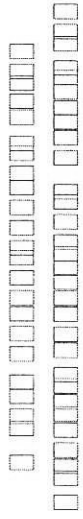


Appendix I

Mid-Hudson South Region Bicycle/  
Pedestrian Master Plan Projects





Westchester, Rockland, and Putnam Counties

**Project:** Route 52  
**Project Limits:** County Line to Carmel  
**Jurisdiction:** Putnam County  
**Project Length:** 6 miles



**Proposed facility type/improvements (or options, if undecided)**

*Short Term*

- Enhance county gateway
- Enhance crosswalk at lake access point

*Long Term*

- Establish bike route – repave/widen shoulders
- Install sidewalk in retail/school, lake/residential, and strip mall areas
- Access management

**Regional transportation purpose/key destinations:**

- Destinations: Lake Carmel, Carmel

**Connections to other bicycle/pedestrian/transit facilities:**

- Link to proposed facilities on Route 311 and Route 6

**Typical conditions in corridor:**

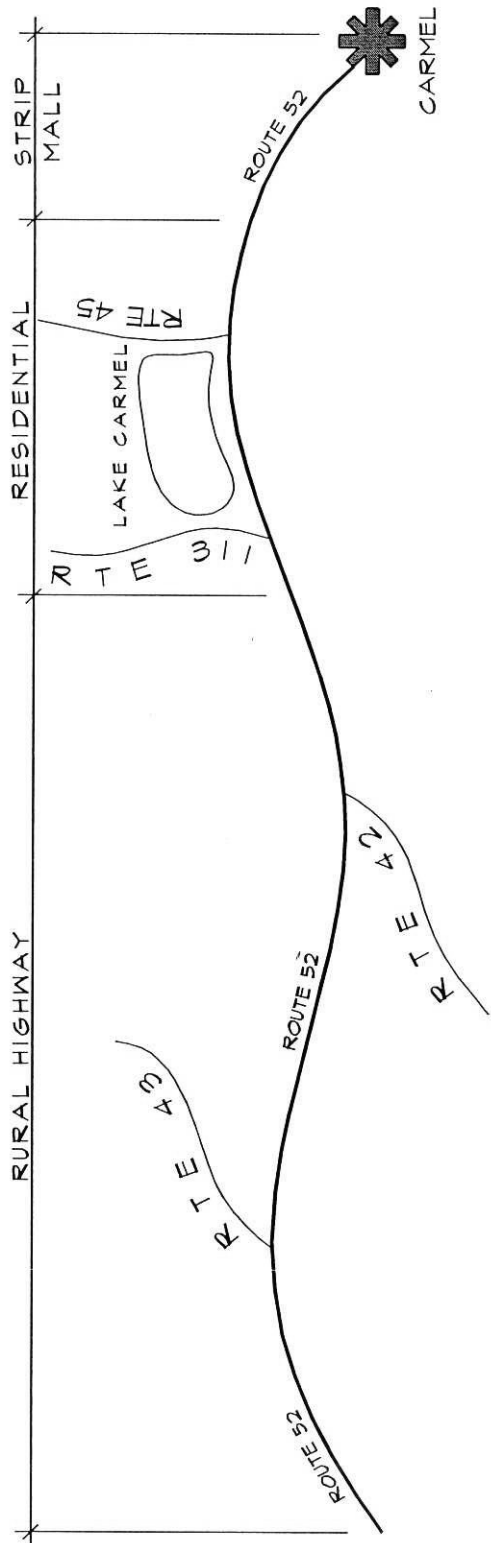
- Two lanes of travel with 3 to 4 - foot shoulder
- Poor shoulder paving
- Open access driveways

**Cost estimate:**

- \$640,000 to \$1.0 million

**Latent Demand Score:**

- Ranking: Moderate



**RURAL HIGHWAY**

- Two lanes
- 3'-4' shoulders
- No sidewalks along entire length
- Small retail area
- Elementary schools
- County gateway
- Elementary schools

**PROJECTS:**

- Repave shoulders
- Install sidewalks in retail/school zone
- Enhance county gateway
- Establish bike route

**RESIDENTIAL**

- Rural
- No sidewalks
- Access to Lake Carmel
- Poor shoulder

**PROJECTS:**

- Install sidewalks to connect residential to Lake Carmel
- Enhance crosswalk at Lake Carmel access point
- Widen and repave shoulder
- Establish bike route

