

US Route 2 Corridor Design Conceptual Village Designs for:

East Montpelier,
Plainfield, and
Marshfield, VT

Prepared for the:

**Central Vermont Regional Planning
Commission**

and East Montpelier, Plainfield, and Marshfield, VT

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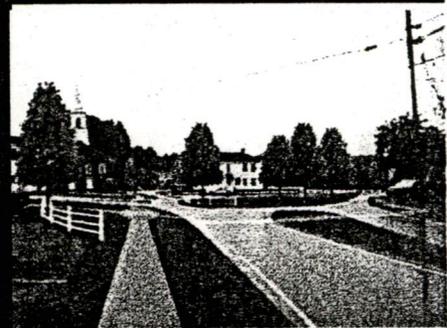


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1. Introduction:

1.1 The US Route 2 Corridor: Balancing an arterial highway with small village setting.

This study of the US Rt. 2 corridor is intended to provide a vision for improvements for the villages of East Montpelier, Plainfield, and Marshfield, VT. The following report is organized into a section for each village center with conceptual design plans and illustrations to assist in visualizing proposed improvements. The information provided is a series of options, and decisions about the preferred alternatives will be subject to further local, regional and state review, and also to further refinement in project development within the VT Agency of Transportation (VAOT).

For almost 20 years, the VAOT has operated under the assumption that a bypass would be built for US 2, which would relocate the heavy truck and other through traffic away from the small villages onto a new highway. At that time, conventional wisdom was that bypasses were the preferred approach for arterial roads to circumnavigate congested town centers. That approach was reinforced by the difficulty that improvements to the existing location and characteristics of US 2 made compliance with AASHTO Standards almost impossible to achieve.

1.2 Making use of the new VT Design Standards.

In 1997-98, the VAOT adopted new VT Design Standards. The previously used AASHTO guidelines called for 12' wide traveled lanes, 8' paved shoulders, and 40-50 mph design speeds, essentially a "highway" cross section. The new VT Standards allow reduced widths of both lanes and shoulders and reduced Design Speeds. These changes were made to allow major improvements to be made to arterial corridors in village settings - but with reduced impacts to the communities. US 2 is a good example of where this change of policy has clear benefits. In fact, the road was cited during the drafting of the new Standards as a specific place where new standards were justified. The difference for the new design standards is that US 2 has the possibility of being designed more as a village main street than a highway. The roadway characteristics can be tailored for slower traffic, acknowledge more congested conditions and accommodate the wide variety of landuses that are found and thrive in village settings.

Across the state, there are examples where the imposition of a "highway" cross-section into small village centers road is incompatible. High-speed truck and automobile traffic entering small village centers results in safety, congestion, and socioeconomic impacts. Whereas the historic intention of the RT. 2 was to unify the towns through transportation, the result was to divide them. In Danville, where the Village Green and school were the center of town - discovered how highway speed traffic made crossing the street very dangerous. When US 2 was improved to AASHTO standards east of the town center, the town experienced one of the highest rates of speeding in the state. Consequently, the town had to contract with the County Sheriff's Department to set up a speed control trap.

The new VAOT Design standards allow the use of narrower travel lanes and shoulders than the previously used AASHTO guidelines. In the appendix of the Final Report, the actual dimensions and design criteria that are allowed by the VAOT can be found. Whereas in other locations on US 2 where improvements were previously planned - Danville for example, the narrowing of the roadway to fit the village setting required a FHWA "Design Exception", which proved to be a challenge, and ultimately brought the project in the village of Danville to a stop. With the VT Design standards, the decision to change design characteristics of the road are more within the purview of the VAOT and the project design team, and there isn't the time consuming and difficult Design Exception Process. This has largely been accomplished through the efforts of VT Senator Jeffords who marshaled through the NHS legislation that allows states to define their own design standards for NHS roads.

Concurrent with the VT Design Standards, the VAOT Long Range Transportation Plan also defined a new Level of Improvement Policy (LOI). That policy mandates major improvement priority on the repair of existing roadway corridors - instead of building new roads. US 2, being a Principal Arterial, is highly eligible for major improvements, and a priority would be to improve the existing alignment.

In the new era of transportation guided by ISTEA and TEA 21, it is mandated that transportation improvements be designed to be compatible with local context. The VAOT participated in a major national conference in the spring of 1998 in Maryland entitled "Beyond the Pavement, Integrating Highway Development with Communities and the Environment." The VT Design Standards have received a National Award from the National Trust for Historic Preservation in 1997 for the provisions for design that respect the rural and village character of much of the state.

Whereas years ago, a policy for US 2 preferred a highway building approach, the current policy is more balanced in favor of an integration of the road with the village centers. US 2 can be both a local and regional asset. That in mind, there are a number of issues that this project should address: traffic safety, pedestrian and bike safety, accommodated mobility in a safe manner, and an enhanced road village relationship.

- The current and future increased levels of automobile and truck traffic will continue and will need to be accommodated on the existing road.
- The safety and comfort of village residents should be respected and, where possible, improved through physical improvements to the corridors.
- The problems of speeding trucks and cars into the village centers must be reduced significantly.
- In some cases, improvements to the corridor can be coordinated with positive developments in the village centers to promote future economic development, tourism, and improved community character.
- Where possible, improvements to the roadway should also enhance the road-village center environment.
- That multiple uses of the roadway corridor happen in the village centers, and that each use should be at least "accommodated" if not maximized with safe, attractive provisions for pedestrians, bicyclists, local and through drivers.

In light of that situation, an alternative view of US 2 is needed to plan for the towns of East Montpelier, Plainfield, and Marshfield as they work with the VAOT to address the needs of this corridor in lieu of a bypass. That alternative is presented in this report.

1.3 Traffic calming: one way to make a safe road

Based upon discussions with the CVRPC TAC and residents of the three towns, there is virtual consensus that one of the major problems with the corridor is excessive speeding. The transitions from rural highway to village center in most cases are defined solely by signage, and are not reinforced with a visual cues of a village ahead. The momentum of through traffic particularly trucks is considerable, and is very difficult to slow down. In the past, the towns have attempted to patrol for speeding, but the cost of enforcement has been a deterrent. There was also somewhat of a desire not become a "speed trap" like Danville has become.

Many residents and officials have indicated that if the traffic were slower, the road would be safer, and more tolerable for local residents. Based upon review of the traffic and accident data, it is the speeds are lower, the accidents tend to be less severe, and lower in general.

When it comes to the making of US 2 as a safer road, there are several important necessities:

- Slowing speeds for all travelers is essential.
- Providing places for pedestrians and bikes off the heavy traveled roadway is essential.
- While enforcement is effective, it cannot always be in place 24 hours a day and 365 days of the year, alternatively, the road should be built to accommodate - if not compel slower traffic.

1.4 Using a roadway project to promote positive economic and community character improvements:

Transportation improvements need to integrate roads as a literal part of the village fabric - not a single minded road improvement. The economy of each of the corridor villages relies on both through traffic and local clientele markets. Residents in each town indicated a desire to promote tourism and a local economy of locally owned businesses and home occupations. While the through traffic brings more customers by their door each day, high speeds and congestion are impediments to good trade, particularly when there is either too much traffic for customers to move and access a business, or where doing so appears to be unsafe. Many travelers on the corridor just "pass through".

Corridor improvements in the villages could be linked to economic development strategies to coordinate access and egress, safe traffic patterns, safe pedestrian patterns for residents and visitors as well as creating a special place that is inviting and interesting to tourists. However, this integration does not typically occur through a traditional VAOT sponsored Scoping Process to solve transportation problems. Instead, it is the responsibility of the town to articulate it's desires and if needed, lobby the VAOT for inclusion of "downtown" improvements as might be appropriate. To a degree, this has occurred in Plainfield with the "Plainfield: Rural Character in Transition" report completed in 1986. Neither Marshfield nor East Montpelier have completed any definitive village plans. At the request of town representatives from each village, where possible, village corridor designs include options that enhance the aesthetic and business setting to make the village centers a place for people to stop, visit and spend money while there. These alternatives include improvements to on-street parking, public spaces, coordinated access and egress from stores and businesses for visitors and customers.

1.5 Moving towards Implementation:

The intention of this report is to define the principles and tools that could assist in achieving that balance - to offer a visual guide to ways that speeding, congestion, economic vitality, and "quality of life" can be integrated into a Major Arterial Road Improvement Project. It is a next step in the process that has involved residents and town officials for a number of years. Given that the scenario has changed, at least there is something to agree upon, which is that the road as it exists can be improved and still retain, the character if the village centers.

The concepts in this report are developed to the point where they are viable solutions, but they have not been "engineered". Further design development is needed before they can be implemented. The hope is that if these concepts pass muster with the local communities, the VAOT, and are supported by the Central VT Regional Planning Commission Transportation Advisory Committee (CVRPC - TAC), implementation can be expedited.

2.0 Existing Corridor Problems and Concerns.

2.1 A summary of existing traffic and safety problems in the US 2 corridor villages:
(Also refer to the village plans on the following pages)

Based upon discussions in each of the villages with residents, business owners, and town officials, there were a series of common issues as well as site specific areas of problems. The following plans of the three villages locate these areas of concern.

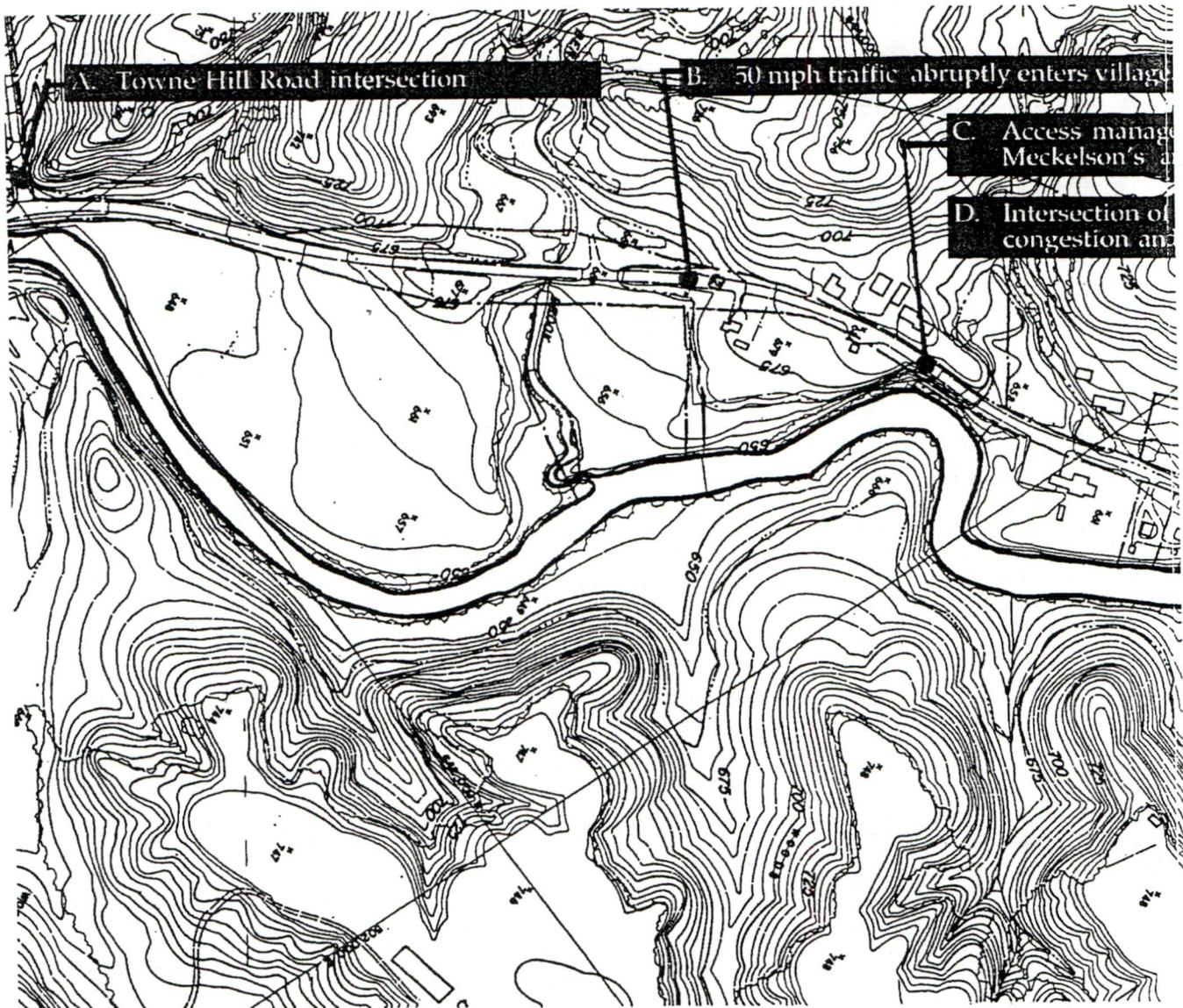
A summary of common corridor village concerns and problems:

- Speeding traffic from the rural areas of the corridor entering the village with no slowing down of either cars or trucks. There is a widespread perception that improvements to the rural highway sections will further exacerbate speeding problems as were experienced in Danville. Traffic signage has proven to be ignored.
- Pedestrian and bicyclist safety. This is combined with the lack of facilities and the speeding/traffic levels. Village sidewalks are either non-existent or in deteriorated condition.
- Confusing and/or dangerous intersections.
- Congested intersections.
- Parking and access problems at local businesses.
- An unattractive view of the village areas from the road because of the deteriorated highway condition.
- A wide range of maintenance, drainage, and other infrastructure conditions that need improvement.

2.2 East Montpelier Village:

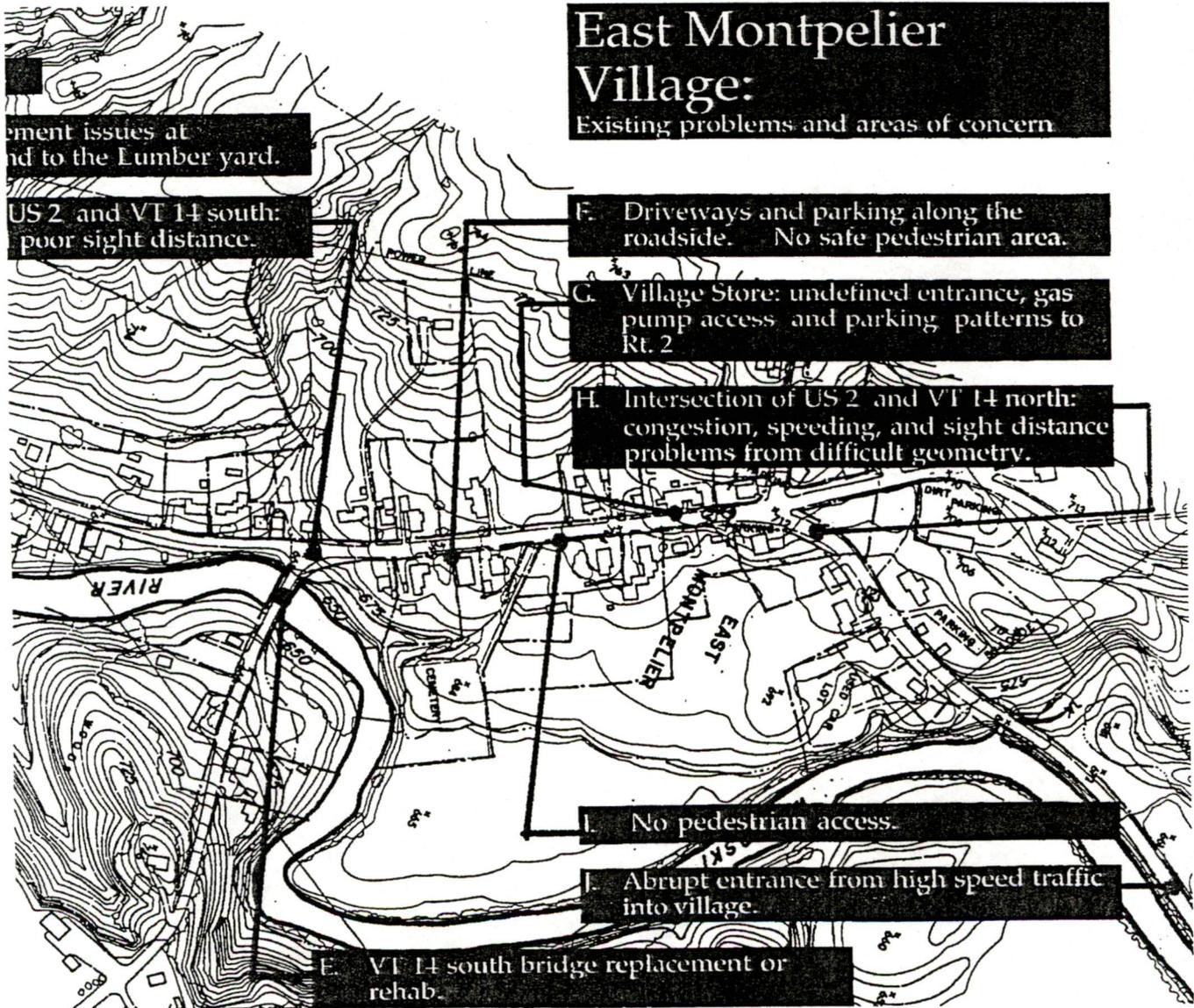
List of Problem Areas

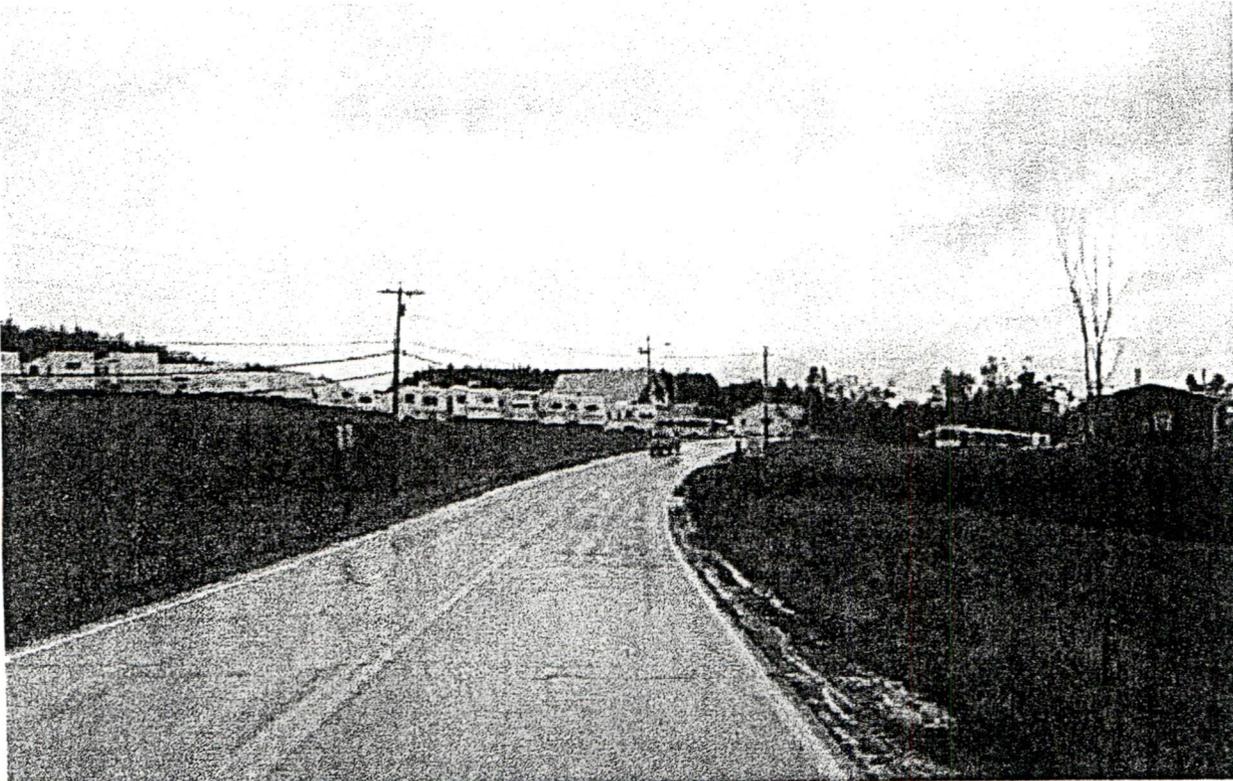
- A. Towne Hill Road intersection
- B. 50 mph traffic abruptly enters village.
- C. Access management issues at Meckelson's and to the Lumber yard.
- D. Intersection of US 2 and VT 14 south: congestion and poor sight distance.
- E. VT 14 south bridge replacement or rehab.
- F. Driveways and parking along the roadside. No safe pedestrian area.
- G. Village Store: undefined entrance, gas pump access and parking patterns to Rt. 2
- H. Intersection of US 2 and VT 14 north: congestion, speeding, and sight distance problems from difficult geometry.
- I. No pedestrian access.
- J. Abrupt entrance from high speed traffic into village.



East Montpelier Village:

Existing problems and areas of concern

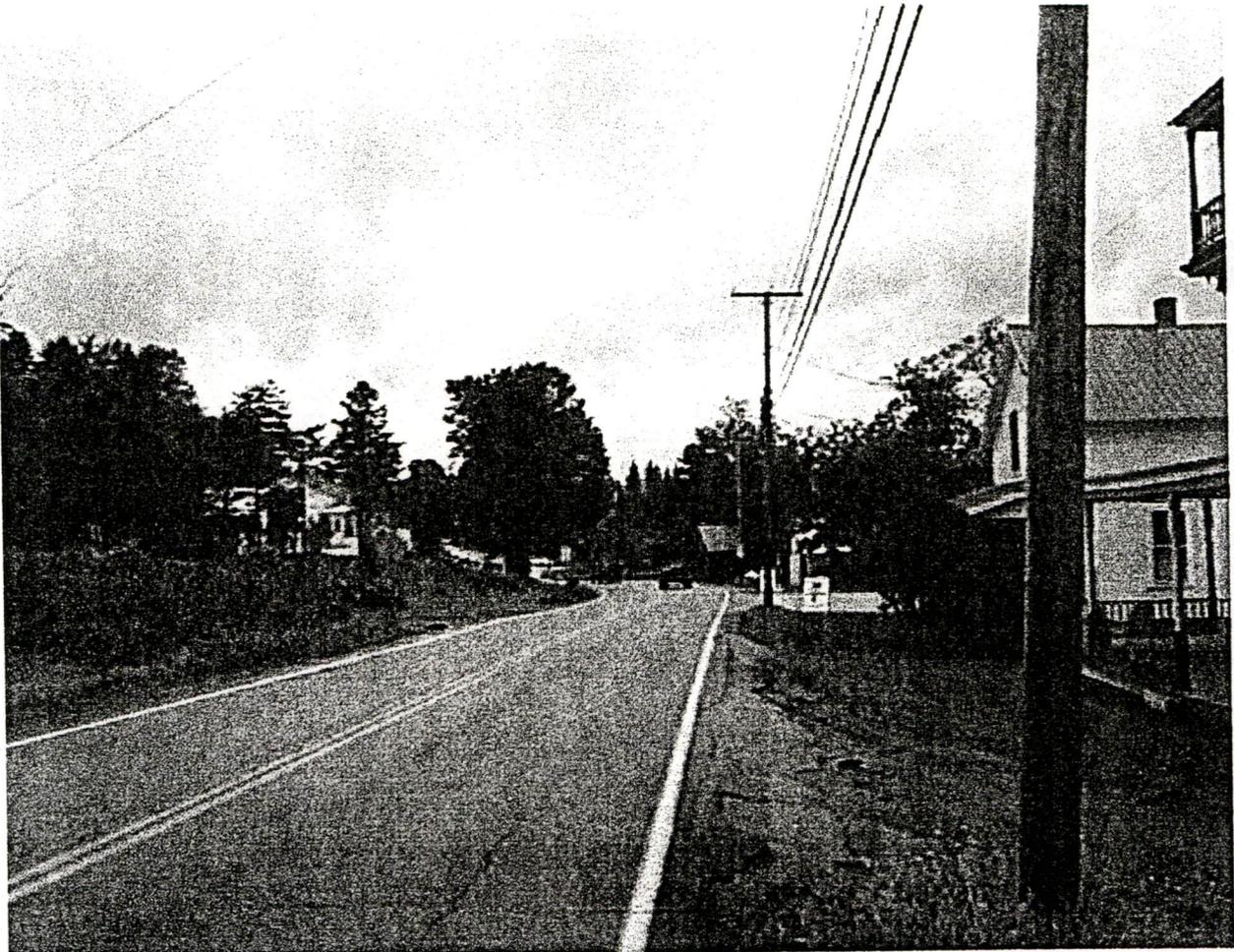




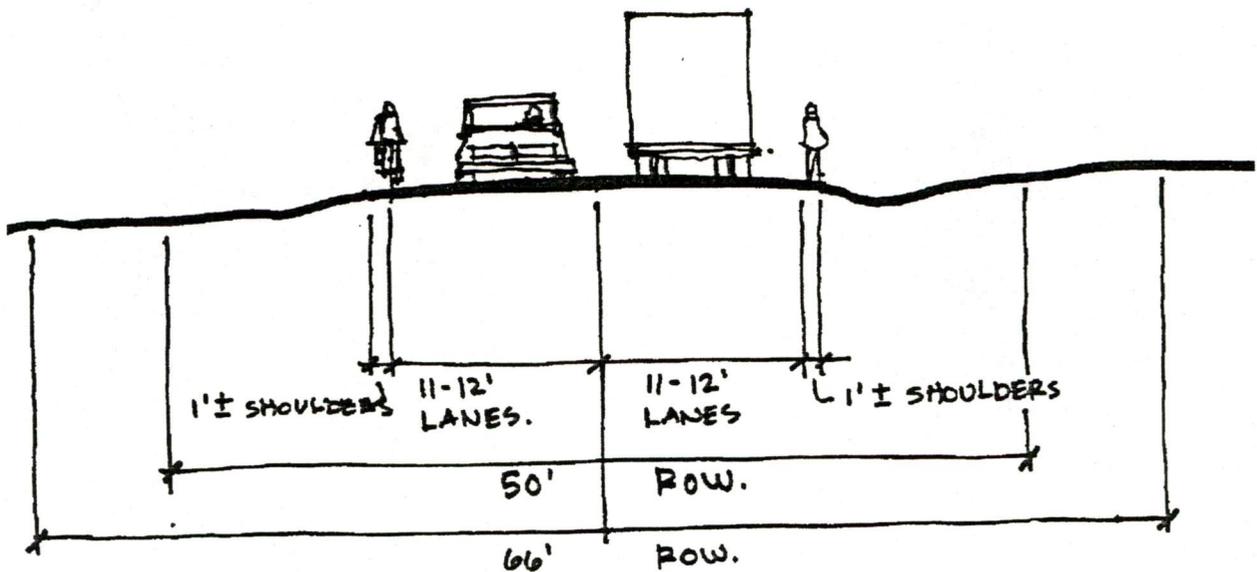
Photograph of existing conditions: Western village edge approaching Meckelson's RV



