Killington Walkway Alternatives

DuBois & King inc.

23 January 2013

Tonight's Meeting

- Review Project
  - Planning and Design Goals
  - Design Constraints
- Present Alternatives
  - Sidewalk on West Side of Killington Road
  - Multi-use Path on East Side of Killington Road
- Analysis of Alternatives
- Discussion

Planning Goals

- Create a more livable community through safe, healthy, transportation alternatives
- Build a more welcoming tourist destination
- Create a sense of arrival and place
- Enhance business district on Killington Road
- Develop four season recreation assets

Design Goals

- Provide safe place to walk along Killington Road between West Hill Road and Schoolhouse Road.
- Improve the appearance through landscaping, lighting and other amenities.
- Reconfigure the West Hill Road intersection.
- Provide safe pedestrian crossings where needed.
- Connect to destinations on east side of road.
- Stay within the project budget

Design Constraints

- Right of Way
  - 66 feet wide
  - Roadway is generally 50 feet wide
  - Property acquisition is likely to be required

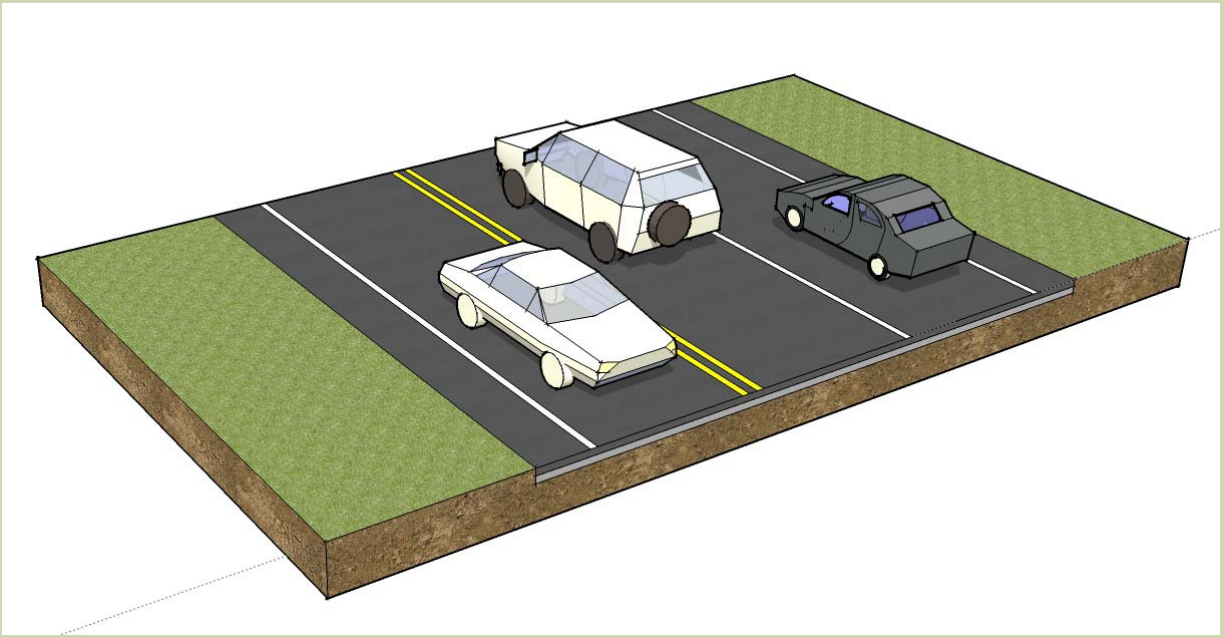
Design Constraints

- Utilities
  - Poles along west side of road

Design Constraints

- Wetlands
  - Small wetland areas on west side
  - Significant wetland on east side

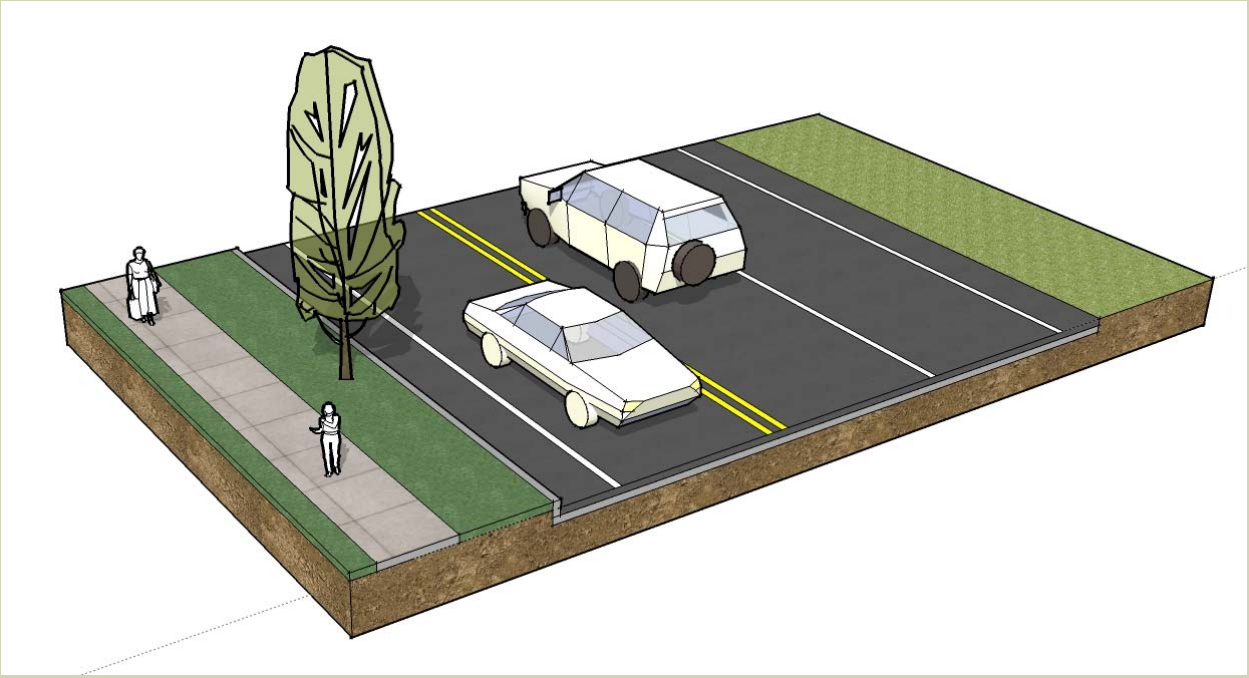
Existing Cross Sections



North of School House Road:

2 lanes northbound/1 lane southbound

Existing Cross Sections

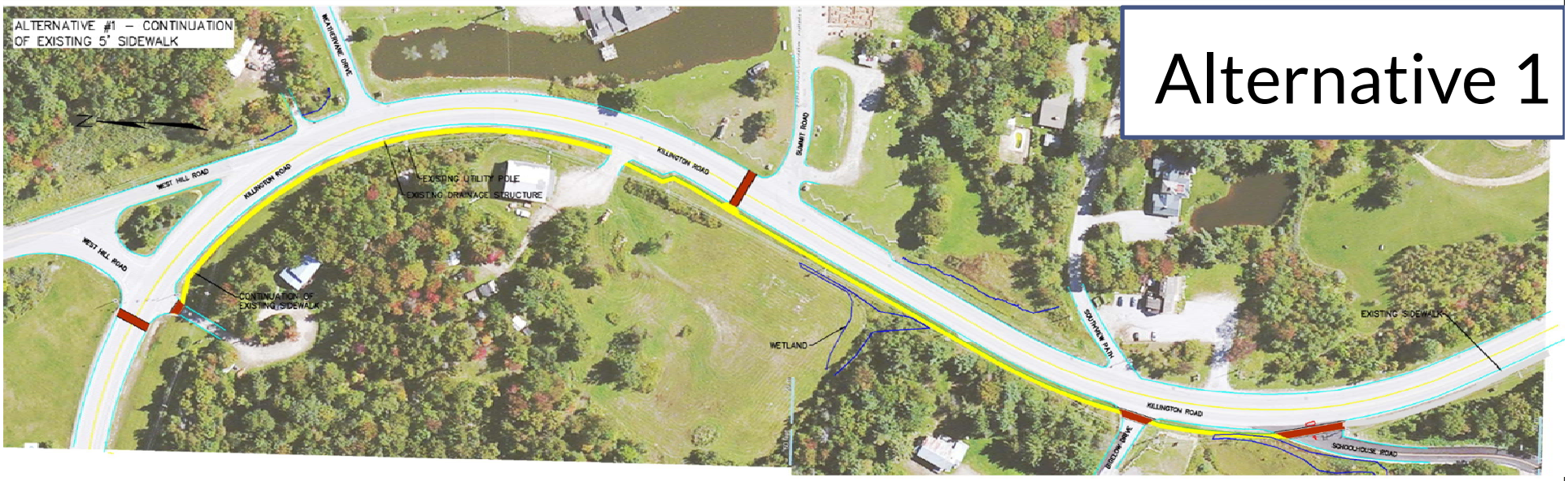


South of Schoolhouse Road:

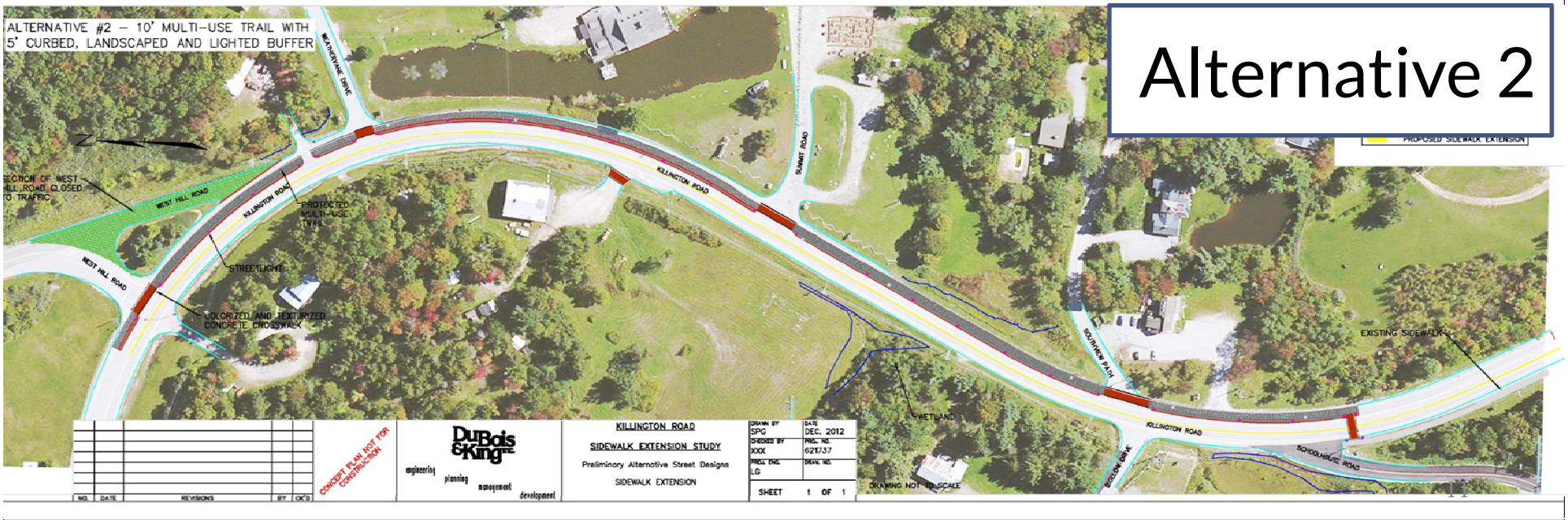
2 lanes northbound/1 lane southbound, Walkway

Alternatives

- Extend sidewalk on west side to West Hill Road, provide crosswalk.
  - Continue existing design
  - May require right-of-way, wetlands and utilities work
- Multiuse Path on east side, reconfigure Killington Road
  - Design variations possible
  - Avoids right of way, wetlands, and utility impacts

