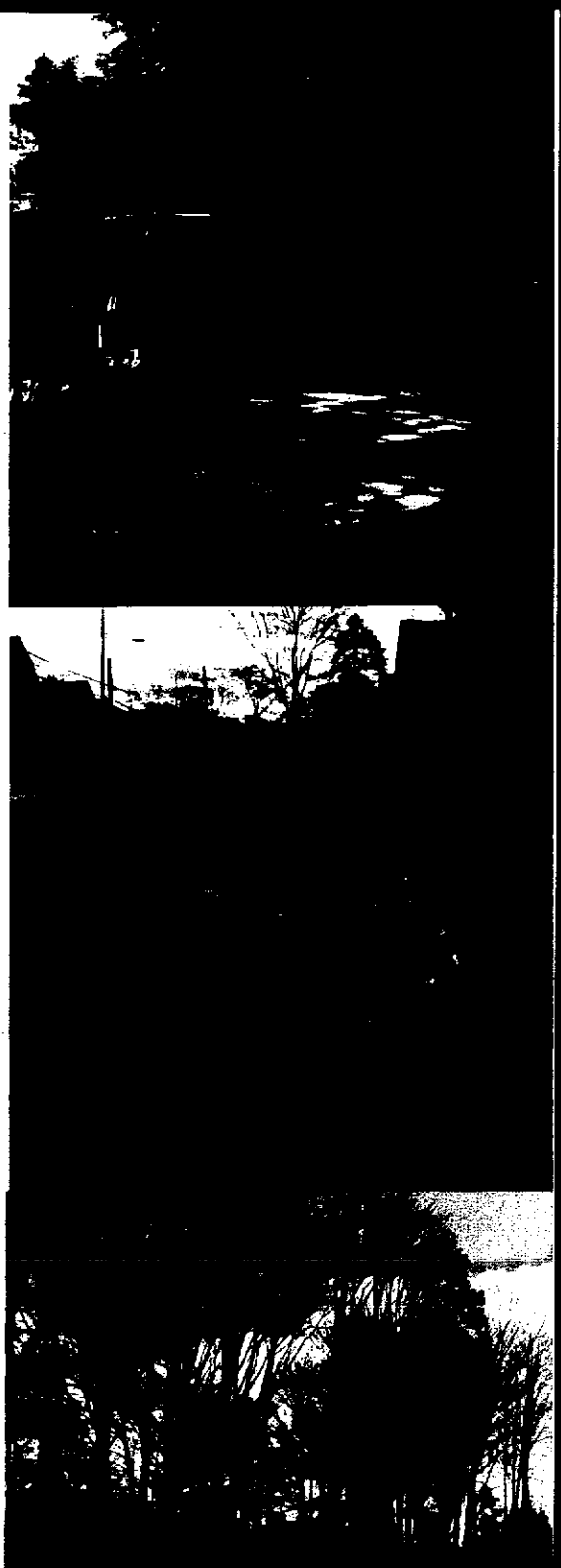
Gail K. Gallerie
4 Wood Lot Rd.
New Paltz, NY 12561-3731

RSG INC.
RESOURCE SYSTEMS GROUP, INC.



Phase C Report:

NEW PALTZ TRANSPORTATION/ LAND USE PROJECT

New Paltz, New York

Prepared for:

Town and Village of New Paltz

NYSDOT Region 8

November 2006

PHASE C REPORT OF THE NEW PALTZ TRANSPORTATION-LAND USE PROJECT

TABLE OF CONTENTS

EXECUTIVE SUMMARY

1.0 INTRODUCTION 1

1.1 PROJECT ORIGIN 1

1.2 SUMMARY OF PUBLIC OUTREACH EFFORTS 3

1.3 GOALS AND OBJECTIVES EXPRESSED IN THE PUBLIC OUTREACH PROCESS 6

1.4 NEW PALTZ TRANSPORTATION-LAND USE MODEL 15

2.0 FUTURE LAND USE RECOMMENDATIONS 18

2.1 GROWTH CENTERS 18

2.2 DENSITY SCHEDULES TO SUPPORT GROWTH CENTERS 27

2.3 LAND USE INITIATIVES OUTSIDE OF THE GROWTH CENTERS 29

3.0 ACCESS MANAGEMENT – THE LAND USE-TRANSPORTATION INTERFACE 30

3.1 KEY ACCESS MANAGEMENT PRINCIPLES 31

3.2 EXISTING ACCESS MANAGEMENT DEFICIENCIES AND OPPORTUNITIES IN NEW PALTZ 43

4.0 THE DESCRIPTION AND EVALUATION OF ALTERNATIVE TRANSPORTATION IMPROVEMENTS 51

4.1 ALTERNATIVE ROADWAY-BASED IMPROVEMENTS 51

4.2 TECHNICAL EVALUATION OF ALTERNATIVE TRANSPORTATION SCENARIOS 56

4.3 PUBLIC EVALUATION OF FUTURE SCENARIOS 60

4.4 CAC EVALUATION OF FUTURE SCENARIOS 67

5.0 TRANSPORTATION IMPROVEMENT RECOMMENDATIONS OF THE NEW PALTZ TRANSPORTATION-LAND USE PROJECT 73

5.1 POLICY RECOMMENDATIONS 73

5.2 BASE CAPACITY IMPROVEMENTS REQUIRED BY 2025 90

5.3 FUNDING SOURCES FOR TRANSPORTATION IMPROVEMENTS 92

5.4 SHORT-TERM TRANSPORTATION IMPROVEMENT RECOMMENDATIONS 93

5.5 MID-TERM TRANSPORTATION IMPROVEMENT RECOMMENDATIONS (5-12 YEARS) 106

5.6 LONG-TERM TRANSPORTATION IMPROVEMENT RECOMMENDATIONS (12+ YEARS) 129

5.7 CONSISTENCY OF RECOMMENDATIONS WITH OTHER PLANS 144

LIST OF FIGURES

Figure 1: Future Land Use Map Developed by New Paltz Residents at Project Meetings 7

Figure 2: Importance of Traffic Congestion 8

Figure 3: Importance of Improving Bicycle/Pedestrian Safety 9

Figure 4: New Paltz Community Open Space Vision Map 12

Figure 5: Location Map of the Shawangunk Mountains Scenic Byway 14

Figure 6: Distribution of Traffic Counts vs. Model Output 16

Figure 7: Proposed Town of New Paltz Zoning Districts from June 2004 Zoning Recommendations 19

Figure 8: Multi-Centric Development 21

Figure 9: Continuum of Roadway Function 31

Figure 10: The Functional Class Road Network in New Paltz 34

Figure 11: Unconnected Parking Lots Behind Main Street Offices 35

Figure 12: Interlot Connection Between Commercial Properties on Main Street (left) and Pedestrian Connection to New Paltz Plaza from Meadowbrook Apartments (right) 36
Figure 13: Access to the Ulster Savings Bank on Route 299 Is Via Joalyn Road 38
Figure 14: Shared Residential Driveways at 156 Main Street 39
Figure 15: Insufficient Corner Clearance 39
Figure 16: Inadequate Driveway Definition 41
Figure 17: Driveway Channelization (Right Turn Only Access to Main Street from New Paltz Middle School) 42
Figure 18: Area along Route 299 Where Median Treatments Should Be Considered 43
Figure 19: Access Management Inventory, Route 299 from Putt Corners to Prospect Street 45
Figure 20: Access Management Deficiencies Proximate to Route 299/Putt Corners 46
Figure 21: Access Management Inventory, Route 32 from Henry W. DuBois to Old Kingston Road 48
Figure 22: Examples of Improved Driveway Definition (Channelization) on Route 32 North 49
Figure 23: Small Residential Driveway on Route 32 North 50
Figure 24: Option 6 One Way Circulation System for New Paltz 70
Figure 25: Recommended Access Management Overlay District 75
Figure 26: Location of Recommended Parking Zones (yellow=short-term; red=medium-term; green=long-term) 82
Figure 27: Example Gateway Treatments 89
Figure 28: Location of Recommended Sidewalk Improvements 95
Figure 29: Sidewalk on the East Side of Route 32 Ends at Orchard Lane (looking south) 98
Figure 30: Conceptual Design of Mini-roundabouts at Selected Intersections on HW DuBois 102
Figure 31: Main Street Circulator 103
Figure 32: Route 32 North (left) and Route 32 South (right) Transit Routes 105
Figure 33: Streetscape Options for Main Street within the Village Core under a One-Way Flow Regime 109
Figure 34: Existing Streetscape along Main Street and Streetscape Options 1 and 2 for a One Way Flow System 110
Figure 35: Streetscape Options 3 - 6 for a One Way Flow System along Main Street 111
Figure 36: 3-Leg Roundabout (left) and 4-Leg Roundabout (right) at Main/Manheim 113

Figure 37: Conceptual Design for Conceptual Capacity Improvements at the Main/Manheim Intersection 114
Figure 38: High Crash Locations along Route 299 115
Figure 39: Conceptual Design of a New Left Turn Lanes (NB & SB) at Route 32/Plattekill 117
Figure 40: Mileposts Along Route 32 for Vehicle Crashes Reporting 119
Figure 41: Potential Roundabout Gateway Locations, Route 32 North Growth Center 120
Figure 42: General Design Concepts for the Route 32 North Growth Center 122
Figure 43: Proposed Multi-Use Path Connections to Ulster County Fairgrounds 124
Figure 44: Two Potential Regional Bicycle Route Alignments in New Paltz to Connect with the Hudson Valley Rail Trail 125
Figure 45: Section of the Hudson Valley Bikeways and Trailways Map Showing Future Bike Paths along Routes 299 and 208 126
Figure 46: Approximate Location of Proposed Vehicle Pull-Off 128
Figure 47: Schematic Design of a Reconstructed Wallkill River Bridge and the Main/Water/Huguenot Street Intersection 130
Figure 48: Conceptual Design of Conventional Intersection Improvements at Main/Chestnut 132
Figure 49: Conceptual Design of a Roundabout at Main/Chestnut 133
Figure 50: Preliminary Alignment of East-West Connector Road, South Putt to Route 208 137
Figure 51: Profile of East-West Connector Road, South Putt to Route 208 137
Figure 52: Typical Cross-Section of Proposed East-West Connector 138
Figure 53: General Park and Ride Locations along State Route Portals to New Paltz 139
Figure 54: Concept of a Main Street Circulator Local Transit Route 147

LIST OF TABLES

Table 1: Members of the Citizens Advisory Committee (CAC) 4
Table 2: Members of the Technical Review Committee (TRC) 4
Table 3: Summary of Project Committee Meetings During Phase B of the Project 5
Table 4: Calibration Measures of the New Paltz Transportation-Land Use Model 16
Table 5: Projected Growth within Each Growth Center By 2025 27
Table 6: Proposed Density Schedule 28
Table 7: Municipal Sewer Demand for Projected Growth in 4 Growth Centers (gallons per day) 29

Table 8: Functional Classes of New Paltz Roads and Streets, and Associated Jurisdiction 32
Table 9: Recommended Driveway Distance from an Intersection 40
Table 10: Driveway Spacing for Different Speed Limits 40
Table 11: Combined Land Use-Transportation Improvement Scenarios Evaluated in Phase B 56
Table 12: PM Peak Hour Person Trips and Walk/Bike Mode Share 57
Table 13: Percent Mean Time Delay for Future Scenarios (2025) 57
Table 14: Estimated East-West Travel Time on Route 299 for Future Scenarios 58
Table 15: Estimated Neighborhood Traffic Index Scenarios 59
Table 16: Summary Table and Ranking of the Future Scenarios 59
Table 17: Evaluation Form Used at Public Meeting 3 61
Table 18: Public Scenario Rankings 67
Table 19: CAC Evaluation of Future Scenarios 71
Table 20: Ranking of Transportation Scenarios According to3 Methods of Ranking 72
Table 21: Driveway Spacing for Different Speed Limits 76
Table 22: Recommended Corner Clearance for Commercial Uses 77
Table 23: List of Recommended Short-Term Parking Zones 80
Table 24: List of Recommended Medium-Term Parking Areas 80
Table 25: Existing and Recommended Schedule C 86
Table 26: Potential Revenue Sources and Expenditures, Transportation Demand Management Fund 87
Table 27: Recommended Base Capacity Improvements 91
Table 28: Short-Term Projects, Village Core 94
Table 29: Different Crosswalk Treatments 96
Table 30: Short-Term Projects, Central Main Street Growth Center 97
Table 31: Short-Term Projects, Route 32 North Growth Center 99
Table 32: Short-Term Projects, Route 32 South Growth Center 100
Table 33: Short-Term Projects, Other Areas of New Paltz 106
Table 34: Traffic Control Options at 4 Portal Intersections 107
Table 35: Level of Service at the Main/Manheim Intersection, 2005 and Estimated 2025 with One Way System Improvements and Conventional Improvements 108

Table 36: : Level of Service at the Main/Chestnut Intersection, 2005 and Estimated 2025 with One Way System Improvements and Conventional Improvements 108
Table 37: Mid-Term Improvements, Village Core 112
Table 38: Summary of Mid-Term Improvements, Central Main Street Growth Center 118
Table 39: Qualitative Advantages and Disadvantages of 3 Different Roundabout Locations 121
Table 40: Summary of Mid-Term Improvements, Route 32 North Growth Center 123
Table 41: Mid-Term Improvements, Route 32 South Growth Center 123
Table 42: Roadway Segments Recommended for Shoulder Improvements 127
Table 43: Mid-Term Improvements, Other Areas 128
Table 44: Long-Term Projects, Village Core 134
Table 45: Design Criteria for the East-West Connector 136
Table 46: Long-Term Improvements, Route 32 South Growth Center 138
Table 47: Recommended Park and Ride Lots, Functions, Location, Partners, and Size 140
Table 48: Long-Term Improvements, Other Areas of New Paltz 142
Table 49: Priority Rankings of Recommended Mid-Term Improvements 143
Table 50: Priority Rankings of Recommended Long-Term Improvements 144

ACKNOWLEDGEMENTS

The New Paltz Transportation-Land Use Project has been conducted over a 3 year period, 2003 – 2006, and has involved hundreds of New Paltz residents. Significant leadership on this project was provided by Supervisors Toni Hokanson and Don Wilen, Mayor Jason West, and by Gail Gallerie, chair of the CAC. The following New Paltz residents deserve special recognition for their energy and vision:

Citizens Advisory Committee

Gail Gallerie, Chair

Alan Bowdery

David Clouser

George Danskin

Steve Greenfield

Sheila Hamilton

Toni Hokanson, Town Supervisor

Don Kerr

Joyce Minard

David Porter

Sally Rhoads

Maureen Rogers

Maureen Ryan

Mark Sherman

Alan Stout

Ron Suits

Bob Taylor

Al Wegener

Chris White

Jason West, Village Mayor

Shelly Wright

The New York State Department of Transportation and the Ulster County Transportation Council provided ongoing technical and managerial guidance throughout the Project. Thanks specifically go to Tom Weiner, Akhter Shareef, and Russell Robbins of NYSDOT and to Dennis Doyle and Bill Tobin of UCTC

EXECUTIVE SUMMARY

The New Paltz Transportation/Land Use Project arose from discussions about traffic congestion in town. For many years people in New Paltz have considered a new roadway connecting South Putt Corners Road with Route 32 and Route 208 in the southerly section of Town as a possible source of congestion relief to Main Street. Through the 1990s, there continued to be strong interest in the southern connector on the part of the Town and Village, and SUNY-New Paltz.

In response to this interest, the New York State Department of Transportation (NYSDOT) agreed to fund a formal study entirely from state and federal funds. NYSDOT stipulated that the resulting project must:

- be comprehensive in its review of transportation and land use;
- be multimodal;
- be able to test the long-term impacts of any major transportation improvements, including a formal evaluation of the east-west connector; and,
- allow for conceptual engineering of any major improvements that are advanced by the project and embraced by the Town and Village.

The project's scope also required that a full analysis of the East-West Connector be conducted. This analysis has been completed and does not conclude that a full East-West Connector (South Putt – Route 32 – Route 208) would effectively address Main Street congestion. The project does recommend that a partial East-West Connector (South Putt – Route 32) be constructed. This recommendation is primarily justified as its supports the development of a future growth center in New Paltz (see Section 5.5.4).

The project has engaged the public throughout all phases of the work through 3 project committees: the Citizen Advisory Committee (CAC) the Technical Review Committee (TRC), and the Bicycle/Pedestrian Committee. The formal public outreach process has been complemented by a series of 4 public meetings, 4 project newsletters, and a project website (www.newpaltztransportation.com). Scores of meetings with individual stakeholders have occurred over the course of the project. The Project has indeed been guided by the input received through these many sources. Of particular importance has been the role of the CAC as a key advisor to the project consultant.

To assist in evaluating alternative transportation improvements, particularly those improvements affecting vehicle mobility, an integrated land use-transportation model has been developed. The model is the central analytical tool for estimating future PM peak hour travel. The model's output tells us how vehicle traffic will change in the future, giving the Project a consistent foundation for comparing alternative transportation improvements.

The transportation-land use model provides of view of travel conditions in 2025, the Project's time horizon. The modeling performed for this Project shows a variety of transportation futures that are directly dependent on the development pattern that occurs over the next 20 years. Projected growth in housing and jobs will lead to increases in travel demand that the existing transportation infrastructure

cannot accommodate without severe and system-wide congestion. This view of future travel will be exacerbated if the growth patterns that have prevailed in New Paltz over the past 30 years are allowed to continue into the future. A development pattern characterized by sprawl can only lead to increased reliance on automobiles, longer travel times for all types of automobile travel, and excessive congestion spilling over into what are today considered off peak hours.

Base transportation improvements will be necessary no matter what land use future New Paltz pursues (see Table 27).

The need for major improvements can be minimized, however, by concentrating future growth in areas currently served by municipal sewer and water services. Ongoing land use planning initiatives within New Paltz, occurring outside of, but simultaneous with, this Project, advocate a future development pattern based on 7 growth centers (see Figure 8). Concentrating future growth reduces the need for expensive transportation fixes because it increases the viability of non-automobile travel. Zoning changes enabling greater densities will be necessary to achieve this concentrated land use pattern.

This is a key insight into the land use-transportation connection. **The most effective and least expensive means to combat congestion is to concentrate development, thereby converting vehicle trips to pedestrian trips.** Investments in facilities for pedestrians, cyclists, and transit service are a necessary complement to a concentrated land use pattern.

To serve the multi-modal mobility and safety needs associated with the future desired land use pattern, the Project has recommended scores of short-term improvements which can be implemented over the next 5 years. These improvements include: construction of new sidewalks, designation of new crosswalks, improvements to street crossings of the Rail Trail, widespread provision of bicycle racks, improvements to signing and striping, and traffic signal optimization. Notable short-term improvements are listed in the following table:

Short-Term Improvements (0-5 years)

Categorized Short-Term Improvements	Cost Estimate	Growth Center
Sidewalks/Multi-Use Paths		
Water Street (Main to Mohonk)	$39,000	Village Core
Mohonk (Water to Chestnut)	$60,000	Village Core
Route 32 (east side, Orchard to SUNY Commuter Lot)	$32,500	Central Main Street
Plattekill Ave. (Maiden Lane to Rt. 32)	$26,000	Central Main Street
HW DuBois (south side, Prospect to North Putt)	$178,750	Route 32 North
Route 32 North (east side, My Market to Sunset Ridge Road)	$34,100	Route 32 North
Sunset Ridge Road (Rt. 32 to Duzine School)	$117,000	Route 32 North
Route 32 North (west side from Village Pizza to crosswalk near Town Hall)	$58,000	Route 32 North
Construct multiuse path parallel to South Putt Rd. from Rt. 299 to New Paltz High School	$1,008,000	Route 32 South
Crosswalks		
Main/Church with bulbout, Chestnut/Mohonk, Chestnut/Southside, Church/Front, Huguenot/Main, Hasbrouck/Tricor, Plattekill/S. Oakwood	$19,500	Village Core
from New Paltz Middle School to west side of Route 32; mid-block crossing on Main Street by Teen Scene (including bulb-outs)	$13,000	Central Main Street
Rt. 32/HW DuBois, Rt. 32/Bonticouview (by My Market)	$4,000	Route 32 North
Rail Trail		
Upgrade street crossings @Main Street, Water Street, Plains Road, North Front Street, Mulberry Street, Cedar Lane, Huguenot Street	$35,000	Village Core
Transit		
Transit: One Year Trial Main Street Circulator Transit Route	$350,000	Village Core/Central Main Street
Roadway/Intersection Improvements		
Optimize traffic signal timings at 6 signalized intersections/coordinate where appropriate.	$35,000	Village Core
Intersection Reconstruction: Route 32/Shivertown (signalize, add NB Right Turn Lane, SB Left Turn Lane)	$475,000	Route 32 North
Intersection Reconstruction: Route 32/HW DuBois	475000	Route 32 North
Construct miniroundabouts on HW DuBois at Manheim and Prospect; remove remaining stop signs on HW DuBois (contingent on constructing sidewalk).	$50,000	Other
Policy		Town-Wide
Establish Project Implementation Committee	-	
Advance zoning recommendations including Growth Center zoning and downzoning of areas outside of Growth Centers through: increasing minimum lot size; establishing Conservation Overlay Districts, purchase of development rights; and establishing a Transfer of Development Rights program.	-	
Implement new parking wayfinding system; implement new parking program; install new parking payment system (meters or pay on foot) at municipal lots; implement new fee structure.	$27,500	
Adopt Access Management Overlay District into Town & Village Code; begin access management changes within normal planning/permitting process.	$10,000	
Adopt sidewalk Master Plan and appropriate language within Town and Village zoning ordinances to strengthen sidewalk construction as transportation impact mitigation.	$2,500	
Establish Sidewalk Construction and Maintenance Fund in Village	-	
Establish Transportation Demand Management Fund	$10,000	
Design Studies		
Corridor Design: conduct corridor (HW DuBois to Old Kingston Road) road design study to establish streetscape vernacular, landscaping, on-street parking zones, etc.	$27,500	Route 32 North
Corridor Design: conduct corridor (Southside Loop at SUNY to South Putt) road design study to establish streetscape vernacular, landscaping, etc.	$10,000	Route 32 South
System Design: One Way Street System Study	$50,000	Village Core/Central Main Street

The Project recommends 15 separate mid-term transportation improvements (5-12 years). These include:

	Schedule of Mid-Term Improvements	Order of Magnitude Cost Estimate*	Growth Center
Mid-Term Improvements (5-12 years)	Sidewalks along Route 32 west side, to be developed as land use changes occur in the growth center.	$78,900	Route 32 North
	One Way Street System: westbound on Main Street from Manheim to Chestnut; eastbound on Hasbrouck/Plattekill from Chestnut to Rt. 32.	$1,375,000	Village Core
	Roundabout, Route 32/Sunset Ridge Road/Re-aligned Old Kingston Road	$500,000	Route 32 North
	Install transit shelters and transit information kiosks, Main Street/Route 299	$60,000	Village Core
	Pedestrian Bridge over Wallkill River	$1,200,000	Other
	Construct multi-use path parallel to North Putt from Route 299 to Shivertown Road.	$1,092,000	NYSDOT
	Intersection Reconstruction, Route 32/Plattekill (northbound left turn lane, southbound right turn lane; upgrade intersection control (signal or roundabout)	$400,000-$625,000	Central Main Street
	Establish/extend Hudson Valley Trailway through New Paltz	$2,000,000	Other
	Establish a Bicycle Lane on Route 208 associated with re-paving project.	$465,100	NYSDOT
	Establish 4' paved, striped shoulders on Route 32 South associated with repaving project	$632,016	Route 32 South
	Implement Left Turn Lanes on Route 299, westbound at Joayln; eastbound at Duzine; westbound at Eckerd's Plaza entrance.Install raised median.	$60,000	Central Main Street
	Road shoulder improvements, Selected Roadway Segments in New Paltz	$1,188,000	UCTC
	Intersection Reconstruction, Main/Manheim	$400,000-$750,000	Central Main Street
	Northbound Left Turn Lane, North Putt/HW DuBois	$80,000	Other
	Develop a formal vehicle pull-off area immediately west of the Wallkill River proximate to the intersection of Route 299/Springtown Road. Pulloff area should include information resources for Shawangunk Scenic Byway and cultural and natural history interp	$50,000	Other

The Project recommends 8 long-term transportation improvements (12+ years):

	Prioritized Long-Term Improvements	Order of Magnitude Cost Estimate*	Growth Center
Long-Term Improvements (12+ years)	Develop Multi-Modal Transportation Center	$3,000,000	Village Core
	Wallkill River Bridge reconstruction and reconstruction of Main/Water/Huguenot intersection	$8,419,900	Village Core
	Construct partial EW Connector, S. Putt to Route 32; includes parallel multi-use path.	$4,950,000	Route 32 South
	Intersection Reconstruction, Route 299/Thruway Access. Requiresdouble northbound right turn lane. Double lane roundabout should be considered as control alternative	$3,000,000	Other
	Establish Park and Ride System	$272,500	Other
	Intersection Reconstruction, Route 299/Ohioville. Requires northbound left turn lane and additional storage for westbound left turn. Add pedestrian hardware for Trailway crossing.	$2,500,000	Other
	Intersection Reconstruction, Route 299/Putt Corners. Requires northbound right turn lane and double westbound left turn lanes.	$2,500,000	Other
	Reconstruct Main/Chestnut intersection for increased turning capacity (northbound left turn, add'l westbound lane); signal hardware and timing improvements	$4,000,000	Village Core

Eight significant policy recommendations are also set forth. These include programmatic to the Village's parking management within the commercial core. Zoning recommendations will lead to denser, mixed land uses in seven identified growth centers, while also reducing development densities and pressures outside of these growth centers. Access Management overlay zoning is also recommended along New Paltz's state highways to guide development in a way that preserves the safety and capacity of New Paltz's transportation infrastructure. In spanning all modes of travel over the short and long term, the scope of these recommendations is ambitious and will take tremendous leadership to carry out. A key short-term recommendation is the formation of a Project Implementation Committee to advance these projects.

The recommendations described herein represent a common vision about how New Paltz should evolve in the future, supported by a wealth of field investigation and research to determine the best mix of transportation improvements for meeting future travel needs of New Paltz citizens.

1.0 INTRODUCTION

The New Paltz Transportation-Land Use project (the "Project") has 3 phases:

- Phase A – Existing Conditions, final report issued in March 2005.
- Phase B – Future Growth Scenarios, final report issued in June 2006
- Phase C – Future Development/Transportation Plan Recommendations

The Phase C Final Report is the culmination of a 3 year investigation. In this document, over 100 transportation improvements are set forth that can be implemented by New Paltz within the next 5 years. In addition, over 25 mid- to long-term transportation improvements are recommended.

Taken in total, the recommendations set forth in this document serve a future land use vision that has been clearly and repeatedly enunciated by New Paltz residents. The core components of that land use vision are:

- Concentrate future development in areas currently served by municipal water and sewer.
- Protect lands and natural values for that portion of New Paltz west of the Wallkill River.

These transportation improvement recommendations represent all modes of travel, including dozens of specific investments in pedestrian and bicycle facilities and a variety of local transit options. Recommendations encompass policy changes that will enable New Paltz to manage its parking more effectively and to guide development in a way that preserves the safety and capacity of New Paltz's transportation infrastructure. In spanning all modes of travel over the short and long term, the scope of these recommendations is ambitious and will take tremendous leadership to carry out. Indeed, one of the key short-term recommendations is the formation of a standing committee charged with advancing these projects.

Thus, the recommendations described herein represent a combination of common vision about how New Paltz should evolve in the future, coupled with a wealth of field investigation and research to determine the best mix of transportation improvements for meeting future travel needs of New Paltz citizens.

1.1 PROJECT ORIGIN

The New Paltz Transportation/Land Use Project arose from discussions about traffic congestion in town. For many years people in New Paltz have considered a new roadway connecting South Putt Corners Road with Route 32 and Route 208 in the southerly section of Town as a possible source of congestion relief to Main Street. A transportation study conducted for the town in 1974[1] described such a

[1] Traffic Study for New Paltz, New York. Ulster County Planning Board. 1974.

roadway as an "Alternative Immediate Connector," and showed an extension of the roadway westerly on a new bridge over the Wallkill River.

The idea of a southern connector roadway surfaced again in 1996, when Town of New Paltz officials met with SUNY officials to discuss concerns over traffic associated with a then proposed Field House Project. This project was larger in scale and different in function from the Center that SUNY ultimately proposed and which opened in 2006. In 1996, however, SUNY and the Town felt traffic issues were acute enough to warrant a serious look at a southerly connector. There was a consensus reached between key private property owners, SUNY, and the Town regarding the general concept and location of the connector.

The Town, Village, SUNY, and the State University Construction Fund sent letters to NYSDOT in support of the southern connector roadway project. In May 1997, NYSDOT expressed their interest in supporting the project and in expediting a Design Study of the roadway.

In 1998, SUNY canceled the Field House project and began re-defining the project. Due to this change in plans, NYSDOT postponed the Design Study and the project became dormant. In mid-1999 the Town and Village re-initiated contact with SUNY and with the NYS Department of Transportation Region 8 Planning and Program Management Group. There continued to be strong interest in the southern connector on the part of SUNY, and the Town and Village emphasized their continuing and growing concerns about Main Street congestion and in the potential for relief that a southern connector might promise.

NYSDOT agreed that a formal study should be initiated, but that the study should not only focus on the impacts of a southern connector. According to NYSDOT the new study should:

- be comprehensive in its review of transportation and land use;
- be multimodal;
- be able to test the long-term impacts of any major transportation improvements; and,
- allow for preliminary engineering of any major improvements that are advanced by the project and embraced by the Town and Village.

Further, the project must engage the public throughout all phases of the work. NYSDOT agreed to finance the project entirely from state and federal funds.

From the origins of the project described above emerged an Initial Project Proposal (IPP),[1] which is a formal statement of need developed by NYSDOT. The IPP described the problem as follows:

"Traffic congestion is a significant problem on Route 299 in both the Town and the Village of New Paltz. This congestion is the result of:

- Route 299 being the only east/west thoroughfare;

[1] The Initial Project Proposal is provided in Appendix A.

- The presence of SUNY New Paltz College;
- Major recreational attractions located west of New Paltz;
- The New York State Thruway interchange with Route 299 just east of the Village of New Paltz; and,
- The Village of New Paltz is a major local destination for commercial activity and increasing residential development and commuter traffic. There are both weekday peak period and weekend shopping and recreational peak congestion."

The IPP describes the project objective as "prepar(ing) a *Sustainable Development Plan* for New Paltz that includes a combination of land use and multi-modal transportation improvement recommendations that are acceptable to the Town of New Paltz, the Village of New Paltz, Ulster County, and NYSDOT." The *Sustainable Development Plan* has taken on the formal name: "New Paltz Transportation/Land Use Project" ("the Project"). This Project will:

- study existing transportation conditions (Phase A),
- identify present and future transportation demand (Phases A and B),
- formulate, analyze, and evaluate alternative transportation solutions (Phases B and C), and
- develop short and long term improvement programs for a comprehensive area improvement plan including both land use and transportation improvement components (Phase C).

The Project includes developing an integrated transportation-land use model to evaluate land use and transportation alternatives, a macro-level inventory of key environmental constraints, and an extensive public participation program. This effort was guided by a scope of work established by the Town of New Paltz with the New York State Department of Transportation (NYSDOT) in 2003. This scope of work is attached as Appendix B

1.2 SUMMARY OF PUBLIC OUTREACH EFFORTS

An ongoing public outreach plan has been implemented through 2 project committees (the Citizen Advisory Committee (CAC) and the Technical Review Committee (TRC)), a series of public meetings, project newsletters, and a project website (www.newpaltztransportation.com). Members of the CAC are shown in Table 1; members of the TRC are shown in Table 2.

Table 1: Members of the Citizens Advisory Committee (CAC)

Member	Affiliation
Charles Andola	New Paltz Rescue Squad
Allan Bowdery	Citizen, Walkill Valley Land Trust
David Clouser	Town of New Paltz Engineer
George Danskin	Chair of Village Planning Board
Gail Gallerie	CAC Chair
Steve Greenfield	New Paltz Fire Department
Sheila Hamilton	Citizen
Johan Hedlund	Citizen
Toni Hokanson	New Paltz Town Supervisor
Don Kerr	New Paltz Central School District Board Member
Joyce Minard	Executive Director, New Paltz Chamber of Commerce
Mike Moriello	Land Use Attorney, Farmer
David Porter	AFFIRM
Sally Rhoads	President, New Paltz Library
Maureen Rogers	Member, EnCC
Maureen Ryan	New Paltz Central School District
Akhter Shareef	NYSDOT
Mark Sherman	Former Town Council, Member Public Safety Task Force
Alan Stout	Chair of the BP Committee
Ron Suits	New Paltz Central School District
Pete Talaferro	Farmer
Bob Taylor	President, Walkill Valley Land Trust
Kevin Van Buren	Engineer, Citizen
Laura Walls	Public Participation Specialist, Patterns for Progress
Al Wegener	Executive Director, Shawangunk Scenic Byway Project
Jason West	Mayor, New Paltz Village
Shelly Wright	SUNY
Raymond Zappone	Chief of Police, Town of New Paltz

Table 2: Members of the Technical Review Committee (TRC)

Member	Affiliation
Akhter Shareef	NYSDOT
John Shupe	SUNY New Paltz Facilities and Planning
Bill Tobin	Ulster County Transportation Council
David Clouser	Co-chair of the TRC, Town Engineer, Town of New Paltz
Dennis Doyle	Planning Director, Ulster County Transportation Council
Toni Hokanson	Town Supervisor, Town of New Paltz
Jack Hohman	NY State Thruway Authority
Maureen Ryan	New Paltz Central School District
Russell Robbins	NYSDOT
Tom Weiner	Co-chair of the TRC, NYSDOT, New Paltz resident

In addition, a third project committee, the Bicycle/Pedestrian Committee ("BP Committee"), has been active in evaluating bicycle and pedestrian issues in New Paltz (http://www.newpaltztransportation.com/bpcschedule.htm). They have issued a final report summarizing their efforts and recommendations, which is included in this document as Appendix C. In 2006 the BP Committee became a standing committee of the town and Village of New Paltz.

Table 3: Summary of Project Committee Meetings During Phase B of the Project

Date	Meeting	Objective	Meeting Minutes/Presentation
29 June 2004	TRC	Discussion of future growth rates; potential transportation improvements.	http://www.newpaltztransportation.com/TRCMeeting2.htm; http://www.newpaltztransportation.com/TRC6-29-04.pdf
19 November 2004	TRC	Discuss memorandum on Land Use Futures.	http://www.newpaltztransportation.com/TRCMeeting3.htm; http://www.newpaltztransportation.com/New%20Downloads/TRC11-19-04.pdf
6 December 2004	CAC	Summarize Phase A; Introduce Phase B.	http://www.newpaltztransportation.com/CAC12-14-04.pdf
23 May 2005	CAC	Discussion of future travel/land use modeling.	http://www.newpaltztransportation.com/may23cacminutes.htm
23 May 2005	TRC	Identification of future transportation improvements.	http://www.newpaltztransportation.com/may23trcminutes.htm
26 Sept 2005	Public Meeting 3	Presentation of future combined land use/transportation scenarios.	http://www.newpaltztransportation.com/PIMeeting3.htm;
29 March 2006	CAC	Review, discuss, and decide on which Transportation/Land Use alternatives to evaluate within Phase C	Minutes attached as Appendix D.
26 Sept 2006	CAC	Discuss/critique Draft Phase C Report	

Special meetings were also held with the Town and Village Boards (28 July and 3 August, 2005, respectively), with the Planning Boards of both the Town and Village (9, 10 January 2006, respectively), and with SUNY President Steven Poskanzer (12 July 2006) for the purpose of providing a status report on the Project and gaining input.

The final public meeting was held on 2 separate dates, 19 and 21 October 2006 for the purposes of communicating the key findings of the Project.

The Project is overseen be a Management Team comprised of the following members:

- Town Supervisor Toni Hokanson
- Village Mayor Jason West
- Gail Gallerie, Chair of the Citizens Advisory Committee
- Dave Clouser, Town Engineer, Co-Chair of the Technical Review Committee
- Akhter Shareef, NYSDOT
- Tom Weiner, NYSDOT, Co-Chair of the Technical Review Committee
- Russell Robbins, NYSDOT

The Management Team works closely with the project consultant and reviews all work products before they are submitted to the public. The Management Team has a standing meeting each month to review the project status and make decisions regarding schedule and scope of work.

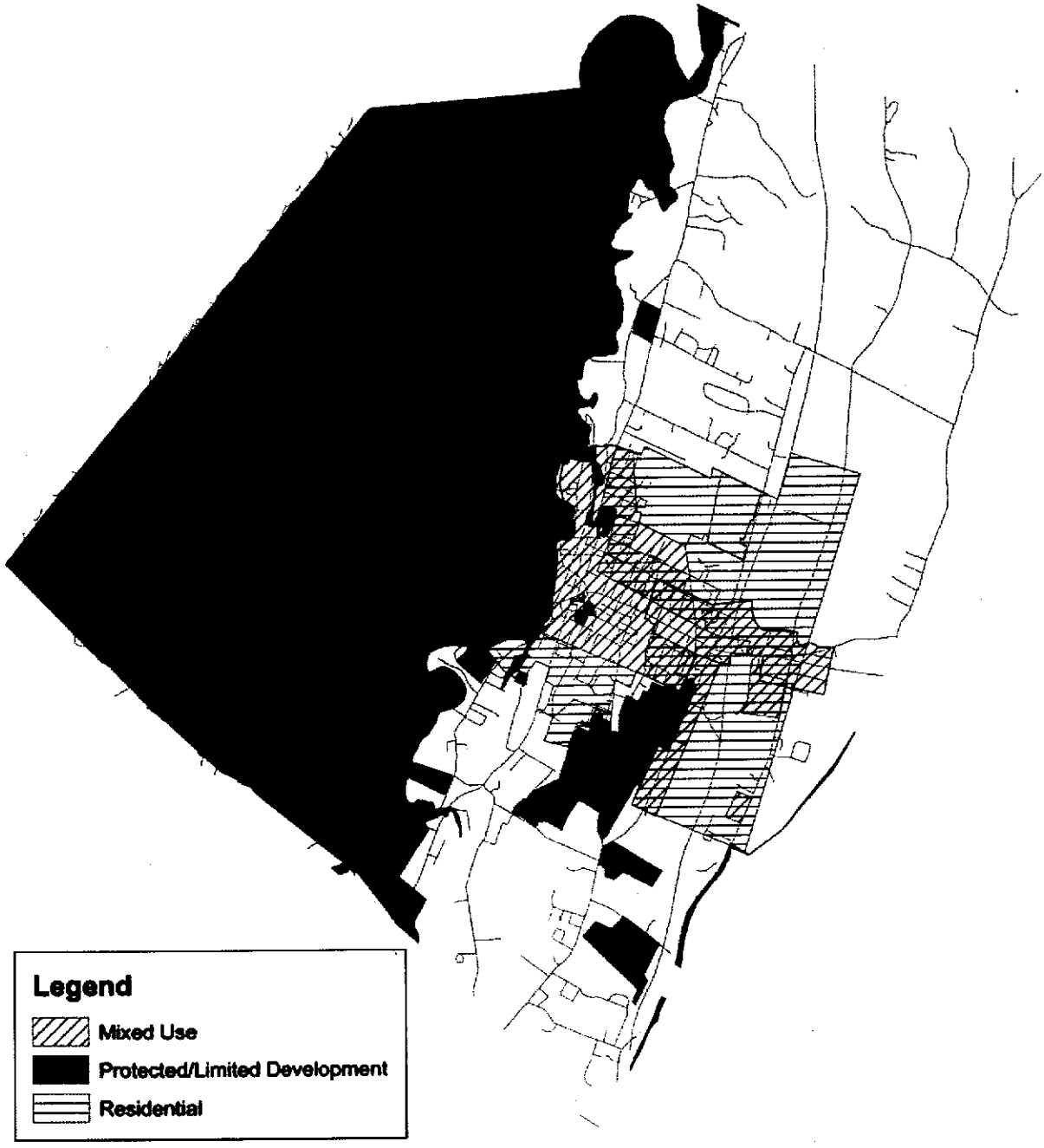
1.3 GOALS AND OBJECTIVES EXPRESSED IN THE PUBLIC OUTREACH PROCESS

From a land use standpoint, there are two issues that have achieved recurring endorsement throughout the Project at public meetings and meetings of the Project's Citizen Advisory Committee:

1. Future development should be focused within areas served by municipal water and sewer.
2. Land west of the Wallkill River should be maintained as open space to the maximum extent possible.

These two points of consensus are illustrated in Figure 1, which is a general land use map developed by participants during the first two public meetings in April 2004

Figure 1: Future Land Use Map Developed by New Paltz Residents at Project Meetings



The future land use patterns formally evaluated within the Project's Phase B effort – High Concentration and Route 32 Mixed Use -- are largely consistent with the pattern shown in Figure 1. The highest

concentration of existing commercial development is currently served by Municipal Water and Sewer located primarily in the Village of New Paltz and along the NYS 299 corridor east of the Village. At present, approximately 55% of New Paltz's housing is served by municipal sewer.

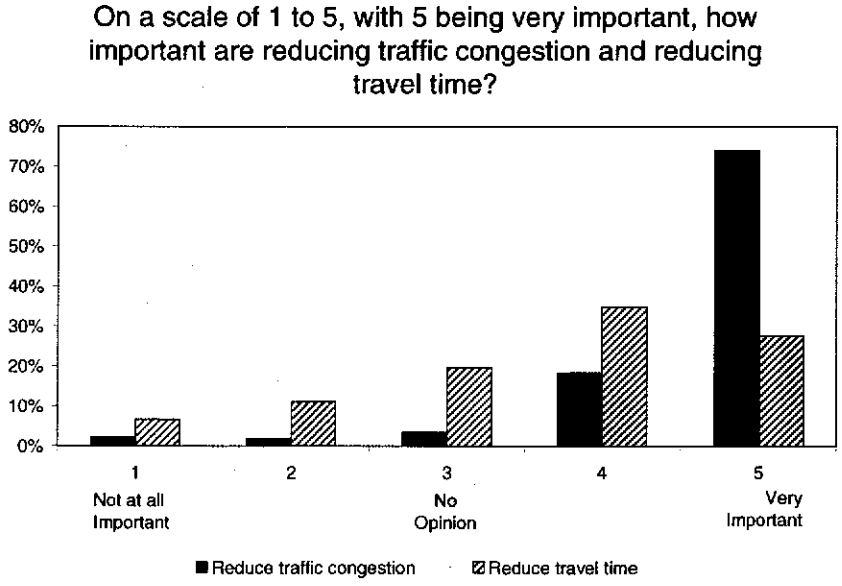
However, over the past 35 years, the majority (70%) of new residential development has occurred outside the Village limits. This recent historic growth pattern is counter to that many New Paltz residents have voiced over the course of the Project, and is not consistent with goals and objectives articulated in other important plans and initiatives, described in Section 1.3.2.

1.3.1 Transportation Objectives in New Paltz

To serve the travel safety and mobility needs associated with this future land use vision, the public and CAC endorsed a multimodal approach, incorporating improved bicycle/pedestrian facilities, local transit service, and spot intersection improvements such as lane additions and signalization.

Responses from New Paltz residents to a household survey conducted in October 2003 are generally supportive of this approach to transportation improvements.[1] Survey participants were asked to rank ten local transportation priorities on importance, on a scale from 1 to 5, with 5 being very important. The issue of greatest importance to New Paltz residents is congestion. 552 households rated reducing traffic congestion as being very important, the highest of all priorities (Figure 2).

Figure 2: Importance of Traffic Congestion

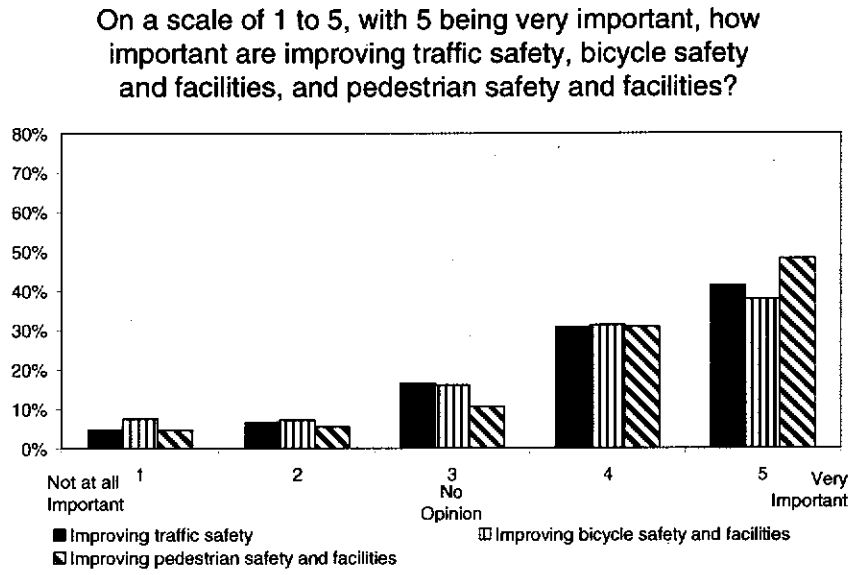


[1] A total of 886 respondent households completed this survey, or 20% of the New Paltz household population. Details on survey methods and a complete analysis are provided in the Project's Phase A report.

The household survey gave strong direction for improving the mobility and safety of automobile travel in and around New Paltz. Automobile travel is the predominant mode of travel accounts for over 85% of the PM peak hour travel in New Paltz. Chronic congestion in New Paltz is perceived as a major inconvenience and nuisance, and has caused many people to modify their travel behavior by choosing not to travel, changing their departure times, and changing their travel routes.

The issue with the second highest average (4.1) and ranking of very important (358) is improving pedestrian safety and related issues (Figure 3).

Figure 3: Importance of Improving Bicycle/Pedestrian Safety



Open ended comments provided by survey respondents give further direction to the Project with regard to pedestrian improvements. For example, over 140 household respondents (out of 886 completed surveys) had comments supporting improvements to the Rail Trail and other path improvements including better access and linkages to public facilities (such as schools), safer crossing locations, safe pedestrian and bicycle mobility associated with the major roads in New Paltz (i.e. Route 299 and Route 32), paved shoulders on major roadways, benches for resting, improved drainage, and improved personal security.

1.3.2 Related Significant Plans and Initiatives in New Paltz

Several other initiatives and established plans are generally aligned with these two major points of consensus, including:

- The Town of New Paltz Comprehensive Master Plan (1995)
- The Village of New Paltz Comprehensive Master Plan (1994)

- The New Paltz Open Space Plan (2006)
- The Shawangunk Scenic Byway Plan (2006)

The Town of New Paltz Comprehensive Master Plan

The first five objectives listed in the Town of New Paltz Comprehensive Plan (1995) reinforce the 2 points of consensus developed within the Project. The relevant Comprehensive Plan objectives are[1]:

1. Preserve and enhance the natural beauty and rural quality of the community and protect the small-town atmosphere of the Village core.
2. Protect environmentally sensitive areas and natural resources, scenic roads and vistas, waterways, floodplain and wetlands by establishing guidelines and regulating development density.
3. Establish environmentally sound land use development policies to ensure a balanced and orderly pattern of future growth and economic stability, with regard to the community's fiscal base, including the protection of farmland.
4. Accommodate present and future population by encouraging the development of an appropriate variety and quantity of sound housing which will serve various income levels and age groups, including low and moderate income housing.
5. Encourage higher density development to locate in areas served by public water and sewer facilities.