**STRIP MALL**

- Open access aprons
- No sidewalks
- No distinction between roadway and driveways
- Poor shoulder

**PROJECTS:**

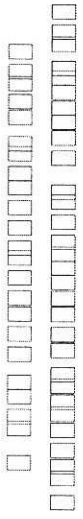
- Enhance gateway into Carmel
- Widen and repave shoulders
- Establish bike route
- Access management



**ROUTE 52**

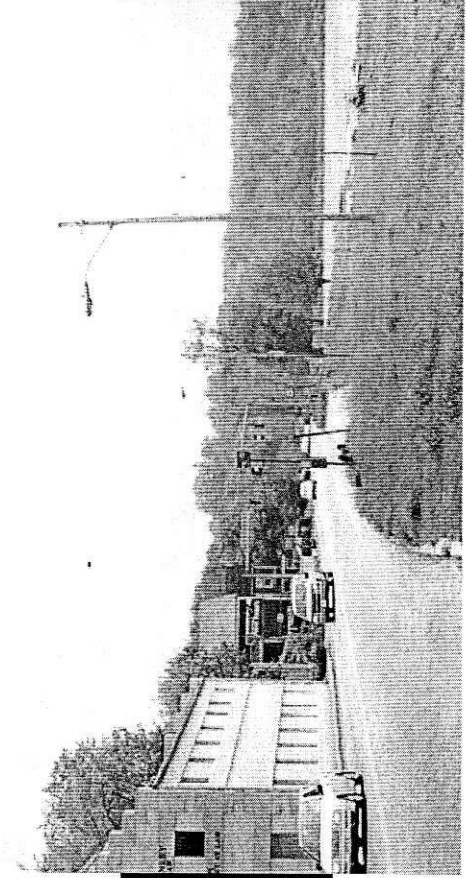
**PUTNAM COUNTY, NEW YORK**

**IRBA**



Westchester, Rockland, and Putnam Counties

**Project:** Route 6  
**Project Limits:** County Line to Brewster  
**Jurisdiction:** Putnam County  
**Project Length:** 13 miles



**Proposed facility type/improvements (or options, if undecided)**

*Short Term*

- Provide crosswalks, curb ramps, and sidewalks in strip mall areas
- Screen parking areas

*Long Term*

- Establish bike route-widening/resurfacing/striping required

**Regional transportation purpose/key destinations:**

- Destinations: Lake Mahopac, Mahopac, Lake Carmel, Carmel, West Branch Reservoir, Middle Branch Reservoir, Brewster

**Connections to other bicycle/pedestrian/transit facilities:**

- Link to proposed facilities on Route 52 and Route 311
- Link to Putnam County Trailway

