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Interpreting the Interstates – how highways changed Rural America’s sense of place.

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2. Narrative

Interpreting the Interstates – how highways changed Rural America’s sense of place.

2.1 Nature of the Request - Hidden away, deep in the vaults of the Vermont State Archives, are 36,655 large-format negatives that depict Vermont, the most rural state in the nation, before, during, and after two decades of Interstate Highway construction. Most of these images, which record a vanished physical and cultural landscape, have never been printed much less seen by the public. These images provide, in exquisite detail, unrivaled documentation of stunningly rapid and dramatic change – the coming of modern, high-speed, limited-access highways to a rural state where dirt roads were and still are the norm. Far away places became accessible but at a price - family farms cut in two, historic buildings bulldozed, and a landscape reshaped in the greatest earth-moving event ever undertaken. The photographs offer at the same time dramatic and mundane details of stunningly rapid change that fundamentally altered the speed and means by which people and goods traveled through rural areas of our nation. These images are an historical treasure trove documenting cultural change in Rural America between 1958 and 1972.

This request seeks support to use this compelling visual record for documenting and understanding cultural changes occasioned by the coming of the Interstate Highways to Rural America. Using these images and the stories associated with them, we will catalyze public engagement and dialog as our nation envisions a future with more people and fewer fossil fuel resources. Our interpretive goal is straightforward and societally relevant. *What can we learn from the past as we embark on creating transportation systems for the future?* The time is right to look back on the Interstate Highways, the last massive Federal infrastructure investment, as our nation has begun the largest economic stimulus and public works program in history. We have assembled an interdisciplinary team to conduct this work including regionally and nationally known humanities organizations and scholars. This project is the first of its kind and serves both as a proof-of-concept and as a model for image analysis and accessibility in other regions. Our findings will be broadly generalizable, as much of America traversed by Interstate Highways is rural. Our work will contrast and compliment extant highway scholarship, which focuses largely on urban and suburban settings. Vermont, which likely has the most detailed photographic record of Interstate Construction, provides a manageable setting to explore, document, and interpret highway creation in rural areas, a pivotal event in America’s history.

Interpreting the Interstates is a three-year, three-phase project focused on public engagement in order to understand better the impact of the Interstate Highway system on the culture and history of Rural America and to disseminate our findings widely. It is a natural outgrowth from our decade of experience developing the *Landscape Change Program* (uvm.edu/landscape), an interdisciplinary, web-based archive of more than 33,000 Vermont landscape images with a strong emphasis on public outreach, image interpretation, and the provision of learning resources to teachers. During the first year, we will bring >10,000 never-before-seen images to the public through the established *Landscape Change Program* digital archive. In the second year, we will use these historic images and modern rephotography as catalysts for public discourse at a series of town gatherings and citizen interviews. In the third year, we will disseminate our findings and stimulate further public discussion using a variety of means: 1) local dissemination will result from a modular, flexible exhibition that will travel to 38 county fairs and libraries in Vermont, 2) regional dissemination will be catalyzed by permanent interpretive signage installed at rest stops along Vermont’s Interstate Highways, and 3) national dissemination will result both from our established interactive web presence and from the book we prepare at the project’s end. We seek \$288,467 of NEH support towards a total of \$381,880 for *Interpreting the Interstates – how highways changed Rural America’s sense of place*.

2.2 Project Introduction

The over-arching goal of this project is straightforward – *Using a unique collection of historic photographs as a catalyst, we seek to engage the public in order to understand how the Interstate Highway system changed the cultural trajectory of Rural America. To do this, we will examine the effect Interstate Highway construction had on Vermont - the state with the most rural population in the nation.* Many significant humanities themes (political, geographical, historical, cultural) underlie this broad umbrella of inquiry. In the paragraphs below, we frame three specific humanities research themes by exploring the ideas of others as they relate to Interstate Highways and to the culture of Vermont. These themes will guide public engagement throughout the course of the project and are the focus of the project’s interpretive approach. Creation of something as large and complex as the Interstate Highway system has been considered by numerous authors from a variety of perspectives (e.g., Weingroff 2006; Weingroff 2008); yet, none has worked with such a complete and compelling photographic archive and none has examined a rural state like Vermont. **It is this contrast, between rural and urban, that distinguishes the project we propose.**

Note: Photographic images in this proposal come from the collection we propose to study; they are indicative of the image quality, composition, and richness of meta-data that typify the collection. Please consider viewing the images on-line (uvm.edu/landscape) where they can be seen at high resolution and full captions are available. Search for an image using the LS# in the form LSXXXX.

2.2.1 History and cultural impact of the Interstate Highway system



An inaugural tour on Interstate 89 with nine men and four oil company signs. Waterbury Vermont, May, 1968. LS7103.

The Interstate Highway system, the seeds of which were planted in 1944, blossomed in 1956 with the passage of the Federal Highway Act. This national system included over 46,000 miles of limited access highway – the largest and most expensive public works project ever undertaken (Kunstler 1993; Kaszynski 2000). The construction process was expedited by the use of standardized designs and advance condemnation of properties along the Interstate right of way (Rose 1979; Kaszynski 2000). Indeed, it was the

condemnation process that led to some of the 36,655 images in the Vermont Interstate collection – there are many images of now-vanished properties taken for use in both the valuation and appeals process. Although states participated in the construction of these roads, coordination, oversight, and funding were largely Federal (Vale and Vale 1983). The first Interstate was opened less than a year after the bill’s passage. The target date for finishing the Interstates was 1969 (Kaszynski 2000) but it took a more than a decade longer before the system was complete. In Vermont, Interstate Highway construction spanned four decades, the ‘50s to the early ‘80s.

The Interstate Highway system was designed to replace a mix of different road types with a network of multi-lane, limited-access roadways built to a uniform specification (Kunstler 1993; Hayes 2005). The system was birthed of the Cold War, as the word “defense” in its title, *The National System of Interstate and Defense Highways*, reveals. The 1956 launch of the Interstate Highway system was the realization of a planning process for a national, limited-access road system that had begun in 1944, more than a decade earlier (Liebs 1995; Hayes 2005).



Construction of a very early section of Vermont's Interstate Highway system. Brattleboro, Vermont, July, 1958. LS8768

Interstate Highways were and are critical to the American economy. Construction of the Interstates followed a protracted debate in the post-WWII era (Rose 1979), spawned by increasingly costly traffic jams in urban and suburban areas (Kunstler 1993) caused by the increasing reliance on trucks for carrying heavy cargo (Rose 1979). Some argued that the automobile culture was the economy and that construction of the Interstate Highway system was a thinly disguised public works program designed to prevent post-war recession or the

return of economic depression that characterized the pre-war decade (Rose 1979; Kunstler 1993). Core to the road-building philosophy was the belief that a prosperous society must be a mobile society and that the construction of roads, specifically Interstate Highways, could be a means to remove urban decay and promote prosperity (Rose 1979). The Interstate Highway system, and associated feeder routes, were both heavily subsidized by the Federal government, with 90% of Interstate construction costs picked up by Washington (Rose 1979; Kunstler 1993). With urban roads being the costliest to build, cities received proportionally more Federal funds (Rose 1979). Cars and highways are now a critical part of our economy and our culture. More than 85% of Americans take some form of motorized vehicular transportation to work (Lewis 1997).



Elizabeth, New Jersey – split by the Jersey Turnpike; the result, neighborhoods isolated. 1950s.