The Village of New Paltz Comprehensive Master Plan

The Village of New Paltz Comprehensive Master Plan (1994) expresses 9 goals, several of which are directly supportive of the Project's points of consensus, as follows:

[1] Objectives 6-10 of the Comprehensive Plan are: Foster and preserve the community's heritage by protecting historic structures and sites; provide adequate public utilities and recreation facilities, and minimize the fiscal burden of such services on the existing community; seek by all reasonable means to provide better traffic conditions and adequate parking in the center of the community and encourage circulation within secondary networks; promote environmentally sound management of the waste stream.; and, encourage regional cooperation to safeguard New Paltz's environmental setting.

- Protect and enhance the drawing power of the Village's commercial and historic areas.
- Ease traffic congestion within the Village, which impedes its successful functioning, without spoiling physical and visual amenities.
- Protect the natural environment by linking zoning regulations to site capability.
- Protect visually attractive land and strengthen scenic views.
- Provide a broad range of housing options for present and future Village residents including families with children, students and young people, the elderly, and persons who earn less than the median income.
- Provide Municipal facilities and services that will meet residents' basic needs and improve opportunities for community activities.
- Make the downtown core a dominant feature of the region by enhancing it as the center for commercial, governmental, and cultural activities.

The New Paltz Open Space Plan

Regarding the maintenance of open space west of the Wallkill River, the large green area in Figure 1 is broadly representative of the area where open space protection and significantly lower density development is desired. This consensus is further reinforced in the work of the New Paltz Open Space Committee, whose community open space vision is illustrated in Figure 4.

The Open Space Vision describes 3 resource areas west of the Wallkill River:

1. Wallkill Flats and River Corridor, with a conservation milestone of 500 additional acres.
2. Butterville-Canaan Foothills, with a conservation milestone of 500 additional acres.
3. Shawangunk Ridge, with a conservation milestone of 500 additional acres.

At present approximately 3800 acres of land west of the Wallkill River is permanently protected.

Figure 4: New Paltz Community Open Space Vision Map

The Shawangunk Mountains Scenic Byway

Another major initiative is the designation of 82 miles of state and county roads within 9 towns and 2 villages that encircle the northern Shawangunk Mountains as a State Scenic Byway (Figure 5). The Town and Village of New Paltz are within this designated Scenic Byway area. The Town Supervisor and Village Mayor are members of the Executive Committee of the Shawangunk Mountains Regional Partnership. The Byway is represented on the Project's CAC by Al Wegener, Executive Director.

The Bill for Scenic Byway designation has, as of the writing of this report, been passed by the New York State Senate and Assembly and is awaiting the Governor's signature. Designation grants "special consideration" to the route for amenities and improvements, qualifies Byway projects for additional funding opportunities, and provides for inclusion of the Byway in the State Byway System, which involves State tourism promotion and special indication on official state highway maps.

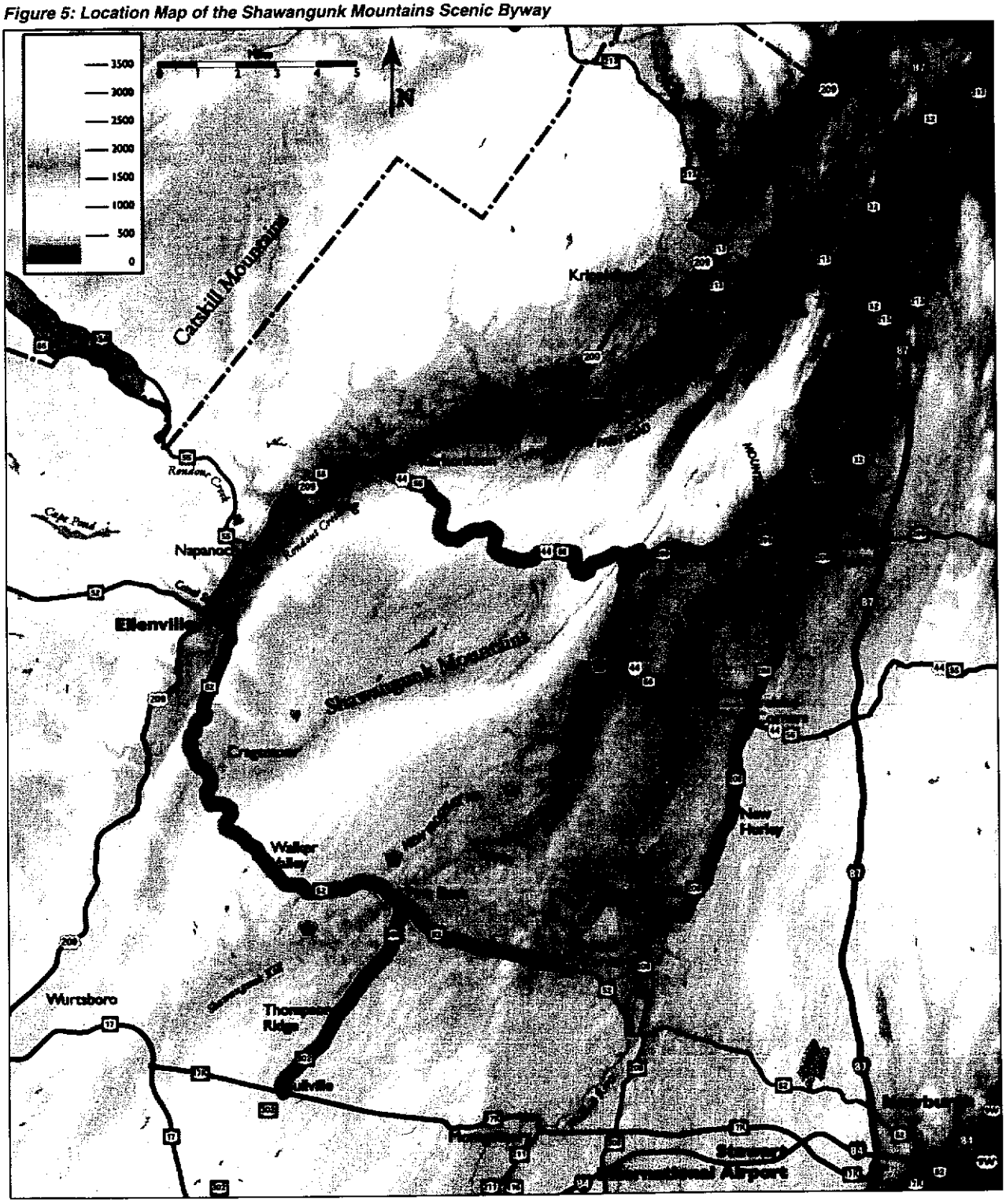
The Steering Committee for the Byway is made up of the chief elected official or official representative of each of each member municipality, and is aided by an Advisory Group, which includes county planners, community groups and land management organizations on the Shawangunk Ridge.

To achieve designation, the committee prepared an inventory of the scenic, natural, recreational and historic resources of the region that are of statewide significance. A Corridor Management Plan has been developed and formally incorporated into the Scenic Byway Committee.

A central objective of the Corridor Management Plan is to encourage the tourism which is attracted to the Region to explore beyond the Ridge, and to experience the other attractions and enjoyments in the Region. This is in order to more broadly distribute the benefits and impacts of tourism throughout the Shawangunk Mountains Region. Achieving this objective could have positive impacts on peak event/weekend traffic in New Paltz by spreading the traffic impacts over a broader area.

The Plan also emphasizes the importance of preservation of the scenic, natural, recreational and historic resources of the region and includes strategies and projects to achieve this.

Figure 5: Location Map of the Shawangunk Mountains Scenic Byway



The Transportation Plan for the Scenic Byway enumerates 11 goals:

1. Utilize consistent design of roadside features to enforce a commonality along the Byway Route.
2. Provide adequate paved shoulders along the state highways and county roads included in the Byway route.
3. Improve safety and reduce congestion by re-designing certain intersections, giving consideration to the use of roundabouts.
4. Improve landscaping along the Byway right-of-way.
5. Improve roadway design with raised instead of painted medians.
6. Upgrade the safety and attractiveness of our Main Streets.
7. Utilize access management to reduce traffic conflicts.
8. Encourage the use of bicycles throughout the Byway Region.
9. Study the possible use of a shuttle bus system between the Ridge and nearby villages/hamlets.
10. Improve handicapped access, particularly to nature areas.
11. Extend foot trails.

The Plan acknowledges the New Paltz Land Use/Transportation Project and recognizes that the Byway in New Paltz will be affected by the implementation of this plan. Many of the Byway's goals, enumerated above, are supported directly by specific recommendations advanced in this Project.

The 4 documents reviewed above – the Town and Village Master Plans, the Open Space Plan, and the Shawangunk Scenic Byway – support the two key points of consensus consistently voiced throughout the Project – 1) concentrate future development; and, 2) protect lands and natural values west of the Wallkill River. Together, the 4 documents provide a foundation for establishing land use recommendations, which is discussed in detail in Section 2.0.

1.4 NEW PALTZ TRANSPORTATION-LAND USE MODEL

The New Paltz Transportation-Land Use model is an integrated transportation simulation model that incorporates the travel effects of alternative land use patterns. The model is the central analytical tool for estimating future PM peak hour trips, which are assigned to the travel network based upon future transportation improvement assumptions (e.g. new roads or intersection improvements). The model's output tells us how vehicle traffic will change in the future, giving the Project a consistent foundation for comparing alternative transportation improvements. Specific model results are discussed in subsequent sections of this report. A complete description of the model is provided in Appendix E.

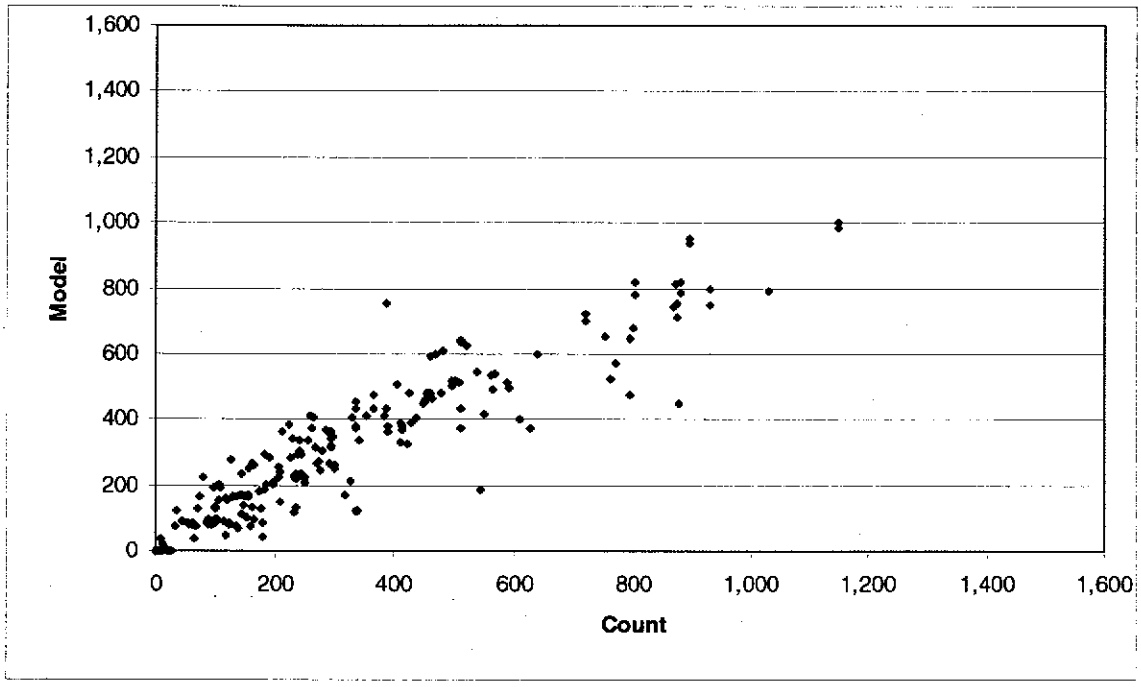
The model is calibrated to 237 traffic counts taken between April and October 2003. At present the standards applicable to calibration of travel models are set forth by FHWA.[1] Table 4 shows the calibration performance of the model.

Table 4: Calibration Measures of the New Paltz Transportation-Land Use Model

	Model Performance	Goal
Root Mean Squared Error	29%	<40%
Sum of Differences (Principal Arterials)	5%	10%
Sum of Differences (Minor Arterials)	-4%	15%
Sum of Differences (Collectors)	2%	25%
Coefficient of Correlation (r)	0.963	>= 0.88

Figure 6 shows the distribution of model output compared to actual traffic counts. A 45-degree line would represent a perfect correlation of model output against traffic counts.

Figure 6: Distribution of Traffic Counts vs. Model Output



The model meets and exceeds all calibration standards for models of this type.

[1] "Calibration and Adjustment of System Planning Models", December 1990. FHWA ED 90-015, page 35.

The future time horizon for the Project is 2025. Land use changes over the next 20 years will lead to increases in travel demand. The existing transportation infrastructure cannot accommodate future travel demand without causing severe and system-wide congestion. Base transportation improvements will be necessary no matter what land use future New Paltz pursues (see Table 27).

The need for major improvements can be minimized, however, with good land use planning that concentrates growth to the areas currently served by municipal sewer and water. Concentrating future growth reduces the need for expensive transportation fixes because it increases the viability of non-automobile travel.

The technical modeling that occurred within the Phase B portion of the Project showed that both the Route 32 Mixed Use and High Concentration land use patterns supported alternative modes of travel – walking, cycling, and transit – to a far greater degree than the historic land use development pattern (Base Case). This is a key insight into the land use-transportation connection.

Quantitatively, use of modes other than the automobile for PM peak hour travel can be expected to double under a High Concentration land use pattern when compared with the Base Case (32% of all trips vs. 16% of all trips). The Route 32 Mixed Use land use pattern supported approximately 28% of all PM peak hour trips using a mode other than automobile. **The most effective and least expensive means to combat congestion is to concentrate development, thereby converting vehicle trips to pedestrian trips.** Investments in facilities for pedestrians, cyclists, and transit service are the necessary complement to a concentrated land use pattern.

2.0 FUTURE LAND USE RECOMMENDATIONS

In order to achieve the future transportation and land use goals developed through community participation, namely multi-modal transportation and concentrated mixed use growth, a consistent set of land use and transportation recommendations that support these goals are needed. Specifying the geographic pattern of future growth guides the selection of a best set of multimodal improvements to address the travel demand generated by that land use pattern.

Within the Project's Phase B effort 3 distinct future land use patterns were formally evaluated[1]:

1. Base Case, or continuation of historic development trends.
2. Route 32 Mixed Use
3. High Concentration

The Base Case, or continuation of the growth patterns that have occurred over the past 30 years, is not a direction supported by New Paltz citizens. Within the past 30 years, 70% of new housing has been developed in areas outside of the Village, much of which is not served by municipal sewer and in densities that make transit impractical.

The other two development patterns – Route 32 Mixed Use and High Concentration – have been carried forward into Phase C due to the positive transportation impacts created by these settlement patterns. As discussed in the previous section, use of non-automobile modes can be estimated to double (when compared to a non-concentrated land use pattern) under a concentrated land use pattern.

To facilitate non-automobile travel, high levels of investment in pedestrian facilities will be necessary to serve the co-location of jobs, housing, shopping, and general commercial opportunities. The higher densities promoted by each land use pattern are also more amenable to supporting a local transit system. **The most effective and least expensive means to combat congestion is to concentrate development, thereby converting vehicle trips to pedestrian trips.**

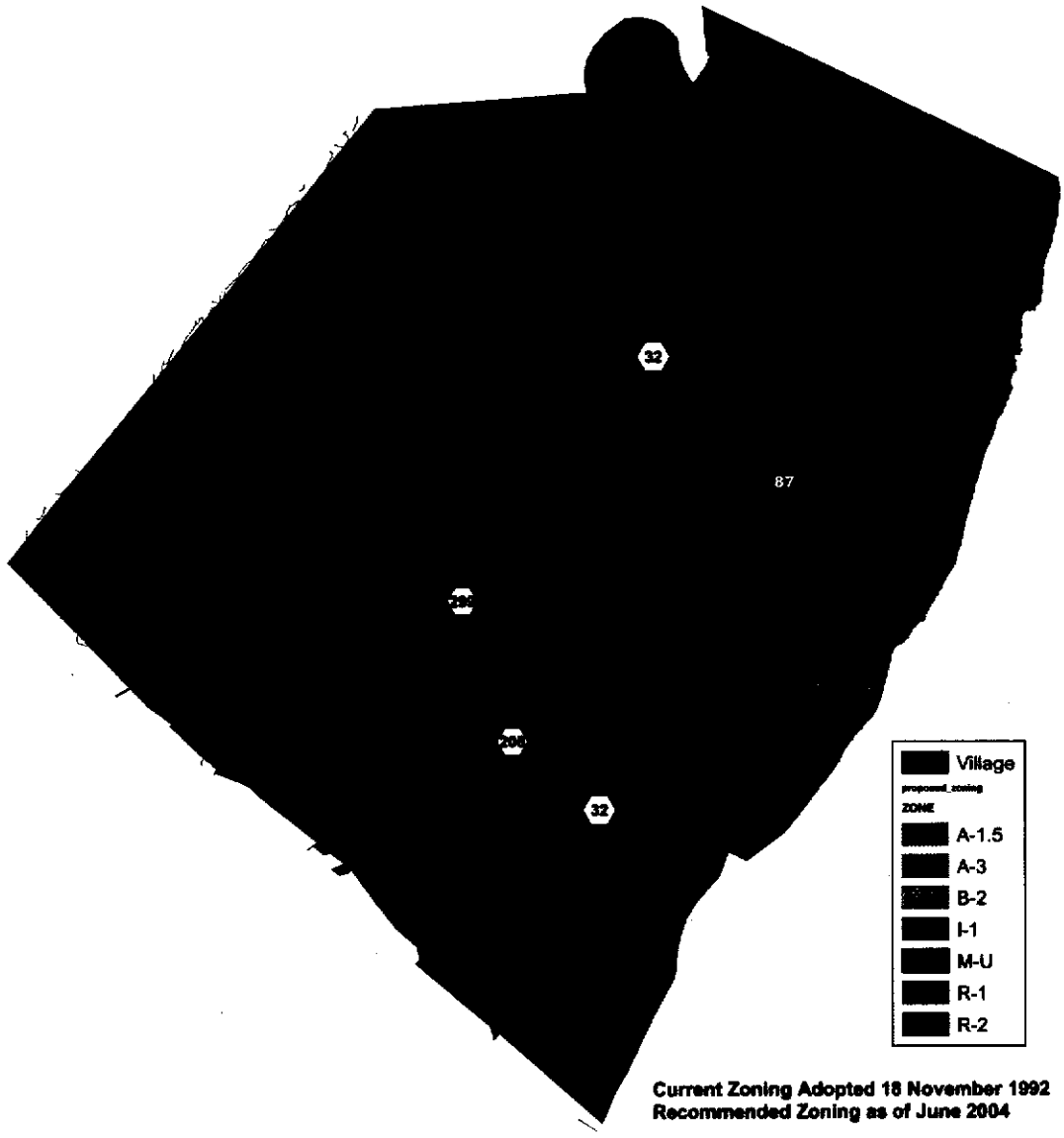
2.1 GROWTH CENTERS

In 2004 the Town of New Paltz retained the Peter J. Smith Company to assist in completing a comprehensive update of the permitted uses with the Town of New Paltz. That work was submitted in draft form in June 2004, and Figure 7 shows the resulting recommended zoning district map.

---

1 The time horizon for evaluating future land use is 2025. For all future land use scenarios, development proposals being currently considered by the Town and Village Planning Boards are assumed to be built out within the time frame of this Project (2025). These developments include: Victorian Square – 90 units of housing; Woodland Pond – 300 unit Continuing Care Retirement Community; Stoneleigh Woods – 300 units of housing; and, Crossroads at New Paltz, consisting of 180 multifamily housing units, a 120-room hotel, and retail and office space.

Figure 7: Proposed Town of New Paltz Zoning Districts from June 2004 Zoning Recommendations[1]



An important new concept for the proposed zoning districts is the "mixed use" designation, allowing for the co-location of housing, retail, and commercial uses. Mixed use development creates many transportation benefits largely because automobile trips are displaced by walking trips. To further the

[1] Permitted Use Recommended Updates, Town of New Paltz, New York. June 2004. peter j. smith & company, inc.

concept of mixing uses within a parcel or within a set of adjacent parcels, the town has drafted a Planned Unit Development ordinance to provide flexible, performance-based regulations for land development. Specific objectives served by the PUD ordinance include:

- Concentrate housing, businesses and services closest to the Village and adjacent to densely developed areas, limiting sprawl.
- Preserve open space and agricultural land, maintain wildlife corridors and habitat, and create recreational areas.
- An efficient use of land resulting in smaller networks of utilities and streets and thereby lower housing costs.
- Facilitate traffic flow by grouping multiple land uses into a discrete area and reducing the number of curb cuts.

Discussions of future land use that have occurred at Project committee meetings and public meetings are entirely consistent with the geography and permitted uses recommended in the zoning districts shown in Figure 7, and are also consistent with the spirit of the Town's proposed PUD ordinance described above.

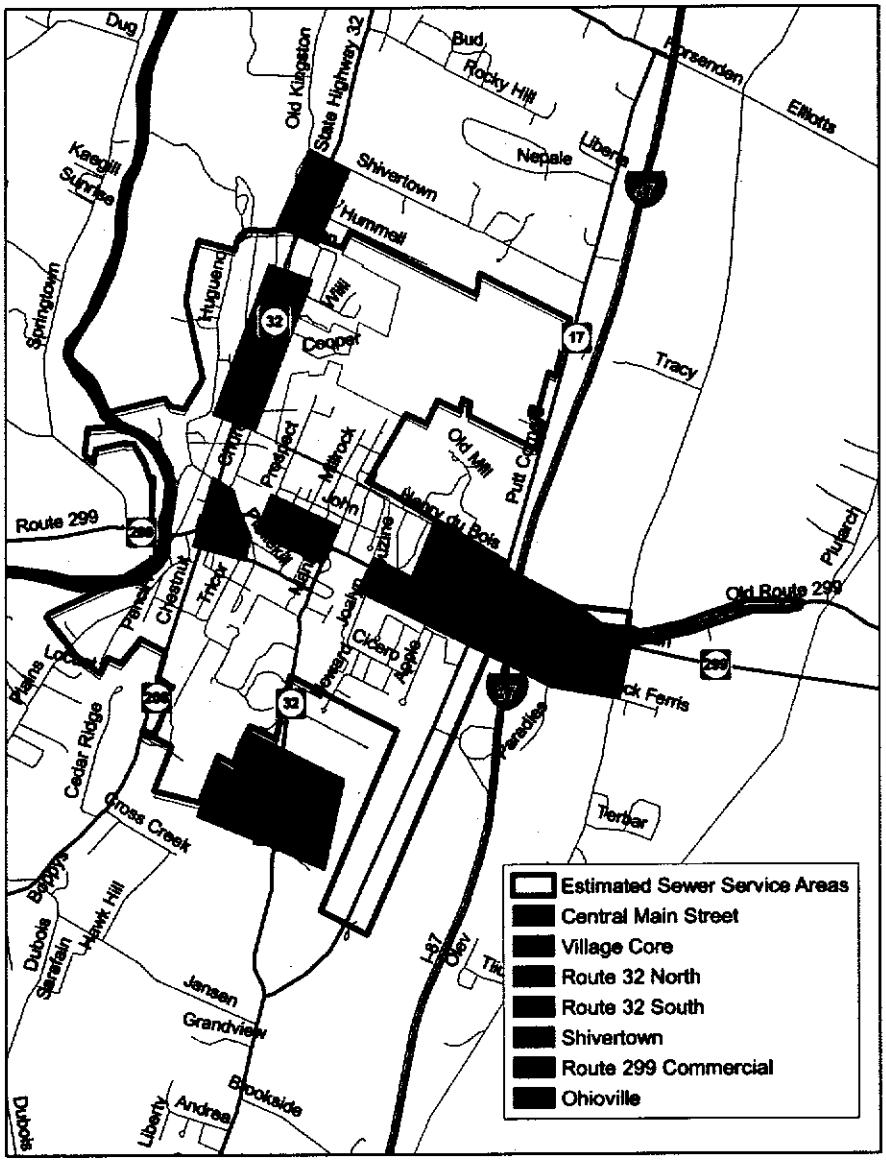
Seven growth centers have been identified and are shown in Figure 8. These development centers are:

- Central Main Street (Village)
- Village Core (Village)
- Route 32 North (Village)
- Route 32 South (M-U district in Figure 7)
- Shivertown (M-U district in Figure 7)
- Route 299 Commercial (M-U district in Figure 7)
- Ohioville (portion of the B-2 district in Figure 7)

Within each growth center a mix of residential, commercial, and retail uses have been envisioned. The overall density of development varies by area and is described in greater detail below. The Project's transportation recommendations have been devised to serve the safety and mobility needs arising from this set of future growth centers. As such, the Project implicitly recommends that the Town and Village advance the necessary zoning provisions to create these growth centers.

The Central Main Street Growth Center corresponds to the High Concentration Center that was formally modeled within the Phase B portion of this Project. Land use growth in this area was modeled as a mutually exclusive growth pattern from the Route 32 Mixed Use Growth Centers.

Figure 8: Multi-Centric Development



The Citizens Advisory Committee (CAC) has discussed the importance of the land use assumptions underlying the technical modeling of future conditions. The CAC generally endorsed a future land use pattern combining the Route 32 Mixed Use pattern with the High Concentration pattern. The CAC strongly advises that any zoning changes seeking to increase density within designated growth center be complemented with simultaneous efforts to downzone or protect open spaces outside of designated growth centers. Polices and initiatives to accomplish this include:

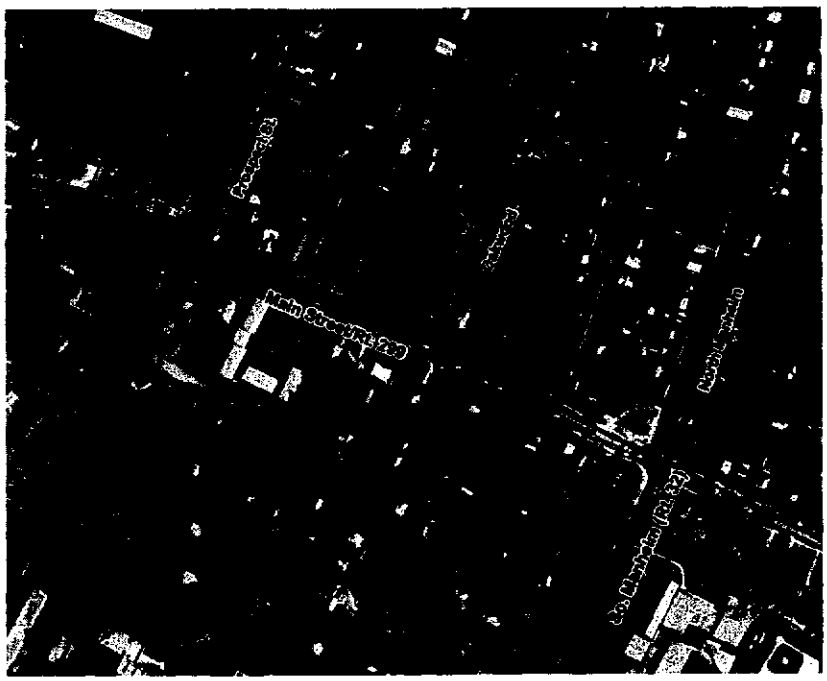
- Downzoning rural residential areas through increasing minimum lot sizes for development.
- Conservation Overlay zoning for protecting key natural values such as productive soils, wildlife habitats, ridgelines, etc. (see Phase B Report for details).
- Purchase of development rights on properties with significant natural or recreation value.
- Establishing a Transfer of Development Rights program designating areas outside of Growth Centers as "sending areas".

2.1.1 Central Main Street (Village)

This area was formally evaluated within the Phase B technical modeling effort as the High Concentration land use pattern. The intent of this land use scenario was to geographically incorporate the majority of future growth (to 2025) in an area proximate to Route 299 from Manheim to Prospect, and extending approximately 300 feet north and south of Main Street in this area.

This area was selected as the location to concentrate growth for the following reasons:

- It responds directly to the consensus voiced consistently at public meetings that future development should be concentrated; this pattern is consistent with the growth pattern shown in Figure 1.
- It is consistent with the current Comprehensive Plan of the Town, which states: "The area along Main Street would act as the core of the Town. Higher density development would occur around this core with decreasing density as the distance from the core grows."[1]
- It is walking distance to two large employers in New Paltz (SUNY and NYSDEC) and to the village commercial



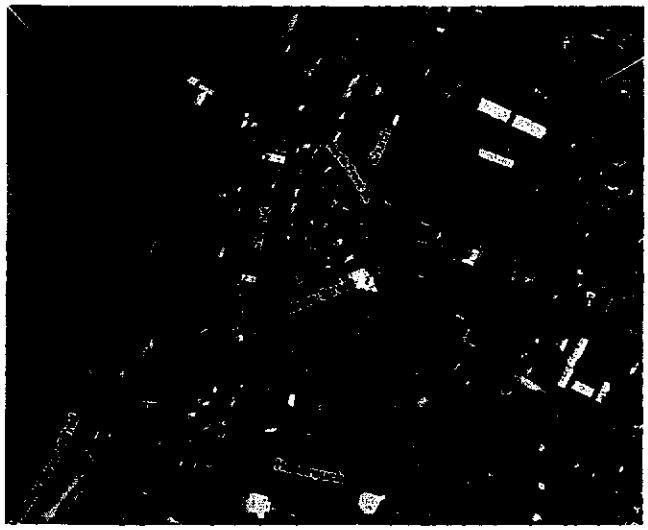
[1] The Central Main Street growth center is technically within the Village of New Paltz. To the extent that the Town's Master Plan encompasses the Village, this Plan excerpt applies to this growth center.

core.

- It is a transitional area that includes housing, offices, and retail. There are some commercial properties that are under-utilized and, as such, this general area could benefit from redevelopment and intensification.
- It is served by municipal water and sewer.
- The paved travel way portion of Main Street in this area is relatively wide, measuring 38-50' curb to curb. This relatively broad paved surface creates opportunities for on street parking, bicycle lanes, bus pull-offs and turning lanes within the existing paved area. The broad area also makes it possible to incorporate 3- and 4-story buildings that, when appropriately set back from Main Street, can be scaled to a pedestrian-oriented environment.

This growth center currently includes portions of the Village's B-1, R-2, and R-3 zones. Currently there are over 450 residential units and 250 jobs within this area[1]. It has been pointed out that this land use pattern may be difficult to achieve due to the already built-up nature of the area and lack of available land.

2.1.2 Village Core

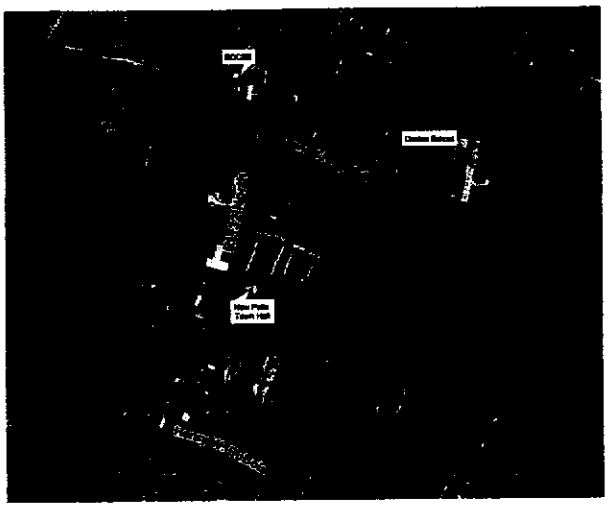


Although the Village Core has been identified as a center of development, this area is largely built out. Limited infill development potential does exist which would increase the density in the village. An example of this type of infill development is a recent proposal by Palladia for a mixed-use project adjacent to the Village Hall. Palladia is preparing draft revisions to the Village's zoning ordinance to permit higher housing density within the B-2 Core Business zoning. Currently there are nearly 200 dwelling units and over 300 jobs in this growth center.

[1] Housing and job estimates are developed from the land use information used in technical modeling. Land uses are associated with Transportation Analysis Zones (TAZs) that intersect with and, in most cases, extend beyond the defined boundaries of each growth center. Hence, these land use estimates provide a high end estimate of actual housing and jobs currently within each growth center.

2.1.3 Route 32 North (Village)

This future growth center was formally evaluated within Phase B as the northern portion of the "Route 32 Mixed Use" land use pattern. This growth center is envisioned as a gateway zone into the Village from the north, and this concept could be incorporated into the Traffic Calming Overlay District advocated by the CAC's Bicycle/Pedestrian subcommittee.



This growth center would affect real estate on both sides of Route 32 from HW DuBois to BOCES (Old Kingston Road). There are several important public facilities/uses within this area such as BOCES (at the northern end), Moriello Pool and Park, and the New Paltz Town Hall. A community center is planned for the area immediately to the east of the Town Hall. The future potential Mill Brook Preserve would be accessible from Town property off of Route 32 and proximate to the Town Hall. Duzine School, at the end of Sunset Ridge Road, would be adjacent to this growth center.

This growth center currently includes portions of the Village's B-3, R-1, R-2, and R-3 zones. Currently there are an estimated 390 residential units and 250 jobs within this area (Town and BOCES employment is included in this figure).

The Village has obtained professional planning review of establishing a mixed-use zone within this area.[1] This analysis finds that the objectives within the Village Comprehensive Plan to create a more pedestrian friendly and walkable village, to reduce traffic congestion, and to provide for a broad range of housing options are not advanced by the current B-3 zoning, which has encouraged "sprawl and auto dependency".

This review continues: "This area of the Village is rather remote from the center. Downtown is nearly one mile from Sunset Ridge, farther than the one-half (1/2) mile radius recommended as a walkable distance to a commercial center...However, this are could present a real opportunity to redevelop an ugly strip with a more vibrant mixed-use area."

[1] 4/11/06 memorandum from Theodore Fink, AICP to Jason West re: Mixed-Use Zoning Analysis for North Chestnut Street.

2.1.4 Route 32 South (Town)

This future growth center was the southern portion of the "Route 32 Mixed Use" land use pattern formally evaluated within Phase B. As with the Route 32 North development node, this growth center is envisioned as a gateway zone into the Village from the south, and could also be incorporated into the Traffic Calming Overlay District advocated by the Bicycle/Pedestrian subcommittee.

This area is within the proposed M-U Mixed Use zoning district, for which the following Purpose statement has been developed:

"The intent of the M-U Mixed Use District is to provide locations to accommodate a mix of uses that include both residential and general retail, service, finance, insurance and real estate and related structures and uses. M-U Districts are often adjacent to Residential Districts to ensure the population of the Town is adequately serviced and to create lively street and community living....Under usual circumstances these districts will only be established in areas served by public water and/or sewer."[1]

Currently this area is not served by municipal sewer.

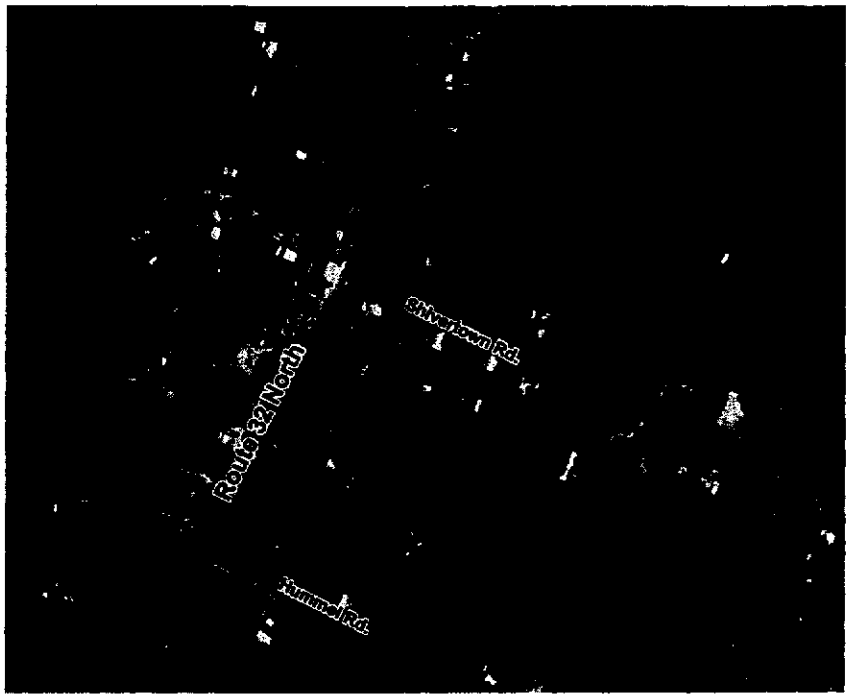
This growth center would be directly served by the EW Connector Road that has been formally evaluated during the Phase B modeling effort. The transportation value of the EW Connector is significantly enhanced through its association with the Route 32 South growth center.

This growth center currently includes portions of the Town's existing R-1 and RV zones, and this area is formally acknowledged in the proposed zoning district map (Figure 7). Currently this area is agricultural/rural. There are fewer than 10 residential units located within this area.

---

[1] Permitted Use Recommended Updates, Town of New Paltz, New York. June 2004. peter j. smith & company, inc. Page A-50.

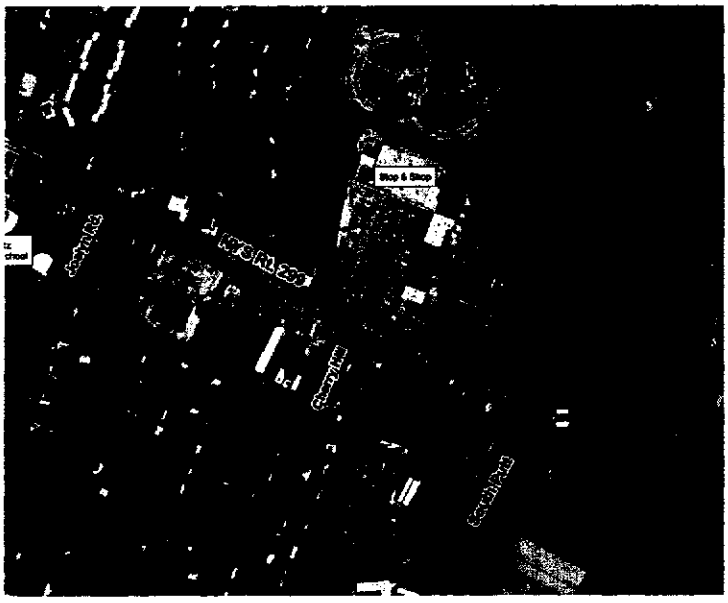
2.1.5 Shivertown (Town)



This lower density growth center would be located along Route 32 with its southern boundary proximate to Hummel Road and its northern terminus near Shivertown Road. This growth center currently includes portions of the Town's B-2 and R-1 zones. There are approximately 70 housing units in this general area.

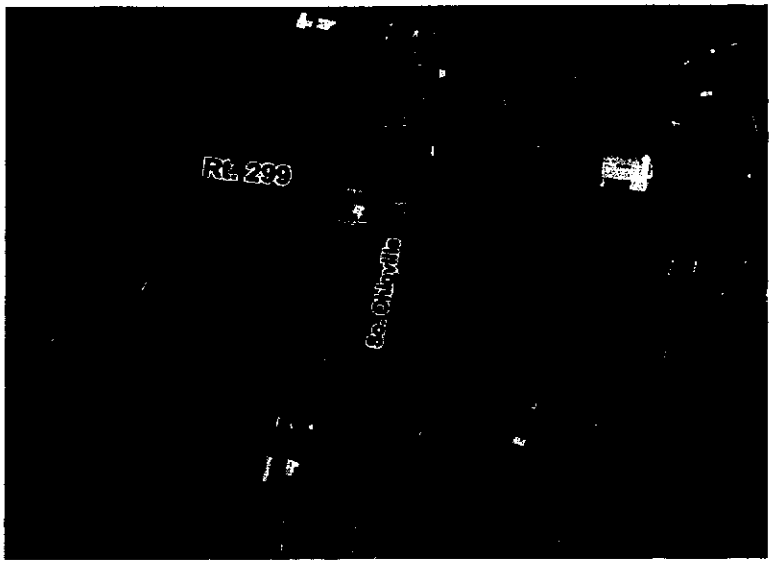
2.1.6 Route 299 Commercial (Town)

This area borders Route 299 west of the Thruway. This area is currently zoned B-1 Limited Business and R-3 Residential and is recommended for M-U zoning. There are over 600 jobs in the general area.



2.1.7 Ohioville (Town)

This area borders Route 299 roughly from the NYS Thruway to the Lloyd town line. This area is currently zoned B-2 Highway Business and is recommended to retain this zoning designation. The Town Planning Board is currently reviewing a mixed use development for this area, Crossroads at New Paltz. The traffic impacts of this development were explicitly accounted for in the technical modeling within the Phase B portion of work.



2.2 DENSITY SCHEDULES TO SUPPORT GROWTH CENTERS

In the Phase B transportation/land use modeling effort, land use projections were performed for each future land use pattern – High Concentration and Route 32 Mixed Use. The High Concentration growth center modeled within Phase B directly corresponds to the Central Main Street growth center. The Route 32 Mixed Use growth center modeled within Phase B directly corresponds to the Route 32 North and South growth centers.

Table 5 shows the existing, new, and total future housing units and jobs associated with each of 7 growth centers.

Table 5: Projected Growth within Each Growth Center By 2025

Multi-Centric Zone	Proposed Zoning District (V=Village, T=Town)	Existing Housing Units, 2005	New Potential Housing Units, 2005-2025	Total Potential Housing Units, 2025	Existing Jobs, 2005	New Potential Jobs, 2005-2025	Total Potential Jobs, 2025
Central Main Street	M-U Mixed Use (V)	470	470	940	250	120	370
Village Core	No Change (V)	180	20	200	340	0	340
Route 32 North	M-U Mixed Use (V)	390	130	520	250	40	280
Route 32 South	M-U Mixed Use (T)	10	250	260	10	70	80
Shivertown	M-U Mixed Use (T)	70	120	190	10	30	40
Route 299 Commercial	M-U Mixed Use (T)	240	0	240	630	130	770
Ohioville	B-2 Highway Business (T)	70	190	260	70	290	350

Allowances under the existing Town and Village zoning ordinances would not permit the land use densities projected for these growth centers. A proposed density schedule for each growth center is shown in Table 6. For growth centers within the Town the density schedule is comparable to the one recommended in the Town's recent zoning revision review.

***Table 6: Proposed Density Schedule*[12]**

Multi-Centric Zone	Zoning District	Village or Town	Lot Size (sq. ft.)	Building Height (ft)	Max. Stories	Building Coverage	FAR
Central Main Street	M-U Mixed Use	Village	5,000	48	4	50%	2.0
Village Core	B-2 Core Business	Village	5,000	48	4	75%	3.0
Route 32 North	M-U Mixed Use	Village	7,500	36	3	50%	1.5
Route 32 South	M-U Mixed Use	Town	20,000	36	3	45%	1.4
Shivertown	M-U Mixed Use	Town	25,000	36	2	45%	0.9
Route 299 Commercial	M-U Mixed Use	Town	25,000	36	2	45%	0.9
Ohioville	B-2 Highway Business	Town	7,500	40	3	35%	1.1

The use of the above density schedule would enable New Paltz to accommodate all future projected growth to 2025 within the 7 designated growth centers[3]. As mentioned, each growth center is envisioned to be mixed use with varying development levels for residential and non-residential structures. For growth centers in the Town, the Town's proposed PUD ordinance would enable them to increase building heights subject to a visual impact analysis.

The densities envisioned within each growth center would need to be supported by municipal services such as sewage treatment and water. Based on current sources and contracts, municipal water is not seen as a constraint to future growth. Additional municipal sewer capacity needed to support projected growth is shown in Table 7. The Village operates the municipal sewage treatment plant. The sewage treatment system covers the village and portions of the Town outside of the Village. These out-of-Village areas include:

- the Cherry Hill area (Sewer District 5); and,
- a portion of the Town roughly co-terminus with the Route 299 Commercial Growth Center (Sewer District 1), encompassing the Meadowbrook Apartments, the New Paltz Plaza and other commercial properties fronting on Route 299 west of the Thruway, and the industrial area along South Putt immediately south of Route 299..

Sewer service extensions to the Route 32 South and Shivertown growth centers would need to be established through a formal intermunicipal agreement.

---

[1] Building Footprint refers to the fraction of the lot that can be covered by the building; FAR stands for Floor Area Ratio, which as a rough indicator of use density arrived at as the product of maximum stories by the building footprint. The densities shown under "M-U" differ from growth center to growth center. Technically, subdivisions of the M-U district would be needed (e.g. MU-1, MU-2, etc.) to distinguish each area.

[2] Upon review of this density schedule, the Management Team representatives from NYSDOT suggested that the densities for the Route 32 South and Route 299 Commercial areas be increased.

[3] Within Phase B of the Project the Technical Review Committee endorsed a Moderate Growth Rate for future analysis. The Moderate Growth rate translates into an increase of approximately 1,500 households and 800 jobs in New Paltz by 2025. The density schedule shown in Table 6 would enable growth to occur beyond these amounts.

Table 7: Municipal Sewer Demand for Projected Growth in 4 Growth Centers (gallons per day)

Additional Municipal Sewer Demand

	Multi-Centric Zone	Housing	Commercial
Village	Central Main Street	82,000	6,000
	Village Core	0	0
	Route 32 North	37,000	2,000
Town	Route 32 South	69,000	4,000
	Shivertown	32,000	2,000
	Route 299 Commercial	0	7,000
	Ohioville	53,000	15,000
	Total	273,000	36,000
	Total Projected Additional Commitment on Village Treatment Plant	220,000	21,000

The current municipal sewer treatment capacity is 1.5 million gallons per day as limited by the capacity at the sewer treatment plant. Of this amount, approximately 1.0 million gallons per day is either being utilized by existing demand or is set aside for future demand.[1] Based on this available capacity, the projected growth in the growth centers is supportable by the existing sewage treatment facility. However, sewer extensions would be necessary to the Route 32 South and Shivertown growth centers. Other improvements such as sewer pipe system looping and pumping stations may need to occur as well.

Sewer demand represented by the Ohioville growth center would be handled by a treatment facility the Town maintains east of the Thruway and thus would not represent a claim on the Village's treatment capacity. The Town is currently discussing upgrading the municipal sewer infrastructure east of the Thruway as part of their review of the Crossroads at New Paltz development proposal.

2.3 LAND USE INITIATIVES OUTSIDE OF THE GROWTH CENTERS

New Paltz has clearly identified areas where increased, dense, and mixed use growth should occur in the future. In order to prevent dense growth from occurring simultaneous with sprawl-like growth, New Paltz needs to complement growth center zoning with provisions to prevent sprawl outside of the growth centers. Sprawl-like growth will defeat the major objective of this Project, which is to mitigate congestion.

With regard to the public consensus to protect and preserve the natural values west of the Wallkill River, there are two major initiatives. First, the Town is currently studying revisions to the zoning code pertaining to the A-1.5 and A-3 districts. In addition, the Town, within the proposed changes

[1] Information on sewage treatment capacity is from direct communications with Brinier and Larios, the Village's municipal works engineers. Future sewage treatment commitments include 50,000 gallons per day for the South Putt enterprise zone, and commitments to proposed developments that are proposed but not yet built, including Woodland Pond and Victorian Square.

recommended by the Peter J. Smith Company will be establishing 3 overlay districts west of the Wallkill River designed to guide and protect specific natural values:

3.3 Floodplain Overlay District

3.3 Wallkill River Recreation Floating District

3.3 Wireless Communications Facilities Overlay District

The Town has also commissioned a study of the property tax revenue impacts associated with a potential reduction of zoning density west of the Wallkill River.