Photograph of existing conditions: Western village edge



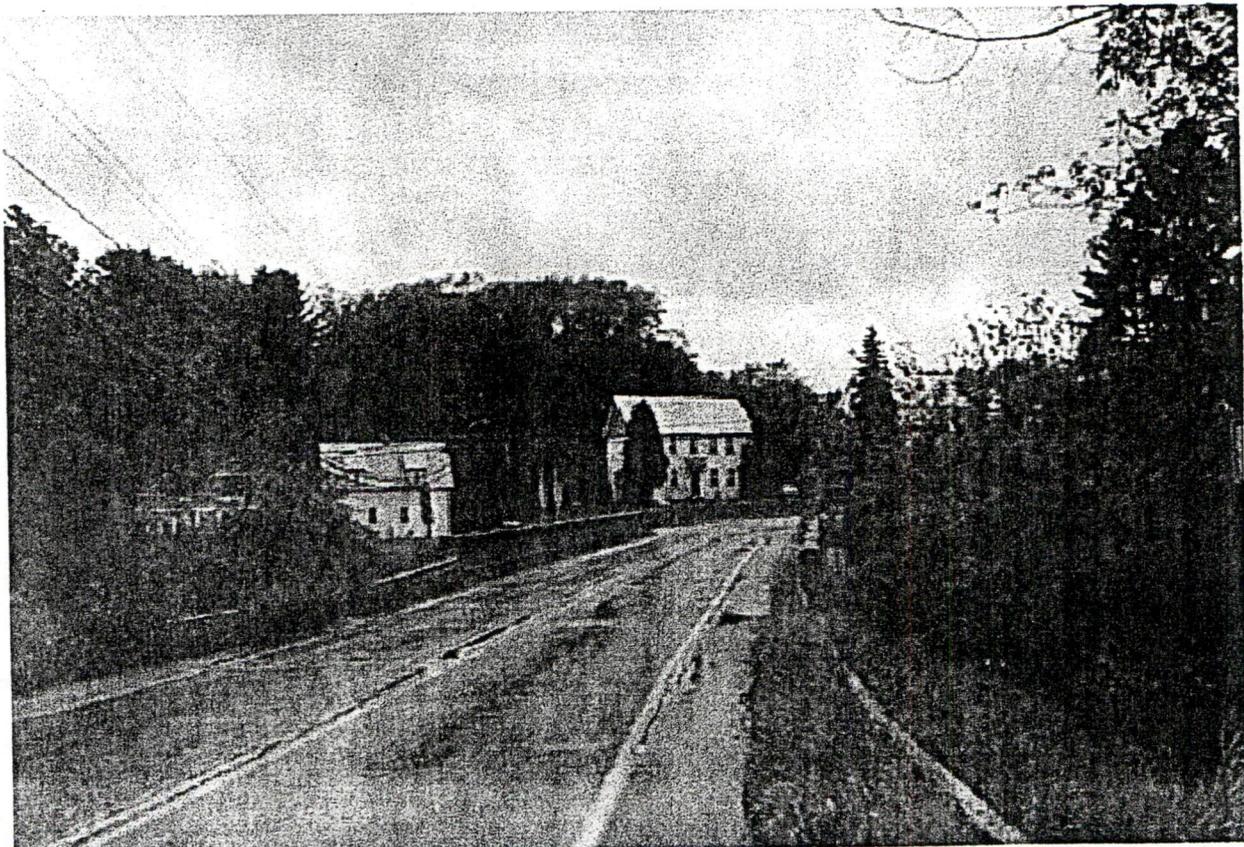
Photograph of existing conditions: Typical street view



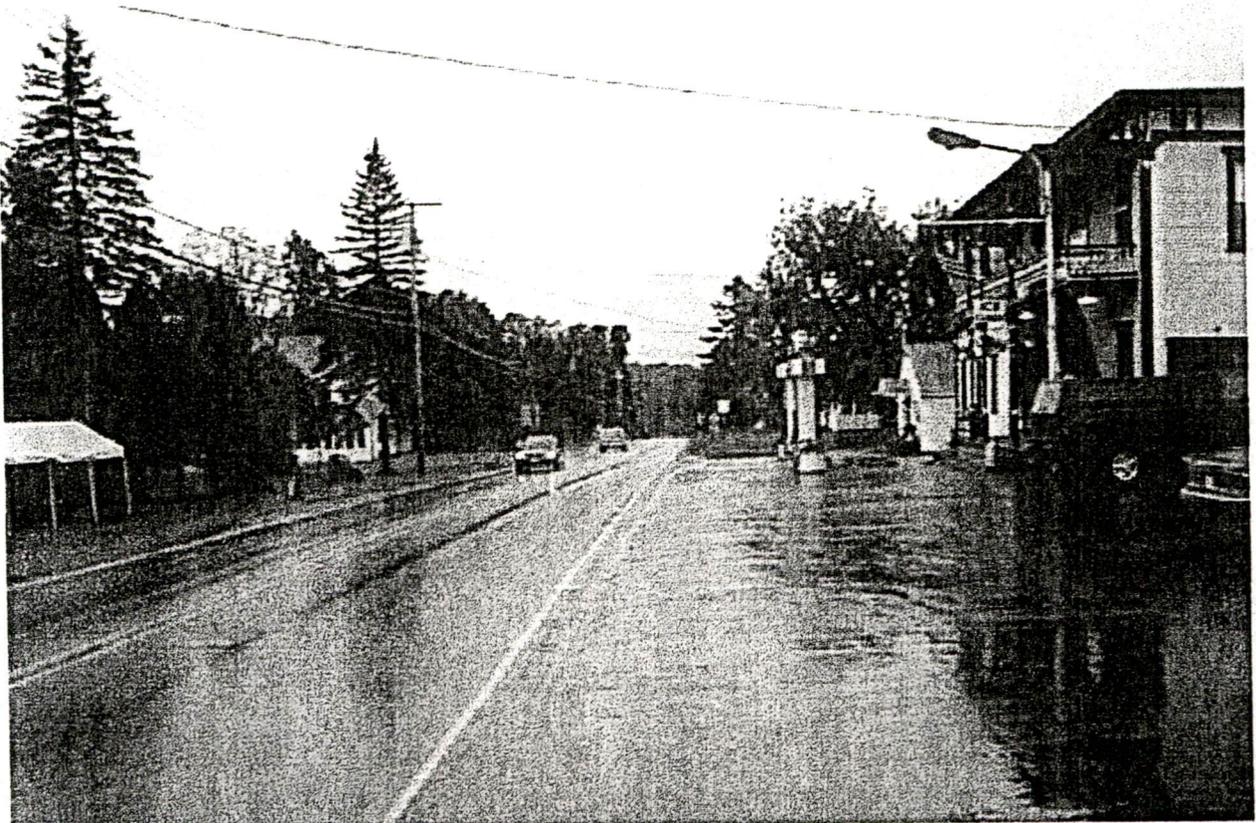
Typical Street Cross Section



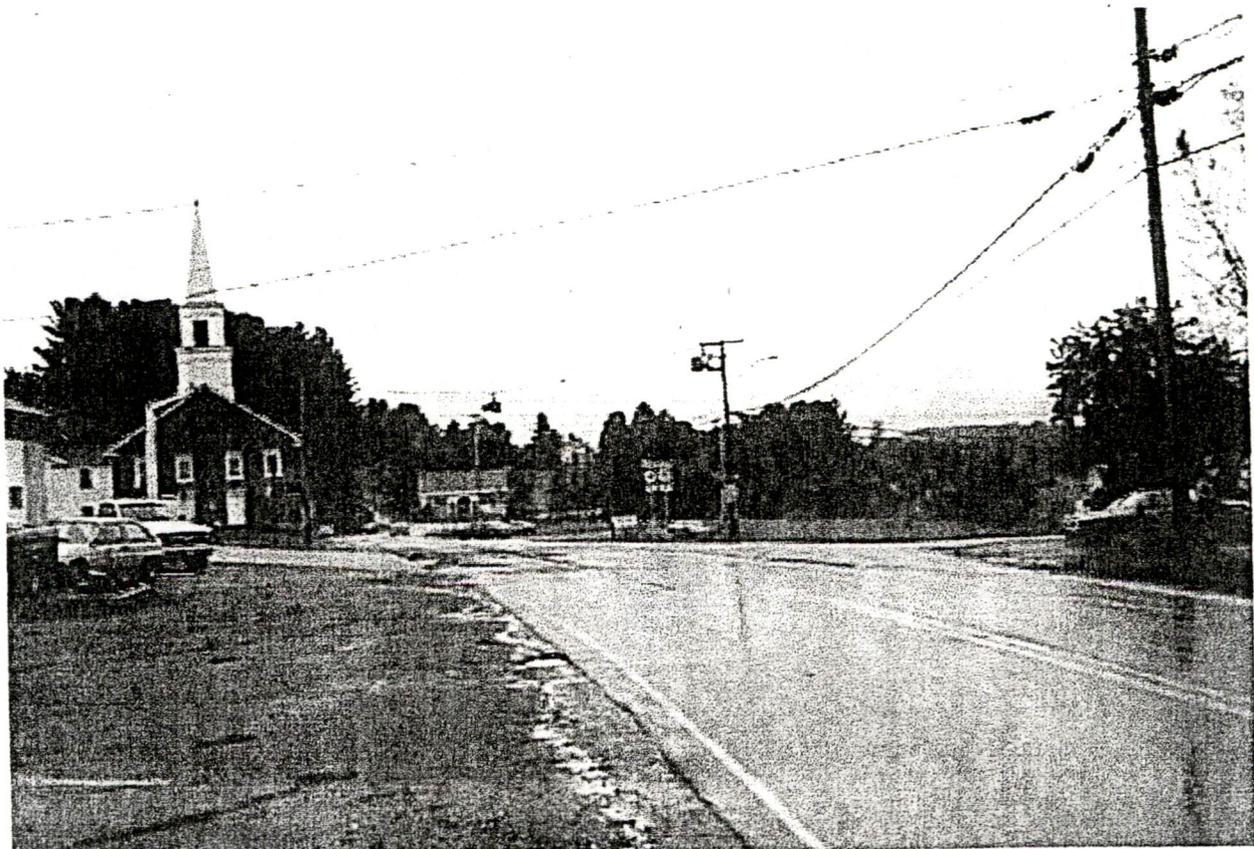
Photograph of existing conditions: VT 14 south/ US 2 Intersection from Route 2 Eastbound



Photograph of existing conditions: VT 14 south/ US 2 Intersection looking from east on Route 14



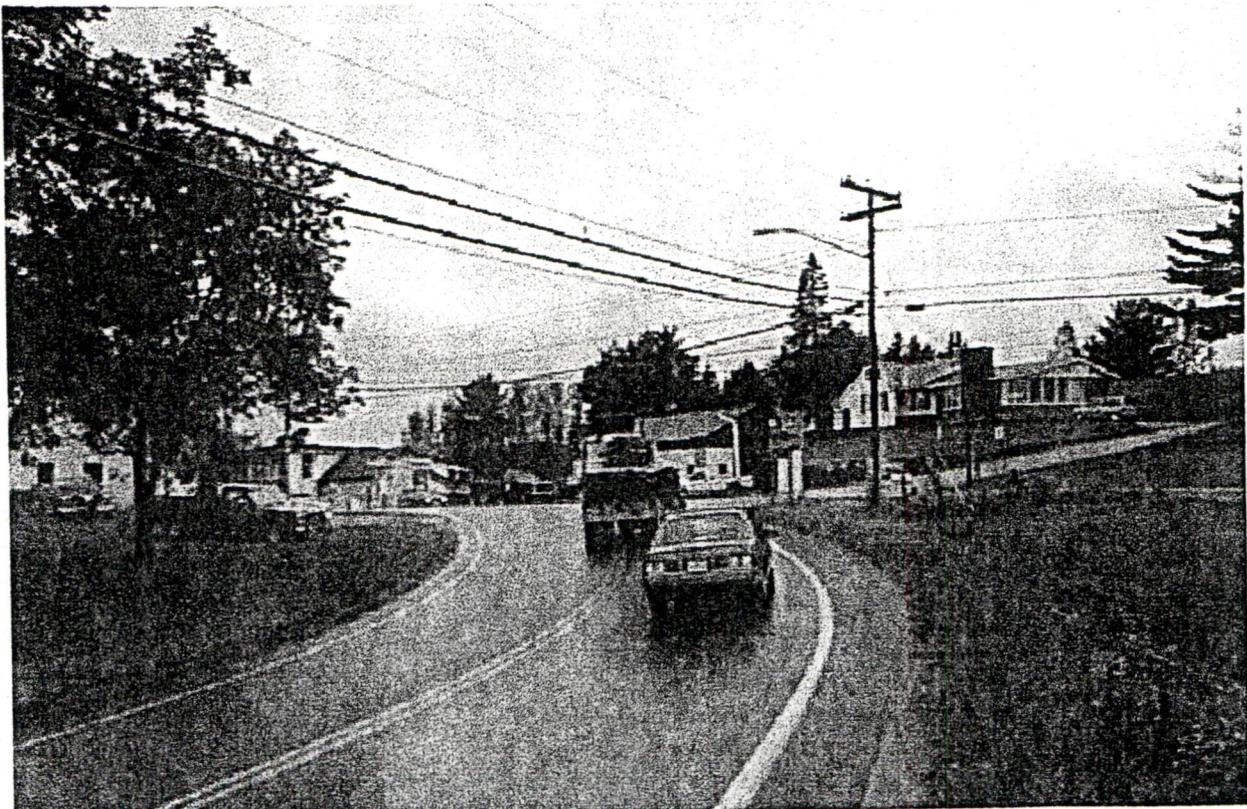
Photograph of existing conditions: Route 2 and the Village Store Looking West



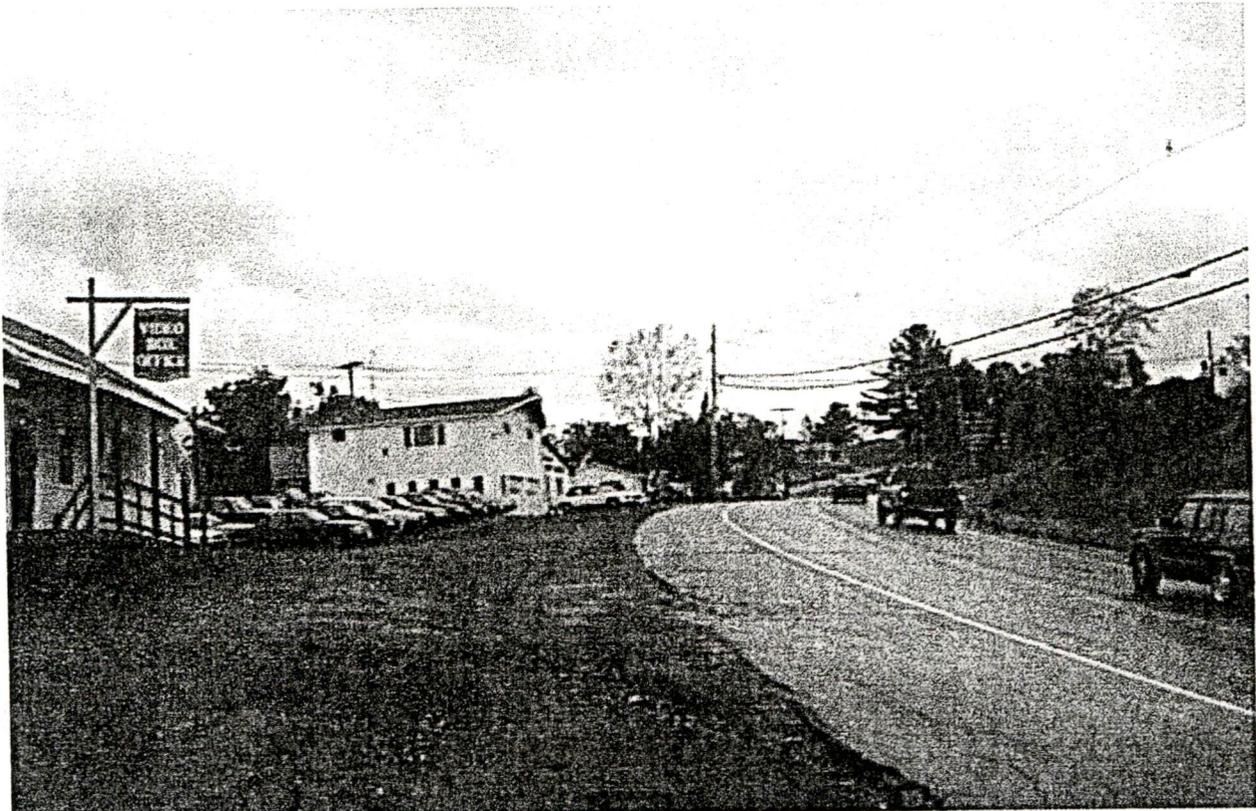
Photograph of existing conditions: VT 14 north/US 2 Intersection from Route 2 looking East



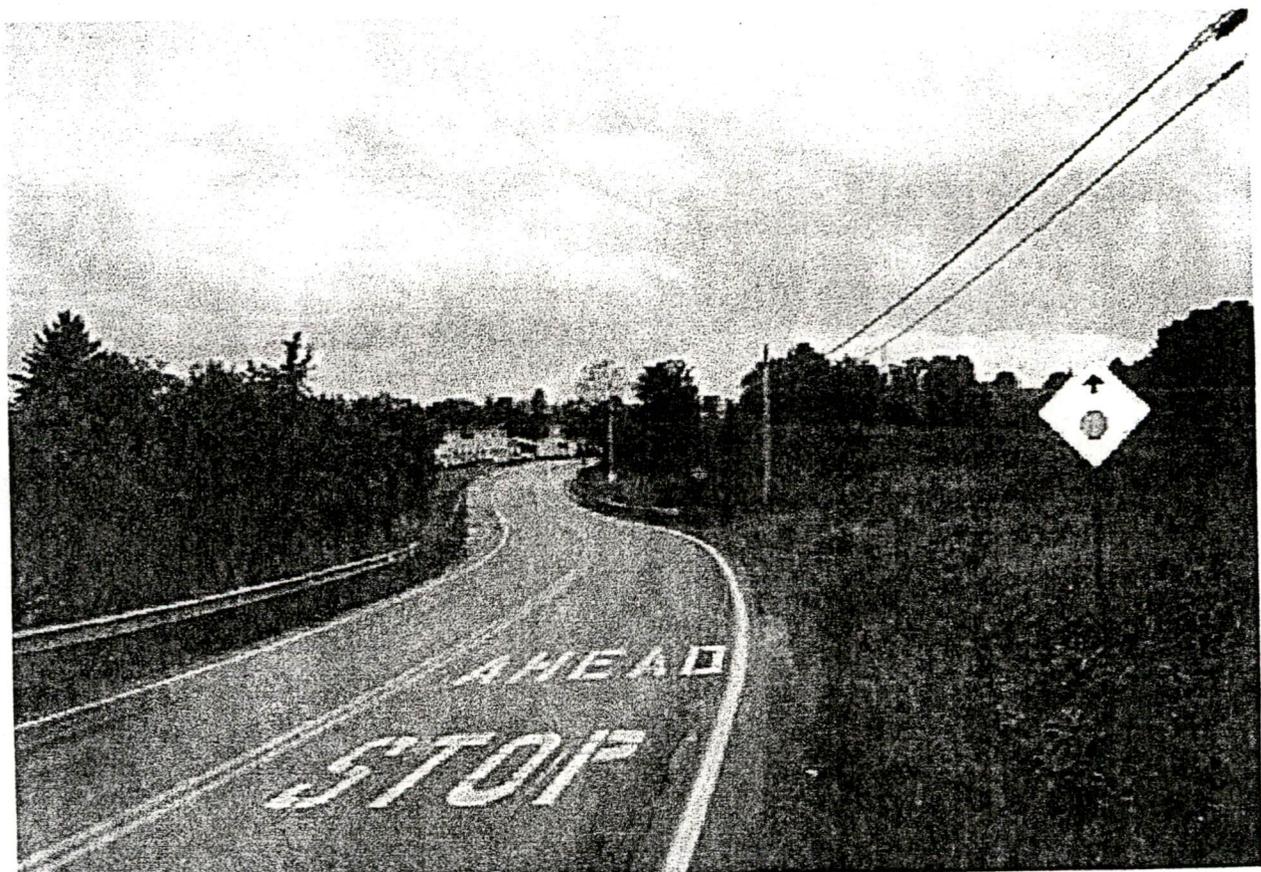
Photograph of existing conditions: VT 14 north/ US 2 Intersection from Route 14



Photograph of existing conditions: VT 14 north/ US 2 Intersection from Route 2 looking West



Photograph of existing conditions: Eastern village area



Photograph of existing conditions: Eastern village edge

2.3 Plainfield Village:

List of Problem Areas

- A. 40-50 mph traffic abruptly enters village.
- B. US 2/VT 214 intersection: confusing traffic patterns and sight distance problems.
- C. No sidewalks or safe pedestrian connection to Goddard College.
- D. Old deteriorated sidewalks.
- E. Narrow street section and nearby houses/parking.
- F. Bridge Street intersection: poor sight distance, steep slope to bridge, constrained by nearby buildings.
- G. East of Bridge Street: narrow road section and nearby buildings/parking.
- H. Parking and driveway access to commercial sites
- I. Abrupt entrance of high speed traffic into village.



East Montpelier, Plainfield, and Marshfield, Vermont

sidewalks or safe pedestrian
ction to Goddard College.

eteriorated sidewalks.

Plainfield Village:

Existing problems and areas of concern

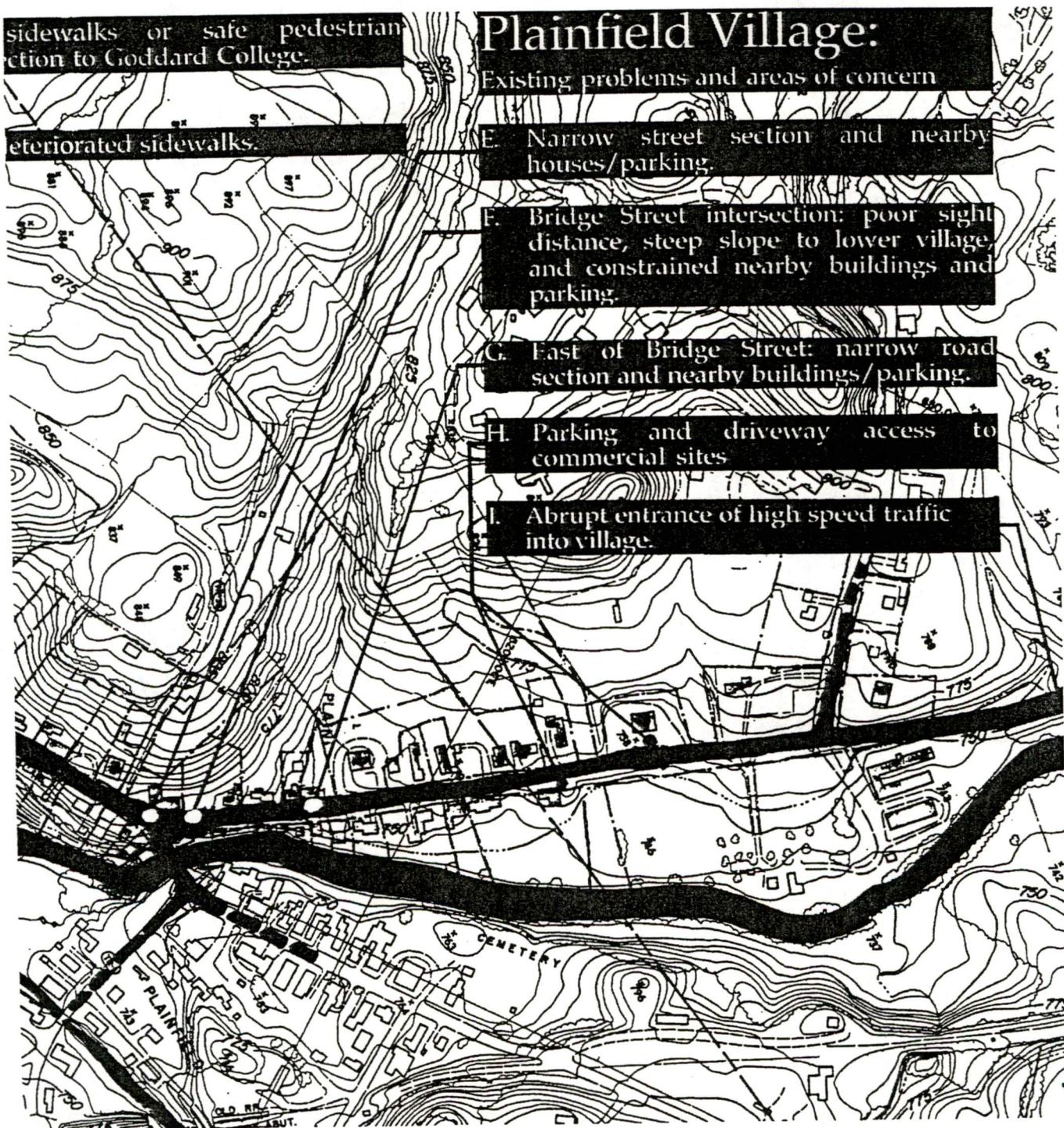
E. Narrow street section and nearby
houses/parking.

F. Bridge Street intersection: poor sight
distance, steep slope to lower village,
and constrained nearby buildings and
parking.

