site may require right-of-way acquisition by NYSDOT; otherwise, development of site would be dependent on developer obtaining necessary approvals and constructing commercial vehicle facility
- Sensitive environmental issues to address on and/or near site – sole source aquifer, federal wetland, state endangered species, floodplain and stream
 - Nearby MBTE spills (north of I-84) may require groundwater sampling
 - On-site disposal of wastewater may be required to protect groundwater
 - Phase 1 archeological investigation may be needed
- Additional traffic on CR 27 (Lime Kiln Road) and I-84 interchange ramps at Exit 15

3.3.2 Evaluation of Site 9

For Site 9, which includes the East Fishkill and Stormville rest areas between I-84 Exits 16 and 17, the main findings of the screening analysis are listed as follows:

Positive Attributes

- Offers good visual and scenic qualities
- Located within I-84 right-of-way
- Rest areas could potentially be redesigned and/or modernized

Issues and Concerns

- Site expansion at both rest areas is limited due to steep slopes and ridges on both sides of I-84
- Existing utilities are overtaxed at times – one leach field (for wastewater disposal) serves both rest areas
- Overcrowded conditions – especially by trucks parking on shoulders along entrances and exits and in rest areas
- Facilities do not provide separate parking areas for cars and trucks

3.3.3 Evaluation of Site 11

For Site 11 located on the north side of I-84, east of Exit 21 in the Town of Southeast in Putnam County, the main findings of the screening analysis are listed as follows:

Positive Attributes

- Vacant parcel has relatively flat topography and appears suitable for construction, particularly for welcome center/rest area
- Site could accommodate welcome center with separate truck parking area
- Parcel size could accommodate future expansion
- Rest area would complement the surrounding land uses
- Utilities are available and obtainable
- Location of site would reduce rest area spacing along westbound I-84
- Consistent with surrounding land uses

Issues and Concerns

- Development of site requires purchase of private property
- Sensitive environmental issues to address on site include the Croton Watershed and two streams
 - On-site disposal of wastewater and collection of surface and storm water run-off may be required to protect watershed and groundwater
 - Phase 1 archeological investigation may be needed
- Site accessibility may involve non-conventional design of entrance and exit due to nearby I-84 interchanges

3.3.4 Overall Summary

The screening analysis and review of Sites 8, 9 and 11 indicated that:

- All three potential sites should be further explored in more detail
- There are environmental and/or accessibility issues that need to be resolved for Sites 8 and 11
- Progressing Site 8 may involve a private developer getting the necessary approvals and constructing the truck facility
- Progressing Site 11 involves the purchase of private property for constructing the rest area
- Sites 8, 9, and 11 could be used to complement one another in developing and implementing an overall rest area plan for the I-84 corridor

The evaluation of the three sites were presented and reviewed at the third SAC meeting on August 21, 2003. The meeting minutes are provided in Appendix A.

Table 2: Summary of Screening Analysis and Review of Sites 8, 9 and 11

Screening Criteria	Site 8 SE Quadrant of I-84 at Exit 15	Site 9 E. Fishkill & Stormville Rest Areas	Site 11 North Side of I-84, East of Exit 21
Site Overview	Site 8 is located in the southeast quadrant of I-84 at Exit 15. It is a vacant parcel being considered as a potential location for commercial vehicle parking and associated uses by a private developer. Access to and from the site would be via CR 27 (Lime Kiln Road) and would be accessible to and from eastbound and westbound I-84. A secondary parcel located on the west side of CR 27 (Lime Kiln Road) is not part of screening analysis of Site 8.	The East Fishkill (EB) and Stormville (WB) rest areas are situated in Site 9. Various potential options may be considered for the rest areas based on the implementation of Site 8 and/or Site 11.	Site 11 is located on the north side of I-84, between Exit 1 (Route 6/Saw Mill Road) and Exit 21 (Route 121). It is a vacant parcel being considered as a potential location for a welcome center with separate parking for commercial vehicles (trucks and buses). It would be situated approximately 1.5 miles west of the Connecticut State Line and be accessible to and from westbound I-84.
Physical Site Features			
Topography	No Impediments ○ Site topography is gentle rolling meadow and wooded	Impediments to existing rest areas ○ Steep Slopes, ridges and outcroppings on both sides of I-84 ○ Limits expansion of rest areas	No Significant Impediments ○ Site topography is sloped closer to I-84 and gentle rolling meadow towards Route 6/202
Streams and Watercourses	Impediments ○ Sub-tributary of Wickopee Creek would require 100 foot buffer in accordance with State environmental guidelines ○ Sub-tributary traverses through southeast section of site	No Significant Impediments ○ Two sub-tributaries of Fishkill Creek located in vicinity of rest areas	Impediments ○ Two sub-tributaries would require 50 to 100 foot buffers in accordance with Town of Southeast and State environmental guidelines, respectively ○ Sub-tributaries traverse north-south through eastern section of site (near Dingle Ridge Road)
Ridges/Steep Slopes	No Impediments	Impediments ○ Rock ledge and ridges (Eastbound direction) ○ Steep slope (Westbound direction)	No Impediments
Forestation, Rock Outcrops or Other Unusual Features	No Impediments	Impediments ○ Rock Outcrops	No Significant Impediments ○ Town of Southeast Tree Protection Ordinance
Soil Conditions	No Impediments ○ Soil is suitable for construction	No Impediments	No Impediments ○ Soil is suitable for construction
Depth to Groundwater-Bedrock	Not available	Not available	Not available
Visual Evidence of Pollution	None	None	None
Accessibility	No Constraints ○ Full Interchange access to/from I-84 ○ No future transportation projects planned or programmed for I-84 in vicinity of site ○ PDCTC has identified CR 27 (Lime Kiln Road) for shoulder widening for bicycle use	No Constraints ○ Full access to and from rest areas on I-84 ○ No future transportation projects planned or programmed for I-84 in vicinity of site	Constraints ○ Site accessibility to and from I-84 may conflict with downstream entrance ramp from Route 6/Saw Mill Road (Exit 1 in CT) and upstream exit ramp to Route 121 (Exit 21) ○ Dingle Ridge bridge structure crossing I-84 may be a design constraint ○ May require a non-conventional design and additional signage ○ No future transportation projects planned or programmed for I-84 and Route 6/202 in vicinity of site

