5. VILLAGE OF COLD SPRING – ROUTE 9D FROM MAIN STREET TO CHESTNUT STREET

5.1 Problem Statement

The Village of Cold Spring has a well-established main street leading down to the Hudson River. The pleasant natural environment and appealing streetscape attracts many visitors, particularly between the months of March and November. During this time, hikers frequently disembark from the Metro North station at the base of Main Street, passing through to hike in the Hudson Highlands, which are adjacent to Cold Spring. This influx of pedestrians is not the only source on Main Street. Most of Cold Spring's residents live within walking distance of the downtown area of Main Street, making pedestrian safety a significant concern.

Year round, the close proximity to New York City (less than one hour on the Metro North Hudson Line) attracts daily commuters from surrounding areas. Traveling to Cold Spring by car, these commuters must circulate through and around Main Street to find parking, which is scarce. This results in inevitable conflicts between motorists and pedestrians.

5.2 Study Area

Route 9D (Bear Mountain Beacon Highway) from the intersection of Main Street (County Route 301) south to the bend at Chestnut Street. The intersection of Main Street and Route 9D is the only signalized intersection within the study area.

5.3 Existing Conditions

The traffic signals at the intersection of Main Street and Route 9D are fully actuated. That is, there is no fixed signal timing, but rather loop detectors at each of the four approaches that detect whether vehicles are present. Priority is given to traffic on Main Street. In addition to the vehicle loop detectors, there are pedestrian push buttons, which call the "walk" signal. The pedestrian waits for the "walk" signal (5 to 50 seconds depending on the presence of traffic in the opposing direction). Due to the high level of pedestrian volumes at peak times, Cold Spring has requested a prohibition of right-turn-on-red at all four approaches to this intersection. NYSDOT has implemented a no right-turn-on-red at one approach to date.

Cold Spring is a walkable community; and its residents include elderly people and parents with strollers and young children. Route 9D is a state highway, with much of the vehicular volumes being through traffic. Based on anecdotal information, residents cross Route 9D most heavily during weekend days, but also mid-day during the week. NYSDOT has installed two cross-walks across Route 9D: the first is south of the fork at Chestnut Street, and the second is in front of the Foodtown Supermarket north of Benedict Road. The Foodtown is part of a strip mall on the west side of Route 9D that also contains other convenience retail establishments, and is a major destination for the residents of the village. On the east side of Route 9D is a parking lot that belongs to the Day Care Center, where the Cold Spring Farmers' Market is held on Saturdays from May through November. Safe connections between these destinations as well as the residential areas on both sides of Route 9D are the priority of the Village, and therefore this study.

There are currently two uncontrolled crosswalks in the study area. The northern crosswalk is at Foodtown and the southern one is at the bend in Route 9D, connecting the sidewalk on the east side to the center of the fork between Route 9D and Chestnut Street. Both have a yellow retro-reflective flexible delineator bolted into the roadbed on the centerline at all times, except during months with frequent snow, so the plows do not destroy the signs. There is also a single yellow flashing beacon light ¾ of a mile in advance of the southern crosswalk, with a standard "Pedestrian" warning sign and a rider below indicating "¾ mile". At that crosswalk, there is another "Pedestrian" warning sign with a rider below pointing at a 45-degree angle towards the crosswalk.

5.4 Analysis

While there were many indications that both pedestrian and vehicular volumes are highest during peak months (March through November), this study was conducted entirely during the off-season. For this reason, traffic volumes and pedestrian counts would not have provided conclusive data, so recommendations are based on the available vehicular volumes and traffic control data acquired from the NYSDOT. Traffic counts for 2006 and 2008 Memorial Day weekend were obtained from the Traffic Impact and Impact Analysis study conducted by the Scenic Hudson Land Trust. In addition, anecdotal information and concerns from stakeholders were considered. To give more detailed recommendations for signal timing and other operational traffic improvements, a study should be conducted during peak times.

Since Route 9D is a State highway, improvements should reflect the needs and conventions of such a road. The two existing unsignalized crosswalks, the flashing beacon and "Pedestrian" warning signs and delineators were installed by NYSDOT. Both crosswalks facilitate the important pedestrian connections, with the signage and lights to highlight the likelihood of pedestrian presence. This begins to mark the study area as a pedestrian zone. However, drivers rounding the curve at the southern end of the study area may not remain conscious of potential pedestrians ahead. Without a traffic control south of Main Street, pedestrians must cross when there is a gap in traffic, or walk up to Main Street on one side and back down on the other, which is unrealistic.