**Typical conditions in corridor:**

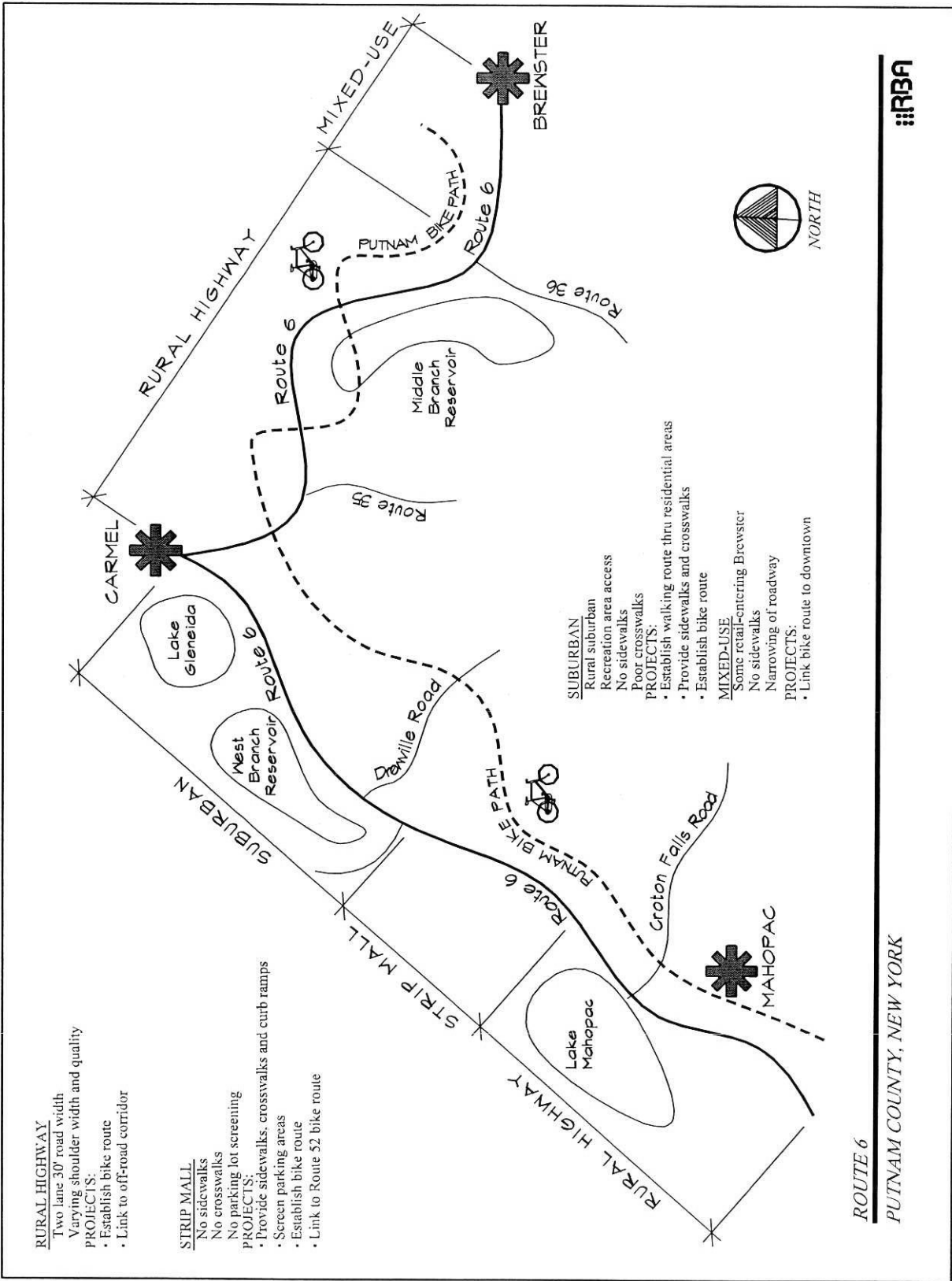
- Scenic route
- No parking lot screening
- Incomplete pedestrian network

**Cost estimate:**

- \$650,000 to \$1.1 million

**Latent Demand Score:**

- Ranking: High



**RURAL HIGHWAY**  
 Two lane 30' road width  
 Varying shoulder width and quality  
**PROJECTS:**  
 • Establish bike route  
 • Link to off-road corridor

**STRIP MALL**  
 No sidewalks  
 No crosswalks  
 No parking lot screening  
**PROJECTS:**  
 • Provide sidewalks, crosswalks and curb ramps  
 • Screen parking areas  
 • Establish bike route  
 • Link to Route 52 bike route

**SUBURBAN**  
 Rural suburban  
 Recreation area access  
 No sidewalks  
 Poor crosswalks  
**PROJECTS:**  
 • Establish walking route thru residential areas  
 • Provide sidewalks and crosswalks  
 • Establish bike route