Second, the New Paltz Open Space Plan (see Section 1.3.2) sets forth a conservation goal of an additional 1,000-1,500 acres of permanently protected land west of the Wallkill River. Supporting acquisition of development rights on key natural/recreational resource properties would support the overall objective.

3.0 ACCESS MANAGEMENT – THE LAND USE-TRANSPORTATION INTERFACE

Access management is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. Access Management seeks to limit and consolidate access along major roadways to preserve roadway capacity and increase safety, while promoting a supporting street system for development and local mobility.[1]

Access management can provide a number of benefits including:

- Improved traffic flow through decreased delays and occurrences of vehicle blockages;
- Improved vehicular and pedestrian safety through elimination of conflict points;
- Improved driveway and site design;
- Decreased cut-through traffic through residential areas;
- Support for economic development activities through improved access;
- Improved aesthetics and community character through reduction in paved surface area.

Implementing access management techniques has been shown to increase safety and reduce travel time. For example, for every additional traffic signal per mile, travel speed is reduced by 2-3 miles per hour (mph).[2,3] Each additional access point per mile increases the accident rate by about 4 percent.[4]

---

[1] NCHRP Synthesis 304 – Driveway Regulation Practices, Transportation Research Board, 2002

[2] Pg 2, NCHRP Report 420.

[3] The Transportation Research Board National Cooperative Highway Research Program (NCHRP) Report 420: Impacts of Access Management Techniques, 2002.

[4] Pg 3, NCHRP Report 420.

A comprehensive approach to access management is needed to realize its benefits. The Transportation Research Board[1] (TRB) Access Management Subcommittee has identified the following key principles of access management:

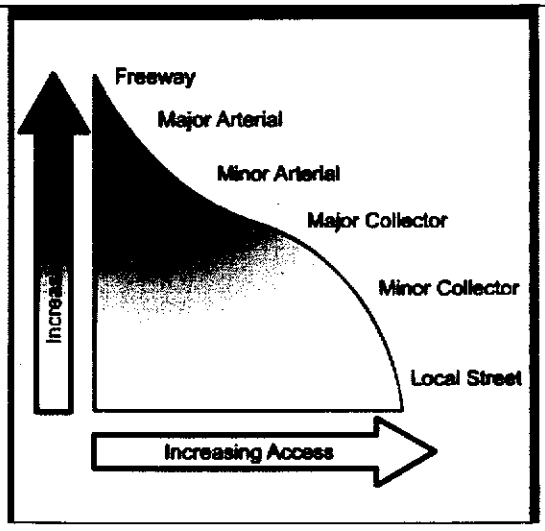
1. Identify a specialized roadway system hierarchy
2. Provide a supporting street circulation system.
3. Limit direct access to major roadways
4. Preserve the functional area of intersections and interchanges
5. Limit and separate conflict points
6. Remove turning vehicles from through traffic lanes

3.1 KEY ACCESS MANAGEMENT PRINCIPLES

3.1.1 Identify a Road System Hierarchy

Public roadways are designed for two primary purposes – providing access to lands and transporting persons and goods. Without careful management, these purposes can each override the functioning of the other. Access management serves to balance these two purposes with the ultimate goal of optimizing mobility, safety and access. It is a process and a planning method that relies on a wide set of tools.

Figure 9: Continuum of Roadway Function



Different roadways serve different purposes across a continuum between high mobility (freeways and arterials) and high land access (local streets).

[1] The Transportation Research Board is a branch of the National Academy of Sciences.

Access management aims to develop a continuum of road purposes. On one end are roadways designed to move large amounts of traffic efficiently over longer distances – freeways and arterials. At the other end are roadways designed to access individual parcels, which should be the predominant function of local streets.

In between these two extremes are collector roadways that "collect" traffic from local streets and convey that traffic to the arterial roadways. Collectors provide more frequent access to local property than arterials, but less than local streets. Collectors have a higher mobility function than local streets. Under a properly balanced and functioning roadway system, local streets should not carry cut-through traffic seeking faster routes. However, it is consistent with the function of collector roads that they carry cut-through traffic.

Table 8 lists the functional classes of several roads and streets in New Paltz and Figure 10 shows the functional class system in New Paltz. This information presents the existing road system hierarchy in New Paltz.

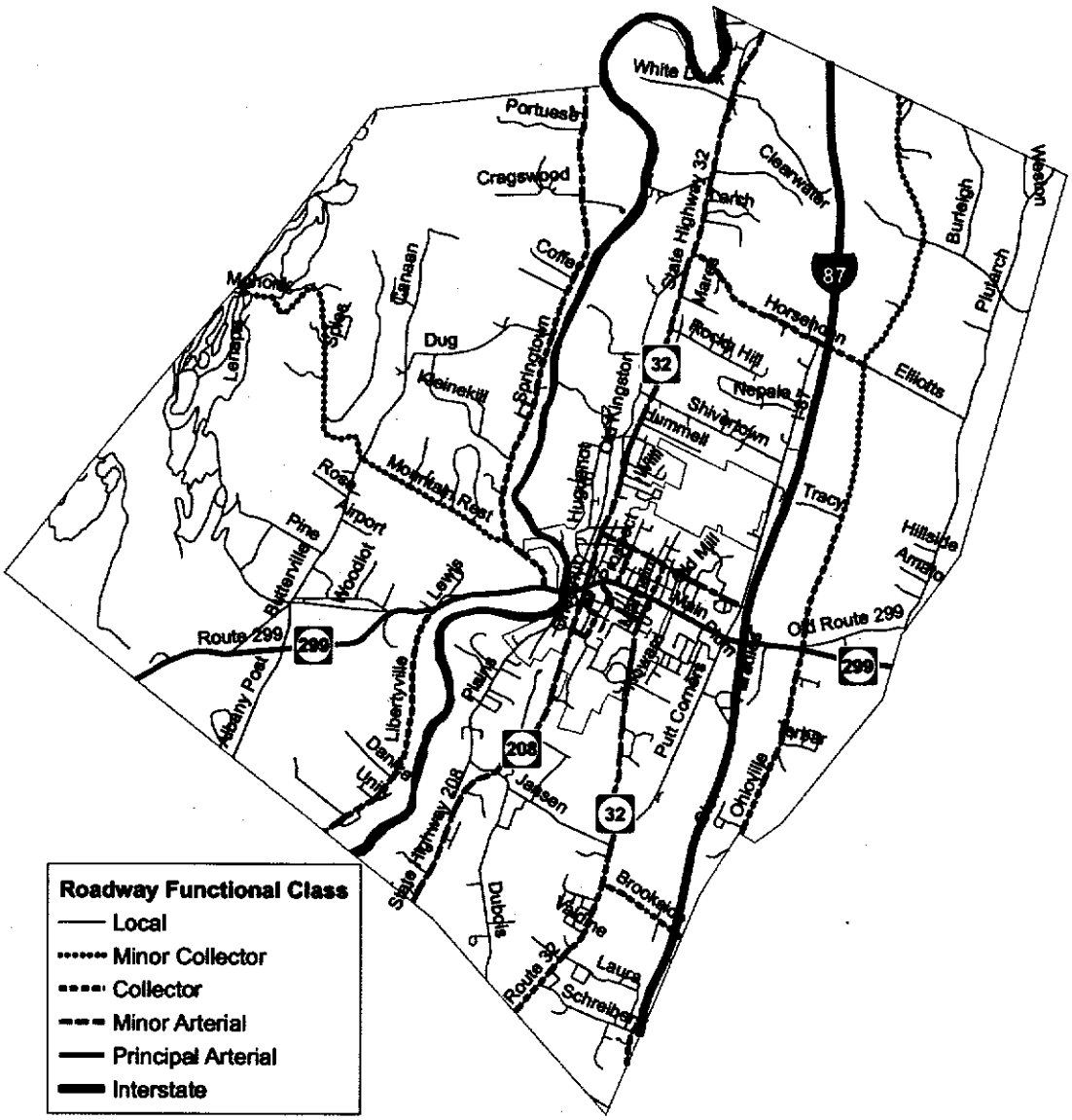
Table 8: Functional Classes of New Paltz Roads and Streets, and Associated Jurisdiction

Roadway	Officially Designated Functional Class	Functional Class According to Apparent Function	Jurisdiction
I-87	Interstate	Interstate	New York State Thruway Authority
Route 299 west of Wallkill Riv.	Principal Arterial	Principal Arterial	Ulster County
Route 299 Wallkill Riv.to 208	Principal Arterial	Principal Arterial	Village of New Paltz
Route 299 east of Rt. 208	Principal Arterial	Principal Arterial	New York State Department of Transportation
Route 32 north of Route 299	Minor Arterial	Minor Arterial	New York State Department of Transportation
Route 32 south of Route 299	Collector	Minor Arterial	New York State Department of Transportation
Route 208	Minor Arterial	Minor Arterial	New York State Department of Transportation
North/South Putt (County 17)	Local	Collector	Ulster County
Jansen (County 17)	Local	Collector	Ulster County
Horsenden (County 17)	Collector	Collector	Ulster County
Libertyville (County 7)	Collector	Collector	Ulster County
Springtown (County 7)	Collector	Collector	Ulster County
Brookside	Collector	Collector	Town of New Paltz
South Ohioville /(County 22)	Collector	Collector	Town of New Paltz/Ulster County
North Ohioville	Collector	Collector	Town of New Paltz
Henry W. DuBois	Collector	Collector	Town/Village of New Paltz
Plattekill Ave.	Collector	Collector	Village of New Paltz
Prospect Street	Collector	Collector/Local	Village of New Paltz
North Manheim Blvd.	Collector	Collector	Village of New Paltz
Southside, Rt. 208 to Tricor	Collector	Local	Village of New Paltz
Tricor, Southside to Mohonk	Collector	Local	Village of New Paltz
Mohonk, Tricor to Elting	Collector	Local	Village of New Paltz
Elting, Mohonk to Innis	Collector	Local	Village of New Paltz
Innis	Collector	Local	Village of New Paltz
Shivertown (Rt. 32 to N. Putt)	Local	Collector	Town of New Paltz
Mountain Rest Road (Co. 6)	Minor Collector	Minor Collector	Ulster County
All other roads/streets	Local	Local	Town/Village of New Paltz

Table 8 distinguishes between the "officially designated functional class" and the "apparent functional class". Any roadway within a designated urban area that is officially identified as a "collector" or above (e.g. arterial) is eligible for federal aid (e.g. financial support for reconstruction or renovation). A collector roadway must also assume a higher function as a result.

The "apparent" functional class is based on how the road/street actually operates within the New Paltz roadway system. In a few cases, the apparent functional class does not match the officially designated functional class.

Figure 10: The Functional Class Road Network in New Paltz



Through the land planning and development process, the functional class of the adjacent roadway to which access from private land is sought should determine key parameters of access design, such as the number, location, and dimensions of driveways. Generally access to higher function roads should be more carefully controlled and designed in order to preserve capacity and avoid costly fixes in the future. Access to lower function roads can be more liberally allowed.

3.1.2 Provide a Supporting Street Circulation System

One of the 10 objectives of the Town Comprehensive Plan is "to seek by all reasonable means to provide better traffic conditions… and *encourage circulation within secondary networks* (emphasis added). The establishment of an interconnected street network, or grid, provides a number of benefits including:

- Alternative routes for local trips, including pedestrian and vehicle trips.
- Shorter travel times.
- Reduced demand on major highways.
- Ability to support the roadway hierarchy.
- Decreased congestion.
- Improved accessibility of developed areas.

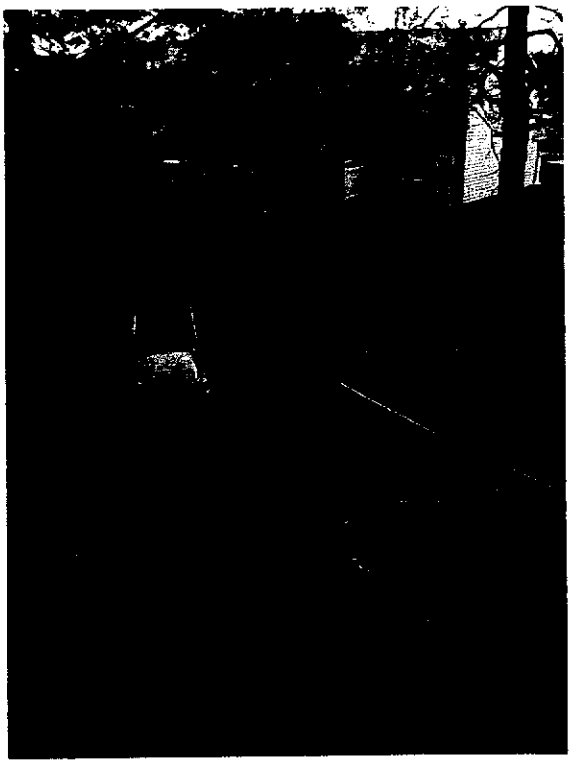
Dead end streets are the antithesis of good access management since they focus all of an area's traffic on one point of access onto the public street network, instead of providing multiple paths for vehicles and pedestrians to select a route.

Subdivision and site plan regulations can be used to limit the number of access points to which any given project is entitled and can require interconnections between parcels (Figure 11) and streets, shared parking and driveways, or a limit on the amount of traffic permitted to access the road network.

Figure 11: Unconnected Parking Lots Behind Main Street Offices

Figure 12 provides 2 examples of lot-to-lot access ways that were established during the site plan review process in New Paltz. In one case, a simple lot-to-lot driveway was established enabling motorists to move from lot to lot without having to use Route 299. In the second case, pedestrian access between adjacent lots was established. A number of vehicle trips are eliminated everyday as a result of this simple walkway.

Figure 12: Interlot Connection Between Commercial Properties on Main Street (left) and Pedestrian Connection to New Paltz Plaza from Meadowbrook Apartments (right)[1]



These types of provisions are supported by the New Paltz Village and Town Codes:

- Residential areas. Where a subdivision abuts or contains an existing or proposed major street, the Planning Board may require marginal access streets, reverse frontage with screen planting contained in a non-access reservation along the rear property line, or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic. (Village Code).
- Access from major streets. Lots shall generally not have their vehicular access from a major street. Where driveway access from a major street may be necessary for several adjoining lots, the Planning Board may require that such lots be served by a combined access drive in order to limit possible traffic hazard on such street. (Village §178.18.K)

[1] The pedestrian stairway connecting the Meadowbrook Apartments to the New Paltz Plaza is not compliant with the Americans with Disabilities Act (ADA).

- B-1 Limited Business District: Whenever possible, the parking areas for all new commercial development shall connect with parking areas of adjacent commercial uses at the rear of buildings. (Village §212.E.9.b.6)
- Continuation of streets into adjacent property. Streets shall be arranged to provide for the continuation of principal streets between adjacent properties where such continuation is necessary for convenient movement of traffic, effective fire protection, efficient provision of utilities, and particularly where such continuation is in accordance with the Master Plan. Reserve strips, controlling access to streets, shall be prohibited except where their control is placed with the Village under conditions approved by the Planning Board. If adjacent property is underdeveloped and the street must temporarily be a dead-end street, the right-of-way and improvements shall be extended to the property line. A temporary circular turnaround with a traveled way radius of at least 50 feet shall be provided on all temporary dead-end streets, with the notation on the plat that land outside the normal street right-of-way shall revert to abutting properties. (Village §178.18.C)
- The arrangement of streets in the subdivision shall provide for the entrance and continuation of principal streets from adjoining subdivisions and for the extension of principal streets into adjoining land which has not yet been subdivided. Such arrangement shall be required in order to facilitate fire protection, movement of traffic… (Town §121.21.B)
- Planned Unit Development: Adequate but not excessive entry points to the site from major through roads shall be planned and provided. The street system within the parcel shall be organized in a logical structure with collector and local streets and forming a unified neighborhood. (Town §140.25.F.2.)

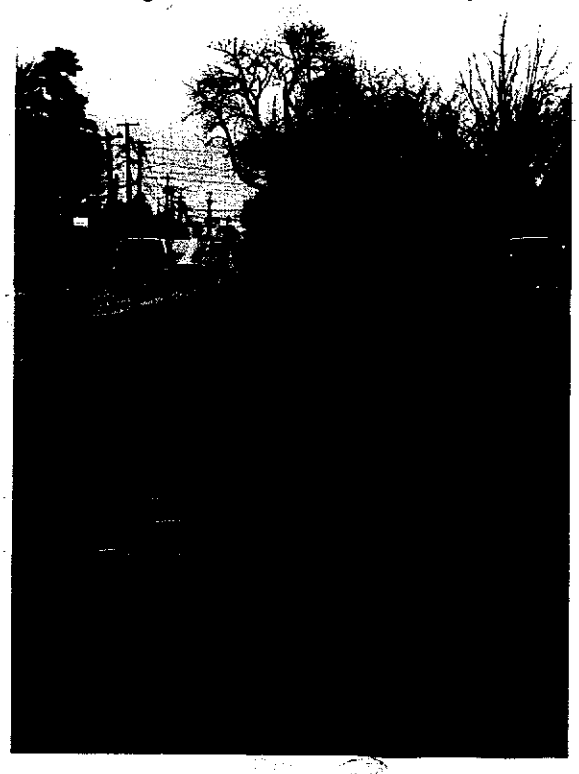
The code language above provides New Paltz the wherewithal to establish local street connections through the normal land planning process. The creation and perpetuation of dead end streets is adverse to the spirit and letter of the Master Plan and the ordinances which support it.

3.1.3 Limit Direct Access to Major Roadways

In most cases, access to major roadways should be limited to one access point. In some cases, site constraints might necessitate a sharing of an access point along a common boundary. In other cases, the need to preserve mobility on an arterial can lead to restrictions on the types of movements that can occur at driveways. There are two cases along Main Street where access has been restricted to right turn exit only (see Figure 17). In another case involving a corner lot on Main Street, the Ulster Savings Bank, entry access to the bank is from Joalyn only (Figure 13).

Corner parcels have frontage on two separate streets. In many cases, one street is of a higher function than the other. In such cases, access should be sought on the lower function street and prohibited on the higher function street.

Figure 13: Access to the Ulster Savings Bank on Route 299 Is Via Joalyn Road



Where possible, access to individual parcels should be via shared driveways. There are several examples of this in New Paltz, including shared residential driveways on Main Street (Figure 14). The Village's Subdivision Regulations provide authority for the Planning Board to require shared access.

Figure 14: Shared Residential Driveways at 156 Main Street

3.1.4 Preserve the Functional Area of Intersections

Sufficient corner clearance between driveways and intersections allows the intersections to operate without impact from the access points, the access points to operate without impact from the intersections and drivers to make one decision at a time. Figure 15: illustrates insufficient downstream and upstream corner clearance at Route 32/Plattekill (left photo) and at Route 299/Prospect (right photo).

Figure 15: Insufficient Corner Clearance

The Village of New Paltz Code states "Intersections. No entrance or exit drive connecting a parking area to a public street shall be permitted within 25 feet of an intersection of two public streets. (§212.43.G).

This recommended corner clearance of 25 feet is considered too short by typical access management standards. Recommended corner clearances are shown in Table 9.

Table 9: Recommended Driveway Distance from an Intersection

Location of Access Point	Minimum Distance for Full Service Driveway (feet)
from an intersecting arterial	300
from an intersecting local or collector street	200

Existing Town and Village codes provide some guidelines for intersection spacing:

- Minor streets shall be laid out in a manner to discourage their use by through traffic. Minor and collector street openings onto an arterial road shall normally be at least 500 feet apart. (Town §121.21.F)
    - Intersection Design. Intersections of major streets by other streets shall be at least 800 feet apart. Cross (four cornered) street intersections shall be avoided, except at important traffic intersections. A distance of at least 150 feet shall be maintained between offset intersections. (Village §178.18.G)".

Generally, a convenient block length is considered to be 600 feet for walkability.

3.1.5 Limit and Separate Conflict Points

Driveways are areas where turning conflicts can occur. On higher speed roadways (collectors and arterials) a planning objective is to reduce and minimize turning opportunities to areas that are well-defined and safely controlled (e.g. traffic signals, roundabouts, etc.). The spacing of driveways should be based on the stopping sight distance required for the posted speed limit. At times the operating speed may be greater than the posted speed limit, as determined by a speed survey, in which case the operating speed should be used to determine the required driveway spacing. Table 10 shows the recommended driveway spacing for different speed limits.

Table 10: Driveway Spacing for Different Speed Limits

Posted Speed Limit (mph)	Driveway Spacing (feet)
<35	125
36-45	245
>45	440

Driveway design is another important feature of this objective. Open, undefined curb cuts can cause a disorganized traffic flow—turning movements can occur at multiple points along the roadway, which is inherently unsafe (Figure 16). For this reason, driveways need to be clearly defined by curbing or other structures and features, and need to be dimensioned for a design vehicle that is appropriate to the use of the site.

Figure 16: Inadequate Driveway Definition

3.1.6 Remove Turning Vehicles from Through Traffic Lanes

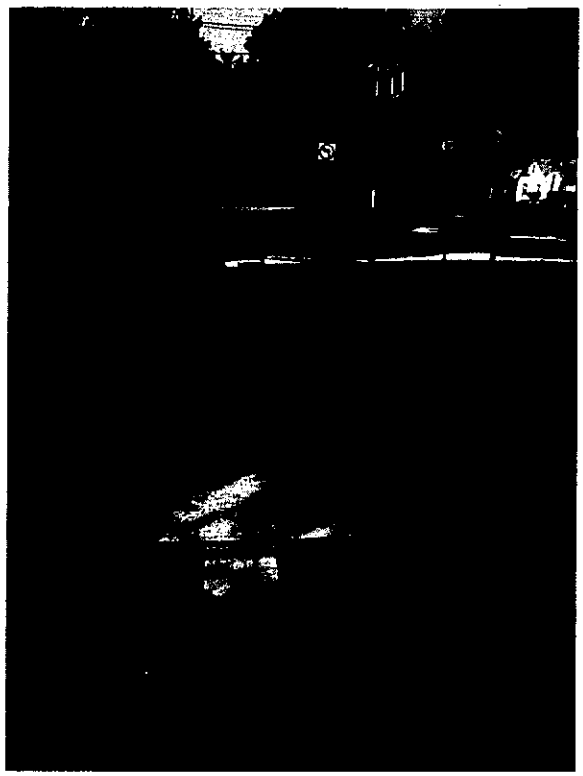
This final objective of access management stems from conventional traffic engineering, which seeks to maximize safety by removing turning vehicles from mainline traffic flow. There are several intersections in New Paltz where left turn lanes are warranted under existing traffic conditions (see Appendix F). These intersections include:

- Route 32/HW DuBois,
- Route 32/Shivertown,
- Route 32/Plattekill, and
- HW DuBois/North Putt.

In the future, as traffic demands increase, right turn lanes will also be warranted at some of these intersections. The poor safety record, particularly along Route 32 North, is partly attributable to the lack of left turn lanes at these intersections.

Driveway channelizing islands prevent left-turning traffic, the most dangerous and most capacity consumptive movement at intersections, into or out of a driveway as illustrated in Figure 17.

***Figure 17*: Driveway Channelization** *(Right Turn Only Access to Main Street from New Paltz Middle School)*



Managing left turning traffic is, in many ways, the essence of access management. Greater than two-thirds of all access-related crashes involve left turning vehicles.[1] Left turns from major roadways to adjacent land uses can be controlled by one of three ways:

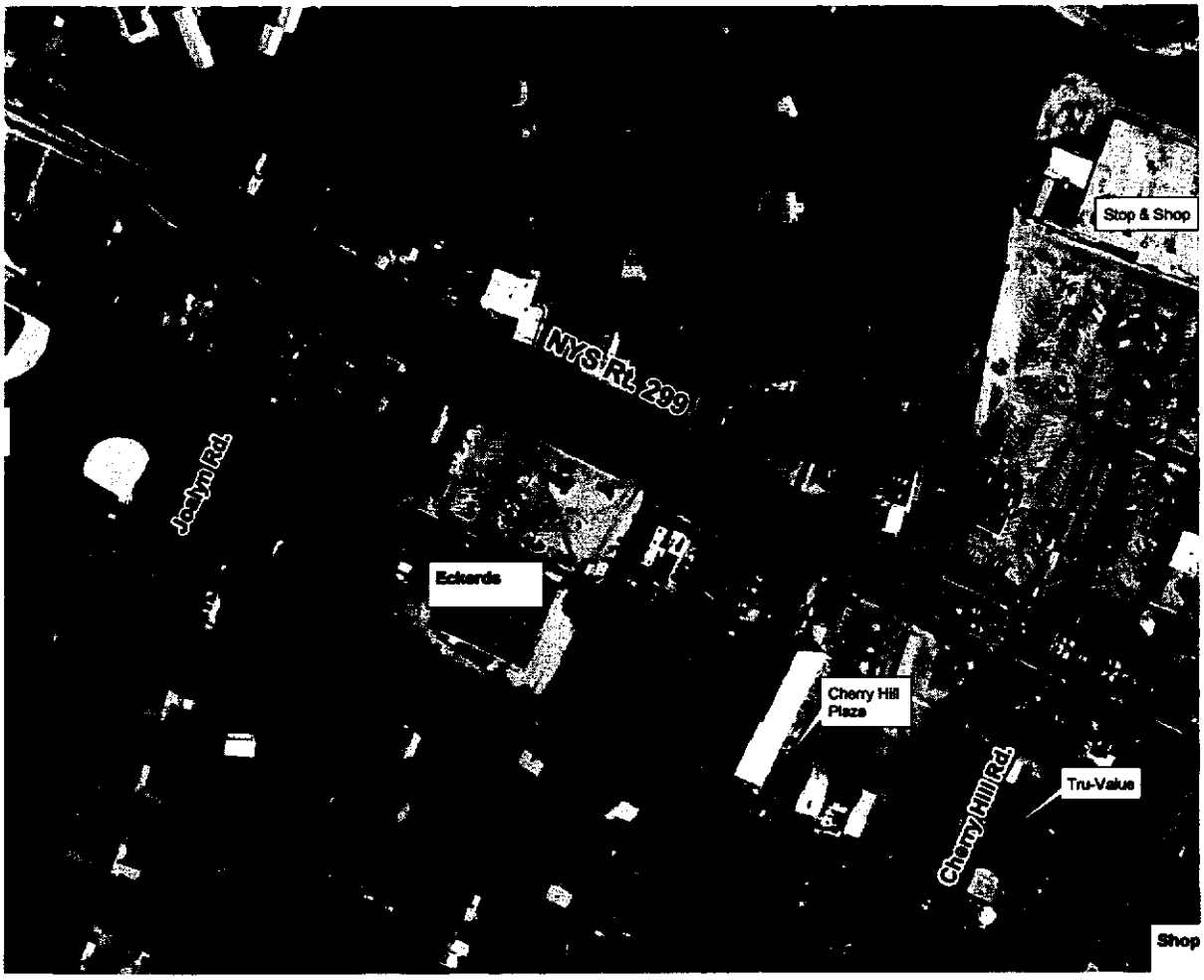
1. two way left turn lanes (TWLTL), a continuous lane located between opposing traffic streams that provides an area for left turning traffic from both directions.
2. traversable median, a median area, usually painted, that allows vehicles to occupy it while waiting to turn left.
3. nontraversible median, a physical barrier that separates opposing traffic. Turns are permitted only at median openings.

Consideration of median treatments is relevant for that portion of Main Street (Route 299) ranging roughly from Joalyn Road to the Cherry Hill Plaza, within the Route 299 Commercial growth center (Figure 18). This area has been classified as a High Crash Location by NYSDOT. Within this roughly quarter-mile road segment there are a total of 25 driveways and intersections, averaging in a turning opportunity every 60 feet within the corridor. Managing access through consolidating and eliminating

[1] Access Management Manual. Transportation Research Board. 2003.

driveways will improve safety and traffic flow in this section. Otherwise removing left turning vehicles from through traffic by the application of medians or left turn lanes is an essential improvement to pursue in this area.

Figure 18: Area along Route 299 Where Median Treatments Should Be Considered



3.2 EXISTING ACCESS MANAGEMENT DEFICIENCIES AND OPPORTUNITIES IN NEW PALTZ

An access management inventory was conducted along Route 299 and Route 32 North. Within each inventory, each curb cut (driveway) onto the state route was evaluated for each of the following conditions:

- Poorly defined or continuous curb cut;
- Inadequate driveway spacing;

- Poor alignment with opposite drives or intersections;
- Inadequate corner clearance;
- More than one driveway;
- Limited sight distance.

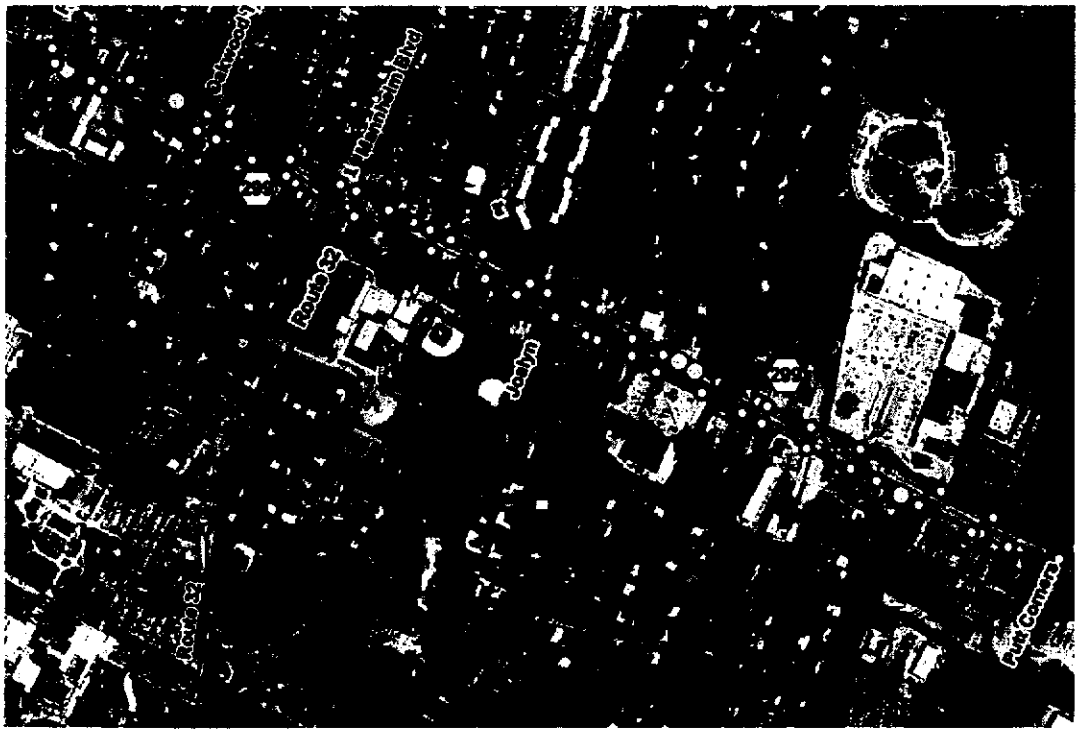
There are numerous opportunities for lot-to-lot access between adjacent lots. These cases are very common along Main Street and along Route 32. The Town and Village Planning Boards should enforce lot-to-lot pedestrian and/or vehicle connections when opportunities to do so occur during planning review. In addition, many driveways in the corridor do not meet desired driveway separation for arterial roadways. This is particularly the case for the existing residential properties in the corridor and those residential properties that have been converted to office use.

3.2.1 Access Management Deficiencies in the Route 299 Corridor

Figure 19 shows the results of the access management inventory for the Route 299 corridor. Figure 19 is coded as follows:

- White = no access management deficiencies
- Blue = 1 access management deficiency
- Yellow = 2 access management deficiencies
- Orange = 3 access management deficiencies
- Red = 4 access management deficiencies
- Green Star = good access management practice

Figure 19: Access Management Inventory, Route 299 from Putt Corners to Prospect Street



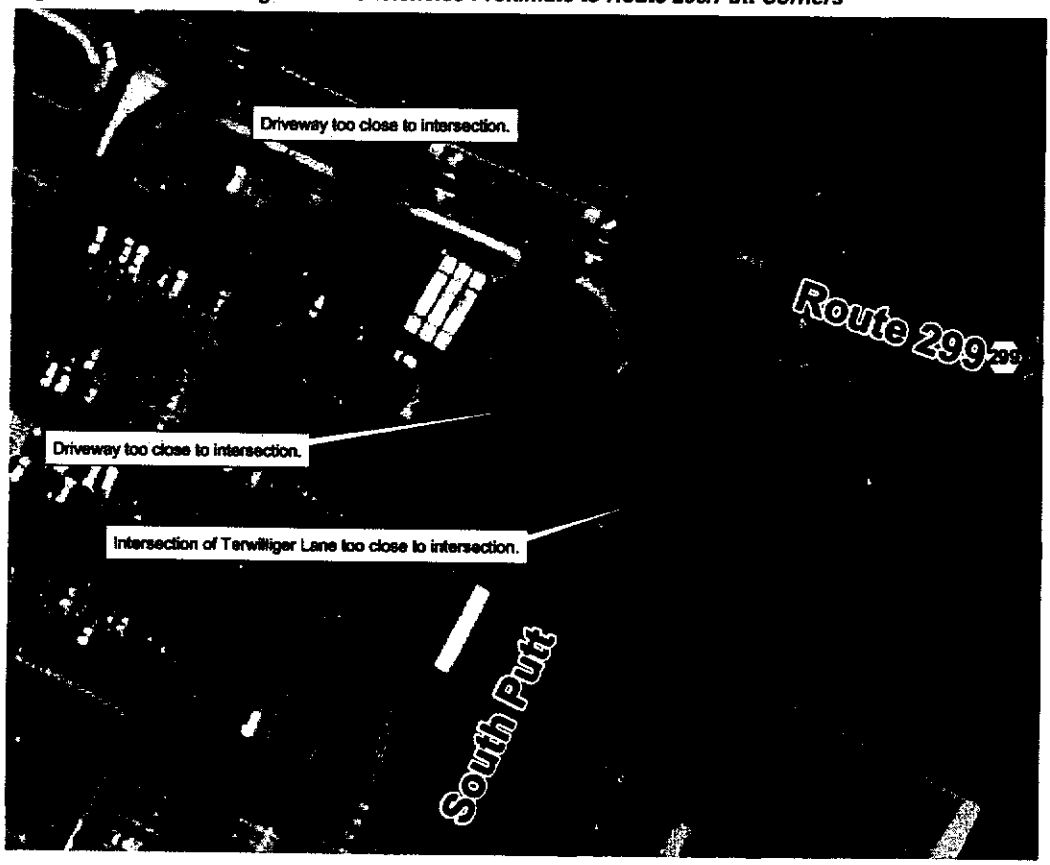
Within the corridor, there are 6 cases with 3 or more deficiencies, 3 of which involve corner parcels:

- the northwest quadrant of Main/Manheim
- the southwest quadrant of Main/Oakwood
- the access to the retail property at 255 Main Street
- the commercial plaza at the southwest quadrant of Main/Manheim
- the southwest quadrant of Route 299/Putt Corners
- at 169-171 Main Street which have multiple, closely adjacent driveways to office uses.

The high potential for turning conflicts along Route 299 warrants a serious consideration of alternative parallel routes for accessing Route 299 commercial establishments. For example, a potential alignment connecting Joalyn Road with South Putt along the back property boundary of adjacent commercial establishments would provide good lot-to-lot mobility and thereby reduce turning movements from Route 299 to commercial properties.

There are several access deficiencies at the Route 299/Putt Corners intersection that contribute to this area's classification as a High Crash Location (Figure 20).

Figure 20: Access Management Deficiencies Proximate to Route 299/Putt Corners



The location of access drives so close to an intersection impedes the intersection's smooth functioning, and creates a safety hazard when turning vehicles on the main roads are delayed by through traffic.

Examples of good access management practice include:

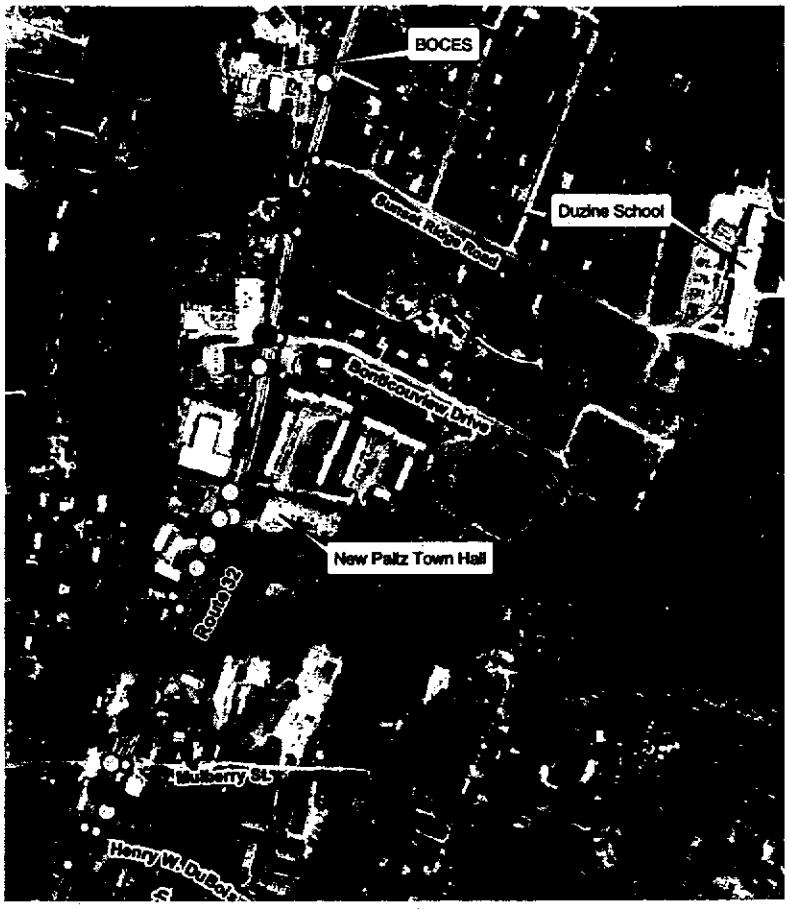
- shared residential driveways on Main Street (Figure 14);
- the corner lot on Main/N. Oakwood, a church with access on the minor street (Oakwood) only;
- the right turn exit only curb cut from the New Paltz Middle School to Main Street (Figure 17);
- the access to Ulster County Savings Bank off of Joalyn Street (Figure 13);
- the back lot connection between Eckerd's Plaza and Burger King (Figure 12); and,
- the pedestrian connection from Meadowbrook Apartments to New Paltz Plaza (Figure 12).

3.2.2 Access Management Deficiencies in the Route 32 North Corridor

Figure 21 shows the results of the access management inventory for the Route 32 North corridor. Though less developed than the Route 299 corridor, this roadway segment has a greater number of access problems. Combining this with the higher speeds along Route 32 North and the relatively open nature of the roadway contributes to the high incidence of crashes within this road segment (documented in the Phase A and B reports).

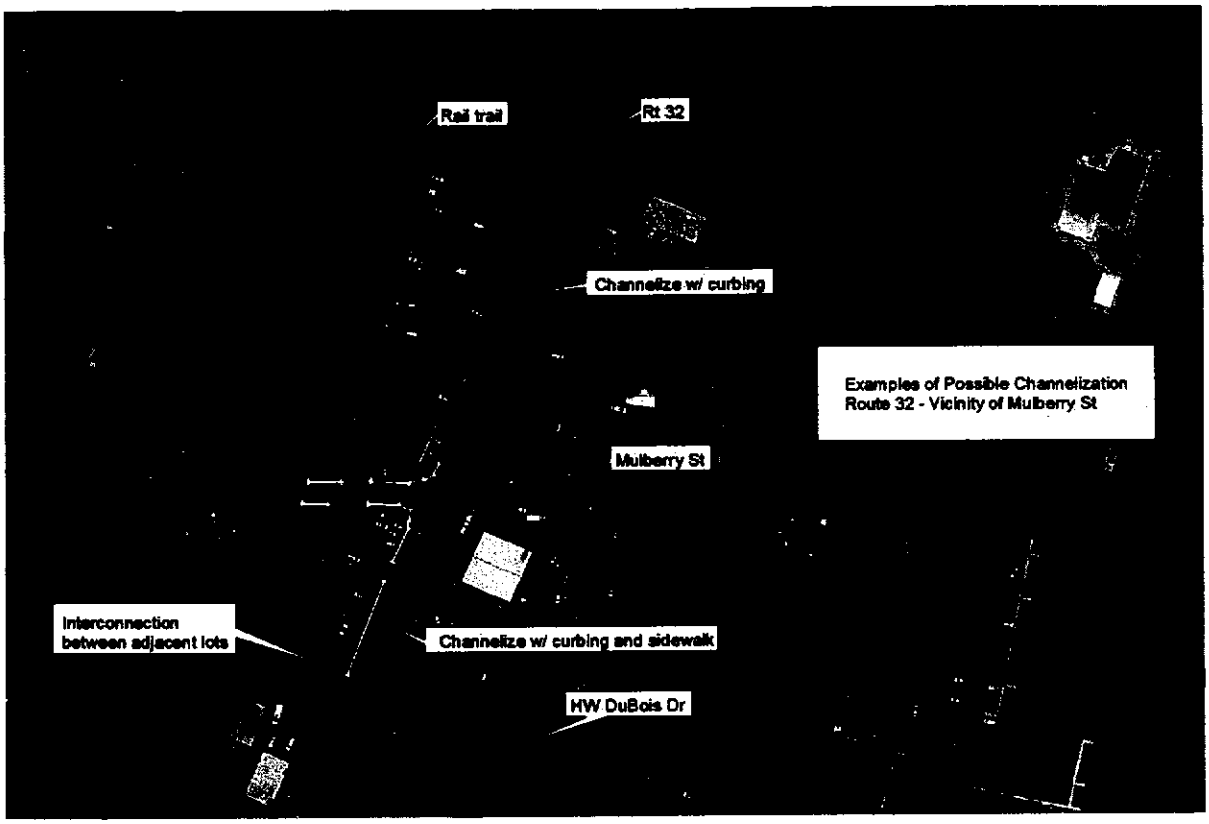
Within the corridor, there are 8 cases with 3 or more deficiencies.

Figure 21: Access Management Inventory, Route 32 from Henry W. DuBois to Old Kingston Road



A high number of access deficiencies exist along Route 32 proximate to Mulberry Street. To a large extent these deficiencies can be addressed through improved driveway definition or channelization (Figure 22).

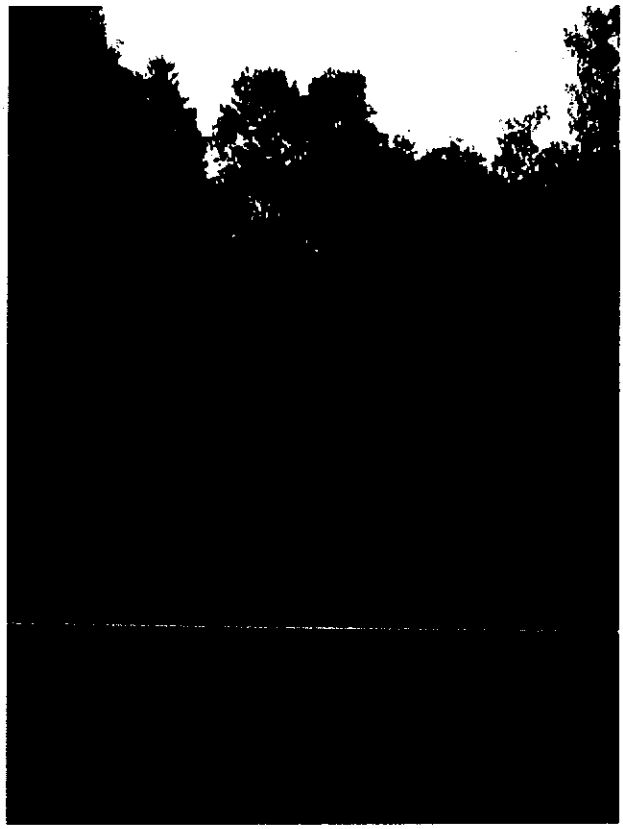
Figure 22: Examples of Improved Driveway Definition (Channelization) on Route 32 North



There are 2 examples of good access management practice within the corridor: First, there is an interlot connection between the New Paltz Town Hall and the apartment complex to the north. This creates the potential to close one of the existing curb cuts if Veterans Drive or the driveway to the apartment complex could be upgraded.

The second example is a small residential driveway situated on the east side of Route 32 and south of Sunset Ridge Road. Residential uses are very light traffic generators and their driveways can usually be designed as one lane of 9-10' width (Figure 23). This driveway is notable since it is appropriately sized for a driveway serving a single family dwelling. The width at the immediate intersection with Route 32 is around 20', which is sufficient. The driveway is also well-defined, as opposed to open and undefined, which is the case with other driveways in this roadway segment.

Figure 23: Small Residential Driveway on Route 32 North



4.0 THE DESCRIPTION AND EVALUATION OF ALTERNATIVE TRANSPORTATION IMPROVEMENTS

Through the public outreach efforts of this Project, a variety of opinions has been voiced regarding future transportation improvements. New Paltz residents who have participated in the Project's committees and in the many Project meetings have continually reinforced the need to seriously consider multimodal improvements within the course of work. Indeed, consideration of multimodal improvements is stated explicitly within the Initial Project Proposal that gave rise this work.

Thus, considerable effort has been expended within all 3 Project Phases to describe and evaluate transportation improvements for alternative modes – walking, cycling, and transit. Recommended improvements for these alternative modes are provided below within this report and have been analyzed extensively within the first two reports of the Project (Phase A and Phase B).

While work on alternative transportation improvements continued throughout the Project, a major objective of the Phase B portion of the Project was to evaluate the effectiveness of roadway-based improvements designed to address vehicular congestion and safety issues. It is emphasized that this evaluation does not diminish the need or consideration for alternative modes; rather, consideration of roadway-based improvements is a necessary element within a Project that, by its scope, must consider the needs of all modes.

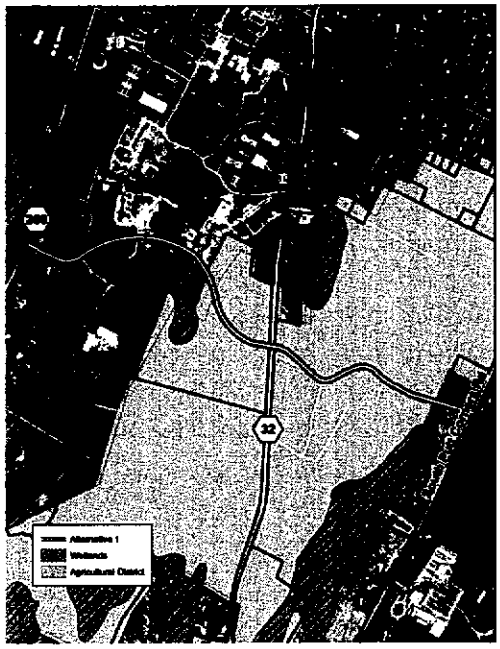
4.1 ALTERNATIVE ROADWAY-BASED IMPROVEMENTS

A major effort within Phase B was invested in defining combined land use-transportation improvement alternatives for detailed evaluation. The selection of land use patterns was described in the previous section, and focused on 3 future land use patterns that projected the geographic pattern of future land use in New Paltz in 2025. Associated with each geographic pattern is a set of travel behaviors and improvements that effect overall vehicle demand:

- Continuation of historic trends – 70% of future household growth occurs outside areas served by municipal sewer. Travel continues to be very auto-dominated. The dispersed nature of development discourages walking for purpose trips and makes transit uneconomical to operate.
- Route 32 (north and south) mixed use – development is encouraged in 2 mixed use activity centers aligned along Route 32 north and south. Reliance on auto travel is slightly reduced from existing conditions, with offsetting increases in walking, biking, work-at-home, and bus transit.
- High concentration (Central Main Street) – the high concentration of new development proximate to existing built up areas near the Village core reduces overall auto dependency. Over 40% of travel can be accomplished with modes other than the automobile.