Table 2: Summary of Screening Analysis and Review of Sites 8, 9 and 11

Screening Criteria	Site 8 SE Quadrant of I-84 at Exit 15	Site 9 E. Fishkill & Stormville Rest Areas	Site 11 North Side of I-84, East of Exit 21
Right-of-Way Opportunities	Possible Constraints ○ Would be developed and operated by private owner	No Constraints ○ Within I-84 corridor right-of-way	Possible Constraints ○ Would require purchase of private property
Expansion Capabilities	No Identifiable Impediments or Constraints ○ Possible expansion	Impediments/Constraints ○ Limited in size due to topography and surrounding land use	No Identifiable Impediments or Constraints ○ Possible expansion
Site Quality			
Site Aesthetics	Favorable ○ Vacant land suitable for construction ○ Would complement surrounding land uses	Favorable ○ Possible redesign and modernization of aging facility	Favorable ○ Vacant land suitable for construction ○ Commercial corridor on Route 6/202
Welcome Area Potential	Unfavorable ○ Site is not near Connecticut or Pennsylvania state lines	Unfavorable ○ Existing rest areas are not near Connecticut or Pennsylvania state lines	Favorable ○ Site is located near Connecticut State Line
Trucking Support Facilities	Favorable ○ Preliminary Plan being developed by a private developer for commercial vehicle parking and associated facilities	Unfavorable as currently designed ○ Existing rest areas are limited in size ○ Existing rest area parking facilities could be demolished and possibly redesigned to accommodate NYSDOT's newer rest area parking layout, which separates passenger vehicles from trucks and buses.	Favorable ○ Vacant parcel could possibly accommodate separate parking area for trucks
Natural and Scenic Features	No significant natural or scenic features	Favorable visual qualities	No significant natural or scenic features
Historical and Cultural Attractions	No Impediments ○ No historical features 50 years or older ○ No cultural features	No Impediments ○ No historical features 50 years or older ○ No cultural features	No Impediments ○ No historical features 50 years or older ○ No cultural features
Archeological Features	Possible Impediments ○ Possible pre-contact civilization ○ Phase 1 Archeological Investigation may be required due to nearby stream	Possibly No Impediments ○ Typically not necessary in steep sloped areas ○ Phase 1 Archeological Investigation may have been done before construction of rest area	Possible Impediments ○ Possible pre-contact civilization ○ Phase 1 Archeological Investigation may be required due to nearby stream
Utilities Available or Obtainable			
Potable Water	No Significant Impediments ○ No central water system, existing or planned, in/near vicinity of site ○ Groundwater on site ○ 30-inch water line planned along CR 27 (Lime Kiln Road), ending north of I-84	No Significant Impediments ○ No central water system, existing or planned, in/near vicinity of site ○ Groundwater on site ○ NYSDOT Facility Report would provide further information on-site facilities and problems	No Significant Impediments ○ No central water system, existing or planned, in/near vicinity of site ○ Groundwater on site
Wastewater Disposal	No Significant Impediments ○ No wastewater treatment, existing or planned, in/near vicinity of site ○ Nearest wastewater treatment facility located within IBM property on north side of I-84	Impediments ○ No wastewater treatment, existing or planned, in/near vicinity of site ○ One leach field in Stormville Rest Area processes wastewater for both rest areas ○ System is periodically overtaxed ○ Alternative design options may need to be considered	Possible Impediments ○ No wastewater treatment, existing or planned, in/near vicinity of site ○ On-site treatment may be required due to Croton Watershed

Table 2: Summary of Screening Analysis and Review of Sites 8, 9 and 11

Screening Criteria	Site 8 SE Quadrant of I-84 at Exit 15	Site 9 E. Fishkill & Stormville Rest Areas	Site 11 North Side of I-84, East of Exit 21
Electrical Service	No Impediments ○ Three-phase electrical service along CR 27 (Lime Kiln Road)	Possible Impediments ○ Single-phase electrical service available in rest areas ○ Not sufficient for additional truck facilities	No Impediments ○ Three-phase electrical service along Route 6/202
Gas Service	No Impediments ○ Pipeline main located 200 feet of site with excess capacity	No Significant Impediments ○ No gas service, existing or planned, in/near vicinity of rest areas	No Impediments ○ Gas service along Route 6/202 with excess capacity
Telephone Service	No Impediments ○ Telephone service in area	No Impediments ○ Telephone service available in rest areas	No Impediments ○ Telephone service in area
Site Spacing in Relation to other Rest Areas	○ Favorable (east- and west-bound directions)	○ Favorable (eastbound direction) ○ Unfavorable (westbound direction)	○ Favorable (westbound direction only)
Corridor Geometry			
Horizontal and Vertical Alignment	No constraints on I-84 and CR 27 (Lime Kiln Road)	No constraints on I-84	No constraints on I-84
Ramp Spacing in Relation to Mainline Exits and Entrances	No constraints ○ Site would have access to and from existing interchange on I-84 (Exit 15) and CR 27 (Lime Kiln Road)	No constraints ○ Upstream ramps to Taconic State Parkway (Exit 16) located approximately two mile west of rest areas	Constraints ○ Ramp Spacing - Site access to and from I-84 may conflict with downstream entrance ramp from Route 6/Saw Mill Road (Exit 1 in CT) and upstream exit ramp to Route 121 (Exit 21) ○ May require a non-conventional design and additional signage
Traffic Operations	Possible Constraints ○ Potential traffic impacts at I-84 Interchange and CR 27(Lime Kiln Road)	Constraints ○ Overcrowded conditions, especially trucks parking on shoulders along entrances and exits and in rest areas	No Constraints
Potential Environmental Impacts			
Watersheds and Aquifers	Impediments ○ Sole source aquifer (11 in all in NYS) ○ On-site truck facilities would need to be sensitive to groundwater quality ○ May require on-site wastewater facility	No Impediments ○ No Watersheds or aquifers near site	Impediments ○ Site located in Croton Watershed ○ Nearest aquifer located near Haines Pond, located east of site and on the north side of Route 6/202
Federal Wetlands	Possible Impediments ○ Federal wetland located on west side of Lime Kiln Road near site	No Impediments ○ No Federal Wetlands near site	No Impediments ○ No Federal Wetlands near site
State Wetland	No Impediments ○ No State Wetlands near site	No Impediments ○ No State Wetlands near site	No Impediments ○ No State Wetlands near site
State and Federal Endangered Species	Possible Impediments ○ State endangered species identified on west side of CR 27 (Lime Kiln Road) near site	No Impediments ○ No State or Federal Endangered Species identified near site	No Impediments ○ No State or Federal Endangered Species identified near site

Table 2: Summary of Screening Analysis and Review of Sites 8, 9 and 11

Screening Criteria	Site 8 SE Quadrant of I-84 at Exit 15	Site 9 E. Fishkill & Stormville Rest Areas	Site 11 North Side of I-84, East of Exit 21
Floodplains	<p>Impediments</p> <ul style="list-style-type: none"> ○ Floodplain located on parcel on east side of CR 27 (Lime Kiln Road), traversing north-south along eastern portion of parcel ○ 100-foot buffer would be require in accordance with State environmental guidelines 	<p>No Impediments</p> <ul style="list-style-type: none"> ○ No State Wetlands near site 	<p>No Impediments</p> <ul style="list-style-type: none"> ○ No State Wetlands near site
Storm Sewers and Drainage Concerns	<p>No Significant Impediments</p> <ul style="list-style-type: none"> ○ No central sewer system, existing or planned, in/near vicinity of site ○ Soil conditions are suitable for run-off and drainage 	<p>Not available</p>	<p>Impediments</p> <ul style="list-style-type: none"> ○ No central sewer system, existing or planned, in/near vicinity of site ○ Surface and storm water run-off will be an issue due to Croton Watershed and would require review by NYCDEP ○ Detention or retention ponds probably would be required
Abutting Land Use and Zoning	<p>No Significant Impediments</p> <ul style="list-style-type: none"> ○ Surrounding land use is a mix of industrial, commercial, residential and agricultural uses and vacant land ○ Site is zoned I-2 and complements the surrounding land use ○ Future land development may include Meadowbrook Corporate Park, situated in the northeast quadrant of I-84 at Exit 15 ○ There are no future zoning changes within site vicinity 	<p>No Significant Impediments</p> <ul style="list-style-type: none"> ○ Rest areas are located within I-84 corridor right-of-way ○ Surrounding land use is primarily residential and public and private park and vacant land ○ Abutting land is zoned R-2 	<p>No Significant Impediments</p> <ul style="list-style-type: none"> ○ Surrounding land use is commercial and vacant land ○ Site is zoned HC-1and complements the surrounding land use ○ There are no future land development planned near vicinity of site ○ There are no future zoning changes within site vicinity
Hazardous Waste Sites	<p>Possible Impediments</p> <ul style="list-style-type: none"> ○ MBTE spills, north of site, may require groundwater sampling 	<p>No Impediments</p> <ul style="list-style-type: none"> ○ No hazardous waste sites reported near rest areas 	<p>No Impediments</p> <ul style="list-style-type: none"> ○ No hazardous waste sites reported near site
Special Local Concerns	<p>No Impediments</p> <ul style="list-style-type: none"> ○ There are no sensitive community receptors near vicinity of site 	<p>Possible Impediments</p> <ul style="list-style-type: none"> ○ There are no sensitive community receptors near vicinity of site ○ Other community concerns to consider in area include the Appalachian Trail and public and private park land ○ Minimize truck idling in order to reduce pollutants 	<p>Possible Impediments</p> <ul style="list-style-type: none"> ○ There are no sensitive community receptors near vicinity of site ○ Other community concerns to consider in area include a trailer park west of site