G. East of Bridge Street: narrow road
section and nearby buildings/parking.

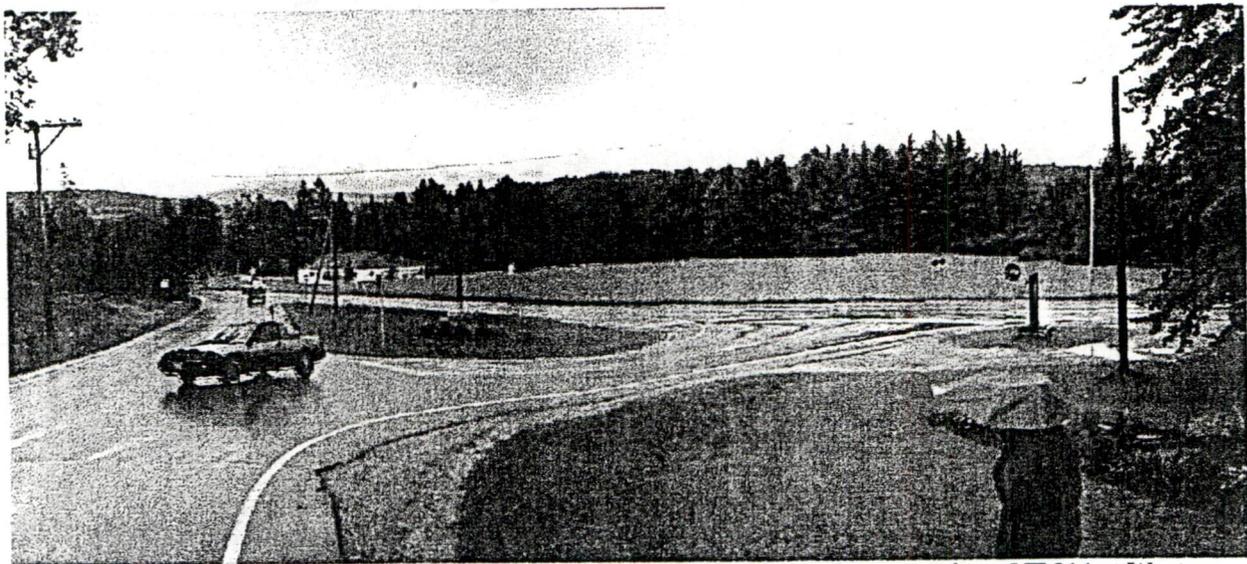
H. Parking and driveway access to
commercial sites

I. Abrupt entrance of high speed traffic
into village.

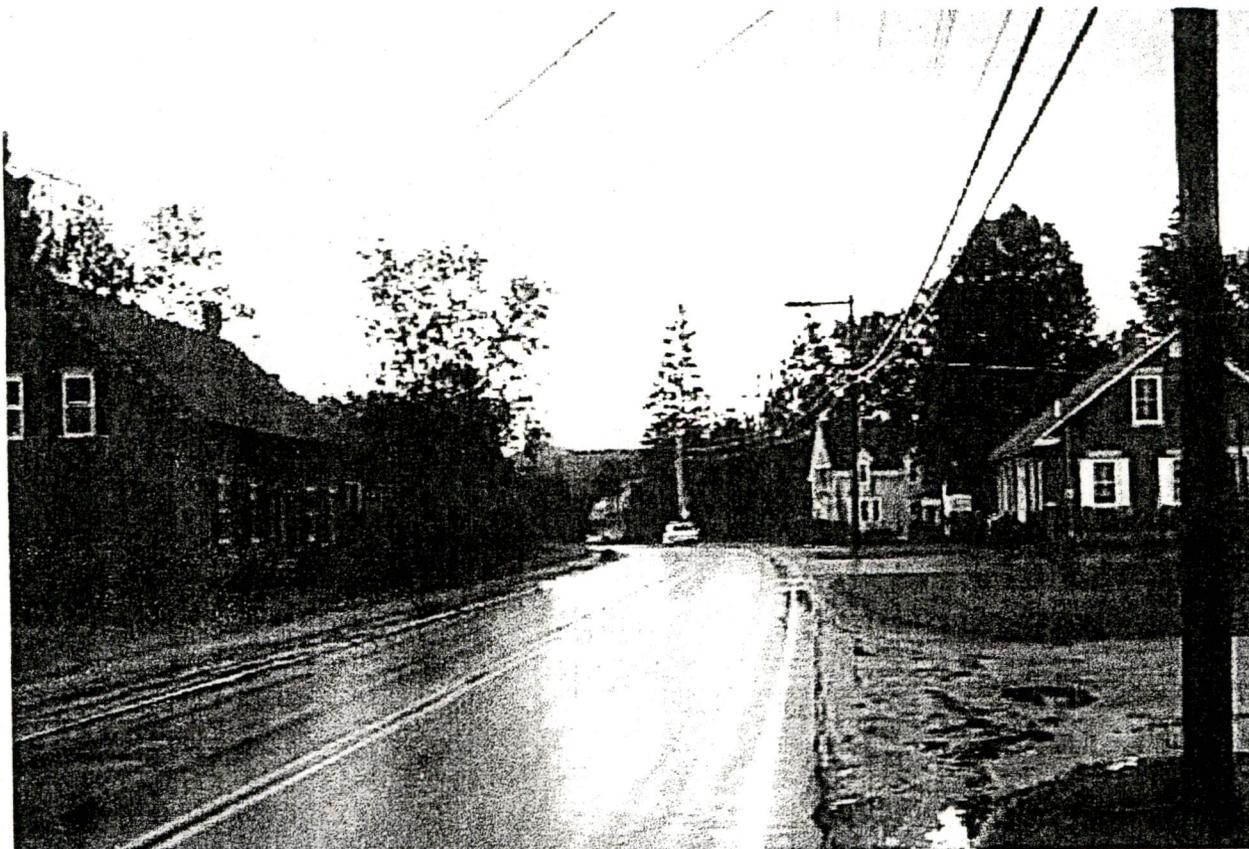




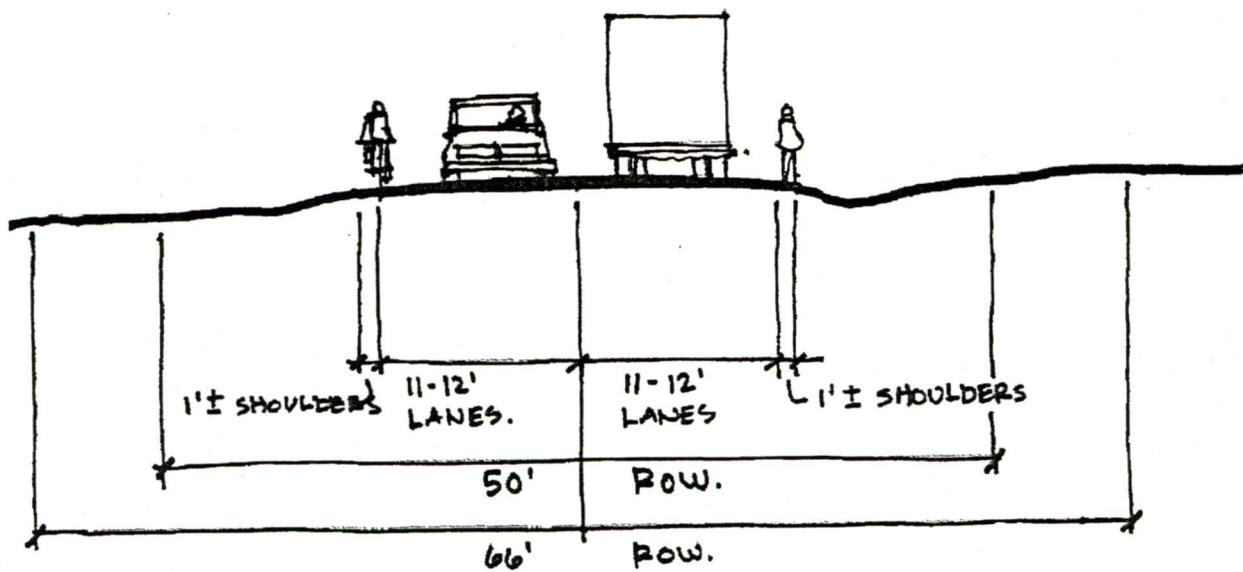
Photograph of existing conditions: US 2 / VT 214 intersection looking east from Rt. 2 at Western village edge



Photograph of existing conditions: US 2 / VT 214 intersection looking east from VT 214 at Western village edge



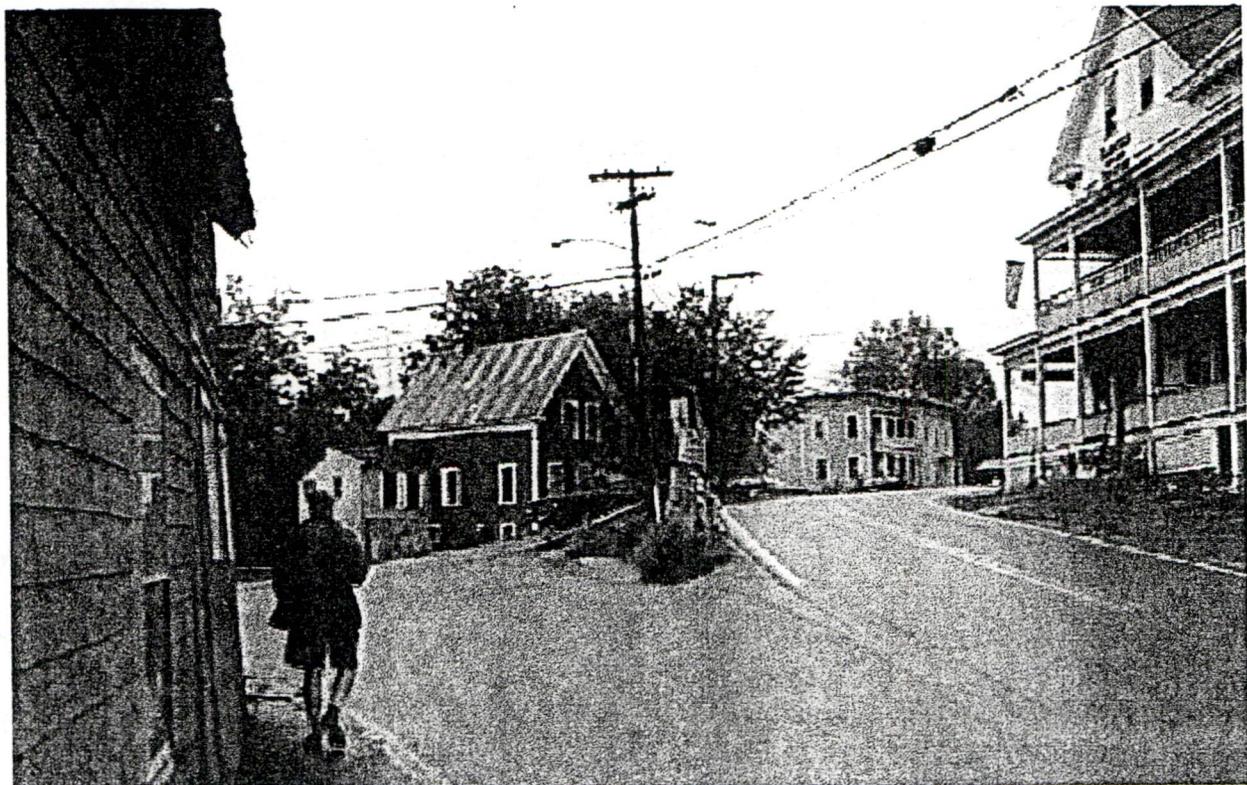
Photograph of existing conditions: Typical street view



Typical Street Cross Section



Photograph of existing conditions: Intersection looking East on US 2 and the top of Main Street



Photograph of existing conditions: Intersection looking West on US 2 and Main Street past the Plainfield Hardware Store



Photograph of existing conditions: Eastern Village Edge

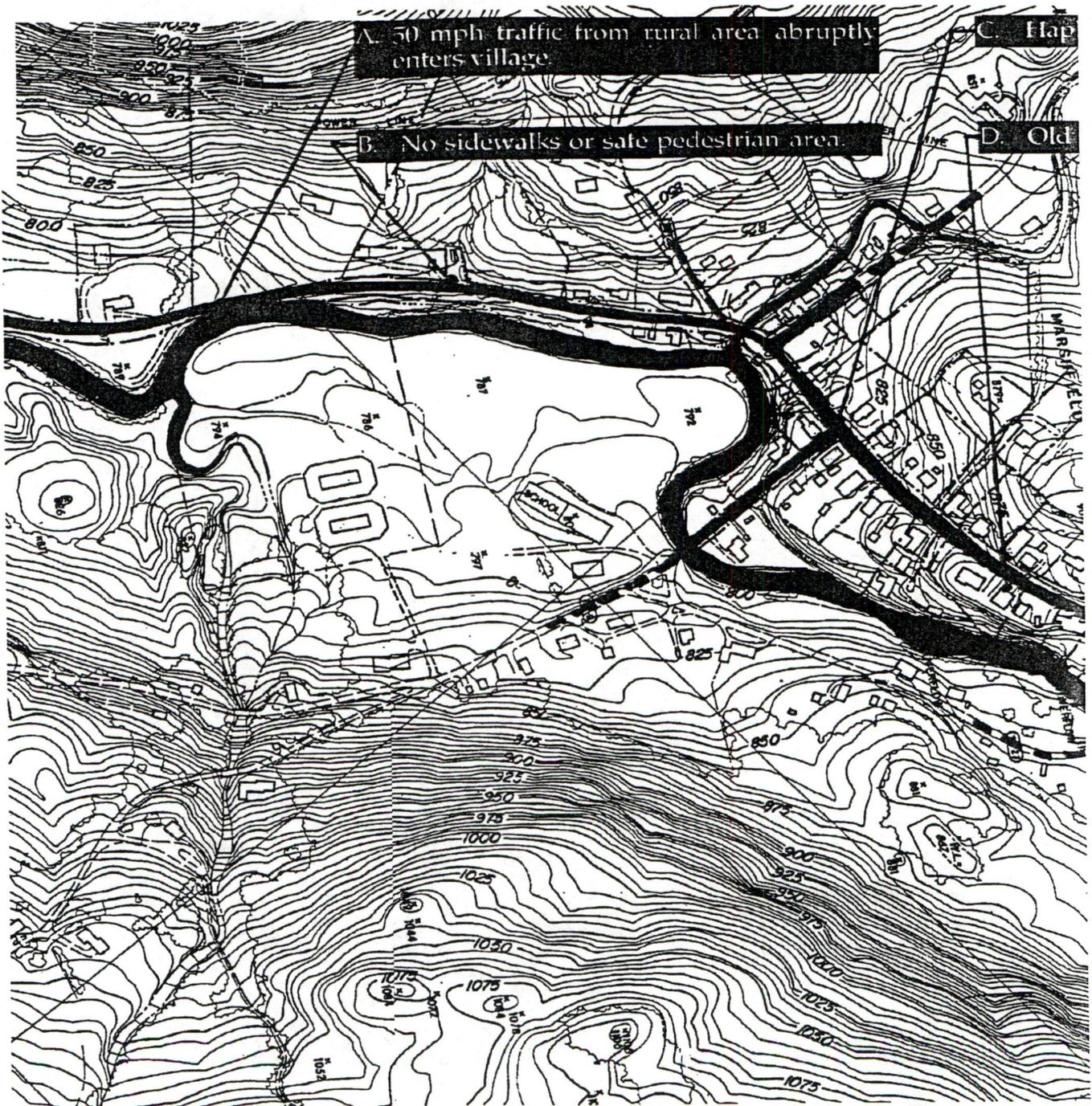


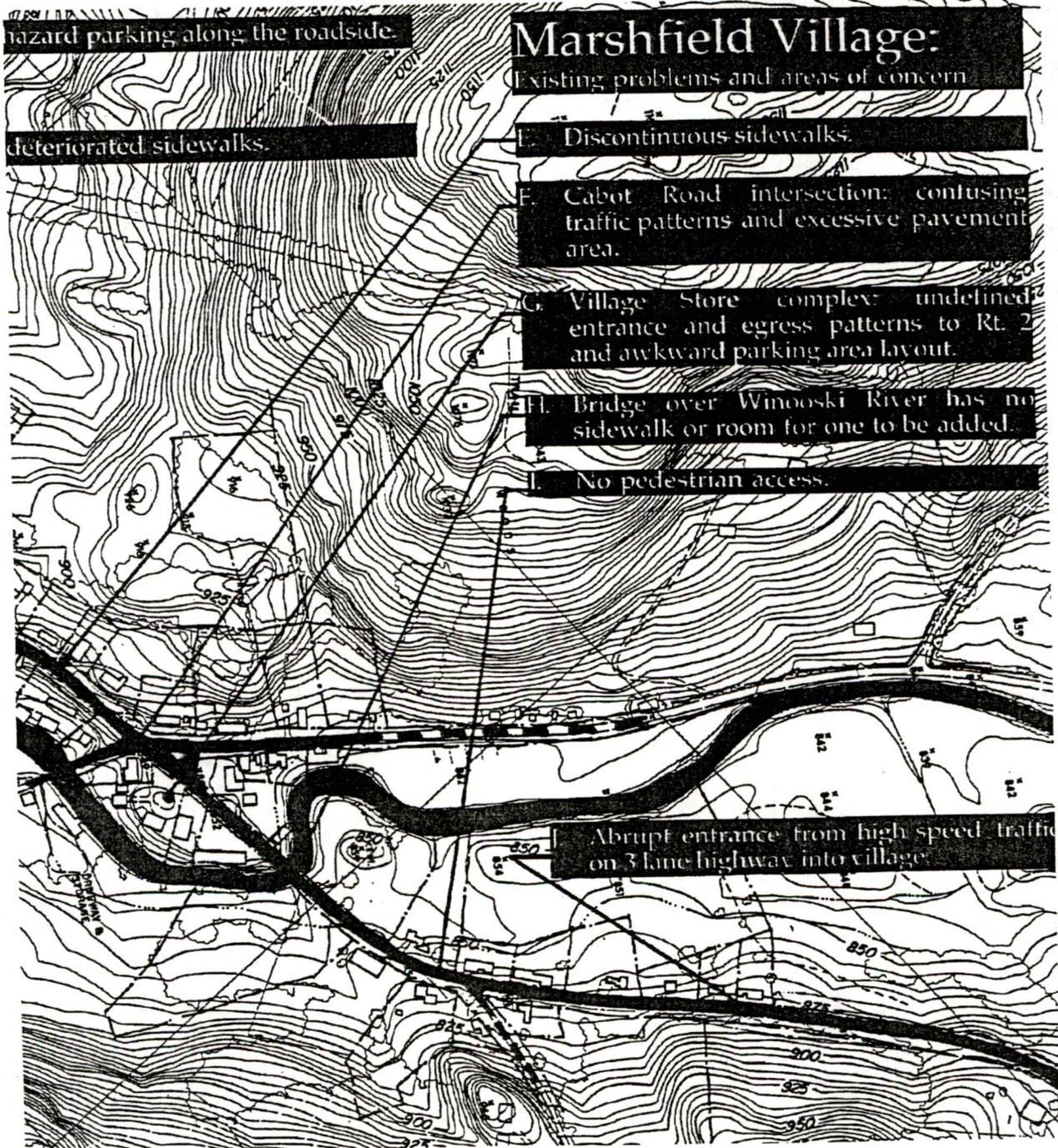
Photograph of existing conditions: View of Village from rural area east of town

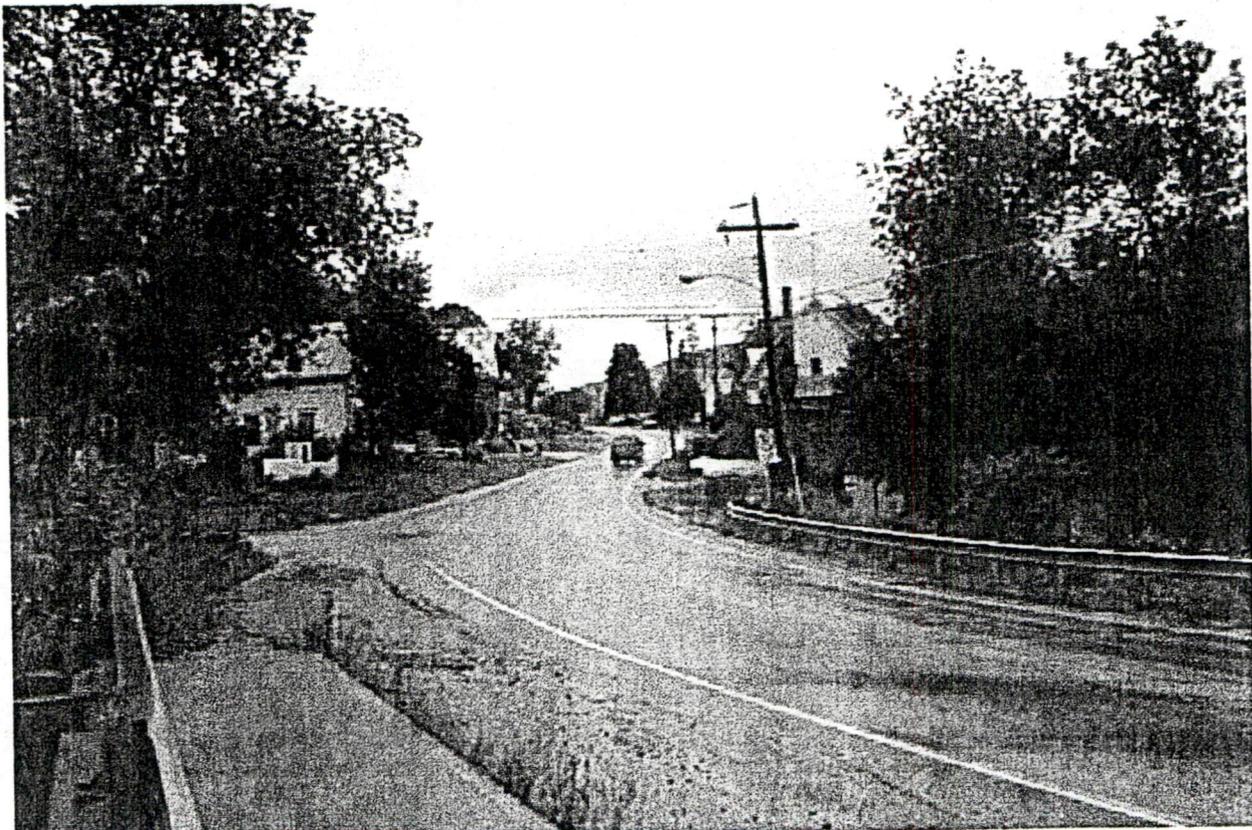
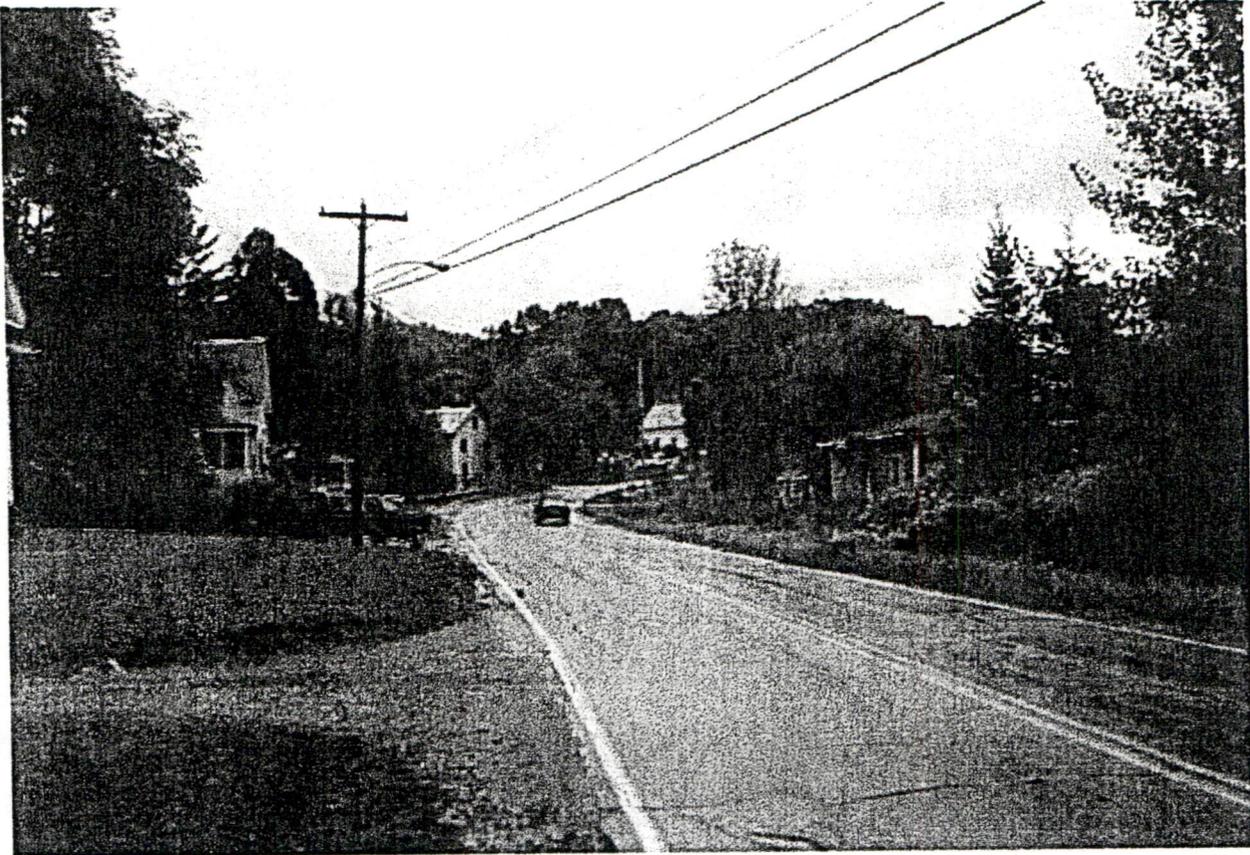
2.4 Marshfield Village:

List of Problem Areas

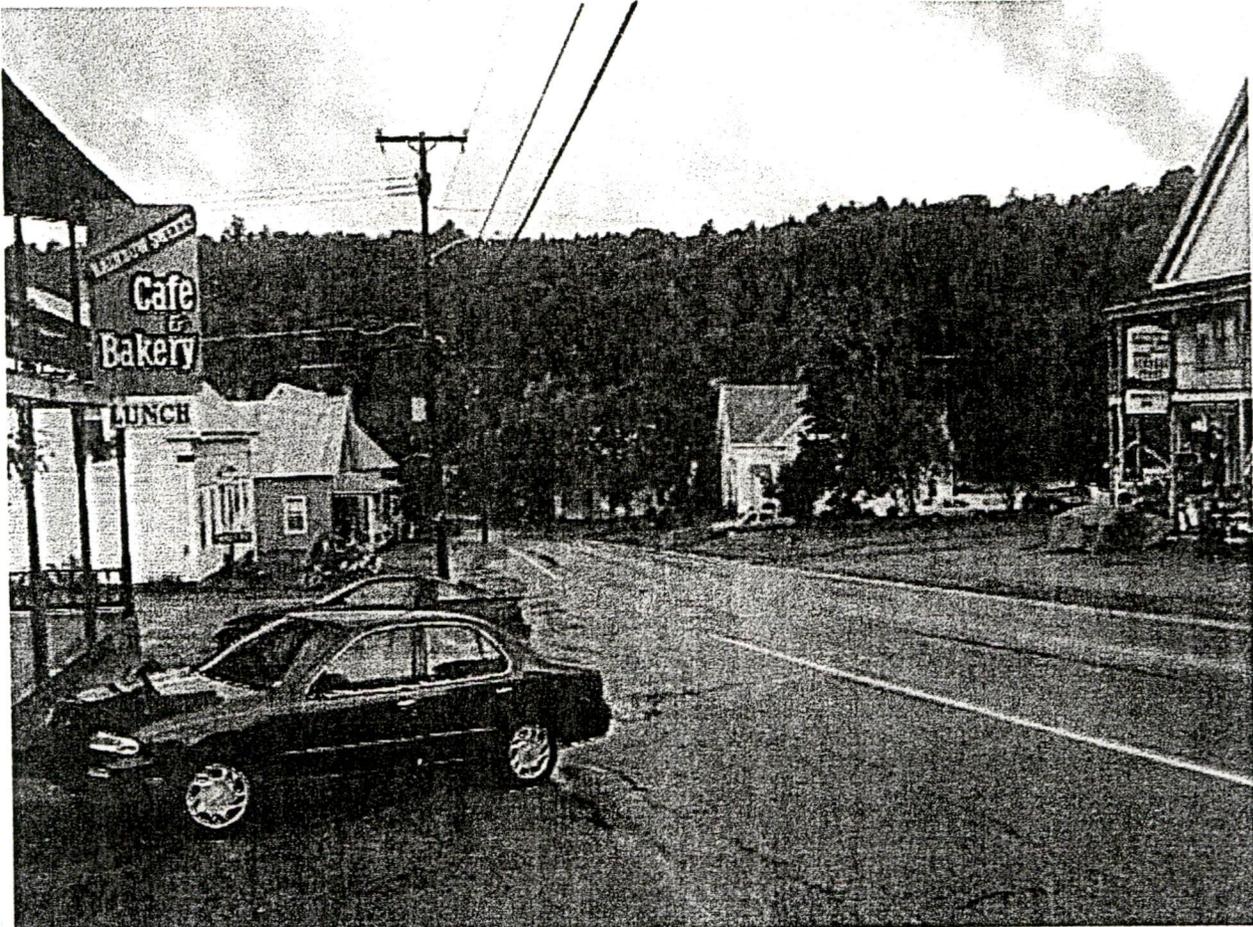
- A. 50 mph traffic from rural area abruptly enters village.
- B. No sidewalks or safe pedestrian area.
- C. Haphazard parking along the roadside.
- D. Old deteriorated sidewalks.
- E. Discontinuous sidewalks.
- F. Cabot Road intersection: confusing traffic patterns and excessive pavement area.
- G. Village Store complex: undefined entrance and egress patterns to Rt. 2 and awkward parking layout.
- H. Bridge over Winooski River has no sidewalk or room for one to be added.
- I. No pedestrian access.
- J. Abrupt entrance from high speed traffic on 3 lane highway into village.



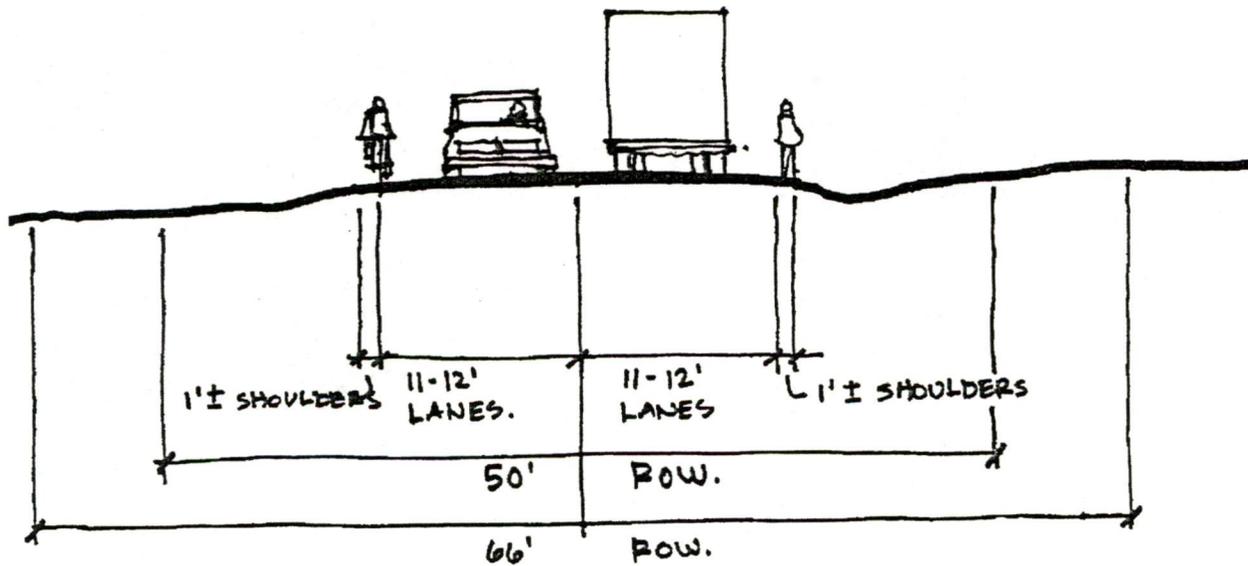




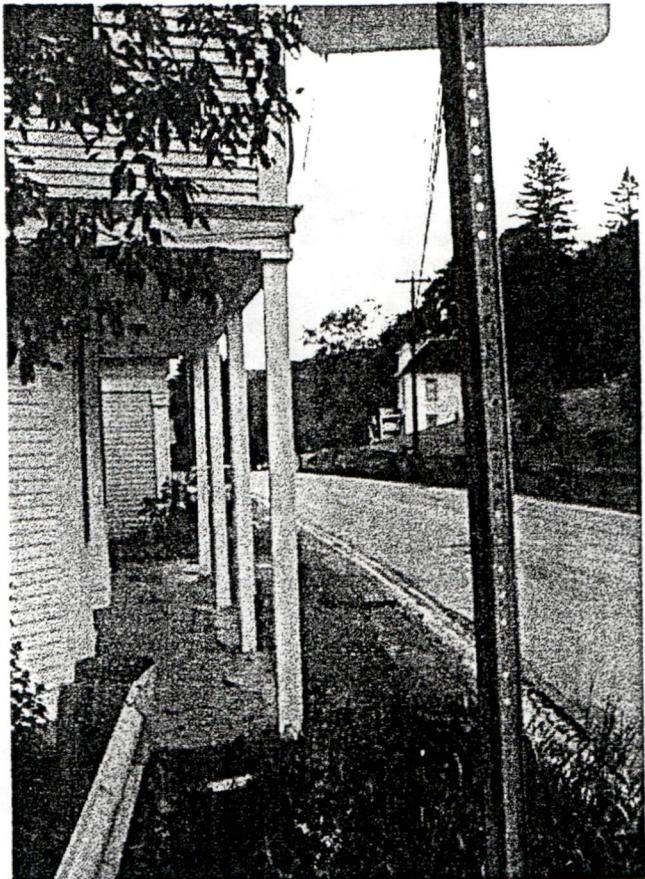
Photographs of existing conditions: Views of the Western Village edge from US 2 looking East



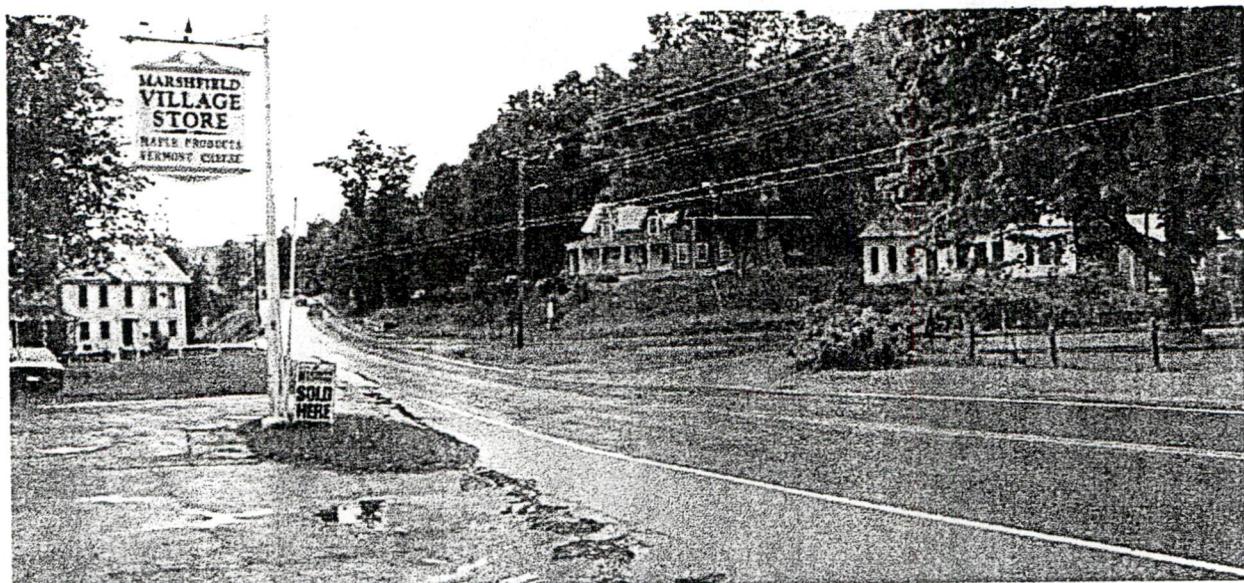
Photograph of existing conditions: Typical street view



Typical Street Cross Section



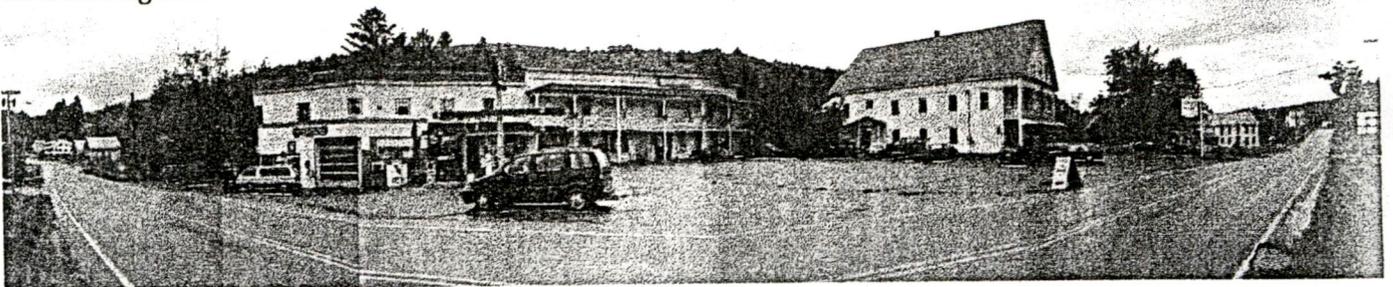
Photograph of existing conditions: Top of Hill



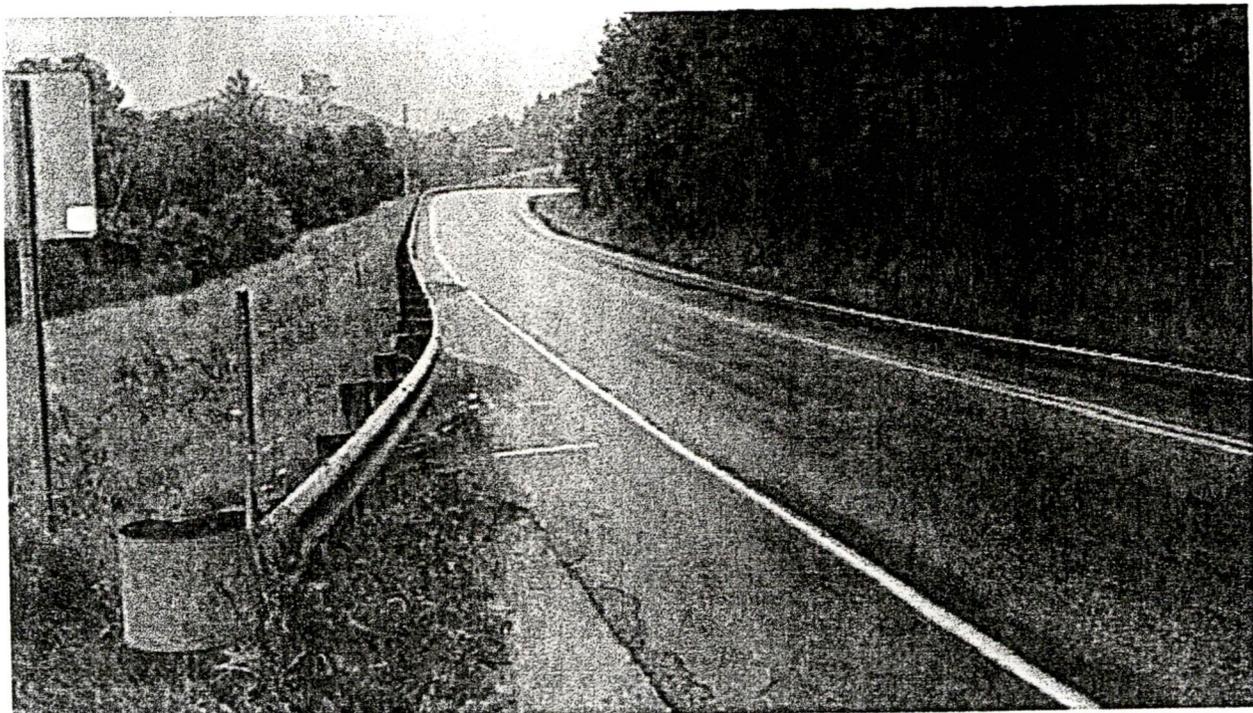
Photograph of existing conditions: Cabot Road / US 2 Intersection, looking west on US 2 past the Village Store complex in the center of town.

US 2 looking east

US 2 looking West



Photograph panorama of existing conditions: The Village Stores



Photographs of existing conditions: Eastern Village edge

3.0 Village Design Alternatives:

3.1 Village Design Concepts for general application

The following concepts are integral to accomplishing traffic calming corridor designs in the villages. As applied to each location, they are implemented in different ways to achieve the desired outcome.

- **Create a village gateway:**
Define a village boundary zone where speeds should be reduced from 50 mph rural speeds to 25 mph village speeds. This should be reinforced with special gateway design treatments and reduced speed limit or advisory posting.
- **Define village street character:**
Make an attractive two lane "village street" with street trees, sidewalks, lighting and other features. This need not be fancy in fact for these villages - the simpler the better.
- **Create pedestrian access facilities:**
Safe and attractive sidewalks, crosswalks with island refuges and/or bulbouts will allow safer walking and will ultimately create more of a walkable community.
- **Enhance the streetscape:**
Simple aesthetic improvements can be done both through efforts of the VAOT as well as local town initiatives. Street trees and corridor landscaping will make the village centers more attractive, and be a better environment for visitors and local residents.
- **Traffic - calm the road:**
A narrower road will slow traffic. This should be maintained through the entire village area. Whenever a paving project or future roadway project is contemplated there should be attention paid to maintaining a narrow. Regularly spaced "constrictions" will assist in this treatment.
- **Traffic calm major intersections:**
Engineered intersection designs should pay special attention to pedestrian and aesthetic features. Turning lanes should be combined with traffic calming splitter islands and pedestrian crossings, street tree and overall streetscape designs instead of painted paved areas that make the road wider.
- **Integrate each transportation element into an overall visually coherent scheme:**
Once a unified visual theme is defined, future improvements to roadways, bridges and other aspects of the US 2 corridor and side roads can be followed - through. The bridge in East Montpelier at the VT 14 south intersection and the US 2/VT 14 north intersection are prime examples of this potential, so that multiple transportation improvements have common design themes and a coordinated appearance.

3.2 Technical Design Parameters Based upon the VT Design Standards.

(Also see appendix: Final Report)

Design speed: Transition from 50 mph rural zone posted speed/design speed to 25 mph village speeds. Gateway features should be visible from 50 mph sight distances for rural areas. A speed transition area from 50 - 40 - 30 - 25 mph should be defined.

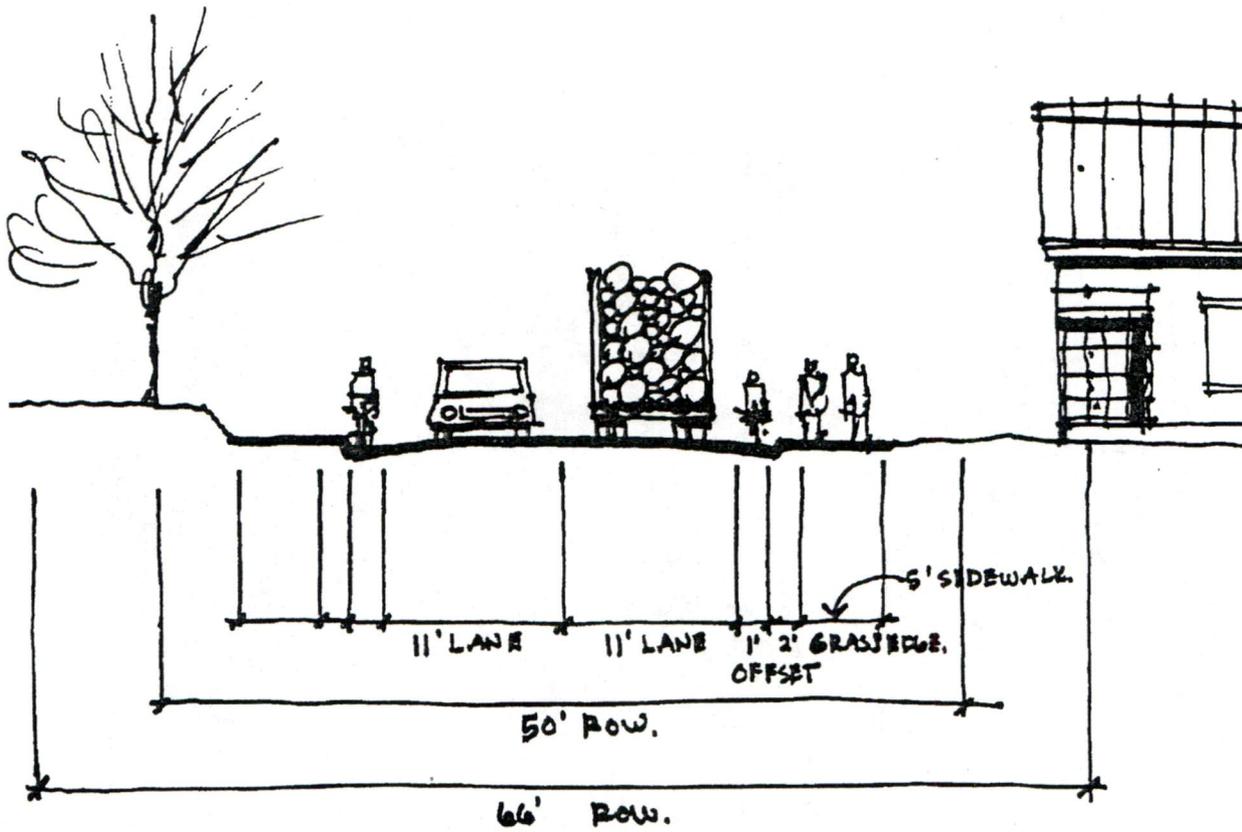
Lane and shoulder widths: 11' lanes typically, with 2' shoulder/offset to curb. the possibility of 4' bike lanes was assessed and it was decided that there would be too much impact upon the narrow village and adjacent houses and stores, and that the wider shoulder would contribute to more speeding. On - street parking should be retained or established to better serve Main Street landuses, as opposed to wide curb cuts and unattractive parking lots.

Sidewalks: 5' minimum sidewalk with either a grass/paved utility strip or curb and gutter. Sidewalks are an essential element of a village setting and a practical need for village residents on busy streets.

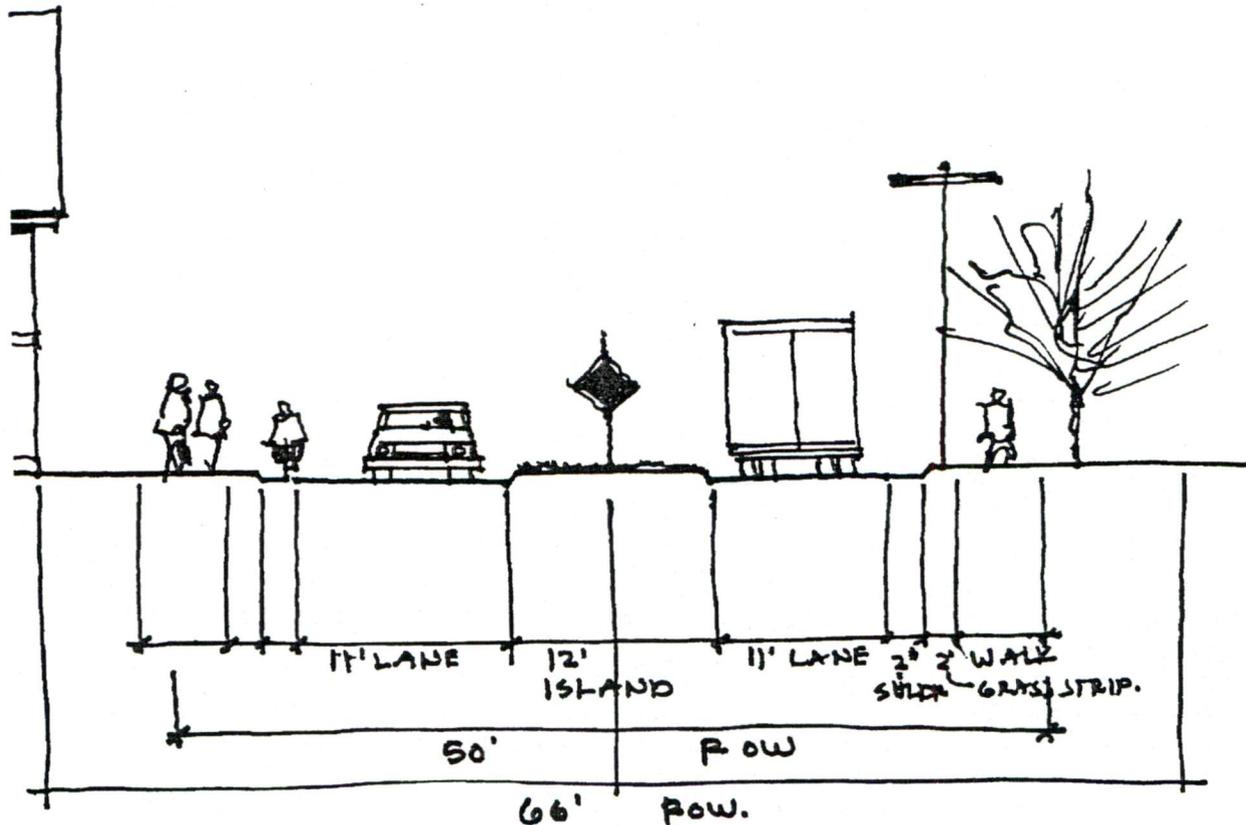
Tree lawn width: Where possible, tree lawns should be a minimum of 6' width, preferably 8-10'. Grass strips can be narrower, even 1-2'.

Stopping sight distance: Coordinate with the transition from 50 mph rural zone posted speed/design speed to 25 mph village speeds.

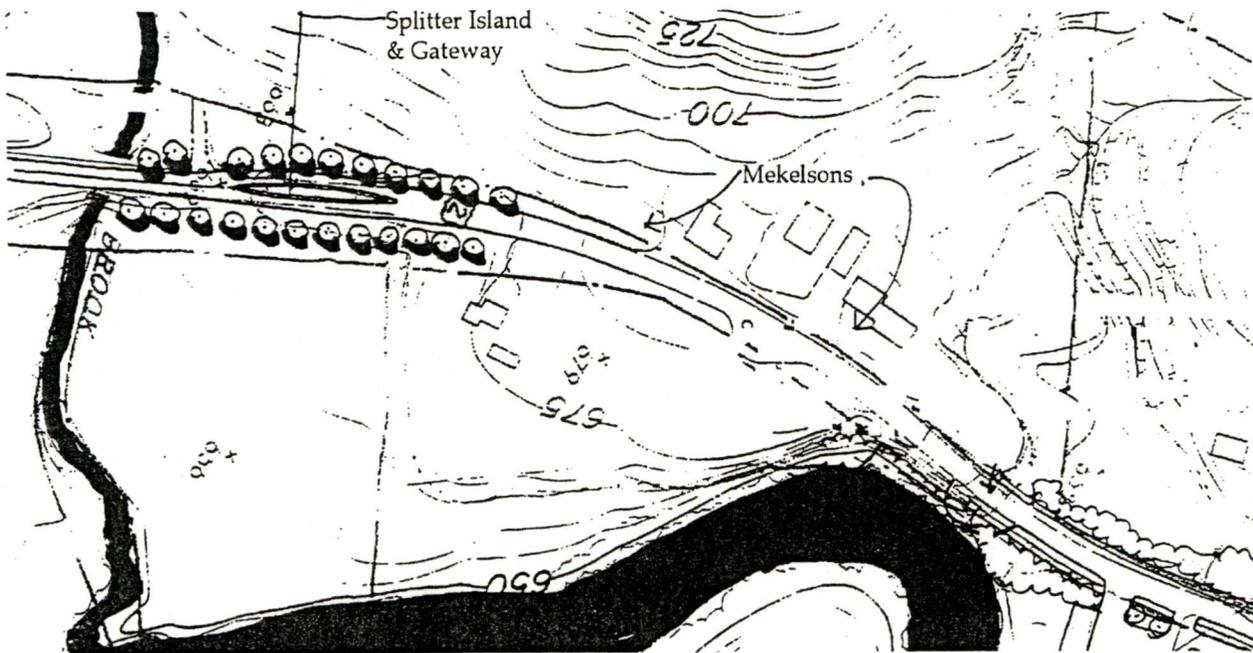
Corner Sight distance: Coordinate with the transition from 50 mph rural zone posted speed/design speed to 25 mph village speeds.



