

US Route 4 West Corridor Management Assessment

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INTRODUCTION

The US Route 4 West Corridor Management assessment encompasses the area from Hartland to Bridgewater. It is funded by a surplus of Transportation Planning Initiative funds and being developed as a follow-up project to the 2008 Hartford US Route 4 Corridor Management Plan.

The 2008 Hartford US Route 4 Corridor Management Plan was developed through a joint effort of the Town of Hartford, the Two Rivers-Ottawaquechee Regional Commission (TRORC), the Vermont Agency of Transportation (VTrans), the project Steering Committee, local residents and business owners. This plan covered US 4 from Exit 1 on I-89 to the Hartland town line. This assessment will build on the Hartford Corridor Plan by defining Access Management Zones (AMZs) and offer municipal and regional planning recommendations for access management.

VTrans defines access management as *“a process that provides or manages access to land development while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity needs, and speed.”* Without adequate access to the transportation system, businesses and citizens are unable to safely and conveniently reach desired destinations. Similarly, the management of the location and number of driveways on public highways is critical to maintaining traffic flow efficiency and safety. There is a relationship that demonstrates this connection – as access increases (driveways, road intersections) mobility decreases and crashes increase.

The VTrans Access Management Program includes education and outreach and is part of the regional planning commission’s (RPC) annual Transportation Planning Initiative (TPI) work program task. Access management has become an accepted practice in local land development review. TRORC has capitalized on this interest to review multiple Town Plans, zoning/subdivision regulations, and highway ordinances. The Hartford Corridor Plan improved understanding for how access management could be implemented in land use development decisions. Additionally, this provided motivation to better advance access management in the local planning and legal process. This assessment will continue this work.

Scope

The scope of this project will expand to the remaining US Route 4 communities beyond Hartford that includes Hartland, Woodstock and Bridgewater and will exclude in-depth analysis of village centers.

This Route 4 West Assessment will focus solely on developing access management zones and planning recommendations for the three communities. The assessment will not include traffic studies or build outs as done in the Hartford Corridor Plan. The Hartford Corridor Plan included comprehensive review of existing transportation conditions, previously identified deficiencies, land use patterns, zoning and land use regulations, and combined with input from local, regional, and state stakeholders. Access management zones (AMZs) defined in the Hartford Corridor Plan were divided into two categories: balanced between mobility and access and greater emphasis on access management. The rest of the US 4 corridor will be defined into these two AMZs.

Vision and Goals

In January 2001, VTrans issued the “East-West Highway Study,” a study of the US 4 corridor that essentially affirms the status-quo in that it does not recommend an alternative highway system. *“Solutions rest... in wise land use planning, regulatory decision making and judicious investments in the major highways and rail infrastructure already existing in the corridor...”* Together with this finding and that the alternative highway system project is not in the TRORC project prioritization list, other suggestions to improve US 4 corridor should be considered such as implementing access management principles.

The vision for the US 4 corridor is one in which accessibility and mobility are maintained through comprehensive land use, transportation, and access management policies and through transportation infrastructure improvements. This corridor presents the highest regional imperative for access management because of its importance as the main east-west regional and state transportation route. This assessment can be used to facilitate the model TRORC will apply along other road corridors in the next Regional Plan update.

US 4 is one of only three high-level east-west routes across Vermont’s transportation system between Rutland and White River Junction and carries the highest volumes of the three (VT Route 9 in the south and US Route 2 in the north are the others). Maintaining the integrity of this major east-west connection for through traffic for commuters and truck traffic is critical and access management is the main tool to accomplish this goal. Within the TRORC US 4 communities, US 4 corridor is a two lane highway with occasional side pull-offs.

The State controls access to the state highways, including US 4 but the authority to plan for and regulate patterns and densities of development that may affect highway function, safety and efficiency falls to the town. The town authority lies under its municipal plan, land use regulations and local participation in Act 250 proceedings.

LAND USE ASSESSMENT – Existing Conditions

Access management is critical to the future growth and preservation of this traffic corridor. Improvements such as adding or widening lanes or shoulders or improving sight distances along curves on this portion of the US 4 corridor would involve significant excavation, right-of-way and floodplain considerations. Most of the corridor is either in a narrow valley, a densely populated village, or along the river bank or floodplain area. Because of these issues and their potential costs and impacts, major improvements along the corridor are highly unlikely. As an alternative, robust access management will maintain and could improve the corridor over the short and long term.

Traffic and Sufficiency

The US 4 study corridor is bound by two higher traffic sections from Killington to Hartford. Figure 1 illustrates the level of traffic crashes, Average Annual Daily Traffic (AADT) and sufficiency rating along the US 4 corridor. Sufficiency ratings evaluate the adequacy of each section of highway by measurable standards and provide a numerical index. This also allows for a method to compare one section of highway with another. The western portion from West Bridgewater to Bridgewater Corners has the lowest count at 4500 AADT for the past several

years. In 2001, this section has a sufficiency rating of 79.7. This portion probably receives the lowest tourist traffic as tourists can access destinations north and south using VT 100 and VT 100A. Local and regional through traffic as well as tourist traffic heading east/west use this section. The next section from Bridgewater Corners to Bridgewater Village has an AADT of 5500 and a sufficiency rating of 56.5. This portion along the north bank of Ottauquechee is in a very narrow valley.

US 4 continues through Bridgewater Village with traffic increasing to approximately 6000 AADT while the sufficiency rating drops to 53.3. These volumes continue to West Woodstock. The portion between Bridgewater Village and West Woodstock follows a wider segment of the Ottauquechee valley. This area includes private residences as well as several bed and breakfasts and motels.