4.0 TRAFFIC DEMAND

4.1 Existing Traffic Pattern

NYSDOT Region 8 collected traffic volume data at the East Fishkill and Stormville rest areas in April 2003. The data included automatic traffic recorder counts on the entrance ramp to the Stormville Rest Area and the exit ramp from the East Fishkill Rest Area. The machine counts recorded hourly volumes by vehicle classification (FHWA vehicle classifications, F1-F13). In addition, NYSDOT provided summaries of automatic traffic recorder counts for I-84 eastbound and westbound segments between Dutchess/Putnam County Line and Exit 17 - Route 52/CR 43 (Ludingtonville Road) taken in November 2001. The data is provided in Appendix C.

Figures 11 through 15 summarize the traffic data for the East Fishkill and Stormville rest areas and for I-84 eastbound and westbound mainlines, east of the rest areas.

4.2 Existing and Future Commercial Vehicle Parking Needs

The following guideline was reviewed to estimate existing and future commercial vehicle parking needs at a public rest area in the I-84 corridor within the study area:

- AASHTO. 2001. *Guide for Developments of Rest Areas on Major Arterials and Freeways*, Third Edition. American Association of State Highway and Transportation Officials: Washington, D.C.

The procedure described in the guideline applies the following equation:

$$N_t = \frac{ADT \times P \times DH \times D_t \times PF}{60}$$

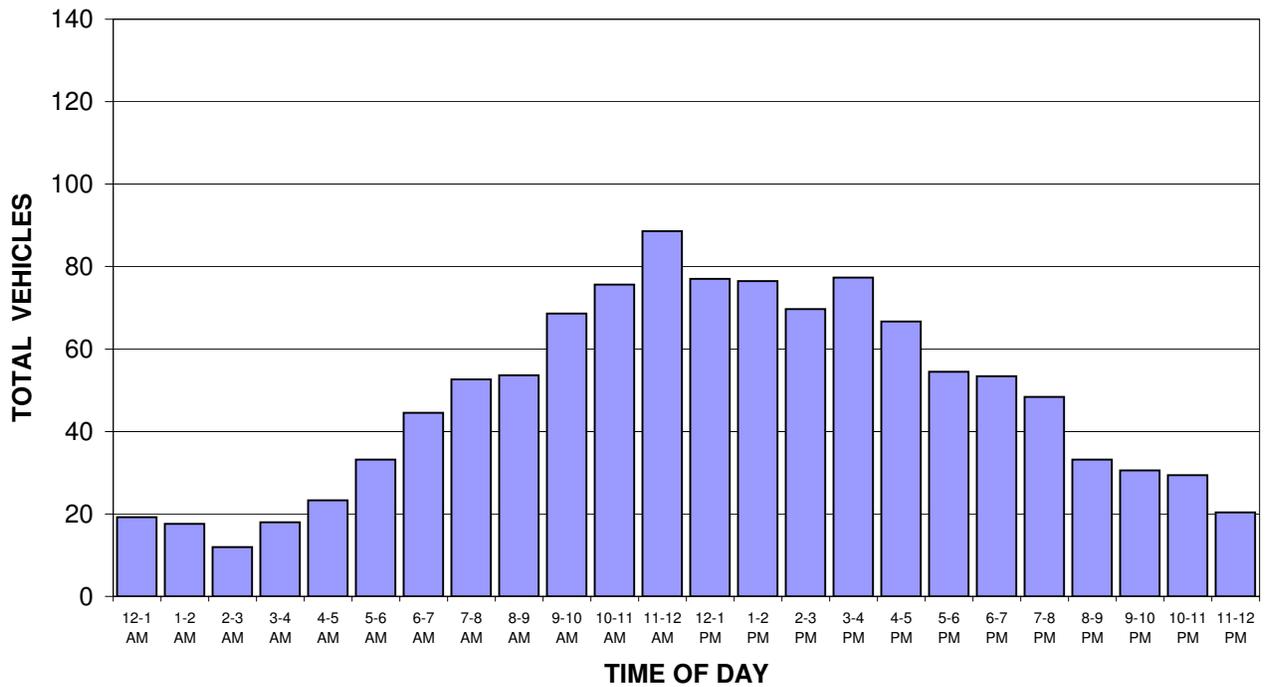
where:

N_t	=	number of truck-parking spaces required
ADT	=	average daily traffic with access to rest area
P	=	proportion of mainline stopping at rest area
DH	=	design-hourly usage
D_t	=	percentage of trucks-parking spaces
PF	=	peak factor, the ratio of the average day usage during the five summer months compared with the average day usage over the entire year
VHS	=	vehicles parked per hour per space

The applied values are provided in Appendix D.

Existing and future truck-parking requirements were estimated at the existing rest areas, at CR 27 (Lime Kiln Road), and at the New York/Connecticut State Line. In addition, existing and future truck-parking requirements were estimated for average corridor conditions. The results of the analysis are presented in Table 3. Appendix D provides the summary sheets for the results presented in Table 3.