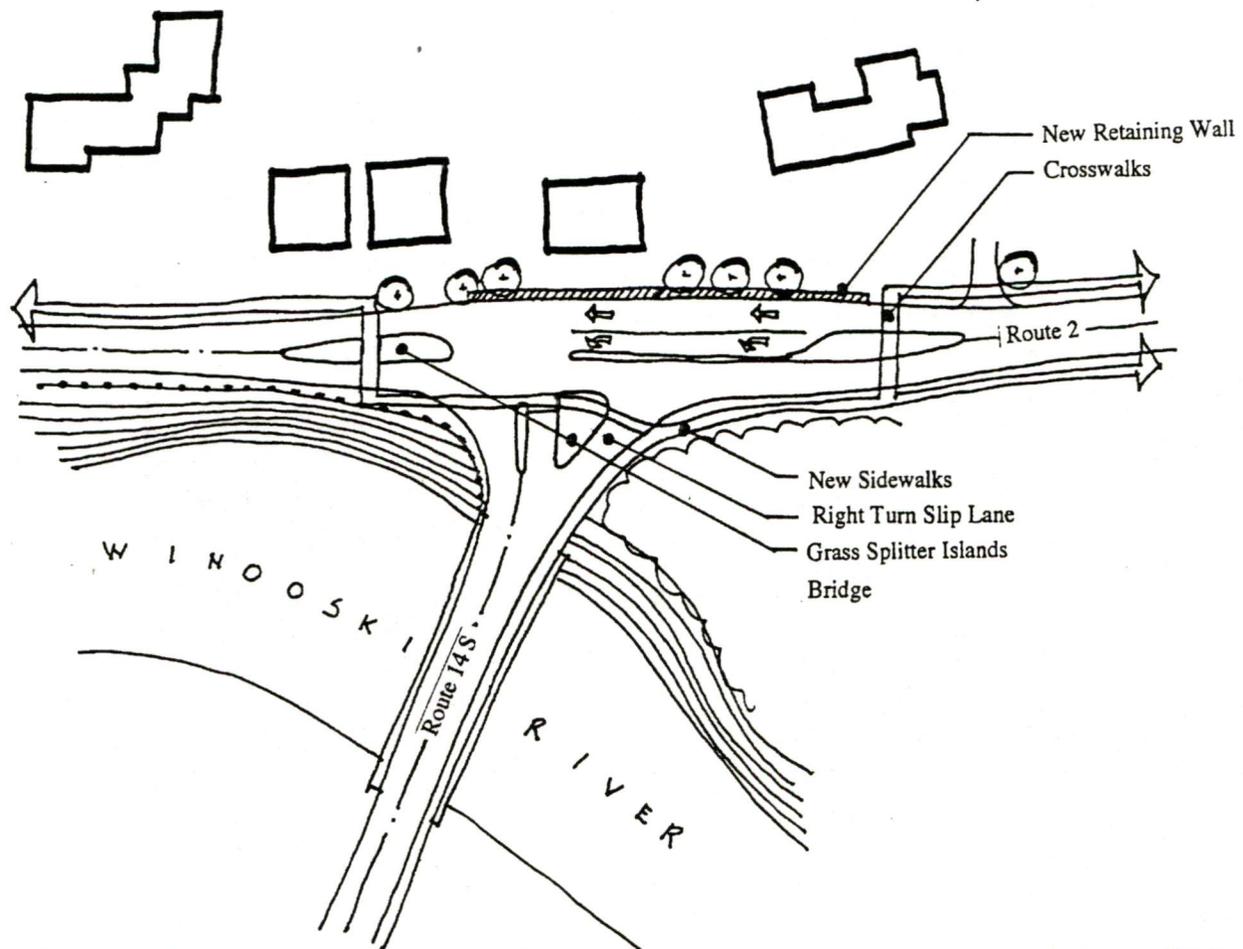
Proposed Typical Street Section (no on - street parking)



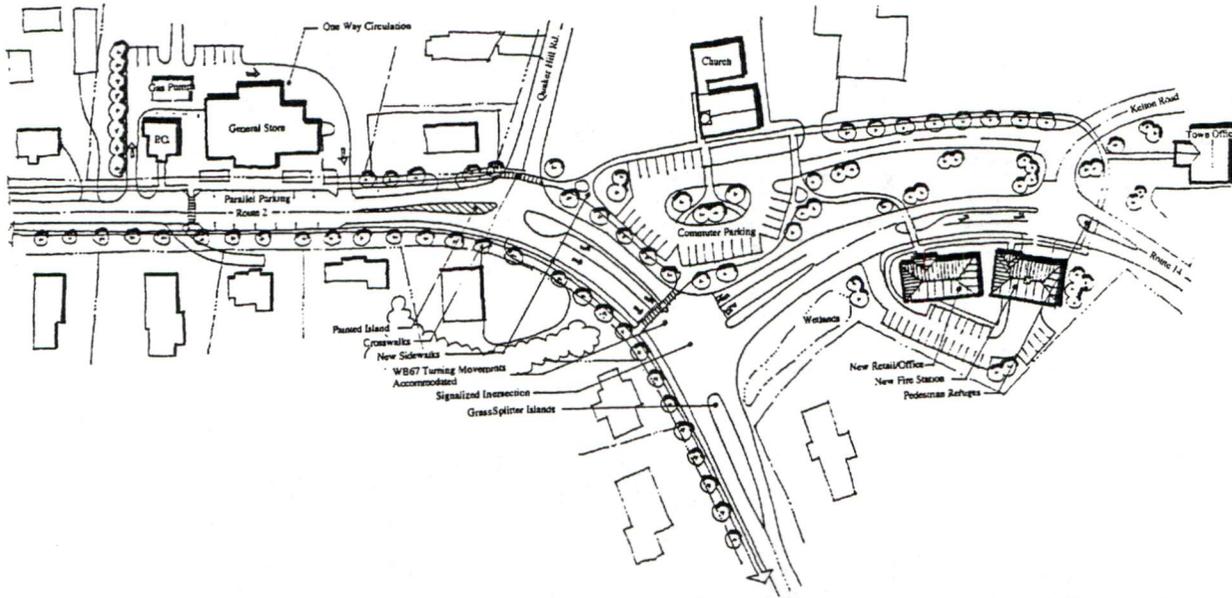
Proposed Section at Gateways and/or Intersections



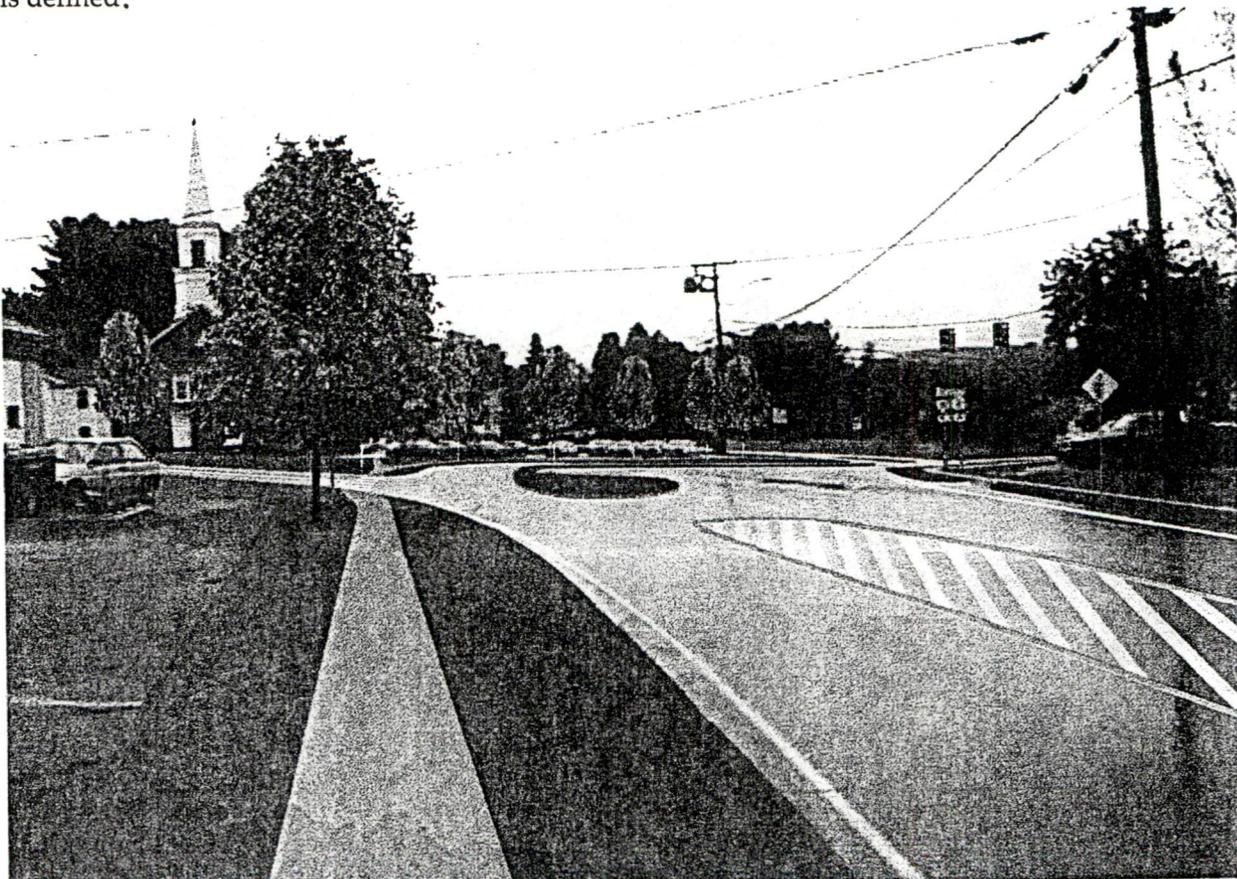
Traffic calming at a Proposed Western Gateway, west of Meckelson's RV



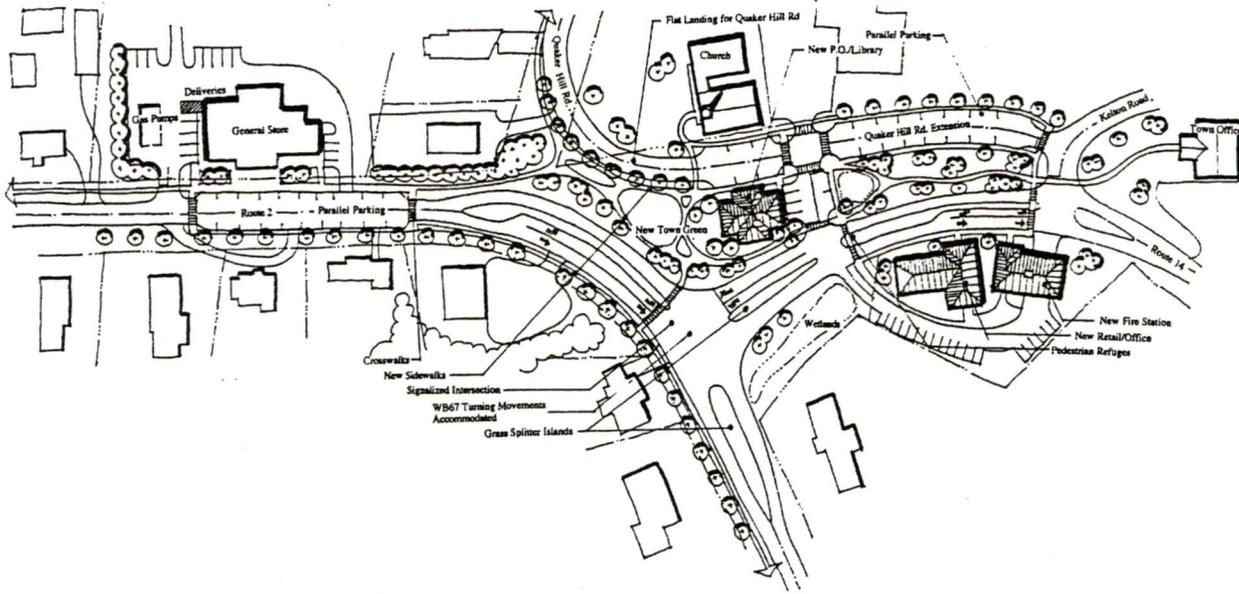
VT 14 south /US 2 intersection concept: splitter islands and a eastbound yield from VT 14 onto US 2. A two lane bridge is shown. A three lane bridge with right turn lane could connect into the eastbound lane onto Rt. 2.



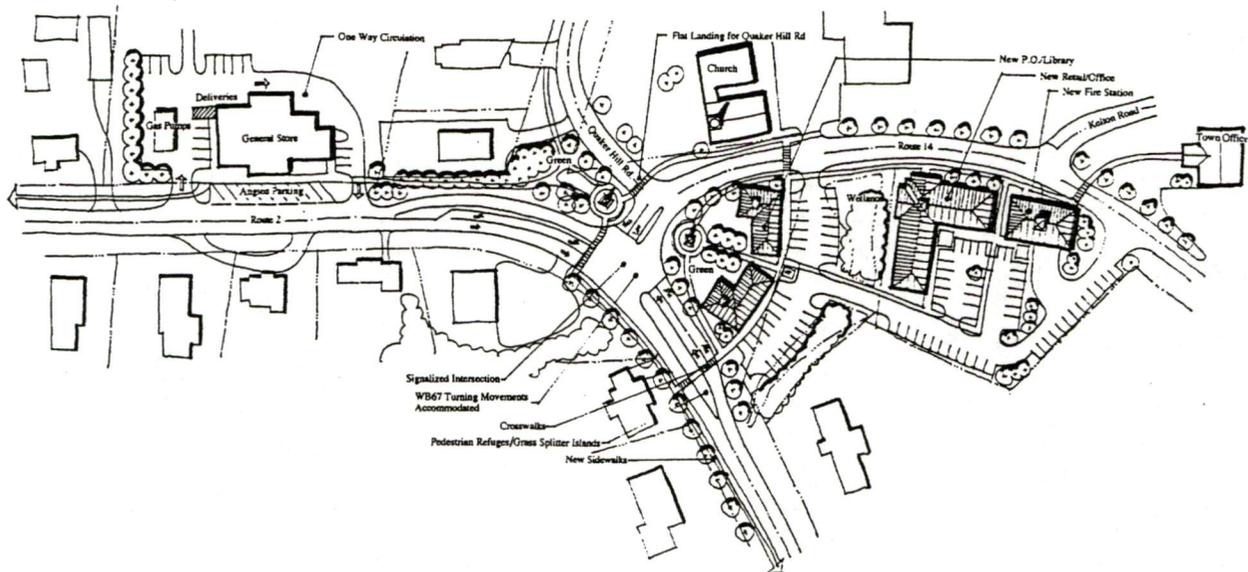
1. **Revised VAOT intersection design:** VT 14 north / US 2 intersection concept: Splitter islands are added to the VAOT scoped intersection design and the parking area is redesigned to create a larger park area to complement the church. A new fire station & a retail/office/community building is developed on the town's property off of Route 14. This is a retrofit of traffic calming to the intersection advocated by the Town of East Montpelier. The Post Office is retained on-site and the gas pumps are relocated to the rear of the parking area and combined access to the PO is provided. On-street parking is defined.



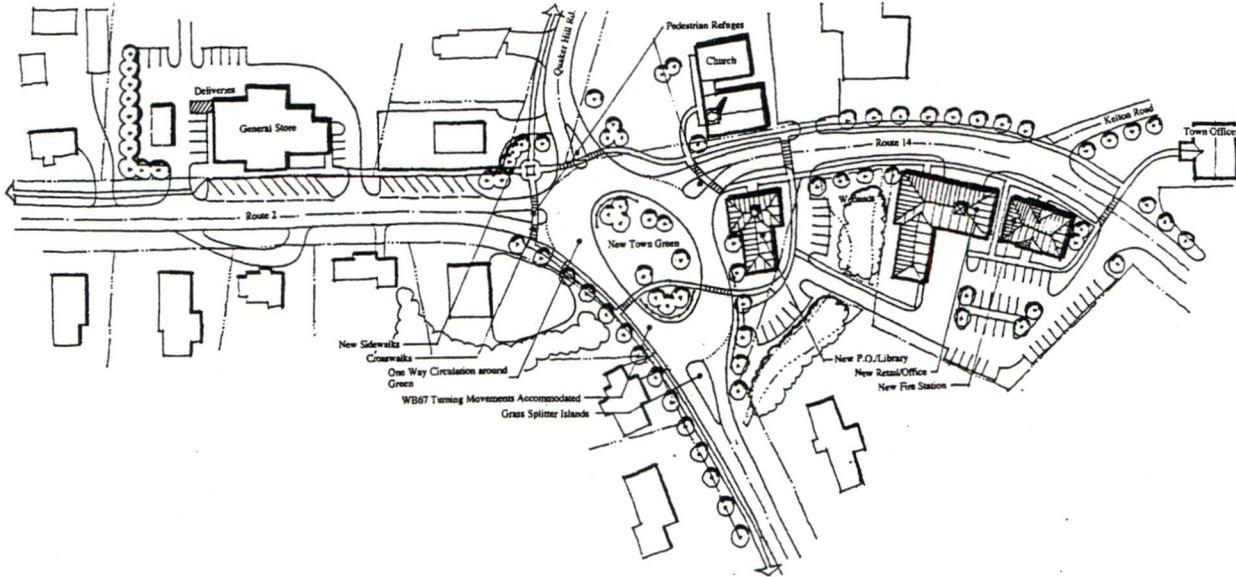
Proposed View from the General Store: Revised VAOT Design



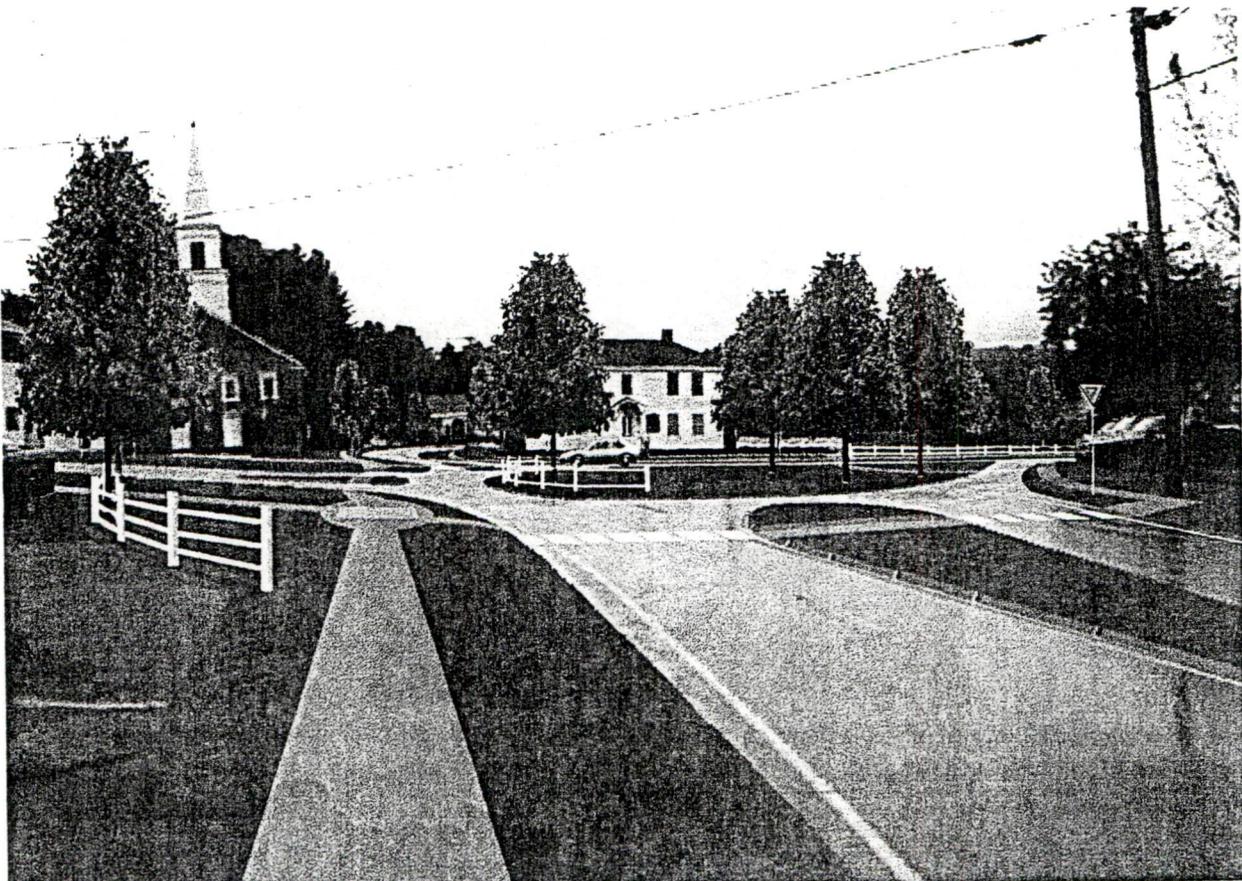
2. **VT 14 north /US 2 intersection concept:** This scheme is a variation on the signalized intersection developed by VAOT, with the difference being that the old location of VT 14 north is preserved, and becomes the lower section of a realigned Quaker Hill Road. A town park or green is created between the roads. Across VT 14 from the Town Hall is located a new fire station. Traffic calming islands and pedestrian crossings are added to the US 2 & US 14 corridors. Relocation of the Post Office to new larger quarters on the new Green allows the relocating the gasoline pumps to the old PO site next to the store. On street spaces are defined for the store and US 2 is shifted 4-6' east to allow space for a wider shoulder for pull - in/out from parking spaces.



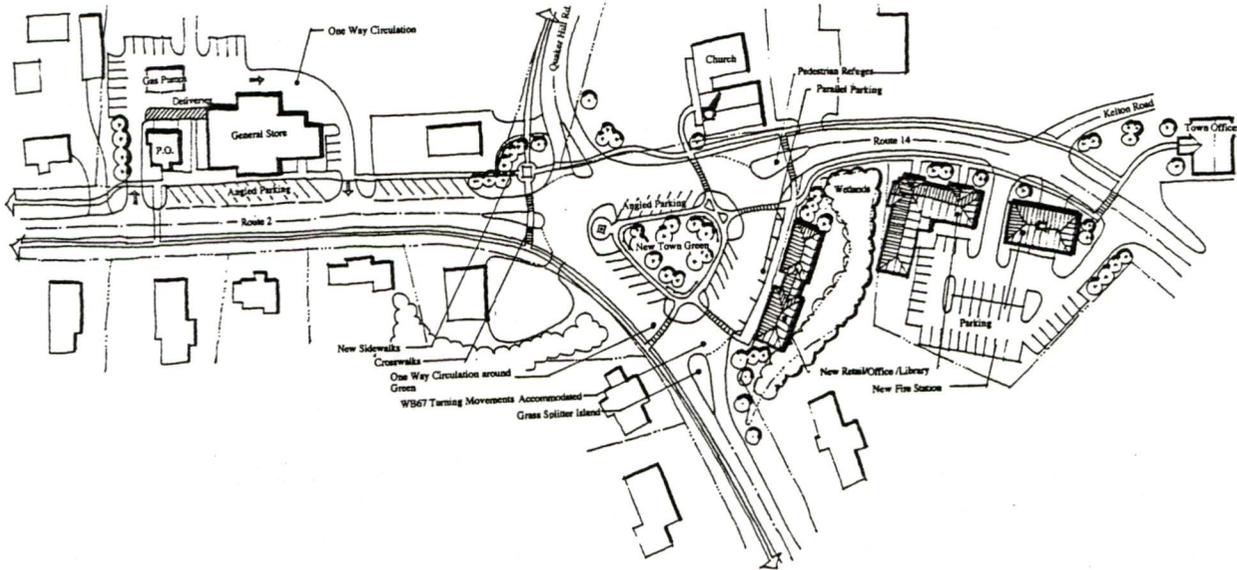
3. **VT 14 north /US 2 intersection concept:** This plan maintains the existing Rt. 14 alignment, but curves the bottom of Quaker Hill Road eastward, lengthening the bottom, and flattening the foot of the hill, and creating a new community green space on either side of the intersection. Relocation of the Post Office to new larger quarters within a larger Public/Private Development to the east allows relocation of the gasoline pumps to the PO site next to the store. On street spaces are defined for the store and US 2 is shifted 4-6' east to allow space for a wider shoulder for pull - in/out from parking spaces.