Bolton, Vermont – split by the Interstate 89: the result, a farmer is separated from his fields. LS6204. 1960.

The Highway experience in a rural area is not that of an urban area. Let's use some examples to contrast the differences. Consider New Jersey, an example of dense, older urban development, where the Jersey Turnpike (now in part I-95), split industrial towns, such as Elizabeth, in two (http://www.jerseyhistory.org/what_exit/index.html). Here, the turnpike ran right through a depressed residential part of the city – hundreds of homes were condemned and destroyed (<http://www.nycroads.com>). Newspaper accounts of the time clearly show the frustration of the townspeople, but in the road-building frenzy of early 1950's – protests were ineffective. The road went through. By the mid-1960s, citizen resistance to urban Interstate construction became commonplace; then, highways in Boston and New Orleans were cancelled (Erlichman, 2006).

In Vermont (and other rural areas, such as Texas, Erlichman, 2006), there were no protests and, it appears, little controversy surrounding the Interstate (McCullough, Ginger et al. 2009). The images above show why. Cleaving the town of Elizabeth affected a large number of people in a

small area. In most of Rural America, including Vermont, many towns were bypassed; thus, immediate impacts were dispersed. Sure, hundreds of homes were taken in Vermont, but the greatest impacts of the Interstate in Rural America were subtle and came later as development shifted in response to Interstate-catalyzed commuting into exurbia (e.g., Erlichman, 2006).

Interstate Highways were designed specifically for efficient and safe travel at high speed. Evolving from the first “modern” roads, the Turnpikes of the 1920s and 1930s, Interstates continued the progression of new, highly efficient road networks connecting the largest cities while bypassing rather than accessing smaller towns (Lewis 1997). In contrast to the Parkways of earlier decades, most Interstates were designed with no concern for the adjoining scenery as a means of elevating the traveler’s experience. Right of ways grew larger, lanes were wider, slopes and curves were limited, and medians and road-side ditches were extensive and gradually sloped, a safety feature should vehicles leave the road at high speed (Kaszynski 2000; Hayes

2005; Jakle et al. 1996). With modern mechanized construction and engineering, Interstate Highways are less bound by physical landscape constraints in comparison to routes of the past such as paths, canals, railroads, and smaller, more local roads (Vale and Vale 1983; Lewis 1997). Cut and fill road design, as well as tunneling and deep road cuts into rock allowed Interstate Highways to be built in places where roads could never have gone before (Lewis 1997).

Cut and fill construction of Interstate 89 moves massive amounts of rock and clears forested slopes. A single rail line runs along the right side of the image. Montpelier, Vermont, July, 1959. LS8769.

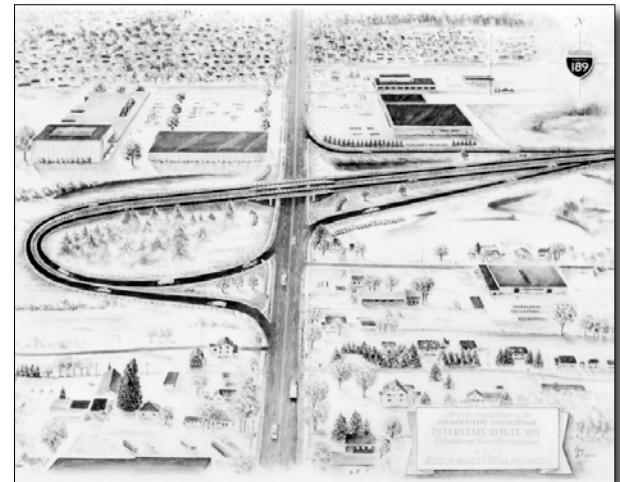


Building the Interstate Highway system caused significant changes to the physical, cultural, and historical landscapes of America (Lewis 1995). Wide right-of-ways consumed thousands of acres, led to the demolition of historical structures, and in some locations, replaced existing roadways (Kaszynski 2000). The Interstate Highways dramatically affected older, general-access roads with similar alignments – roads common to rural areas such as Vermont (Hayes 2005). Traveled at lower speeds and lined by businesses with direct access to the roadway, such roads were characterized by distinct vernacular architecture that connected travelers to the communities through which they passed (Liebs 1995). The construction of Interstate Highways fundamentally altered this pattern of commercial development as long-distance travelers abandoned those former routes leaving once-vibrant towns fading into obscurity and busy roadside stores and restaurants struggling to make ends meet (Vale and Vale 1983; Liebs 1995; Kaszynski 2000). With the coming of Interstate, whole architectural genres were driven to extinction by abandonment (Liebs 1995). Fast Interstate travel also sounded the death knell for short-haul train travel (Kaszynski 2000) and completed the process of intimately linking Americans to the personal automobile as their primary mode of transportation (Hayden 2004).

New roadside development near Interstate Highways was focused at interchanges because design of these limited access highways prohibits businesses from having direct access to the highway

itself (Lewis 1995; Jakle & Sculle 1999). Such interchanges are unique to highways and have evolved into three-dimensional engineered structures quite distinct from the grade-level junctions of traditional roadways (Hayes 2005). With so little space available around the interchanges, in densely settled areas, land there became extremely valuable limiting the diversity of business to only those with deep pockets: oil company gas stations, shopping malls, national and regional chains (Jakle & Sculle 1994). The result? Uniform, cookie-cutter architecture replaced regionally distinctive vernacular designs (Kunstler 1993). Perhaps it's no coincidence that the rise of the destination shopping mall (usually located at a highway interchange), the demise of Main Street, and the construction of the Interstate Highway system all occurred in the same 25 year period (Kunstler 1993; Lewis 1995). The automobile and the roads it required, clearly shaped the built environment of 20th century America (Liebs 1995; Hayes 2005). Yet, in rural areas, like Vermont, much land around interchanges remains empty – the demand for business is simply not there.

Design sketch of I-189 connector ending in State Route 7 amid new shopping malls, homes, businesses, and a few farms. South Burlington, Vermont, 1960. LS8722.



Over the last century, American society has reorganized its culture around the roads its vehicles need (Vale and Vale 1983; Liebs 1995; Hayden 2004). Some would argue that the Interstate Highways both encouraged and were the result of the commuting lifestyle, the loss of a land ethic, and the divorce of the workplace from the home (Kauffman 2004). What would once have been an intolerably long commute on winding country roads became doable on the Interstate, psychologically opening up huge tracts of agricultural land, now within driving distance of American cities, for development (Kunstler 1993; Lewis 1995; Boynton 2004). In urban areas, Interstate Highway construction destroyed entire neighborhoods (Kaszynski 2000) and isolated others, creating physical ghettos (Kunstler 1993). Installation of continuous sound barriers protected neighborhoods from the roar of thousands of cars passing at high speed but completely blinded drivers to the local visual geography; they might as well have been driving through tunnels (Hayes 2005). In less developed areas, the impact was different. Over time, Interstate Highways have become connectors of suburbs (Lewis 1997) and rural small towns. Wherever they may be, highway travelers are isolated from local landscapes and cultures – on many

Interstate Highways the services motorists need are provided only at limited access service areas.



Sweeping landscape view looking east on Interstate 89 with Camel's Hump in the distance. Williston, Vermont, July, 1964. LS6699.