**EAST FISHKILL REST AREA (I-84, EASTBOUND)
Weekday**



**EAST FISHKILL REST AREA (I-84, EASTBOUND)
Weekend**

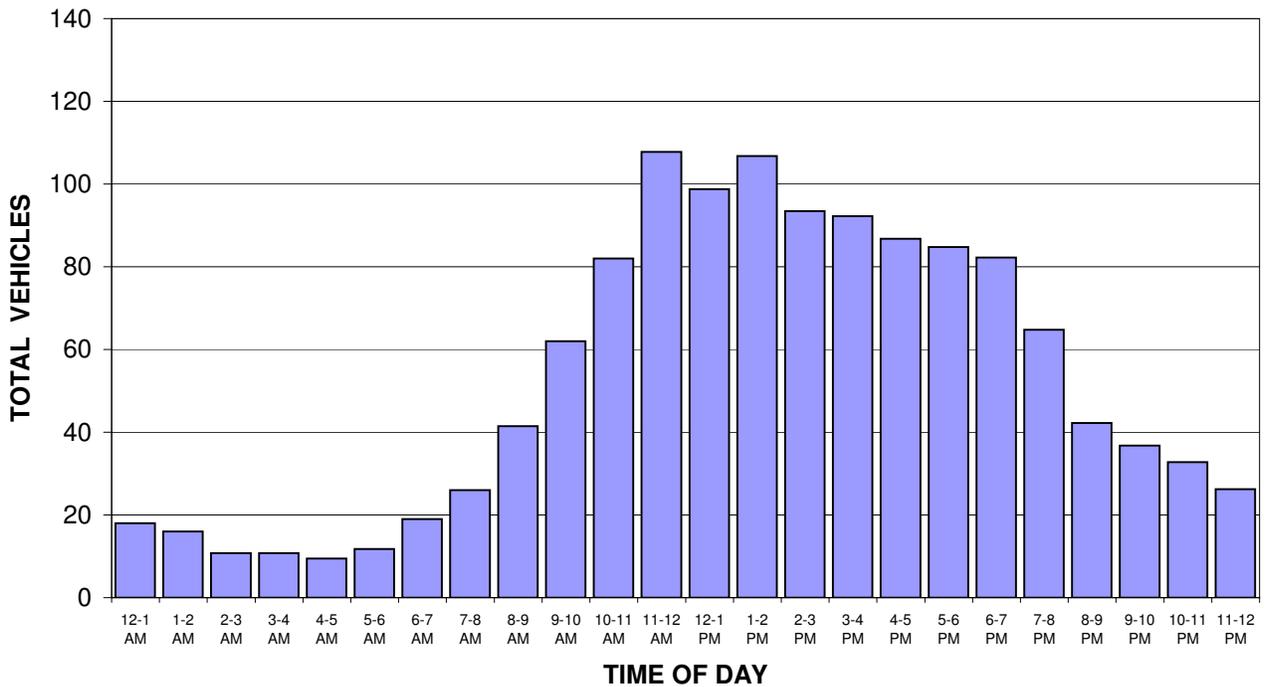
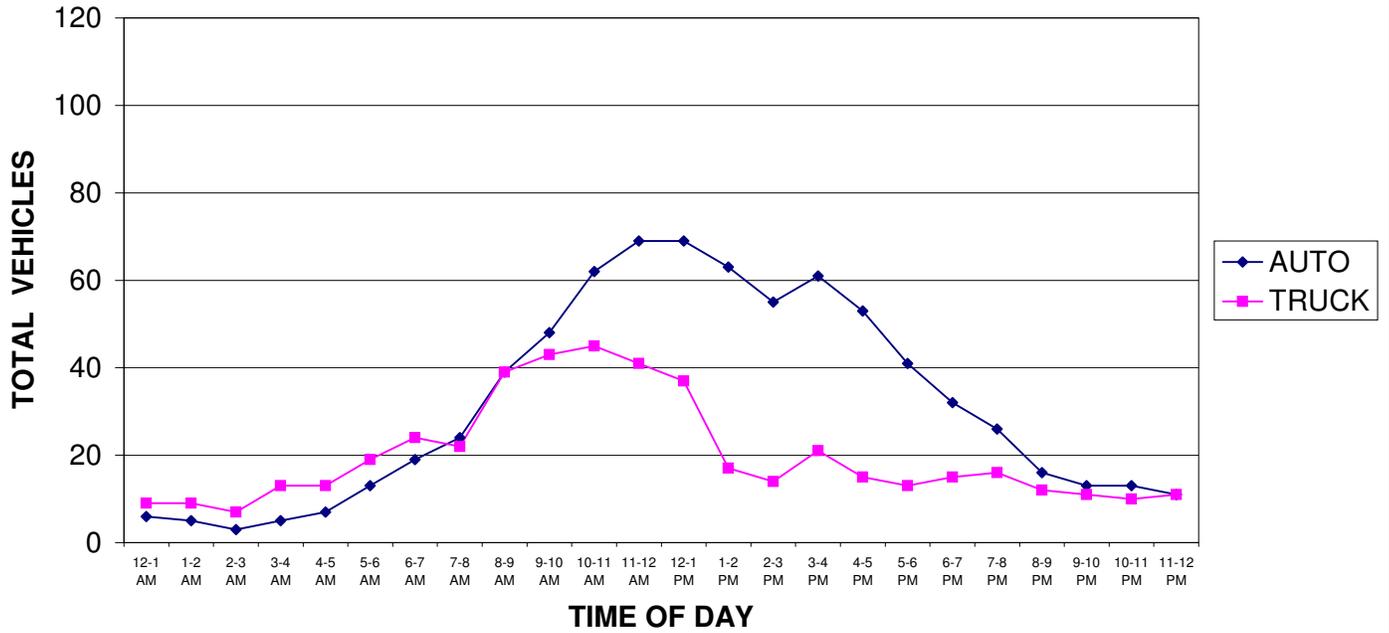


FIGURE 11

**HOURLY TRAFFIC VOLUMES
FOR EAST FISHKILL REST AREA
(WEEKDAY & WEEKEND)**

SOURCE: NYSDOT R8
April, 2003 DATA

**EAST FISHKILL REST AREA (I-84, EASTBOUND)
Weekday**



**EAST FISHKILL REST AREA (I-84, EASTBOUND)
Weekend**

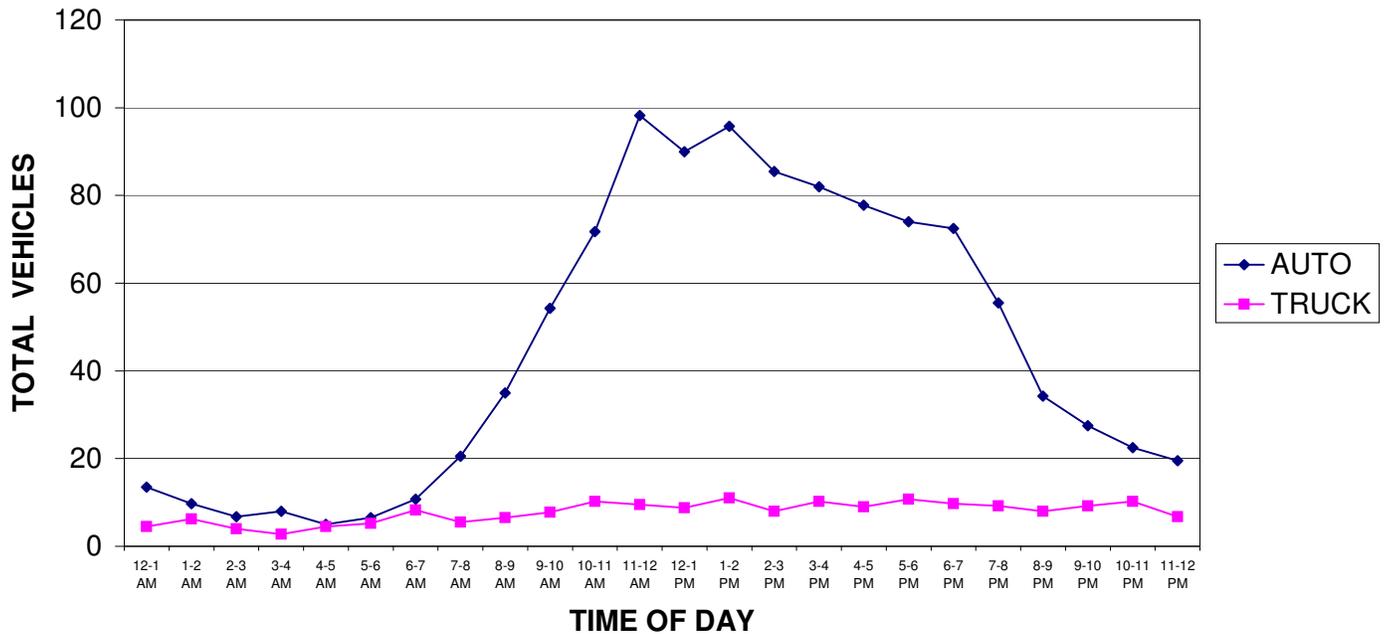
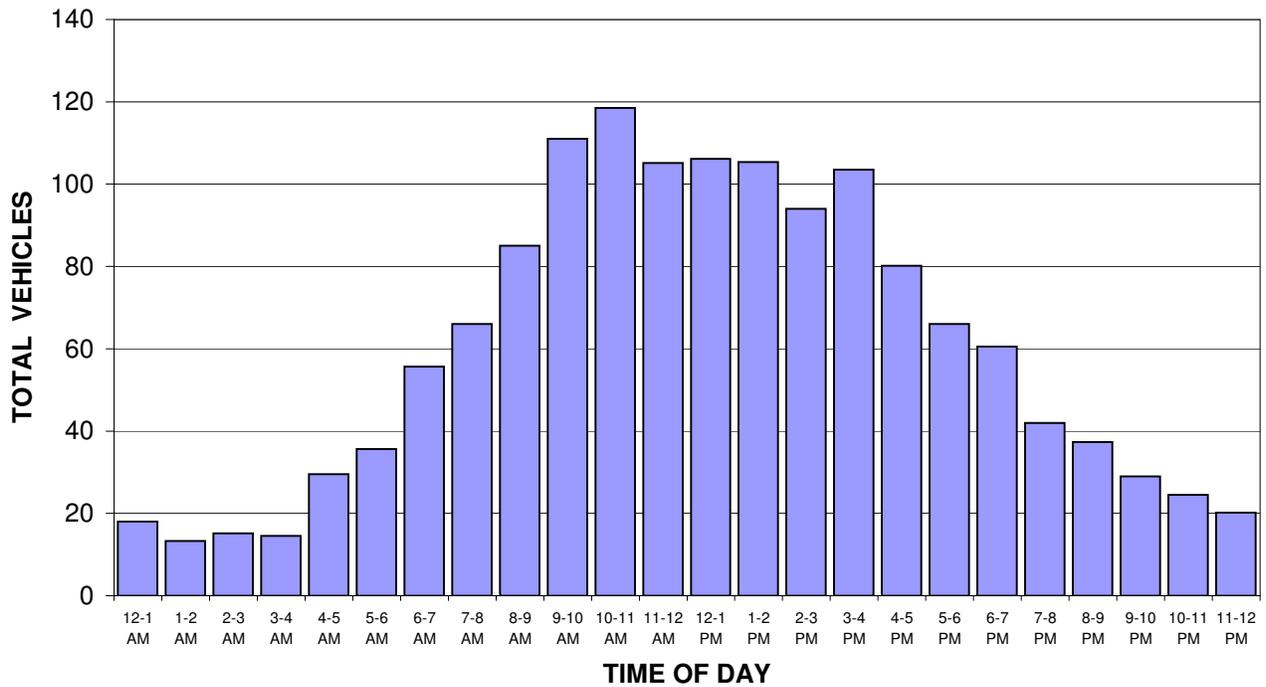