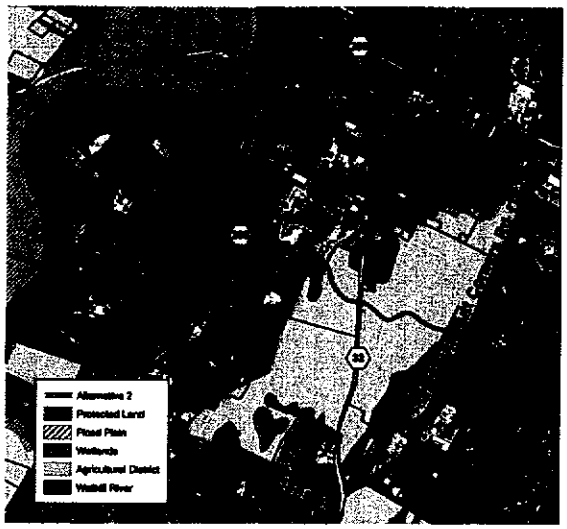
These land use patterns were used as the "foundation" for evaluating the effectiveness of 7 alternative transportation improvements[1]:

Alternative 1: New East-West Connector Road, connecting South Putt Corners to Route 32 and Route 208. The concept of an East-West connector south of Main Street has been discussed in New Paltz for several decades. The Land Use-Transportation Project was, in large measure, created to evaluate the effectiveness of this new roadway within the context of future land use change and multimodal improvements. The Town Engineer has provided a conceptual alignment for this alternative that has been used to develop the map shown at right.



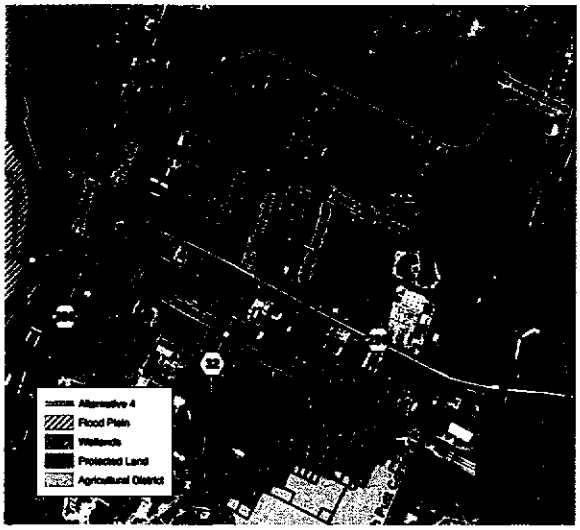
1 The conceptual alignments for each transportation alternative provides a first-order review of environmental constraints. Four resource types are projected:

1) Wetlands – this information acquired from the Ulster County Information Services depicts regulated Article 24 Freshwater wetlands. 2) Agricultural Districts -- these data were obtained from an Open Space study commissioned by the Town of New Paltz and conducted by AKRF. The original data were acquired from the Cornell University Geospatial Data Information Repository (CUGIR) and re-projected. 3) Protected Open Land – these data were also obtained from the AKRF Open Space study. 4) Parcel Boundaries – shows the parcels of private properties in New Paltz. These data were obtained from the Ulster County Information Service.



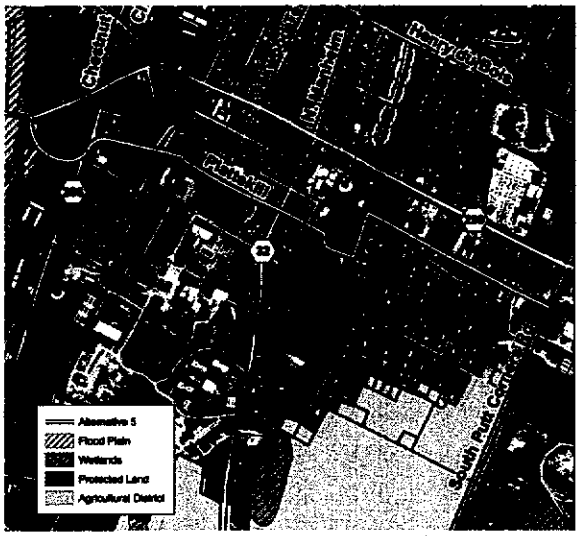
Alternative 2: The East-West Connector Road of Alternative 1 continuing westerly across a new bridge over the Wallkill River, connecting to Route 299 west of the Wallkill River at a realigned intersection proximate to Libertyville Road. On the eastern end, a modified EZ Pass access to I87 from South Putt Road would be provided. The Wallkill River floodplain and floodway are major environmental constraints associated with this Alternative.

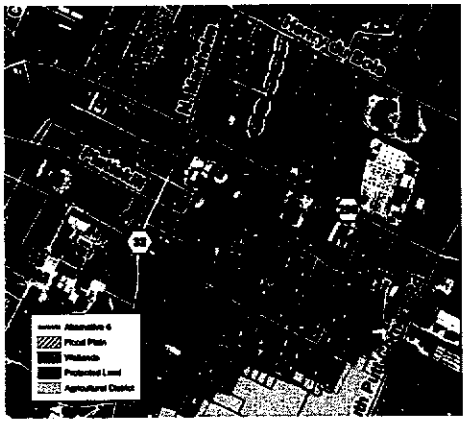
Alternative 3: Short connector extending from Rt. 32 to South Putt behind Cherry Hill commercial area. EW connection between Route 32 at Plattekill and South Putt following an alignment parallel and south of Route 299 along the back boundary lines of the Route 299 commercial area. The Project's Technical Review Committee also indicated the general need to include greater connectivity of local streets within this alternative.



Alternative 4: Roundabouts at 2 intersections (Main/Huguenot and Rt. 32/Plattekill) and selected residential street connections north and south of Route 299. These intersections are currently capacity constrained. Roundabouts could improve traffic flow at each intersection. However, roundabouts at these intersections would impact private property.

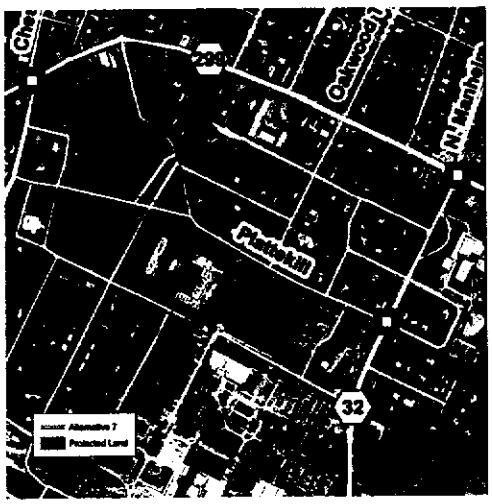
Alternative 5: One Way Circulation System, Main Street westbound to Water Street southbound to Mohonk/Hasbrouck eastbound to Route 32, continuing easterly to Putt Corners Road. While this alternative was formally evaluated, there are other one way alternatives that are considered more feasible. For example, a one way pair extending between Route 32 and Route 208 (Chestnut) is more compact and focuses on managing traffic in and around the village core. In either case, a one-way system would create opportunities for extensive streetscape improvements, angled parking, bus pulloffs, bicycle lanes, and wider pedestrian areas.





Alternative 6: Major Main Street Improvement Project to facilitate east-west travel on Rt. 299/Main Street. This alternative incorporates a 4-lane cross-section from S. Putt to Prospect, with center medians for left turn control and other access restrictions. This is a high mobility alternative to relieve spillover congestion in local neighborhoods.

Alternative 7: Spot intersection improvements (addition/extension of turn lanes, signal optimization) at 3 intersections: Rt. 32/Plattekill; Main/Manheim; Main/Chestnut. This is a minimalist proposal that seeks capacity improvements at these three key intersections. There are very few options for constructing new capacity at the 2 signalized intersections at Main/Manheim and Main/Chestnut without the taking of private property. For this alternative, optimized signal timing is evaluated against the projected 2025 travel demand. For the Rt. 32/Plattekill intersection, a northbound left turn lane is assumed as a spot improvement.



In total, 10 future scenarios were evaluated within Phase B. Each scenario was a unique combination of a future land use pattern with 1 of the 7 transportation improvements (Table 11).

Table 11: Combined Land Use-Transportation Improvement Scenarios Evaluated in Phase B

Scenario	Land Use Pattern	Transportation Improvement
Scenario 1	Route 32 Mixed Use	Alt 1: EW Connector, S. Putt-Rt. 32-Rt.208
Scenario 2	Route 32 Mixed Use	Alt 2: EW Connector (Scen 1) with new bridge over Wallkill River, reconfigured access to Exit 18
Scenario 3	Route 32 Mixed Use	Alt 3: Short connector, S. Putt to Rt. 32 near Rt. 299
Scenario 4	Route 32 Mixed Use	Alt 4: Roundabouts at selected intersections and new neighborhood connectors
Scenario 5	High Concentration	Alt 1: EW Connector, S. Putt-Rt. 32-Rt.208
Scenario 6	High Concentration	Alt 5: One way pair, Rt. 299 WB/Mohonk-Hasbrouck-Plattekill EB, Putt to Water Street
Scenario 7	High Concentration	Alt 4: Roundabouts at selected intersections and new neighborhood connectors
Scenario 8	High Concentration	Alt 6: Major Main Street Improvement Project
Scenario 9	Rt. 32 Mixed Use	Alt 7: Spot intersection improvements
Scenario 10	Historic (Base)	Alt 7: Spot intersection improvements

4.2 TECHNICAL EVALUATION OF ALTERNATIVE TRANSPORTATION SCENARIOS

Each scenario shown in Table 11 was modeled for 2025 land use conditions using the New Paltz traffic simulation model. The 10 scenarios described in Table 11 were evaluated against 4 performance measures[1]:

- Total Trips, Mode share (% of PM peak hour trips using alternative modes of travel).
- System-wide congestion (index, compared to 2005 conditions)
- East-west travel time on Route 299 (east town boundary to west town boundary);
- Index of neighborhood traffic (index, compared to 2005 conditions).

[1] The complete description of these performance measures is provided in the Phase B report.

4.2.1 Total PM Peak Hour Travel and Mode Share[1]

Total PM peak hour person trips for current conditions (2005) and for the three land use scenarios are shown in Table 12. Changes in mode share for walk/bike trips are also shown.

Table 12: PM Peak Hour Person Trips and Walk/Bike Mode Share

	Total PM Peak Hour Person Trips	PM Peak Hour Vehicle Trips	External-to-External Vehicle Trips	Total PM Peak Hour Walk/Bike Trips	Mode Share for Walk/Bike
2005	8,800	6,900	1,100	730	8.3%
Historic Pattern 2025	11,100	8,600	1,600	790	7.1%
Rt. 32 Mixed Use 2025	10,900	8,400	1,600	1,400	12.8%
High Concentration 2025	10,700	8,100	1,600	1,600	15.0%

The increases in walk/bike trips for the Rt. 32 Mixed Use and High Concentration land use patterns are significant, and result from a combination of assumed investments in bicycle/pedestrian facilities, higher density land use, and higher vehicle travel times.

Mode share for transit has not been explicitly modeled for these scenarios. For each scenario (combined land use pattern and transportation improvement) a specific transit service plan would need to be defined that is tailored to the growth and attraction patterns characteristic of that land use pattern. Generally speaking, transit ridership will improve with densification of land use. Hence, the High Concentration land use pattern will be more amenable to attracting a high ridership than the other land use patterns. The Phase C report will make specific recommendations regarding future transit service in New Paltz.

4.2.2 System-Wide Congestion

Table 13 shows the network-wide congestion indicator, Mean Percent Time Delay.

Table 13: Percent Mean Time Delay for Future Scenarios (2025)

	Land Use Pattern	Transportation Improvement	Mean % Time Delay	Index
Existing Conditions (2005)	Existing	-	67	1.00
Scenario 1	Rt. 32 Mixed Use	Alternative 1	71	1.06
Scenario 2	Rt. 32 Mixed Use	Alternative 2	71	1.06
Scenario 3	Rt. 32 Mixed Use	Alternative 3	96	1.43
Scenario 4	Rt. 32 Mixed Use	Alternative 4	63	0.93
Scenario 5	High Concentration	Alternative 1	45	0.67
Scenario 6	High Concentration	Alternative 5	39	0.58
Scenario 7	High Concentration	Alternative 4	36	0.53
Scenario 8	High Concentration	Alternative 6	44	0.65
Scenario 9	Rt. 32 Mixed Use	Alternative 7	96	1.43
Scenario 10	Historic Trend	Alternative 7	127	1.90

The results for system-wide congestion show that overall congestion is significantly reduced for all scenarios utilizing a High Concentration land use pattern. Under High Concentration, there are fewer

[1] Mode share refers to the percentage of trips by each mode of travel. Modes of travel in New Paltz in clued auto (drive alone), auto (shared ride), walk/bike, and bus. Mode share for walk/bike is tracked separately by the modeling system.

overall vehicle trips, and the average trip length for vehicle trips is reduced due to the closer proximity of land uses. These effects are very significant such that even small improvements in roadway capacity appear to have a large impact in mitigating congestion. The land use effect on congestion, as effected through the High Concentration land use pattern, is the much larger cause of the estimated change in congestion, however.

4.2.3 East-West Travel Time on Route 299

Table 14 shows the estimated end-to-end travel time for vehicles traversing New Paltz on Route 299. In all cases, the projected transportation improvements result in reductions in east-west travel time when compared with the results shown in Table 14. The largest travel time reductions occur when the High Concentration land use pattern is utilized.

Table 14: Estimated East-West Travel Time on Route 299 for Future Scenarios

	EW Travel Time, Route 299	Change from Existing
Existing Conditions, 2005	15:40	-
Scenario 1	27:48	12 mins. 8 secs.
Scenario 2	25:51	10 mins. 11 secs.
Scenario 3	28:58	13 mins. 18 secs.
Scenario 4	28:39	12 mins. 59 secs.
Scenario 5	19:43	4. mins. 3 secs.
Scenario 6	22:20	6. mins. 40 secs.
Scenario 7	20:10	4. mins. 30 secs.
Scenario 8	19:25	3. mins. 45 secs.
Scenario 9	27:23	11 mins. 43 secs.
Scenario 10	28:26	12 mins. 46 secs.

4.2.4 Index of Neighborhood Traffic

The Index of Neighborhood Traffic estimates how much traffic (number of vehicles during the PM peak hour) would use residential streets when compared to existing conditions (2005). Traffic was measured along 7 residential streets in New Paltz, as follows:

- Plains Road
- Oakwood South
- Oakwood North
- Harrington
- Cicero
- Huegenot
- Church

The results are provided in Table 15.

Table 15: Estimated Neighborhood Traffic Index Scenarios

	PM Peak Hour Neighborhood Traffic	Neighborhood Traffic Index
2005 Existing Conditions	406	1.00
Scenario 1	616	1.52
Scenario 2	617	1.52
Scenario 3	694	1.71
Scenario 4	416	1.02
Scenario 5	323	0.80
Scenario 6	270	0.67
Scenario 7	268	0.66
Scenario 8	369	0.91
Scenario 9	581	1.43
Scenario 10	691	1.70

As shown, in many cases involving combined land use patterns and transportation improvements, ancillary benefits can be estimated in the form of reduced travel on neighborhood streets.

4.2.5 Technical Ranking of Future Scenarios

Another method of ranking the scenarios is to evaluate how each scenario performed relative to the 4 performance measures. Table 16 provides a ranking of each scenario relative to how the scenario ranked within each of the 4 performance measures. The best performance is assigned a "1", the second best, "2", and so on, with ties being given the same ranking. Summing all performance measures enables a final ranking, with the lowest total being the best performance.

Table 16: Summary Table and Ranking of the Future Scenarios

Scenario	Land Use Pattern	Transportation Improvement	Walk/Bike Mode Share	System-Wide Congestion	EW Travel Time	Index of Neighborhood Traffic	Sum of Rankings	Rank
Scenario 1	Rt. 32 Mixed Use	Alternative 1	2	6	6	7	21	5
Scenario 2	Rt. 32 Mixed Use	Alternative 2	2	6	5	4	17	4
Scenario 3	Rt. 32 Mixed Use	Alternative 3	2	7	9	10	28	8
Scenario 4	Rt. 32 Mixed Use	Alternative 4	2	5	10	6	23	6
Scenario 5	High Concentration	Alternative 1	1	4	2	3	10	3
Scenario 6	High Concentration	Alternative 5	1	2	4	2	9	2
Scenario 7	High Concentration	Alternative 4	1	1	3	1	6	1
Scenario 8	High Concentration	Alternative 6	1	3	1	5	10	3
Scenario 9	Rt. 32 Mixed Use	Alternative 7	2	7	7	8	24	7
Scenario 10	Historic Trend	Alternative 7	3	8	8	9	28	8

Using this approach, Scenarios 6, 7, and 8 rank the highest, all of which are based upon a High Concentration land use pattern. Scenario 7 is the top ranked scenario, involving spot improvements including neighborhood street connections and roundabouts at selected intersections. Scenario 6 is the second highest ranked scenario, involving the establishment of a one-way street system. The 3rd, 4th, and 5th ranked scenario incorporated the East-West Connector in some form.

4.3 PUBLIC EVALUATION OF FUTURE SCENARIOS

The results of the modeling were first presented at a general public meeting held at BOCES on 26 September 2005[1]. As described each scenario was technically evaluated using the integrated New Paltz transportation-land use model. Scenario results were formally evaluated at two separate meetings: 26 September 2005 at the general public meeting and again on 29 March 2006 at a CAC meeting where public reaction informed the CAC's discussion. Prior to the 26 September public meeting, 8 of the 10 scenarios had been formally evaluated, so the results of the public's ratings of the scenarios are available for Scenarios 1-8 only.[2]

General measures of performance were generated by the model, providing insight into the following issues and questions:

- Congestion--How does the scenario affect:
  - Peak hour congestion generally?
  - Main Street congestion specifically?
  - The volume of traffic on residential streets?
  - The ability to manage special event or emergency management traffic?
- Alternative Modes: How does the scenario affect the attractiveness of bicycle/pedestrian travel?
- Land Use--How does the scenario affect:
  - Open spaces?
  - Environmentally sensitive areas?
  - The potential for desirable economic growth?

For the September 2005 public meeting, participants were asked to rate whether the scenario:

- made things better than today (+1),
- made things worse than today (-1), or
- was neutral relative to today (0).

The evaluation form that was used at public meeting #3 is provided in Appendix F and shown in Table 17.

---

[1] At the 26 September 2005 public meeting, only 8 of 10 scenarios were presented. Scenarios 9 and 10 were defined by the Management Team after the public meeting, considering public input provided at the meeting.

[2] Scenario 9 and 10 were recommended for formal evaluation by the Project's Management Team after reviewing the results of the public ranking of Scenarios 1-8.

Table 17: Evaluation Form Used at Public Meeting 3

		Score (1=improves; 0=no change; -1=makes worse)
Congestion	Impacts PM Peak Hour Generally	
Congestion	Impacts Route 299/Main Street Specifically	
Congestion	Impacts Routing Alternatives	
Congestion	Impacts Special Event Traffic Management/Emergency Services	
Alternative Modes	Impacts the Attractiveness of Bicycle/Pedestrian Travel	
Land Use	Impacts Open Spaces	
Land Use	Impacts Environmentally Sensitive Areas	
Land Use	Impacts Potential for Desirable Economic Growth	

Public meeting participants completed and handed in a range of 39-45 Rating Sheets for each scenario. Most of these were collected directly at the public meeting, which was attended by an estimated 100 people. Participants were allowed to access the Rating Sheet after the meeting from the project website and send in their evaluations until 14 October 2005. Five Rating Sheets were received after the September 26 meeting.

The following analysis of the Rating Sheets involves a simple summation of all of the individual ratings. Thus, a positive number means that, on average, people felt the scenario resulted in performance better than today; a negative number means the opposite. For each Scenario, the number of respondents (N),

the overall sum of the ratings, and the ratings sums for the Congestion, Alternative Mode, and Land Use subcategories are provided.

Participants were also given the opportunity to provide open ended comments on each scenario. Representative pro/con samplings of these comments are provided below. More comments were offered for the lower numbered scenarios (1-4) indicating that participants may have fatigued as the meeting progressed.

Scenario 1: E-W Connector from South Putt to Route 32 to Route 208 combined with the Route 32 Mixed Use Land Use Pattern.

N=	41
Overall Sum	19
Congestion Sum	25
Alternative Modes Sum	5
Land Use Sum	-10

Comments in Favor of Scenario 1

This may have a positive effect on congestion and might be a solution I would support. I would be concerned about land use along this road (specifically I would not want to have a new commercial strip to compete with Main St)

Good idea to have another connector road parallel to 299 & HW DuBois. Would help Main Street congestion. However, any connector road that does not include a second bridge over Wallkill would simply create new bottleneck where traffic going to Gardiner (or other places West of Wallkill) need to come back to 299 to cross bridge.

I see this as a viable improvement of traffic so long as it does not cause condemnation procedures on land owners

Comments Opposed to Scenario 1

Would simply create new bottleneck at intersection of 208&299 for thru traffic.

This proposal, I feel would have minimal impact on traffic patterns including those on Main Street. If the bypass area is commercially developed this could be detrimental to the downtown area. This impact on the environment and open space would be detrimental.

Too limited, need more significant change, fails to address Wallkill bottleneck; that this will assist E/W traffic jam, maybe help with southbound.

Scenario 2: E-W Connector from a modified EZ Pass access at Exit 18 to South Putt to Route 32 to Route 208, continuing westerly to a new bridge over the Wallkill River, connecting directly to Route 299. This transportation improvement is combined with the Route 32 Mixed Use Land Use Pattern.

N=	39
Overall Sum	1
Congestion Sum	48
Alternative Modes Sum	5
Land Use Sum	-52

Comments in Favor of Scenario 2

This seems to me the proposal that would accommodate most of my concerns. If DOT is reluctant to build a second bridge across Wallkill, how about widening existing bridge & improving access from 208 to bridge (widen Mohonk Ave & Water St.)?

Best alternative - only one to address need for new bridge; impacts can be mitigated; with growth in Gardiner major new traffic impacts are coming from the West; need an aggressive plan to handle this.

Traffic through downtown would be less so you could actually get to the shops!

Comments Opposed to Scenario 2

This would have the unintended consequence of allowing traffic to completely bypass Main St & would have a serious negative economic effect on Main St.

I feel this alternative is the worst in terms of environmental impact, the worst in terms of damage to downtown businesses, and the worst in terms of encouraging development west of the Wallkill.

An additional vehicle route across the Wallkill will up the development potential W of the Wallkill & have huge negative impacts on the environmental and scenic resources.

Scenario 3: This scenario combines a short street connection from Plattekill Avenue through to the Cherry Hill residential area, providing a parallel route south of Route 299/Main Street. Scenario 3 is modeled assuming the Route 32 Mixed Use land use pattern.

N=	45
Overall Sum	-26
Congestion Sum	-21
Alternative Modes Sum	-1
Land Use Sum	-5

Comments in Favor of Scenario 3

In general, I favor extending the grid in this type.

Positive effect on Main St. with the potential for interconnecting 299 businesses without entering and exiting 299.

(no other favorable comments on Scenario 3)

Comments Opposed to Scenario 3

Too limited to have much value.

Totally unacceptable going through Cherry Hill neighborhood.

This route involves private property & is much too close to the school & disturbing to a neighborhood.

Scenario 4: Scenario 4 involves spot improvements including roundabouts at the intersections of Main Street/Water Street/Huguenot Street and at Route 32/Plattekill Avenue. Additional local street connections are also represented within Scenario 4 including a modified east-west connector between Route 32 and 208, a connection from Plattekill (Hasbrouck) to the Cherry Hill neighborhood, and a new east-west local street north of Main Street extending between Route 32 and North Putt. This scenario assumes the Route 32 Mixed Use land use pattern.

N=	43
Overall Sum	-17
Congestion Sum	13
Alternative Modes Sum	0
Land Use Sum	-30

Comments in Favor of Scenario 4

Okay, except the easterly extension of Hasbrouck.

In general, these kind of smaller grid extensions are the route to take.

(no other favorable comments on Scenario 4)

Comments Opposed to Scenario 4

Without increasing the width of the Wallkill River Bridge Roundabout won't be effective. This is too much of a mixed bag to evaluate - as a package it doesn't work.

The roundabout at Water St/Rte 299 is unacceptable - roundabouts are a joke! Does nothing to address E/W problems; worth thinking about multiple improvements but needs to include a new Wallkill River crossing.

The connecting road north of 299 doesn't serve the new housing. More than 1/2 of the projected growth (1500 units) is already planned north of 299. The proposed site plans are effectively dead ends. Rather than bypass, we need connector roads.

Scenario 5: E-W Connector from South Putt to Route 32 to Route 208 combined with the High Concentration land use Pattern.

N=	43
Overall Sum	-5
Congestion Sum	3
Alternative Modes Sum	0
Land Use Sum	-9

Comments in Favor of Scenario 5

This is a viable alternative as long as it doesn't impact the environment.

Good bypass for students.

This is also okay.

Comments Opposed to Scenario 5

Obviously, land use in an important component. I am not going to vote on scenarios 5-8 because it would indicate that tonight's presentation gave enough detail about the two land use scenarios.

Too little, too late.

(no other opposing comments on Scenario 5)

Scenario 6: This scenario has a one way pair system between Putt Corners and Water Street with Main Street westbound and a combination of eastbound streets including Mohonk, Hasbrouck, and Plattekill. Scenario 6 is combined with the High Concentration land use pattern.

N=	41
Overall Sum	10
Congestion Sum	20
Alternative Modes Sum	-3
Land Use Sum	-7

Comments in Favor of Scenario 6

I like the idea of parallel one-way streets but question the practicality of extending Hasbrouck through existing residential district, as Hasbrouck is not a through street. Problem of bottleneck where the 2 streets merge back into 299 still exists.

Still would bottleneck at the Wallkill River Bridge & Thruway Bridge but could help traffic flow. Impacts neighborhoods; should include another bridge over Wallkill also one way at the box factory & rejoin 299 at flats.

(no other favorable comments on Scenario 6)

Comments Opposed to Scenario 6

It's kind of scary to imagine one-way streets - feels like a huge character change. But I like the idea of not having to create major new roads somewhere else. How do the 2 or 3 lanes going W get back to 1

lane at the bridge?
There may be value to the one way system of roadways - but this is NOT the one to be followed. It would destroy existing neighborhoods. Use Henry W. DuBois for the W to E traffic!
One ways limit options. In emergency closing you don't have the option of using other street.

Scenario 7: This scenario combines the spot improvements (described above in Scenario 4) with the High Concentration land use pattern.

N=	45
Overall Sum	-4
Congestion Sum	14
Alternative Modes Sum	0
Land Use Sum	-18

Comments in Favor of Scenario 7

I think that this plan best serves the public. I think this is best of what you show us.
The N&S road is fine but eliminate the extension of Hasbrouck Ave.
(no other favorable comments on Scenario 7)

Comments Opposed to Scenario 7

This feels like we're building roads at public expense for private developers…Stoneleigh, etc. Maybe these projects are too big. Would these plans require eminent domain taking to provide roads for their projects? Yikes!
Unacceptable! A connection between Rte. 32 and Joalyn Rd. would mean many people would use Joalyn Rd. South to Cicero - East on Cicero to Cherry Hill and out of Cherry Hill (North) to Rte. 299. We do not want this traffic.
This road goes directly through the planned Millbrook Preserve.

Scenario 8: This scenario involves a major Main Street improvement project with a 4 lane cross-section and access management to control left turns with the High Concentration land use pattern.

N=	45
Overall Sum	-97
Congestion Sum	-88
Alternative Modes Sum	-5
Land Use Sum	-5

Comments in Favor of Scenario 8

(there are no other favorable comments on Scenario 8)

Comments Opposed to Scenario 8

However it looks like you would wipe out the entire downtown business district.
Forget about it! Changes the character of Main Street in an unacceptable way.
No boulevards! NO way! Where is the connection between the Fairground, UC Pool-Field of Dreams and 208 to create some real alternatives for the people of NP to get out there? (diagram)

Table 18 ranks each scenario based on the public scoring.

Table 18: Public Scenario Rankings

Rank	Scenario	Overall Sum
1	**1**	19
2	**6**	10
3	**2**	1
4	**7**	-4
5	**5**	-5
6	**4**	-17
7	**3**	-26
8	**8**	-97

The public ratings show heavily negative reactions to Scenarios 3 (short street connection, Route 32 to So. Putt via Cherry Hill) and 8 (Major Main Street Improvement). Scenarios 1 and 2, involving east-west connector roadways, obtained overall positive ratings. The only other positively reviewed scenario was Scenario 6, involving one-way street pairs.

The public reaction to the scenarios was considered as important advisory input to the Project's Citizens Advisory Committee (CAC). As mentioned the CAC met on 29 March 2006 to review the public comments and reactions, decide on eliminating some alternatives from future consideration, and advance other alternatives within Phase C for further review.

4.4 CAC EVALUATION OF FUTURE SCENARIOS

The CAC met on 29 March 2006 to discuss the public reactions and evaluations of the future transportation scenarios and to provide guidance for further consideration of specific scenarios within Phase C. A summary of this critical discussion follows:

Scenario 1 and Scenario 5: E-W Connector from South Putt to Route 32 to Route 208 combined with two different land use patterns (the Route 32 Mixed Use Land Use Pattern and the High Concentration Land Use Pattern).

The traffic analysis suggests that its main contribution, from a travel standpoint, would be to serve future land use growth in the area. The Connector's geographic location proximate to the next most convenient east-west connector – Jansen Road, an Ulster County collector – suggests that its value as a Main Street bypass would be duplicative to that of Jansen Road.

The CAC emphasized that any connector roadway would need to be carefully designed with clear access restrictions and careful consideration of adjacent zoning.

The CAC felt that the main advantage to the East-West Connector included providing an alternative access to SUNY from points east. The SUNY administration has recently indicated their opposition to an east-west route proximate to the south boundary of the SUNY campus. However, SUNY would be supportive of a partial east-west route linking South Putt with Route 32, as this would provide a viable alternative commuting route for students and staff.

Scenario 2: E-W Connector from a modified EZ Pass access at Exit 18 to South Putt to Route 32 to Route 208, continuing westerly to a new bridge over the Wallkill River, connecting directly to Route 299. This transportation improvement is combined with the Route 32 Mixed Use Land Use Pattern.

It was generally felt that this Scenario, which incorporates a new bridge over the Wallkill River, would have severe environmental and private property impacts. The one aspect of this scenario that was positively received was the potential modified EZ Pass access to the Thruway, which would connect directly to South Putt Road. It was pointed out that this would be especially valuable managing special event traffic for SUNY and the Ulster County Fairgrounds.

Scenario 3: This scenario combines a short street connection from Plattekill Avenue through to the Cherry Hill residential area, providing a parallel route south of Route 299/Main Street. Scenario 3 is modeled assuming the Route 32 Mixed Use land use pattern.

NYSDOT originally recommended that this Alternative be evaluated as it could provide an alternative access to Route 299 commercial properties, thus relieving some Main Street congestion. An Agreement between the Town and Village precludes a connection to the Cherry Hill residential area from Route 32 from being legally established.

Scenarios 4 and 7: Scenarios 4 and 7 pair the same transportation improvements with 2 different land use patterns. The transportation improvements are spot improvements including roundabouts at the intersections of Main Street/Water Street/Huguenot Street and at Route 32/Plattekill Avenue.

Additional local street connections are also represented within Scenarios 4 and 7 including a modified east-west connector between Route 32 and 208, a connection from Plattekill (Hasbrouck) to the Cherry Hill neighborhood, and a new east-west local street north of Main Street extending between Route 32 and North Putt. The connector north of Route 299 is designed to tie together several dead-end streets. Field reconnaissance has determined that there are significant environmental constraints (grades and wetlands) to this connector, although portions of it are feasible. The connector south of Route 299—connecting the Cherry Hill neighborhood to Route 32--is restricted by the Town-Village agreement.

Scenario 6: This scenario has a one way pair system between Putt Corners and Water Street with Main Street westbound and a combination of eastbound streets including Mohonk, Hasbrouck, and Plattekill. Scenario 6 is combined with the High Concentration land use pattern.

There are several benefits to one way pairs. The first is general efficiency, as intersections can operate more efficiently when processing traffic from 3 rather than 4 approaches. The second is that currently paved areas could be reclaimed for other purposes since 2 travel lanes would not be necessary for most road segments. Paved areas could be converted to landscaping or outfitted with additional pedestrian amenities such as benches or broader walkways. Angle parking or bicycle lanes could be provided as well. Thus, there are several interesting streetscape opportunities that the one way system yields that are difficult to accommodate with other roadway improvement options.

The CAC discussed several other one way system options:

Option 1: This option has a one way pair system between Putt Corners and Water Street with Main Street westbound and a combination of eastbound streets including Mohonk, Hasbrouck, and Plattekill. This option was technically evaluated within Phase B.

Option 2: This one way system commences at Rt. 32/Manheim on Main Street, continuing one way westbound down Main Street to Water Street, and looping one way eastbound on Hasbrouck/Plattekill, and ending at the Rt. 32/Plattekill intersection.

Option 3: This option involves Main Street and HW DuBois as a one way pair. Drawbacks associated with this alternative are described in the Phase B report.

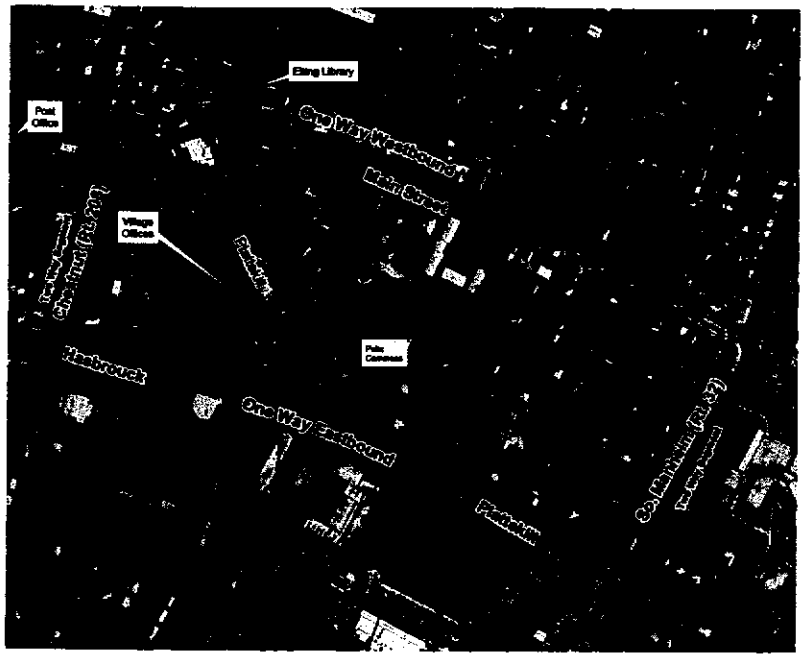
Option 4: A minimalist one-way circulation system would traverse Front Street northwest-bound to Route 32 (Chestnut Street), Route 208 southbound to Main Street, and Main Street eastbound from Route 208 to Front Street.

Option 5: One-way west-bound Main Street from Plattekill to Chestnut; one-way eastbound from Hasbrouck to Plattekill.

Option 6: This one-way circulation system involves Main Street westbound and Hasbrouck/Plattekill eastbound, Manheim to Chestnut Street (Figure 24).

The CAC devised some of these options and decided that Option 6 had the greatest potential to serve existing and future land uses within existing travel ways. The CAC recommended that One Way Option 6 be considered within Phase C. Consequently the original Project scope was expanded to develop this one-way concept further, including microsimulation and conceptual design of intersections.

Figure 24: Option 6 One Way Circulation System for New Paltz



Scenario 8: This scenario involves a major Main Street improvement project with a 4 lane cross-section and access management to control left turns, combined with the High Concentration land use pattern.

This alternative was recommended for consideration by the Project's TRC. An intended benefit of this alternative is keeping through traffic off of neighborhood streets. The CAC noted that the reaction to this alternative was decidedly negative (see Table 18). The CAC formally approved a motion expressing opposition to this alternative.

Scenarios 9 & 10: These scenarios involve spot improvements at 3 intersections, as follows:

- Main/Chestnut: optimized signal timing
- Main/Manheim/Rt. 32: roundabout
- Rt. 32/Plattekill: northbound left turn lane.

The scenarios differ in that Scenario 9 uses the Rt. 32 Mixed Use land use pattern and Scenario 10 uses the Historic land use pattern. The CAC determined that these improvements made sense for any future scenario and should be advanced to Phase C of the project.

With regard to a roundabout at the Main/Manheim intersection, this location was evaluated as "feasible" candidate for a roundabout within the Phase B analysis, a candidate for further field investigation. The main constraint at this intersection is real estate, since acquisition of private property would be necessary to construct the roundabout. The New Paltz School District owns an administrative building on the

southeastern corner of this intersection and has recently indicated that they might be vacating it. Were this real estate available, a single lane roundabout could be accommodated.

The CAC discussed the safety of roundabouts with regard to pedestrian crossings. Because roundabouts are efficient at moving vehicles there are cases where very few acceptable gaps for pedestrians occur. Offsetting their vehicle processing efficiency is that roundabouts, when properly designed, significantly reduce vehicle travel speeds through intersections (9-15 mph), which has reduced the incidence and severity of vehicle-vehicle and vehicle-pedestrian crashes.

The CAC reviewed each scenario and ranked the scenarios according to the following protocol:

- scenario should be investigated further within Phase C (score = 1).
- scenario should possibly be investigated further within Phase C (score = 2).
- scenario should be eliminated from further consideration (score = 3).

A total of 17 rating sheets were completed by CAC members, and the raw results are shown in Table 19.

Table 19: CAC Evaluation of Future Scenarios

Scenario	Resp1	Resp2	Resp3	Resp4	Resp5	Resp6	Resp7	Resp8	Resp9	Resp10	Resp11	Resp12	Resp13	Resp14	Resp15	Resp16	Resp17	Scenario
1	3	3		1	1	1	1	3	1	1	3	1	1	1	2	1	1	1
2	2	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	2
3	2	1		3	2	3	3	3	3	3	2	3	3	3		3	2	3
4	3	1		2	2	2	1	1	2	2	1	1	1	1		2	1	4
5	1	3	1	1	1	1	1	3	1	1	3	1	1	1	2	1	1	5
6	1	1	3	1	3	1	1	1	3	1	1	2	2	1	1	1	1	6
7	1	1	1	1	2	2	1	1	2	2	1	1	1	1		2	1	7
8	2	2		3	3	3	3	3	3	3	3	3	3	3	3	3	3	8
9	3	1		1	1	1		1	2	1	1	1	2		1	2	2	9
10	3	1		1	1	1		1	3	1	1	1	2		1	2	2	10

The CAC tallies can be analyzed in a number of ways to deduce a central tendency of opinion with regard to each of the transportation improvement alternatives.

1. According to the number of "#1" votes the scenario obtained (#1 being a vote to investigate further).
2. According to the number of "#3" votes the scenario obtained (#3 being a vote to eliminate from further consideration).
3. Based on the group average ranking (the average of all individual CAC member rankings; a lower average score indicates a greater amount of support for the improvement alternative).

Table 20 shows these different ranking methods:

Table 20: Ranking of Transportation Scenarios According to3 Methods of Ranking

Scenario	Ranking Based on #1s	Ranking Based on #3s	Ranking Based on Average Score
1	3	7	7
2	9	10	10
3	8	8	8
4	7	2	6
5	1	5	2
6	2	5	4
7	3	1	1
8	9	9	9
9	5	2	3
10	5	4	5

Based on the foregoing, Scenarios 7 and 9, incorporating a variety of spot improvements, received strong endorsement by the CAC. The one-way circulation alternative, Scenario 6, has been endorsed for further investigation within Phase C as well. Finally, the CAC endorsed the concept of a partial East-West connector between South Putt and Route 32, noting that a full connector to Route 208 should continue to be considered an option for New Paltz beyond the 20 year time horizon of this Project.

Based on the CAC discussion and ranking, and subsequent to the Management Team review, Scenarios 2, 3, and 8 have been eliminated from further consideration by the Project. Scenario 2 incorporates the second bridge over the Wallkill River. Scenario 3 incorporates a short connection to the Cherry Hill neighborhood from Route 32, extending to South Putt. Scenario 8 incorporates the major Main Street improvement project.

5.0 TRANSPORTATION IMPROVEMENT RECOMMENDATIONS OF THE NEW PALTZ TRANSPORTATION-LAND USE PROJECT

Based on the analysis of existing conditions, the analysis of future conditions and the input of the public and CAC members, a comprehensive program of transportation improvements has been developed. This program incorporates policy and management recommendations, spot intersection improvements, recommendations for implementing a local transit service, and a host of improvements to bicycle/pedestrian facilities.

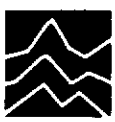
The program description begins with policy and management recommendations. Subsequent to this, a set of base capacity improvements necessary by 2025, determined through technical modeling, are described. Specific multi-modal transportation recommendations are then described according to implementation time frame – short (0-5 years), mid-term (5-12 years), and long-term (12+ years). Within each time frame, improvements are categorized by the growth center they are most closely related to, in the following geographic order:

1. Village Core
2. Central Main Street
3. Route 32 North
4. Route 32 South
5. Other Areas/Town-Wide

5.1 POLICY RECOMMENDATIONS

Eight policy recommendations designed to advance the joint transportation/land use goals and objectives of the Project are proposed:

1. Adopt revisions to the Town and Village land use regulations to support greater density in the designated growth centers (see Section 2.2) and to discourage sprawl and increased automobile reliance in areas outside of the designated Growth Centers.
2. Adopt an Access Management Overlay District with the Town and Village Zoning Ordinances
3. Adopt revisions to the Village's parking program.
4. Extend the local pedestrian network (sidewalks/pedestrian travel ways) through the formal subdivision and site plan review process.
5. Establish a Sidewalk Improvement Fund
6. Establish a Transportation Demand Management Fund.
7. Create transportation gateways and adopt traffic calming overlay strategies.



8. Establish a Study Implementation Committee.

5.1.1 Advance Zoning Recommendations to Encourage Growth Centers and Discourage Sprawl

Section 2.2 provides details on the density schedules recommended for advancing Growth Center zoning in the Town and Village.

To complement the increased densities in these designated areas, and to follow through on the second key point of consensus in this Project – to protect lands and natural values west of the Wallkill River – the Project recommends that the Town of New Paltz pursue a set of policies for discouraging sprawl outside of the Growth Centers. A primary motivation for limiting sprawl is to reduce auto-dependent travel in New Paltz, as non-concentrated growth directly causes an increase in the number and length of vehicle trips.

These policies should include elements of the following:

- Downzoning rural residential areas through increasing minimum lot sizes for development.
- Conservation Overlay zoning for protecting key natural values such as productive soils, wildlife habitats, ridgelines, etc. (see Phase B Report for details).
- Purchase of development rights on properties with significant natural or recreation value.
- Establishing a Transfer of Development Rights program designating areas outside of Growth Centers as "sending areas".

The Town should also seek other innovative methods for protecting the open spaces outside of the Growth Centers. Collectively, these methods would focus on areas within the Agriculture (A-1.5 and A-3) and Residence (R-1) zoning districts in the Town.

5.1.2 Adopt Access Management Overlay District[1]

The purpose of an Access Management Overlay District is to provide for improved highway safety and operations, and to better manage access to land within New Paltz from the 3 state highways – Route 299, Route 32, and Route 208. An area within 400 feet of the centerline of these state highways within New Paltz Town boundary would constitute the overlay district (Figure 25). Areas within the most built-up section of the Village would be exempt from the Overlay District[2]. It is recommended that the Town and Village amend their zoning ordinances to include an Access Management Overlay District. Recommended ordinance language is provided in Appendix I.

---

[1] The concepts described in this section are based on a proposed Access Management Overlay District for Rt. 22 in Pawling, NY.

[2] Recommended exempted areas are Route 32/299 from Prospect Street to Chestnut; Route 32 North from Chestnut to HW DuBois, and Route 208 from Main Street to Hasbrouck.

Figure 25: Recommended Access Management Overlay District

The Overlay District regulations would not apply to the state routes within the Village Core. The Overlay District would cover Route 299 from Prospect Street easterly and from the Wallkill River Bridge westerly. It would cover the entirety of Route 32 South and cover Route 32 north from HW DuBois northerly. It would cover the entirety of Route 208 up to Hasbrouck Avenue.

This Overlay District would support New Paltz's planning objectives for balancing land development and open space preservation along the roadway, while also preserving the regional flow of traffic in terms of safety, capacity, and travel speeds in accordance with the objectives of the Project. Appendix I provides a sample Access Management Overlay District ordinance for New Paltz.

Key Regulatory Elements of the Access Management Overlay District

Driveway Spacing and Design

Typically, driveway spacing is based on the sight distance required for the posted speed limit of the applicable road segment within the Overlay District. At times the operating speed may be greater than the posted speed limit, as determined by a speed survey, in which case the operating speed should be used to determine the required driveway spacing. Table 21 shows the recommended driveway spacing.

Table 21: Driveway Spacing for Different Speed Limits

Posted Speed Limit (mph)	Driveway Spacing (feet)
<35	125
36-45	245
>45	440

For new sites with insufficient road frontage to meet the required spacing, the following options should be pursued for providing reasonable access:

- Construction of the driveway along a side street;
- A shared driveway with an adjacent property;
- Construction of a driveway along the property line farthest from the adjacent intersection or driveway.
- Require a system of shared use driveways and cross-access easements.

Driveway and intersection approaches must be designed and located to provide an exiting vehicle with sufficient sight distance as determined by the mainline posted speed limit.

In order to prevent left-turn conflicts, driveways should be perpendicular to the intersecting public street and should be aligned to existing or planned driveways/intersections on the opposite side of the road, unless doing so in a particular case is substantially demonstrated to be unsafe.

Driveway width and flare shall be adequate to serve the volume of traffic and provide for safe movement of vehicles off the major thoroughfare, but standards shall not be so excessive as to pose safety hazards for pedestrians, bicycles or other vehicles.

The length of driveways or "Throat Length" should be designed to accommodate the anticipated storage length for entering and existing vehicles to prevent vehicles from backing into the flow of traffic on intersection streets or causing unsafe conflicts with on-site circulation. As a general rule there should be a minimum of forty (40) feet of throat length for entering and exiting vehicles at the intersection of a driveway and public street. For driveways serving between one-hundred (100) and four-hundred (400) vehicles in the peak hour (two-way traffic volumes) the driveways shall provide at least sixty (60) feet of throat length. For driveways serving more than four hundred (400) vehicles in the peak hour (two way traffic volumes), the driveway throat length shall be determined by a Traffic Impact Study.

In areas where significant pedestrian/ bicycle travel is expected, the ingress and egress lanes can be separated by a 4 to 10 feet wide median with a pedestrian refuge area.