Interstate Highways changed people's perceptions of the landscape. Travel on an Interstate Highway is a landscape-blurring experience, far less intimate and more homogeneous than travel on secondary roads. The driver's focus is on the road and distant,

sweeping views; details are lost and the landscape passes as a kaleidoscope of images allowing only broad comparison (Vale and Vale 1983; Jakle 1987). Clearly, most Interstate Highways do not entertain the traveler but get people as quickly as possible from point A to point B (Rose, 1979; Kaszynski 2000). Some blame America's loss of historical and geographical perspective directly on construction of the Interstate Highway system because it distanced people from the landscape both by speed and limited access (Liebs 1995). The Interstate's standardized, homogenized design (and the homogeneity of development that followed the roads) have been implicated directly in the "blanding of America" (Kaszynski 2000; Jakle 1982, 1985).

2.2.2 Vermont – the right place to study the impact of Interstates on Rural America

Vermont is the most rural state in the nation; not until after WWII did Vermont have more people than cows (Bryan 1974). Nearly two-thirds of Vermont's 615,000 people live in communities of fewer than 2,500. Only eight towns have a population over 10,000, and only one town – Burlington – has a population greater than 20,000. A remarkable 180 of 252 towns have fewer than 2,500 inhabitants. The state prides itself in keeping its government, social fabric, and civic institutions at a human and local scale (Jennison 1989; Bryan 2003).

Tourism is and has been a major economic and cultural force in Vermont (Harrison 2006) and the Interstate Highway is how most visitors now reach the state (McCullough, Ginger et al. 2009). For more than a century, people have come to Vermont for clean air, foliage, winter snow, and to see a "pristine" pre-industrial landscape (Lipke and Grime 1976). Gone are the days when a rudimentary road system hampered tourism (Sherman 2000); as recently as 1943 only 9% of Vermont's roads were paved, 51% were graveled, and 40% remained "primitive" (Albers 2000). Now, 9 million tourist-nights a year are spent in a state with 600,000 residents. Every year, 3.7 million people visit Vermont rest areas on the Interstate Highways – a prime audience for disseminating our work! More than 35 million people live within a two-hour drive of the State's borders (Jennison 1989); yet, despite such proximity to the East Coast "megalopolis" (Lewis 1995), Vermont's "profound ruralism," remains intact (Bryan 1974).

Vermont has always maintained a streak of independence. The state saw little Federal investment until it was devastated by a massive flood in November 1927; rebuilding more than 1200 bridges, hundreds of miles of roads, and much of the rail network relied on 2.6 million Federal dollars. The next offer of Federal aid to Vermont was not well received (Bryan 1974).



Quickly designed by Federal engineers as part of Roosevelt's stimulus to address the Great Depression (Rose 1979), the Green Mountain Parkway was to have run north-south near the crest of the Green Mountains, the range that defines the state. Community response was visceral and clearly showed the importance of visual perceptions. As a newspaper editorialized at the time, "With a 1000 foot swath lined with gas stations and refreshment stands cut through the heart of her most beautiful scenery, Vermont would have been Vermont no longer" (Bryan 1974).

Horses enjoy hay intended for mulching new construction on Interstate Highway 91. Windsor, Vermont, September, 1966. LS8804

The Green Mountain Parkway was put to a popular vote and defeated (Bryan 1974). Had the vote gone differently, Vermont would have had a major highway, paid for with Federal dollars, two decades before the Interstate. The Parkway's defeat represents the first significant political and cultural interaction in the state between the automobile and conservationists (McCullough, Ginger et al. 2009) or phrased differently, economic development versus the integrity of nature (Bryan 1974). However, both of these arguments ignore recent landscape history. In the 1800s, Vermont had been completely cut over for lumber and sheep farming (Meeks 1986; Bierman, Lini et al. 1997; Bierman 2000). Vermont's forested landscapes were hardly pristine.

There are 321 miles of Interstate Highway in Vermont and 80% of Vermonters live within 30 miles of an Interstate Highway on-ramp (Albers 2000); yet, unlike the Green Mountain Parkway episode 20 years earlier, no organized opposition accompanied the coming of the Interstate. Was

this because the proposed alignments followed traditional, valley-bottom transportation corridors? The first section of the Interstate Highway in Vermont (I-91, Guilford to Vernon) was completed and opened to traffic in November, 1958 (Vermont Department of Highways 1965). The last section of Vermont Interstate, leading from St. Johnsbury to New Hampshire, was completed in 1982 (www.vermonthistory.org). Attitudes have changed since the 1970s; construction of a beltway around Burlington, the Circumferential Highway (now State Route 289) has been stalled since 1993 by continued political challenges (Murphy 2005).

A picnic at one of the many rest spots dotting Interstate 91 near Putney, Vermont. c. 1965. LS5945



The impact of the Interstate Highway system on Vermont can be told at the State, local and personal scales (Bryan 1989). For example, some suggest that the Interstate Highway project catalyzed ground-breaking legislation protecting the Vermont landscape, legislation that has since been adapted and adopted in many other states, including laws controlling development, billboards, and historic preservation (Jennison 1989; McCullough, Ginger et al. 2009). Regional changes coincident with the coming of the Interstate were substantial (Murphy 2005). In the 1960s, as the Interstate Highway in Vermont opened, 10 new state parks were created and annual visitation rose from 2600 to 126,000 people (McCullough, Ginger et al. 2009). Early ski areas were served by snow-trains which, with the rise of automobiles after WWII, disappeared only to be replaced by Interstate Highways accelerating ski-area development and the development of roads needed for tourists to reach the resorts (Sherman 2000; Harrison 2006).

2.2.3 Significant humanities research themes and project's interpretive approach

Consulting our advisory team (section 2.6) and reviewing the literature, we selected 3 themes to guide our research and interpretive approach. Our survey methodology will involve both attitude surveys at town meetings and scripted interviews. Information collected from the public will be used to address specific questions posed below and make dissemination products more authentic. Public discourse will consider both historical impacts and future land-use trajectories.

Theme 1. *What trajectory did development take in different parts of Vermont after completion of the Interstate Highway system? (cultural, historical, and geographical)*

Based on the literature, it's easy to suggest that when an Interstate Highway is built, suburbs soon follow and then come the malls, both being predictable environments not dissimilar from the consistent nature of the Interstate Highway itself (Liebs 1995; Kay 1997; Lewis 1997; Hayes 2005). In rural Vermont, this suburb-mall trajectory is the exception rather than the rule (Albers 2000) – its appearance being limited to areas where population is sufficient to make development economically feasible. Clearly, *greenfielding*, the construction of low-density residential developments on what used to be agricultural lands (Hayden 2004) has affected some areas of Vermont near Interstate Highway interchanges, but the isolation of towns and the loss of local business as existing local roads were bypassed seems to be quite limited in extent. *Our research will test the hypothesis that profoundly rural areas, common in much of the US and epitomized by Vermont, respond to the coming of Interstate with the different development trajectories than suggested by the literature for suburbs and urban areas (e.g., Chandra and Thompson 2000).*

Specific research questions

- a. Did Vermont towns and businesses bypassed by the Interstate Highway fade into obscurity as they did elsewhere in more densely populated parts of the country? If not, what cultural, geographical, and historical characteristics of rural Vermont preserved them?
- b. Did the build-out pattern differ between Interstate interchanges? If so, what if any cultural and geographic characteristics can explain observed differences?
- c. How, if at all, did the similarity between the Interstate alignment and that of earlier travel routes affect the development patterns after highway completion?