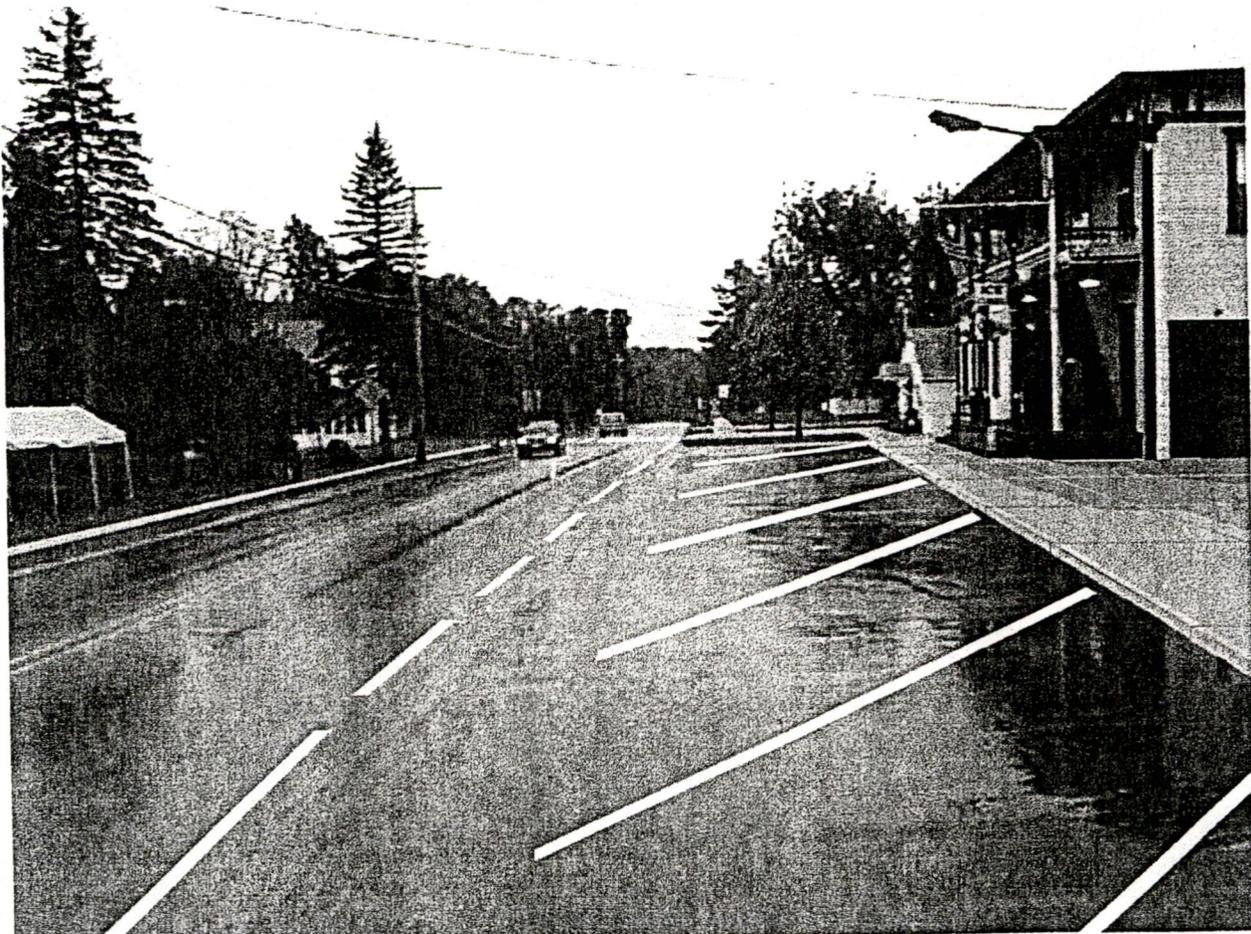
4. **VT 14 north/US 2 intersection concept:** this scheme creates a new town green at the eastern edge of the village around which circulates one-way traffic in a roundabout like pattern. A new Post Office is located at the intersection, and off-street parking is located on the back side of the building. Similar to Plan B, new public facilities and private development are also shown off VT 14 north and the Near the Town Hall. Relocation of the Post Office to new larger quarters to the east and moving the gasoline pumps to the PO site next to the store. On street spaces are defined for the store and US 2 is shifted 4-6' east to allow space for a wider shoulder for pull - in/out from parking spaces.



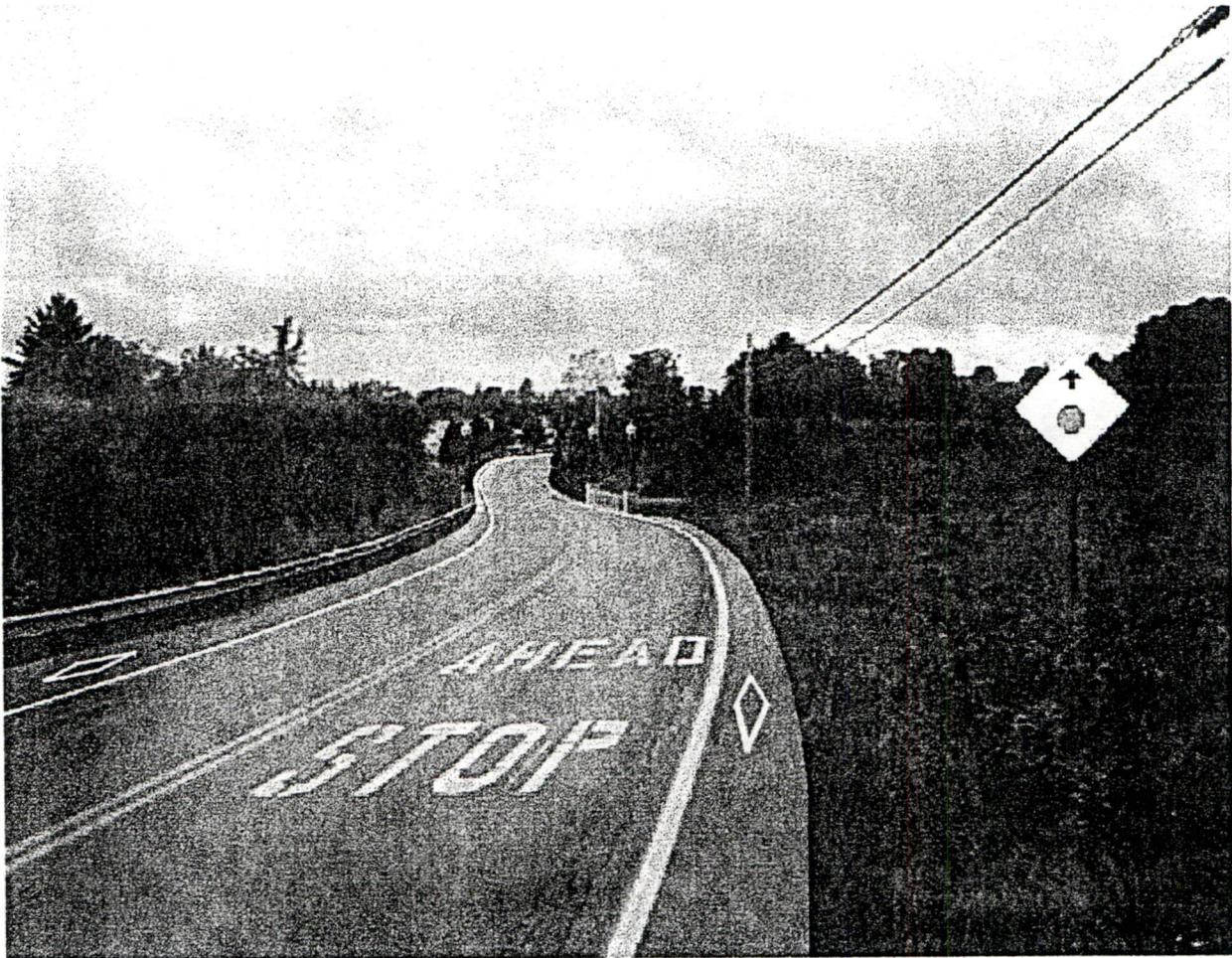
Proposed View from the General Store: Alt.4



5. **VT 14 north /US 2 intersection concept:** a variation of Plan C, this scheme locates the new Post Office within the town green surrounded by on-street parking and one way traffic. Additional new private development is shown facing Main Street, looking westward. Islands are shown for pedestrian safety at crossings. The Post Office is retained on - site and the gas pumps are relocated to the rear of the parking area and combined access to the PO is provided. On- street parking is defined



Proposed View of the General Store: Alt.5

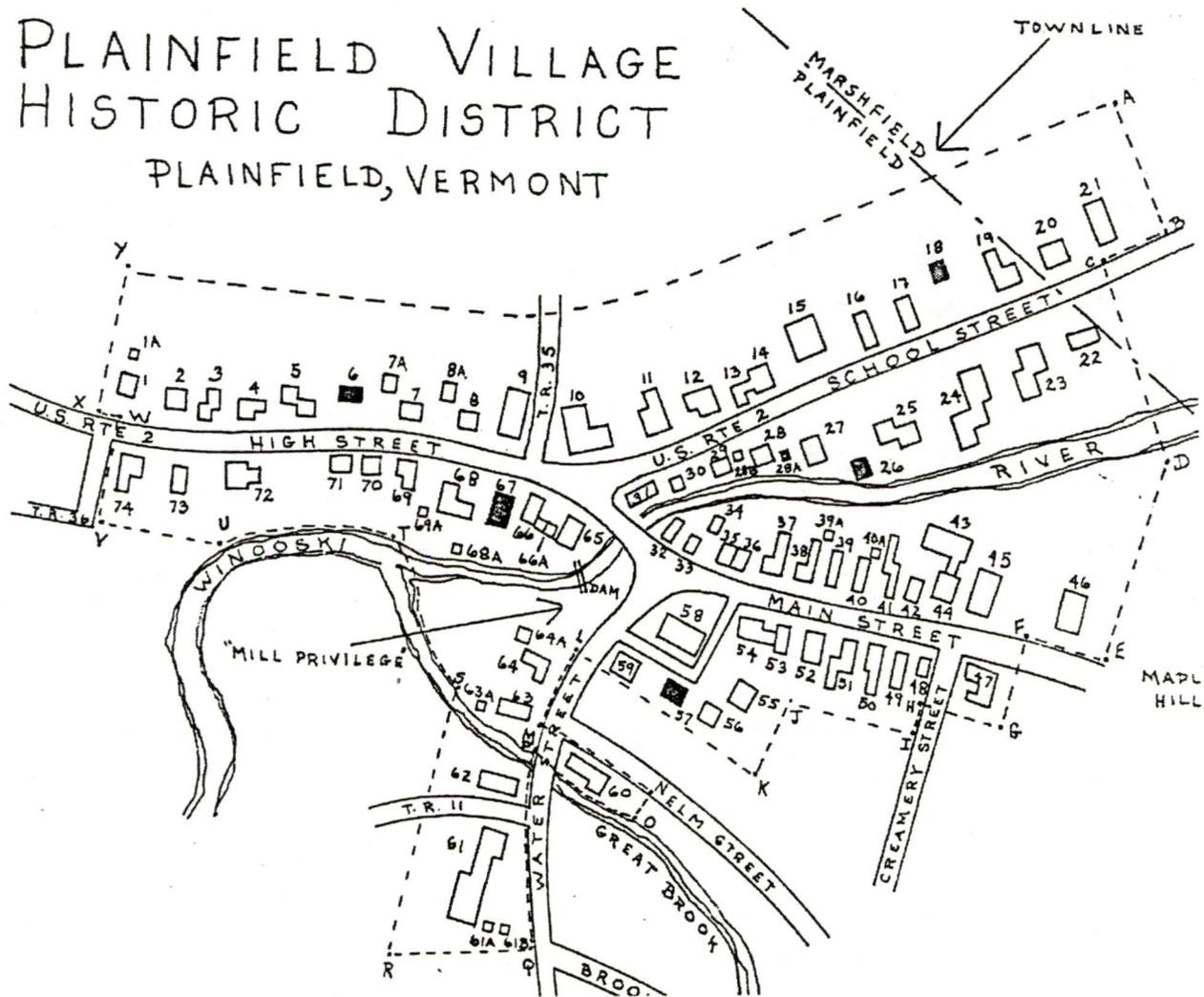


Eastern Gateway: street level view

3.4 Village Designs:

Plainfield

PLAINFIELD VILLAGE
HISTORIC DISTRICT
PLAINFIELD, VERMONT

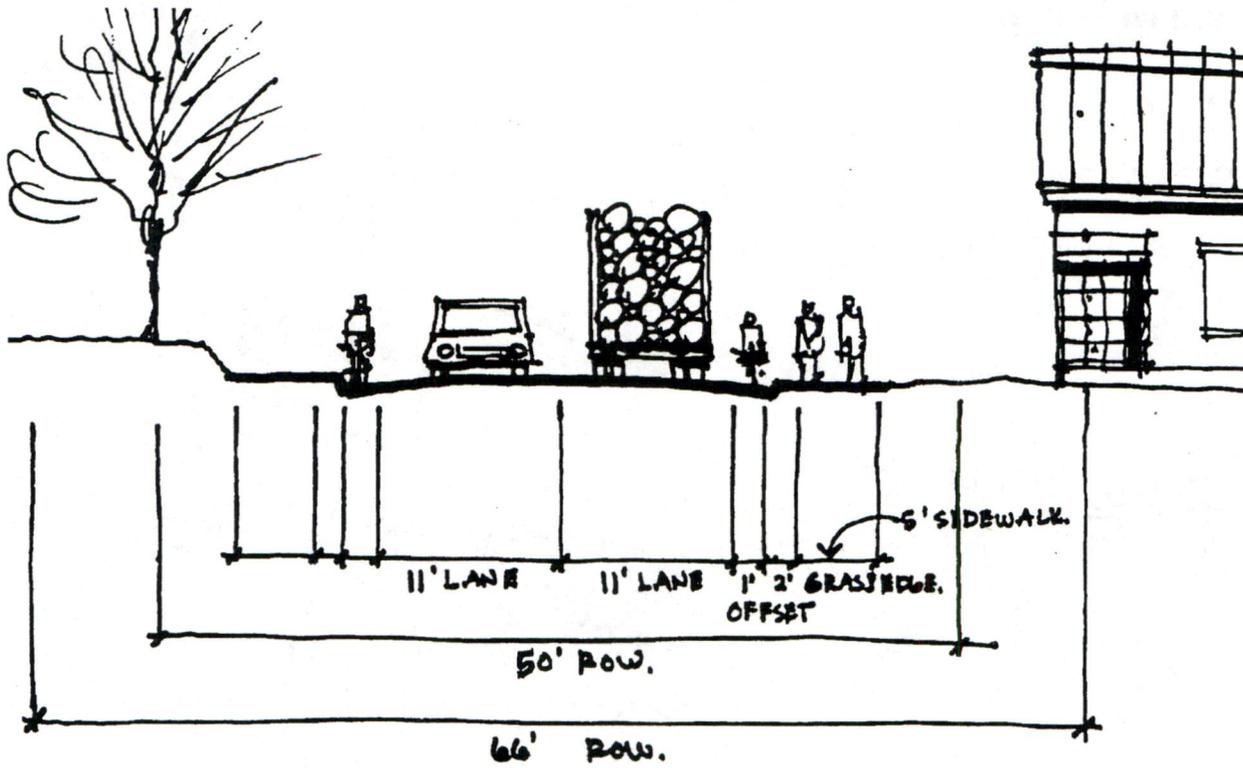


Plainfield Village Historic District

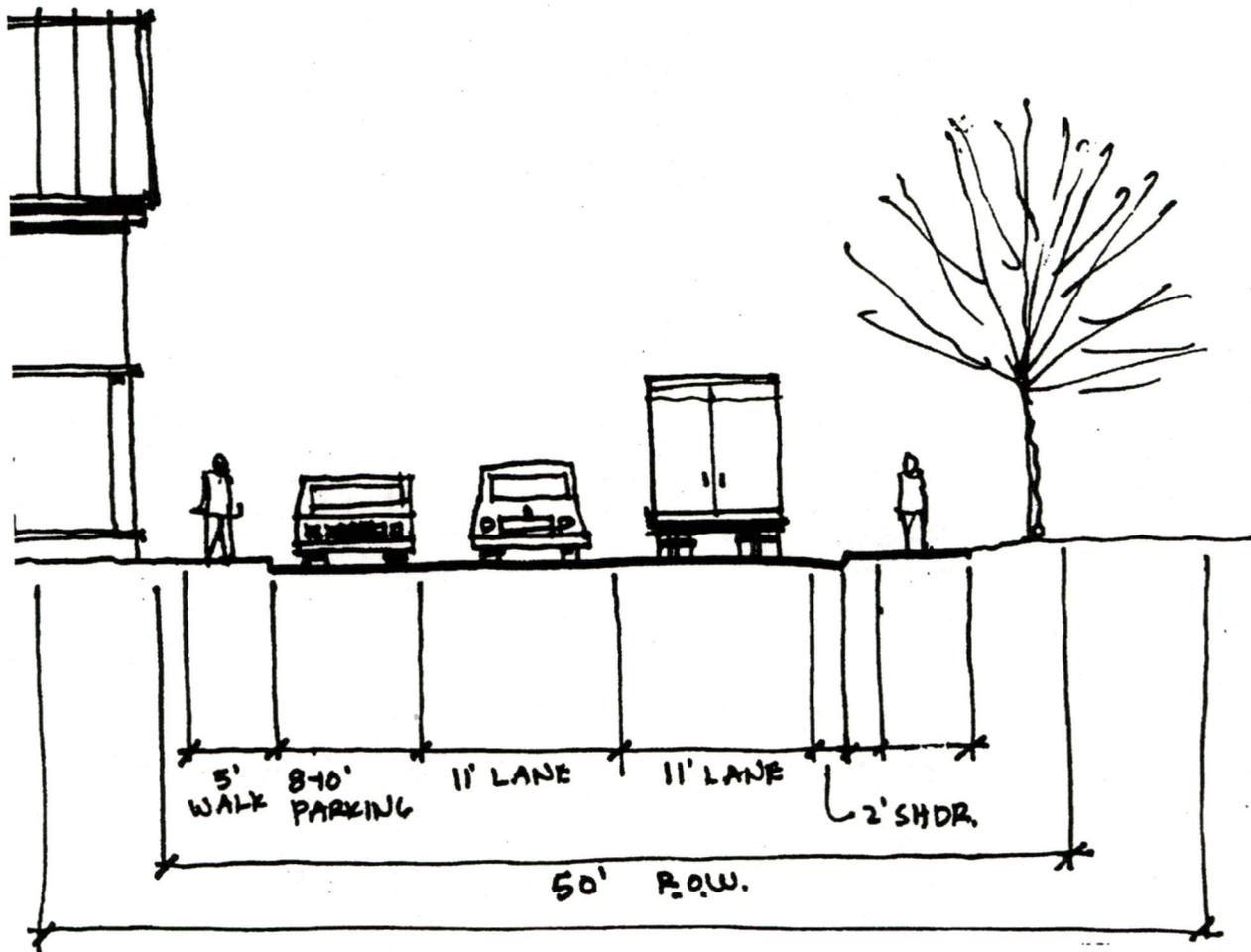
Design Concept:

The Plan for Plainfield includes several areas of improvements:

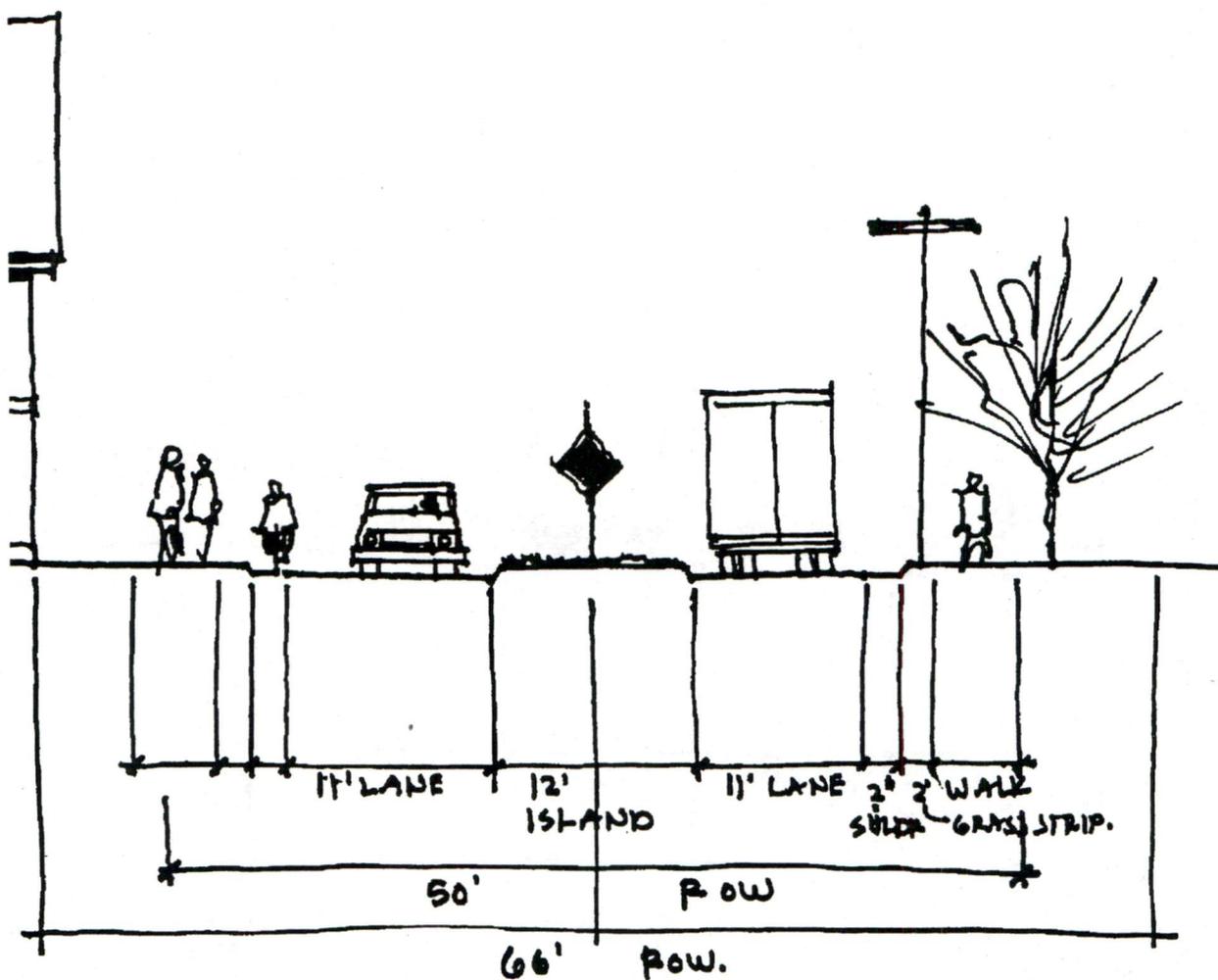
- A traffic calming gateway located at the west end of the village near the US 2/VT 214 intersection near the entrance to Goddard College.
- A Main Street design for pedestrian improvements such as sidewalks and crosswalks.
- Improvements to the US 2/School Street intersection near the Town Hall and the Plainfield Hardware Store.
- A traffic calming gateway at the Eastern Edge of the village.