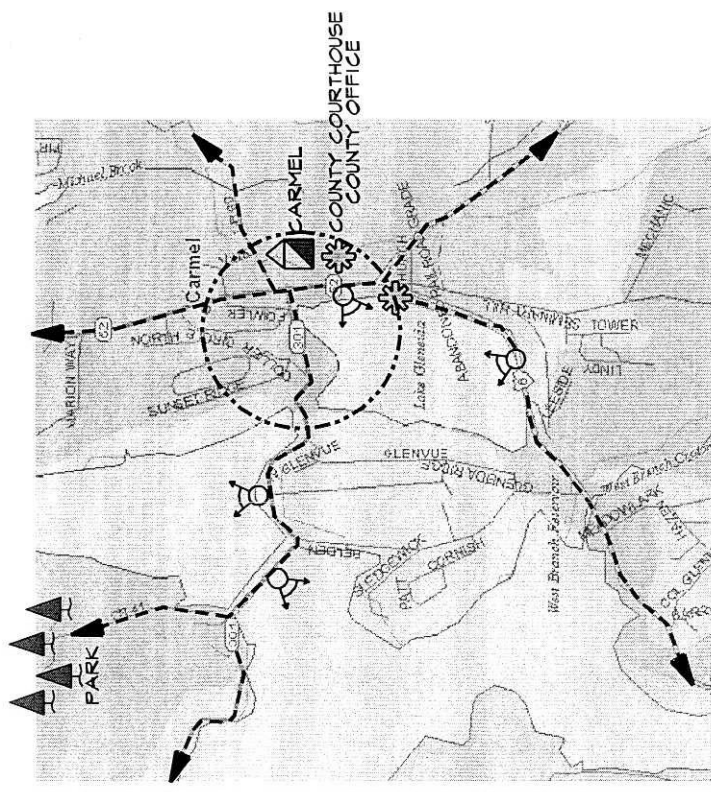
**MIXED-USE**  
 Some retail-entering Brewster  
 No sidewalks  
 Narrowing of roadway  
**PROJECTS:**  
 • Link bike route to downtown



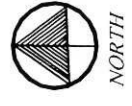
**ROUTE 6**  
 PUTNAM COUNTY, NEW YORK







- GENERAL:**
- Poor sidewalks throughout downtown - broken and heaving
  - No curb ramps
  - Poor access to lake
  - Poor visibility of lake
  - No gateway treatment
- PROJECTS:**
- Repair/install sidewalks throughout town with buffer and curb ramps
  - Trim vegetation along lake to enhance view
  - Create bike center - Carmel is confluence of several recommended bike routes
  - Install bulb-ous and raised crosswalks along Main Street
  - Enhance curbing to define edge of road



**RBA**

**CARMEL**  
**PUTNAM COUNTY, NEW YORK**

## Typical Unit Costs

	Unit	Unit cost
Enhance Pedestrian Network - Stripe crosswalks and install appropriate signage (i.e., yield to ped)	per ft	\$ 2.50
Enhance Pedestrian Network - Repair sidewalk and curb ramps	sq ft	\$ 12.00
Enhance Pedestrian Network - Relocate sidewalk obstructions, install new sidewalks and curb ramps	sq ft	\$ 22.00
Establish Bike Route - Sign and Stripe	per mile	\$ 17,850.00
Establish Bike Route - Widening, Resurfacing, Signing and Striping (1 ft. widening/mile)	per mile	\$ 45,165.00
Establish Off-road Bike Path	per mile	\$ 500,000.00
Investigate blue bike lanes through downtown	per ft	\$ 10.00
Traffic Calming - Install signage and Implement education and enforcement programs	per mile	\$ 2,000.00
Traffic Calming - Install curb extensions/bulb outs, refuge islands and enhance crosswalks	per intersection	\$ 35,000.00
Traffic Calming - Install raised intersection, or roundabout	per intersection	\$ 60,000.00
Streetscape Amenities - Install bike racks/lockers at all destinations	per bike	\$ 100.00
Streetscape Amenities - Screen parking areas, install benches and install decorative street lamps	per lin ft	\$ 50.00
Install Gateway Treatments	per gateway	\$ 15,000.00
Provide directional signage to all destinations	per sign	\$ 250.00
Establish trail head with bike racks, parking, signage and informational kiosk	per car (gravel)	\$ 700.00
	per car (asphalt)	\$ 1,400.00
	per restroom	\$ 40,000.00
Enhance curbing to define edge of road	per lin ft	\$ 16.00

**NOTES:**

- 1 Unit costs are based on regional and national sources. Figures were developed for planning and comparison purposes and include costs for materials and installation only. Other costs associated with design services, ROW acquisition, mobilization and utility relocation are not included.
- 2 Unit cost for "Establish Bike Route - Widening, Resurfacing, Signing and Striping" is for estimating a per foot increase in pavement width per mile. Total pavement width for on-road bicycle accommodation should be a minimum of 4 feet on both sides of the roadway. (If full 4-foot width is to be added on both sides, cost per mile would be approximately \$360,000.)