Corner Clearance

Because of their immediate adjacency to the intersections of public streets, corner lots are especially critical in access management. Turning movements into and out of corner lots can be extremely unsafe without adequate corner clearance and can consume critical intersection capacity. For these reasons, providing adequate corner clearance is critical for preserving roadway capacity and function. Table 22 provides recommended corner clearance for driveways to corner lots with commercial uses.[1]

Table 22: Recommended Corner Clearance for Commercial Uses

Location of Access Point	Minimum Distance for Full Service Driveway (feet)
from an intersecting arterial	300
from an intersecting local or collector street	200

For sites with insufficient corner clearance to meet the required clearance, the following options should be pursued for providing reasonable access:

- Construct the driveway at the property line farthest from the intersection to encourage future shared use;
- Restrict driveways to specific directional turns (e.g. right turn enter/exit only).
- The Planning Board may decide that a corner clearance of less than the required distance does not present an unsafe or operational problem.

Lot Width-to-Depth Ratios

Newly created lots should conform to certain dimensional standards to ensure that site access and circulation can be properly accommodated. To this end, the depth of any lot within the Overlay District should not exceed 3 times its width.

Shared Access

Sharing or joint use of a driveway by two or more property owners should be encouraged and in some cases a shared driveway may be the only access design allowed. The shared driveway shall be constructed at the midpoint between the two properties unless a written easement is provided which allows traffic to travel across one parcel to access another and/or to access a public street.

[1] Driveways for residential corner lots should have a corner clearance of at least 100 feet.

Where shared access, frontage roads, cross access easements or rear service drives are provided for access to multiple commercial properties, clearly defined business identification signage and circulation directional signage shall be provided on the site to facilitate safe and efficient access and informational needs of visitors.

Where alternatives to a single, two-way driveway are necessary to provide reasonable driveway access to public roads, and a shared access is not an available option, the following options should be considered:

- Two (2) one-way driveways;
- Additional ingress/egress lanes on two (2) one-way driveways;
- Additional driveway(s) on an abutting street with a lower classification;
- Restricted turns and roadway modifications will be considered by the Planning Board in conjunction with alternative driveway designs.

Inter-Lot and Street Connections

Adjacent commercial or office properties are encouraged to provide a cross access drive and pedestrian access connections to allow circulation between sites. Service drives or cross access corridors should have a design speed of 10 mph and be of sufficient width to accommodate two-way travel aisles designed to accommodate automobiles, service vehicles, and loading vehicles.

Subdivisions with a single residential access street that ends in a cul-de-sac shall not exceed 25 lots or dwelling units. The street system of proposed and existing subdivisions should be designed to coordinate with existing, proposed and planned streets outside of the subdivision.

Wherever a proposed development abuts unplatted land or a future phase of the same development, street stubs shall be constructed to provide access to abutting properties or to logically extend the street system to the surrounding area.

Subcollector and local residential access streets shall connect with surrounding streets to permit the convenient movement of traffic between residential neighborhoods or to facilitate emergency access and evacuation.

Shared Parking

A unified access and circulation system plan that includes coordinated or shared parking areas is encouraged wherever feasible. When shared parking areas are established a reduction in required parking spaces should be permitted if peak demand periods for proposed land uses do not occur at the same time periods.

5.1.3 Adopt Parking Program Revisions

Policy with regard to parking management should be considered within an overall approach to managing travel in New Paltz. The Village and Town Boards are charged with determining the overall goals and

objectives for transportation and, hence, for parking. However, if an objective is to manage the existing parking supply most efficiently, then a policy direction can be established from the analysis conducted for this Project (see Appendix H) and from recommendations made by other related parking initiatives/studies that have occurred over the past 10 years.[1]

The key findings of the Project with regard to parking in the Village core are:

1. Changes to the management of the existing public parking inventory will create better usage efficiencies. Recommended changes include:
    i. Designating short-term (<30 minutes), higher cost parking most proximate to the village's commercial areas.
    ii. Designating medium-term (1-2 hours), lower cost parking adjacent to the village's commercial areas. It is recommended that the municipal lot on Plattekill Avenue by metered and designated for medium term parking.
    iii. Designating long-term (2+ hours) free parking in an area approximately outside of a 5 minute walk to the downtown. The Village's Huguenot Street lot (approx 35 spaces), which is chronically under-utilized, could be used for long term parkers (e.g. downtown employees), possibly on a permit basis.
2. Currently adequate parking exists within public and private parking lots serving the Village core during average peak demand periods. **There is not an immediate need to increase parking in the village core.** The management improvements recommended above will postpone the need to invest in new municipal parking inventory in the short-term (approx. 5 years). However, the Village should monitor parking utilization, supply, and demand in order to determine whether, as use changes in the downtown occur over time, chronic parking shortfalls emerge. If such is determined, the Village should be prepared to make appropriate investments to expand the parking inventory or invest in facilities designed to reduce parking demand. Establishing a Travel Demand Management Fund is recommended to give the Village financial means toward accomplishing these goals.
3. Improve the wayfinding system for public parking.

The technical support to these findings follows.

[1] These include: a 1999 downtown parking survey commissioned by the Downtown Business Association; the Report of the Downtown Parking Committee to the Village of New Paltz (September 2000); and, a 1986 proposal for parking in New Paltz Village prepared by the NYS Division of Housing and Community Renewal.

Establish 3 Parking Zones

Currently, the Village manages metered parking with 2 metering districts. A 4-hour district is established along Tricor Street and along the southern side of the Village Lot. This 4-hour district encompasses approximately 95 spaces. The other district is a 2-hour district. The findings of the technical analysis support establishing 3 general parking zones. Each zone would have a fee and time limit determined by its proximity to the retail core:

Short-Term Parking (30 minute maximum in the Village Core):

Parking within the Village Core is the most convenient and most demanded. There are 136 parking spaces within this area. Approximately 70% of the parking demand within the metered on-street spaces in the Village Core is less than 30 minutes. Pricing of parking in the Village Core should be high to encourage high turnover—e.g. 25-cents for 15 minutes.

Table 23 lists the parking spaces recommended for short-term parking.

Table 23: List of Recommended Short-Term Parking Zones

Short-Term Parking Zone	# of Spaces	Currently Metered?
Academy (Church to N. Chestnut)	7	No ✓
North Chestnut (North Front to Main)	16	Yes
Church, Main to Front	13	No
North Front (Main to Chestnut	29	Yes
Main (Prospect to Front)	7	Yes
Main (Front to Chestnut)	17	Yes
Main (Chestnut to Wurtz)	11	Yes
Plattekill (Main to Village Hall	18	Yes
South Chestnut (Main to Mohonk)	6	Yes
North Chestnut Parking Lot	12	Yes
	136	

Medium-Term Parking (1-2 hours):

Outside of the Village Core there is a need for 1-2 hour parking. Currently much of this parking is free, but should be metered. Recommended locations for 1-2 hour parking are shown in Table 24.

Table 24: List of Recommended Medium-Term Parking Areas

Medium-Term Parking Zone	# of Spaces	Currently Metered?
Village Hall	43	Yes
Municipal Lot on Plattekil Ave.	77	No
Church, north of Front	30	No
Lenape, Front St. (Chestnut to Hugenot)	35	No
Hasbrouck (Tricor to Plattekill)	6	No
Tricor (Hasbrouck to Mohonk)	59	Yes
	250	

Cost per unit time for medium term parking should be lower than for Core Village Parking—e.g. costs of $0.25 per hour. For the Municipal Lot we recommend installing a pay-on-foot system, which is equivalent in cost to individual meters, but is less expensive to maintain over time.

Long-Term Parking (2+ hours)

There is a need for longer-term parking for downtown employees and visitors. Longer term (2+ hours) parking should be free of charge. Some residential streets within walking distance of the Village Core are currently used for long-term parking (e.g. Prospect Street). We recommend that the Village clearly designate areas for long-term parking for downtown employees and visitors who have a need to park their cars for more than 2 hours. We recommend that the Village designate the following locations for free, long-term parking:

- Hasbrouck Street (Chestnut to Tricor) (73 spaces)
- Huguenot Street Lot (35 spaces, *est.*). This lot is approximately 2500 feet from the downtown. However, this lot is underutilized and would be ideal for downtown employees who need to park their vehicles for several hour periods.

There are an estimated 77 unmetered spaces around the Village Hall that serve Village employees, the New Paltz Police Department, and the Courthouse. An estimated 43 parking spaces to the south of the Village Hall are metered for public use, and these spaces are recommended for medium-term designation.

Figure 26 shows the location of the recommended parking zones.

Related Parking Findings and Recommendations

Section 212-44 of the existing Village of New Paltz parking ordinance specifies a minimum required number of on site parking spaces for a set of uses outlined in Schedule C. For cases where the minimum requirement cannot be met on site, provision is made to obtain "credit" for existing public (municipal) parking spaces, as follows

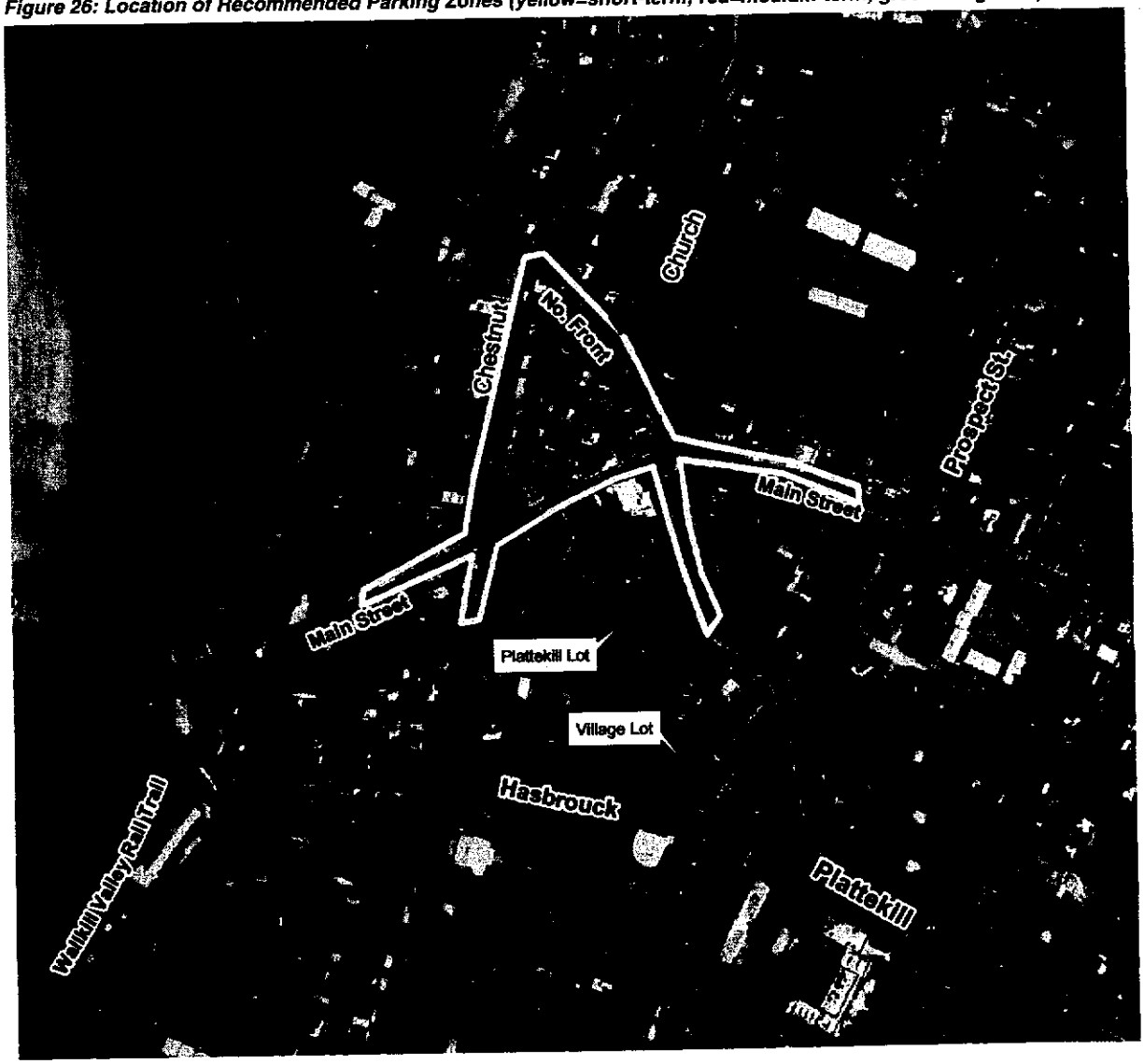
> B. *Credit for existing spaces. Spaces in municipal parking lots, where available, may be credited toward the off-street parking requirements of nonresidential uses, provided that:*
>
> *(1) Such spaces are within 400 feet of the use to be served.*
>
> *(2) Only the excess of such spaces, after the needs of existing uses within 400 feet (to be computed on the same basis as for new uses) have been satisfied, shall be so credited.*
>
> (3) *A special use permit for such use is obtained from the Planning Board.*

The existing ordinance presupposes an accurate and ongoing accounting of parking spaces within municipal lots (including on-street spaces), presuming that already-established uses exert a "claim" to public spaces if such spaces were available at the time of permitting. The record-keeping required to enforce this ordinance would be unduly burdensome, requiring that the Planning Board accurately

template a 400' distance from each existing use and allot a required number of off site spaces for each use.

In recent years, the Village Planning Board has granted use permits for private enterprises within the downtown without a strict accounting of parking for existing or proposed uses. Up to the present this lack of accounting has not been problematic because there has not been an acute parking shortage. A 1999 parking study commissioned by the Village Parking Commission concluded "that there is adequate available parking in Downtown New Paltz on both weekdays and weekends…", and that "(T)here is almost always spare capacity on streets within reasonable walking distance from Downtown."

Figure 26: Location of Recommended Parking Zones (yellow=short-term; red=medium-term; green=long-term)



The parking supply and demand analysis summarized above shows that parking is generally available, but availability varies by location and time of day. Sporadic parking shortages do occur; however, the existing parking situation cannot be described as an acute or chronic parking shortage (see Appendix H).

Our parking research leads us to make 4 recommendations to the Village of New Paltz to modify its parking ordinance:

- Eliminate Section B of the existing parking ordinance.
- Add a paragraph at the beginning of the parking section that describes the intent of the Village's parking policy.
- In the event parking requirements cannot be met on site, require a per-space monetary payment to a Transportation Demand Management Fund in lieu of constructing physical parking. Some established programs require both an up-front payment and an annual payment. We recommend establishing an up-front payment only at this point in time.
- Revise the parking supply calculations set forth in Schedule C to reflect actual parking demand within a pedestrian-oriented, mixed use downtown commercial center (corresponding to the Village's G and B-2 zoning districts), which also accounts for shared parking.

It is of note that the Village is considering intensifying the uses and densities that can be developed in what is now the B-3 zoning district (Highway Business). This area corresponds to the Route 32 North growth center that has received considerable attention within the New Paltz Land Use/Transportation Project. If the Village moves forward with zoning changes in this area, we recommend that the recommendations described below be extended to this district as well.

Parking Policy Intent

It would be beneficial to introduce the parking ordinance with a paragraph that discusses the intent of the ordinance. The policy intent expressed in this paragraph would provide ongoing guidance to the Planning Board in reviewing the transportation and parking impacts of development applications.

We recommend the following language:

It is the intent of this article to:

(a) Ensure there is adequate parking to serve the use or uses of the property within the Gateway and B-2 Districts;

(b) Ensure that any parking facility is designed to provide proper circulation, reduce hazards to pedestrians, and protect the users of adjoining properties from nuisance caused by the noise, fumes, and glare of headlights which may result from the operation of vehicles parking off the street;

(c) Reduce congestion in the streets and contribute to traffic safety; and

(d) Encourage alternate modes of travel that will reduce dependence upon the single-occupancy automobile.

Transportation Demand Management Fund

In cases where new parking spaces cannot be accommodated on site, the Village should establish a system whereby developers can contribute an "in lieu of" fee to a Transportation Demand Management fund instead of constructing new parking spaces (see Section 5.1.6). The Village Board should establish this fee every year.

The following ordinance language is recommended:

> *Cash Payment in Lieu of Providing Required Off-Street Parking Spaces.*
>
> *Within the Gateway (G) and Business 2 (B2) Districts, in those instances where the Planning Board has determined that parking cannot be sufficiently and/or safely accommodated onsite, provision of the minimum required number of off-street parking spaces, as calculated in accordance with Schedule C, may be alternatively satisfied for any commercial use, whether permitted by right or by special use permit, by payment to the Village of New Paltz Transportation Demand Management Fund of an initial charge per parking space required but not provided on-site. The amount of said initial charge per parking space alternatively provided shall be in accordance with the fee schedule established and annually reviewed by the Village Board. In setting such fee, the Village Board shall take into account the costs of acquiring property, carrying out suitable site development, and maintaining municipal parking facilities.*

In lieu of parking fees should be based on an estimate of providing a parking space within the village core. A typical basis for calculating the per-space fee is the prevailing per acre cost of real estate. One parking space is assumed to use 350 square feet of space, including the parking stall and circulation area. 350 square feet is 0.7% of an acre; hence, the per-space fee should be 0.7% (350/43560) of the prevailing cost per acre in the village core.

For example, if the prevailing cost per acre were $10,000, the in lieu of fee would calculate to $725. A $50,000 per acre value calculates to $3,615.

In lieu of fees are used commonly by other municipalities. Woodstock, NY assesses a per space fee of $700, and the fee can be adjusted annually by the Board. In more urban areas (e.g. Portland, OR) in lieu of fees are over $10,000 per space.

Calculation of Required Parking

The rationale for having a different standard for parking requirements in the commercial core is supported on two important foundations.

First, a large number of customer trips to downtown businesses are made on foot. In many cases, as with resident SUNY students, there is no parking demand associated with their visiting downtown establishments. For other downtown patrons who arrive in New Paltz by car, there is a tendency to visit more than one establishment after parking the car. A pedestrian intercept survey conducted by Resource Systems Group in Burlington, Vermont found that, on average, each vehicle trip to a downtown parking space generated pedestrian trips to more than 3 distinct commercial destinations. Fewer than 10% of vehicle trips to a downtown parking space visited only one establishment.

Second, analysis of shared parking conducted by the Urban Land Institute (ULI), now codified within their Shared Parking model, establishes the concept that different uses peak at different times throughout the day. Ideally the temporal parking requirements of each use are tracked collectively. In this way, a parking supply tied to the cumulative needs of all downtown businesses can be estimated for handling peak demand periods. For example, ULI's shared parking model shows that parking demand for fast food restaurants tends to peak before 1pm; for fine dining at 8pm; for nightclubs after 9pm.

Based on this foundation, and on research into the parking requirements of other similar municipalities, the Village should amend Schedule C with regard to parking requirements within the village core (B-2 and G districts). Recommended minimum parking requirements are shown in Table 21.

Consider Alternative Uses for the Chestnut Street Municipal Lot.

The Chestnut Street lot, while extremely convenient to the downtown, is poorly shaped to provide efficiently-spaced parking. In the long term the Village may wish to consider liquidating this parcel and using the proceeds to develop parking elsewhere.

Table 25: Existing and Recommended Schedule C

Use	Minimum Number of Required Spaces	Minimum Number of Required Spaces for G and B2 Districts
Residential		
Detached single-family and two-family structures	2 spaces per dwelling unit containing a maximum of 3 bedrooms plus 1 space for each additional bedroom per unit	1 per dwelling unit up to 3 bedrooms; 2 spaces for dwelling units with 4 or more bedrooms.
Multifamily structures and townhouses	2 spaces per dwelling unit containing a maximum of 3 bedrooms plus 1 space for each additional bedroom per unit	1 per dwelling unit
Fraternity/sorority house	1 space per bedroom	0.5 spaces per bedroom
Indoor commercial recreation		
Billiards	4 spaces per table	2 for each table.
Bowling alley	4 spaces per alley	3 for each alley
Dance hall/discotheque	1 space for each 25 square feet of dance floor area	no change
Racquet sports	4 spaces per court	no change
Skating rink	1 space for each 250 square feet of skating area	no change
Business and retail commercial		
Office, general or professional	1 space for each 300 square feet of gross floor area	1 space for each 500 square feet of gross floor area
Office, home occupation	1 space for each 50 square feet of office and reception area	no change
Automobile storage and/or gasoline filling station	3 spaces for each service bay repair; plus 1 space for each service vehicle	1 for each 2 employees plus 1 fer each service bay.
Bank or post office	1 space for each 200 square feet of customer floor area	1 space for each 500 square feet of gross floor area
Bar, nightclub	1 space for each 50 square feet of gross floor area	no change
Barber shop, beauty parlor	2 spaces per seat devoted to service	no change
Funeral home, mortuary	10 spaces plus one additional space for each 50 square feet of chapel area	no change
Hostel	One space for every three beds plus one space for staff	no change
Instructional facility	3 spaces for each classroom	no change
Mixed-use building	The aggregate number of spaces for each use in the building	based on shared parking model.
Outdoor cafe/restaurant	1 space for each 3 seats devoted to service	1 for each 5 seats.
Restaurant	1 space for each 3 seats devoted to service	1 for each 5 seats
Restaurant, takeout	1 space for each 3 seats devoted to service plus 1 additional space for each 300 square feet of gross floor area	1 for each 5 seats.
Self-service laundry	1 space for every 2 washing machines	no change
Any commercial use	1 space for each company vehicle	no change
Retail business or service not specifically mentioned herein	1 space for each 200 square feet of gross floor area	1 space for each 300 square feet of gross floor area
Light industrial and general commercial		
Light industrial uses, including laundry or dry-cleaning plant, printing plant	1 space for each 400 square feet of gross floor area	1 space for each 1000 square feet of gross floor area
Research laboratory	1 space for each employee on the maximum shift plus 10% of total	no change
Storage, enclosed building	1 space for each 2,000 square feet of area devoted to storage	no change
Storage, outdoor	1 space for each 3,000 square feet of area devoted to storage	no change
Any light industrial or general commercial use	1 additional space for each company vehicle	no change

5.1.4 Construct Sidewalks/Pedestrian Travel Ways through the Formal Subdivision and Site Plan Review Process

The Village of New Paltz Code contains the "Sidewalk Law of the Village of New Paltz" (Article IV, 175-14) that gives the Village Board the authority to construct sidewalks.

In reviewing subdivision applications the Town and Village Planning Boards may require that sidewalks be constructed. The following language, if added to the municipal land use regulations, would provide clear authority to the Planning Boards for causing sidewalks to be constructed when development applications are reviewed.

- Where necessary in the judgment of the Board, rights-of-way for pedestrian and/or bicycle travel and access shall be required between parts of the subdivision or between a subdivision and public property. When such need has been created by the subdivision, the Board may require the subdivider to provide sidewalks and/or bicycle paths outside the subdivision.

5.1.5 Establish a Sidewalk Improvement Fund

The CAC has recommended that a specific dedicated fund be set up for the improvement of the sidewalk network in New Paltz. Funds from this source would be used to repair deficient sidewalks, to construct new sidewalks, and to provide matching funds for governmental sidewalk enhancement grants.

Establishing a dedicated fund for this purpose underscores the high priority New Paltz places on safe, convenient, and widespread pedestrian mobility. The Sidewalk Improvement Fund also points to the need to ambitiously expand the sidewalk network throughout the Village and Town. Within the Phase B report, a sidewalk investment prioritization was recommended. The highest priority sidewalk segments resulting from that prioritization exercise are recommended as short-term improvements within the Phase C report.

5.1.6 Establish a Transportation Demand Management Fund

It is recommended that the Town and Village of New Paltz establish Transportation Demand Management Funds, administered jointly by the Town and Village Boards, for providing revenue to enable ongoing management of traffic and parking. Potential revenue sources for this fund include mitigation payments from private developers (Figure 23). The Town and Village Boards should assess the feasibility of this recommendation with their associated land use counsel.

Table 26: Potential Revenue Sources and Expenditures, Transportation Demand Management Fund

Potential Fund Sources	Potential Fund Expenditures
Transportation mitigation from private development. Parking fees, fines, and permits. Contributions from key stakeholders.	Local match for transportation projects. Expand parking inventory. Local transit operating costs. Special event traffic management. Traffic signal optimization.

Such payments could be made, for example, if parking requirements for a proposed use in the Village core were not met due to site constraints. Developers could pay a published per space capital fee to the fund. This fee would then be managed collectively with other fees to improve travel options (e.g. transit, sidewalk construction), increase parking inventory, or perform other tasks to improve overall mobility (e.g. traffic signal optimization).

The Village is currently seeking a legal review of this concept.

5.1.7 Create Gateways and Adopt Traffic Calming Overlay Strategies

In their final report the BP Committee recommended that an appropriate area of the town/village be designated as a "Slow Down" overlay district where people and vehicles slow down "so that better quality of life, sense of neighborhood, and human relationships may be enjoyed because of a more leisurely pace than otherwise."

The Committee points to street design as a key factor in determining vehicle speed and thus changing the design of streets is a critical point of intervention. Traffic calming refers to a set of street design changes targeted to slowing vehicle speeds. High-speed traffic is intimidating to pedestrians and shortens reactions times for drivers. The BP Committee acknowledged that the SUNY campus represents a local example of a traffic calming area, and they seek to calm traffic within a broader area within the Town and Village. This initiative is an ongoing project of the BP Committee.

Communicating to the general public the need for and existence of a "Slow Down" zone could be done in a number of ways "such as stickers on menus in the restaurants, sidewalk sculpture, outside dining, hopscotch board on sidewalk, landscaping … Signs at this point would indicate "Slow down, you go too fast," a la Simon and Garfunkle."

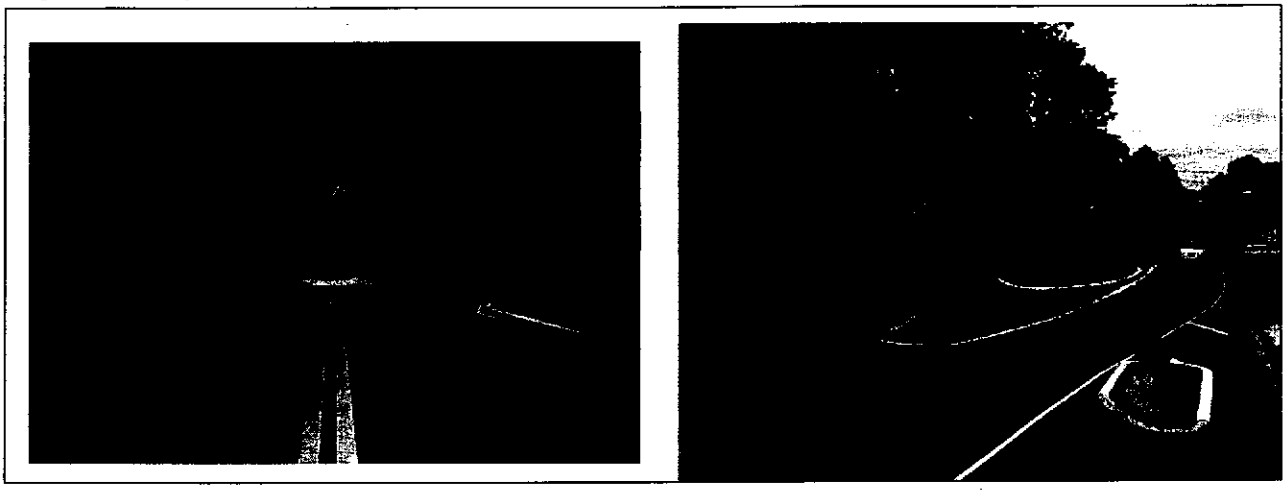
A key design feature element of the BP Committee proposal would be serious Traffic Calming at the five major road portals to the core developed area:

- Route 299 from the east and west
- Route 32 from the north and south
- Route 208 from the south.

The BP Committee has suggested "Gateway"[1] treatments at each of these areas (Figure 27).

1 The B/P Report included this definition: A gateway consists of an architectural or roadway feature on each side and/or in the center of a roadway used primarily to indicate to drivers that they are entering a special area. The most effective gateways include vertical elements such as trees or columns. Gateways may be formed by curb bulb-outs, fences, poles, signs, artwork, and other features that can be combined with each other. If the gateway were narrow, it would reduce speed at that point.

Figure 27: Example Gateway Treatments



It is recommended that the newly formed BP Committee advance this concept further by defining the geographic areas to be governed by the overlay district. Regarding gateway treatments, there are several opportunities for these to be constructed in association with the growth centers advocated in this plan. Possible locations include:

- Route 32 North proximate to BOCES
- Route 299 between Manheim and Prospect
- Route 32 South, south of the SUNY commuter lot, or proximate to the intersection of Route 32 with the partial east-west connector.
- Route 208 south of the new entrance to SUNY.

5.1.8 Establish Study Implementation Committee

The Project's Phase C report sets forth a broad, long-term agenda for improving transportation facilities in New Paltz. To convert these ideas into real projects will take sustained effort and interest on the part of the Town and Village leadership. To facilitate executive action on these recommendations, a Study Implementation Committee should be established.

The Committee should have members from the Project's Citizens Advisory Committee, with representatives from the Town and Village Boards and Planning Boards, and the New Paltz BP Committee. Outside members should include representatives from NYSDOT and the Ulster County Transportation Council. The Village Superintendent of Public Works and consulting engineer should provide technical staff to this committee.

5.2 BASE CAPACITY IMPROVEMENTS REQUIRED BY 2025

The technical modeling supporting this Project shows a need for certain "base" roadway improvements, primarily along Route 299, which are necessitated to maintain efficient traffic flow under estimated 2025 traffic conditions.

For Route 299, the major signalized intersections at Ohioville, Thruway access, and Putt Corners will need additional capacity. The need for these improvements is driven partially by the high growth rates associated with Thruway traffic, averaging 2-4% growth annually, but is also driven by future growth in New Paltz. Technical modeling of 2025 traffic flows showed significant congestion along this segment of Route 299 necessitating additional left turn capacity at the Thruway (double northbound left turn) and at Putt Corners (double westbound left turn). Additional travel lane capacity may also be indicated along Route 299 eastbound, but this improvement has not been comprehensively considered within the scope of this Project.

In addition to these capacity-driven "base" improvements, the technical modeling has shown a need for capacity improvements at the following intersections:

- Main/Manheim
- Main/Chestnut
- Route 32/Plattekill
- Route 32/HW DuBois

The CAC concurs with the direction of improving the efficiency of the existing roadway system as much as possible through smaller capacity improvements ("spot improvements").

Base capacity improvements and spot intersection improvements are listed in Table 27.

Table 27: Recommended Base Capacity Improvements

Intersection	Short-Term (0-5 years)	Mid-Term (5-12 years)	Long Term (12+ years)	Growth Center
Route 299/Ohioville	Northbound left turn lane on Ohioville; retime/rephase signal operation at this intersection.		Possible	Other
Route 299/Thruway Access Road			Double left turn lane, northbound approach; or, double lane roundabout.	Other
Route 299/South Putt Corners			Double left turn lane, westbound approach on Route 299	Route 299 Comm.
Route 32/South Putt	Traffic signal			Route 32 South
Route 32/Jansen	Traffic signal			Route 32 South
Route 32/Plattekill		Northbound left turn lane on Route 32	Traffic signal or roundabout	Central Main Street
Route 299/Manheim		Capacity improvements needed depend on right of way acquisition and implementation of one-way circulation pattern. Options for improvement include: realigning intersection to true 4-way intersection, construction of roundabout, or other conventional improvements such as lane additions.		Central Main Street
Main/Chestnut	Optimize signal timing.	Add northbound left turn lane on Chestnut. Upgrade signal hardware and optimized timing/phasing by time of day.		Village Core
Main/Water/Huguenot	none		Reconstruct intersection (add turn lanes) as part of Wallkill River Bridge reconstruction.	Village Core
North Putt/HW DuBois	Northbound left turn lane on North Putt.			Other
Route 32/HW DuBois	Southbound left turn lane on Route 32. Traffic signal or roundabout.			Route 32 North
Route 32 north, intersection optional	Residential streets--Sunset Ridge and Bonticouview-- need improved control onto Route 32. Control could include roundabout or traffic signal, but should be combined with connecting dead end residential streets in this area.			Route 32 North
Route 32/Shivertown	Traffic signal, southbound left turn lane, northbound right turn lane.		none	Shivertown

5.3 FUNDING SOURCES FOR TRANSPORTATION IMPROVEMENTS

This section describes the sources for funding transportation improvements which are referred to in subsequent sections of the report.

5.3.1 State Funding Sources

The New York State Department of Transportation has two main avenues through which transportation projects are scoped, designed, and constructed – Federal Aid (administered through the STIP) and State Dedicated Funds (SDF).

NYSDOT STIP

NYSDOT's State Transportation Improvement Plan includes all federally funded and most state funded transportation projects. Ulster County has a regional extraction from this program. Transportation improvements recommended for state highway facilities and bridges are candidates for this funding source.

NYSDOT SDF

Statewide Dedicated Funds (SDF) are obtained primarily from the fuel tax and other taxes. This fund is often used to provide the state matching share of federally-financed projects, but can also be directed to 100% state funded projects.

5.3.2 County Funding Sources

The Ulster County Transportation Council (UCTC) is the designated Metropolitan Planning Organization for Ulster County. UCTC is responsible for developing, implementing, and maintaining a long range transportation plan (20 years) and an associated Transportation Improvement Plan (TIP). UCTC also administers the county's Transportation Enhancement (TE) program

UCTC Transportation Improvement Plan (TIP)

UCTC's Transportation Improvement Plan (TIP) is a 5 year financial plan for implementing transportation improvements in Ulster County. UCTC works cooperatively with the state Department of Transportation when programming their TIP. UCTC has a 2 year update process whereby applications for new projects county-wide are accepted, reviewed, and evaluated. The amount of funds is limited and the funds are allocated through a highly-competitive selection process.

UCTC Transportation Enhancement Grants (TE)

UCTC administers the county's Transportation Enhancement grant program. This program requires a 20% local match for projects. Transportation enhancements typically involve "non-traditional

transportation projects that add value to the transportation system and complement local community goals." Examples of non-traditional projects include improvements to bicycle and pedestrian infrastructure, scenic and historic preservation, archeological planning and research, and environmental mitigation. The TE grant cycle occurs approximately every 2 years. New Paltz currently has an application for a TE grant being reviewed by UCTC for assistance in constructing a pedestrian bridge over the Wallkill River to the Ulster County Fairgrounds.

5.3.3 Private Funding Sources

Private contributions to planned transportation improvements can be obtained through the land permitting process if a rational nexus between the projected traffic impacts of that project and the need for specific transportation projects can be shown. In New Paltz, such funds could be attracted to the proposed Transportation Demand Management Fund through the permitting process. Costs of specific projects recommended in the Phase C report should provide the basis for determining fair share contributions to the Transportation Demand Management Fund.

5.3.4 Local Funding Sources

Local funds can of course be used to partially finance transportation improvements, and are usually required to match state and federal contributions. The Project recommends that New Paltz establish a Transportation Demand Management Fund to which financial contributions from a variety of sources can be accumulated for investing in facilities and travel management designed to reduce vehicle travel and parking demand.

5.3.5 Federal Elected Officials

Federal elected officials can some times secure project-specific funding, or earmarks for special projects. This type of funding cannot be relied upon, and is typically associated with the Transportation Bill.

5.4 SHORT-TERM TRANSPORTATION IMPROVEMENT RECOMMENDATIONS

Short-term transportation improvement recommendations are meant to be relatively inexpensive solutions or enhancements to be pursued within the next 5 years.

5.4.1 Short Term Projects in the Village Core (0-5 years)

Table 28 lists the short-term project recommendations within the Village Core. The list contains investments in sidewalks, crosswalks, signage, and traffic signal timing. Of particular interest are investments in upgrading the quality of street crossings of the Wallkill Valley Rail Trail. Short-term improvement recommendations do not include routine maintenance such as paving or re-striping.

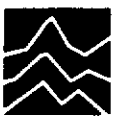


Table 28: Short-Term Projects, Village Core

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Short Term Improvements (0-5 years)	**Sidewalks:** Water Street from Main to Mohonk; Mohonk (n/s) from Water to Chesnut Street	$99,000	TE, VONP, UCTC	
	Striping: eastbound Front Street (Lenape Lane); northbound Water Street; new paint for speed humps on Huguenot Street;	$1,500	VONP	
	Crosswalks: (streetprint) @ Main/Church with bulbout, Chestnut/Mohonk, Chestnut/Southside, Church/Front, Huguenot/Main, Hasbrouck/Tricor, Plattekill/S. Oakwood	$19,500	TE, Village of New Paltz	BP Committee
	Rail Trail: Upgrade street crossings @Main Street, Water Street, Plains Road, North Front Street, Mulberry Street, Cedar Lane, Huguenot Street	$35,000	TE, VONP	Wallkill Valley Rail Trail
	Bicycle Racks: @Deyo Hall, Ballfield, Post Office Plaza, Municipal Parking Lots, Water Street Market, Hasbrouck Park	$4,500	TE, VONP	BP Committee
	System Design Study: One Way Street System Design	$50,000		
	Signage: Implement public parking wayfinding system; clarify lane designations on Chestnut Street northbound approach to Main Street; relocate SUNY sign on Rt. 208 northbound approach to Main Street to another point south (prior to Hasbrouck Street or to the newly-developed driveway; post directional signs for westbound Route 32 traffic to continue on North Front Street; southbound Huguenot Street.	$35,000	VONP	NYSDOT, SUNY
	Traffic Signals: optimize signal timings/phasings @ Main/Chestnut, Chestnut/Front	$6,000	UCTC	NYSDOT
	Parking: Implement new parking wayfinding system; implement new parking program; install new parking payment system (meters or pay on foot) at municipal lots; implement new fee structure.	$27,500	VONP, TDM	

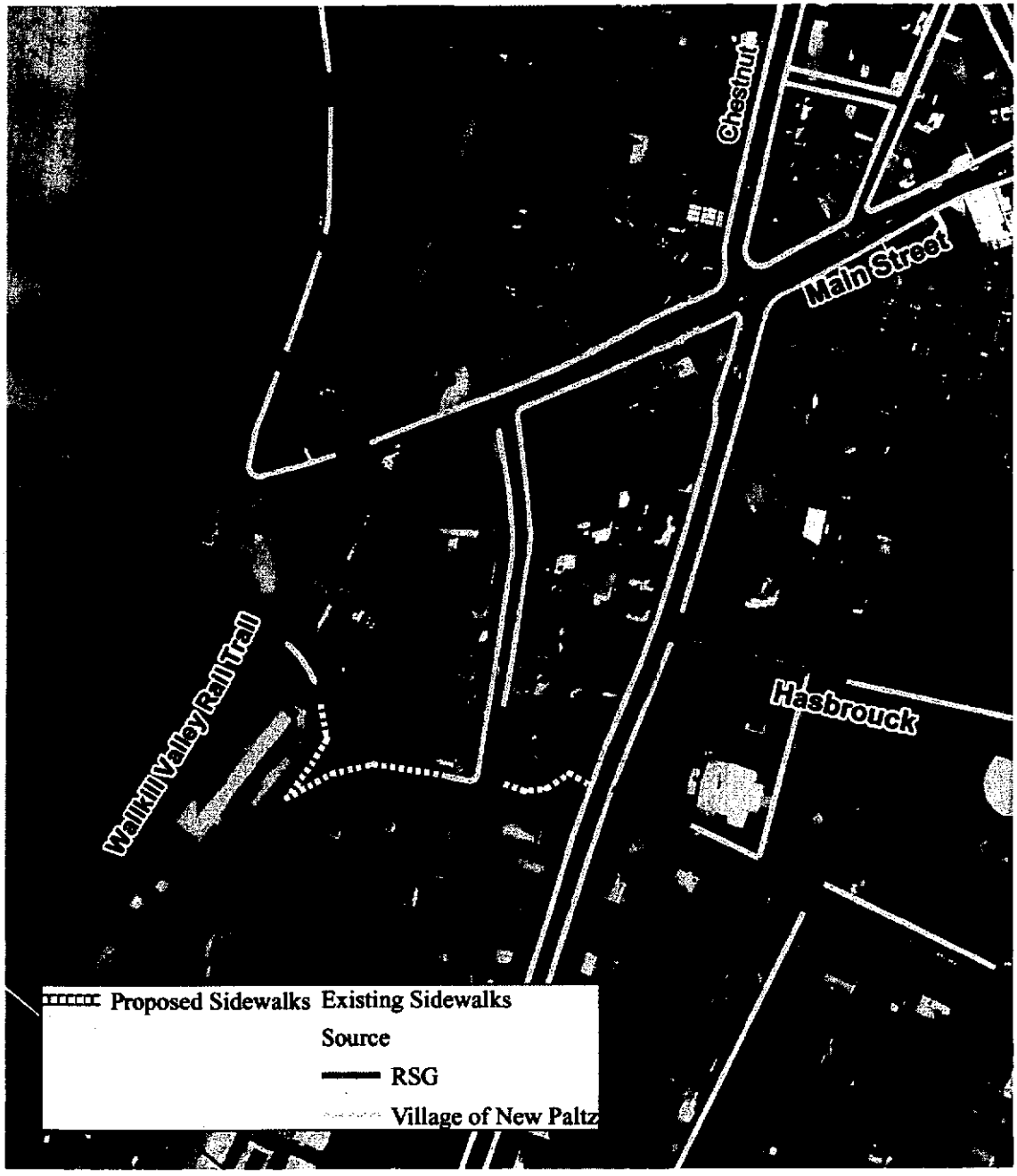
* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.

** The following abbreviations are used:

BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

Figure 28 shows the area with the highest priority sidewalk extension within the Village core. Adding sidewalks on Mohonk Avenue has been an issue raised by New Paltz residents since the beginning of the Project, and this specific investment was mentioned by several respondents to the New Paltz household survey (October 2003), as well as being recommended by the BP Committee. The segment of the sidewalk along Mohonk is more expensive to build than normal sidewalks due to grade and drainage issues.

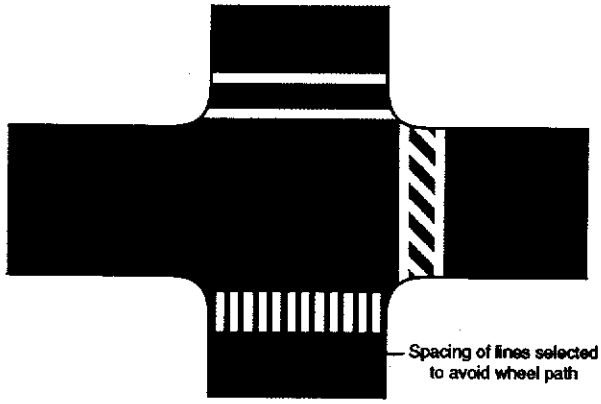
Figure 28: Location of Recommended Sidewalk Improvements



Installation of new crosswalks is recommended in the Village Core, and throughout the various other growth centers. There are a variety of crosswalk treatments as shown in Table 29. For estimating purposes, the Phase C crosswalk recommendations assume that normal street crosswalks would be

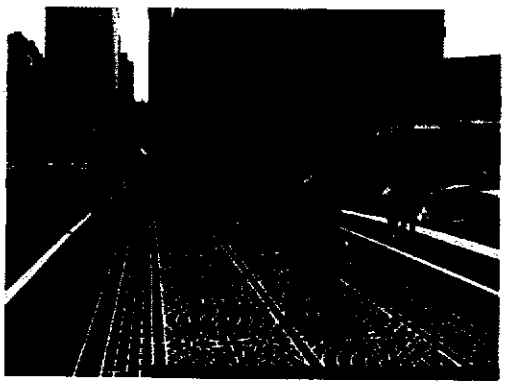
implemented with Streetprint. For select, high traffic street crossings of the Rail Trail, a highly durable paver crosswalk treatment is recommended, with granite edging.

Table 29: Different Crosswalk Treatments



Thermoplastic striping, ~$500 per crossing; ladder type striping is typically installed by NYSDOT Region 8.

Streetprint, ~$2,000 per crossing



Duratherm, ~$3,000 per crossing

Brick pavers w/granite edging, ~$12,000 per crossing

5.4.2 Short Term Projects, Central Main Street Growth Center

Table 30 lists the short-term recommendations for the Central Main Street Growth Center.

Table 30: Short-Term Projects, Central Main Street Growth Center

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Short Term Improvements (0-5 years)	**Sidewalks:** east side of Route 32 from Orchard south to SUNY Commuter Lot; Plattekill Avenue from Maiden Lane to Rt. 32 (400 feet)	$58,500	TE, PVT, UCTC	Bicycle/Pedestrian Committee, Village of New Paltz, NYSDOT
	Striping: Stripe southbound approach lane on Manheim	$500	Village general fund	Village Department of Public Works
	Crosswalks: (streetprint) @ from New Paltz Middle School to west side of Route 32; mid-block crossing on Main Street by Teen Scene (including bulb-outs)	$13,000	TE, New Paltz School District	NYSDOT
	Bicycle Racks: @ Bus Station, Mall at Main/S. Manheim	$1,000	TE, VONP	BP Committee
	Traffic Signals: optimize signal timings/phasings @ Main/Manheim	$5,000	PVT	NYSDOT

* NOTE: PVT - Private landowners, developers

** The following are potential funding sources:
- TDM - Transportation Demand Management Fund
- BP - Bike/Ped
- FE - Federal Elected Officials
- HBRR-Highway Bridge Replacement and Renovation program
- PVT - Private landowners, developers
- SDF- State Dedicated Funds
- STIP - State Transportation Improvement Program
- TDM - Transportation Demand Management Fund
- TE - Transportation Enhancements
- TIP - Transportation Improvement Plan
- TONP - Town of New Paltz
- UCTC - Ulster County Transportation Council Transportation Improvement Program
- VONP - Village of New Paltz

A critical short-term improvement is to extend the pedestrian network along the easterly sideline of Route 32 from Orchard Street to the SUNY commuter lot. Figure 29 shows where the sidewalk ends at Orchard Street (looking south).