FIGURE 12

**HOURLY DISTRIBUTION OF AUTOS & TRUCKS
FOR EAST FISHKILL REST AREA
(WEEKDAY & WEEKEND)**

SOURCE: NYSDOT R8
April, 2003 DATA

STORMVILLE REST AREA (I-84, WESTBOUND) Weekday



STORMVILLE REST AREA (I-84, WESTBOUND) Weekend

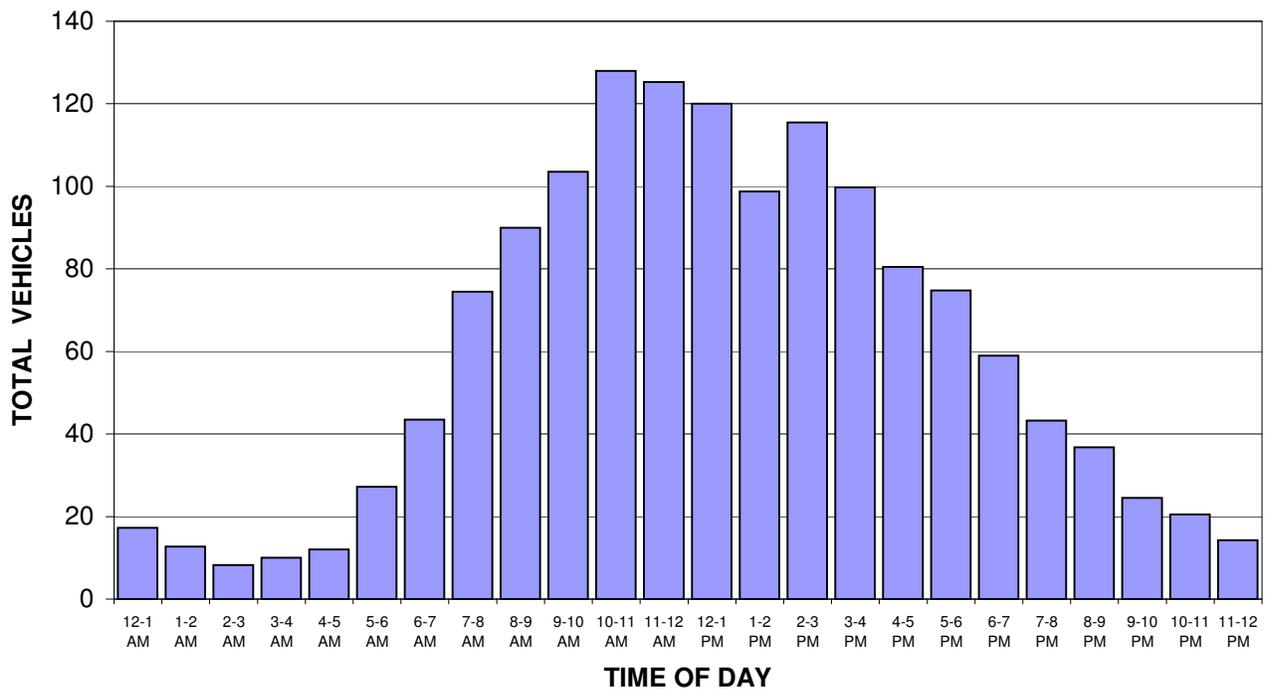
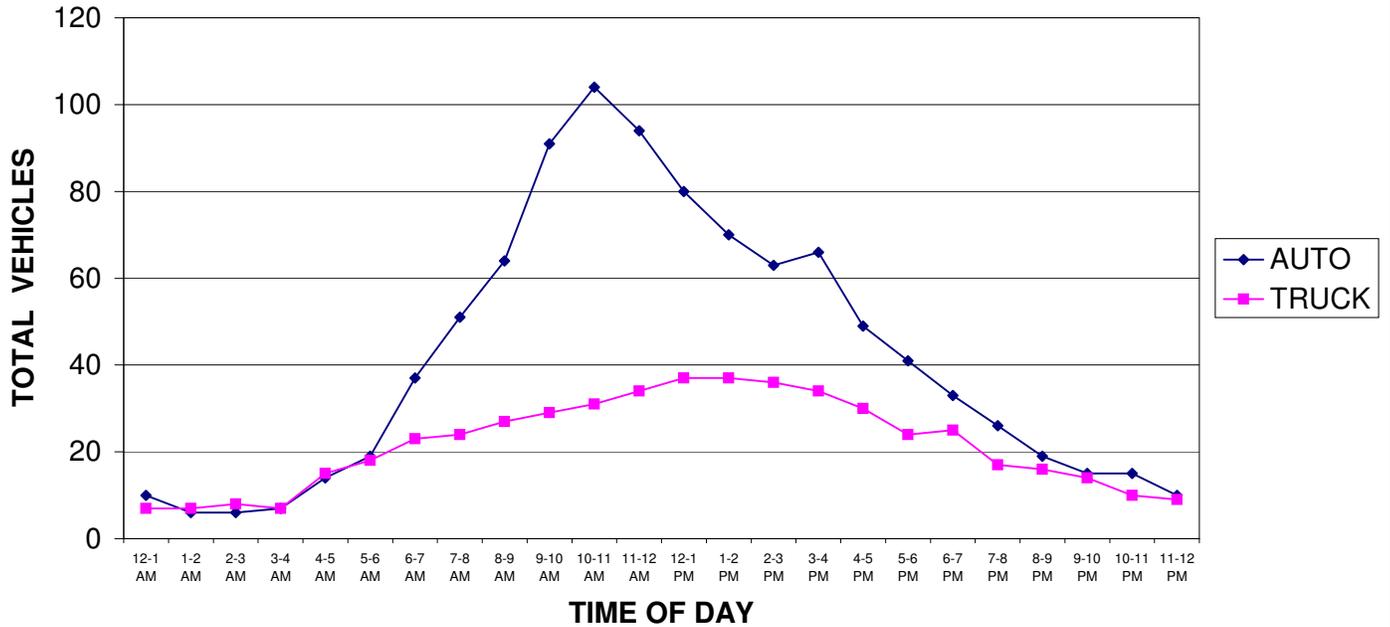