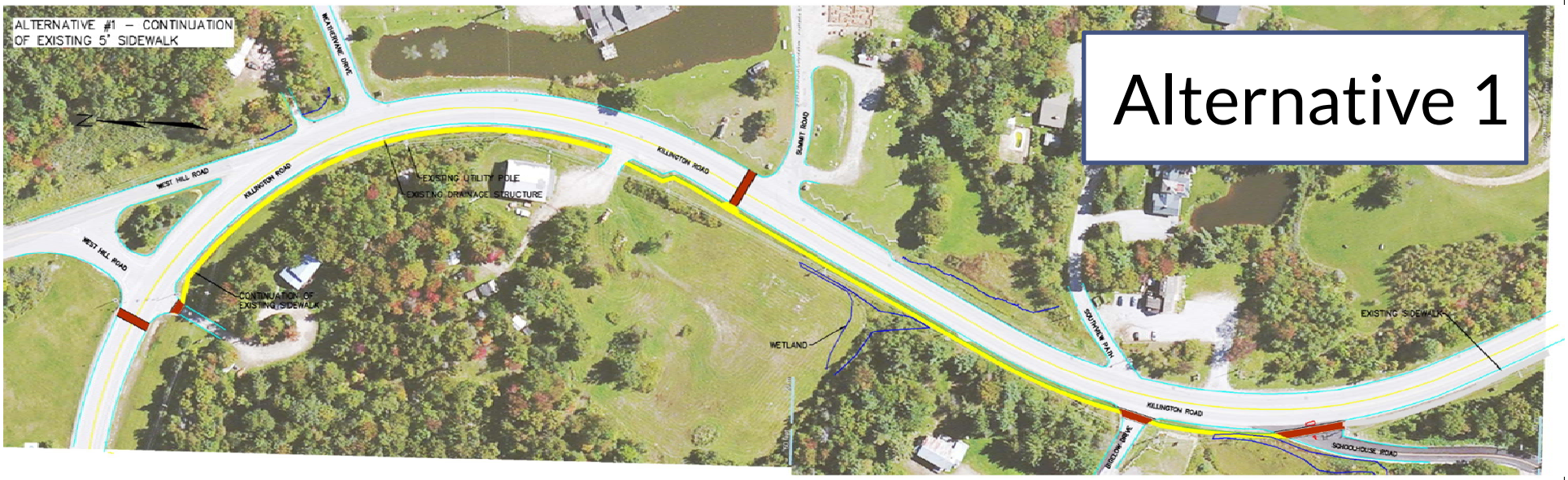


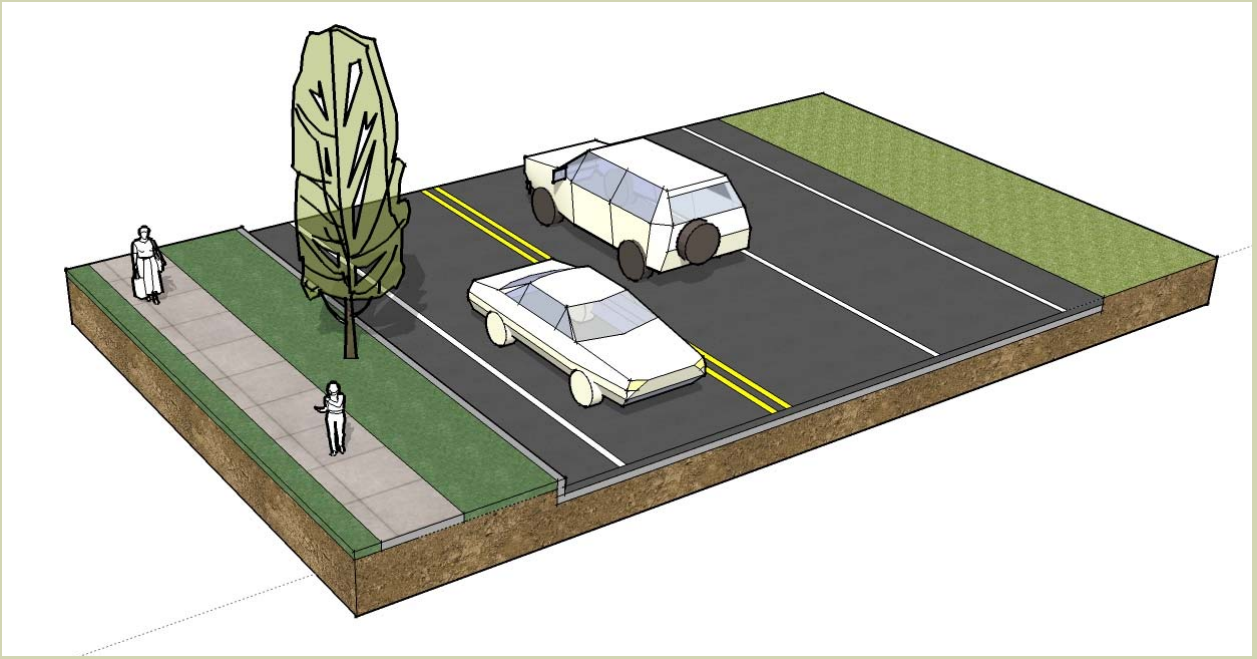
Alternative 1



Alternative 2

Alternative 1



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ROOT'S
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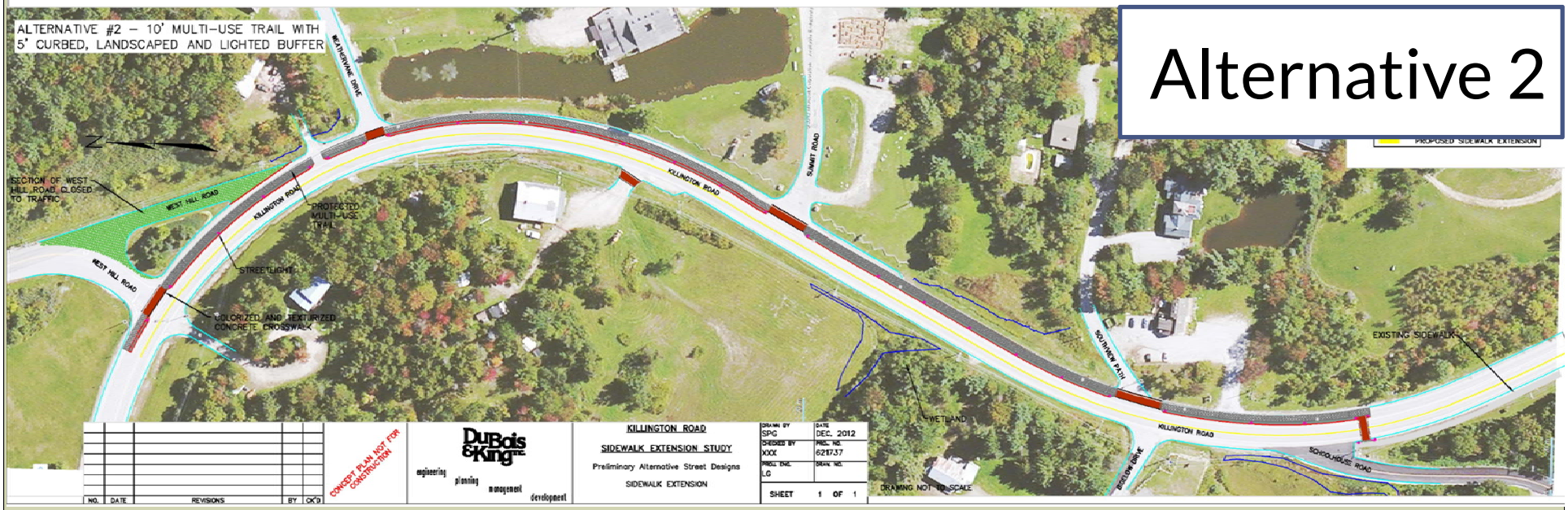
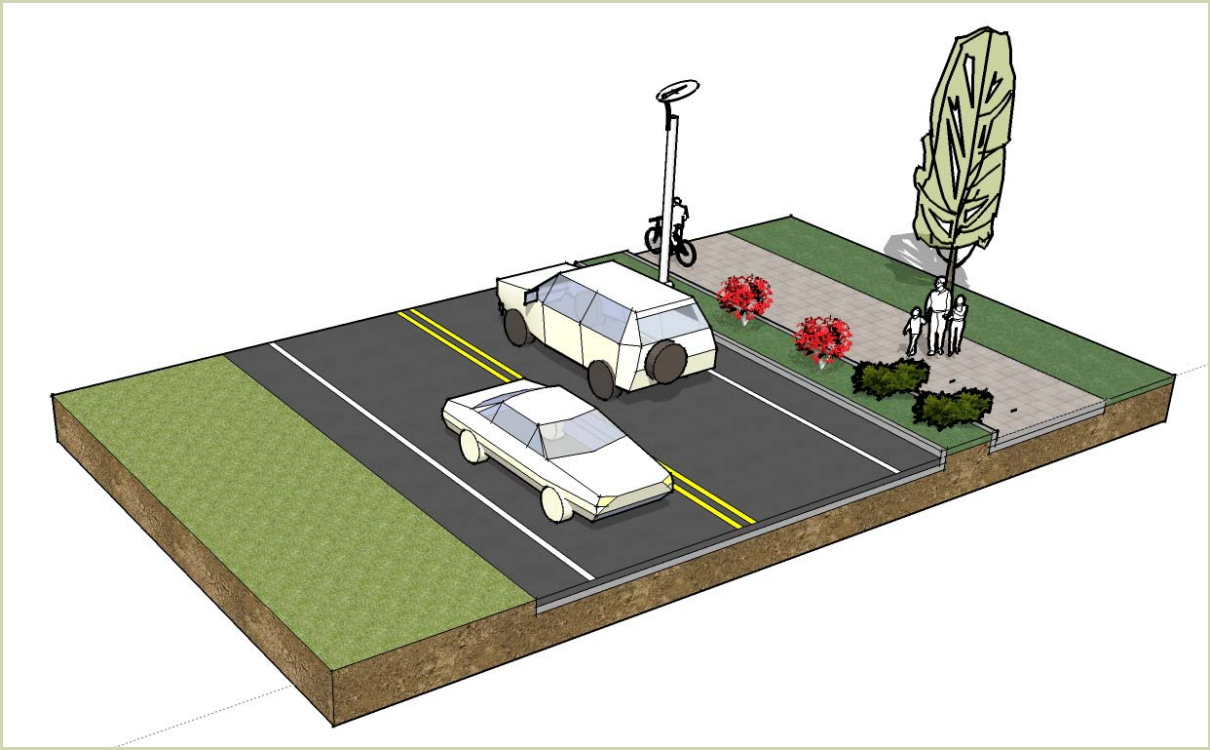
Alternative 2