US 4 then passes through the Woodstock Village. Starting in West Woodstock with the high school and the class 2 Prosper Road cut off to VT 12, US 4 continues along the narrow valley beside the Ottauquechee and its floodplain into the village. In the village, drivers pass the town green and the junction with VT 106 and VT 12 as well as the retail district. Drivers leave the village as they pass through the East End with its commercial activity and traveler services. Traffic counts increase from 9000 to 12000 and then drop back to 10000 from a west to east direction.

US 4 leaves Woodstock Village and follows the Ottauquechee River past hillsides and into another narrow valley with steep banks until it reaches Taftsville and the intersection with VT 12. The northeast portion of the VT 12 intersection has several commercial enterprises and at this point, traffic counts drop from 10000 to 8000 and sufficiency ratings run from 37 to 43.

- Tourist vs. Through Traffic

As a major east-west link, US 4 provides several functions such as a through traffic commuter link for statewide and regional communities. US 4 also serves local commuter, shopping, and visitor trips within the towns. As discussed in the Hartford Corridor Plan, the 1989 origin-destination study found the majority of traffic travelling east to west towards Killington was locally generated.

- Truck Route Fact

US 4 is not only a link for commuter traffic but also a heavily used route for truck traffic carrying freight regionally and nationally. All State routes are subject to an 80,000 pound weight limit while municipalities are authorized to establish their own weight limits for all local roads. The US 4 towns have been struggling to cope with increasing truck traffic that runs through town centers as the town interests are to preserve their New England character. Hartland is experiencing a growing number of trucks using VT 12 as a connector from I-91 Exit 9 to US 4, some as a means of bypassing the I-91 weight station north of Exit 9 when traveling between I-91 and I-89. Some towns have recommended in their town plans to control truck traffic or look to an alternative route to bypass the town center. It is not feasible to shut off US 4 to truck traffic completely. Various

stakeholders must work with these towns to balance truck traffic while simultaneously not hindering the significant freight connection.

Paving

US 4 west of Bridgewater Corners was resurfaced in the summer of 2007. US 4 between Bridgewater Corners and Lincoln Corners was ground up, re-graded and paved in the summer of 2008. The section from Lincoln Corners through the village of Woodstock to the end of East Woodstock was also re-surfaced in the summer of 2008. Guardrails were replaced from West Bridgewater to the village of Woodstock during the paving projects. No paving work has been done recently east of Woodstock village.

Bicycle/Pedestrian Issues

US 4 from West Bridgewater to Bridgewater Corners includes a large shoulder. This portion of US 4 is part of a loop from Plymouth or Ludlow that includes VT 100 and VT 100A. The shoulders east of Bridgewater Corners are generally too small for all but the most seasoned riders especially when the site distances around several curves in this section are considered. There is a private woods road between Bridgewater Corners and Bridgewater Village that hikers and cyclists use. To the east of Bridgewater Village cyclists can pedal along the Ottauquechee River to Quinn Road in Woodstock. However, between Quinn Road and Bourdon Road, there is no route on the south side of the Ottauquechee.

East of Woodstock village the shoulders on US 4 are very narrow but cyclists can take advantage of the River Road along the Ottauquechee from the village to Taftsville and Quechee. The connection between VT 12 and the River Road for cyclists should be addressed when accesses are being permitted and reconstruction projects are being planned.

Currently, there are limited facilities along US 4 to accommodate bicycle and pedestrian activity. US 4 remains a corridor designed for single-occupant vehicles and does not provide bicycle and pedestrian connections between towns. A major impediment to safe bicycle travel along US 4 through the communities is the high traffic volume and narrow shoulder width and guardrails. Sidewalks may not be reasonable or desirable along the entire US 4 corridor.

Future Development Potential

Most of the US 4 corridor from Hartland to Bridgewater is along the narrow Ottauquechee River valley. Figure 2 shows the natural constraints and future land use areas along US 4. The corridor is bound by steep topography and the river bank on most sections. The wider valley sections in and around Woodstock Village have been developed extensively. Future potential exists in the East End of the village as well as just before the Blake Hill condominiums. These farm fields on the south side of US 4 offer rare buildable lands that eventual developers may find suitable. Beyond West Woodstock in Lincoln Corners, additional fields south of US 4 out of the floodplain have development potential. At the east end of the study areas, the northeast portion of the intersection with VT 12 has commercial enterprises with flat areas for expansion.

The lowest development potential is between Bridgewater Village and Bridgewater Corners and beyond Bridgewater Corners west. The former is along the north bank of the Ottauquechee for

nearly the complete length of the southern side and a steep bank is present on the north side. The latter enters the steep foot hills of Green Mountains leading up to Killington and steep grades leading down to the north side US 4 are present along this section.

Figure 3 shows commercial parcels, potential development areas, and sewer service. A modest portion of parcels fronting US 4 are underdeveloped, which poses the potential for a significant amount of new, locally-generated traffic to be added onto US 4 in the future.

TOWN PLANNING AND CURRENT ACCESS MANAGEMENT SUMMARY

Woodstock

The Town of Woodstock adopted their latest town plan in 2007. They also have zoning and highway ordinances. Traffic congestion on US 4 is most prominent in Woodstock Village as it bottlenecks commuters, visitors (tour buses and additional automobiles), and freight trucks while navigating bicycle and pedestrian activity. The US 4 corridor runs about 10 miles in Woodstock.