Data gathering protocol -- We will approach this theme and its three specific research questions by gathering a variety of different data. Collection and analysis of re-photography will be invaluable for understanding development trajectories at different Interstate interchanges (Vale and Vale 1983; Rogers, Malde et al. 1984). Summer interns visiting each interchange during the re-photography project will use standardized inventory forms to quantitatively track the types and numbers of businesses present. Interviews with residents will provide qualitative data tracking change over time as well as soliciting opinions about how the Interstate Highway and its alignment may have affected development patterns. Map and oblique aerial imagery (both historic and contemporary), will clearly document similarities and differences between past and present road alignments. Census and map data, collected for each of 15 Interstate interchanges, will quantify cultural and geographic characteristics over the last five decades.

Data analysis and interpretive approach – We will use a variety of approaches to analyze and interpret data for the public. Survey responses will be collated and sorted allowing for statistical testing of ranked or categorical data; specific quotations will be extracted if they exemplify particular findings. Map and photograph data will be analyzed both quantitatively (alignment differences) and qualitatively (build-out patterns). Our experience suggests that interpretation related to Interstate-mediated development will best succeed if it is highly visual and highly personal. As prompts in dissemination products, we will use *before* and *after* image pairs, annotated appropriately with relevant interview snippets.

Theme 2. *What were the direct and indirect cultural impacts of Interstate Highway system construction in Vermont? (cultural, historical, political)*

In the five decades since the first few miles of Vermont's Interstate Highway system were completed, the state has changed. In the 1980s, ski areas became destination resorts, clearing mountainsides and filling towns with both tourists and new businesses. Tens of thousands of hippies came to fill Vermont communes in the 1960s and were assimilated (Sherman 2000).

Civil unions started in Vermont in the 1990s amid threats of doom. The reality was altogether different - more tourists filling inns and hotels. It would seem that much of Vermont (and much of Rural America) remains “unblended” by the coming of the Interstate (Kaszynski 2000). Yet, Vermont now has big box stores, suburbs, and sprawl, all of which in one way or another are likely be linked to a changing transportation system. *Our research will test the hypothesis that proximity to an Interstate Highway controls the rate and nature of cultural and demographic change in rural towns.*

Specific research questions

- a. Are the demographics and culture of Vermont towns related to their distance from an Interstate Highway?
- b. Does the rate and degree of cultural change in a town over the past 40-50 years have any relationship to that town’s proximity to an Interstate Highway?
- c. Is the appearance of box stores, suburbs, and sprawl in Vermont towns linked to the coming of the Interstate Highway and have these changes affected the social fabric?

Data gathering protocol – Approaching research questions related to cultural change will require both fieldwork and statistical analysis. Attitude surveys, administered by interns at town gatherings and during citizen interviews, will allow us to understand townspeople’s beliefs in regards to cultural changes over time, whereas census data will indicate changing demographics, town by town. Field surveys at Interstate Highway interchanges will document the preservation or destruction of historically and culturally significant buildings and road alignments. To answer these research questions, we will work not only in towns directly adjacent to the Interstate but in towns further afield using historic imagery as prompts for town gatherings and interviews.

Data analysis and interpretive approach – We will use statistical analysis of both qualitative survey data as well as quantitative census information to determine if there are trends over time in metrics reflecting cultural change. Interpretive material will be visual emphasizing ground-level photographs that clearly show cultural changes. Interpretive graphics will be used to communicate cultural trends over time along with pertinent interview quotations.

Theme 3. *What are Vermonters’ perceptions of the coming of the Interstate Highway system and how it has affected their lives? (cultural, historical)*

When it comes to the Interstate Highway system, there are two classes of people – those who remember the State before the Interstate came and those whose only knowledge includes an Interstate Highway system. Over the past several years, we have seen that that the responses of these two cohorts to imagery of Interstate Highway construction are completely different. Elders

view the images as artifacts of a now-vanished landscape they remember, often wistfully; younger people and those new to the State are shocked by the scale of landscape change, the damage to natural resources, and the loss of open space. *Our research will test the hypothesis that proximity to an Interstate is related to the way people live their lives and the perception of the landscape in which they live.*



Aerial view shows the construction of Interstate 89 as it moves through, over and around homes and businesses in Waterbury, Vermont. c. 1960. LS6304.

Specific research questions

- a. How do people perceive that Interstate Highways affect their day-to-day lives? Does this perception differ between those living and working in towns near and in towns far from an Interstate Highway?
- b. Do people believe that the Interstate has changed the culture of their town? If so, what types of changes do they attribute to the coming of the Highway?

Data gathering protocol -- Through moderated conversations at town gatherings, attitude surveys, and citizen interviews, we will collect a sample of people who remember the time before the Interstate and those who don't. We will engage people living and working near the Interstates and as well as those whose lives keep them at a distance from these roads.

Data analysis and interpretive approach – We will compile and sort responses to distill both the range of views and the most common ideas held by citizens. We will infer the cultural impacts of the Interstate system on Vermont by comparing these findings with responder distance from and experience with the highway system. Public interpretation will be anchored by images, new and old, illustrated with selected quotations and complied findings.

2.2.4 Why the project will engage the public and what we expect people to learn

The 36,655 Vermont Interstate images capture a 20-year transformation of a Rural American landscape. The collection is diverse and captivating. Images show homes being bulldozed, immense earth-moving machinery, and oblique aerial views of farm fields bisected by strips of graded gravel soon to be paved. Every time we have shown images of the Interstate project, beginning at the Vermont Humanities Council fall conference, *Setting as Character: Vermont's Landscape Stories and Sense of Place* (2006) and continuing at schools, clubs, and libraries since, people are engaged – not subtly but viscerally. There are gasps from the audience when rivers are bridged and highways replace fields. This project will immediately engage the public.

We are not alone in discovering the power of landscape imagery to engage. Photographs are a particularly powerful means by which people, without extensive technical training, can understand the scale, distribution and cultural impact of landscape change (Hayden 2004). Time sequences of images are particularly powerful tools (Vale and Vale 1983). Such contrasts can empower and encourage citizenry to make changes and to chose different development paths based on experiences in similar settings (Hayden 2004; Campoli and MacLean 2007).

The project is hauntingly timely. Our work comes at a particularly germane moment in history, as our country remains in the worst economic downturn since the Great Depression and a

massive economic stimulus, in the form of public works investment, has begun. As our society moves toward a new, uncertain future, it is just the right time to look back at the last major Federal infrastructure investment and its effect on Rural America where, for example, much of the proposed renewable energy infrastructure will end up. We hope our work will stimulate people to take an active role in deciding the future of their communities and their landscapes as we move away from a carbon-based economy and transport system.



Grading of the Interstate Highway. Middlesex, Vermont. April, 1959. LS6447.

2.2.5 Relationship of *Interpreting the Interstates* to the existing *Landscape Change Program*

The project represents a seamless and sensible evolution of our current endeavors. Over the past decade, we have established the *Landscape Change Program* (uvm.edu/landscape); it is now one of the premier digital archives of Rural American historic imagery and a rich resource for place-based educators and people interested in the history of rural landscapes. *Interpreting the Interstates* will be housed within the established *Landscape Change Program*.