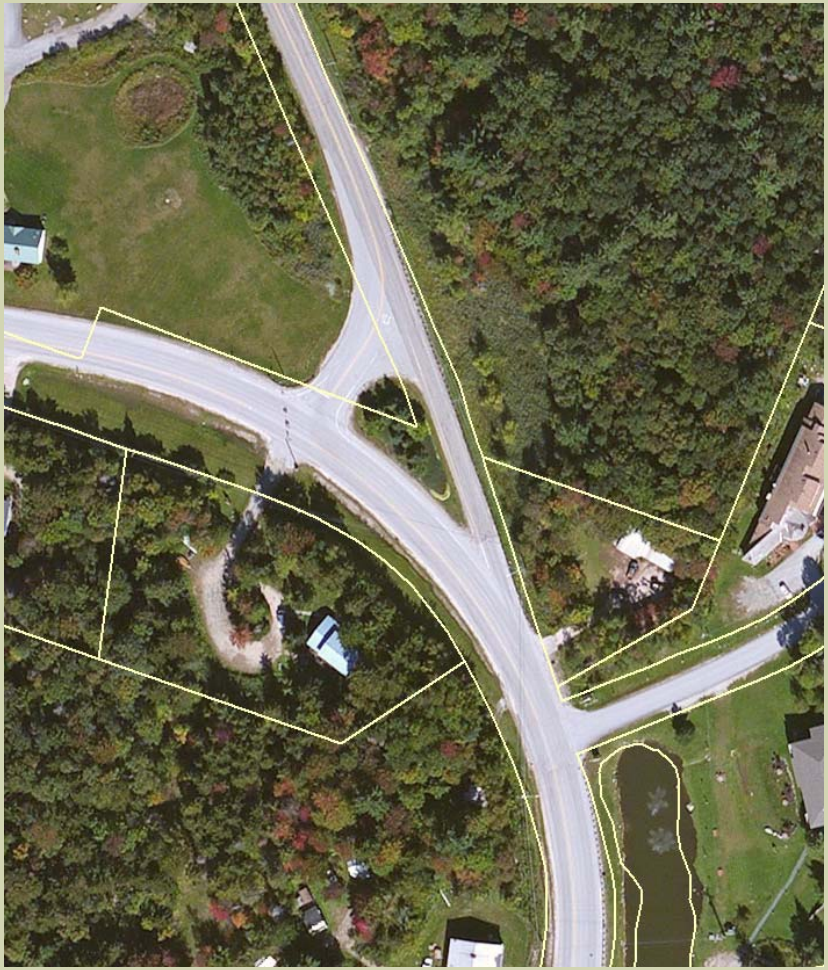



FIRE ON THE MOUNTAIN
GLASSWORKS


FIRE ON THE MOUNTAIN GLASSWORKS

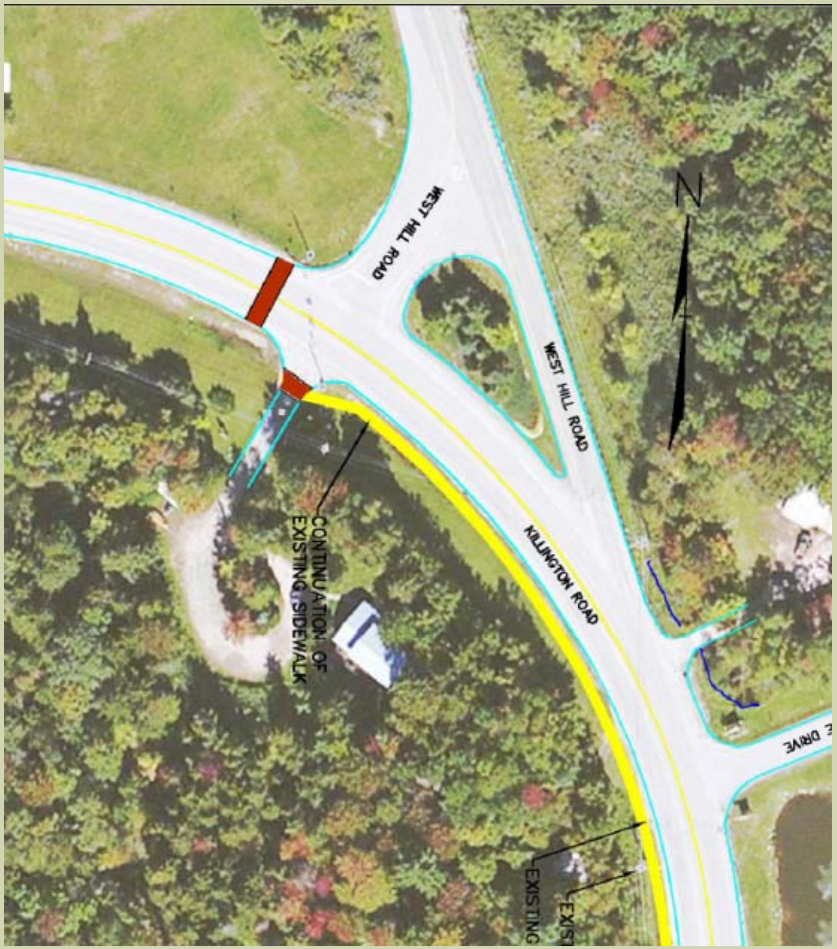
West Hill Road Intersection

- Traffic volumes do not warrant signal operation
- Northbound slip lane encourages high speeds on West Hill Road, hazardous for pedestrians
- Bus stop at this location warrants a safe pedestrian crossing
- Construction not included in enhancement grant, but a design consideration



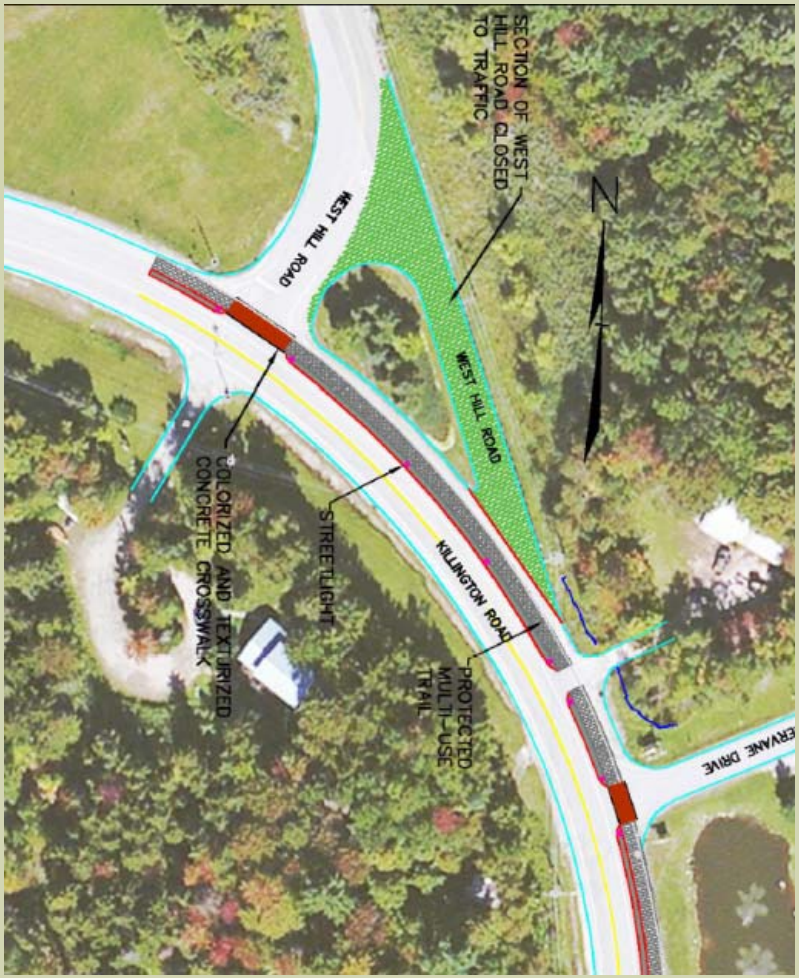
West Hill Road Alternatives

- Maintain Existing Configuration
- Compatible with Alternative 1



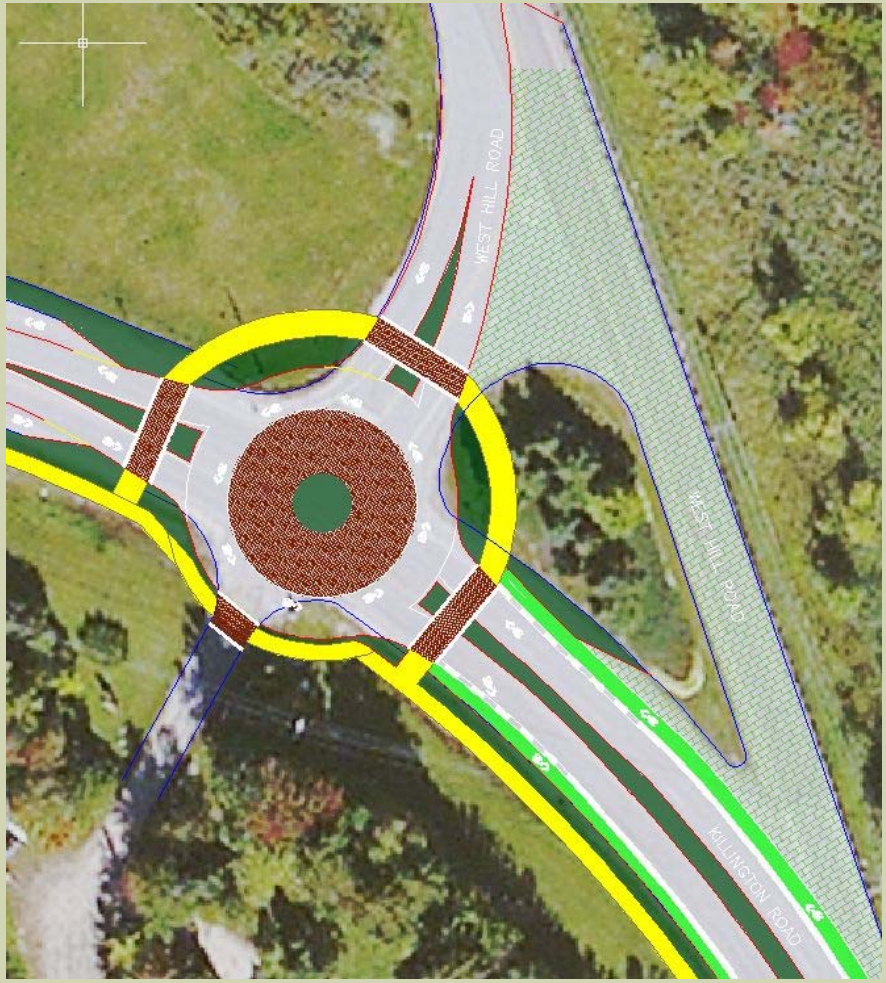
West Hill Road Alternatives

- Close northbound slip lane
- Compatible with either Alternative 1 or 2
- Reduces speeds on West Hill Road and improves pedestrian safety
- Slip lane area can be reclaimed for other uses (park, playground)



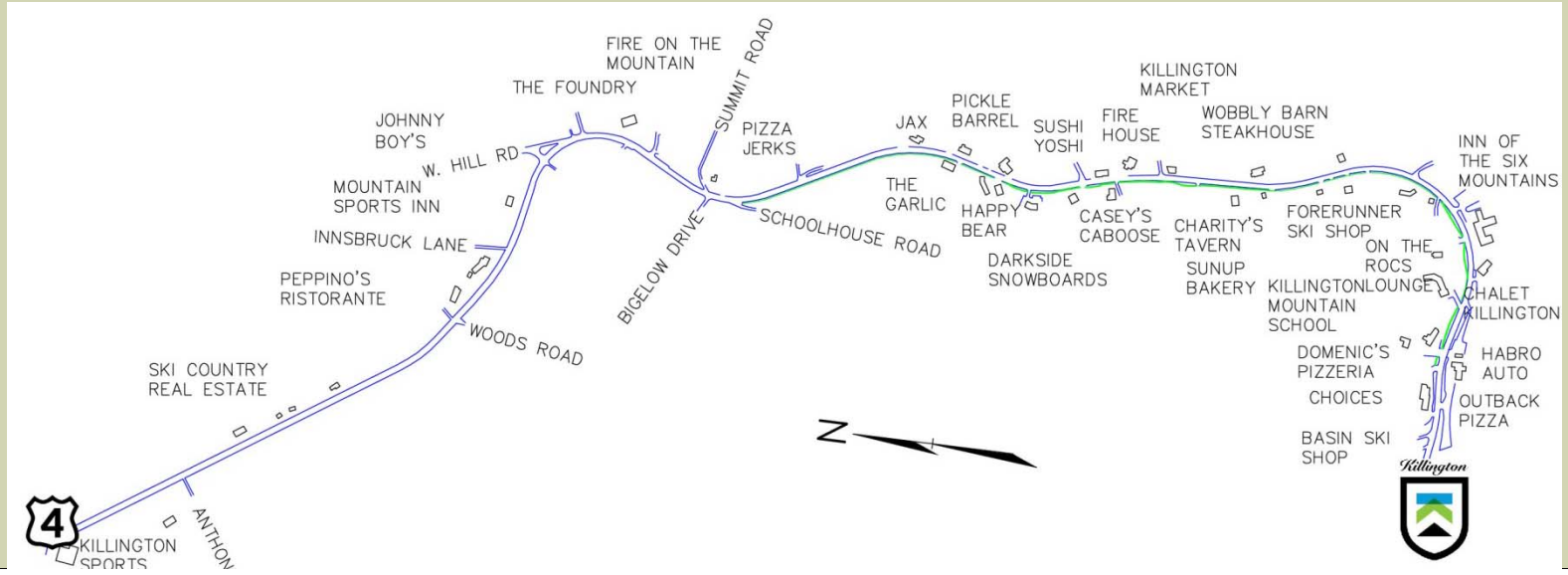
West Hill Road Alternatives

- Roundabout as a gateway and transition from one to two northbound lanes
- Safest type of intersection control
- High traffic capacity
- Attractive gateway to commercial area
- Compatible with Alternatives 1 and 2