Figure 29: Sidewalk on the East Side of Route 32 Ends at Orchard Lane (looking south)

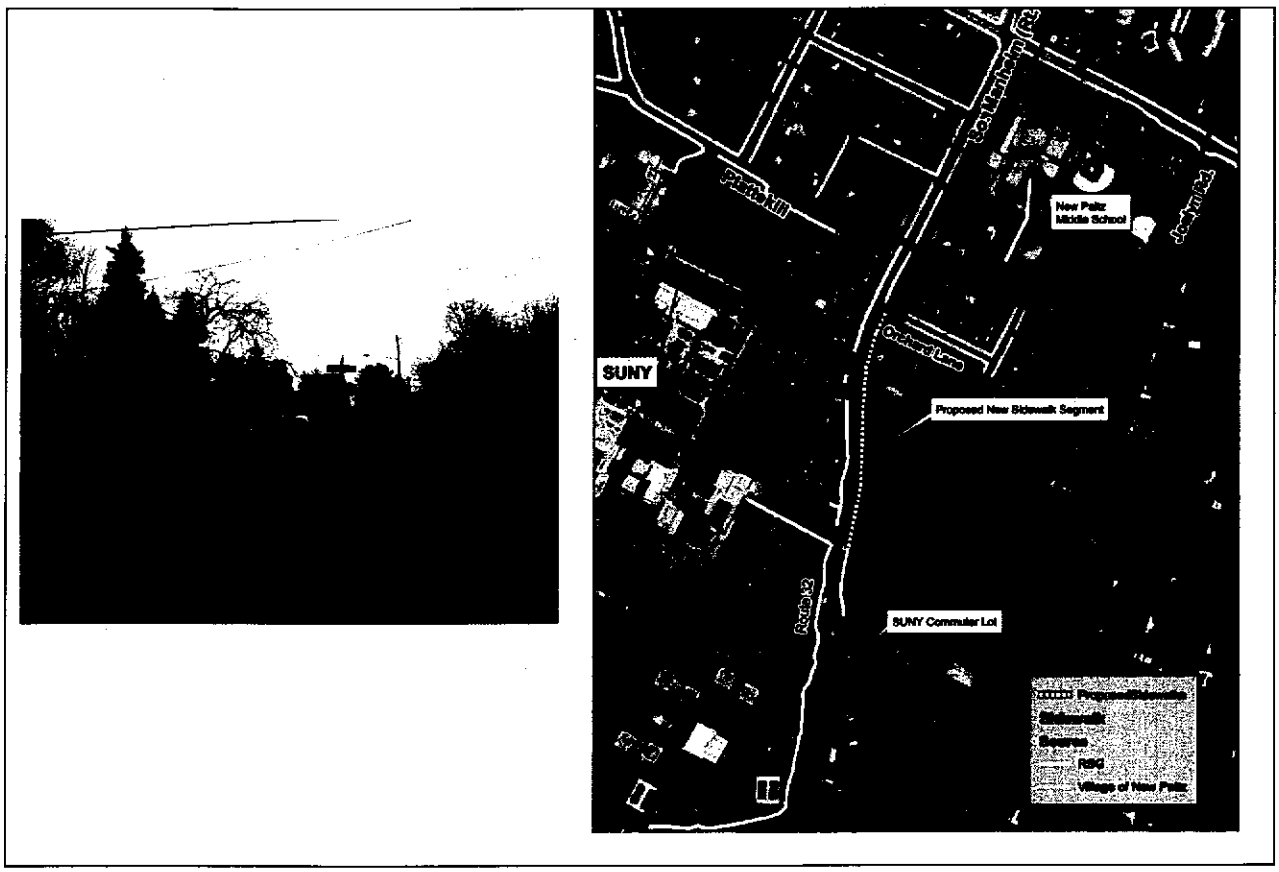


Figure 29 (right) also shows the general alignment of this improvement. The proposed Victorian Square residential development (approximately 90 units) would be directly served by this improvement. Through an overland pedestrian connection to the Cherry Hill neighborhood through the Victorian Square project, Cherry Hill residents will also gain access to this sidewalk network. This sidewalk extension was ranked as a high priority within Phase B due to its providing safe pedestrian access to SUNY and to the New Paltz Middle School. This improvement is consistent with the NYSDOT policy of establishing sidewalks along both sides of state arterial roadways when development exists on both sides of the roadway.[1]

5.4.3 Short Term Projects, Route 32 North Growth Center

Table 31 lists the recommended short-term improvements for the Route 32 North growth center.

[1] New York State Highway Design Manual, Chapter 18, Table 18-3.

Table 31: Short-Term Projects, Route 32 North Growth Center

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Short Term Improvements (0-5 years)	**Sidewalks:** Henry W. DuBois, south side, Prospect Street to North Putt; Route 32 east side from My Market to Sunset Ridge Road; Sunset Ridge Road to Duzine School; Route 32 west side from Village Pizza to crosswalk near Town Hall.	$329,400	B/P, TE, UCTC	TONP, NYSDOT
	Striping: Stripe lanes at westbound approach of HW DuBois to Route 32.	$750	VONP	VONP
	Crosswalks: (streetprint) @ Rt. 32/HW DuBois, Rt. 32/Bonticouview (by My Market)	$4,000	TE, VONP	BP
	Intersection Sight Distance: review sight distances at Shivertown/Route 32 due to constraints from vegetation and parked vehicles; review shoulder grading to ensure safe, smooth transition from travel way.	min	TONP	NYSDOT
	Bicycle Racks: @BOCES, New Paltz Town Hall	$1,000	TE, VONP	BP
	Signage: no recommendations			
	Policy: adopt Access Management Overlay District into Town & Village Code; begin access management changes within normal planning/permitting process.	$10,000	UCTC	VONP, BP
	Intersection Reconstruction: Route 32/Shivertown (signalize, add NB Right Turn Lane, SB Left Turn Lane	$475,000	STIP/PVT	NYSDOT
	Intersection Reconstruction: Route 32/HW DuBois	$475,000	STIP/PVT	NYSDOT
	Corridor Design: conduct corridor (HW DuBois to Old Kingston Road) road design study to establish streetscape vernacular, landscaping, on-street parking zones, etc.	$35,000	UCTC	VONP, BP

* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.

** The following abbreviations are used:

BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

Sidewalk extensions are very important in this section of New Paltz. Included within this growth center is the construction of a new sidewalk along the southerly sideline of HW DuBois, extending from Prospect Street to North Putt. This distance is approximately 1.1 miles in length. The southerly sideline is selected as the general aspect of the land slopes to the north; thus, the sidewalk could be constructed with curbing while maintaining the natural flow for stormwater. Minimal storm sewerage is evident in this section; hence, surface channeling and treatment of stormwater will be the preferred treatment.

The vision for this area is substantially different from the land form and built environment that exists today. For this reason, it is recommended that the Village commission a corridor design for the section of Route 32 from HW DuBois to BOCES. A master corridor design accounting for landscaping, sidewalks and pedestrian paths, bicycle lanes, crosswalks, street furniture, and on-street parking would provide a road map for the Village and the Planning Board to pursue treatments according to an integrated plan. This detail of site specific planning is beyond the scope of the Project, but a necessary next step for the Village in realizing its land use vision for this growth center.

Improvements to the Route 32/Shivertown Road intersection are warranted within the short-term time frame. These include signalization and the addition of southbound left turn and northbound right turn lanes.

In addition, the Village Planning Board should seek to implement improved access management within this growth center through the normal course of planning and permitting.

5.4.4 Short Term Projects, Route 32 South Growth Center

Table 32 lists the short-term project recommendations for the Route 32 South growth center. Since this area is primarily a greenfield area, with minimal existing development, there is a lesser need to construct sidewalks and a greater need to specify a streetscape plan for the growth center.

Table 32: Short-Term Projects, Route 32 South Growth Center

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Short Term Improvements (0-5 years)	**Striping:** stripe 2-4 foot shoulder on Route 32 as paved surface allows, during next re-paving.	$7,500	NYSDOT	NYSDOT
	Signage: establish speed transition zones to 40 mph s/o Jansen and 35 mph n/o So. Putt (NYSDOT must approve)	$7,500	NYSDOT	TONP
	Corridor Design: conduct corridor (Southside Loop at SUNY to South Putt) road design study to establish streetscape vernacular, landscaping, etc.	$35,000	UCTC	VONP, SUNY, BP
	Traffic Signals: Install Traffic Signal at Route 32/Jansen, Route 32/S. Putt	$300,000	NYSDOT	NYSDOT

* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.

** The following abbreviations are used:

BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.4.5 Short Term Projects, Other Areas

Table 33 lists the short-term project recommendations for other areas of New Paltz. Of special interest are two short-term projects, which are described in the sections following.

Construct Mini-roundabouts on HW DuBois at Selected Locations

HW DuBois is an important east-west collector roadway north of Main Street with minimal sidewalk coverage. The Village has installed stop signs at all minor street approaches to HW DuBois, and has all-way stops at the following locations:

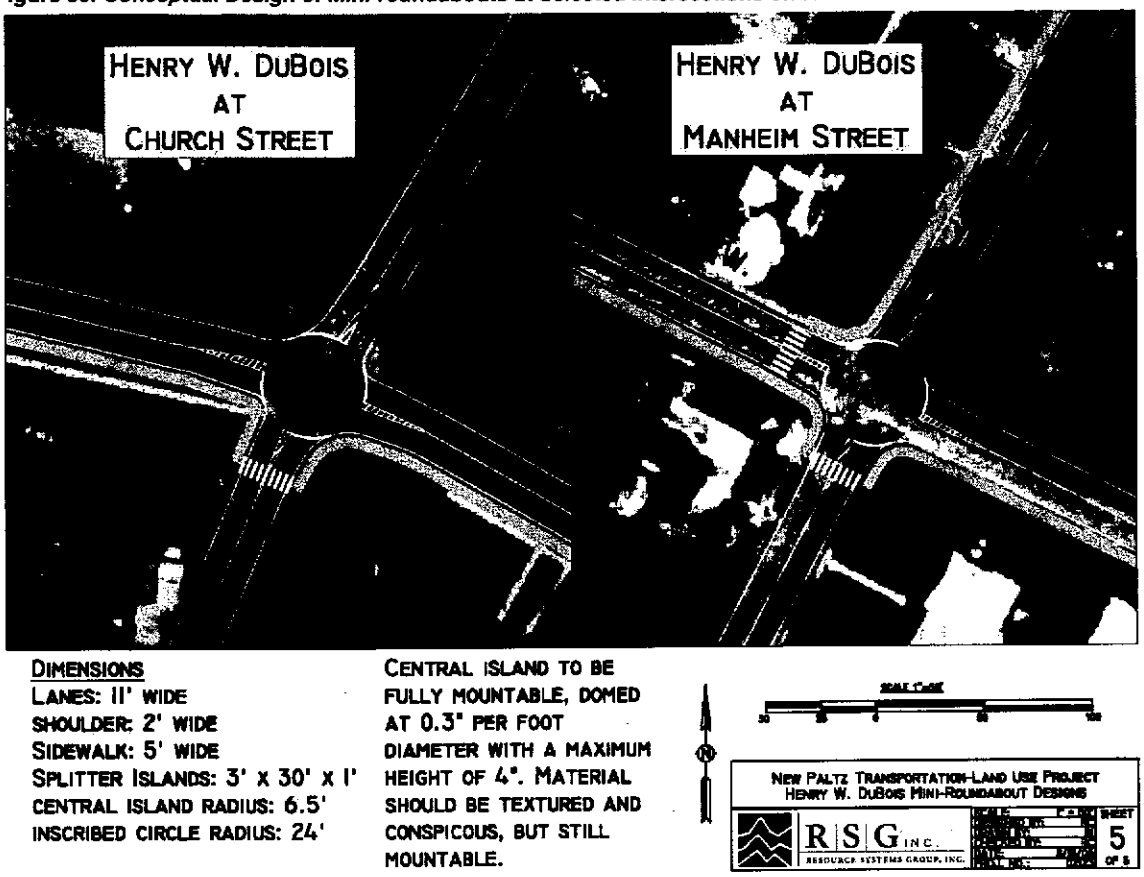
- Prospect Street
- Oakwood
- Millrock
- Duzine/Old Mill – offset 2-way stops

The heavy use of stop signs along the street calms traffic. Slower speed conditions make a safer pedestrian environment. While the stop signs are effective at calming traffic, they do so at a cost to local travelers. This cost consists of higher fuel consumption and vehicle emissions caused by frequent starting and stopping of traffic, and higher wear on private vehicles.

Mini-roundabouts are recommended at selected intersections along HW DuBois as they would have a very similar traffic calming effect as stop signs, but would cause significantly less starting and stopping of vehicles. Mini-roundabouts operate with the same rules as modern roundabouts (e.g. entering traffic yields to circulating traffic), but they are sized for lower-speed urban environments. The central island of mini-roundabouts is fully mountable (usually 4" height) and 13-16 feet in diameter. The splitter islands at the entry/exit portals are either painted or mountable.

It is recommended that mini-roundabouts be installed only after the sidewalk is constructed, and after a public education campaign designed to inform people of their objective and design. Figure 30 provides a conceptual design of mini-roundabouts at two intersections on HW DuBois. After discussions with the CAC and the Project Management Team it was determined that the two best locations for mini-roundabout installation would be at Manheim and at Prospect.

Figure 30: Conceptual Design of Mini-roundabouts at Selected Intersections on HW DuBois



The overall coordinated project consists of 3 phases:

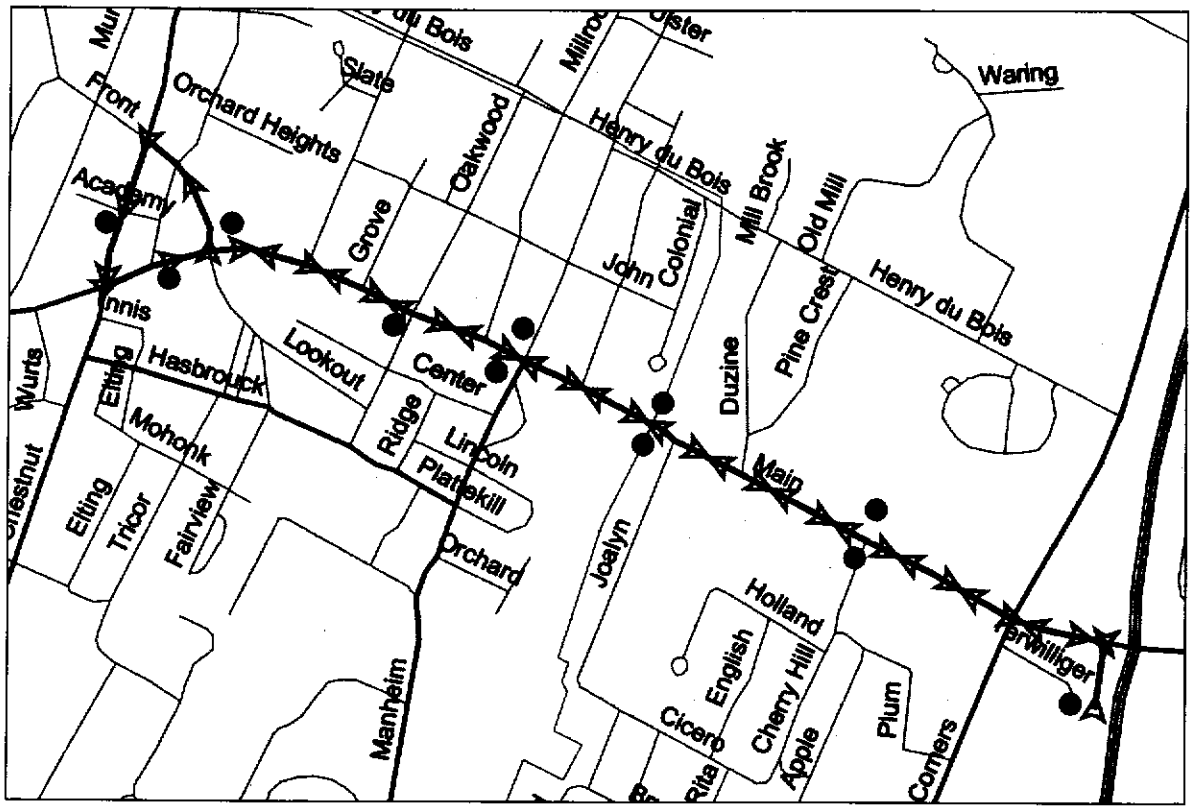
1. Construct sidewalks the length of HW DuBois from Prospect to North Putt
2. Construct mini-roundabouts at Prospect and Manheim.
3. Remove stop signs along HW DuBois at Prospect, Manheim, Duzine/Old Mill, Millrock, and Oakwood.

Establish Transit Service (one year trial)

A total of 6 alternative service concepts have been developed based upon public input, information provided by the Ulster County Transportation Council[1], and on future potential land use directions for New Paltz. These fixed route service concepts are described in Appendix J.

As a mid-term objective, it is recommended that New Paltz contract with Ulster County Area Transit to establish a Main Street Circulator. This service would run the length of Main Street/Route 299 from the I-87 park-and-ride lot to the Village core commercial area. (Figure 31)[2]

Figure 31: Main Street Circulator



It is recommended that this transit service operate Monday – Friday from 7 AM to 9 PM, with weekend service running from 10 AM to 5 PM. Making allowances for bus speed, vehicular congestion, and time spent at bus stops, it is estimated that the proposed Main Street Circulator can operated with a 20 minute headway (the average time between buses at a specific location).

---

[1] Ulster County Fixed Route Transportation Coordination and Intermodal Opportunity Analysis. UCTC. August 2005.

[2] Within Figure 31, the direction of travel is indicated by the arrow superimposed on the route. Proposed bus stop locations are designated by a black dot.

The current New Paltz shuttle charges a $0.75 fare upon boarding. The selection of a fare amount and a fare collection system must be carefully considered in light of overall operating goals and transportation policy objectives. Demand to ride buses is affected by the fare amount and the ease with which the fare can be paid. Thus, to meet the goal of high transit ridership, minimizing fares and payment inconveniences is an overall policy objective.

We recommend that New Paltz strive to establish a free fare transit service. Ideally, this service would be operated by UCAT under contract to the Town of New Paltz. There are examples of such transit services thriving in small towns in the Northeast.[1] To meet the annual costs of operation (discussed below) bus routes are paid for through a combination of public and private sources. In some communities in the Northeast, a transit fund has been established to which private developers contribute payments as a form of traffic mitigation for proposed development projects. To the extent that developments are situated in an area served by a transit route, a rational nexus can be established between the traffic impacts of that development and financial support of the transit service. Annual municipal contributions to operations may be required to make up the operating revenue shortfall.

Operating Cost

Assuming one bus runs from 7:00 AM to 9:00 PM on weekdays and 10:00 AM to 5:00 PM on weekends, the average daily cost per route is $1,200 on weekdays and $600 on weekends. This translates into an annual cost of approximately $350,000 for the Main Street Circulator.

These cost estimates account for all expenses associated with operating buses, such as vehicle purchases, salaries, and gas.

Possible Future Extensions

The Main Street Circulator serves a strong existing axis of development. This recommended route has an added attraction in being expandable to serve other axes of development as growth occurs. Two additional transit services can be considered to serve the proposed multi-centric development shown in Figure 8. These routes are shown in Figure 32

1. **Route 32 North** – this service extends northward from the Village Core along Route 32 to proposed mixed use development area between HW DuBois and Bonticouview View Roads. East-west circulation is provided via HW DuBois and Main Street.
2. **Route 32 South** – this service circulates continuously, traveling south along Route 32/Manheim to the proposed EW Connector, west on the Connector to Route 208, thence north back to Main Street, closing the loop by traveling east on Main Street to Manheim.

[1] One such system is Advance Transit, out of Hartford, Vermont. See advancetransit.com.

3. **Intercity Routes** – New Paltz is currently served by several intercity routes that terminate at the bus station at Main/Prospect. A new intercity route connecting New Paltz to Poughkeepsie via the Poughkeepsie Railroad Station would be a logical extension of the intercity route options currently provided. NYSDOT and Ulster County Area Transit (UCAT) support creation of this service.

Figure 32: Route 32 North (left) and Route 32 South (right) Transit Routes

Table 33: Short-Term Projects, Other Areas of New Paltz

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Short-Term Improvements (0-5 years)	**Striping:** review stop line location on northbound approach to Route 299 from Exit 18 access drivey to ensure clear way for westbound left turning vehicles to access Thruway; stripe stop bars and lanes at the HW DuBois/North Putt intersection	$10,000	NYSDOT, UCDPW, VONP	NYSDOT
	Crosswalks: no recommendations			
	Policy: adopt Access Management Overlay District into Town & Village Code; adopt sidewalk ordinance; establish Transportation Demand Management Fund.	$17,500	VONP, TONP, UCTC	NYSDOT
	Bicycle Racks: Eckerd Plaza, New Paltz Plaza	$1,000	TE, VONP	BP Committee, NYSDOT
	Signage: Install lane designation signage on westbound approach to Putt Corners on Route 299; install lane designation signs on eastbound Route 299 west of I87 bridge.	$7,500	NYSDOT	NYSDOT
	Transit: One Year Trial Main Street Circulator Transit Route	$350,000	STP, MUNI	Ulster County Area Transit, Town of New Paltz, Private Developers, Institutional Support
	Intersection Improvement: miniroundabouts on HW DuBois at Manheim and Prospect	$100,000	UCTC	
	Streetscape: pavement reclamation on abandoned section of Old Route 299.	$15,000	UCTC	VONP, SUNY, BP
	Traffic Signals: optimize signal timing and coordination of Route 299 arterial @ Ohioville, Thruway, Putt, and Cherry Hill	$25,000	NYSDOT, PVT	A portion of this is a permit condition for the Stop & Shop.

* NOTE: Cost figures ar VONP - Village of New Paltz

** The following abbrevi BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF - State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.5 MID-TERM TRANSPORTATION IMPROVEMENT RECOMMENDATIONS (5-12 YEARS)

Mid-term transportation improvement recommendations are projects to be constructed within a 5 to 12 year time frame. In many cases, a 2-3 year planning/scoping/design process should be anticipated.

5.5.1 Mid-Term Projects, Village Core

Implement One-Way Street System

One of the transportation improvement alternatives that showed particularly strong mobility benefits within the Phase B technical modeling was establishing a one-way street system to serve the core commercial area fronting on Route 299 (Alternative 5). Several one-way street options have been

identified, and these are described in Section 4.4 of this report. A preferred one-way system is shown in Figure 24.

The one-way system was ranked highly from the technical modeling (ranked second, see Table 16), as well as within the review by the CAC (Table 20) and the general public (Table 18). A one-way system is an enormous departure from the existing transportation routing available for local travel. It is recognized that such a major change would require significant further study as well as near unanimous support by key stakeholders. For these reasons, the one-way street system is looked upon as a long-term recommendation that New Paltz can continue to discuss, study, and review as New Paltz' settlement pattern and travel demand changes over the coming years.

The preferred one-way system has portals at the following intersections[1]:

- Main/Manheim
- Main/Chestnut
- Chestnut/Hasbrouck
- Route 32/Plattekill

The design at each portal intersection is critical to ensure safe and efficient traffic movement. For each portal intersection, there are at least two options for controlling traffic flow, described in Table 34.

Table 34: Traffic Control Options at 4 Portal Intersections

	Intersection Control Options	
	Option 1	**Option 2**
Main/Manheim	signal for 3 entering approaches	roundabout for 3 entering approaches
Main/Chestnut	signal for 4 entering approaches	roundabout for 4 entering approaches
Chestnut/Hasbrouck	stop control for northbound Route 208	roundabout for 2 entering approaches
Route 32/Plattekill	roundabout for 3 entering approaches	signal for 3 entering approaches

Of note is that 3 of the 4 portal intersections are slated for some type of spot improvement, involving a change in the intersection control or in the intersection capacity through lane additions, etc. Thus, these mid-term and/or long-term spot improvements should be designed to be compatible with a one-way system if New Paltz decides to pursue this alternative in the future. For example, design changes to the Main/Manheim and Route 32/Plattekill intersection are targeted for the mid-term (Table 38). Design improvements to the Main/Chestnut intersection are specified for this time frame as well (Table 37).

[1] Within the context of one-way streets, portal intersections are those places where normal two way flow changes to one way flow that either enters or exits the one-way system.

From a mobility standpoint, the key advantage of a one-way street system is to simplify operations at intersections. Under a one-way flow regime, each portal intersection has fewer vehicle routing alternatives to arbitrate; as a result, each intersection approach can process more traffic in a given time period.

For example, traffic operation at the Main/Manheim intersection is simplified under a one-way system as the former eastbound movement, which conflicts with westbound left turns, is converted to a northbound left turn movement, which does not conflict. Thus, all of the green time that was formerly allocated to combined east/west flow can be reallocated to westbound flow and northbound flow. Whenever the westbound movement has the green signal indication, the northbound right turn can also have green. In this way the major traffic flows do not conflict. Table 35 shows the analytical results of traffic operations at this intersection for 2005 and compares those results with estimated operations in 2025 under both conventional and one-way system improvements.

Table 35: Level of Service at the Main/Manheim Intersection, 2005 and Estimated 2025 with One Way System Improvements and Conventional Improvements

	Overall	EB	WB	NB	SB	PM Peak Hour Traffic Volume (vehicles)
2005 LOS	D-52	D-43	B-15	F-109	D-39	2100
2025 LOS Conventional Improvements	F-102	C-27	B-14	F-300	F-330	2800
2025 LOS, One Way System	B-19	-	C-28	A-9	C-23	2800

At each successive intersection westerly from Manheim -- at Millrock, Oakwood, Grove, Prospect, and Plattekill -- this capacity advantage is duplicated. Since there are no conflicting movements in the westbound direction all eastbound traffic proceeds without delay. Even with significantly more traffic demand (2,800 vehicles per peak hour in 2025 compared to around 2,100 vehicles per peak hour today), the intersection operates with less congestion.

The good flow of traffic creates an additional concern to design the roadway to discourage speeding, which can be accomplished a number of ways, including through the incorporation of deflection (chicanes).

These efficiencies gained at the above-named intersections ultimately get "paid" for when the one-way system merges back into the two-way system at Chestnut Street. At this location, operations are estimated to worsen due to the need for handling the eastbound and westbound travel demands separately. The operational results for the Main/Chestnut intersection are shown in Table 36.

Table 36: : Level of Service at the Main/Chestnut Intersection, 2005 and Estimated 2025 with One Way System Improvements and Conventional Improvements

	Overall	EB	WB	NB	SB	PM Peak Hour Traffic Volume (vehicles)
2005 LOS	C-27	C-22	C-33	C-31	C-23	1600
2025 LOS Conventional Improvements	D-51	C-31	D-48	F-94	D-38	2000
2025 LOS, One Way System	F-120	F-185	F-86	F-120	F-101	2000

From a streetscape design standpoint, the one-way system requires that intersections be wide to incorporate turn lanes, many of which already exist. Street segments that are further than 60 feet from an intersection can operate with only one travel lane, thereby creating design opportunities within a paved area that currently measures 32-50 feet in width (curb-to-curb).

For example, the Village commercial core fronting Main Street between Front Street and Chestnut Street measures 31-36 feet curb-to-curb. With one-way westbound flow requiring as little as 11 feet for one vehicle lane, as much as 25 feet is available for other uses. Figure 33 shows a visualization of Main Street looking west from the northeast corner of Main/Front, assuming a one way flow westbound with wider sidewalks and street trees.

Figure 33: Streetscape Options for Main Street within the Village Core under a One-Way Flow Regime

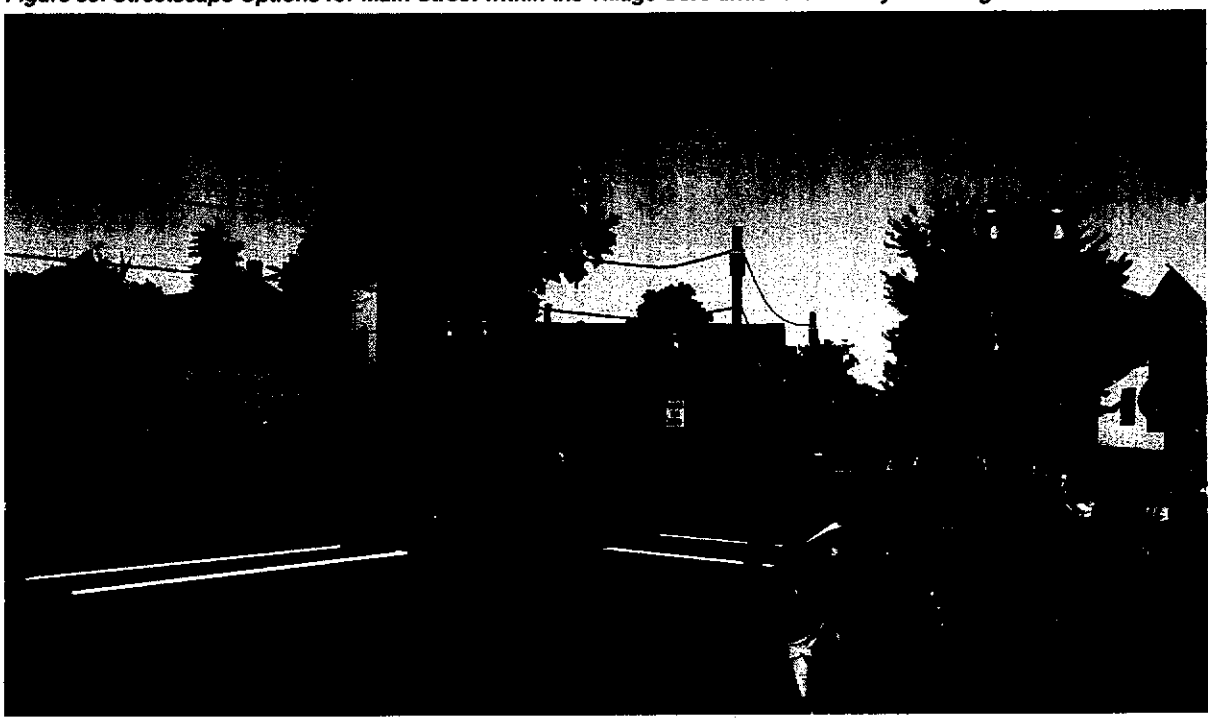


Figure 34 and Figure 35 show alternative street treatments for this section of Main Street.

Figure 34: Existing Streetscape along Main Street and Streetscape Options 1 and 2 for a One Way Flow System

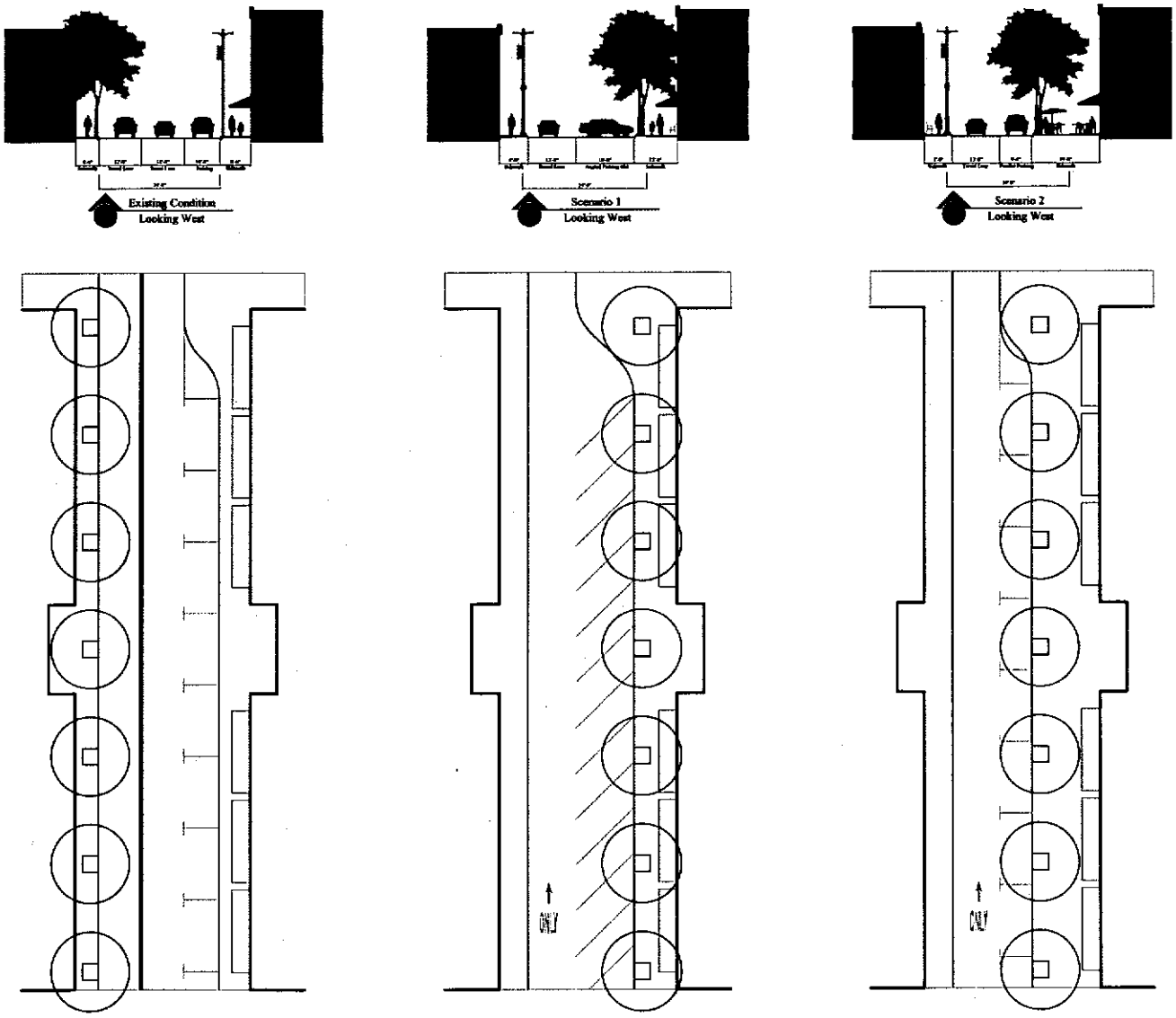
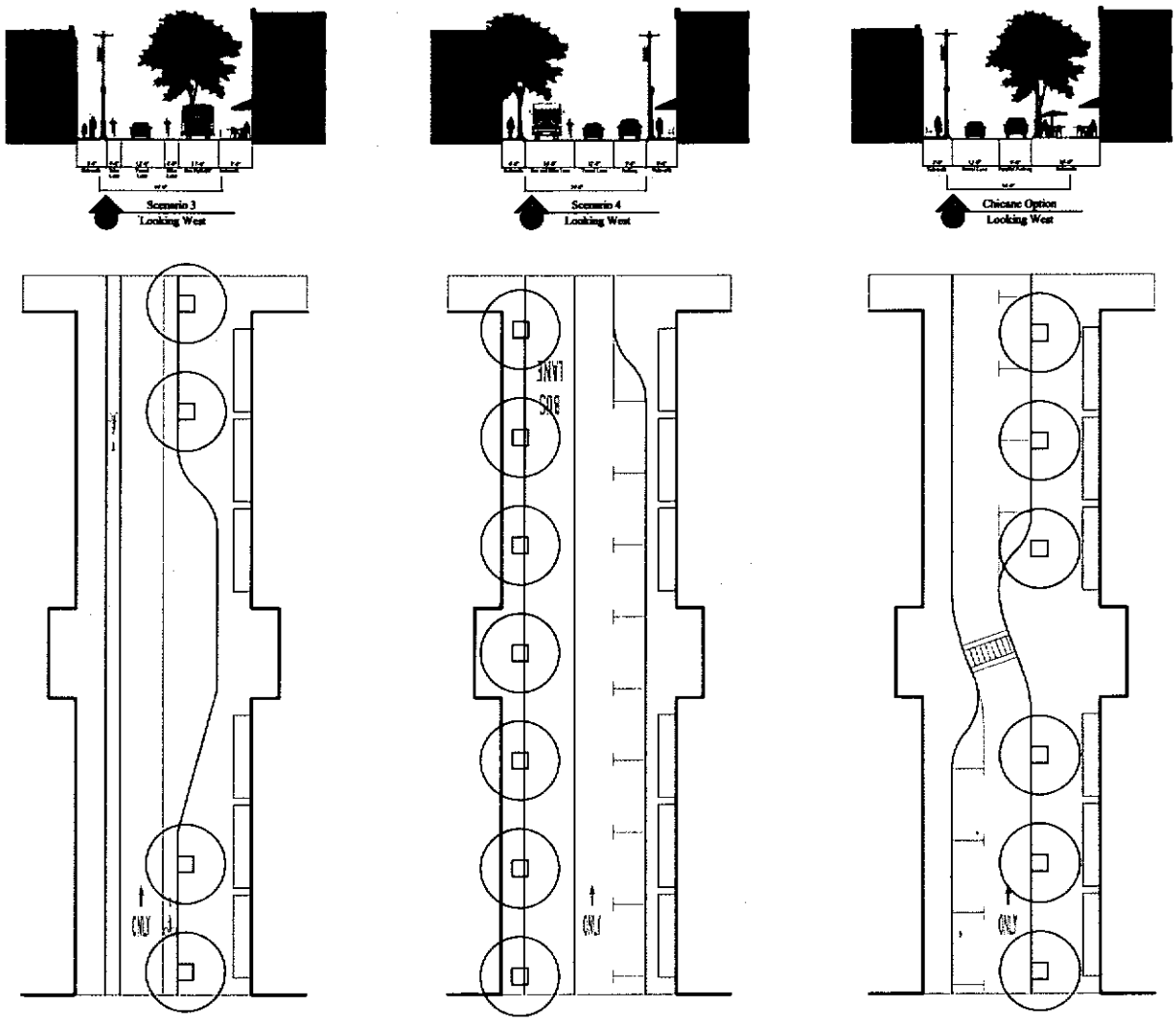


Figure 35: Streetscape Options 3 - 6 for a One Way Flow System along Main Street



The one-way system potentially provides land use benefits as well. The eastbound travel segment traverses Hasbrouck and Plattekill Avenues. This general area is notable for a variety of civic uses, including churches, parks, the Village Hall, and SUNY. Along the northerly sideline of Plattekill Avenue, opposite the SUNY campus is a largely residential area. With greater traffic flow along Plattekill, these properties will gain higher value as office or light commercial inter-mixed with residential, if the Village chooses. These types of land use permissions are entirely consistent with the land use goals enunciated over the course of the Project – concentrate development in areas currently served by municipal water and sewer.

Install Transit Shelters to Support Selected Transit Route

The public that has participated in the Project's meetings has consistently expressed enthusiasm for establishing a more visible transit shuttle, with high frequency service to the downtown, has been consistently expressed. Several transit routes are described in a technical memorandum provided in Appendix J.

The Main Street Circulator (Figure 31) route recommended by the Project shows bus stops at the following locations:

- Southbound Main/Chestnut, northwest corner.
- Eastbound Main Street, mid-block, Church to Plattekill.
- Northwest-bound Front Street near the Elting Library.
- Eastbound Main Street, southeast corner of Main/Plattekill.
- Westbound Hasbrouck at Route 208, northeast corner.

The mid-term improvements recommended for the Village Core are summarized in Table 37

Table 37: Mid-Term Improvements, Village Core

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Mid-Term (5-12 years)	One Way Street System: westbound on Main Street from Manheim to Chestnut; eastbound on Hasbrouck/Plattekill from Chestnut to Rt. 32.	$1,375,000	STP, TE	NYSDOT, UCTC, VONP, TONP
	Install transit shelters and transit information kiosks, Main Street/Route 299	$60,000	UCTC	UCAT, Town & Village of New Paltz

* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.

** The following abbreviations are used:

BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.5.2 Mid-Term Project, Central Main Street Growth Center

Main/Manheim

Overall, this intersection operates currently at LOS D, processing approximately 2,000 vehicles per peak hour. The offset alignment of the intersection causes the intersection to operate at below standard

efficiency. By 2025, as many as 2,400 vehicles may need to be processed through this intersection during a peak hour. Options for maintaining operational efficiency include:

- Conventional capacity improvements (lane additions), 4-leg intersection.
- Single lane roundabout, 4-leg intersection
- Conventional capacity improvements (lane additions), 3-leg intersection.
- Single lane roundabout, 3-leg intersection

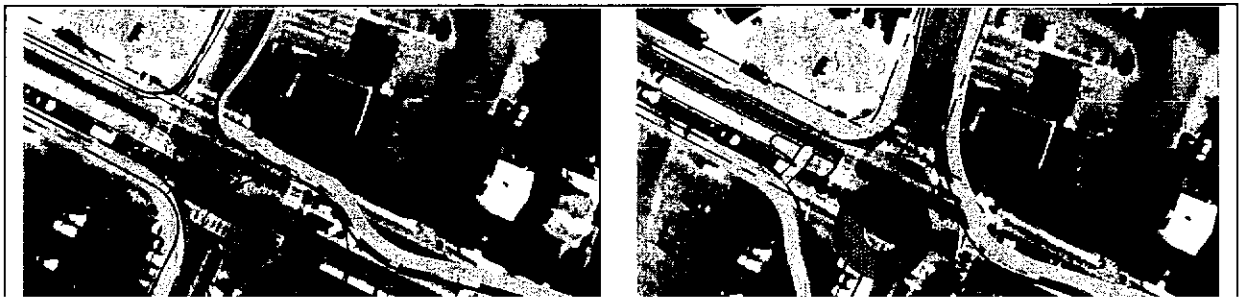
The last two options involve T-ing North Manheim on Main Street as a minor leg that is separate from the main control device (traffic signal or roundabout). While this would greatly simplify operations of the Main/Rt. 32 South intersection, it creates other operational problems for North Manheim. With North Manheim stop-controlled as a minor street to Main Street it will be difficult for left turning vehicles exiting North Manheim onto Main Street to find adequate gaps to enter the traffic stream. This same problem exists whether Main/S. Manheim is controlled by a traffic signal or a roundabout.

Another option would be to operate Manheim as a restricted intersection, where only right turn enters and exits would be allowed or a one-way northbound operation. In either case, this new type of operation would create broader traffic impacts locally which would require a comprehensive traffic flow and control strategy in the immediate area.

A roundabout at the Main/Manheim intersection was formally evaluated during the Phase B portion of the Project as one element of Alternative 4. This location is considered a feasible candidate for a roundabout and, however, will likely require acquisition of private property to construct.

The CAC has advised the Town of New Paltz to extend consideration of the roundabout at this intersection within Phase C and directed that conceptual designs be prepared for the Phase C report. These are shown in Figure 36. Each roundabout design would require acquisition of private property.

Figure 36: 3-Leg Roundabout (left) and 4-Leg Roundabout (right) at Main/Manheim



From a capacity standpoint, the 3-leg roundabout is preferred as the traffic flow to and from Manheim is separated from the main roundabout circle. This flow currently varies from 200-250 vehicles per hour and is projected to increase to 300-400 vehicles per hour (entering + exiting North Manheim) by 2025.

Alternatively conventional capacity improvements could be constructed at this intersection (Figure 37). Extending northbound right turn capacity at this intersection is the most critical capacity need at present, and would require acquisition of New Paltz School District land on the southeast quadrant of the intersection. Adding exclusive left turn lanes for the northbound and southbound approaches can create some capacity benefits realized through signalization (protected left turns and advance movements). However, the intersection would continue to operate poorly (Table 35).

Figure 37: Conceptual Design for Conceptual Capacity Improvements at the Main/Manheim Intersection

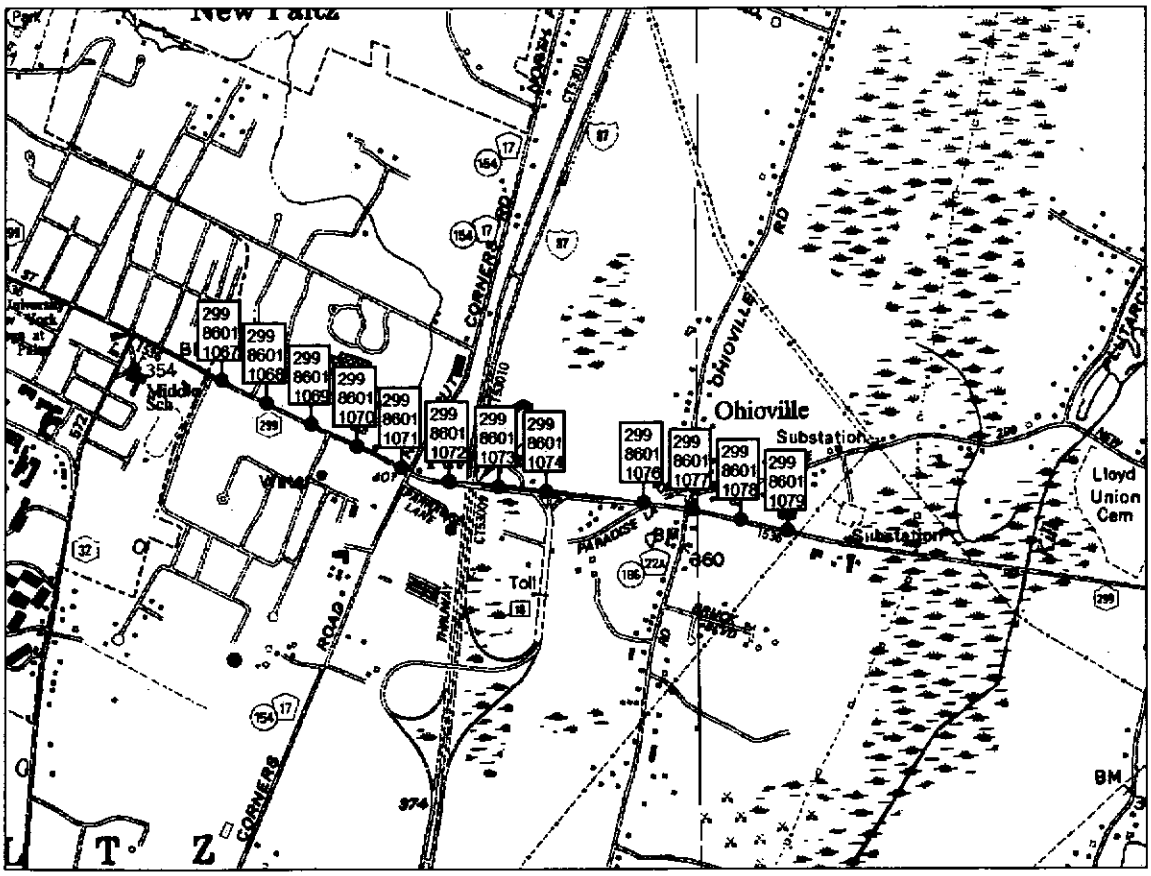
Implement Left Turn Lanes on Route 299 from Cherry Hill to Joalyn Road

The commercial area along Route 299 from Cherry Hill to Joalyn Road is approximately 1500 feet in length with over 25 driveways. The high potential for turning traffic correlates directly with the high crash rates experienced in this section of roadway Figure 38).[1]

Crashes are concentrated at 3 locations:

- At the intersection with Joalyn Road (RM 1067);
- At the intersection with the Eckerd's Plaza driveways (RM 1068); and,
- Proximate to the signalized intersection at the New Paltz Plaza (RM 1069-1070)

Figure 38: High Crash Locations along Route 299



[1] NYSDOT Traffic Engineering & Safety Group Priority Investigation Location (Route 299: Joalyn Road to Cherry Hill Road); December 2005.

At two locations in particular – at Joalyn Road and at the Eckerd's Plaza driveways – adding left turn lanes for westbound traffic will address an existing safety deficiency. Read end collisions account for over 60% of the crashes in this area, the highest crash mechanism, with left turn crashes being the second most frequent at 16%.

This area of Route 299 has relatively wide travel lanes that provide de facto "bypass" lanes for through vehicles wishing to continue past queued left turning vehicles. The curb-to-curb width in this section of Route 299 is estimated to be 40 feet. We recommend formalizing left turn lanes through striping at the westbound approach to Joalyn Road (17 accidents from 2000-2003) and at the westbound approach to the Eckerd's Plaza entrance, which would oppose an exclusive eastbound left turn for Duzine Street.. These 2 improvements, in combination with ongoing efforts to improve access management in this section, will significantly improve safety along Route 299.

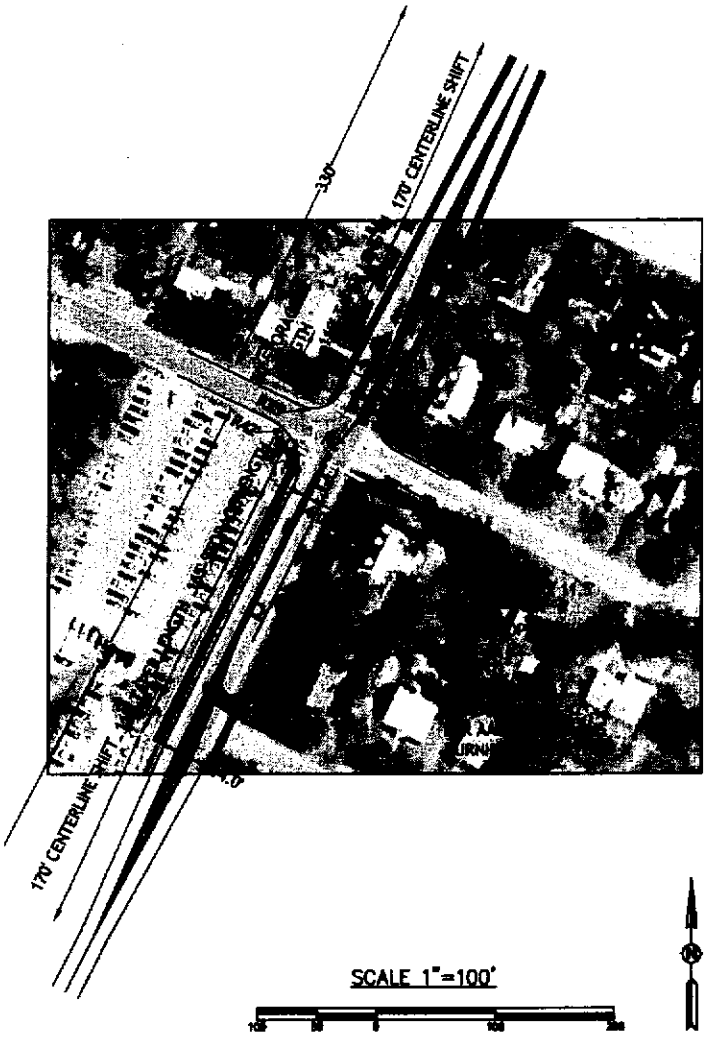
Intersection Reconstruction, Route 32/Plattekill

The need for a northbound left turn lane at this intersection was established in future transportation/land use modeling within Phase B. The need for a left turn lane is warranted from both a capacity and safety standpoint (turn lane warrant analyses for this and other intersections are provided in Appendix F).