The most rural areas of the US 4 corridor in Woodstock are zoned as Residential Five Acre with Residential One Acre and Residential low density. There are also parts along the corridor in between the Residential areas that are zoned Commercial / Light Industrial.

In the Town Plan, Woodstock opposes the construction of two additional lanes onto US 4, as well as opposing “strip” development along its entire length which detracts from the community’s sense of place. Woodstock recommended the construction of road improvements to foster the safe flow of traffic as a short term solution, and the construction of a new, limited access highway as the long term solution to moving traffic between Rutland and White River Junction.

The 2000 East End Master Plan found that traffic was detriment to the successful development of the east end of the village. The plan recommended that the current private road corridors, Maxham Meadow Way and the Sewer Plant Road, to be converted to an official village street. This street would both provide an alternative to US 4 and better access to the existing and potential businesses between US 4 and the river. This could be a potential pilot project.

Woodstock recognizes the need to develop continuous safe bicycle routes throughout the Town for use by both students and recreationalists. This is particularly challenging due to high traffic volume and the narrow shoulder width on US 4. Although routes along VT 106 and VT 12 are also desirable, highest priority should be given to the route with the likelihood of greatest use, which would run from the Village to the Middle-High School in West Woodstock. The 2003 Woodstock Bicycle and Pedestrian Plan addressed bicycle paths that would lighten energy needs, studied the parking crisis in the Village and suggested safety improvements for vehicles and bicycle users between the High School and the Village. Two sidewalk/pathway projects were completed: the East End sidewalk in the Village was completed in 2006 and the Route 12 path from Billings Farm and Museum to the Mt. Tom Farmer’s Market was completed in 2007.

In 2007, TRORC staff revised the Woodstock Town Plan and Zoning Ordinance and incorporated additional access management principles addressing some of the Transportation goals. Several implementations were added to the Town Plan to support the goal of encouraging dependable mass transportation systems to minimize automobile dependence and use. Examples of implementation include establishing a tourism based bus serving the Marsh-Billings-Rockefeller National Historic Park and Woodstock village, establishing a fixed route commuter service to major employers in the Upper Valley and increasing support to the Woodstock Senior Center in providing additional elderly and disabled transportation services. Other implementations were added to promote access management to preserve the safety and mobility of the travelling public such as ensuring highway function classifications to adhere to the highest level of access management standards. Improvements to the Zoning Ordinance included greater communication between developer, town and State regarding access to public roads.

Hartland

The Town of Hartland adopted their latest town plan in 2007 and is currently considering zoning. Hartland does not have a highway ordinance. The US 4 corridor in Hartland is only $\frac{3}{4}$ of a mile but it intersects with VT 12, another heavily travelled corridor. This junction is fairly dangerous because of the increasing traffic volume off VT 12 trying to merge with fast and heavy traffic volume on US 4 and inadequate sight lines. Hartland's future land use area is designated as commercial for the US 4/VT 12 intersection and rural residential for the surrounding area.

Hartland's Town Plan discusses applying specific access management strategies designed to reduce the number of curb cuts or driveways needed to serve roadside development.

1. Requiring driveways to serve adjoining lots;
2. Prohibiting curb cut access from the main thoroughfare for corner lot properties;
3. Requiring off-street access and traffic circulation to adjoining parking lots in commercial areas;
4. Imposing restrictions on the width and placement of curb cuts on major highways;
5. Requiring specific setbacks from road intersections for all new curb cuts; and
6. Requiring subdivisions adjoining major thoroughfares to provide internal street access only for all lots fronting the thoroughfare. The resulting lots would have double frontage (along the front and rear yards.)

Bridgewater

The Town of Bridgewater adopted their latest town plan in 2008 and does not have zoning or a highway ordinance. The main destinations of Bridgewater Village, Bridgewater Corners, and West Bridgewater are all located along the 7.5 miles of US 4 in the southern portion of the town. The Plan recognizes that from West Bridgewater to Bridgewater Corners, US 4 'adequately fulfills the needs of existing traffic movements' but from Bridgewater Corners east through the

Village, US 4 is a ‘narrow winding highway in need of safety improvement’. Vehicular and pedestrian conflicts exist within the Village.

Bridgewater recognizes the village and the hamlets of Bridgewater Corners and West Bridgewater as land use areas. There are several conservation areas along US 4 west of Bridgewater Corners to West Bridgewater as part of the Chateauguay-Dailey Hollow Conservation Area and as part of the publicly conserved Coolidge State Forest. There are also rural residential land use areas surrounding US 4.

Under the Chateauguay-Dailey Hollow Conservation Area Planning Policies, there are strong conservation considerations regarding land use development in the Chateauguay-Dailey area. A particular policy focuses on limiting access to a town highway stating Vermont law (24 V.S.A. Section 1111) that grants authority to the Selectboard to control driveway entrances, power and telephone lines, and similar private investments within the right-of-way of Town roads. The policy also notes that it is unlawful to construct a driveway accessing a town highway or to extend a power line within the right-of-way without first obtaining the approval of the Selectboard. This policy of limiting town highway access should be expanded beyond the Chateauguay-Dailey area to town wide applicability, particularly in regards to town highways linking to the US 4 corridor.

TRORC Regional Plan

The Regional Commission follows all access management strategies through Act 250 and when working with towns in plan and ordinance development. Regulatory authority for access management rests with VTrans for state highways and towns for local roads (VSA Title 19 Chapter 11). The Regional Plan addresses several goals and policies which are incorporated into the region’s thirty town plans.