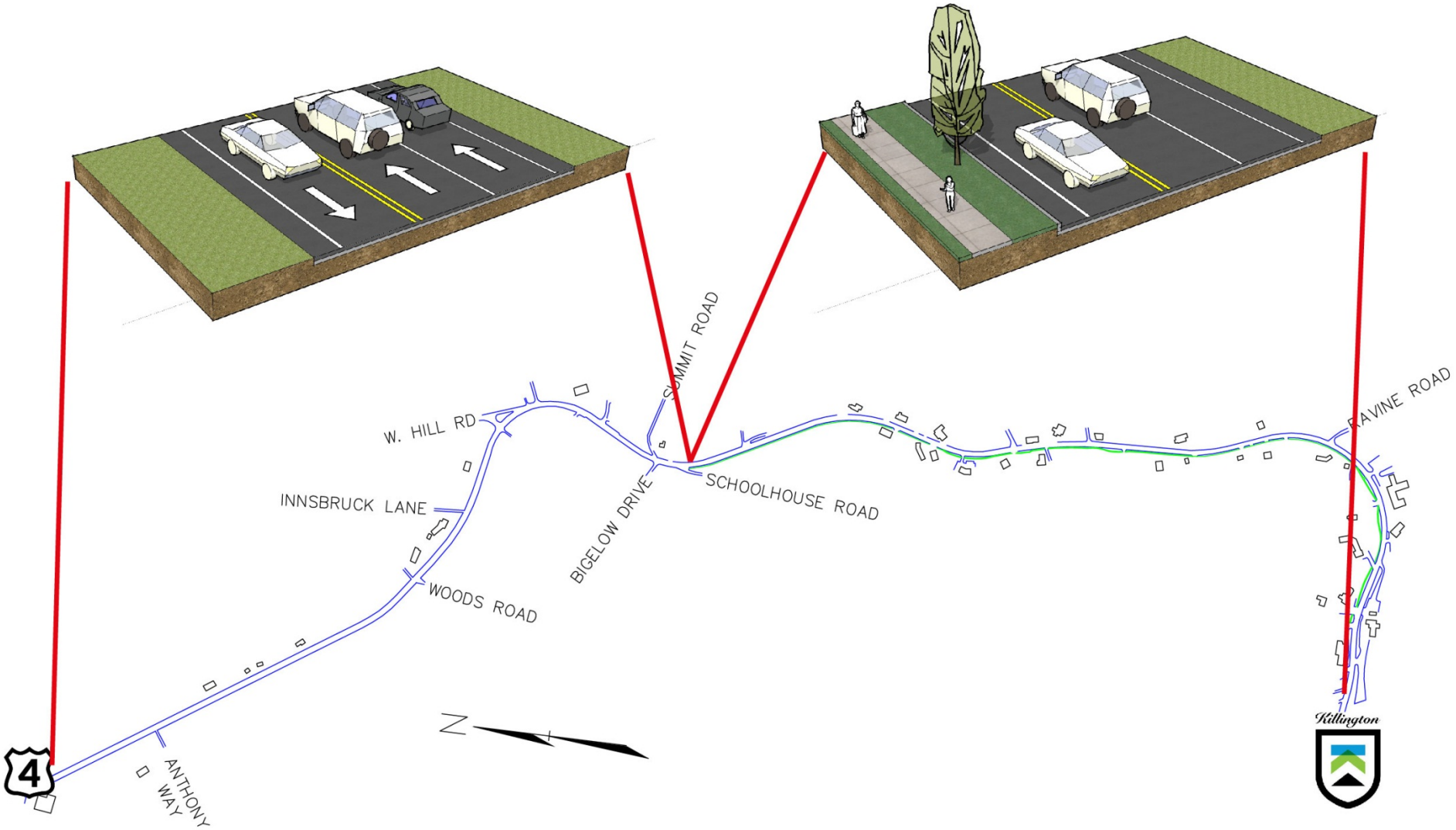


Corridor Plan

- Alternative 1 maintains the "status quo" conditions for Killington Road.
- Alternative 2 would require reconfiguration of the road to have one lane in each direction between Schoolhouse and West Hill Roads.



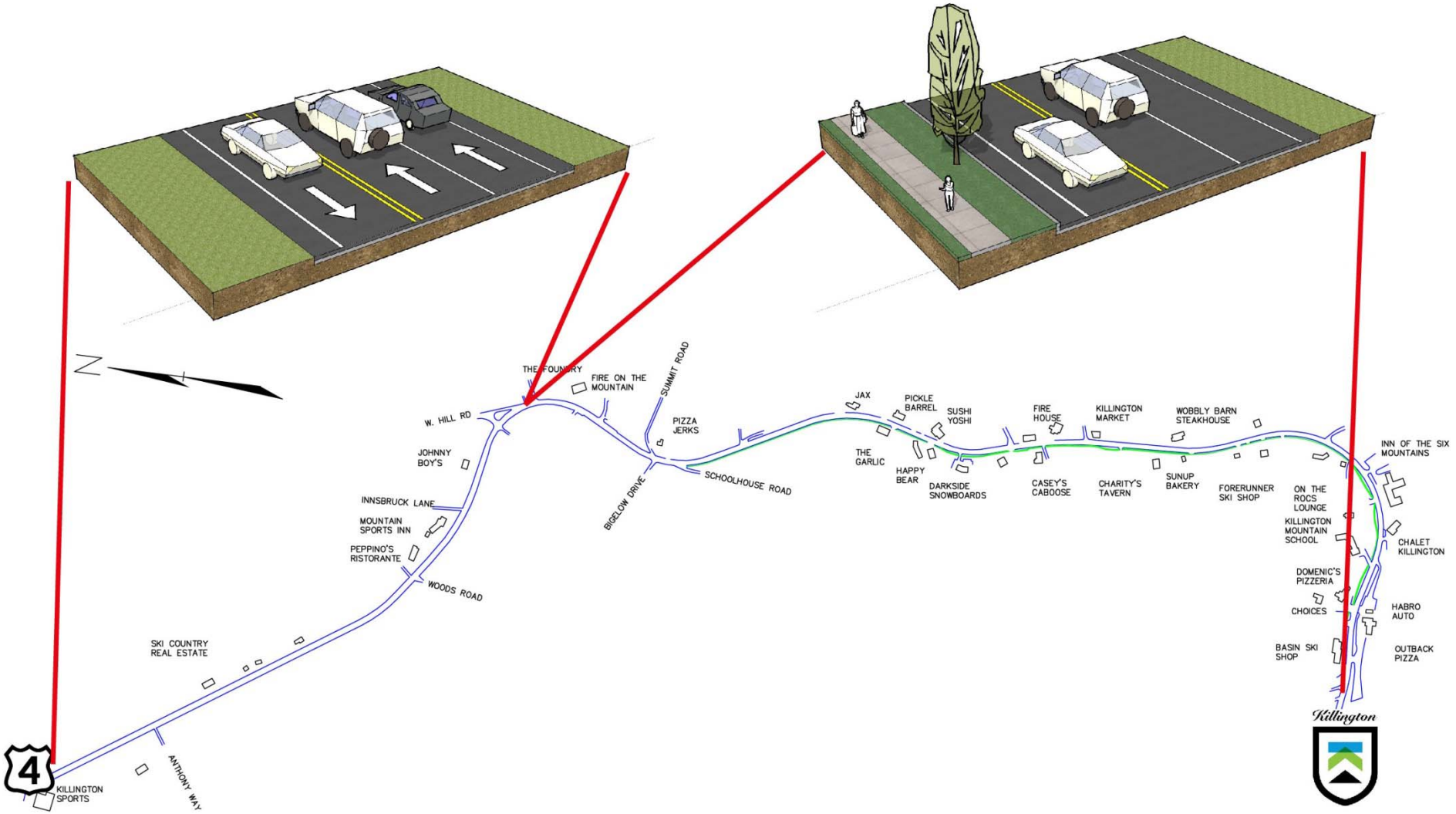
Existing Conditions



Existing Conditions

- Pedestrian walkway on west side from Schoolhouse Road to Basin Ski Shop
- Pedestrian crossings are challenging due to distance and speeds
- No bicycle facilities on Killington Road
- High travel speeds for northbound traffic
- Potential for vehicle conflicts due to passing and turning maneuvers