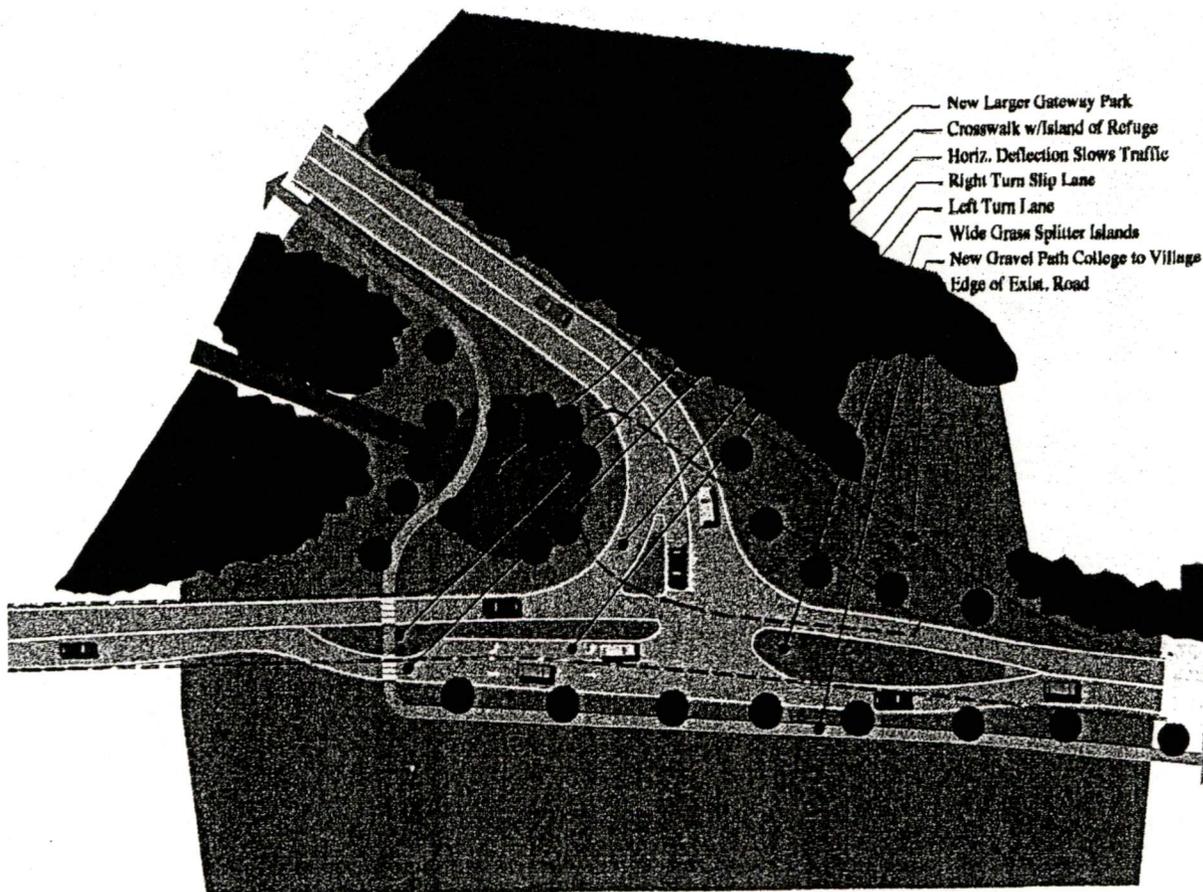
Proposed Section without On-Street Parking



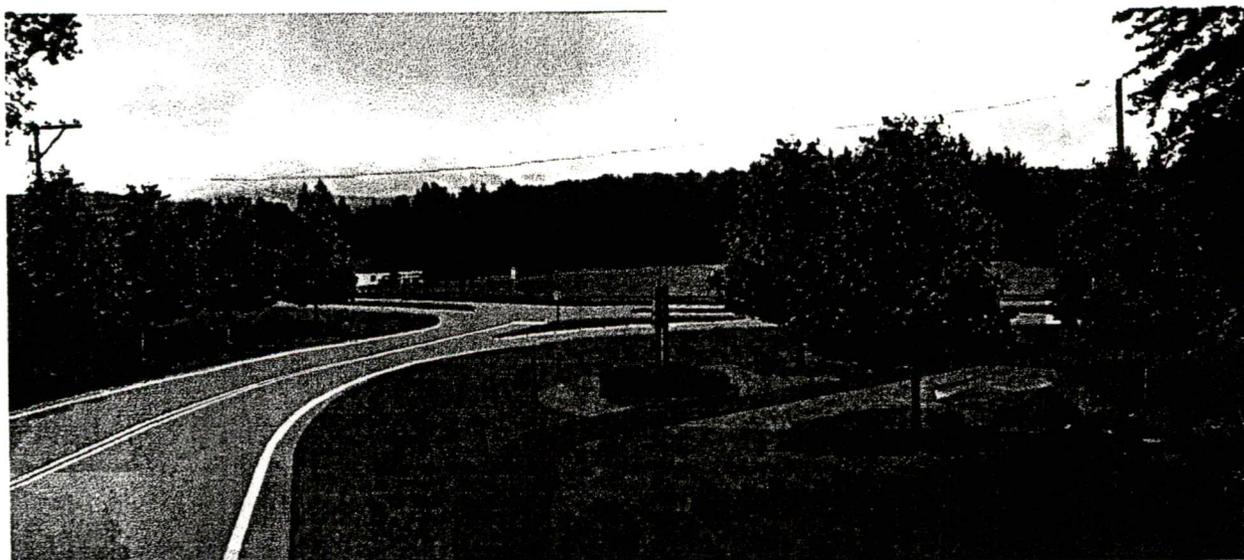
Proposed Section with On-Street Parking



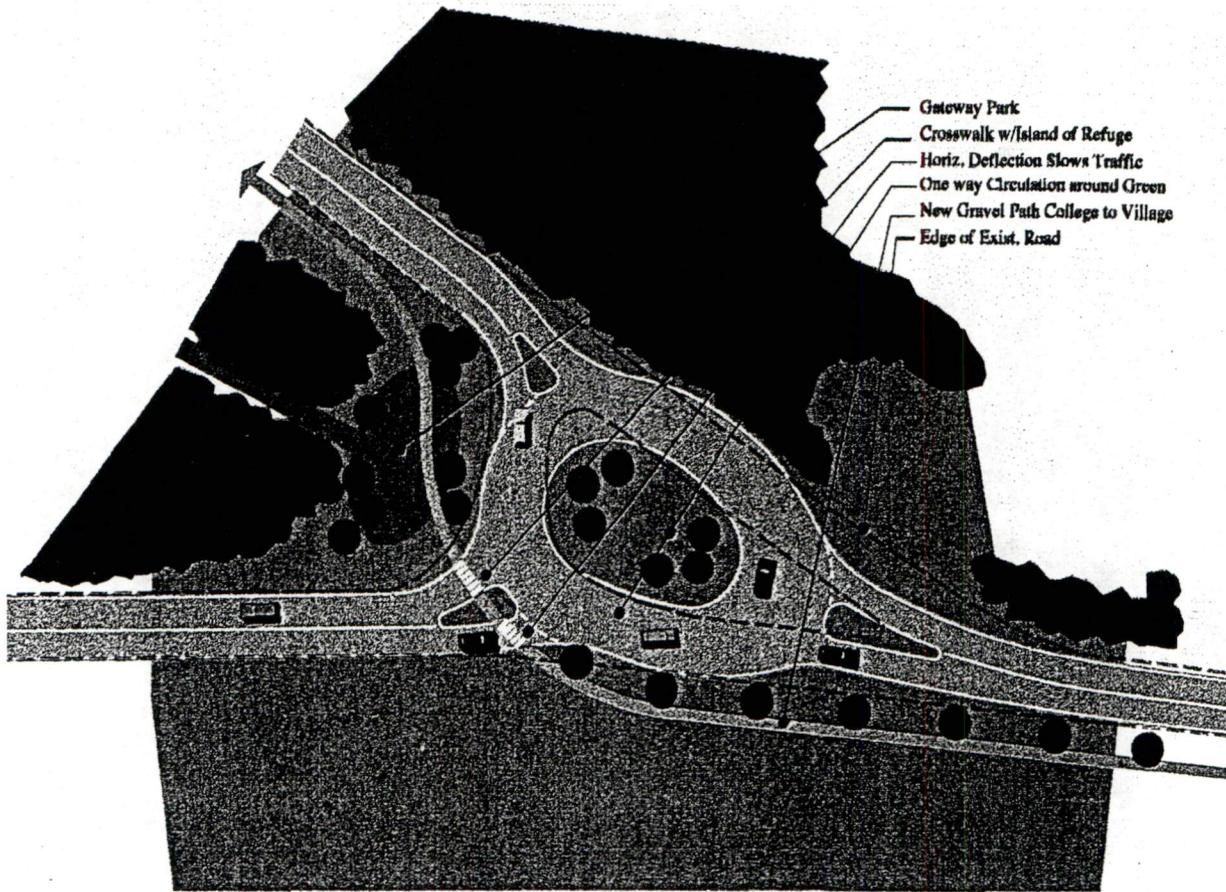
Proposed Section at Gateways or Intersections



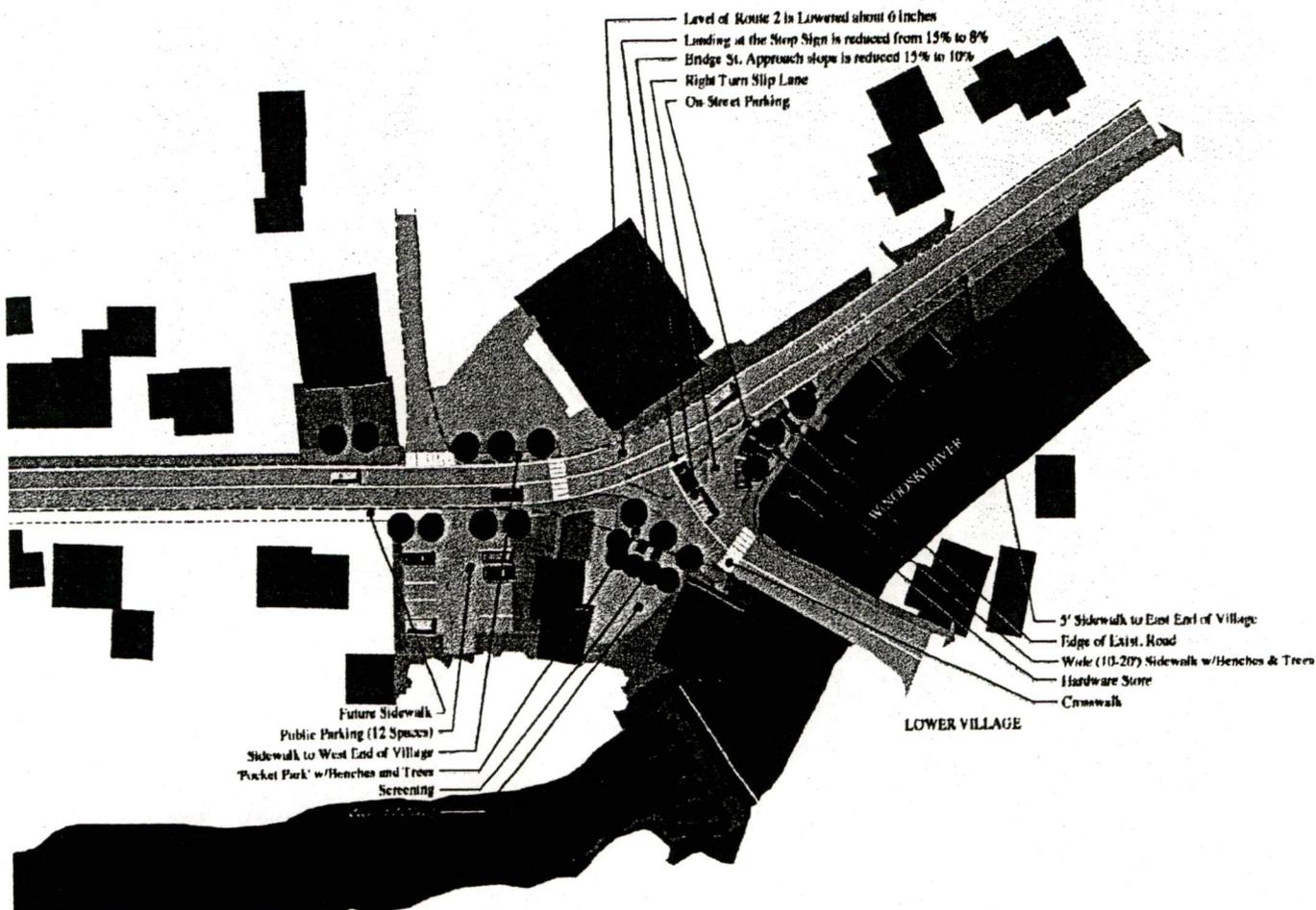
Alt. 1: Western Gateway Location: this scheme defines a T-intersection integrated with traffic calming splitter islands on US 2 eastbound. The intersection location is shifted eastward from the existing location to increase sight distance to the intersection from the west. An additional benefit of this plan is the increased area for a landscaped gateway to the village and Goddard College. The plan is integrated with the VAOT/town funded sidewalk project.



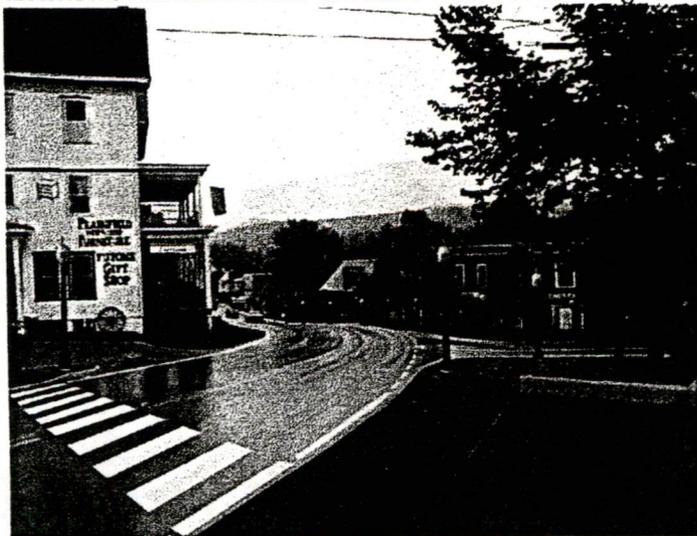
View Of Alternate 1 Intersection from the North



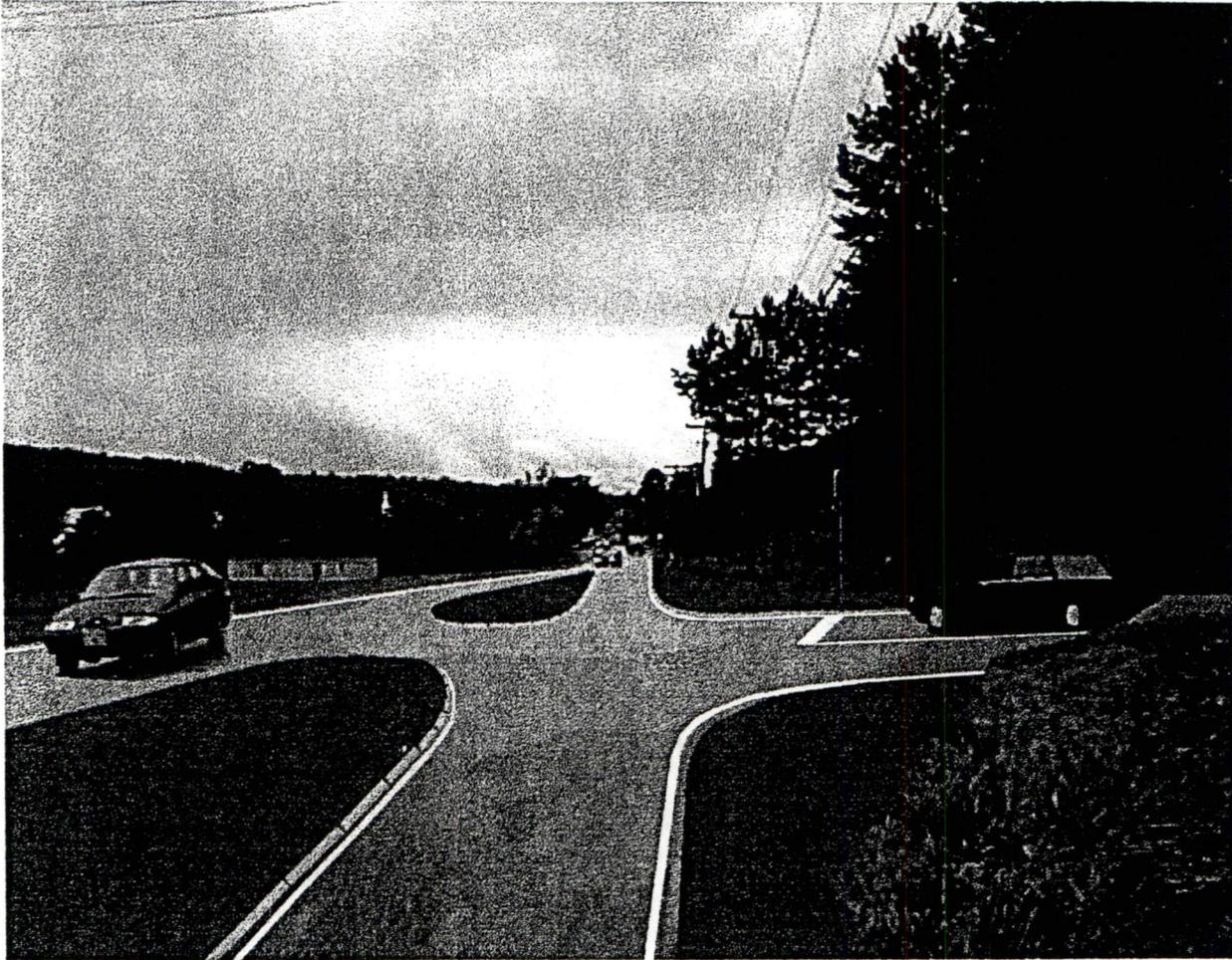
Alt. 2: Western Gateway Location: A modified roundabout plan that uses the outline of the existing intersection . Traffic circulates in a simple one - way loop, instead of the confusing and dangerous two - way triangle intersection.



US 2 / Main Street Intersection: This scheme defines a 'T' shaped intersection, instead of the existing 'Y' intersection. It is accomplished by relocating the intersection center eastward along US 2, taking advantage of the lower grade at that location to reduce the slope on Main Street. More non-vehicular space is created by squaring up the legs of the intersection and adapting it's sides for enhanced pedestrian access and traffic calming. Also, by bringing the intersection to a closer T, Route 2 sight distances are increased and crossing distances are decreased for better safety and convenience. The intersection also provided an attractive gateway to the Lower Village with increased landscaping and pedestrian connections. Four on- street parking spaces are provided for the Hardware Store, which is an increase in number and are safer than the existing ones.



View of Intersection from the West



View of Proposed Eastern Gateway to Plainfield looking West (within Town of Marshfield)

3.5 Village Designs:

Marshfield

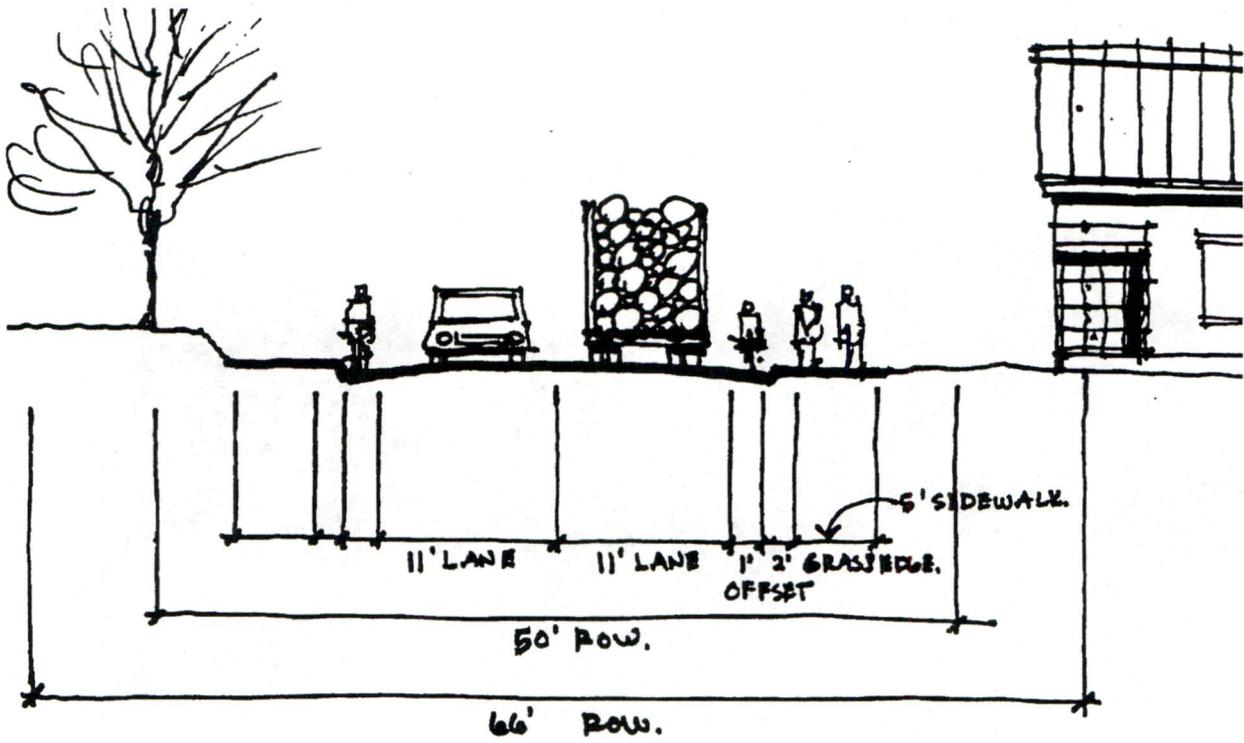


Historic Photographs of Marshfield Village Common

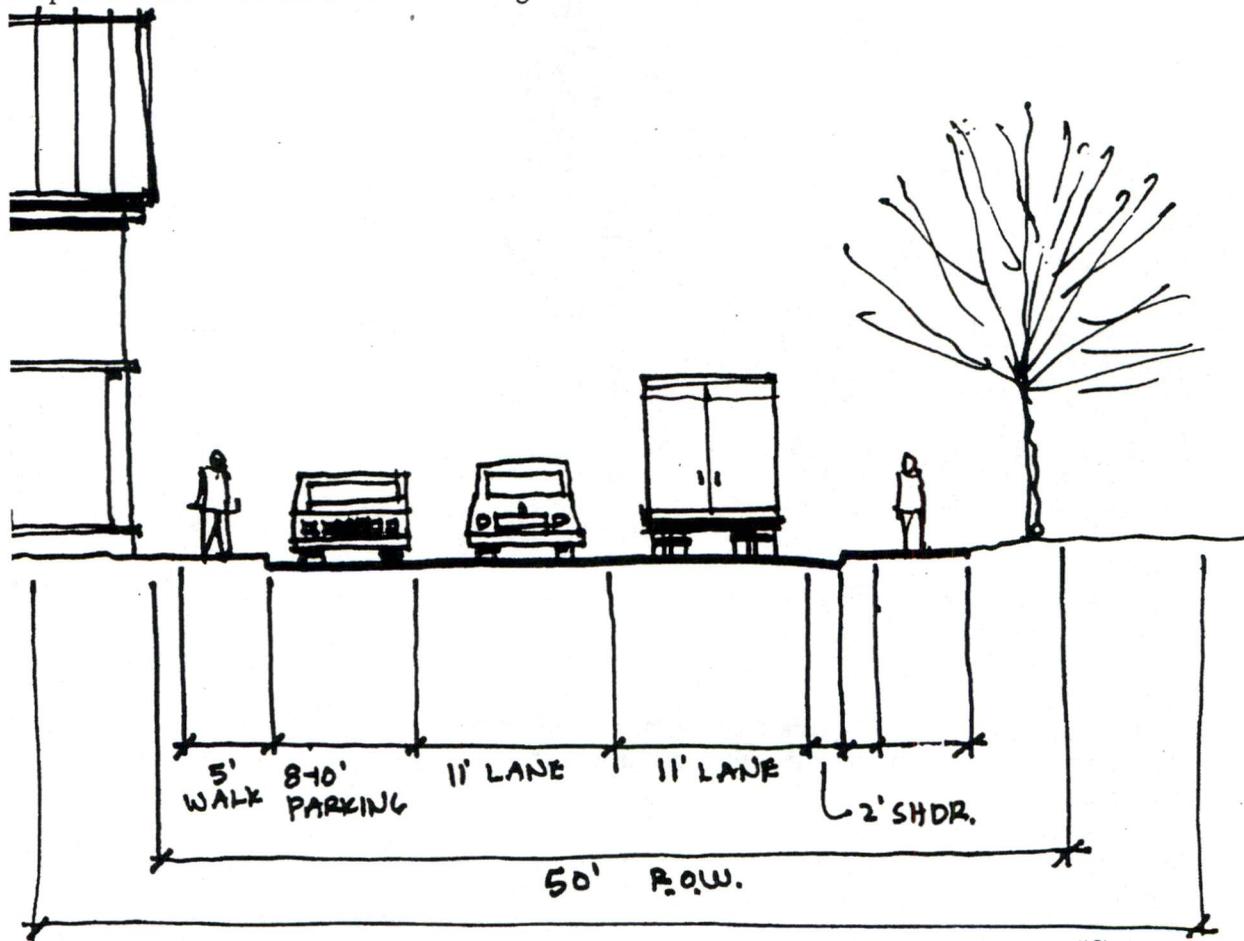
Design Concept:

The Plan for Marshfield includes several areas of improvements:

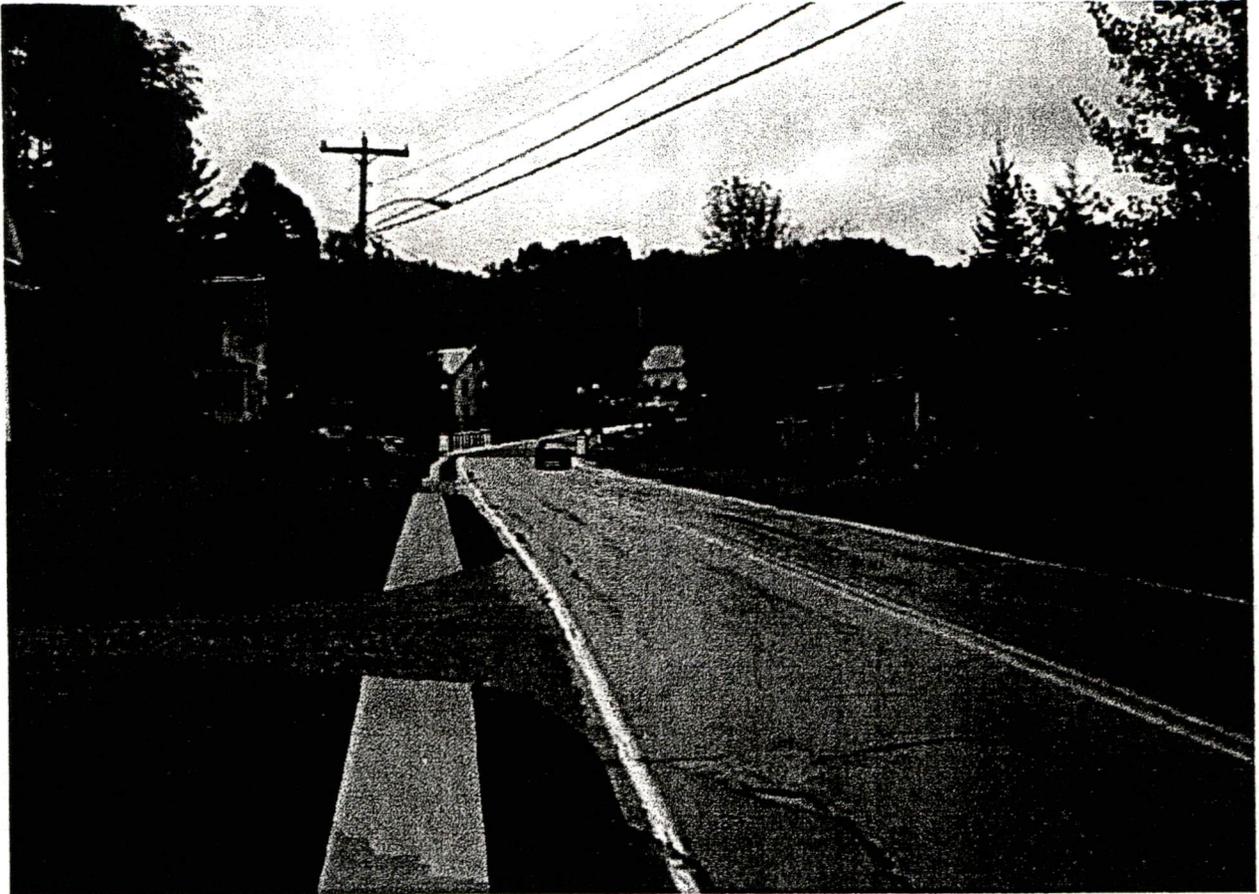
- A Western Gateway at the bridge at the foot of Main Street.
- A Main Street design for on-street parking, traffic calming, and pedestrian improvements up the hill.
- Improvements to the Cabot Road intersection for traffic calming and safer pedestrian access.
- To revitalize the historic town green that was in this location.
- Improvements to the Village Store complex in the center of town for improved access, simplified parking and circulation and aesthetics.
- Pedestrian improvements for the Eastern end of the village including a footbridge over the Winooski River and sidewalk connection to the eastern village edge.
- A Traffic calming gateway at the Eastern Edge of the village where the three lane highway transitions to the two lane village road.