Goals

- (1) Enhance the use of access management in local, regional, and state development permitting activities.
- (2) Promote access management for all local and state transportation projects.

Policies

- (1) On town roads, access design standards should be implemented for all driveways without distinction if the access is temporary or permanent. The access permitting process should encourage the use of shared driveways and/or permitting an access that may result in a future shared driveway. And the permitting of access for commercial or industrial land uses should be purposely guided towards existing development nodes in order to preserve or create road segments that possess fewer access points. Continue to develop access management standards with Towns using the Regional Commission driveway access model ordinance. Continue working with towns to improve town plan, zoning and subdivision regulations to better promote access management. Continue working with towns to update highway and public work ordinances that more effectively emphasize access management principles.

(2) In Act 250 developments, require connections to adjacent roads and between existing and future developments and minimize access points outside of village and town centers. On regionally managed transportation enhancement projects, ensure existing accesses are more effectively designed and managed.

(3) On state controlled highways, cooperate with VTrans in implementing the state's access management program. Private development should have permanent landscaping and roadside enhancements to visually define access points and contribute to the road's aesthetic character. Access locations should be clustered together to promote development nodes with slower speed limits and multiple accesses along with road segments that have higher speed limits and fewer driveways. Sight distance standards will be based on actual travel speeds and not the posted speed limits. Land owners will utilize a local road access or acquire an access easement to avoid direct access to a state or national highway – particularly on the region's tractor truck highway network. Work with VTrans staff to clarify the state's administrative process so access permits follow state law and are "compatible with any regional plan, state agency plan or approved municipal plan." (VSA Title 19, Chapter 11).

RECOMMENDATIONS

Each of the town plans includes a chapter on land use and transportation that may address the planning of US 4 corridor management. Land use and transportation chapters have been examined for the incorporation of access management policies. Several sections have been identified and recommended planning language changes to enhance policies and implementation suggestions.

Unchanged text

Added text

~~Deleted text~~

Woodstock Town Plan

As previously mentioned, the Woodstock Town Plan had been revised to incorporate further access management principles. Below are further recommended planning language changes.

TRANSPORTATION Chapter, p. 97

Specific improvements advocated by Woodstock on U.S. Route 4 roadway are as follows:

1. Selective shoulder and lane widening which should improve level of service.
2. Study methods to reduce delays for side-road traffic and to improve safety.
3. Construction of turn-outs with advance signage to warn drivers which should reduce platoon delays.
4. Construction of passing lanes.
5. Installation of signs indicating no passing to further reduce platoon delays.
6. Reconstruction of U.S. Route 4 within the Village of Woodstock, with reference to the "Route 4 Corridor Street Tree Master Plan".
7. Promote and enhance the use of access management in local development permitting activities and transportation projects.

Scenic Ridgeline

US 4 is a tourist route between Vermont destinations such as Killington, Woodstock and Quechee. It is also a scenic destination on its own as many travelers and bus tours traverse the Ottauquechee Valley to view the foliage, see the historic covered bridges, villages and mills, and sample the fare at the various restaurants and local markets. Several of the more expansive views are between West Woodstock and Bridgewater Village. These areas include panoramas of central Vermont's trademark rolling, yet rugged hills as well as the foothills to the Green Mountains. These side hills and old farms have beautiful foliage in the fall.

The Town of Woodstock has recognized these areas and protected the upper portions of the hillsides through the ridgeline protection portion of their bylaw. Applicants must mitigate impacts to the viewshed within these areas with selected cutting and screening. Many of the middle and lower portions of these side hills are not protected by the ridgeline regulations. TRORC has completed several analyses of the ordinance and has determined that several highly viewable areas are unprotected on these hillsides. The town has considered changes to their ridgeline language and map but has yet to pass any changes.

Hartland Town Plan

LAND USE Chapter, p.8

Siting Recommendations:

2. Continue to utilize the assistance of the Regional Planning Commission for land use planning and development. The RPC shall assist the town in developing acceptable access management standards and site- or parcel-specific access management plans for parcels along the highway corridor.

US 4/VT 12 Junction Commercial District Policies:

2. Direct access to Route 4 in the proposed Commercial District must be limited for safety considerations. Additional access to Route 4 in the area northwest of the Route 4/12 intersection will add to an already busy and potentially dangerous traffic situation. Therefore, until the State of Vermont improves sight lines along this section of Route 4, access should be restricted to Town Highway 51. Proposed development that shares an exiting access may also be acceptable, ~~but will need careful review.~~ but should be reviewed with conformance to 24 V.S.A. Section 1111 that grants authority to Selectboard to control driveway entrances, power and telephone lines, and similar private investments within the right-of-way of Town roads. This will complement land use policies of avoiding scattered development and discouraging incompatible land uses as well as conserving scenic resources.

US 4/VT 12 Junction Commercial District Recommendations:

- ~~1. The above policies should be incorporated into any future land use regulations or permitting decisions.~~
1. Support the development of the commercial district that promotes access management principles such as consolidating curb cuts for single access and improved sight lines to US 4.

2. On state controlled highways, the applicant shall forward a copy of their Vermont Agency of Transportation (VTrans) Utilities and Right-of-Way permit application (Form TA210) to the Administrative officer. The Planning Commission may submit written recommendations to the VTrans Utilities and Permits Unit within 1 month of receiving a copy of the permit application. The thresholds for submitting written comments shall be:
 - a. Any new lot access.
 - b. Any existing lot access, with a proposed change of use, may require review. Change of use shall include alterations in access location, access design, and/or traffic operations. A change of use threshold shall be determined by the Administrative officer and a minimum include all conversions of residential to commercial land uses, a 25% or greater increase in proposed vehicle trip generation, and/or the physical alternation of the access or the internal traffic circulation pattern.
 - c. Or on a case-by-case scenario deemed applicable by the Planning Commission.