Alternative 1 : Walkway

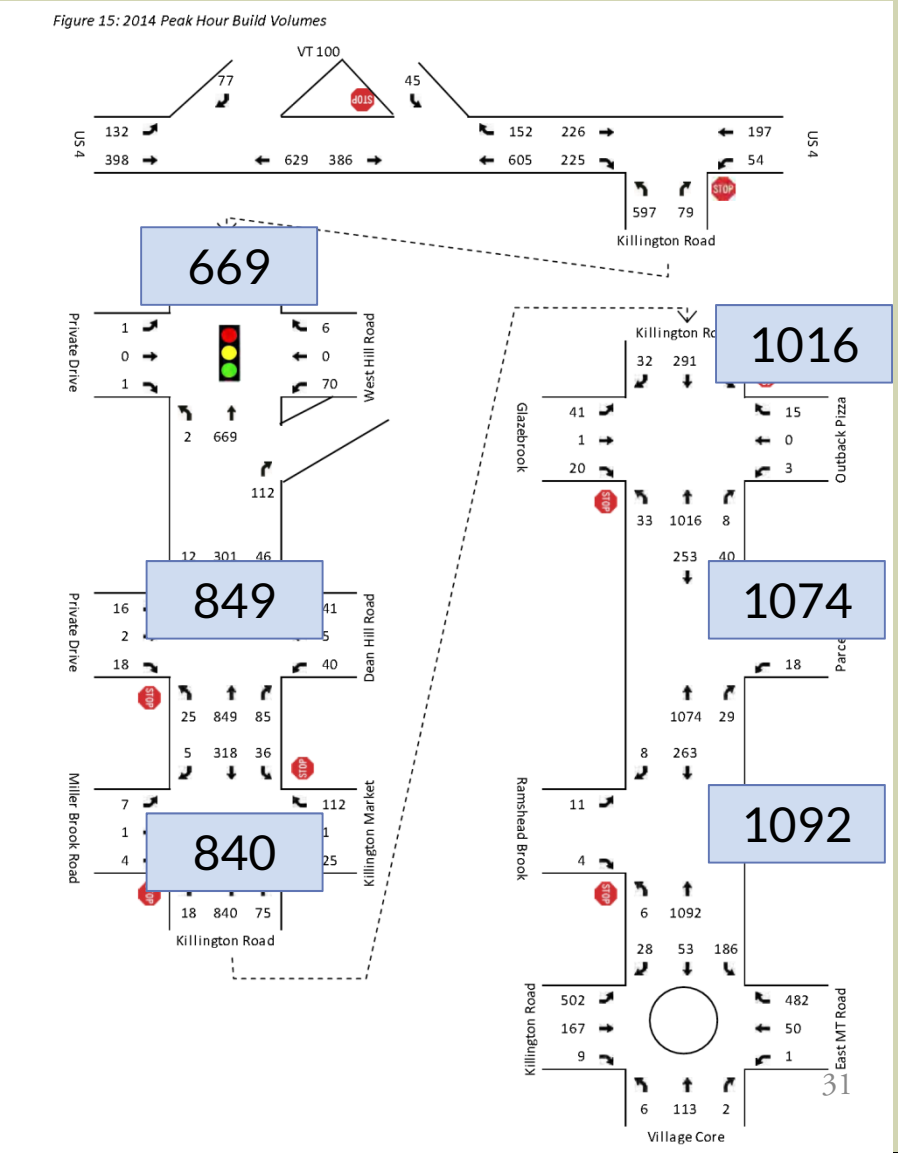


Alternative 1: Summary

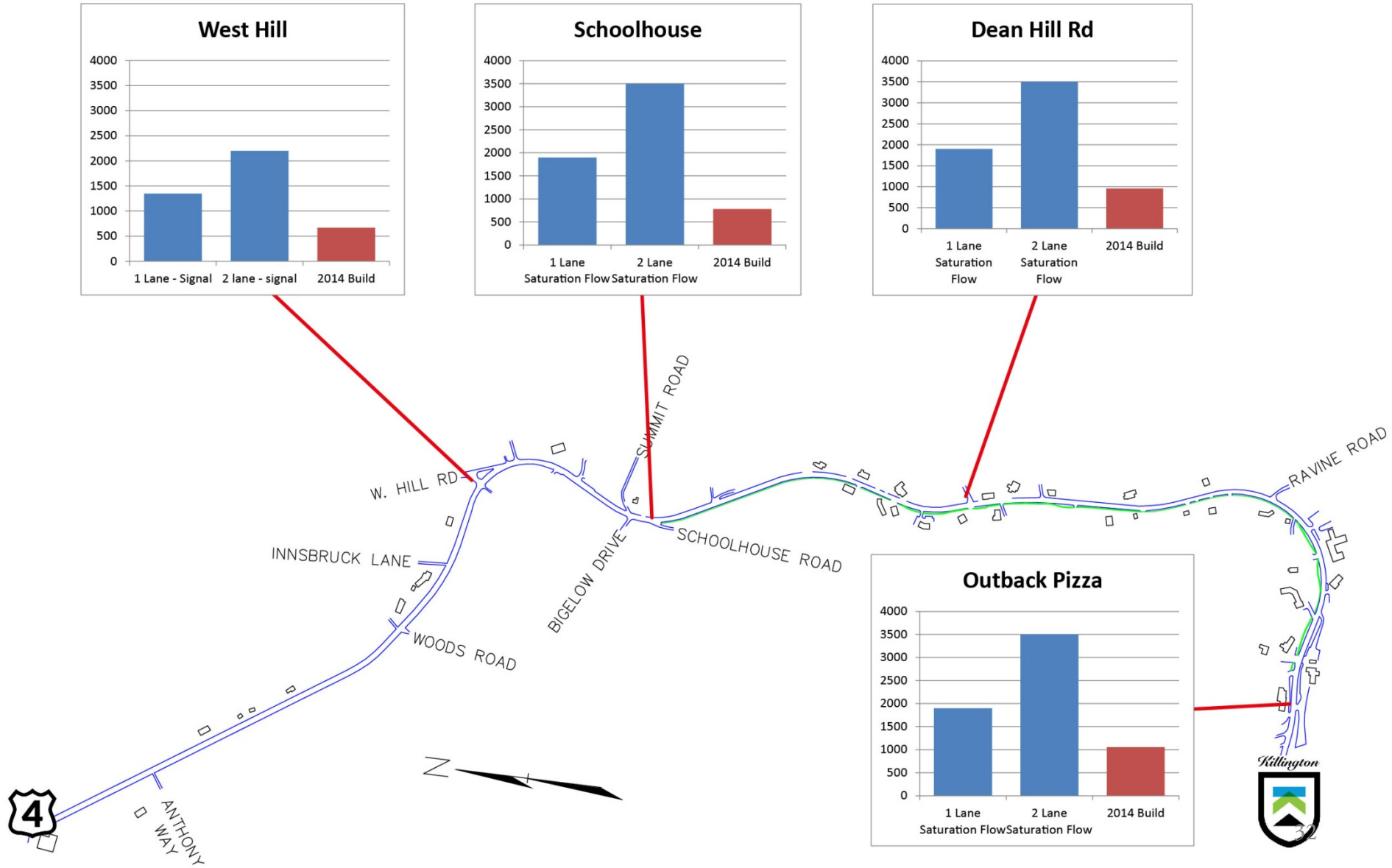
- Maintains 2 outbound travel lanes-Status Quo
- Does not address bicycle needs
- Pedestrians must cross three lanes of higher speed traffic
- Does not address vehicular conflict potential
- Utility and environmental impacts
- Higher construction costs

Alternative 2: Traffic Analysis

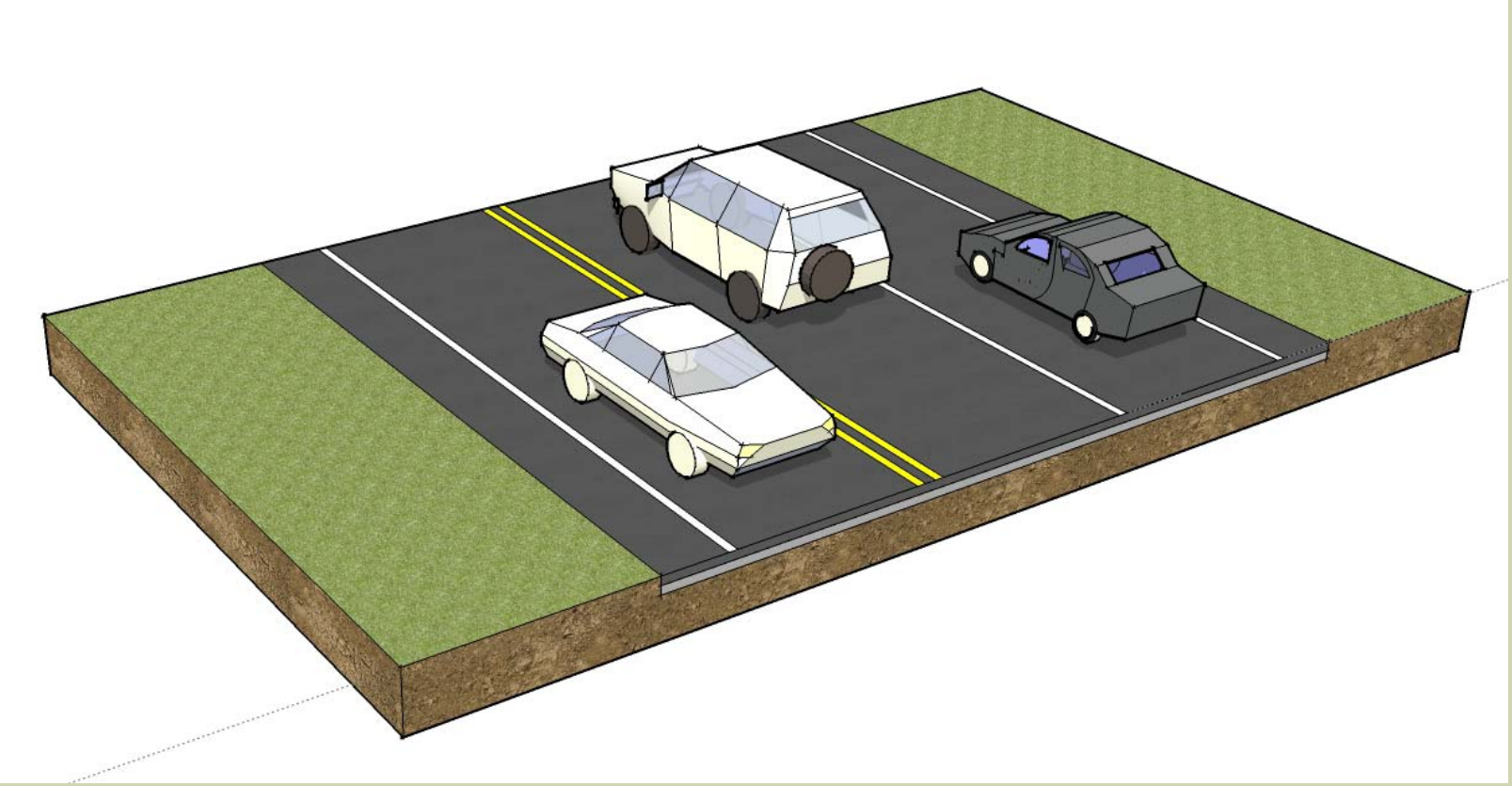
- Requires travel lane modification
- 2014 Build Village peak hour traffic volumes available from recent Resort/SP Land traffic study