5.5 Recommendations

The recommendations below can be referenced by referring to Figure 5.1.

5.5.1 Traffic and Pedestrian Access

To address pedestrian safety conditions for crossing Route 9D, a few simple measures could be adopted which together will strengthen the concept of a "pedestrian safety zone" at this location. While attempts have been made to create crossings at convenient locations, there are far more desire lines for crossing than have been provided. It is recommended to install several new crossings along this section of Route 9D. These new uncontrolled crosswalks should be striped and signed per the Manual of Uniform Traffic Control Devices (MUTCD) requirements, but it is also recommended that they be paved with a decorative "brick-like" material called BrickPrint®.

In addition to the visual cue, there is a slight tactile difference between BrickPrint and asphalt, which will subtly register with the driver at each crossing. These new crossings will provide a visual cue to drivers to expect pedestrian activity in the area.

BrickPrint is a highly durable thermoplastic-based material, which can be inlaid to create a surface that is flush with the asphalt. It is designed to resist fading and the color is aggregate in the material, so it does not fade like other decorative crosswalk treatments. The life span of BrickPrint is intended to match that of asphalt, so it will not wear before a repaving is necessary.

5.6 Phasing and Cost Estimate

The table below describes order of magnitude costs for installing imprinted decorative intersection treatments at 6 intersections along Route 9D. The estimate assumes that corners will also be constructed with new ADA compliant ramps and that damaged sidewalks will be replaced along the corridor. The estimate also assumes that asphalt will be milled and resurfaced at these locations to provide a smooth wearing surface for the proposed imprint treatment.

WORK OR ITEM DESCRIPTION	Unit Price	Unit	Area or Quantity	Approximate Cost	Cost per Intersection
Milling and resurfacing asphalt[3]	$ 2.50	S.F.	14,000	$ 35,000	$ 5,833
Imprint crosswalk	$ 25.00	S.F.	14,000	$ 350,000	$ 58,333
Thermoplastic paint for crosswalks	$ 4.00	L.F.	1,260	$ 5,040	$ 840
Corner quadrants (ADA compilance)					
Concrete Sidewalk at corners[1]	$ 15.00	S.F.	3,456	$ 51,840	$ 8,640
Concrete Curb[2]	$ 70.00	L.F.	480	$ 33,600	$ 5,600
Detectable Warning Surface[2]	$ 20.00	S.F.	384	$ 7,680	$ 1,280
5" Concrete Sidewalk	$ 15.00	S.F.	5,000	$ 75,000	$ 12,500
Maintenance and Protection of Traffic	$ 8,000.00	L.S.	1	$ 8,000	$ 1,333
Subtotal				$ 566,160	$ 94,360
Contigency (20%)				$ 113,232	$ 18,872
Construction Inspection (10%)				$ 56,616	$ 9,436
Design (10%)				$ 56,616	$ 9,436
Mobilization (5%)				$ 28,308	$ 4,718
Total				**$ 820,932**	**$ 136,822**

Notes

1 Assume 144 S.F. per Corner Quadrant

2 Assume 8 S.F. per ramp and 2 ramps per Corner Quadrant

3 Assume 2" of milling

* Sidewalk area for known replacement segments. Additional segments may be necessary.

New Sidewalk

Continuous sidewalks are an essential pedestrian amenity. In addition, providing openings for vehicles to enter and exit the parking lot is important for access management.

Extend Intersection of Chestnut St and Route 9D

In order to make the existing crossing more safe, the area between these two roads should be extended to provide a refuge area for pedestrians as they cross.

Additional Crossings

Retro-reflective thermoplastic crosswalks highlight specific crossing locations for drivers and pedestrians. Pedestrian actuated flashing crosswalks could also be considered.

High-visibility, Textured Intersection Treatments

Distinctive pavement at crosswalks and intersections serve as a visual and textural indicator to drivers that pedestrians will be present. To produce this effect, stamped concrete, brick pavers or another material may be used in order to maintain the historic character of the Village.

Pedestrian Signage

Other Potential Treatments

Pedestrian Countdown Signals

Illuminated Crosswalks

Pedestrian Signage

The RBA Group

Putnam County Main Street Partnership Planning Study

Figure 5.1 Cold Spring Pedestrian Improvements