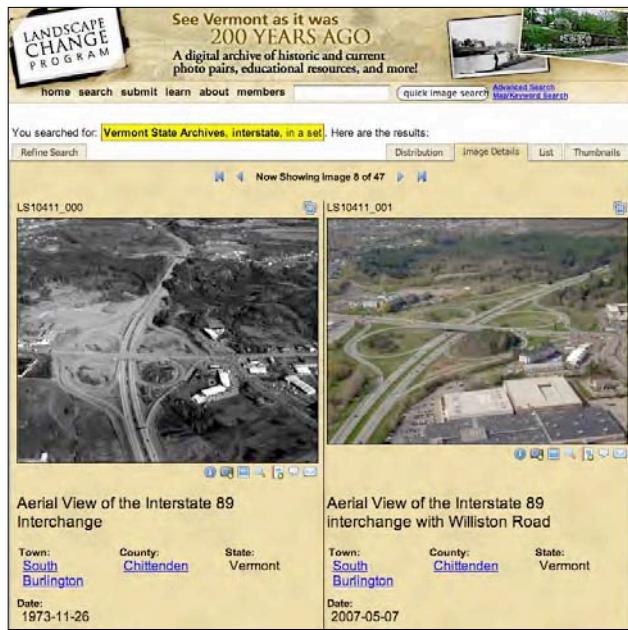
2.2.6 Brief history of the project to date

We have spent several years laying the groundwork for this project using support from the National Science Foundation (NSF), the Vermont *Transportation Research Center*, and Vermont's Lintilhac Foundation. In 2005, working with five NSF-supported interns, we scanned, described, key-worded, and added to the *Landscape Change Program* more than 4,000 images from the Vermont State Archives and Records Administration (VSARA) including about 1,000 images related to roads and road building from 1908 onward. Once these images came on line, Bierman began working with the Executive Director of the Vermont Humanities Council, Peter Gilbert (advisory team). Bierman was the keynote speaker at the 2006 Vermont Humanities Council annual fall conference. During that talk, he presented numerous Interstate images, the beginning of several years of public discourse in a variety of settings and for many different audiences. During the summers of 2008 and 2009, we scanned an additional ~2,400 images from the Interstate Highway collection using 6 additional interns, one funded by the *Transportation Research Center*. These interns included a graduate student from the UVM Historic Preservation Program, directed by architectural history Professor Tom Visser (advisory team). In anticipation of expanding the Interstate image project, we digitized the photographer's notebooks during the summer of 2008; these notebooks detail the location, subject, date and content of each of the 36,655 images and are unique information sources

(www.uvm.edu/landscape/learn/interstate.html).

We now have 1,400 images from the collection on line and another 1,300 in process – already, over 100 Interstate-related images have public comments associated with them – a clear indication of the interest they generate in the community. We are now exceptionally well poised to complete the proposed project – we know the collection well, have streamlined our digitization process, have extensive experience working with student interns, and have built many links to the community and with humanities scholars.

Here comes the mall! Original image (1973) and rephotography (2007) of Interstate 89 displayed on the Landscape Change website. This is one of 60 Interstate Highway images that have so far been re-photographed. South Burlington, Vermont. LS10411.



2.2.7 Relationship to other similar projects

We have looked long and hard for projects similar to the one we propose and come up empty handed – both the approach we plan to take and the archive of images held in Vermont appear to be unique. There are projects documenting cultural change in the wake of highway installation, such as (http://www.jerseyhistory.org/what_exit/index.html) but none has as its catalyst an image

collection of the quality, size, and broad-ranging content as the 36,655 images at the center of *Interpreting the Interstates*. Nor are any existing projects tied to an established, functioning image archive that already has a large audience such as the *Landscape Change Program* (for which Google Analytics reports almost 4000 unique visitors per month, each of whom views 12 pages on average and stays on the site for an average of 5 minutes). Our experience creating high resolution, web-based image archives, the ease of public interactions that characterize Vermont and Vermonters, and the team we have assembled, will allow this project to make unique contributions to the humanities.

Number of interstate/highway construction images											
None			Hundreds			Thousands					
IL	MD	IA	AZ	MA ~32,000		FL	CA	TX			
NH	MN	VA	CT	VT ~36,000		IN	WA	RI			
OK	AK	SC	ME			NJ	ID	PA			
	MS	CO	MS			NY	MO	TN			
	WI	DE	ND			UT	OH	OR			
	NC		SD			WY	NV				
Few			NE			Thousands					
AL	MI		NE	NM		FL	CA	TX			
AR	MT		WI	NC		IN	WA	RI			
KS	WV					NJ	ID	PA			
KY	HI					NY	MO	TN			
LA	GA					UT	OH	OR			
ND	SD					WY	NV				

Italics indicate that at least a portion of the collection is available on-line

Table 1. State-by-state the availability of Interstate Highway related imagery. The Vermont collection of Interstate photographs appears to be unique. Only Massachusetts appears to have an imagery collection on the scale of the one that forms the basis of this project. To do this compilation, we made extensive calls to state agencies and state archives and utilized a listing of Interstate-related archives compiled by the Federal Highway Administration and available at: http://www.environment.fhwa.dot.gov/histpres/state_archival.asp.

2.3 Project Description

At the center of this project lie 36,655 negatives, a unique, two-decade-long record of a physical change that both reflected and morphed the cultural landscape of Rural America forever. These images are a treasure trove of history, stored in plain manila envelopes deep in an archive vault, open to the public but rarely seen. Here is a time machine that takes the viewer from sock hops through the Vietnam War and hippies to Three Mile Island. The Interstate images, and the images we will create rephotographing these historic scenes will dramatically and effectively convey the project's central theme of understanding cultural change over time. The photographs are both a fundamental visual dataset and an exquisite set of public prompts that will encourage citizen involvement.

Our work over the past year, scanning over 2,700 of these images and bringing almost half online has shown just how unique and important the Vermont collection will be for understanding the trajectory of highway-induced change in Rural America. The images acquired so far show all phases of highway construction from planning to stake out to construction to the completed roadway. Just as important, they show improvements made to feeder routes at the time – this is important as it allows the project to move away from the Interstate corridor (thereby increasing the audience) and thus better understand the far-field impacts of highway development.

Superb image quality and the granularity of the Vermont collection are key to this project's success and set our work apart from others. The remarkable sharpness of the 4 by 5 negatives is rendered well by our high-resolution scans allowing deep image examination using the zoom tool on our web interface – crucial for reading detailed information. Multiple photographs of each parcel from different view angles and at different times is also a great attribute of the collection – this granularity allows viewers to recreate the past more accurately. The photographer's notebooks, and the stake-out data they contain, provide a means to accurately relocate many images. This is an exceptional collection showing Rural American life in flux – well worth the investment to bring these images on-line and thus make them widely available.

The images at the core of this project are in the public domain, held by the VSARA. Few of the images have ever been printed; most exist only as 4 by 5 inch negatives. Today, viewing these images requires a trip to the archives, an appointment, and the ability to understand negatives; the collection is neither described nor interpreted. There is no way to search for content except

for the photographer's notebooks, which set out only the most basic information. The first year of this project will change the situation dramatically by describing, key-wording, and placing on-line, for free 24/7 public access, at least 30% of the collection.