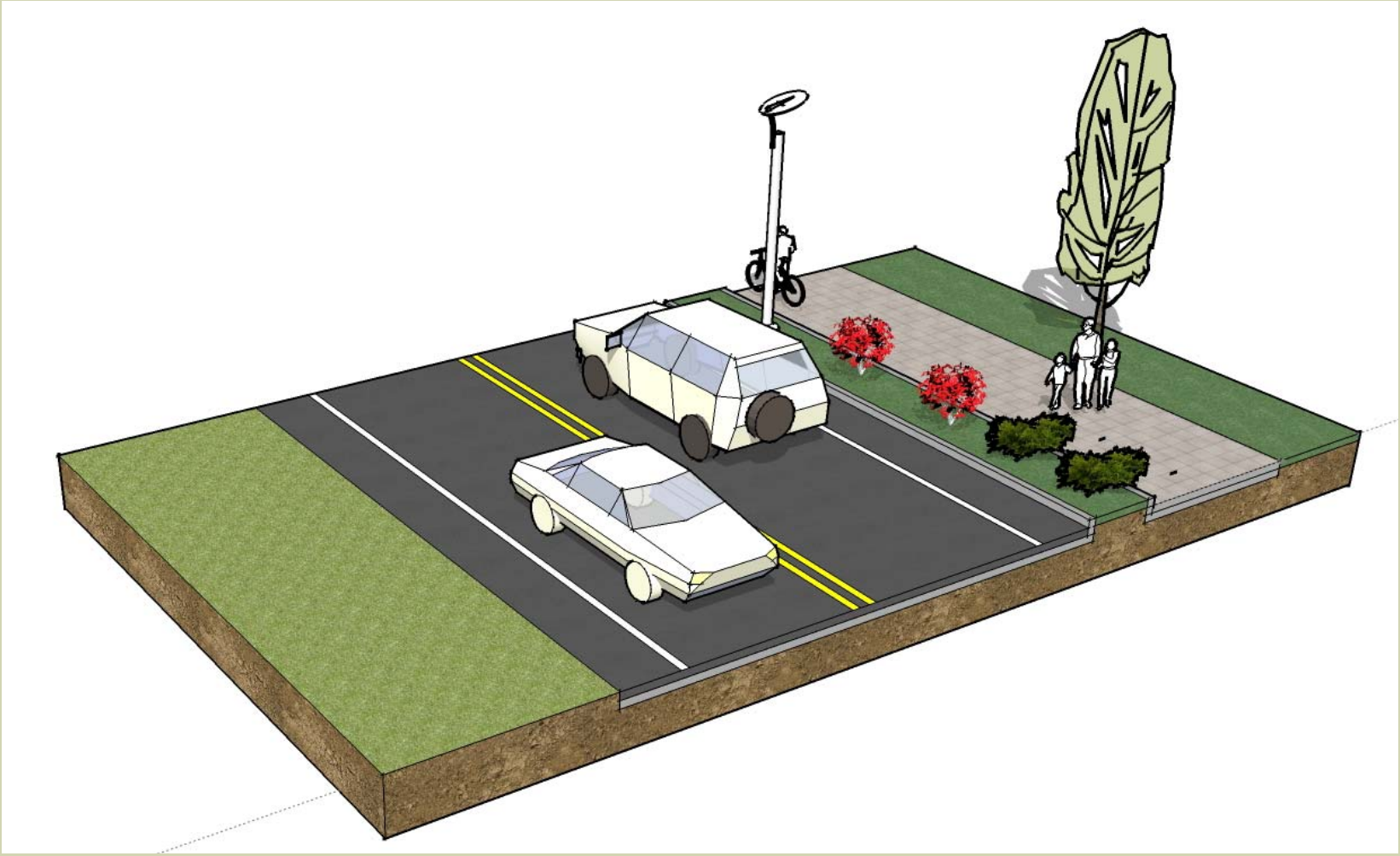
2014 Capacity Utilization



Alternative 2: Existing Cross Section

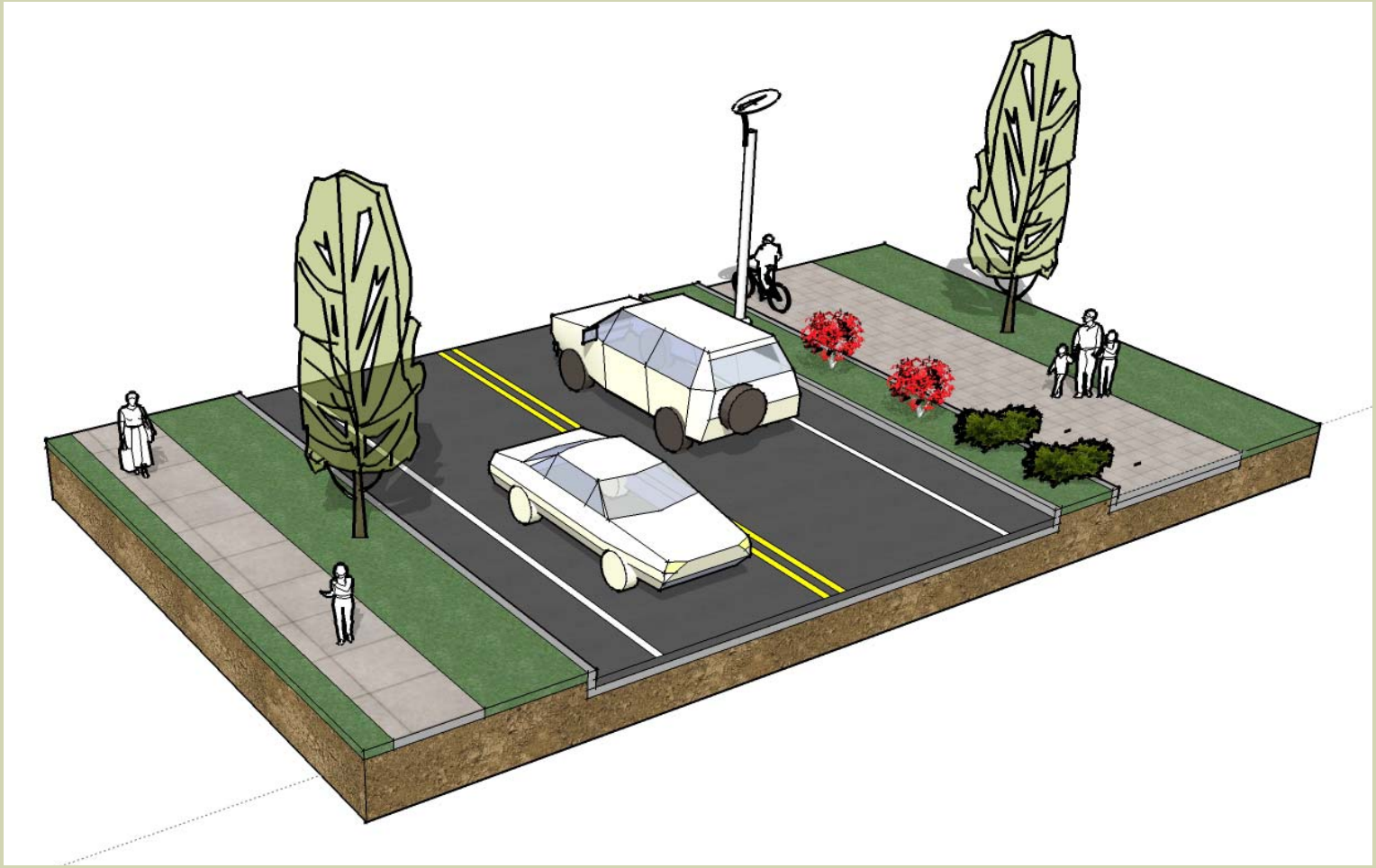


Alternative 2: Proposed Cross Section



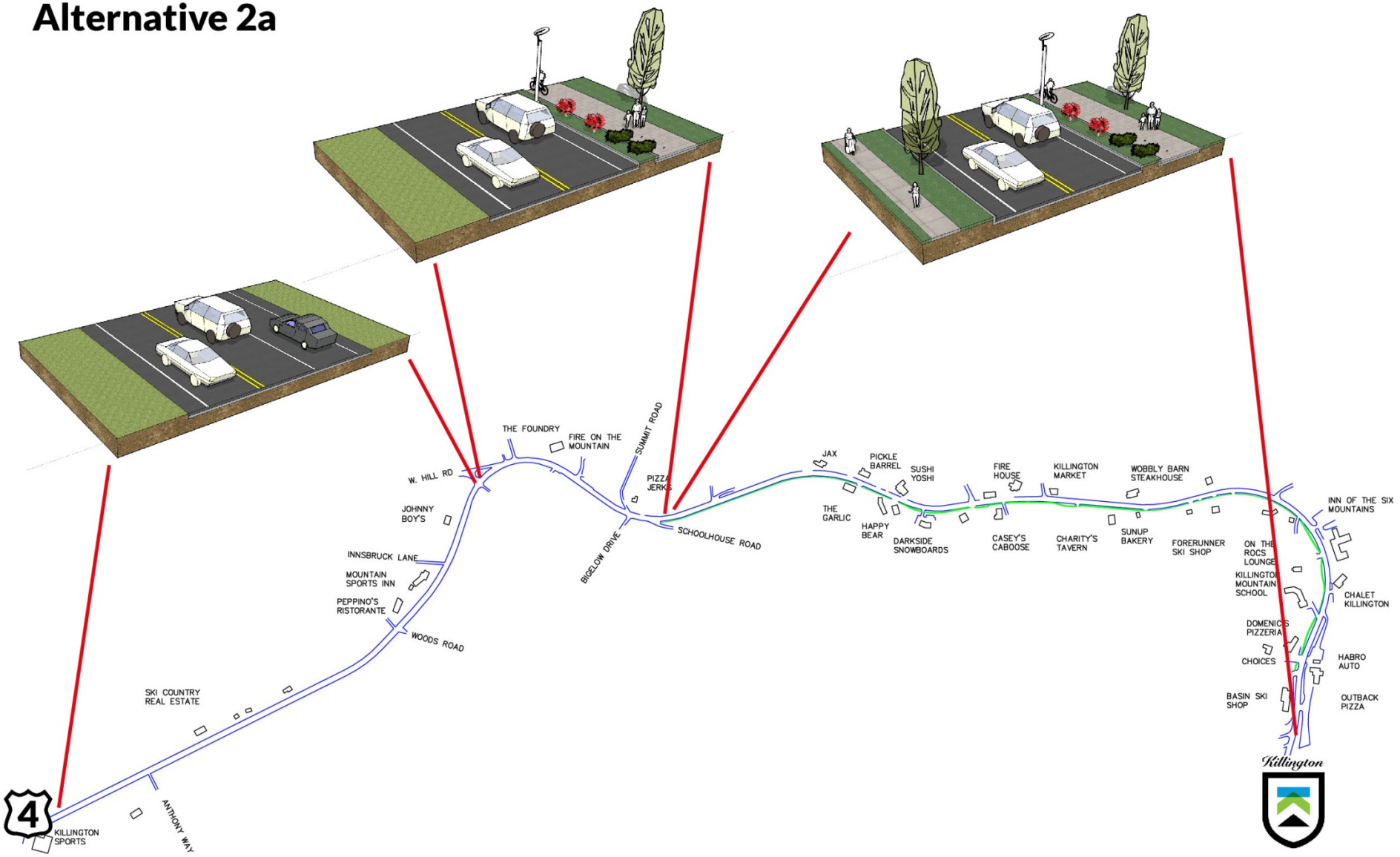
Between West Hill and Schoolhouse Roads

Alternative 2: Proposed Cross Section