FIGURE 13

**HOURLY TRAFFIC VOLUMES
FOR STORMVILLE AREA
(WEEKDAY & WEEKEND)**

SOURCE: NYSDOT R8
April, 2003 DATA

**STORMVILLE REST AREA (I-84, WESTBOUND)
Weekday**



**STORMVILLE REST AREA (I-84, WESTBOUND)
Weekend**

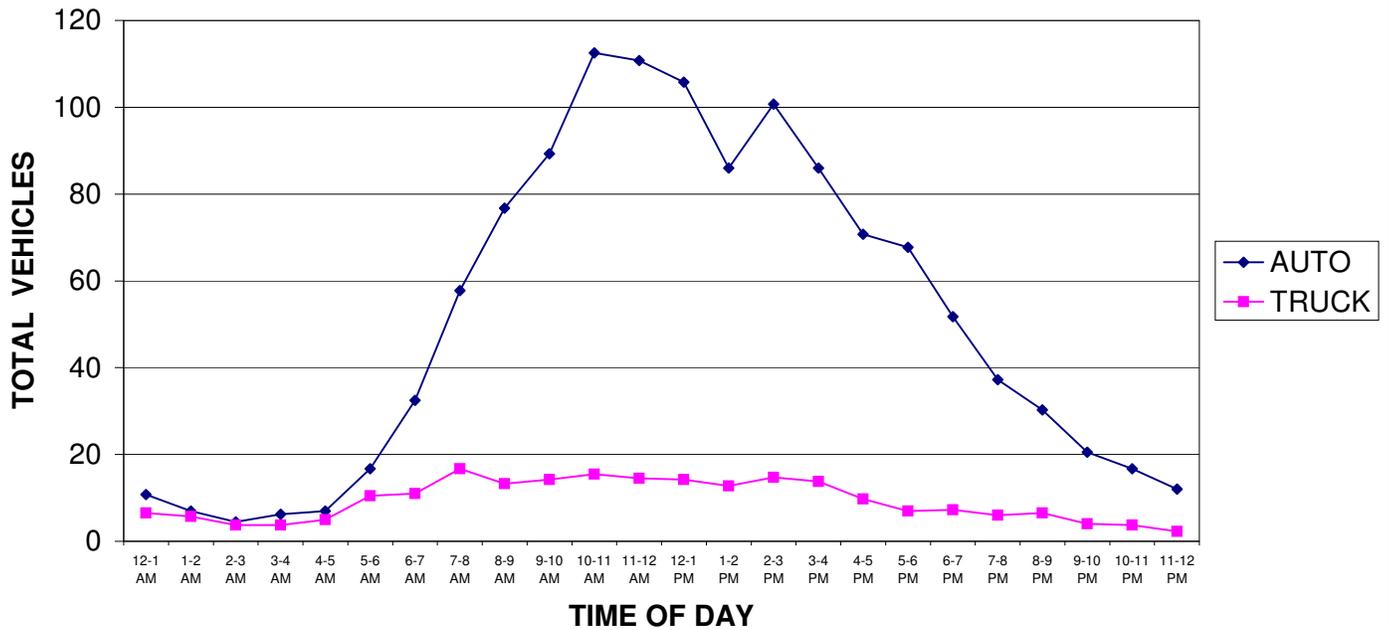
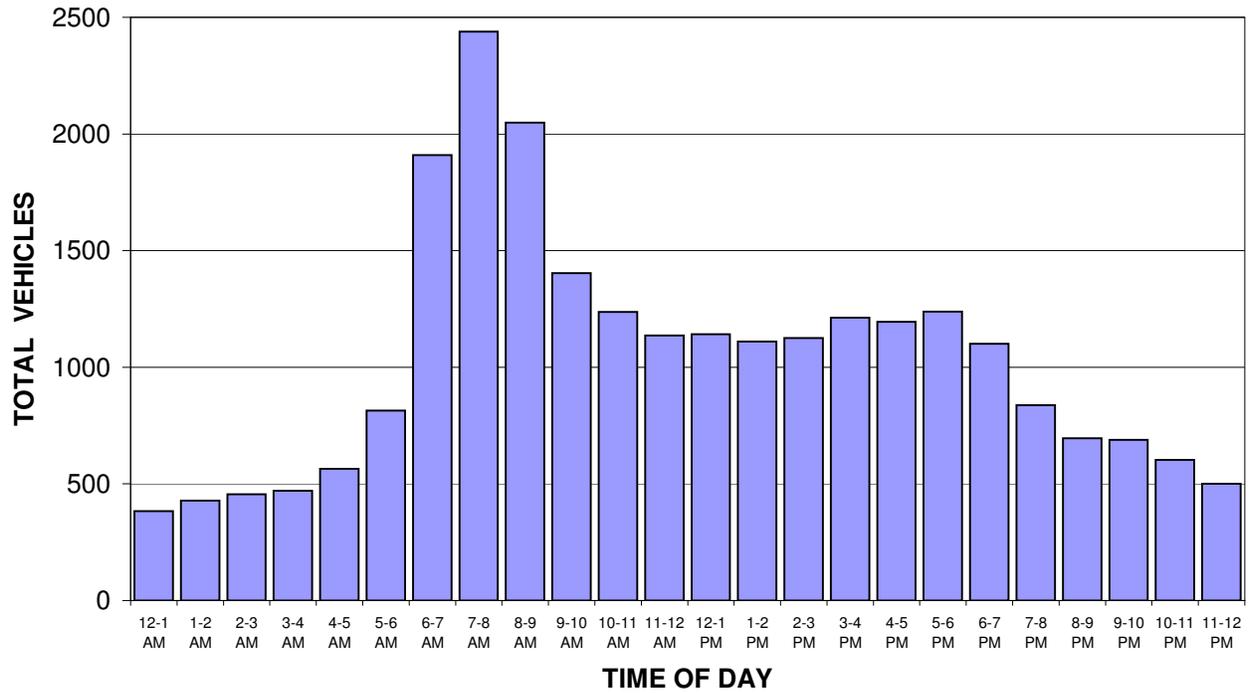