Driveways/Curb Cuts, p.48

Communities also ~~can~~ should apply specific access management techniques designed to reduce the number of curb cuts or driveways needed to serve roadside development.

TRANSPORTATION Chapter, p. 51

Transportation Policies

4. The Town will also ensure conformance to 24 V.S.A. Section 1111 granting authority to the Selectboard to control driveway entrances, power and telephone lines, and similar private investments within the right-of-way of Town roads. This will complement the overall transportation goal of providing and maintaining a safe and efficient transportation system as well as conserving scenic corridors.

Transportation Recommendations

4. Explore the possibility and desirability of utilizing weight limits and other design tools as a means for controlling truck traffic on local roads. Consider prohibiting through truck traffic on local collector (Class 2) roads to keep existing truck traffic on VT Route 12 and US Route 5. ~~Changes to signage and continued efforts toward better access management along US Route 4 in Hartland should also be considered.~~
5. Changes to signage and continued efforts toward better access management along US Route 4 in Hartland should also be considered. Efforts should include greater coordination between town and State; improve coordination of the local access permit process between Selectboard and Planning Commissions; and support the development of zoning and subdivision regulations that promote access management.
8. Review and update the Town's driveway regulations and road standards to ensure that safety and drainage issues are adequately addressed. If the Town adopts subdivision regulations, incorporate appropriate requirements to ensure that new private roads and rights-of-way will be constructed to town road standards and be subjected to conformance review to 24 V.S.A. Section 1111.

9. If driveways potentially access state controlled routes, work with VTrans of high access management standards to ensure continued efficient and safe thoroughfare traffic.

Bridgewater Town Plan

LAND USE Chapter p. 27

Overall Land Use Goals

6. Vermont law (24 V.S.A. Section 1111) grants authority to the Selectboard to control driveway entrances, power and telephone lines, and similar private investments within the right-of-way of Town roads. This will complement the other overall land use goals of avoiding scattered development and discouraging incompatible land uses as well as conserving scenic resources.

Planning Policies for Bridgewater Village

4. Because of past problems caused by the parking of large trucks along the side of Route 4, it is the policy of this Plan to discourage the creation of any commercial development that does not have adequate space for off-street parking and safe ingress and egress sight line for its customers. Any commercial development should work with the town and VTrans regarding high access management standards and conformance to 24 V.S.A. Section 1111 to ensure continued efficient and safe thoroughfare traffic.

TRANSPORTATION Chapter, p.47

US Route 4

A secondary purpose of a principal arterial is connecting other town highways to it. As with all Town highway accesses, but especially along US Route 4, the Town should ensure future improvements or new development access to conform to 24 V.S.A. Section 1111. This grants authority to the Selectboard to control driveway entrances, power and telephone lines, and similar private investments within the right-of-way of Town roads. This will complement the overall transportation goal of providing and maintaining a safe and efficient transportation system as well as conserving scenic corridors.

Policies

2. Where new developments are proposed with access to town highways, and where such developments necessitate improvements to certain town highways, it is recommended that the developer pay for the major share of the costs while making such improvements to the town roads. Prior to the issuance of any required permits, an agreement should be reached between the Selectboard and the party's proposed new development as to what a fair share for both the Town and the developers would be. The agreement should also address conformance to 24 V.S.A. Section 1111 which will complement high access management standards.
7. Support the development of the commercial district that promotes access management principles such as consolidating curb cuts for single access and improved sight lines to US 4.

8. On state controlled highways, the applicant shall forward a copy of their Vermont Agency of Transportation (VTrans) Utilities and Right-of-Way permit application (Form TA210) to the Administrative officer. The Planning Commission may submit written recommendations to the VTrans Utilities and Permits Unit within 1 month of receiving a copy of the permit application. The thresholds for submitting written comments shall be:
 - a. Any new lot access.
 - b. Any existing lot access, with a proposed change of use, may require review. Change of use shall include alterations in access location, access design, and/or traffic operations. A change of use threshold shall be determined by the Administrative officer and a minimum include all conversions of residential to commercial land uses, a 25% or greater increase in proposed vehicle trip generation, and/or the physical alternation of the access or the internal traffic circulation pattern.
 - c. Or on a case-by-case scenario deemed applicable by the Planning Commission.

Recommended Actions

6. Seek greater coordination between town and State; improve coordination of the local access permit process between Selectboard and Planning Commissions; and support development that promotes access management.

Regional Plan/TPI Work Tasks

The Regional Plan was last revised in 2007. As with the Town Plans, the Regional Plan also requires reviewing and updating of goals, policies and implementation strategies. Town Plans will reflect conformance to the Regional Plan policies. Below are recommended planning language changes to enhance policies and implementation suggestions. Some implementation strategies can be easily integrated into the Transportation Planning Initiative.

- On state controlled highways, cooperate with VTrans in implementing the state's access management program. Private development should have permanent landscaping and roadside enhancements to visually define access points and contribute to the road's aesthetic character.
- Access locations should be clustered together to promote development nodes with slower speed limits and multiple accesses along with road segments that have higher speed limits and fewer driveways. Sight distance standards will be based on actual travel speeds and not the posted speed limits.
- Land owners will utilize a local road access or acquire an access easement to avoid direct access to a state or national highway – particularly on the region's tractor truck highway network.
- Work with VTrans staff to clarify the state's administrative process so access permits follow state law and are "compatible with any regional plan, state agency plan or approved municipal plan." (VSA Title 19, Chapter 11).