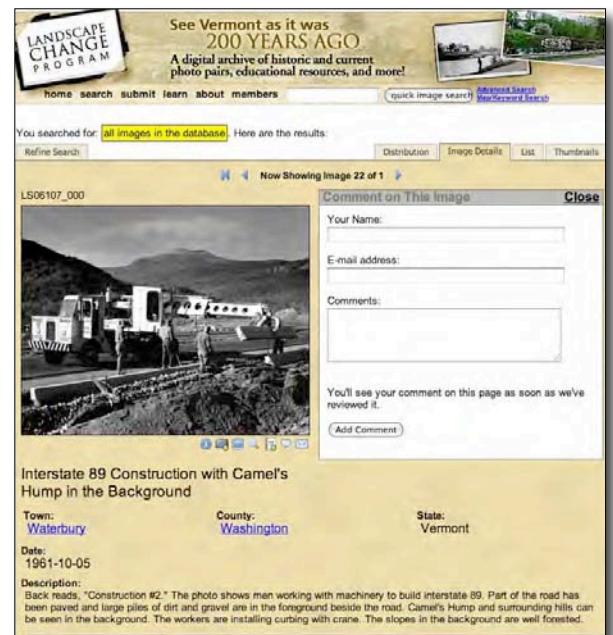
Different activities will take place at each of the project's venues. Project organization will be conducted at the University Vermont. The Interstate images will be scanned at the VSARA. They will be described, key-worded and uploaded to the existing, public *Landscape Change Program* digital archive so that viewers can better understand and search for specific content. During the second summer of this project, after the images are scanned, interns will work in 18 Vermont towns holding town gatherings and one-on-one interviews to understand better the cultural impact of Interstate construction. These interviews will be accessible from the project web page; they will also be contributed to the *Vermont Folklife Center*'s oral history archive.

During 2013, a modular, flexible exhibition will travel to 20 regional and state fairs in Vermont and 18 town libraries, reaching tens of thousands of Vermonters. These unique venues offer the potential to reach new audiences, many of who may never have gone to a traditional exhibition. During 2014, after conclusion of the project, the same exhibition will move between 17 Interstate Highway rest areas and welcome centers run by the State of Vermont (see support letter from Director, VonTurkovitch). The installations of permanent signboards at each Interstate rest area will communicate research findings to the millions of tourists that travel Vermont's highways each year long after the project is over. The popular book we write, illustrating Interstate-related landscape and cultural change with rephotography, will also have extended impact.

During the last year of the program, we will create web pages dedicated specifically to *Interpreting the Interstates*. These pages will compile and explore the history of the Interstate Highway system in Vermont and present both our primary data (images and interviews) and our findings - the cultural impact of the highways on rural Vermont over the last 50 years. These pages will be consistent with the look and feel of the existing *Landscape Change Program* site. Relevant audio excerpts of interviews will be linked to images where appropriate and all interviews will be available by town. Web pages will explore the themes of changing culture over time. How did people perceive the impact of the Interstate Highway? Did they take jobs farther from home? Did local businesses suffer?

We have chosen these particular program formats because they will reach the greatest number and diversity of people. Town gatherings will encourage direct involvement. Displays at Vermont fairs will reach tens of thousands of people from all walks of life. For tourists passing through Vermont, displays at rest areas will capture their attention and provide long-lasting impact for the project and its findings. Web browsing and interaction through submitting comments about images allow anyone to follow up on thoughts they might have had at town gatherings or fairs. The web is a long-lasting way to disseminate our findings beyond the State's borders.

Public comment form on the Landscape Change Program website with image showing men setting granite curbs as they completed a section of Interstate 89 near Waterbury, Vermont. October, 1961.
LS6107



There will be numerous opportunities for public input. During town gatherings, we will both use written attitude surveys and also capture oral commentary on imagery and cultural changes, incorporating this information into image descriptions where appropriate and considering it in the broader context of cultural and historical analysis of Interstate Highway impact (see examples in banner mock up, section 2.10.3). The *Landscape Change Program* archive contains a public comment tool that is used extensively; there are currently ~3,500 images with public comments attached to them. We will heavily promote the use of this tool at public gatherings.

2.4 Project Audience

The audience for this project is broad, deep and varied. At the local level, the audience is townspeople, some old enough to remember their towns before the Interstate, some either young or transplants who only know Vermont with highways. At a regional level, the audience is all Vermonters and tourists interested in the evolution of the State's physical, transportation, and cultural landscape. Those would include both residents and travelers passing through, stopping at rest areas, and reading the signage. Nationally, the web site and book will reach people interested in the history of societal response to major, physical landscape perturbations.

Local and regional publicity plans include intensive networking by interns with towns to make people aware of gatherings, displaying the traveling exhibition at county fairs and town libraries, and writing press releases for local and regional papers and magazines. On a national level, we will present our work at academic conferences. Much publicity will be generated by the direct involvement of the Vermont Humanities Council (see letter of commitment from Executive Director Gilbert) through its *First Wednesdays* lecture series. Vermont Humanities Council speakers will focus on cultural and historical impacts of highways.

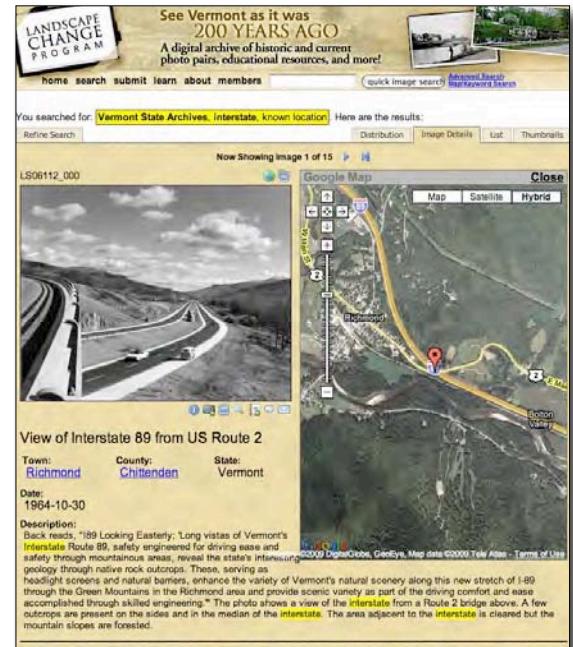
Over a decade of experience working with Vermont towns through the *Landscape Change Program* suggests that we will easily reach our target audience. We routinely give talks throughout the state that are well attended by people from a variety of backgrounds - all interested in the history of the Vermont, its culture and landscape.

2.5 Organizational Profiles

Landscape Change Program, University of Vermont

The Department of Geology has hosted the *Landscape Change Program* as a public service since 1999. The program began as educational outreach, a successful attempt to interest K-12 students in landscape history (Massey and Bierman 2007). It has dramatically expanded since then. At the core of the program is the website, an on-line community archive containing more than 33,000 images. The mission of the *Landscape Change Program* is to preserve, organize and make widely accessible, images of Vermont landscapes as they were and as they are. Our goal is to illustrate the complex interaction and feedbacks between people and landscapes. Using images and interpretation, we seek to integrate history, science, and the human experience (Bierman, Howe et al. 2004, 2005). We are committed to community outreach including hands-on work with schools (Massey and Bierman 2007).

Google Maps' interface allows location mapping of images in the Landscape Change Program archive. A newly completed section of Interstate 89 near Richmond. 1964. LS6112.



The *Landscape Change Program* website has many uses. Vermonters use the site to see their history. Historical societies and museums use the site to make their collections available to anyone, anywhere, anytime. Town planners use the site for historical perspective. Teachers use the site to give their students a sense of place and of history by adopting or adapting the curricular modules we provide. We partner with museums, historical societies, libraries, and citizens to obtain and disseminate digital copies of original landscape images and host these images for public viewing.