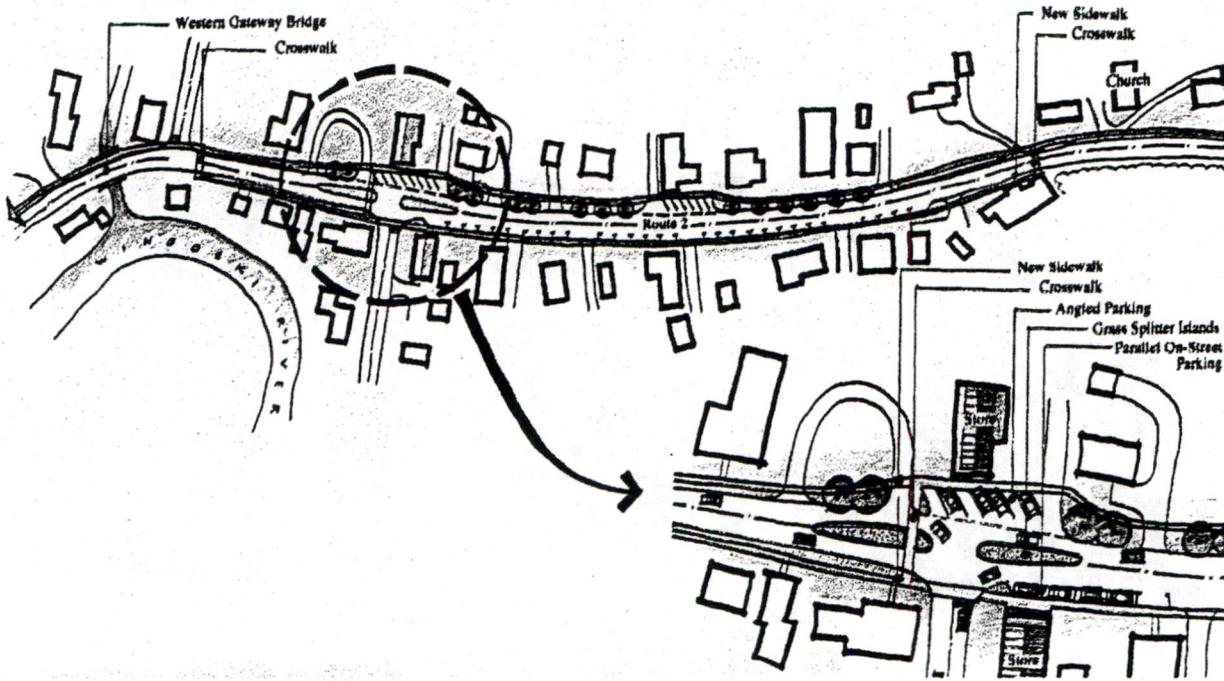
Proposed Section with no On-Street Parking



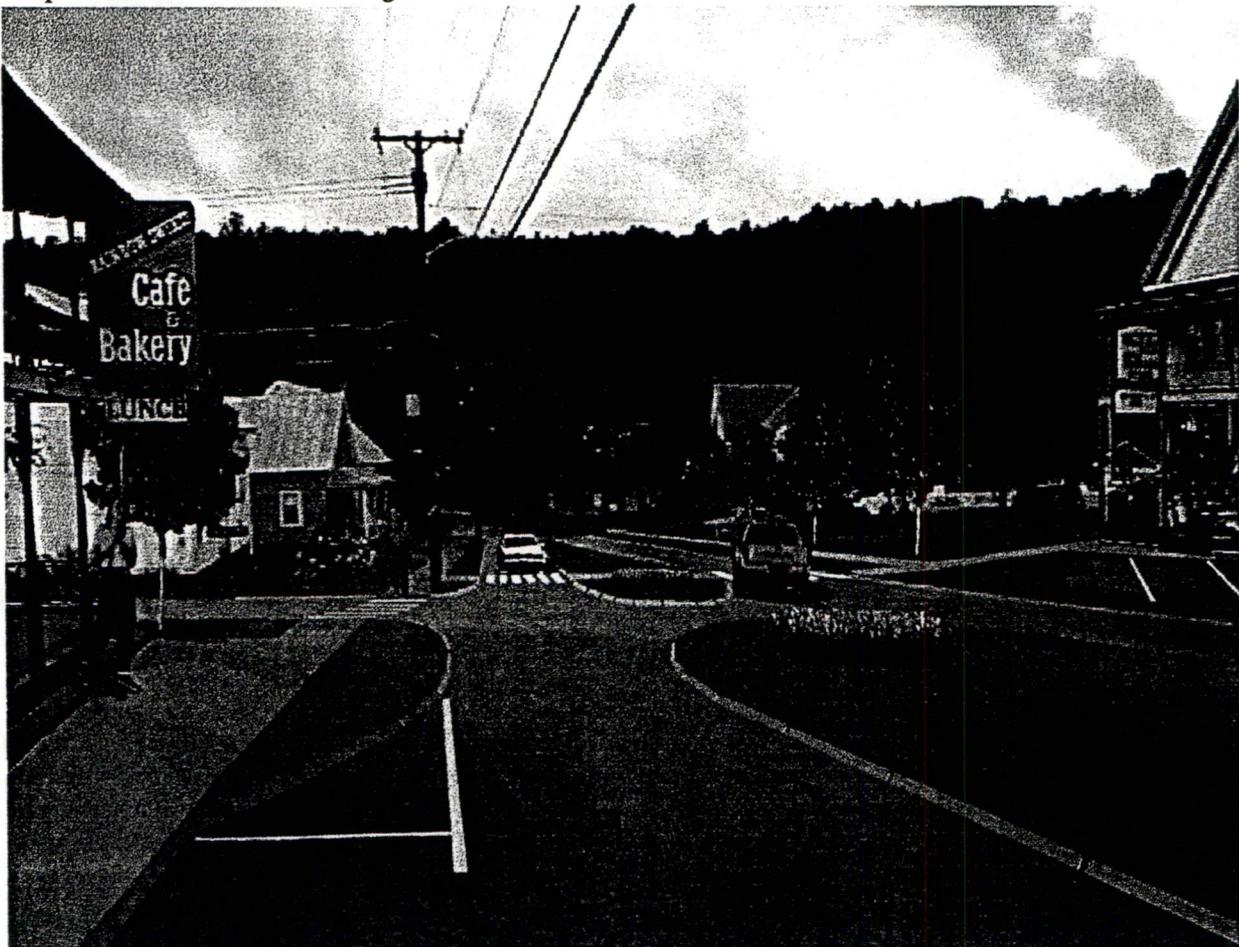
Proposed Section with On-Street Parking



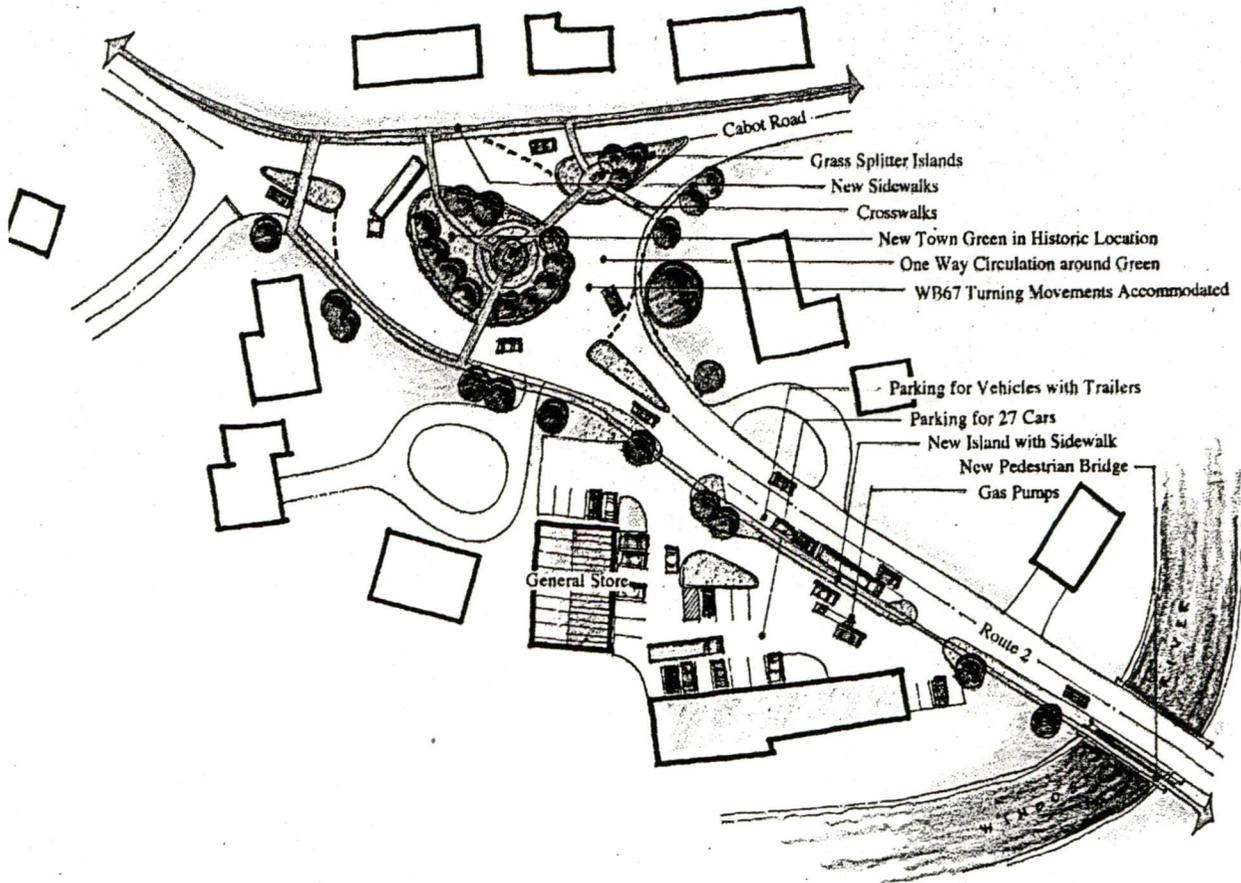
Proposed Western Gateway



Proposed Plan at Western Village Area

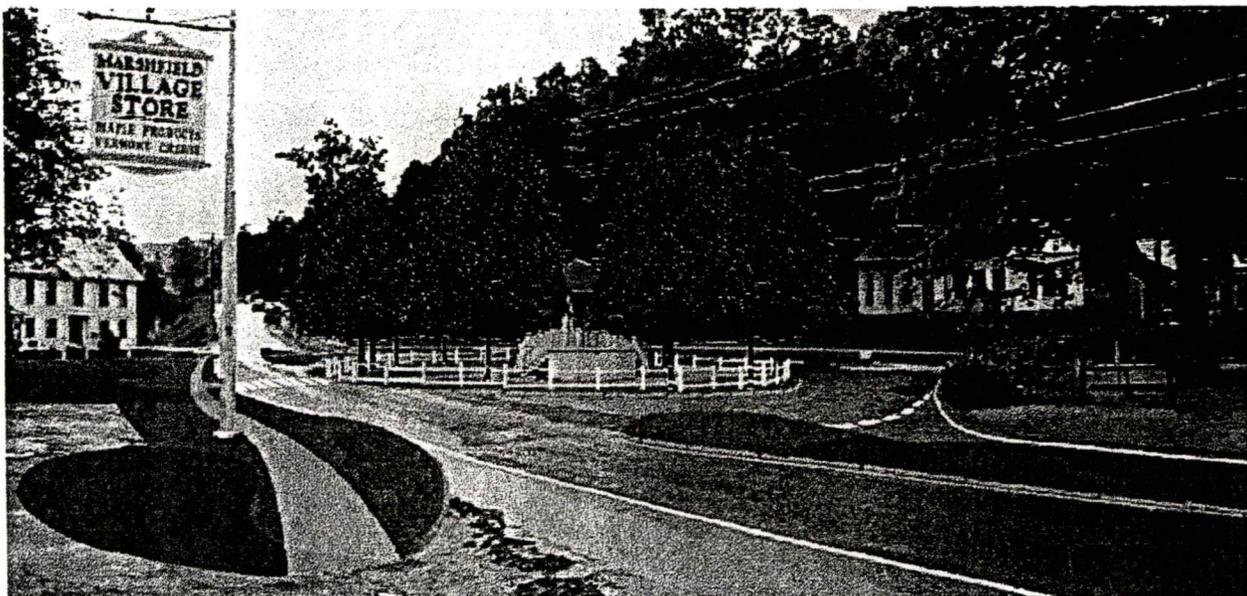


View of Proposed Streetscape Design in Western Village Area - looking West

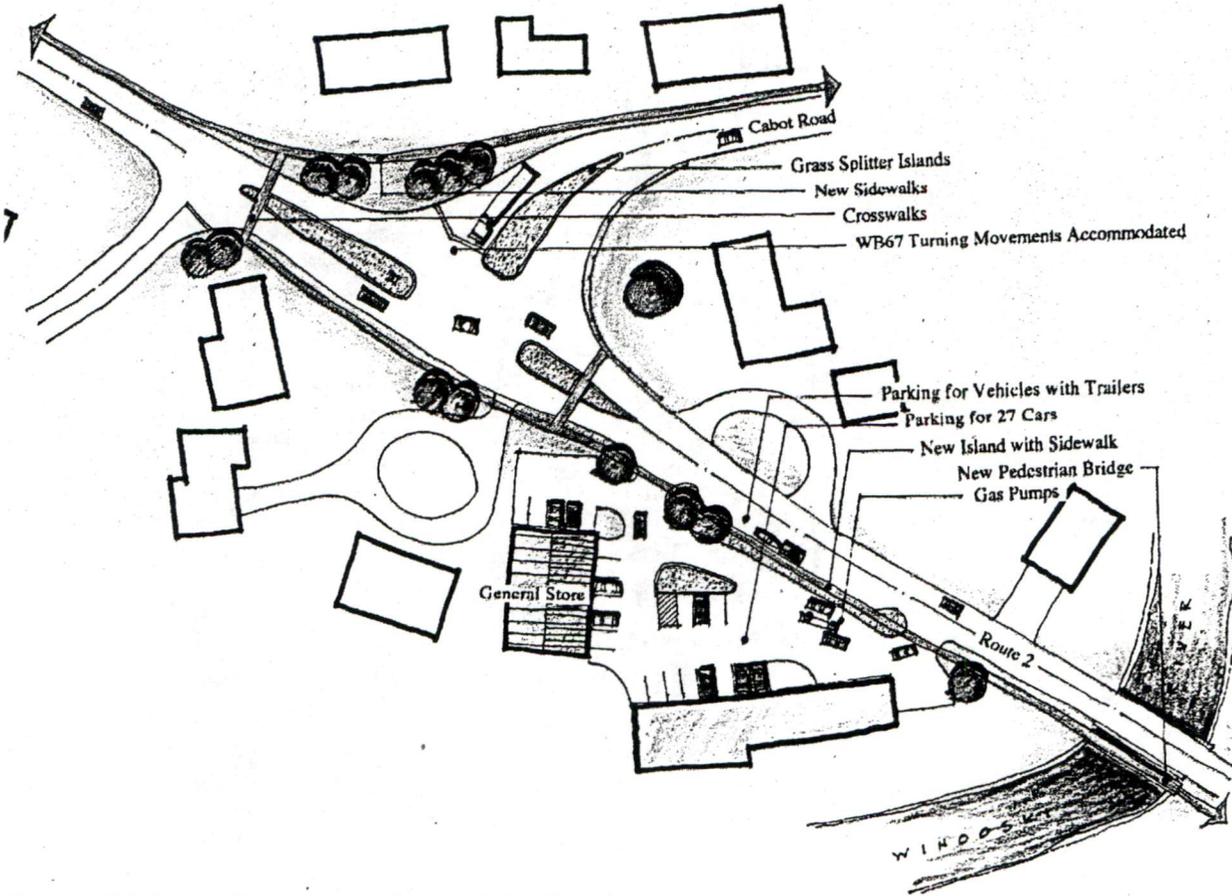


Proposed Scheme 'A' at Intersection of Cabot Road

Revised Cabot Road intersection and Town Center. This scheme defines a town green in the location of the historic green and creates a one-way loop for improved safety and traffic calming. The Village Store complex is accessed with clearly defined entrances and exits, improved parking and pedestrian circulation. A pull-over area is defined for truck access to the stores.

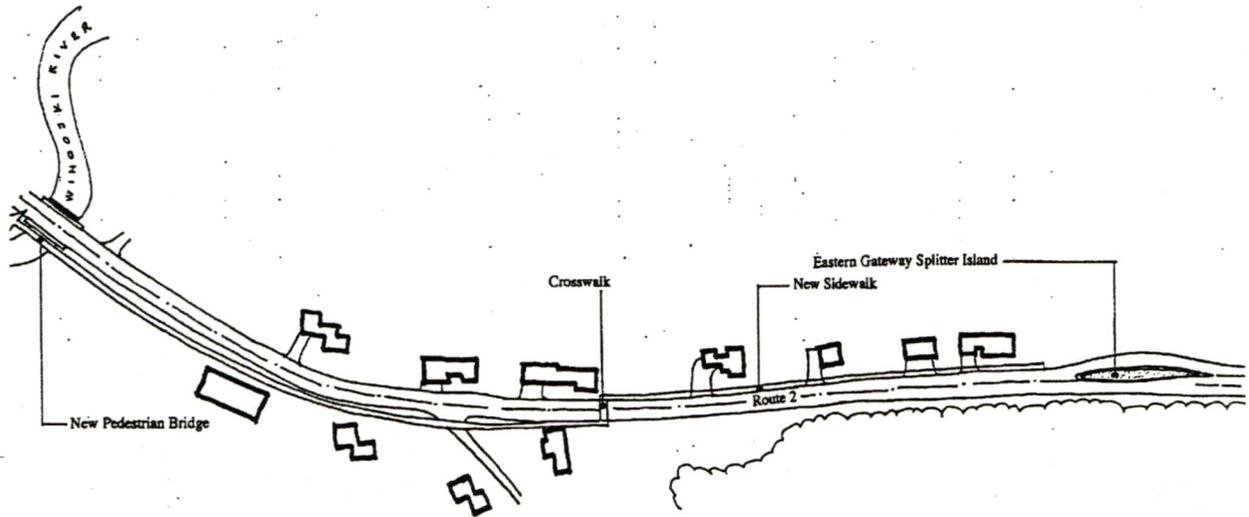


View of Scheme 'A' from the East

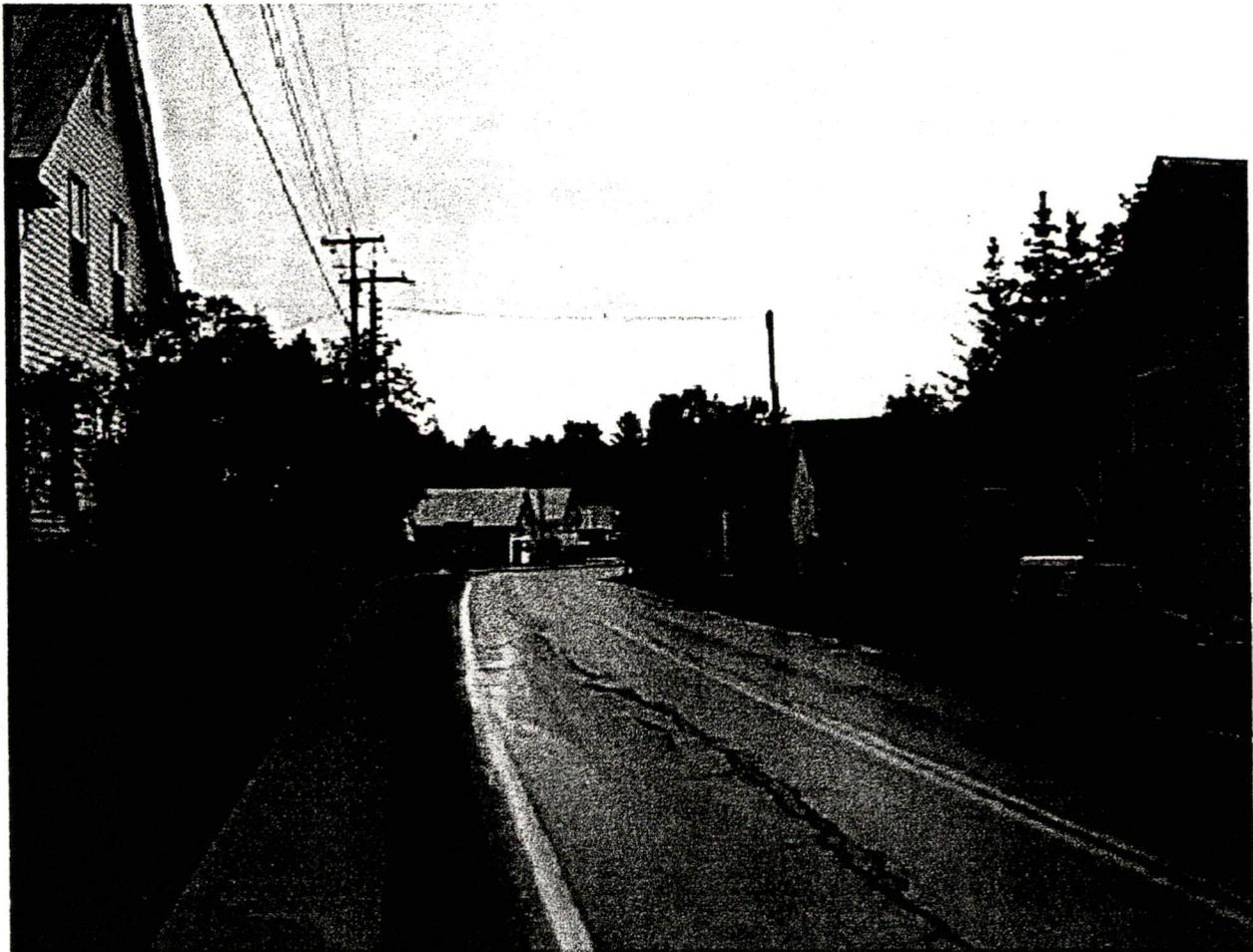


Proposed Scheme 'B' at Intersection at Cabot Road

This scheme creates a modified T-intersection combined with Splitter islands for traffic calming and pedestrian crossing refuge. The overall area of pavement is reduced in the center of town but the through - traffic flow is less restricted than Scheme A. The Village Store complex is accessed with clearly defined entrances and exits, improved parking and pedestrian circulation. A pull - over area is defined for truck access to the stores.



Proposed Plan of Eastern end of Village and transition from two - lane road to three lane - highway.



View of new walk at Eastern end of Village

4.0 Conclusions and Implementation Options:

4.1 How Traffic Calming will effect through traffic:

If a traveler is cruising US 2 from Marshfield to East Montpelier, each of the village centers is approximately 3/4 mile in length, almost 1 mile in Plainfield for a total of 2-1/2 miles length. The traveling time difference between an assumed 50 mph speed and 25 mph for the length of time in each of the three villages poses an interesting question:

Assumptions:

2.5 miles distance = 13,200LF

50 mph = 3000 LF /minute, approximately .56 mile. $13,200/3000 = 4.4$

25 mph = 1500 LF /minute, approximately .28 mile. $13,200/1500 = 8.8$

- $13,200/3000 =$ At 50 mph = 2.5 miles takes 4.4 minutes.
- $13,200/1500 =$ At 25 mph = 2.5 miles takes 8.8 minutes.

The difference for the through traveler is less than 5 minutes over the length of the entire corridor, a delay that in many ways can be offset through increased LoS at the congested intersections.

The use of Traffic calming , while it has gained in popularity has specific limitations for this project. Whereas most traffic calming projects are regarded for neighborhood settings, there are a whole series of design tools that could work in those locations where speeds are slow, truck volumes are low or non-existent, the nature of the speed reduction effort can be quite aggressive. On a major regional highway - part of the NHS, the tools available are more limited and must be judiciously implemented.

4.2 A Menu of Implementation Choices :

There are a number of ways that an incremental completion of traffic calming improvements could be implemented in the Villages of East Montpelier, Plainfield, and Marshfield. Most of these can be initiated from the Town Selectboards to the Central VT Regional Planning Commission Transportation Advisory Committee, and then advanced to the VAOT.

It should be reinforced that according to the VAOT Level of Improvement Policy in the Long Range Transportation Plan, that US 2, as part of the National Highway System is a high priority road and would receive preferential treatment in a funding decisions and priorities set for major transportation investments.

1. **Integrate improvements into the planned VAOT paving projects for US 2:**
A paving project is planned for US 2 from Marshfield to Plainfield and some of the lane, shoulder, and turning movement designs in these plans could be integrated into the new paving design.
2. **Incorporate corridor improvements into specific VAOT Projects already being planned.**
The intersection US 2 and VT 14 north is being designed by VAOT and could include traffic calming provisions and some of the alternative designs for the east end of East Montpelier Village. During the meeting with the East Montpelier Selectboard, VAOT staff on the intersection project were present and there was general agreement that the projects could be integrated. Guidance from the Town to the VAOT will be needed.
3. **Develop a US 2 Corridor Village Improvements Project with the VAOT.**
It is possible the a multi region proposal could be advanced by three Regional Commissions for the US 2 corridor. This could include NVDA for corridor improvements from West Danville to the NH border, CVRPC from Cabot to East Montpelier, and Chittendon County MPO for Richmond and Williston Village Center. US 2 would benefit from a consistent approach being applied, and a multi region approach would add weight to that case to the VAOT.
4. **Apply for selective Enhancements Program Grants for improvements.**
Selected locations like the gateways to the villages at old bridges could be done as Enhancement grants for limited projects. It would be better if the Enhancement program were relied - on as the principle funding source, though as the planned improvements are essential parts of the roadway system and not "added - on" features.
5. **Apply for free standing bike/Ped. Improvements projects through the VAOT Bike Ped. Program.**
Similar to #4 , only through the Bike Ped. Program and the CVRPC TAC list for CV Region Bike/Ped. Projects. The only issue here is that there are several other significant regional Bike/Ped. Projects that are awaiting funding, and these village projects could compete for those project funds.
6. **Locally funded improvements for village center revitalization and public improvements.**
There are a number of smaller off road improvements that can be implemented on a local level either through permit conditions on developers, or improvements to town owned sites.