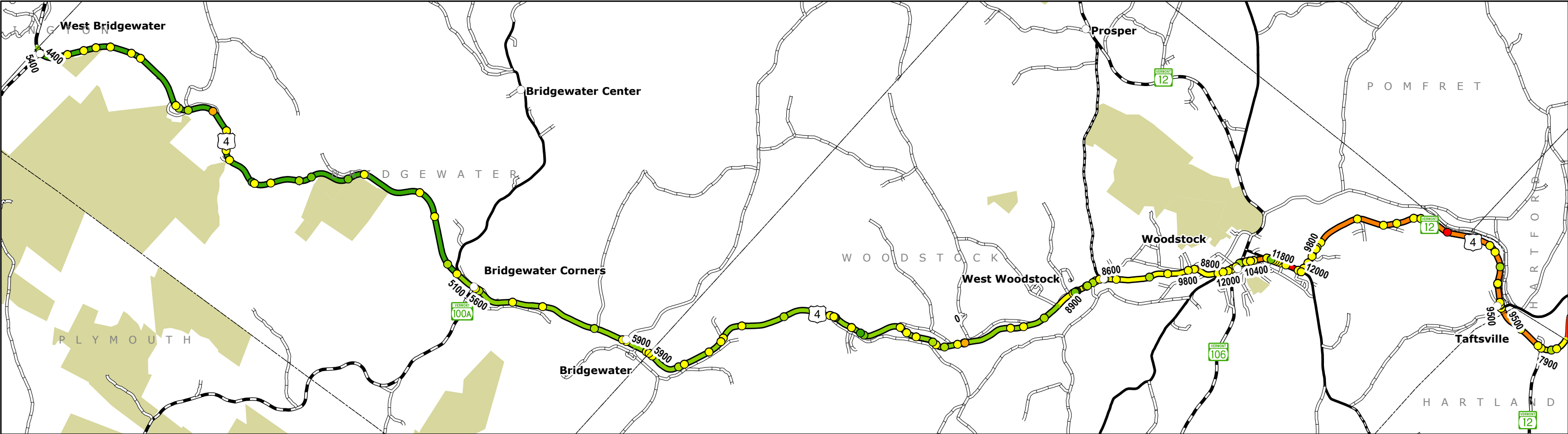
- Complete access management for other major State routes and town Class 2 roads in the Federal Aid System in the Two Rivers-Ottawaquechee region.
- Reassess and update access management categories as a TPI task when reviewing and updating the Regional Plan.

Access Management Zones

As established in the Hartford Corridor Management Plan, US 4 was defined into access management zones showing sections being either balanced between mobility and access or requiring greater emphasis on access management. Zones that are balanced have lower travelling speeds, have more driveway and local road connections providing greater access into and egress from traffic flow and usually correspond to entering village or dense land use areas. Zones that require greater emphasis on access and mobility show sections of higher travelling speeds to increase the traffic flow, decreased number of driveways or local road connections to maintain a safe and efficient travel corridor and correspond to areas in between dense land use areas that are less dense. The remaining US 4 corridor through Bridgewater, Woodstock and Hartland have been categorized into the two AMZs. Figure 3 illustrates the designation between mobility and balance along the US 4 corridor. Overall there are 17.7 miles of mobility zones (red) and 6.8 miles of balanced zones (blue).

Other Recommendations

- Re-apply for a Transportation Enhancement grant for high school to existing Ottawaquechee path from Lincoln Corners to Quinn Road.
- Apply for a Transportation Enhancement grant for a Park & Ride location feasibility study.



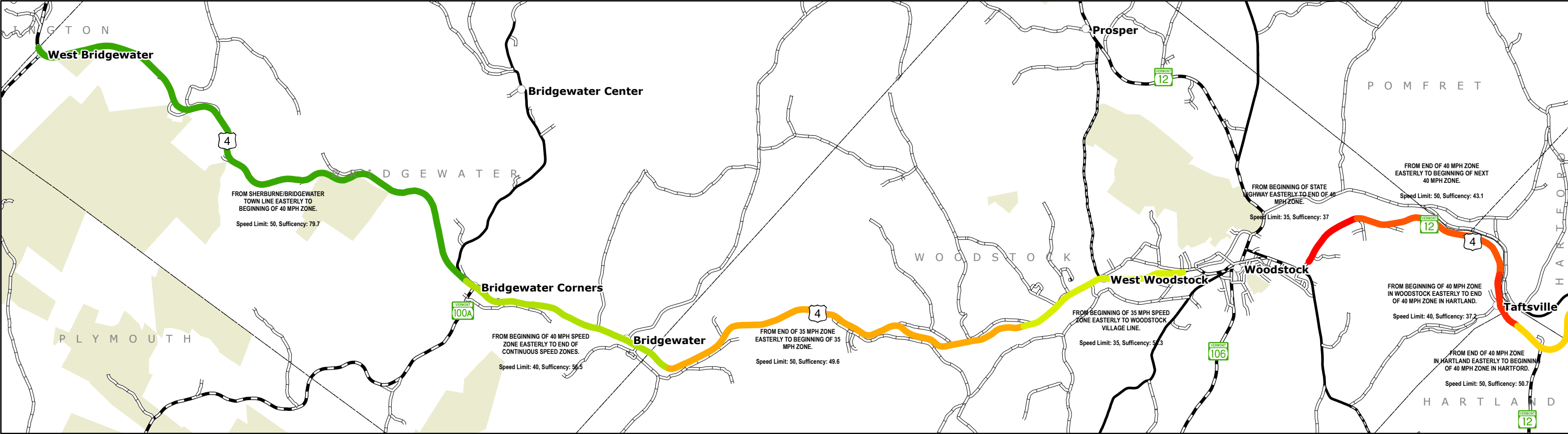
Traffic & Crashes
AADT 2007 & Crashes 2004-2008