We provide the website as a public service and as a resource for both formal and informal education. It is our hope that the images we collect and display will inform a variety of debates and decisions regarding land use and the environment by providing primary data for research of all kinds. Support for the *Landscape Change Program* has come from the National Science Foundation, the Lintilhac Foundation, the University of Vermont, and donations of time and images from hundreds of different people around the world. Over the past 10 years, our operating budget has averaged about \$80,000 per year.

Vermont State Archives and Records Administration (VSARA) -- The VSARA holds State archival records, images and photographs and is a key source for documenting the deliberations, actions, and evolving services of state government (www.vermont-archives.org). The mission of VSARA is to advise and guide public agencies in records and information management, preserve and enhance access to the State government's archival records, and operate a secure State Records Center for non-permanent and inactive agency records. VSARA's annual budget is \$1.3 million. *The VSARA will provide access to the images at the core of this project.*

Robert Hull Fleming Museum, University of Vermont -- Founded in 1931, the Robert Hull Fleming Museum serves as a gateway for active cultural exchange and critical thinking. With a collection of over 23,000 objects from across the globe, including works of art, artifacts, and material culture, the Fleming is a critical resource for teaching and learning at the University of Vermont www.flemingmuseum.org. Eight staff members support a program that presents nine changing exhibitions every year; they work with dozens of students who serve as interns, researchers, and exhibit builders. The operating budget for 2008 was \$939,238. Annually, there are 12,000 visitors to the museum. *The Fleming Museum will guide travelling display creation.*

Vermont Humanities Council (VHC) -- A statewide nonprofit organization founded in 1974 and a state affiliate of the National Endowment for the Humanities, the Vermont Humanities Council (www.vermonthumanities.org) is committed to "creating a state in which every individual reads, participates in public affairs, and continues to learn throughout life." Last year, the Council, with a budget of 1.2 million dollars, sponsored nearly 1,400 events in 155 Vermont towns including speakers, conferences, and a statewide one-book community reading program. *The VHC will assist with outreach, organizing the speaker series and publicizing town gatherings.*

The Vermont Folklife Center – Founded in 1984, the Vermont Folklife Center is dedicated to preserving and presenting cultural traditions, www.vermontfolklifecenter.org. Through ongoing field research, a multimedia archive and apprenticeship, the center documents and conserves cultural heritage and has made preservation of the spoken word the core of its endeavors; the VFC archive now comprises over 5000 taped interviews, which have been transcribed and electronically indexed. With a 2009 budget of \$601,000, the Center has a core audience of 6,000+ people who participate in gallery and traveling exhibits, oral history workshops, lectures and special events. *The Folklife Center will train interns in oral history and interview techniques; they will archive the interviews that interns conduct.*

2.6 Project Team

We have assembled an appropriate and well-qualified *Advisory Team* who together will guide the project through both formal meetings several times a year and informal contact with project staff when appropriate. The team has worked together extensively in the past in a variety of combinations; these established relationships ensure we will work together well and fluidly toward making *Interpreting the Interstates* a success.

2.6.1 Staff from the University of Vermont

Professor **Paul Bierman** has considered human-landscape interactions for almost two decades and directed the *Landscape Change Program* since its inception 10 years ago. He will oversee *Interpreting the Interstates* and provide direct input to and editing of the resulting dissemination products. Bierman's expertise is broad and includes not only landscape and environmental history but also public outreach and education for which he was awarded the National Science Foundation's highest honor, the *Directors Award for Teaching Scholars* in 2005. Bierman has co-authored several books, authored >50 academic papers, mentored 24 graduate students, and overseen more than 4.7 million dollars in Federal grants.

Outreach Professional, **Jamie Russell** has extensive experience with management of the *Landscape Change Program*, student intern supervision, and project organization. She will manage *Interpreting the Interstates* day-by-day, directly supervising student interns and handling all archival image scanning, uploading, and quality control. She will rely on her experiences and established lines of communication with historical organizations, museums, and townspeople to rapidly initiate *Interpreting the Interstates*. Her experience with database management and her deep knowledge of the *Landscape Change Program* operations will be invaluable as we incorporate Interstate imagery and audio recordings into the archive for web distribution.

Associate Professor of Historic Preservation, **Thomas Visser** (Advisory Team member) has broad experience as Director of the Historic Preservation Program at the University of Vermont since 1994. Visser's scholarship focuses on rural vernacular architecture. As the team's expert on historic architecture, he will advise us on image selection and description as well as mentor history graduate students serving as interns for *Interpreting the Interstates*. He is the author of the award-winning book, a *Field Guide to New England Barns and Farm Buildings*.

Associate Professor of Historic Preservation, **Robert McCullough** (Advisory Team member) brings expertise in history, as well as the law, to this project. His interest and expertise in road and bridge history are key for placing in context the cultural and historical changes that *Interpreting the Interstates* will document. McCullough will mentor students and guide the image selection and interpretation process. He is the author of many germane publications including a recent book, *Crossings. A History of Bridge Building in Vermont*.

Professor of Political Science, **Frank M. Bryan** (Advisory Team member) has an encyclopedic and unique knowledge of Vermont and Vermont politics. Bryan is the team's expert on Vermont culture and will both mentor interns and be a sounding board as the team works to interpret the information we collect. His writings consider Vermont history and culture with repeated mention of the impact of roads and highways, including the Interstates. Bryan's standing as "the authority" on Vermont political culture will be an unmatched asset as we seek to understand how Rural America and the Interstate Highway system interacted.

Manager of Collections and Exhibitions at the Robert Hull Fleming Museum, **Margaret Tamulonis** (Advisory Team member) has over 15 years of experience in museum exhibition planning, design, creation, and installation. She will provide advice and support to the interns creating the travelling *Interpreting the Interstates* exhibition. Her experience in exhibit design and production will be critical as we enter the culminating phase of *Interpreting the Interstates*.

2.6.2 Advisory Team members outside the University of Vermont

Executive Director of the Vermont Humanities Council, **Peter Gilbert**, is an integral member of the Advisory Team. Gilbert and the Vermont Humanities Council will aid in organizing public forums around the state and encourage community discourse as part of the *Interpreting the Interstates* program. Gilbert's established connections and those of the Vermont Humanities Council will ensure that *Interpreting the Interstates* is well advertised, stimulating involvement in the town gatherings.

Vermont State Archivist, **D. Gregory Sanford**, has exceptional knowledge of Vermont history and the

holdings of the VSARA, reflecting his 26 years on the job. Sanford will be an important resource on the Advisory Team, advising us on the selection and description of imagery scanned during the first summer of *Interpreting the Interstates*. Sanford also brings to the project expertise in oral history collection; he will be a valuable advisor during phase two of the project as we plan for and conduct interviews.

Vermont Landscape Historian and Director of the Sheldon Museum of Vermont History, **Jan Albers** will be an important member of the advisory team when it comes to advertising the program and working to create enthusiasm in individual towns as evidenced by her countless keynote addresses, lectures, radio and television appearances. Albers is best known as the author of a famous and well-respected historical view of Vermont, *Hands on the Land: A history of the Vermont Landscape*, recipient of four awards.

Executive Director of the Vermont Folklife Center, **Brent Björkman** is an expert in folk studies, ethnography and oral history. Björkman and staff of the Folklife Center he directs will train student interns in oral history techniques and guide development of interview questions and formats. Folklife Center expertise is critical to success of *Interpreting the Interstates* as much of data on cultural change and perceptions will come from interviews.