FIGURE 14

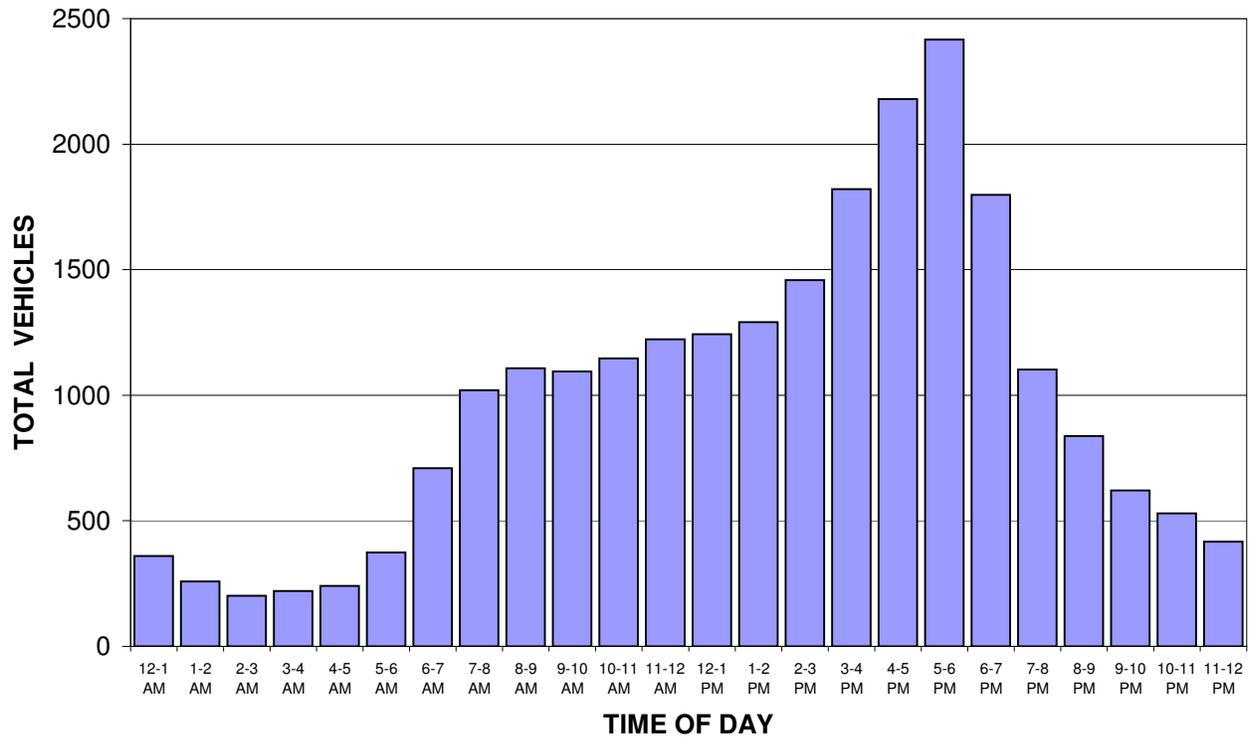
**HOURLY DISTRIBUTION OF AUTOS & TRUCKS
FOR STORMVILLE REST AREA
(WEEKDAY & WEEKEND)**

SOURCE: NYSDOT R8
April, 2003 DATA

I-84 EASTBOUND MAINLINE *



I-84 WESTBOUND MAINLINE *



* Segment of I-84 between Dutchess County Line and Route 52 (Ludingtonville Rd.)

FIGURE 15
HOURLY TRAFFIC VOLUMES
FOR I-84 MAINLINE

Table 3
Existing and Future Commercial Vehicle Parking Needs
in the I-84 Study Area (Rounded Values)

TRUCK-PARKING DEMAND MODEL		
Location	Existing	Future
East Fishkill and Stormville Rest Areas (EB/WB directions combined)	105	160
Site 8 (EB/WB directions combined)	135	205
Site 11 (WB direction)	110	170
Average Corridor Conditions (EB/WB directions combined)	140	210

5.0 CONCEPTUAL OPTIONS

A PDCTC meeting with NYSDOT and NYSTA was held in late September 2003 to discuss options and implementation scenarios for the three potential sites. The following conceptual options were developed from the meeting. The minutes of the meeting are provided in Appendix A.

5.1 Options for Site 8

Three conceptual options were considered for Site 8. It should be noted that the initial concept for Site 8 was to develop the vacant parcel described in Section 2.0, Identification of Potential Sites (page 12), based on a proposal by a private developer. Options 8B and 8C were added based on further discussions at the September 25, 2003 progress meeting. All three options would develop Site 8 for commercial vehicle parking. The three options are described as follows:

Option 8A

Option 8A would involve constructing commercial vehicle parking with truck facilities (e.g., fuel, repair, truck wash, food and restrooms) on a vacant parcel on the east side of CR 27 (Lime Kiln Road) and south of the I-84 eastbound entrance and exit at Interchange 15. The site would be outside I-84 right-of-way. The site would be accessed via CR 27 (Lime Kiln Road). It is estimated that the facility could accommodate about 125 truck spaces. Figure 16 shows a schematic plan of Option 8A.

Option 8B

Option 8B would involve constructing commercial vehicle parking with some facilities for truckers (e.g., vending machines and restrooms) on New York State property within the I-84 right-of-way. The facility would be bounded by the I-84 eastbound exit loop ramp. A new frontage road on the west side of CR 27 (Lime Kiln Road) would provide access to and from the site. It is estimated that the facility could accommodate about 100-125 truck spaces. Figure 17 shows a schematic plan of Option 8B. Screening and review of this option may be necessary to identify possible issues and concerns.

Option 8C

Option 8C would involve reconstructing the I-84 eastbound ramps at Interchange 15 in order to construct commercial vehicle parking with truck facilities. The site would include both New York State property within the I-84 right-of-way and the vacant parcel described in Option 8A. The site would be accessed via CR 27 (Lime Kiln Road). It is estimated that the facility could accommodate about 175-225 truck spaces. Figure 18 shows a schematic plan of Option 8C. Screening and review of this option may be necessary to identify possible issues and concerns.

Figures 16, 17 and 18 are provided at the end of this section.

5.2 Options for Site 9

The three options for the existing rest areas are described as follows:

Option 9A

Option 9A would involve maintaining and/or modifying one or both of the existing rest areas.

Option 9B

Option 9B would involve converting one or both rest areas to a scenic overlook or parking-only facility. This option would eliminate the rest area buildings in order to reconfigure the parking areas.

Option 9C

Option 9C would involve closing one or both rest areas, depending on Site 8 and/or Site 11 to accommodate the needs in the corridor.

Figure 19 shows a schematic plan of Options 9A, B and C. The figure is provided at the end of this section.

5.3 Options for Site 11

Three conceptual options were considered for Site 11. All three options would develop Site 11 for welcome center/rest area. The three options are described as follows:

Options 11A

Option 11A would involve constructing a westbound welcome center with provision for commercial vehicle parking. Sole access would be via westbound I-84. It is estimated that the facility, under this option, could accommodate about 60-100 truck spaces. Figure 20 shows a schematic plan of Option 11A.

Option 11B

Option 11B would involve constructing a scaled-down westbound welcome center with possibly limited or no provisions for commercial vehicle parking. Sole access would be via westbound I-84. It is estimated that the facility, under this option, could accommodate up to 20 truck spaces. Figure 21 shows a schematic plan of Option 11B.

Option 11C

Option 11C would involve constructing a westbound welcome center with, as options, commercial vehicle parking and a retail establishment fronting Route 6/202. Sole access would be via westbound I-84. Walkways would provide the connection between the welcome center and retail establishment. It is estimated that the facility, under this option, could accommodate up to 30 truck spaces. Figure 22 shows a schematic plan of Option 11C.

Figures 20, 21 and 22 are provided at the end of this section.

6.0 IMPLEMENTATION SCENARIOS

Table 4 presents five implementation scenarios for the three potential sites. The scenarios are based on the development potential of the two vacant parcels, Site 8 and Site 11.

As indicated in Table 4, Site 8 would be used to meet existing and future commercial vehicle parking needs in Scenarios I and II. In Scenarios III and IV, Site 8 is not intended to fully meet commercial vehicle parking needs in existing or future conditions. Scenario V does not include Site 8 for commercial vehicle parking. In Scenario IV and V, Site 11 is intended to supply some of the commercial vehicle parking needs in the corridor.

The implementation scenarios were compared with existing and future travel demand for the I-84 corridor developed in Section 4.0, Traffic Demand, to determine the relationship between the conceptual options and the implementation scenario. The comparisons are presented in Table 5.