It is typical to construct an opposing left turn lane when a new left turn lane is added, even when a specific left turn volume is not particularly high, as is the case with the southbound left turn volumes at this intersection. A southbound left turn lane will be an improvement for Middle School buses that use this intersection to loop to the bus pick-up/drop-off area.

Based on the conceptual design shown in Figure 39, the curbline on the northwest corner would need to be changed to enable safe southbound right turns for the design vehicle, which is a city bus.

Figure 39: Conceptual Design of a New Left Turn Lanes (NB & SB) at Route 32/Plattekill



A southbound right turn on Route 32 will be necessary in the longer term, and could be constructed when the left turn lane is built, or when the intersection control is upgraded to a traffic signal or roundabout (long-term improvement). The right turn lane is shown as a long term improvement at this intersection.

An alternative to these conventional capacity improvements would be a roundabout. A roundabout at this location would have ample capacity for projected 2025 traffic flows, and would be the preferred facility if a one-way circulation system is established.

The Project's technical analysis shows the need to upgrade traffic control at the Route 32/Plattekill intersection to either a roundabout or a traffic signal. PM peak hour traffic volumes currently average

around 1,000 vehicles at this intersection, and are estimated to grow to 1,500-1,700 vehicles per hour by 2025 (dependent on the land use pattern assumed).

To maintain efficient operation at this intersection, an upgraded control to a traffic signal or roundabout is recommended as a long-term improvement. A roundabout would be a preferred treatment if the one-way system described above is established, as the roundabout enables U-turns.

Install transit shelters and information kiosks along Main Street to serve Main Street Circulator

The bus route for a Main Street Circulator is shown in Figure 31. Logical locations within the Central Main Street area include:

- Eastbound Main street proximate to Oakwood, Manheim, and Joalyn.
- Westbound Main Street proximate to Duzine St. and North Manheim.

Table 38: Summary of Mid-Term Improvements, Central Main Street Growth Center

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Mid-Term (5-12 years)	Roundabout or other conventional capacity improvement, Main-Manheim	$400,000-$750,000	TE, STP, VONP, PVT	NYSDOT, Property Owners
	Implement Left Turn Lanes on Route 299, westbound at Joayln; eastbound at Duzine; westbound at Eckerd's Plaza entrance. Install raised median for section between Duzine and Joalyn.	$60,000	STIP, TDM	NYSDOT, TONP
	Intersection Reconstruction, Route 32/Plattekill (northbound left turn lane, southbound right turn lane; upgrade intersection control (signal or roundabout)	$625,000	STP, VONP	NYSDOT
	Install transit shelters and transit information kiosks, Main Street/Route 299, simultaneous with establishing Main Street Circulator transit route.	$60,000	TE	UCAT, VONP

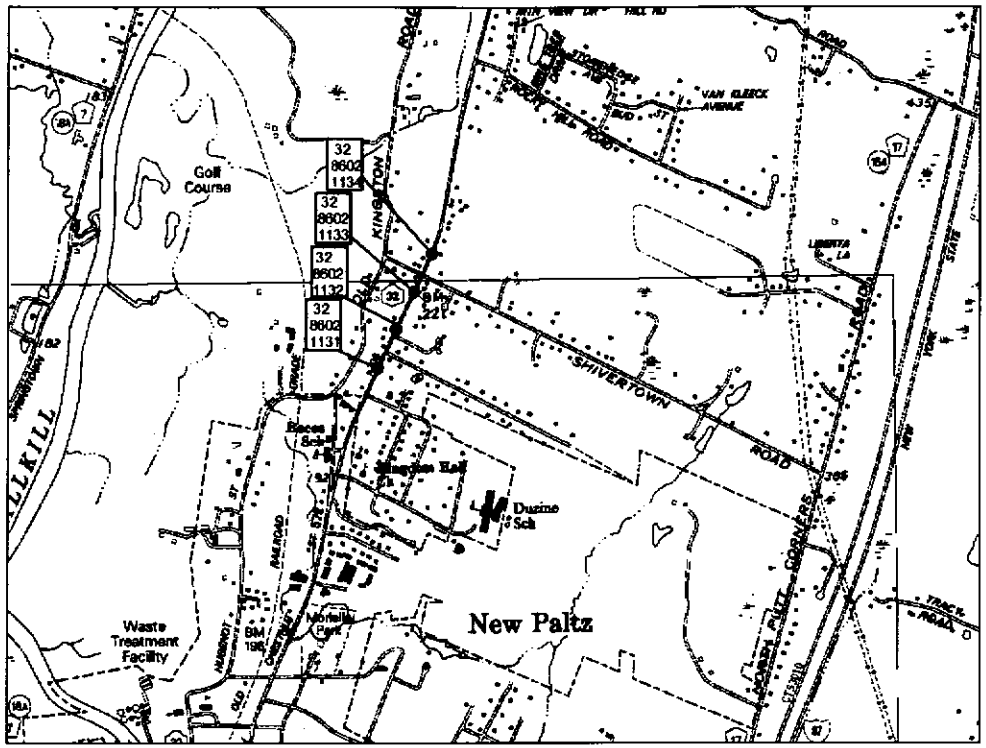
* NOTE: PVT - Private landowners, developers

** The fol TDM - Transportation Demand Management Fund
BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.5.3 Mid-Term Projects, Route 32 North Growth Center

The Route 32 North growth center provides opportunities to address existing transportation deficiencies while creating an attractive infrastructure foundation for future land use growth. The area along Route 32 immediately north of the growth center is classified as a High Crash Location. The area has a high incidence of crashes, with 30 vehicle crashes reported from 1999-2002 within the area shown in (Figure 40).

Figure 40: Mileposts Along Route 32 for Vehicle Crashes Reporting



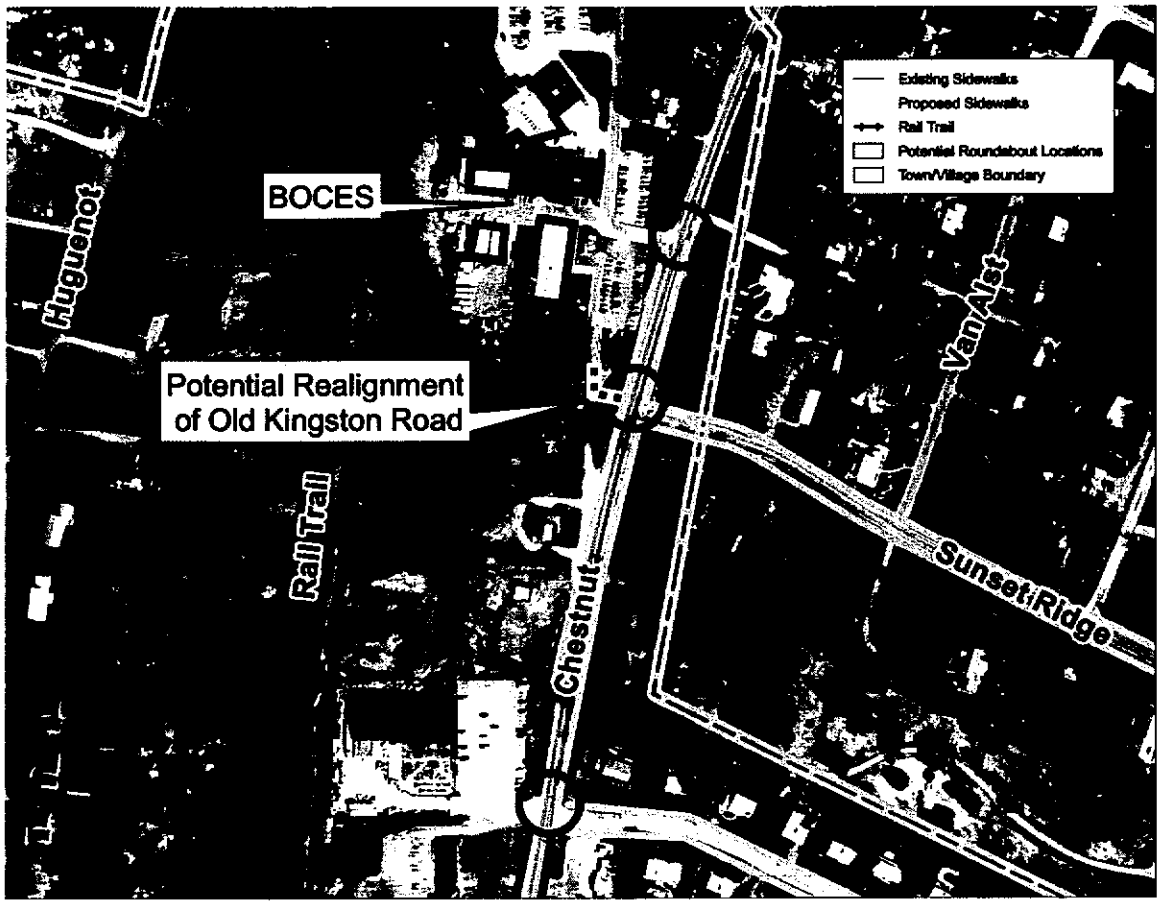
This high incidence of crashes underscores the need to make safety improvements in this general area. Installation of a traffic signal and turn lanes at the Route 32/Shivertown Road intersection will help improve safety. A solution that is recommended for this area, to address both safety concerns and the need to define the northern portion of the growth center, is to apply a gateway treatment to Route 32 in this general area.

Gateway treatments can take many forms, two of which are shown in Figure 27, above. However, in this area there is also the need for improved intersection control at each of the following intersections:

- Route 32/Old Kingston Road (BOCES)
- Route 32/Sunset Ridge Road
- Route 32/Bonticouview Drive

Another potential gateway treatment that also addresses safety concerns and capacity concerns in this

Figure 41: Potential Roundabout Gateway Locations, Route 32 North Growth Center



There are advantages and disadvantages to each potential roundabout location, which are qualitatively described in Table 39. A roundabout has significant capacity for managing vehicle flow. A single lane roundabout can efficiently process up to 2,500 vehicles per hour. By 2025 traffic along Route 32 in this area is projected to be around 1,800 vehicles per peak hour, compared to 1,400 today. Ideally, the roundabout would be installed at a location that could more fully utilize its capacity. For this reason, the location at Old Kingston Road (BOCES), generating the least amount of conflicting traffic, may be the least likely candidate.

One option, shown in Figure 41, is to construct the roundabout at the Sunset Ridge Drive intersection. This would address existing capacity problems for Sunset Ridge Road, where the left turn exiting movement operates at LOS F. It would be possible to re-align Old Kingston Road as a fourth leg to the roundabout at this location, creating the opportunity to close the existing curb cut at Old Kingston Road and re-define the interface between Old Kingston Road and the BOCES parking lots.

Table 39: Qualitative Advantages and Disadvantages of 3 Different Roundabout Locations

	Advantages	Disadvantages
at Old Kingston Road	at the true northern terminus of the growth center	roundabout is not necessary for controlling primarily right turning exiting traffic
at Sunset Ridge	would address existing capacity issues for the minor leg (Sunset Ridge, exiting left turning vehicles) would be a safe facility for school traffic could provide a re-alignment of Old Kingston Road, creating a more efficient 4-leg roundabout	constrained due to surface drainage areas proximate to the intersection
at Bonticouview	would address existing capacity issues for the minor leg (Bonticouview, exiting left turning vehicles) would address access management deficiencies along westerly portion of intersection adequate existing public paved area for accommodating a roundabout	minor leg traffic (to/from Bonticouview) is lowest of the 3

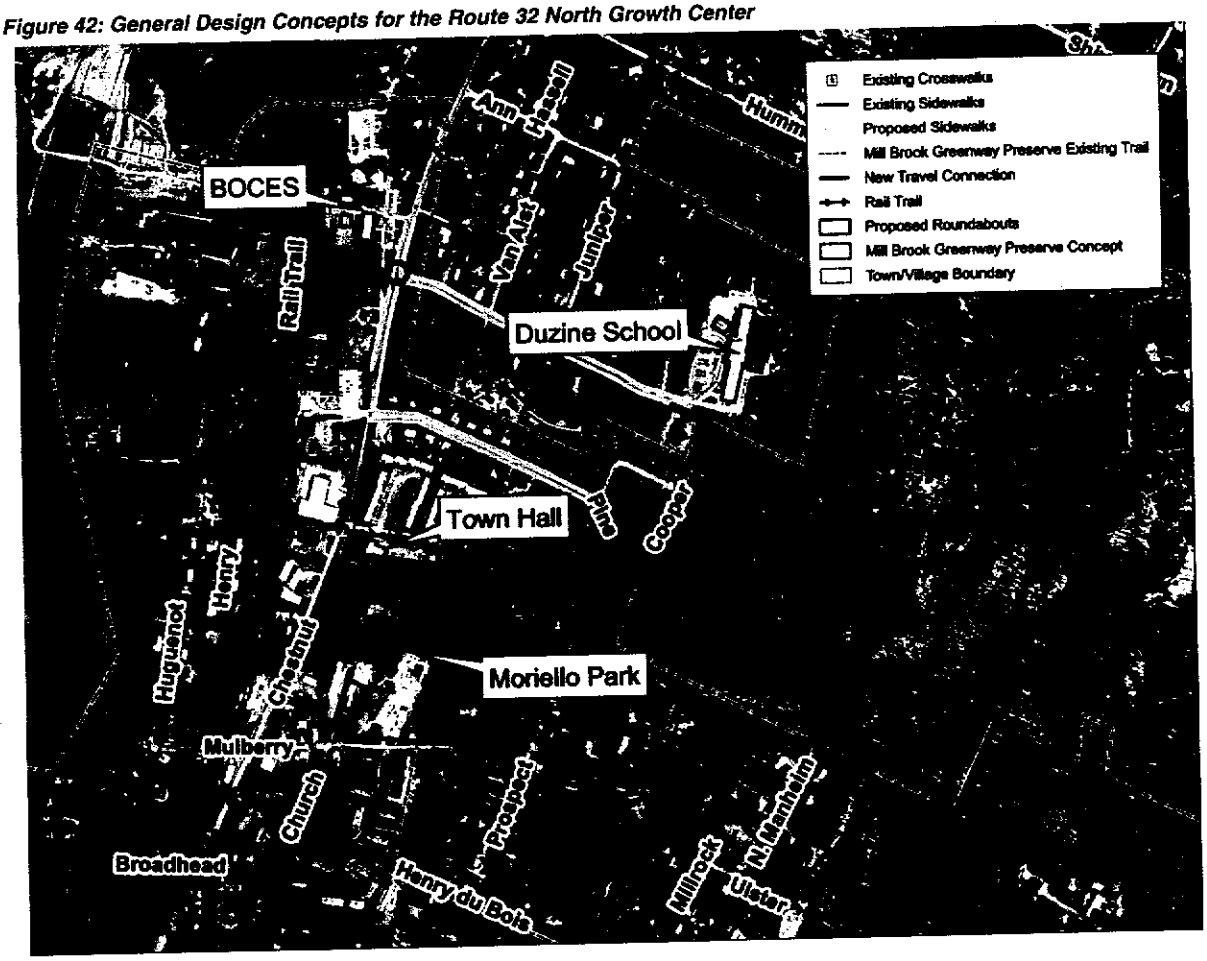
Constructing the roundabout at Bonticouview Drive has the advantage of addressing a set of access issues at this location. However, the traffic flow to/from Bonticouview Drive is the lowest flow of the 3 potential locations and, hence, may not justify the construction of a roundabout.

The recommended design concept for this growth center is shown in Figure 42. The design concept shows roundabouts at either end of the growth center – at Sunset Ridge to the north and at HW DuBois to the south. A traffic signal would also be possible at the Route 32/HW DuBois intersection. However, the gateway effect of a roundabout at this location is an important aesthetic and traffic control element. Hence, the recommendation advances a roundabout at this location as opposed to a traffic signal.

Sidewalks are fully constructed along both sides of Route 32 for the length of the growth center. The geography of public uses, including the proposed Mill Brook Greenway, is also shown. Public uses include the New Paltz Town Hall, Duzine School, BOCES, the Wallkill Valley Rail Trail, and a community center to be constructed behind the town hall. The location and number of important public buildings and facilities creates the logical land use foundation for this growth center.

Transportation improvements in the area should focus on connecting all uses safely. For this reason, future travel connections linking Sunset Ridge Road and Bonticouview Drive with Veterans Drive (the driveway access to Town Hall) are shown in Figure 42.

Figure 42: General Design Concepts for the Route 32 North Growth Center



The intersection of Route 32/HW DuBois will also need improved control for safety and capacity reasons within the mid-term time frame. The minor approach on HW DuBois was evaluated under existing conditions to operate at LOS F, and congestion at this intersection will worsen over time. Under existing travel demand, a southbound left turn lane is warranted for safety reasons; under projected future demand, a northbound right turn is warranted.

However, these turn lane improvements, while important for safety, will only worsen the congestion effects on HW DuBois. For these reasons, a roundabout is recommended as it addresses both the safety and capacity issues at this intersection.

A summary of mid-term improvements for this growth center is shown in Table 40. For scoping purposes, this analysis has assumed that a roundabout would be constructed at the Sunset Ridge intersection. For the intersection at HW DuBois, both a roundabout and conventional capacity improvements are shown, even though only one of these two improvement solutions would eventually be pursued.

Table 40: Summary of Mid-Term Improvements, Route 32 North Growth Center

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Mid-Term (5-12 years)	Sidewalks along Route 32 west side, to be developed as land use changes occur in the growth center.	$78,910	TE, MUNI	NYSDOT, VONP, PVT
	Roundabout, Route 32/Sunset Ridge Road/Re-aligned Old Kingston Road	$500,000	PVT	NYSDOT, VONP, PVT

* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.

** The following abbreviations are used:

BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.5.4 Mid-Term Projects, Route 32 South Growth Center

Establish/Construct Paved, Striped Shoulders along Route 32 South (to Town Line)

It is recommended that NYSDOT stripe a 2-4' paved shoulder, as paved width allows, along Route 32 in this general area the next time the area is re-paved. This improvement would address a longstanding need to provide for long range bicycle mobility. This specific improvement has been voiced from many quarters over the course of the Project, including from several respondents to the household survey.

Expanding the paved width is often not a simple construction task due to the need to move utilities and manage stormwater. There may also be right-of-way impacts in some cases. Thus, this improvement recommendation is subject to these constraints. The cost of these improvements would be incorporated into a larger re-paving project conducted within the course of normal maintenance. The cost shown in Table 41 is the cost of the entire repaving/rehabilitation project for 3 miles of Route 32, extending from Southside to the Town line.

Table 41: Mid-Term Improvements, Route 32 South Growth Center

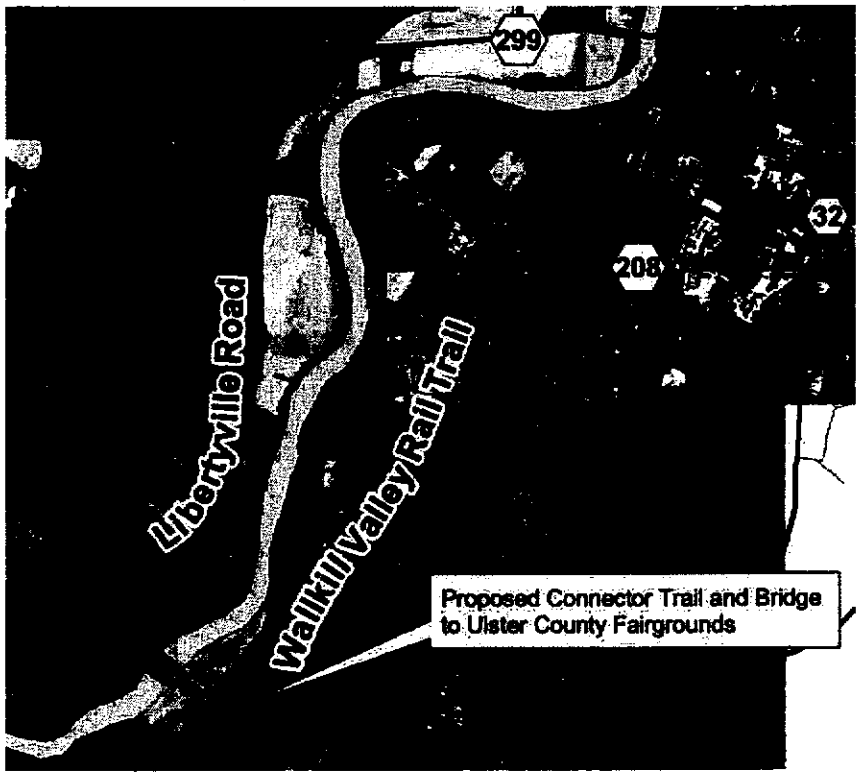
	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Mid-Term Improvements (5-12 years)	Establish/construct 4' paved, striped shoulders on Route 32 within New Paltz (south of Route 299)	$632,016	NYSDOT	

5.5.5 Mid-Term Projects, Other Areas

Pedestrian Bridge over Wallkill River

The Town of New Paltz has submitted a Transportation Enhancement grant application to the Ulster County Transportation Council to construct a pedestrian bridge over the Wallkill River to the Ulster County Fairgrounds. The Wallkill Valley Rail Trail would provide primary access to this proposed bridge. This is an extremely exciting project concept that will have a major impact on the quality of life in New Paltz, particularly during special events. Figure 43 shows the approximate location of the proposed pedestrian bridge.

Figure 43: Proposed Multi-Use Path Connections to Ulster County Fairgrounds



Construct Multi-Use Path Parallel to North Putt from Route 299 to Shivertown

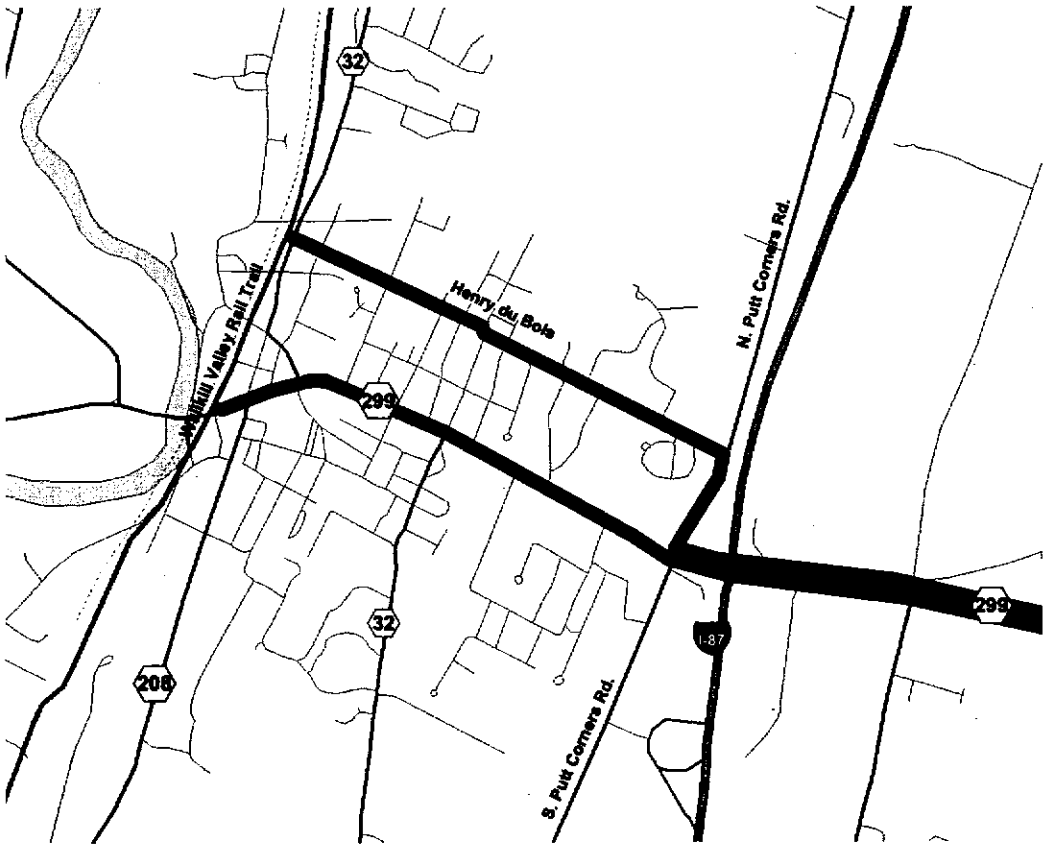
Construct multi-use path parallel to South Putt Rd. from Rt. 299 to Shivertown Road. This alternative pathway would follow in sequence the development of a multi-use path from Route 299 to the New Paltz High School parallel to South Putt.

Establish/Extend Regional Bike Route through New Paltz

An extension of the regional bike route is shown in Figure 44, which extends a designated state bike route on Route 299 from the Lloyd Town Line to North Putt. The bike route would continue north along North Putt to HW DuBois, thence westerly to Route 32. This connection would ultimately meet the Rail Trail at Mulberry Street. This improvement would need to be coordinated with the recommended short-term improvement of constructing sidewalks along the southerly sideline of HW DuBois.

An alternative advocated by the Southern Ulster Alliance[1] would turn left onto S. Putt Corners Road then right onto a potential connector trail between S. Putt and Route 32. At Route 32 a trail can lead through the SUNY campus to Route 208. At the exit from SUNY onto Route 208 a safe route will need to be established to connect to the rail trail.

Figure 44: Two Potential Regional Bicycle Route Alignments in New Paltz to Connect with the Hudson Valley Rail Trail

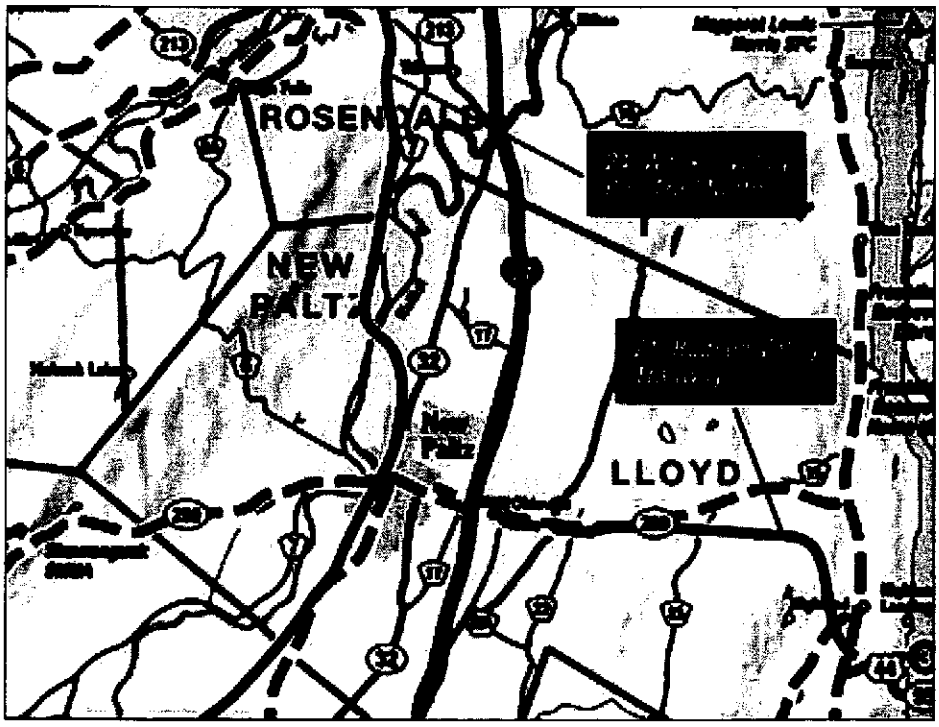


[1] This information was presented at the June 13, 2005 meeting of the B/P Committee and is reflected in the minutes of that meeting.

Establish a Bike Lane along Route 208 (to Town Line)

The Hudson Valley Bikeways and Trailways map shows a future bike path along Route 208 in New Paltz Figure 45). It is recommended that NYSDOT construct a 4' paved shoulder along Route 208. This improvement would address a longstanding need to provide for long range bicycle mobility. This specific improvement has been voiced from many quarters over the course of the Project, including from several respondents to the household survey.

Figure 45: Section of the Hudson Valley Bikeways and Trailways Map Showing Future Bike Paths along Routes 299 and 208



Road Shoulder Improvements to Selected Roadways

Improving paved, striped shoulders on the arterial and collector roadways of New Paltz has been a recurring theme throughout the Project. Many comments received in the 2003 household survey pointed to the existing deficiencies in this regard, and the need to provide safe pedestrian and bicycle travel along major roadways. Table 42 shows priority segments for shoulder upgrades not previously described in the Project recommendations. These recommendations are consistent with those made in the Ulster County Long-Range Transportation Plan prepared by the Ulster County Transportation Council.

Note that any road shoulder that is officially designated as a bike path (e.g. Route 299 through New Paltz and Route 208 are shown on the Hudson Valley Bikeways and Trailways Map as Future Bike Routes)

must measure 4 feet in width according to the safety standard set by the American Association of State Highway and Transportation Officials (AASHTO).

Table 42: Roadway Segments Recommended for Shoulder Improvements

Roadway	Jurisdiction	Segment Description	Segment Length	Recommended Width	Comment/Other
South Putt	Ulster County	Route 299 to New Paltz High School	6400 feet	4 feet	TIP Application to UCTC denied (7/05); alternative to multi-use path
South Putt	Ulster County	New Paltz High School to Route 32	2500 feet	4 feet	
North Putt	Ulster County	Route 299 to Shivertown	7200 feet	4 feet	
Route 299	Ulster County	Wallkill River Bridge to Libertyville Road	5000 feet	2-3 feet	Within Shawangunk Scenic Byway; 4 foot shoulders on bridge to be integrated into bridge reconstruction.
Route 299	NYSDOT	Putt Corners to Lloyd Townline	6100 feet	4 feet	A portion is within the Shawangunk Scenic Byway; many segments of paved shoulders currently exist. This segment should have a consistent width paved shoulder.
Libertyville Road	Ulster County	Route 299 to Ulster County Fairgrounds	9000 feet	2-3 feet	
Route 208	NYSDOT	Route 299 (Main Street) to Jansen Road	8200 feet	2-4 feet	Within Shawangunk Scenic Byway; Route 208 is designated as a future Bike Route on the Hudson Valley Bikeways & Trailways map.
Route 208	NYSDOT	Jansen Road to Gardiner Town Line	15000 feet	2-4 feet	

Many of the segments listed in Table 42 are formally within the area designated as the Shawangunk Mountains Scenic Byway (the Byway). The Byway's Corridor Management Plan recommends that, for the area along Route 299 west of the Wallkill River to Routes 44/55, shoulders be 2'-3' wide. This recommendation is also within final report of the Project's BP Committee and approved by both the Ulster County Transportation Council and the NYS DOT Scenic Byway Advisory Board.

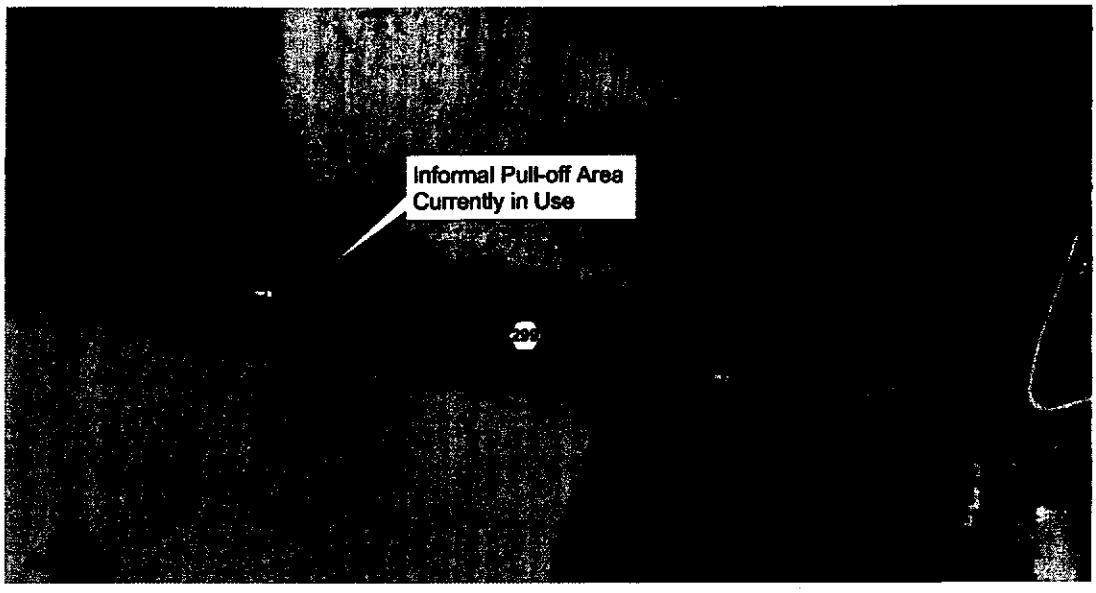
Construct Northbound Left Turn Lane on North Putt Approach to HW DuBois

A left turn lane at this intersection is warranted under current traffic volumes (Appendix F). This is a safety improvement that should be pursued over the next 5-8 years if a roundabout is not constructed at this intersection.

Vehicle Pull-off West of Wallkill River

Recommendations of the Shawangunk Scenic Byway include a vehicle pull-off along Route 299 west of the Wallkill River where visitors to the region can obtain information about the Scenic Byway and local attractions. Figure 46 shows a potential location for this pull-off area, which is an open graveled area currently used informally. A pull-off to the east of Springtown Road is preferred as it would be prior to a decision point for westbound motorists. Any structures or utilities associated with the pull-off area should not interfere with scenic views. An area that could accommodate up to 3 parked vehicles and an information kiosk would require an estimated 1700 square feet.

Figure 46: Approximate Location of Proposed Vehicle Pull-Off



NYSDOT does not support establishing a formal pull-off at this location. Route 299 at this location is under the jurisdiction of the Ulster County Transportation Council.

Table 43: Mid-Term Improvements, Other Areas

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Mid-Term Improvements (5-12 years)	Pedestrian Bridge over Wallkill River	$1,200,000	B/P, TE	TONP, Private landowners
	Construct multi-use path parallel to North Putt from Route 299 to Shivertown Road.	$1,092,000	NYSDOT	
	Establish/extend Regional Bicycle Route through New Paltz	$2,000,000	NYSDOT	TONP, VONP, UCTC
	Establish a Bicycle Lane on Route 208 associated with re-paving project.	$466,100	NYSDOT	BP Committee
	Road shoulder improvements, Selected Roadway Segments in New Paltz	$1,188,000	UCTC	BP Committee
	Northbound Left Turn Lane, North Putt/HW DuBois	$80,000	STP, MUNI	NYSDOT, Town/Village of NP, Private developers
	Develop a formal vehicle pull-off area immediately west of the Wallkill River proximate to the intersection of Route 299/Springtown Road. Pulloff area should include information resources for Shawangunk Scenic Byway and cultural and natural history interpretation.	$50,000	TE, TONP	NYSDOT, Shawangunk Scenic Byway

November 2006

ons.

: Overlay District proximate to all state
ty to manage and control access to the most
rely consistent with the Ulster County Long

5.6 LONG-TERM TRANSPORTATION IMPROVEMENT RECOMMENDATIONS (12+ YEARS)

Long-term transportation improvement recommendations are often larger, more expensive projects designed to address systemic congestion and safety issues. These projects are to be pursued beyond a 12 year time frame.

5.6.1 Long-Term Projects, Village Core

Reconstruct Wallkill River Bridge and Main/Water/Huguenot Street intersection

The Wallkill River Bridge carrying Route 299 is a county bridge. Statewide, bridges are inspected every 2 years and are formally rated using a national system. Two important ratings are the Condition Rating and the Sufficiency Rating.

Condition ratings for bridge components range from 1 (totally deteriorated or failed) to 7 (new condition). Generally, any bridge with a component having a condition rating of 1 would be closed to traffic. A bridge component with an overall condition rating greater than or equal to 5 is considered to be in good condition, while a bridge component with a condition rating less than 5 is considered to be deficient. Based on its last inspection date in November 2004, the Wallkill River Bridge has a Condition Rating of 4.078.

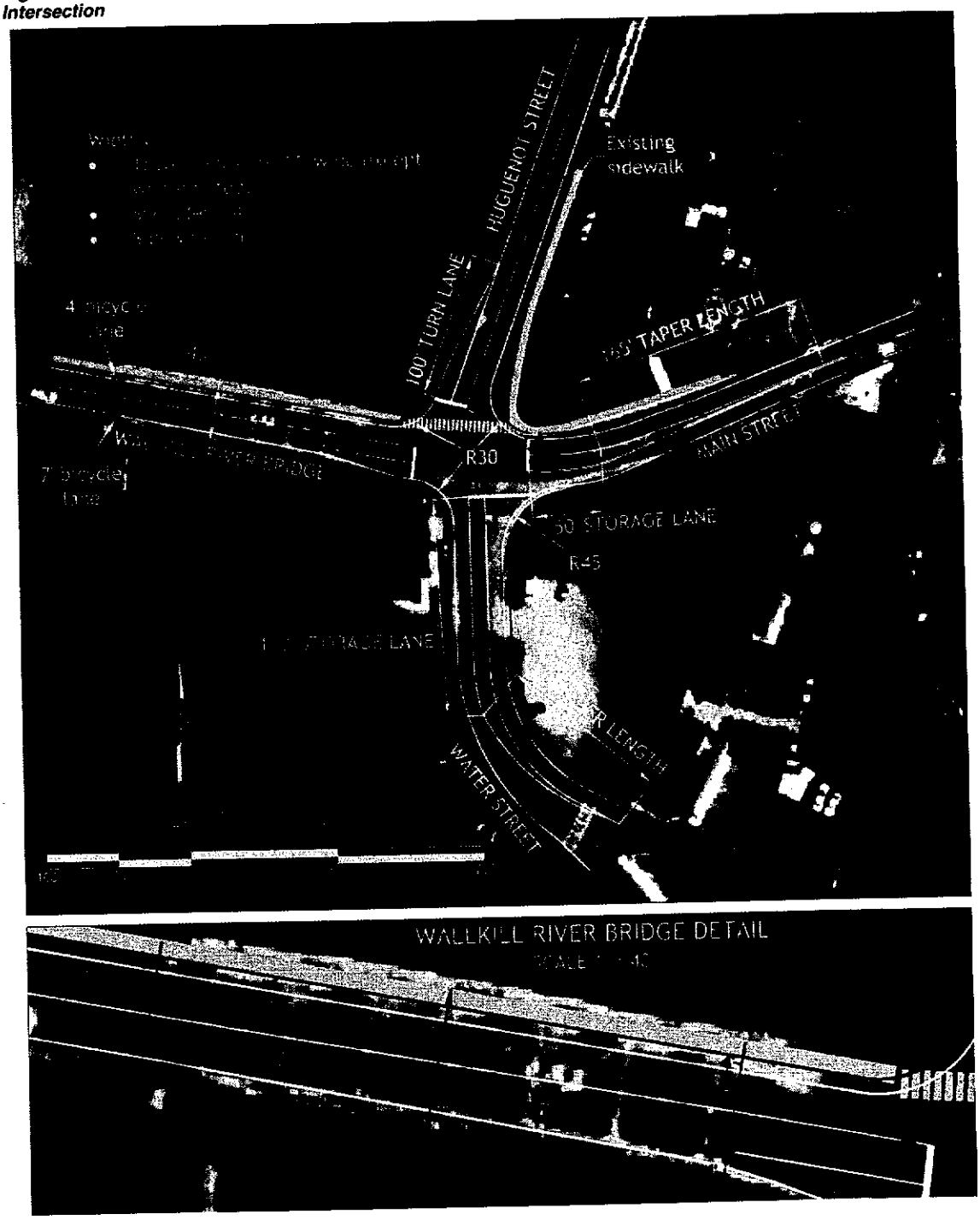
The sufficiency rating (SR) is a numerical rating of a bridge based on its structural adequacy and safety for public use, and its serviceability and function. The SR may be used as a basis for establishing eligibility and priority for replacement or rehabilitation of bridges. The lower the sufficiency rating, the higher the priority for addressing deficiencies. It provides a relative measure of how severely deteriorated, load capacity deficient, or functionally obsolete a bridge is, and ranges from a low of 0 to a high of 100.6 If the SR is as low as 20, rehabilitation would be a major undertaking. If the SR is above 50, rehabilitation is more likely to be feasible. The Wallkill River bridge has a sufficiency rating of 48.4

Given these ratings, a reconstruction of the bridge within a 12-20 year period is recommended. A sidewalk along the northerly side of the bridge and the reconstruction of the Main/Water/Huguenot intersection would be included in a bridge reconstruction. Lane additions at the intersection include a northbound left turn lane on Water Street and an eastbound left turn lane on Main Street.

The Wallkill River bridge is eligible for Highway Bridge Replacement and Renovation funds, and also eligible for STP funds from the Ulster County Transportation Council.

Figure 47 provides a conceptual design of this improvement. The conceptual design shows a 40 foot bridge deck, which is sufficient for 2 travel lanes (12 feet each), 2 4-foot shoulders, and a sidewalk along the northerly side. Due to its close proximity to the Huguenot/Water Street intersection, a 50-foot bridge deck will enable construction of an eastbound left turn lane (to turn left onto Huguenot Street, with its associated centerline shift occurring along the length of the bridge.

Figure 47: Schematic Design of a Reconstructed Wallkill River Bridge and the Main/Water/Huguenot Street Intersection



Develop Multi-Modal Transportation Center

As a long-term improvement, New Paltz should establish a multi-modal center at a site in the Village, perhaps proximate to the bus station on Prospect Street. This bus station in downtown New Paltz at Main/Prospect is well situated to serve pedestrian access. However, there is a growing need for the bus station to serve commuters who may make a short trip to the bus station with a car before taking a longer trip with the bus. Thus, providing parking is a growing need at the current bus terminal. At present, on-street parking on Prospect Street is partially meeting this demand.

For current levels of passenger demand, it has been estimated that a 3,000-4,000 square foot passenger facility would be appropriate.[1] Generally, bus terminal facilities should incorporate a waiting room, public restrooms, some retail activities, and a ticketing office. Bicycle racks and/or storage facilities would be appropriate as well. Ideally, the intermodal center would have space for on-site saw tooth parking for 2-4 buses.

The current location of the New Paltz bus terminal is ideal, but space constrained.

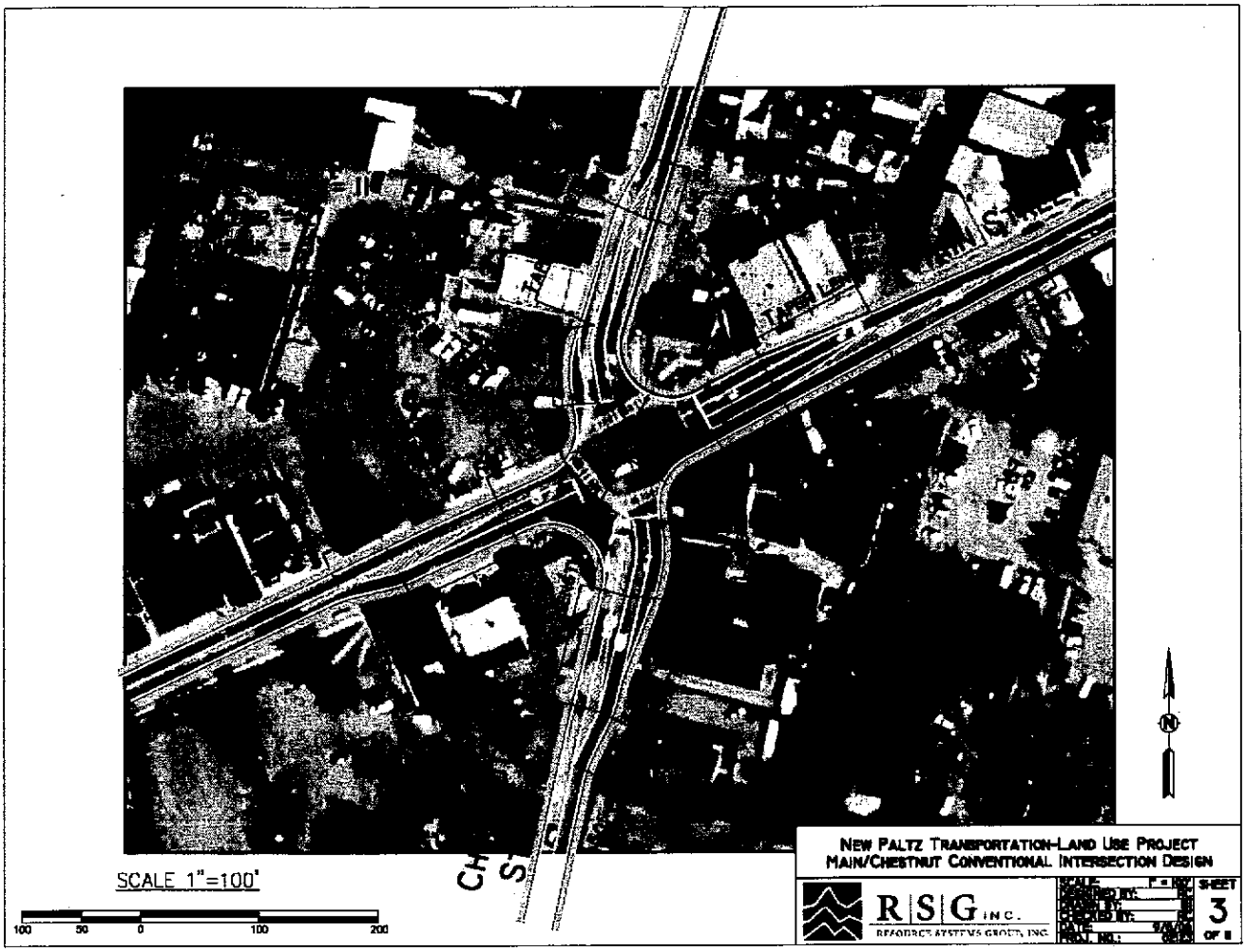
Reconstruct Main/Chestnut Intersection

Located in the heart of the Village core, this signalized intersection currently operates with poor levels of service during peak traffic hours (LOS E overall with LOS F on the northbound approach). The intersection receives heavy pedestrian crossing demand, which claims a minimum of 24 seconds per cycle during typical pedestrian flows. The intersection is outfitted with advanced pedestrian crossing equipment, including countdown timers, and operates with an exclusive pedestrian phase. Current PM peak hour traffic demand at this intersection ranges from 1800-2000 vehicles per hour. Adverse queuing/spillback resulting in the blocking of turn lanes occurs frequently.