- HIGH INJURY/FATAL
- HIGH AADT
- LOW/NO INJURY/FATAL
- LOW AADT
- PUBLIC CONSERVED

TWO RIVERS-OTTAUQUECHEE
REGIONAL COMMISSION
GIS Service Center
The King Farm
Woodstock, VT 05091
802-457-3188
for info & data
www.vcgl.org
www.trorc.org

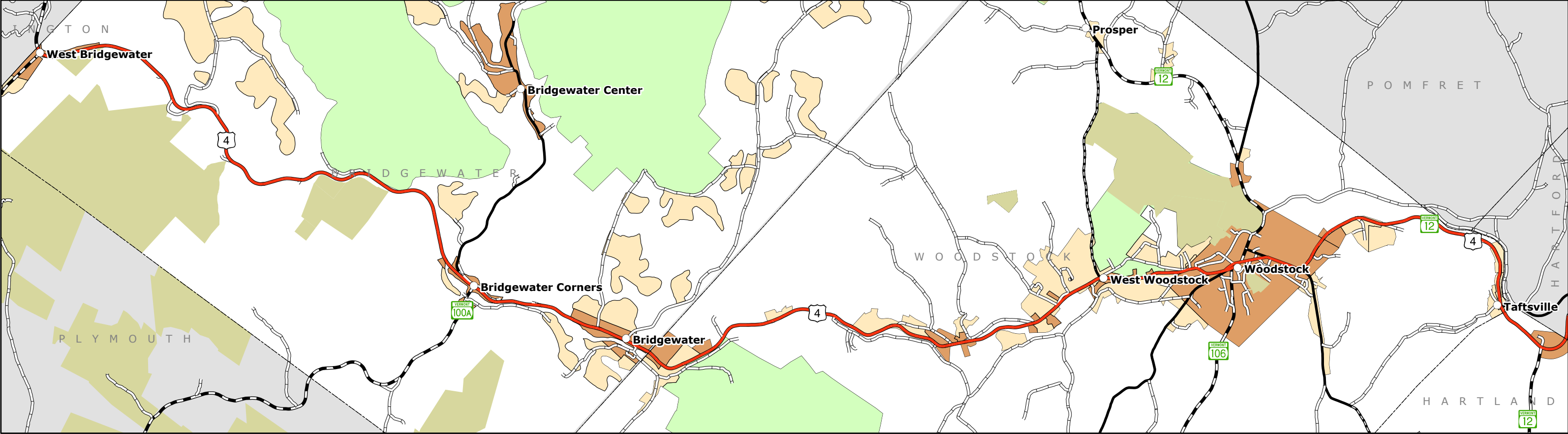


Map 1 of 3



Sufficiency
2001

- LOW SUFFICIENCY
- HIGH SUFFICIENCY
- PUBLIC CONSERVED

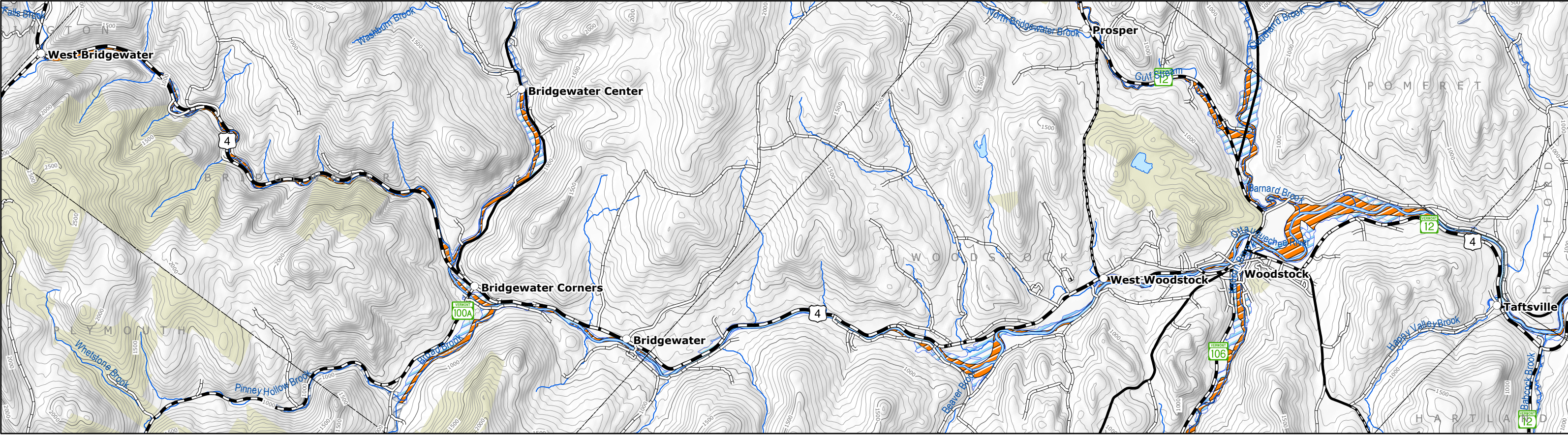


Future Landuse
Future Land Use Areas and Zoning

- | | |
|------------------|-----------|
| COM | RURAL RES |
| CONSERVATION | RES |
| PUBLIC CONSERVED | |

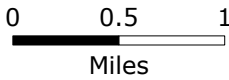