The “low” and “high” existing truck-parking needs have been estimated to be 105 and 140 spaces, respectively. A review of Table 5 indicates that Scenarios I through IV should meet both the low and high estimates of existing truck-parking needs. Scenario V would meet only the low estimate of existing truck-parking needs, if Option 11A were implemented. However, if Option 11C were implemented as part of Scenario V, even the projected low estimate of truck-parking needs would not be met.

The “low” and “high” future truck-parking needs have been estimated to be 160 and 210 spaces, respectively. Scenarios I through IV should meet the low estimate of future truck-parking needs. Scenarios I and II have the potential of meeting the high estimate of future truck-parking needs, if Option 8C is included. Scenario V would not meet the projected low or high estimate of future truck-parking needs regardless of which option was implemented.

The implementation scenarios were presented and reviewed at the fourth SAC meeting on November 25, 2003. The meeting minutes are provided in Appendix A.

Table 4: Implementation Scenarios

SCENARIO	SITE 8	SITE 9	SITE 11
		<i>Site 8 is located in the southeast quadrant of I-84 at Exit 15 in the Town of East Fishkill, Dutchess County</i>	<i>Site 9 includes the East Fishkill (EB) and Stormville (WB) rest areas in the Town of East Fishkill, Dutchess County</i>
I	Construct commercial vehicle parking with associated facilities that meet or exceed commercial vehicle parking needs for the I-84 corridor in study area	Monitor and evaluate usage to determine future need of rest areas	No future plans for site
II	Construct commercial vehicle parking with associated facilities that meet or exceed commercial vehicle parking needs for the I-84 corridor in study area	Monitor and evaluate usage to determine future need of existing rest areas	Construct welcome center with/without provisions for commercial vehicle parking
III	Construct commercial vehicle parking with associated facilities that do not fully meet commercial vehicle parking needs for the I-84 corridor in study area	Maintain and/or modify existing rest areas	No future plans for site
IV	Construct commercial vehicle parking with associated facilities that do not fully meet commercial vehicle parking needs for the I-84 corridor in study area	Monitor and evaluate usage to determine future need of rest areas	Construct full welcome center with provisions for commercial vehicle parking
V	No future plans for site	Monitor and evaluate westbound I-84 rest area usage to determine future need of rest area	Construct full welcome center with provisions for commercial vehicle parking

**Table 5
Estimated Commercial Vehicle Parking Supply for Various Implementation Scenarios**

OPTIONS	SCENARIOS														
	SUPPLY		I-A	I-B	II-A	II-B	II-C	II-D	II-E	II-F	III	IV-A	IV-B	V-A	V-B
	EXISTING	FUTURE													
Site 8	NA	125	8A	8A	8A	8A	8C	8C	8C	8B	8B	8B	8B	---	---
Option 8A	NA	100 - 125	9	9	9	9	9	9	9	9	9	9	9	9	9
Option 8B	NA	175 - 225	---	11A	11B	11C	11A	11B	11C	---	11A	11C	11A	11A	11C
Option 8C	NA		125	125	125	125	NA	NA	NA	NA	NA	NA	NA	NA	NA
Site 9 (excludes trucks parking in shoulder area)	18 (NM)	18 (NM)	20	20	20	20	20	20	20	20	20	20	20	20	20
East Fishkill (EB)	18 (NM)	18 (NM)	20	20	20	20	20	20	20	20	20	20	20	20	20
Stormville (WB)	NA	60 - 100	80	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	80	NA
Site 11	NA	0 - 20	NA	20	NA	NA	NA	20	NA	NA	20	NA	NA	NA	NA
Option 11A	NA	0 - 30	NA	30	NA	NA	NA	NA	30	NA	NA	30	NA	NA	30
Option 11B	---	---	165	240	245	185	320	260	270	155	175	185	120	70	70
Option 11C	---	---	105	105	105	105	105	105	105	105	105	105	105	105	105
TOTAL PARKING SUPPLY	---	---	165	240	245	185	320	260	270	155	175	185	120	70	70
EXISTING TRUCK-PARKING NEEDS (LOW)	---	---	105	105	105	105	105	105	105	105	105	105	105	105	105
TOTAL TRUCK-PARKING SUPPLY	---	---	165	240	245	185	320	260	270	155	175	185	120	70	70
PARKING SURPLUS (+) OR SHORTAGE (-)	---	---	60	135	140	80	215	155	165	50	70	80	15	-35	-35
EXISTING TRUCK-PARKING NEEDS (HIGH)	---	---	140	140	140	140	140	140	140	140	140	140	140	140	140
TOTAL TRUCK-PARKING SUPPLY	---	---	165	240	245	185	320	260	270	155	175	185	120	70	70
PARKING SURPLUS (+) OR SHORTAGE (-)	---	---	25	100	105	45	180	120	130	15	35	45	-20	-70	-70
FUTURE TRUCK-PARKING NEEDS (LOW)	---	---	160	160	160	160	160	160	160	160	160	160	160	160	160
TOTAL TRUCK-PARKING SUPPLY	---	---	165	240	245	185	320	260	270	155	175	185	120	70	70
PARKING SURPLUS (+) OR SHORTAGE (-)	---	---	5	80	85	25	160	100	110	-5	15	25	-40	-90	-90
FUTURE TRUCK-PARKING NEEDS (HIGH)	---	---	210	210	210	210	210	210	210	210	210	210	210	210	210
TOTAL TRUCK-PARKING SUPPLY	---	---	165	240	245	185	320	260	270	155	175	185	120	70	70
PARKING SURPLUS (+) OR SHORTAGE (-)	---	---	-45	30	35	-25	110	50	60	-55	-35	-25	-90	-140	-140

Note:
 NM - Not Marked Truck-Parking Spaces
 NA - Not Applicable

7.0 CONCLUSION

Sites 8, 9, and 11 could be used to complement one another in developing and implementing an overall rest area plan for the I-84 corridor. As indicated in the following summary table, Table 6, Site 8 is included in four of the five implementation scenarios, Site 11 in three of the five scenarios, and Site 9 in all five scenarios.

Table 6
Summary of Implementation Scenarios

Scenario	Site 8	Site 9	Site 11
I	●	●	
II	●	●	●
III	●	●	
IV	●	●	●
V		●	●

There are environmental, accessibility and acquisition issues that may need to be resolved for Sites 8 and 11. These issues appear to be resolvable.

For Site 8, issues include:

- Sensitive environmental issues to address on and/or near site – sole source aquifer, federal wetland, state endangered species, floodplain and stream
 - Nearby MBTE spills (north of I-84) may require groundwater sampling
 - On-site disposal of wastewater may be required to protect groundwater
 - Phase 1 archeological investigation may be needed
- Additional traffic on CR 27 (Lime Kiln Road) and I-84 interchange ramps at Exit 15
- Possible land acquisition

For Site 11, issues include:

- Development of site requires purchase of private property
- Sensitive environmental issues to address on site include the Croton Watershed and two streams
 - On-site disposal of wastewater and collection of surface and storm water run-off may be required to protect watershed and groundwater
 - Phase 1 archeological investigation may be needed

- Site accessibility may involve non-conventional design of entrance and exit due to nearby I-84 interchanges

The “low” and “high” future truck-parking needs have been estimated to be 160 and 210 spaces, respectively. Scenarios I through IV should meet the low estimate of future truck-parking needs. Scenarios I and II have the potential of meeting the high estimate of future truck-parking needs, if Option 8C is included. Scenario V would not meet the projected low or high estimate of future truck-parking needs regardless of which option was implemented.

The next step is for NYSDOT Region 8 to progress with the development of a rest area plan for the study area.