Traffic projections, based on the technical modeling within Phase B, show peak hour traffic volumes increasing to 2,000 vehicles per hour at this intersection (2006 counts ~1,600 vehicles per hour). Under continued signalization with the addition of new turn lanes (westbound right turn lane, northbound left turn lane, southbound right turn lane), this intersection will operate at LOS D in 2025, with LOS F projected for the northbound approach (Table 36).

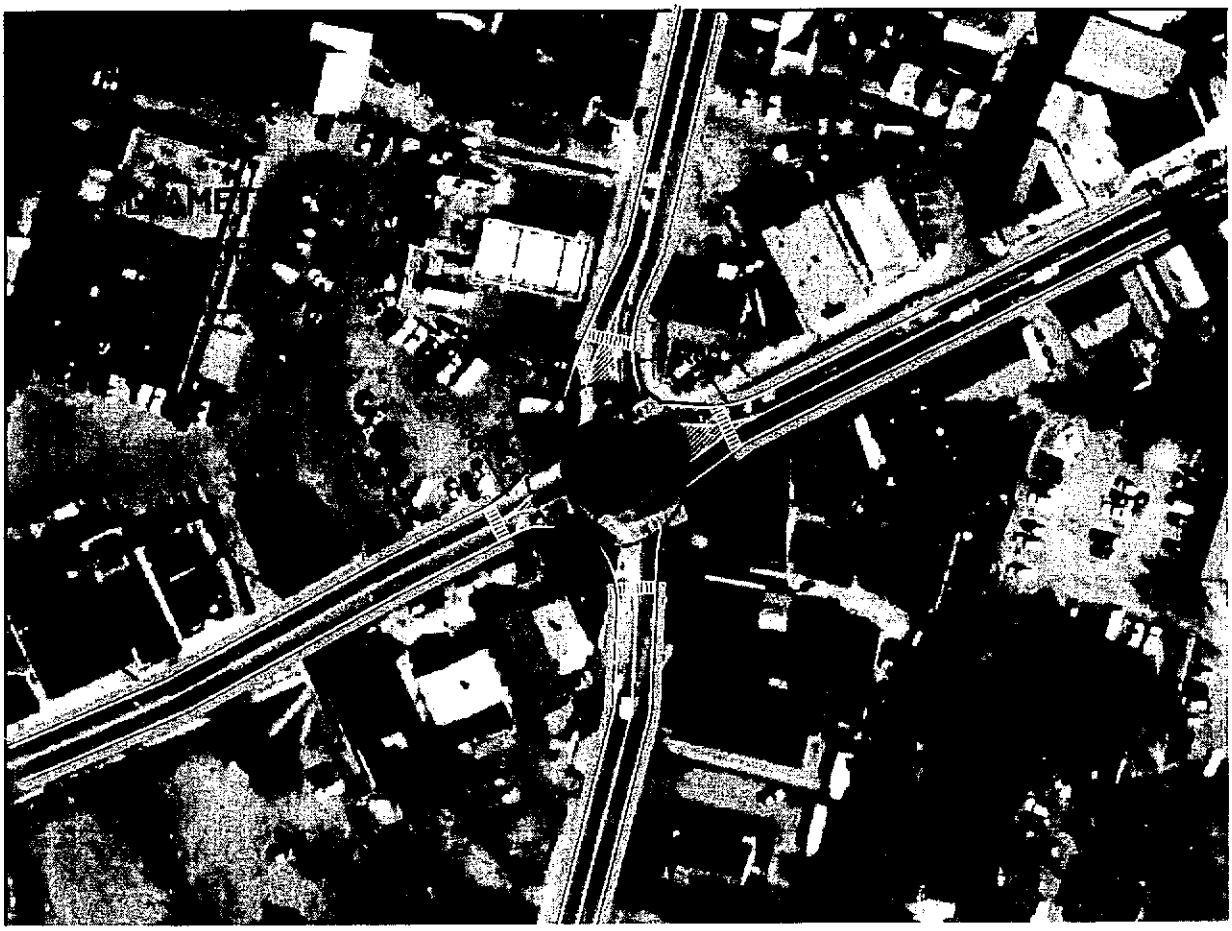
[1] Ulster County Fixed Route Public Transportation Coordination and Intermodal Opportunities Analysis. Ulster County Transportation Council. August 2005.

Figure 48: Conceptual Design of Conventional Intersection Improvements at Main/Chestnut



An option for controlling traffic at this intersection would be a single lane roundabout. Modeled with 2,400 vehicles per hour, a single lane roundabout is projected to operate with sufficient capacity on 3 of 4 legs (v/c < 0.80), but overcapacity on the southbound approach (v/c = 1.08). If the southbound right turn could be channelized, requiring private property, the volume/capacity ratio of the southbound approach is reduced to 0.65. A conceptual design for a roundabout at this location is shown in Figure 49 (without a channelized southbound right turn lane).

Figure 49: Conceptual Design of a Roundabout at Main/Chestnut[1]



Roundabouts generally are safer for pedestrians than traditional intersections. Main/Chestnut is probably not strictly conventional in that its signal timing plan incorporates a pedestrian-only phase, where all traffic is stopped. This is clearly very safe for pedestrians. However, in many instances, pedestrians who push the button to receive the pedestrian phase proceed across an intersection if they get impatient before the pedestrian phase is activated.

In a roundabout, pedestrians walk on sidewalks around the perimeter of the circulatory roadway. When pedestrians cross the roadway, they cross only one direction of traffic at a time. Raised "splitter" islands divide the roadway at the entrances and exits, providing refuge for pedestrians and at the same time separating opposing traffic. Crossing distances are relatively short which means that pedestrians are exposed for less time than at a conventional intersection. In addition, vehicular traffic speeds in

1. [1] The inscribed circle of a roundabout is the diameter from outside travel lane to outside travel lane.

roundabouts are lower than at traditional intersections. Many studies have shown substantial reductions in pedestrian crashes when intersections are converted to roundabouts. Single-lane roundabouts, in particular, have been reported to involve substantially lower pedestrian crash rates than comparable intersections with traffic signals[1].A counter-argument to the virtues of a roundabout — its ability to keep traffic moving — can be seen to be at odds with the needs of pedestrians who want to cross.

Table 44: Long-Term Projects, Village Core

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Long-Term (12+ years)	Wallkill River Bridge reconstruction and reconstruction of Main/Water/Huguenot intersection	$8,400,000	STP, HBRR	UCTC, NYSDOT
	Develop Multi-Modal Transportation Center	$3,000,000	VONP, PVT	NYSDOT, UCTC
	Reconstruct Main/Chestnut intersection for increased turning capacity (northbound left turn, add'l westbound lane); signal hardware and timing improvements	$2,000,000	UCTC TIP, STP	Village of New Paltz

* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.
** The following abbreviations are used:
BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.6.2 Long-Term Projects, Route 32 South Growth Center

Partial East-West Connector

As described in Section 1.1 the New Paltz Transportation/Land Use Project arose from ongoing discussions about traffic congestion in town. The idea of a southern connector roadway surfaced in

---

1 Brilon, W.; Stuwe, B.; and Drews, O. 1993. Sicherheit und Leistungsfahigkeit von Kreisverkehrsplatzen. FE Nr 77359/91. Bochum, Lehrstuhl fur Verkehrswesen, Ruhr-Universitat Bochum (as summarized by Elvik, R. 2003).

Schoon, C. and van Minnen, J. 1994. The safety of roundabouts in the Netherlands. Traffic Engineering and Control 35:142-48.

Brude, U. and Larsson, J. 2000. What roundabout design provides the highest possible safety? Nordic Road & Transport Research 2:17-21.

See: www.dot.state.ny.us/roundabouts/files/insurance_report.pdf

association with SUNY's Field House proposal, which was discussed publicly in the mid-1990s, and was subsequently modified to its current form.

Due to ongoing interest in the potential traffic impacts of the Connector Road, NYSDOT agreed to finance the New Paltz Transportation/Land Use project. The Project scope explicitly mentions the east-west connector road as a roadway improvement that the Project must evaluate.

The traffic impacts of the East-West Connector road were formally evaluated within the Phase B portion of the Project within Scenarios 1, 2, and 5 (Scenario 2 included a new bridge across the Wallkill River in addition to the Connector road). From an overall transportation performance standpoint, the Connector Road scenarios ranked 3rd, 4th, and 5th.

Depending on the land use pattern modeled, the Connector Road carried 250-550 vehicles per hour, averaging 390 vehicles per hour (both directions, PM peak hour).[1] Underlying these traffic estimates are future land use patterns that are served by the Connector Road directly (Route 32 Mixed Use) or indirectly (High Concentration). Without an adjacent concentration of land use that would be directly served by this proposed road, the analysis indicates that hourly traffic volumes would be reduced to 50% or less of the values associated with Scenarios 1, 2, and 5.

From a pure traffic demand standpoint, the East-West Connector, without a complementary development of adjacent real estate, does not hold great potential for attracting or diverting traffic that is otherwise a source of congestion in New Paltz. Generally, under existing settlement patterns, there is not a great amount of east-west travel demand south of the SUNY campus. To a large extent, Jansen Road is satisfying this travel demand, which currently measures around 250 vehicles per hour (eastbound + westbound).

At their 29 March 2006 meeting the CAC discussed the East-West Connector Road. Due to the high environmental impacts associated with an east-west connection involving a new bridge over the Wallkill River, this alternative was dismissed entirely and not carried forward into Phase C for further consideration.

The CAC endorsed the idea of a partial East-West Connector between South Putt Corners Road and Route 32 if zoning and land use changes within this area of Town warrant this roadway improvement. The CAC views the partial East-West Connector as unique among the transportation recommendations set forth in this Project as its value to traffic management is contingent upon future land use changes and does not strongly influence current traffic problems. The Project's Management Team decided to maintain the partial East-West Connector as a long-term improvement, making note of the CAC's view on the issue..

---

[1] For comparison purposes, current PM peak hour volumes of other roads in New Paltz are: Wallkill River Bridge--approximately 1,000 vehicles; Route 208 one-half mile south of Main Street—approximately 550 vehicles; Jansen Road—approximately 250 vehicles.

Ultimately extending this partial Connector in a westerly direction to intersect with Route 208 will remain an option. The current SUNY New Paltz administration is not in favor of the segment connecting Route 32 with Route 208, however

Construction of the full east-west connector can be considered in the future as land use changes occur in New Paltz. Several aspects of the Connector's preliminary design are:

- Overall design criteria--Table 45
- Potential alignment--Figure 50
- Elevation profile--Figure 51
- Typical cross-section, assumed to include a 12 foot multi-use path along the northerly sideline--Figure 52

Table 45: Design Criteria for the East-West Connector

ITEM	DIMENSION
DESIGN SPEED	35 MPH
LANE WIDTH	12 ft
SHOULDER WIDTH	3 ft
CLEAR ZONE (1:6)	15 ft (17 ft if 1:4)
MAX SUPERELEVATION	6%
MIN HORIZONTAL CURVE	510 ft
MIN VERTICAL GRADE	0.50%
MAX VERTICAL GRADE	7%
STOPPING SIGHT DISTANCE	305 ft
K (SAG)	64
K (CREST)	44
MULTI-USE PATH (ALONG NORTH SIDE)	12 ft
FUNCTIONAL CLASS	RURAL COLLECTOR
JURISDICTION	TOWN
CURBS	NONE
ON-STREET PARKING	NO
DRAINAGE	SURFACE
R.O.W.WIDTH	60 ft (wider at intersections)
ACCESS	1000' SPACING BETWEEN INTERSECTIONS/DRIVEWAYS

Figure 50: Preliminary Alignment of East-West Connector Road, South Putt to Route 208

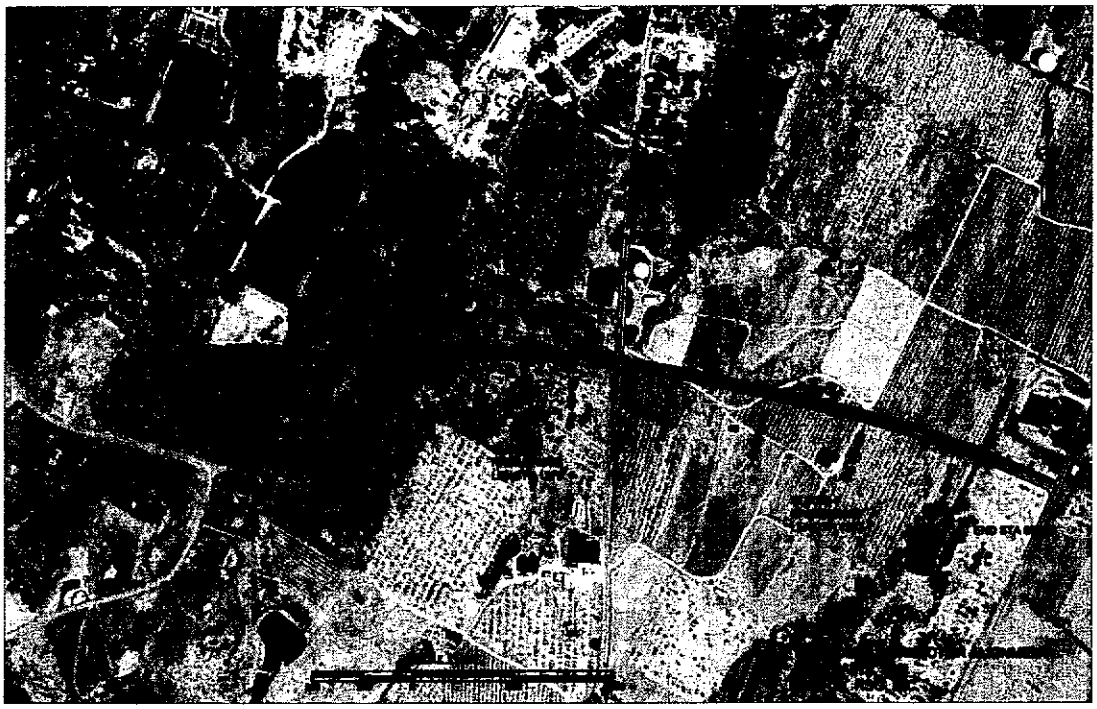


Figure 51: Profile of East-West Connector Road, South Putt to Route 208

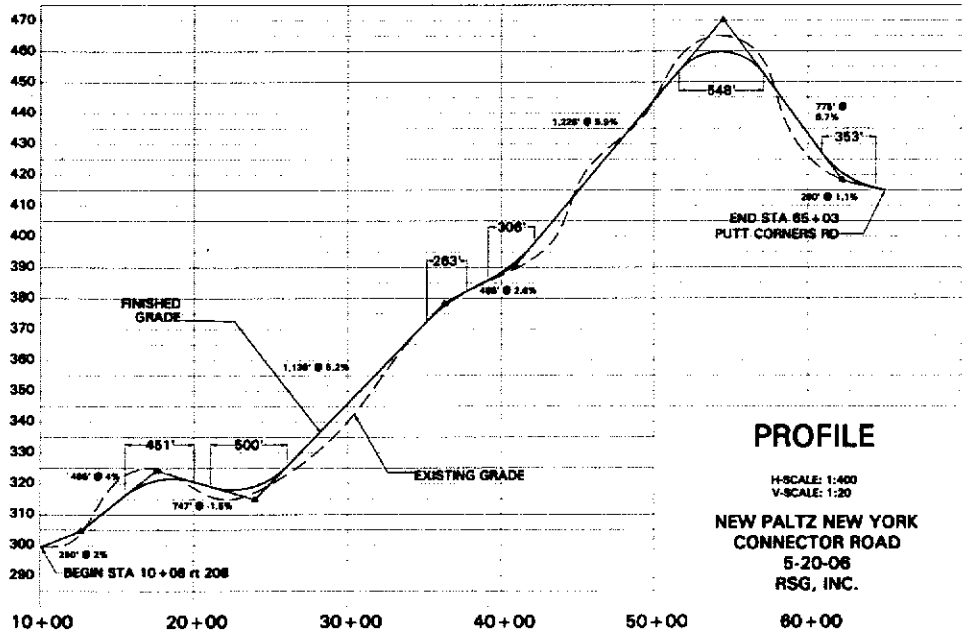


Figure 52: Typical Cross-Section of Proposed East-West Connector

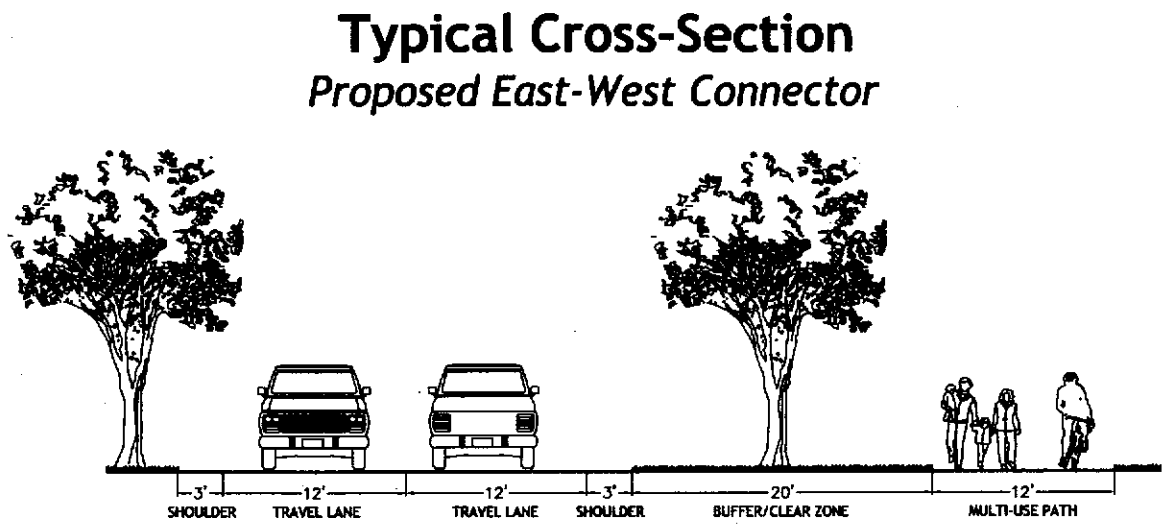


Table 46: Long-Term Improvements, Route 32 South Growth Center

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Long-Term Improvements (12+ years)	Construct partial EW Connector, S. Putt to Route 32; includes parallel multi-use path.	$4,950,000	UCTC, TE, PVT	NYSDOT

* NOTE: Cost figures are estimates only and do not include right-of-way purchase or other contingencies. They should be used for planning purposes only.

** The following abbreviations are used:

BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.6.3 Long-Term Projects, Other Areas

Establish/Expand Park and Ride Lots at State Route Portals to New Paltz

Park and ride lots can be used for a variety of functions including providing access to public transit, staging carpools, and serving special event traffic management functions. Figure 53 shows potential

locations of 4 park and ride lots in New Paltz, one of which currently exists at the New York State Thruway.

Park and ride lots at other locations can be particularly useful for special event traffic management, which is the primary objective of those park and ride locations. Table 47 provides information on the potential location, function, and size of proposed park and ride locations. For special events

Figure 53: General Park and Ride Locations along State Route Portals to New Paltz

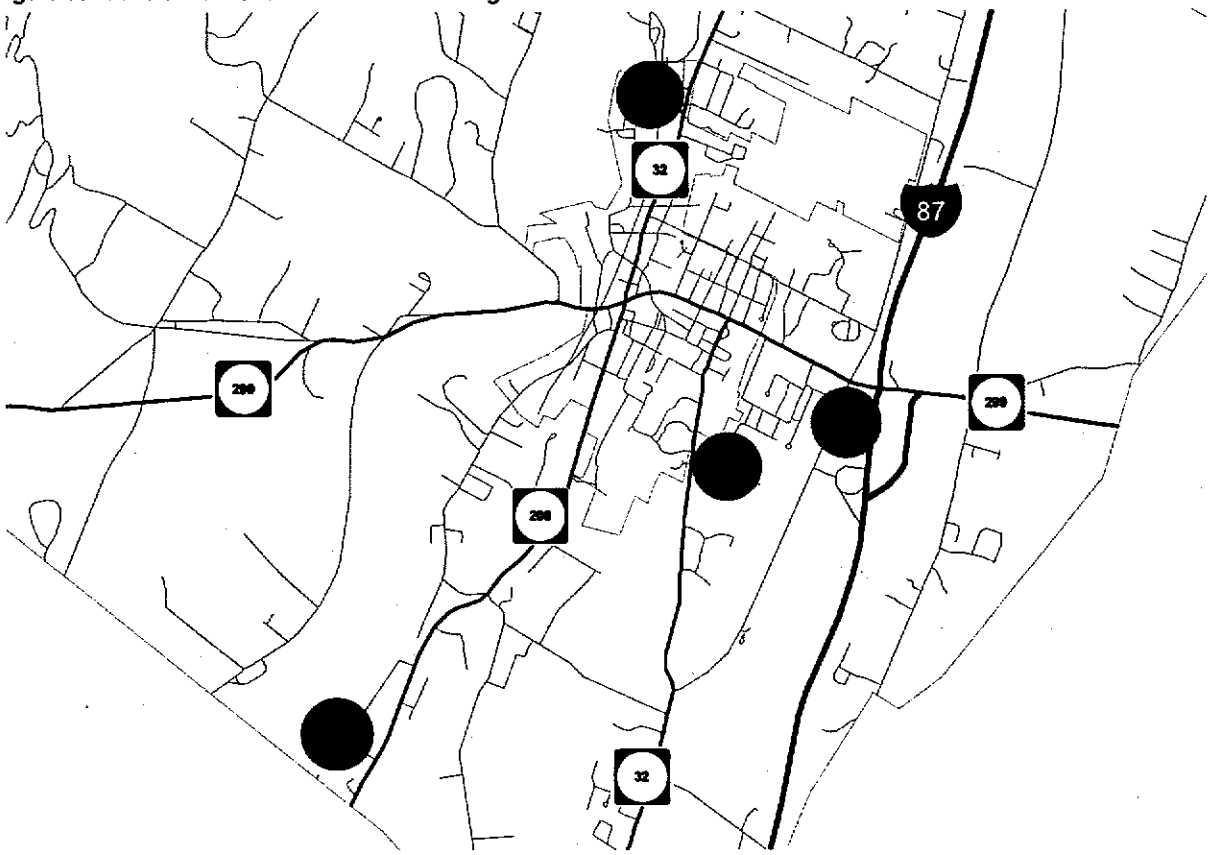


Table 47: Recommended Park and Ride Lots, Functions, Location, Partners, and Size

Arterial	Primary Function	Potential Location	Partering Opportunity	Recommended or Existing Size (# of spaces)
Route 299 East	Commuter, Intermodal, Special Event	Expanded at existing Thruway park and ride site	NY State Thruway, Ulster County Area Transit, NYSDOT	250 (new + existing)
Route 32 South	Special Event	SUNY Commuter Lot	SUNY	390 (existing)
Route 32 North	Special Event	BOCES parking Lot	BOCES	250 (existing)
Route 208	Special Event	Proximate to Gardiner Town Line	Wallkill Valley Rail Trail	50 (new)

Route 299 Intersections Reconstruction

The technical traffic modeling that occurred within Phase B of the Project showed the need for base capacity improvements at several intersections in New Paltz by 2025 (Table 27). The 3 large intersections along Route 299 at Putt Corners, the Thruway, and Ohioville will all need capacity improvements by 2025.

The analysis indicates a need for a double left turn lane westbound and an extended northbound right turn lane on South Putt at the Route 299/Putt Corners. For the Thruway intersection, northbound double left turn lanes are indicated. For Ohioville, addition of a northbound left turn lane plus additional capacity for westbound Route 299 left turns is indicated. The Hudson Valley Rail Trail would cross Route 299 at this location, so pedestrian signal facilities would also be indicated.

Special Event Traffic Management

The most acute traffic congestion in New Paltz occurs on weekends and during special events... During some special event weekends it has been observed that traffic queues on Route 299 from downtown New Paltz through the New York State Thruway tollbooths. Travel times westbound from Ohioville Road to Libertyville Road on Route 299 (2.8 miles) can be 10-20 minutes longer than typical travel times over the same roadway segment.

This congestion causes many drivers with local knowledge of the roads to utilize alternate routes in and around New Paltz during peak events. In this way, special event traffic causes secondary impacts on local roads throughout the entire network. Special event congestion may also hinder access and response time for emergency vehicles, particularly at key network chokepoints such as at the Wallkill River Bridge or at the Route 299 intersections.

Traffic during special events and special weekends has been measured to be 10-40% higher than normal PM peak hour traffic at selected locations in New Paltz.

It is recommended that the Town, Village, and other stakeholder groups commission a Special Event Management Committee, whose first task should be to conduct a Special Event feasibility study. Such a

study would select a specific special event (e.g. Ulster County Fair) and establish baseline data for the following items:

- Market Analysis
  - Anticipated daily attendance
  - Estimated arrival/departure rates
  - Description of trip origins
  - Travel time/distance analysis
- Parking supply and demand
- Estimated arrival/departure routes, by mode
- Site-specific analysis of access to event site, by mode:
  - Automobile
  - Tour and shuttle bus
  - Bicycle
  - Pedestrian
- Capacity analysis (chokepoints)
- Mitigation plan

The Town and Village of New Paltz has the authority, granted to it by Ulster County, to approve private uses of the fairgrounds site (the Ulster County Fair is exempt from this requirement). Such approval can be construed to authorizing the Town and Village to require a traffic mitigation plan for such events. In recent years the Town has not exercised this authority to require any special management of event traffic, such as the use of satellite parking, shuttle buses, etc.

A specific plan for managing special event traffic would have two major objectives:

1) Managing traffic immediately proximate to the Fairgrounds. For example, the management of arriving/departing vehicles and the movement of pedestrians across Libertyville Road represent special cases that Ulster County must manage.

2) Managing traffic flow to/from I87 Exit 18 and the Fairgrounds.

With regard to this second objective, the first step is to try to divert as much of this traffic to a network of park and ride locations, as shown in Figure 53, all of which are located to intercept vehicles east of the Wallkill River at conveniently located intercept parking lots.

From these staging areas, patrons could be transported to the Fairgrounds via shuttle bus or bicycle. A shuttle bus system must be designed to provide travel time advantages to the bus. This could be achieved by designating a shuttle bus route from the parking area to Route 299 from each location, and by

providing preferential access to the shuttle bus at key intersections along the route using Special Event Traffic Control.

Upon special request from the Village or Town of New Paltz, shuttle service will be provided by UCRT for special events. Arrangements are typically made with SUNY New Paltz to use SUNY parking areas for a shuttle pick up and drop-off point. Since the special events are usually held on weekends, the parking areas are typically available due to less use by students and faculty.

Table 48: Long-Term Improvements, Other Areas of New Paltz

	Improvement	Order of Magnitude Cost Estimate*	Potential Funding Source(s)**	Implementing Partners
Long-Term Improvements (12+ years)	Establish/expand Park & Ride lots on State routes to New Paltz for special event and commuting traffic	$272,500	STP, MUNI, PRIVATE	TONP, Private landowners
	Intersection Reconstruction, Route 299/Putt Corners. Requires northbound right turn lane and double westbound left turn lanes.	$2,500,000	STP, MUNI, PRIVATE	TONP, Private landowners
	Intersection Reconstruction, Route 299/Ohioville. Requires northbound left turn lane and additional storage for westbound left turn. Add pedestrian hardware for Trailway crossing.	$2,000,000	STP, MUNI, PRIVATE	TONP, Private landowners
	Intersection Reconstruction, Route 299/Thruway Access. Requiresdouble northbound right turn lane. Double lane roundabout should be considered as control alternative	$3,000,000	STP, MUNI, PRIVATE	NYSDOT, NYSTA, Town of New Paltz

* NOTE: Cost figures ar VONP - Village of New Paltz

** The following abbrevi BP - Bike/Ped
FE - Federal Elected Officials
HBRR-Highway Bridge Replacement and Renovation program
PVT - Private landowners, developers
SDF- State Dedicated Funds
STIP - State Transportation Improvement Program
TDM - Transportation Demand Management Fund
TE - Transportation Enhancements
TIP - Transportation Improvement Plan
TONP - Town of New Paltz
UCTC - Ulster County Transportation Council Transportation Improvement Program
VONP - Village of New Paltz

5.6.4 Evaluation Matrix

The transportation improvement projects described above have been evaluated at public meetings, by the CAC, and by the Project Management Team. As projects are developed further, they would go through a complete development process and environmental assessment if they were to be selected for funding.

As a final step, all mid- to long-term projects are evaluated on a scale of 0-3 (with "0" being no impact and "3" being strong positive impact and prioritized according to their relative impact in the following areas:

- Mobility: will the recommendation improve travel time?
- Safety: will the recommendation improve safety?
- Multimodal: will the recommendation improve travel for pedestrians, cyclists, or transit users?
- Land Use: will the improvement support land use goals?

- Environment: will the improvement enhance natural and scenic attributes?

Table 49 shows the results of the prioritization for mid-term improvement recommendations.

Table 49: Priority Rankings of Recommended Mid-Term Improvements

	Schedule of Mid-Term Improvements	MOBILITY: Improves Travel Time	SAFETY: Improves safety	MULTIMODAL: Improves travel for pedestrians, cyclists, and transit users	LAND USE: Supports land use and development goals	ENVIRONMENT: Enhances natural and scenic attributes	SCORE
Mid-Term Improvements (5-12 years)	Sidewalks along Route 32 west side, to be developed as land use changes occur in the growth center.	2	3	3	3	2	13
	One Way Street System: westbound on Main Street from Manheim to Chestnut; eastbound on Hasbrouck/Plattekill from Chestnut to Rt. 32.	3	3	2	2	3	13
	Roundabout, Route 32/Sunset Ridge Road/Re-aligned Old Kingston Road	3	3	2	2	2	12
	Install transit shelters and transit information kiosks, Main Street/Route 299	2	1	3	2	3	11
	Pedestrian Bridge over Wallkill River	2	2	3	2	2	11
	Construct multi-use path parallel to North Putt from Route 299 to Shivertown Road.	2	3	3	1	2	11
	Intersection Reconstruction, Route 32/Plattekill (northbound left turn lane, southbound right turn lane; upgrade intersection control (signal or roundabout)	3	3	2	1	1	10
	Establish/extend Hudson Valley Trailway through New Paltz	2	2	3	1	2	10
	Establish a Bicycle Lane on Route 208 associated with re-paving project.	2	2	3	1	2	10
	Establish 4' paved, striped shoulders on Route 32 South associated with repaving project	2	2	3	1	2	10
	Implement Left Turn Lanes on Route 299, westbound at Joslyn; eastbound at Duzine; westbound at Eckerd's Plaza entrance.Install raised median.	2	3	2	2	1	10
	Road shoulder improvements, Selected Roadway Segments in New Paltz	1	2	2	1	2	8
	Intersection Reconstruction, Main/Manheim	2	1	2	1	1	7
	Northbound Left Turn Lane, North Putt/HW DuBois	1	3	1	1	1	7
	Develop a formal vehicle pull-off area immediately west of the Wallkill River proximate to the intersection of Route 299/Springtown Road. Pulloff area should include information resources for Shawangunk Scenic Byway and cultural and natural history interp	1	2	1	2	1	7

Table 50 shows the rankings for recommended long-term improvements.

Table 50: Priority Rankings of Recommended Long-Term Improvements

	Prioritized Long-Term Improvements	MOBILITY: Improves Travel Time	SAFETY: Improves safety	MULTIMODAL: Improves travel for pedestrians, cyclists, and transit users	LAND USE: Supports land use and development goals	ENVIRONMENT: Enhances natural and scenic attributes	SCORE
Long-Term Improvements (12+ years)	Develop Multi-Modal Transportation Center	2	2	3	3	2	12
	Wallkill River Bridge reconstruction and reconstruction of Main/Water/Huguenot intersection	2	3	2	2	2	11
	Construct partial EW Connector, S. Putt to Route 32; includes parallel multi-use path.	2	1	2	3	2	10
	Intersection Reconstruction, Route 299/Thruway Access. Requiresdouble northbound right turn lane. Double lane roundabout should be considered as control alternative	3	3	1	1	2	10
	Establish Park and Ride System	2	1	3	1	2	9
	Intersection Reconstruction, Route 299/Ohioville. Requires northbound left turn lane and additional storage for westbound left turn. Add pedestrian hardware for Trailway crossing.	2	2	2	1	1	8
	Intersection Reconstruction, Route 299/Putt Corners. Requires northbound right turn lane and double westbound left turn lanes.	3	2	1	1	1	8
	Reconstruct Main/Chestnut intersection for increased turning capacity (northbound left turn, add'l westbound lane); signal hardware and timing improvements	2	2	1	1	2	8

5.7 CONSISTENCY OF RECOMMENDATIONS WITH OTHER PLANS

This section reviews transportation improvement recommendations set forth in other recent plans and discusses their consistency with the findings of this Project. In many cases, Project recommendations are consistent with those advanced in these plans; however, in other cases, they are not consistent and these cases are highlighted.

These plans include:

- The New Paltz Comprehensive Master Plan
- The Shawangunk Scenic Byway Corridor Plan
- The Ulster County Public Transportation Opportunities Analysis
- The Ulster County Long Term Transportation Plan

5.7.1 Transportation Improvement Recommendations of the New Paltz Comprehensive Master Plan

The Comprehensive Master Plan was adopted in 1995. The Plan contains a section entitled "Circulation and Transportation Plan", which enumerates several short-term improvement recommendations. These recommendations are described below, accompanied with a discussion of their current status in light of the work on this Project.

Planning new east-west routes to by-pass the Main Street Corridor

A central issue in this Project has been to evaluate an East-West Connector Road located south of Main Street. The extensive traffic modeling conducted within Phase B concluded that the transportation value of this connector road, absent a complementary and explicit policy to develop land adjacent to the road, was limited. In other words, as a functional bypass of Main Street, such a connector road would have limited value.

The Project endorses the partial construction of such a road, connecting South Putt to Route 32 within a 20-year time horizon. In addition to serving the mobility needs of the Route 32 South growth center this section of road would provide alternative routes to SUNY and to the New Paltz High School, and could contribute effectively to special event traffic management.

Aside from the East-West connector road, this Project concludes that the best and most cost effective way of creating new east-west routes is through the normal planning process by requiring local street connections. Creating and perpetuating dead end streets in the Town and Village directly leads to a concentration of traffic at the most congested intersections in New Paltz, and severely reduces travel options for New Paltz citizens.

Synchronizing traffic lights

Retiming and synchronizing traffic lights is an early-win low cost improvement that the Project fully supports. Specific recommendations are made in the sections that follow. However, it is important to note that there are limits to the capacity improvements that can be gained through optimized signal timing and that there are jurisdictional issues that need to be negotiated, as all of the traffic signals in New Paltz are owned and operated by NYSDOT.

Widening roads to construct turning lanes

Many of the spot improvement recommendations listed in Table 27 will require widening of the travel way proximate to intersections in order to build or extend new turn lanes. The Project is fully supportive of this approach to increasing roadway capacity. Widening roadway segments (lane miles) is not supported by the technical analysis of the Project.

Restricting on street parking

The Project has analyzed parking demand within the Village's core commercial area. There are over 300 on-street parking spaces within a 5-minute walk of the Village's commercial core. It is important that this existing on-street inventory be kept available for all users for the foreseeable future. The Project does not see the need to restrict on-street parking in New Paltz.

Installing pedestrian and bicycle ways

A Bicycle Pedestrian Committee has been formally established by the Town and Village. The precursor to this committee was a subcommittee to the CAC and issued a final report including recommendations on new pedestrian and bicycle ways (Appendix C). Those recommendations are fully incorporated into the Phase C recommendations summarized below.

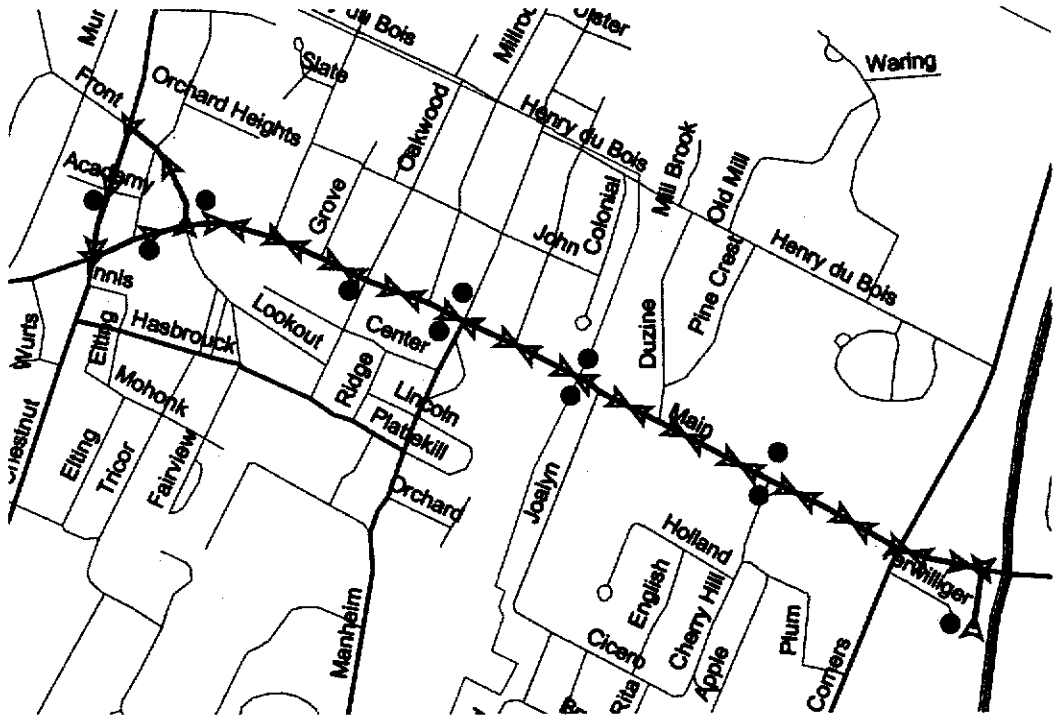
Promoting a community-SUNY bus loop including stops and shelters

Ulster County Area Transit currently operates a local transit shuttle that addresses this particular objective. The shuttle runs 4 times per day and has been chronically under-patronized. In addition to improving the performance of this existing route, the Project has analyzed 5 other potential local transit routes, three of which provide some direct service to SUNY.

Based on input from UCAT and experience with other similar rural transit systems, the Project recommends supporting a Main Street Circulator that would shuttle between the Village downtown and the NYS Thruway park and ride (Figure 54). Once a high frequency shuttle route is established, locations of bus shelters should be identified.

Complementary recommendations of the Project include construction of an intermodal facility at/near the NYS Thruway park and ride, and siting intercity bus service at this location as well. This specific recommendation is conditioned on the existence of a frequent, low cost shuttle route connecting the downtown to the intermodal facility.

Figure 54: Concept of a Main Street Circulator Local Transit Route



Long term improvement recommendations in the Town's Comprehensive Plan include:

Upgrading all "through" roads similar to the Main Street- Route 299 Corridor

It is unclear what this objective is designed to address. The public input received by the Project at public meetings, through the household survey, and at committee meetings has not been supportive of increasing the capacity of through roads.

Either painting stripes on streets for bicycles or constructing new pedestrian/ bicycle ways on Route 32 North and 208 South.

Similar improvements to these are discussed in subsequent sections.

Construction of a park and ride facility near the Thruway to accommodate commuters

A park and ride lot has been constructed at this site, and is going to be enlarged to create additional parking. The Project recommends the creation of a formal intermodal center at or near this site that would increase the parking capacity, accommodate local and intercity bus, and provide a regional visitor center for the Shawangunk Scenic Byway and New Paltz Chamber of Commerce. Creating an intermodal center at this site is contingent on connecting it to the downtown with a frequent headway local transit

bus. Without convenient access to this site from Main Street via a transit shuttle, the current location of the bus station is the best location.

Construction of a downtown parking garage to meet increasing parking needs in that area.

The Project does not conclude that a downtown parking garage is necessary to meet the parking demand in the downtown. However, the Project recommends a revised parking management program, which is described in detail in subsequent sections of the Phase C report.

Institute a shuttle bus system on peak weekends from New Paltz to the Ulster County Fairgrounds, and/or Minnewaska Park from the park and ride or other parking facility.

This idea has been discussed frequently over the course of the Project. The Project recommends creation of an intermodal facility at or near the Thruway park and ride that could act as a pick-up/drop-off point for the shuttle system.

5.7.2 Transportation Improvement Recommendations of the Shawangunk Scenic Byway Corridor Plan

The Byway Plan also makes recommendations for specific roadway segments of the Byway within New Paltz:

Consider siting a Shawangunk Mountains Scenic Byway regional information center on surplus NYS Thruway property on the northerly sideline of Route 299 immediately opposite the interchange.

Given the space constraints on the NYS Thruway surplus property, it may be more feasible to house the regional information center on the park and ride lot or other adjacent real estate. The Project recommends that an intermodal facility be constructed at this location to serve multiple purposes, including the suggested regional information center.

Improve landscaping to create a gateway effect to this portion of the Byway, particularly at the Thruway interchange access road to Route 299, and along the Thruway overpass.

This area is an important gateway to New Paltz and this suggestion would be consistent with the Gateway concepts promoted by the Project's Bicycle Pedestrian Committee. In addition to improving the landscaping, other vernacular features for treatments in this area that have been voiced by the public are Dutch style stone walls with "Welcome" & CBD (Central Business District) signs. This gateway area should welcome travelers while making the multi-modal aspect very obvious.

Increase parking in the New Paltz village downtown area.

The Project recommends changes to the management of on street and other municipal parking which are described in subsequent sections. There are some opportunities for increasing parking in the downtown through more efficient designs of on-street and surface lot areas.

Improve operations of two downtown intersections – Main Street/Water Street and Rt. 208/Rt. 32N/Main Street – and consider a roundabout as a control option.

A roundabout at the Main/Water Street intersection was formally evaluated within Phase B. A roundabout at this location would have sufficient capacity to efficiently manage projected travel demand over the next 20 years. Conceptual engineering of this facility has not occurred, so it is undetermined at this time whether acquisition of private property would be necessary for its construction.

A roundabout at the Rt. 208/Rt. 32N/Main Street intersection has not been fully evaluated. A recommended long-term improvement at this intersection is the construction of a northbound left turn lane, and associated signalization changes. This improvement would require acquisition of private property for its construction.

The Project recommends both short-term and long-term improvements to both of these intersections. The Project recommends that roundabouts be constructed at other critical intersections in New Paltz, but not at these 2 specific intersections.

Consider 2-3' shoulders for bike lanes, rather than the 4' minimum recommended for State-Designated Bike Routes. The narrower widths represent a more context sensitive approach.

The Project recommends establishing a connection between the Wallkill Valley Rail Trail and the Ulster County Fairgrounds via a new pedestrian bridge over the Wallkill River. In the event this bridge is not built, the Project would recommend creation of 2-3 foot wide bicycle lanes along Route 299 west of the Wallkill River, extending to Libertyville Road, and thence to the Fairgrounds.

Study a pull-off area immediately west of the Wallkill River Bridge. This could include an information kiosk or other ITS technology to route tourists.

This suggestion has been incorporated into the Project's mid-term recommendations.

Consider burying the utility lines along Route 299 and Springtown Road immediately west of the Wallkill River Bridge as they mar the tremendous views of the mountains along these roadway stretches.

This suggestion is consistent with other Project recommendations.

Install signs alerting travelers in advance to local farms and markets.

This suggestion is consistent with other Project recommendations.

Eliminate informal pull-offs near Rt. 299/Butterville Road for safety and aesthetic reasons.

This suggestion is consistent with other Project recommendations.

Re-design and narrow the intersection of Routes 208 and 299 with Jansen Road

The intersection of Jansen with Route 32 is currently being signalized. The intersection of Jansen with Route 208 is very wide and a review of its design should be undertaken by NYSDOT and Ulster County.

At the intersection of Route 208 and Route 299 in New Paltz, consider a re-design to facilitate left turns. Also consider a detour for bicyclists, which would direct them from Route 208 to Mohonk Avenue and Water Street.

The Project recommends the construction of a northbound left turn lane at this intersection. Current public right-of-way would not allow construction of this left turn lane. Private property would need to be obtained to enable construction to occur. The alternative route for bicyclists is a recommendation of the Project.

Study the possibility of narrow (2'-3') shoulders if this can be done without endangering the trees along the road.

This suggestion is consistent with other Project recommendations.

Consider thinning of trees to open views of the Wallkill River if this is consistent with preservation plans for the river.

This suggestion is consistent with other Project recommendations.

5.7.3 Transportation Improvement Recommendations of Ulster County Transportation Opportunities Analysis

The Ulster County Transportation Council has findings and recommendations for improving transit service in Ulster County, including New Paltz.[1] The relevant findings are:

Initiate a U-PASS fare payment system for SUNY students.

This study recommends establishing a U-PASS arrangement between UCAT and SUNY contingent on a higher frequency shuttle service operating in New Paltz. Students would present their student ID card upon boarding, which would allow them to ride a bus without paying a fare. Cost of a U-PASS payment method is typically included in a student activity fee.

[1] Ulster County Fixed-Route Public Transportation Coordination and Intermodal Opportunities Analysis. August 2005.

The Project supports a low-fare, high frequency (<=30 minute headway) transit service. A U-PASS arrangement would be one of the sources of financial support necessary to pay for the operating cost of a local shuttle.

Upgrade New Paltz Shuttle Route.

Currently Ulster County Area Transit (UCAT) operates the New Paltz shuttle 4 times daily. UCAT recommends increasing this service to provide 30 minute headways and extend operating hours to this service which serves SUNY, the central business district, and a portion of the Route 32 north commercial area. UCAT also recommends supporting fixed route transit in New Paltz partially through proceeds from a U-PASS student transit fare.

While New Paltz is fortunate to have a local shuttle, the Project recommends establishing a Main Street Circulator (Figure 54) and operating this at low fare and at 30 minute headways. This option has been discussed with UCAT and has received their verbal support. Financial support of any transit service through student activity fees is common in university towns that have transit in exchange for free fare boardings. This would be consistent with other Project recommendations.

Upgrade New Paltz Bus Terminal.

This study recommends expanding the bus terminal to include a 3,000-4,000 square foot terminal building, bus shelter, off-street bus berths for 3-4 buses, and more parking. The study acknowledges that the existing location would need to be expanded to accommodate the recommended amenities. However, additional property would be necessary for this. The study recommends that the bus terminal remain in its current location.

The Project recommends serious consideration of an intermodal facility at the Thruway park and ride location, conditioned on a low fare, frequent headway transit bus service from the downtown which would connect people to the intermodal center in a 10-12 minute period. If this transit service is not established, the existing location is best for the bus terminal. Adjacent property acquisition would be the most effective means of expanding the amenities.

5.7.4 Transportation Improvement Recommendations of the Ulster County Long Range Plan[1]

Initiate Transportation Deficiency Study of the NY-299 Corridor.

The Project presents a multitude of recommendations for addressing congestion and safety concerns within the Route 299 corridor of New Paltz so is consistent with this strategy of the Ulster County Long Range Plan.

---

[1] 2030 Long Range Transportation. Ulster County Transportation Council. September 2005.

Support designation of a scenic byway in the corridor.

This suggestion is consistent with other Project recommendations.

Apply access management to commercial areas.

The Project recommends establishing an Access Management Overlay District proximate to all state routes in New Paltz to give the Planning Boards clear authority to manage and control access to the most congested routes in New Paltz. This recommendation is entirely consistent with the Ulster County Long Range Plan.