Map 2 of 3

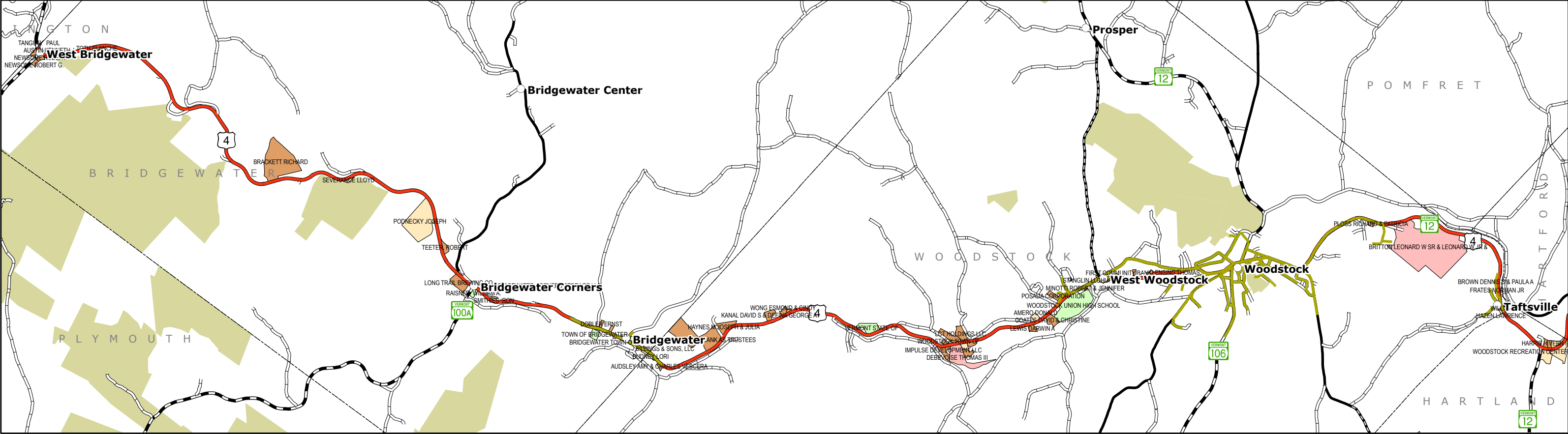
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Natural Constraints
Topography and Special Flood Hazard Areas

- | | |
|----------|------------------|
| SFHA | PUBLIC CONSERVED |
| FLOODWAY | |



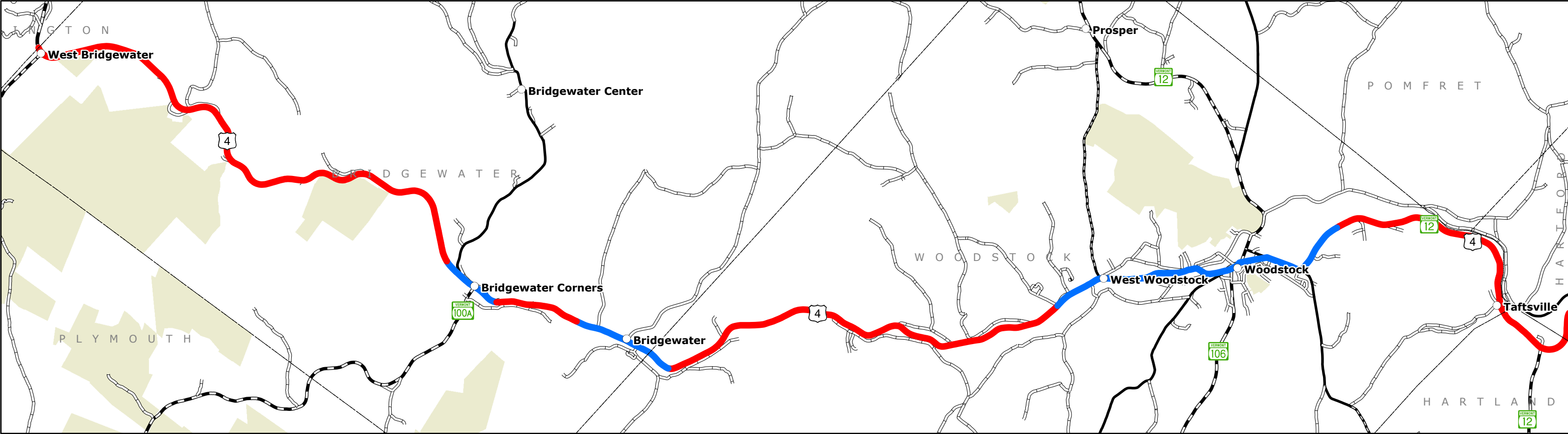


Non-Residential Landuses
Commercial Parcels, Potential Development Areas & Sewer Service

- COM/INN/DINING
- RETAIL
- RURAL RES
- PUBLIC CONSERVED
- OPEN
- SEWER

Map 3 of 3

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Access Management Zones
Mobility versus Balance

- MOBILITY
- BALANCE
- PUBLIC CONSERVED