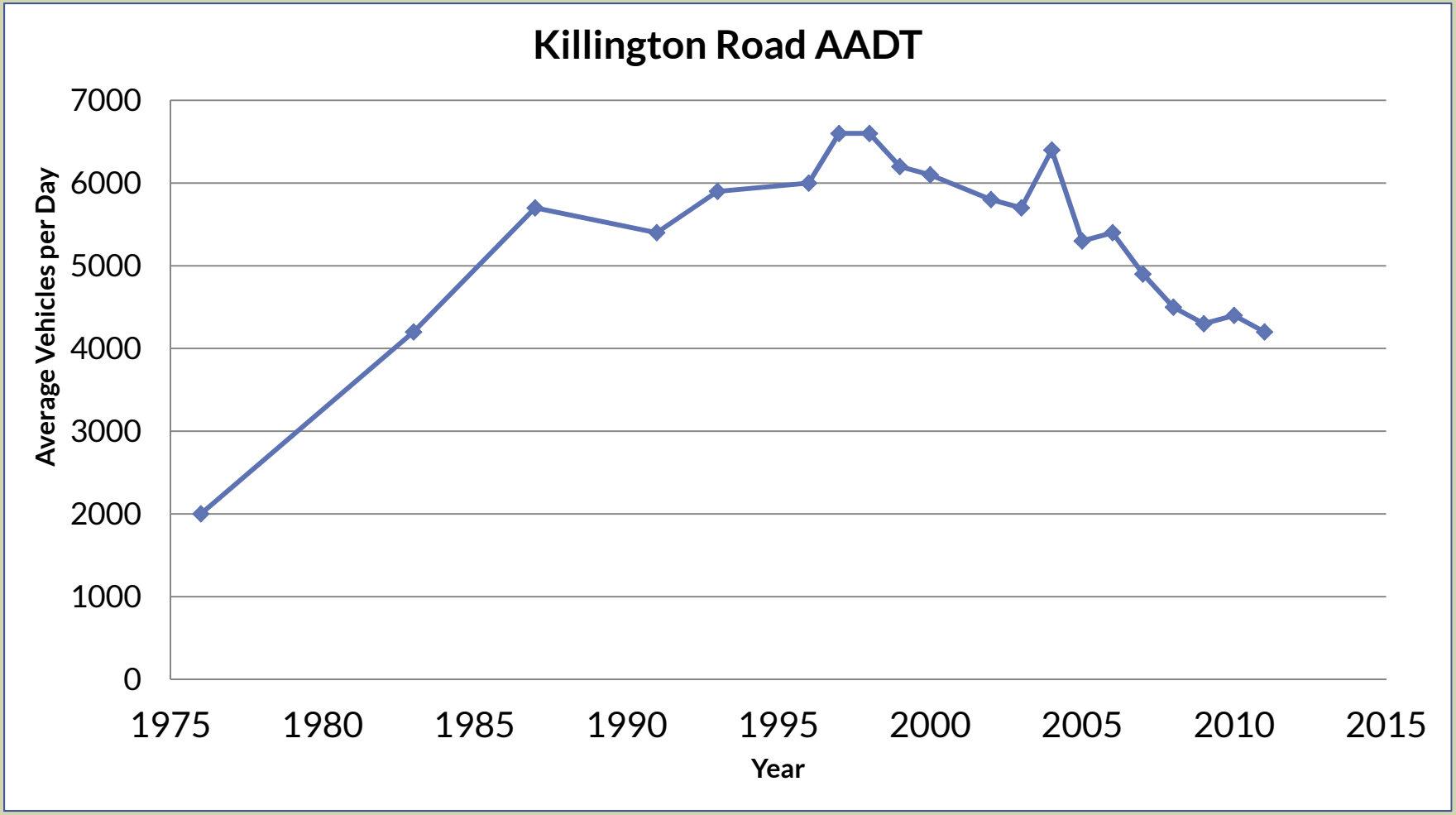


South of Schoolhouse Road

Alternative 2a

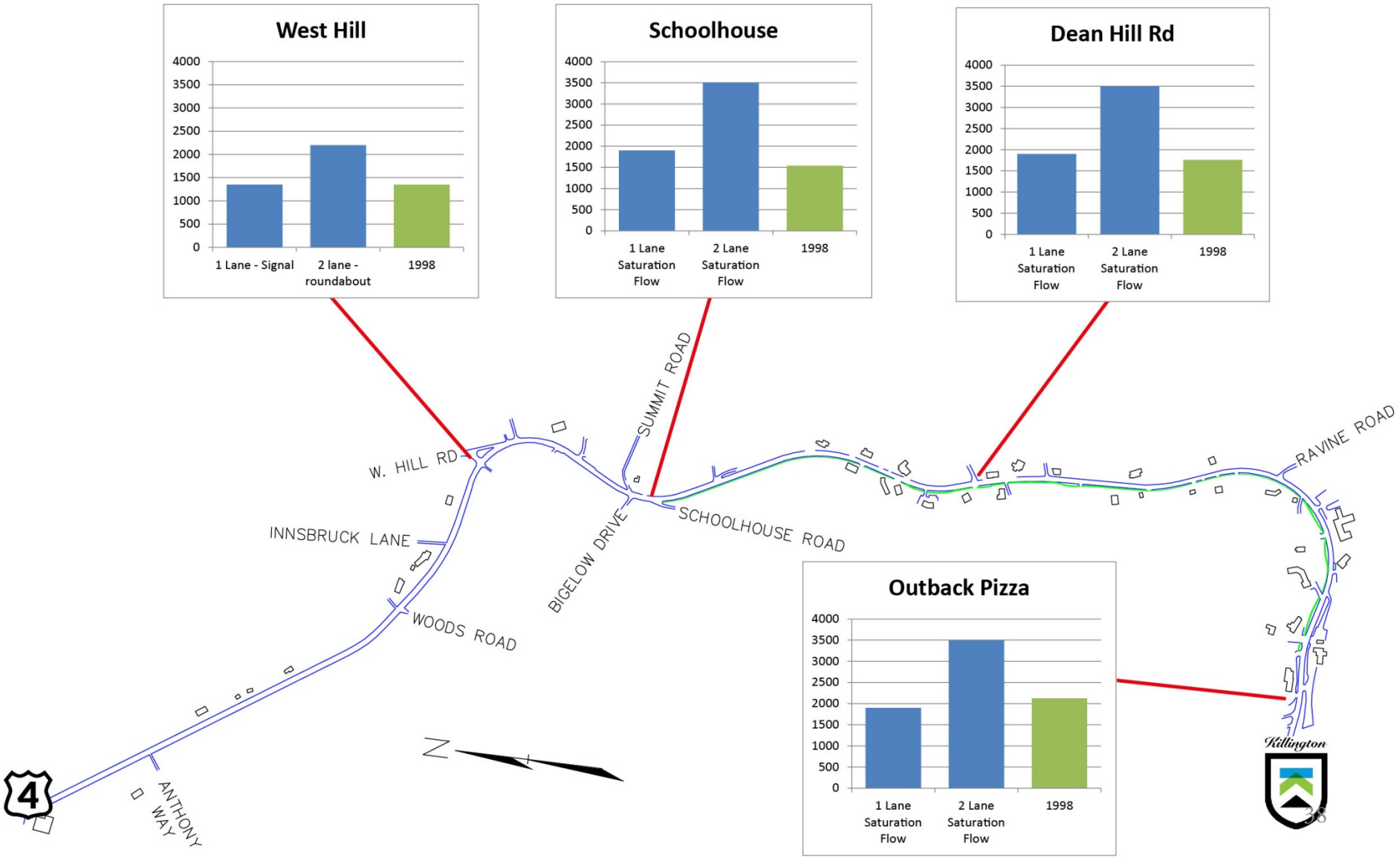


Traffic Volume History

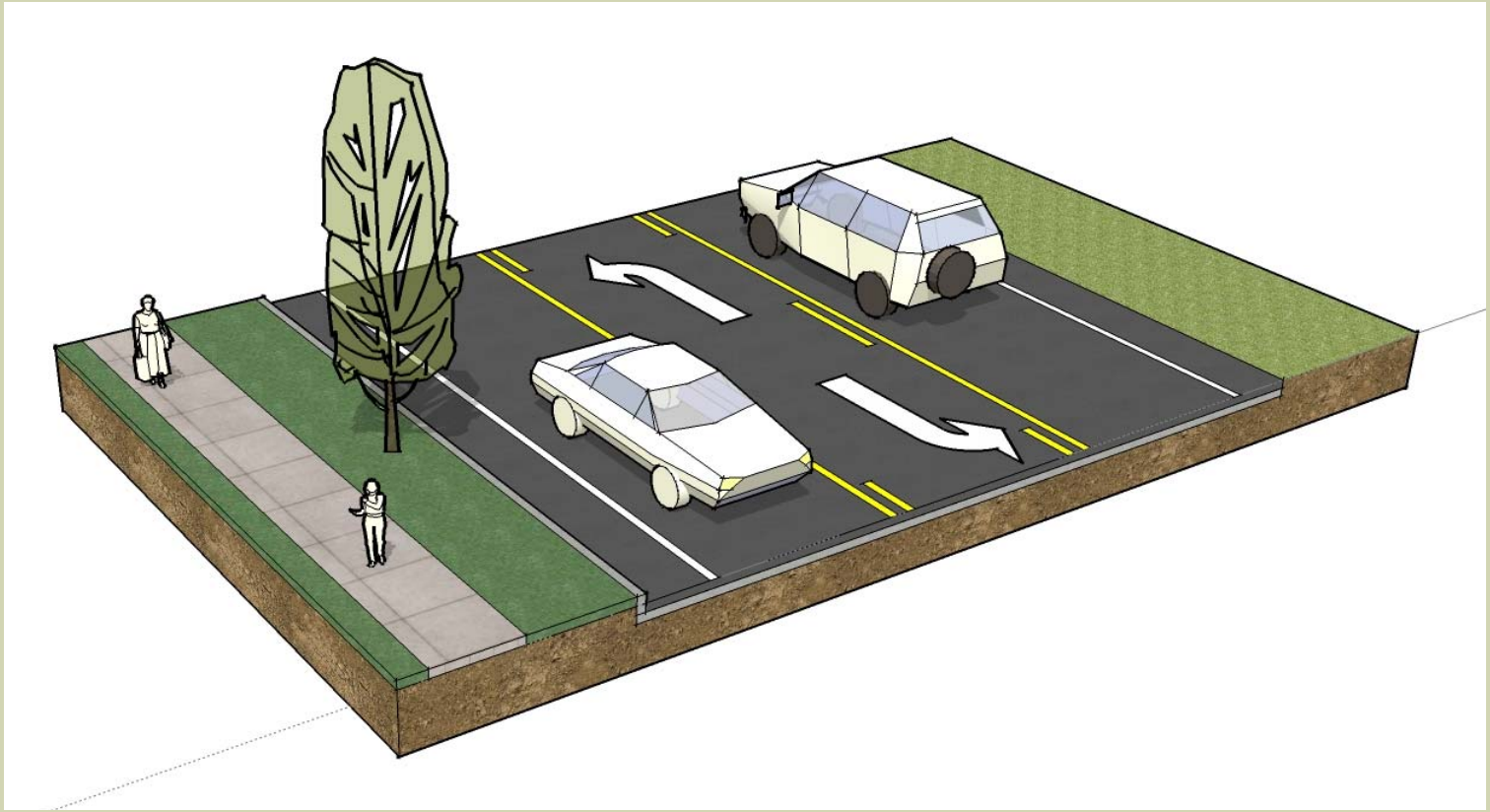


- Traffic Volumes on Killington Road reached their peak in 1998
- Source: Vermont Agency of Transportation, Station P6R054

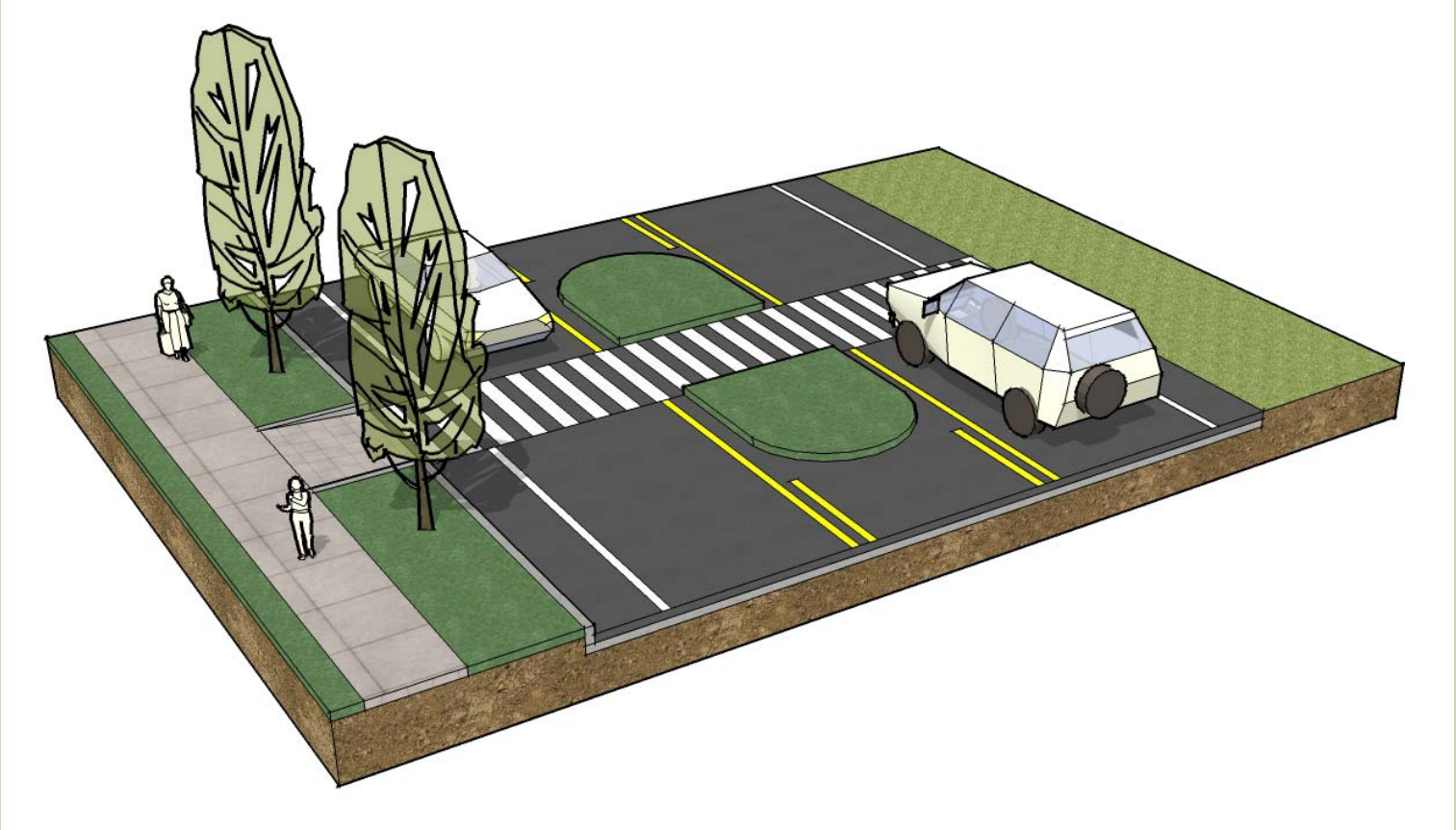
1998 Capacity Utilization



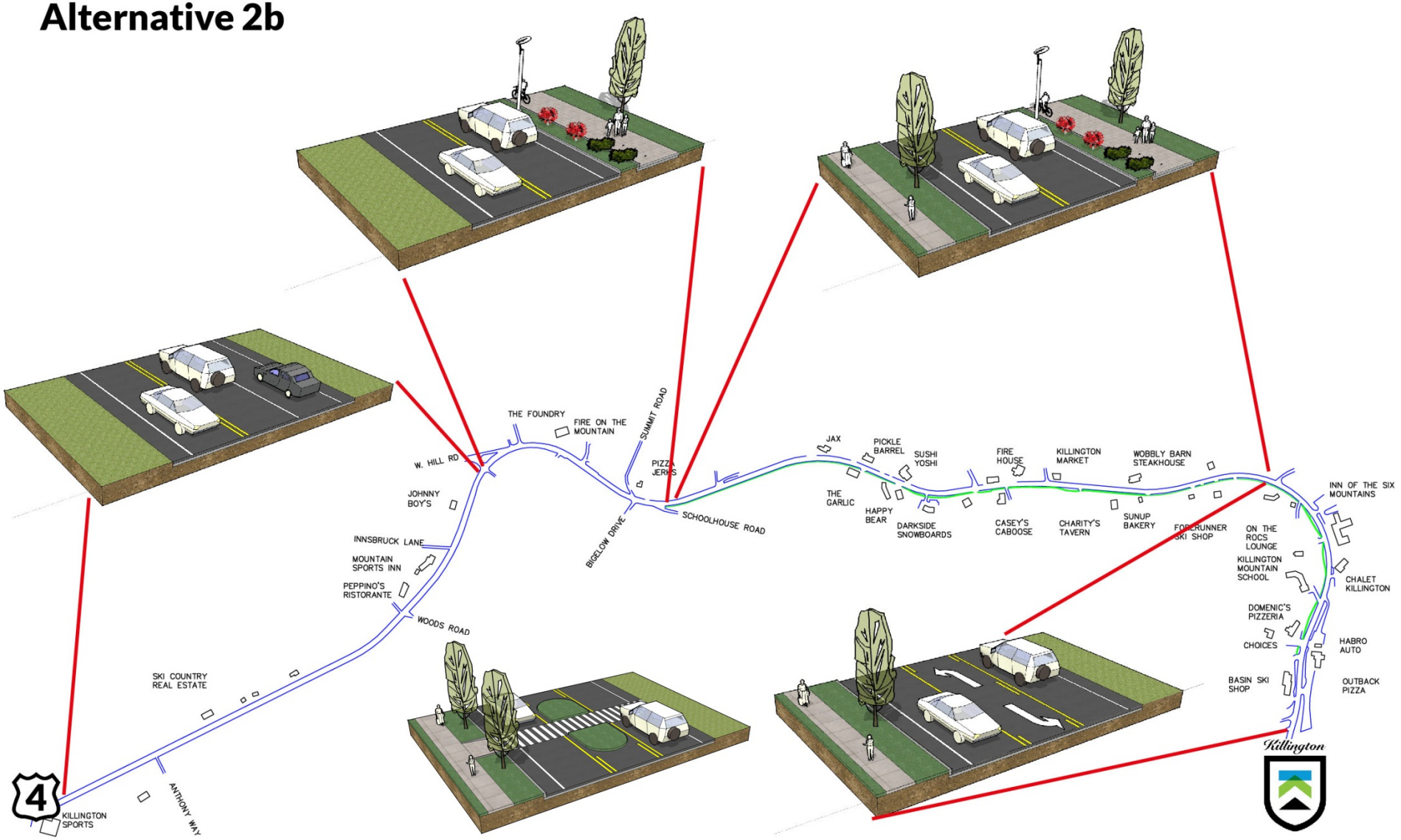
Alternative 2b Cross Section



Alternative 2b Cross Section



Alternative 2b

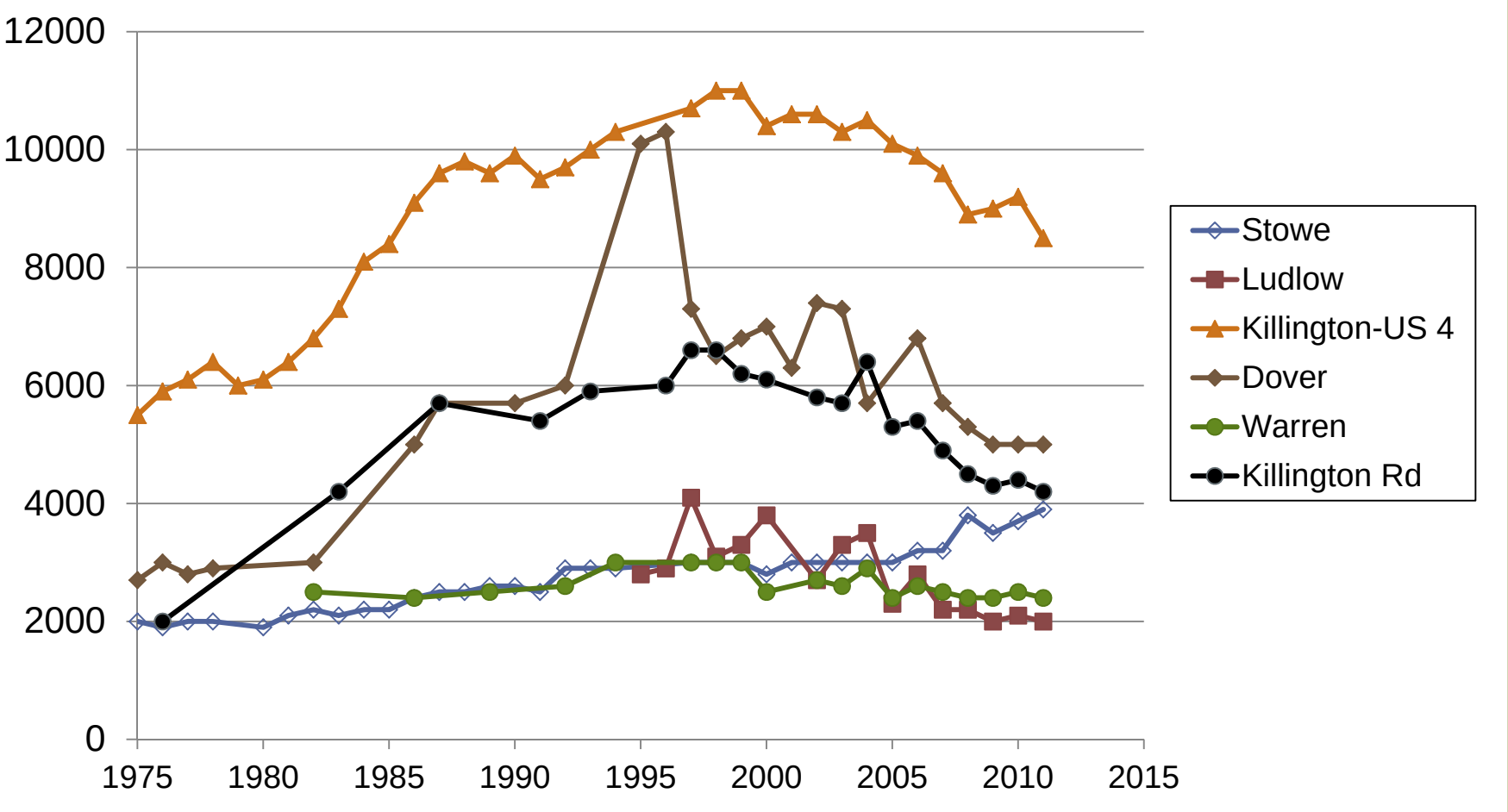


Vermont's Ski Highways

Town/Ski Area	Route	Design Hour Volume	% Utilization	Number of Lanes
Warren/Sugarbush	Sugarbush Access Rd	624	24%	2
Ludlow/Okemo	Okemo Access Rd	726	28%	2
Winhall/Stratton	Stratton Access Rd	775	30%	2
Killington	**Killington Rd**	**873**	**17%**	**3**
Stowe/Mt Mansfield	VT 108	908	35%	2
Dover/Mt. Snow	VT 100	1,037	40%	2
Killington	US 4	1,119	44%	2

- Killington has by far the lowest capacity utilization of Vermont's ski roads.

Traffic History



- **Vermont's ski roads are showing similar declines in traffic**

Planning for the Future

- Declining volumes seen across VT and US provide an opportunity to reconsider how we use our roadway infrastructure.
- Rebound of traffic to 1998 levels is unlikely given current trends
- Official forecast of the Resort traffic study is for a modest increase from the Village development, and can be accommodated in Alternative 2.

Alternative 2: Benefits

- Improves pedestrian and vehicular safety with no passing and encouraging lower speeds.
- Eliminates need for pedestrian crossing signals
- Provides greater visibility for businesses, creating a sense of place while facilitating easier access.
- Lower construction costs, allowing more investment in streetscape amenities, less spent in new construction.

Alternative 2: Benefits

- Fewer environmental impacts to wetlands.
- Provides bicycle facilities for all levels of cyclists.
- Offers affordable implementation in steps by restriping road.

Alternative 2: Other Considerations

- Smarter Growth Patterns
  - Greater mix of land uses would absorb more traffic along the route
  - Resort Village development has these characteristics
- Peak Hour Travel Demand Management
  - Promote Transit and Park and Rides
  - Provide incentives to leave early or stay late

Alternatives Analysis

Alternative	1) Sidewalk	2) Multi-Use Path
Pedestrians	Yes-one side	Yes-both sides in business district
Bicyclists	No	Yes
Vehicular Safety	No	Yes
Lighting	Yes	Yes
Landscaping	Limited	Yes
Accommodates Current Traffic	Yes	Yes - Alternative 2a
Accommodates Historic Peak Traffic	Yes	Yes - Alternative 2b

Alternatives Costs

Alternative	Sidewalk	Multi-Use Path (Low)	Multi-Use Path (High)
Cost (Estimated - Construction Only)	$175,000	$ 90,000	$130,000
Cost (lighting, pedestrian crossings, etc.)	$100,000	$100,000	$100,000
Total Construction	$275,000	$190,000	$230,000
20% Contingency	$55,000	$38,000	$46,000
Engineering Costs	$55,000	$55,000	$55,000
Total Project	$385,000	$283,000	$331,000
Project Budget	**$318,900**	*($255,120 Grant*	*with $63,780 match)*

- Does not include intersection improvements
- Does not include right-of-way costs

Additional Considerations

- Strengthen Killington's appeal to boomers and millennials, who seek walkable places to recreate or retire.
- Strengthen appeal of Killington as a walkable and bikable four season community.
- Support a vibrant Killington central business district, and "park once-shop several times."
- Visitors are willing to tolerate traffic congestion to visit a special place.

Walking and Cycling Amenities Attract Tourists

"**T**ourists coming to Vermont to walk and bicycle in the scenic, human scale towns and compact, pedestrian-friendly town centers have proved to be an economic boon."

Bicycle Touring in Vermont and Vermont's Scenic Byways Program, Bruce Burgess for the Vermont Agency of Transportation, 1995.

What VTrans Says

- Building bicycle and walking facilities can be a profitable investment in the economy. Case studies indicate that the annual economic impact of bicyclists and walkers who utilize trails and paths is significantly more than the one-time expenditure of public funds to construct special walking and bicycling facilities in the region. And the quality of these facilities has a positive effect on vacation planning.
- ***Economic Impact of Bicycling and Walking in Vermont-Final Report, July 6, 2012***

Questions/Answers/Discussion