2.7 Project Work plan

We propose a three-phase, three-year project with an extensive dissemination campaign during the final project year. There will be several planning meetings (Advisory Team retreats) each year, one before and one after major project phases. Key to the project is the extensive involvement of student interns at the graduate and senior undergraduate levels. Involvement of students is consistent with the educational mission of UVM and its partners in this project, provides an economical source of motivated participants, and most importantly trains the next generation of scholars. To ensure the quality of student work, we will rely a decade of experience working with interns as part of the *Landscape Change Program* – this experience is codified in the program's Standard Operating Procedures, available at:

<http://www.uvm.edu/landscape/about/sop.html>

2.7.1 Phase 1. Building contacts and acquiring imagery.

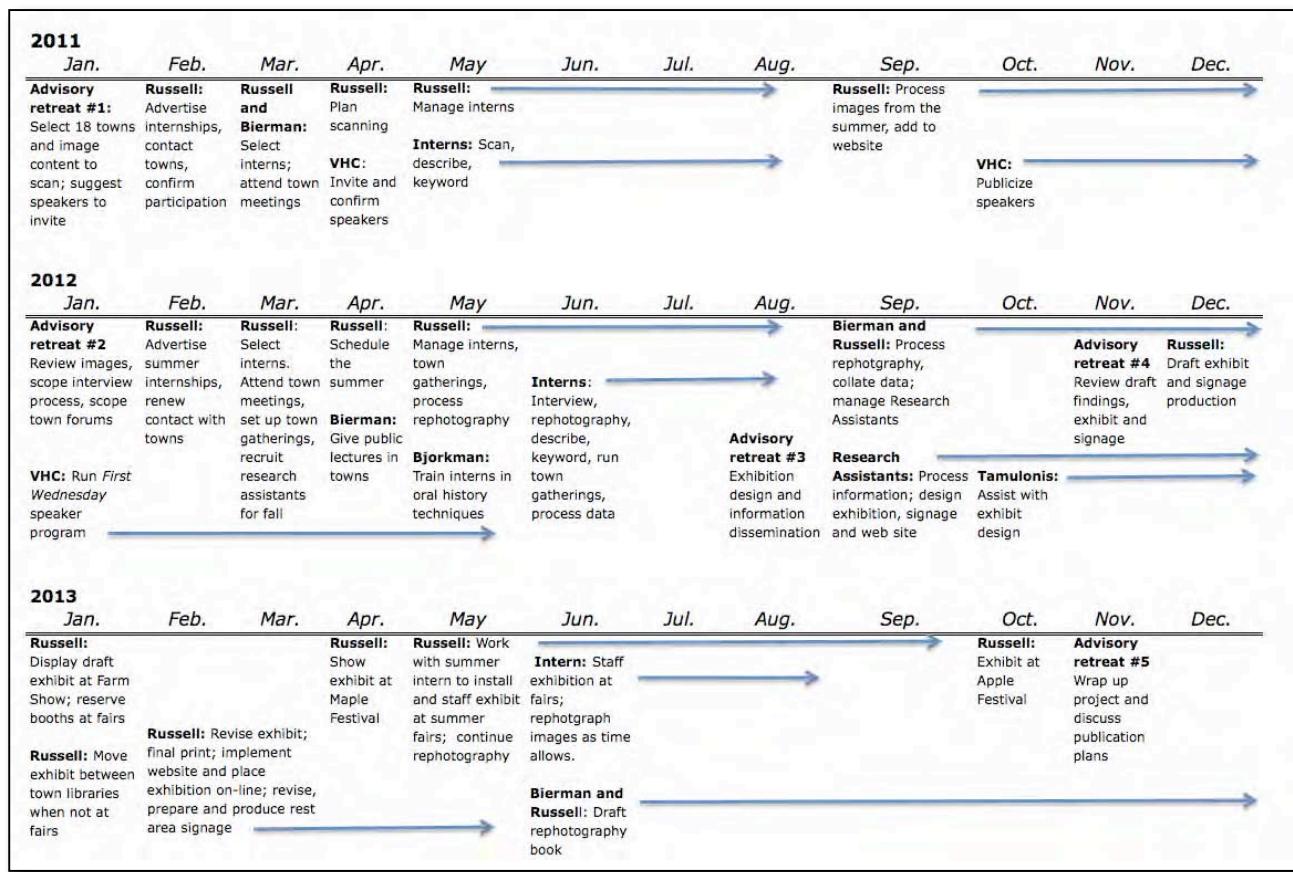
The first phase of *Interpreting the Interstates* is the foundation for the rest of the project. In early 2011, we will convene a one-day retreat with all project staff and the advisory team to continue planning that began prior to this proposal. During that meeting, we will decide on the types of imagery most likely to ensure project success and will identify 15 towns along the Interstate right-of-way that represent a variety of sizes, socio-economic, and geographical settings. Over the spring, Russell will work intensively with town historical societies (there are more than 200 in Vermont representing over 80% of towns) as well as town officials to establish relationships that we will continue to nurture over the course of the project. Once the list of towns is final, Russell will use the database of Interstate images we have created from the photographers' notebooks to select about 10,000 images of those towns and areas nearby to digitize as project catalysts. These images provide historical and cultural documentation of changing conditions over two decades of Interstate construction.

Although, this is not a digitization project, for the project to succeed, we need to capture relevant images and we need to collect and create metadata that make the images searchable. To ensure images come on line in a timely manner, we will rely on 10 years of experience as described in the *Landscape Change Program* SOPs (www.uvm.edu/landscape/about/sop.html). Digitization will be done by six interns over 12 weeks during summer 2011. Russell will process the images during the fall and all 10,000 new images will join the 2700 Interstate images already in the *Landscape Change Program* archive. During the winter, we will convene retreat #2 with the goal planning specifically for community engagement during phase 2 of the project.

2.7.2 Phase 2. Town-by-town and person-by-person engagement.

The core of this project is engaging Vermonters and understanding how both people and their communities have responded to the coming of the Interstate Highway. We will collect this information through a variety of means including town gatherings, attitude surveys, and scripted citizen interviews (done after a two-day training with oral historians of the Vermont Folklife Center). The work in towns will be coordinated by Russell and done by graduate student interns working closely with her. Project director Bierman will give many of the public lectures. Each intern will take responsibility for three towns, making numerous visits over the early and mid-summer of summer 2012. During the later part of the summer, the interns will collate their data and prepare it for the next phase of the project.

Integral to this phase of the project is rephotography of the historic images to document change and provide additional catalysts for public discussion. Interns will spend several days rephotographing imagery (and using GPS to collect location data) in each of their three towns before describing, key-wording, and uploading their photographs to the *Landscape Change Program*. We and others have demonstrated the power of rephotography for showing change associated with the coming of the Interstate (Vale and Vale 1983; Bierman, Howe et al. 2005).



Project time line showing Advisory Team meetings and project-related activities of staff and interns.

2.7.3 Phase 3. Creating and disseminating interpretive materials.

Public dissemination is the capstone phase of the project and will last for 16 months. Starting at the end of summer 2012 and continuing through the fall of 2013, Russell, Bierman, and Tamulonis will work intensively with an interdisciplinary team of students including graduate

students (Research Assistants) in history and undergraduates with expertise in graphic design to create interpretive materials. The history students will analyze and synthesize the data collected during phase 2 and digest it in a way that is accessible for the public. Students with interest and expertise in design will create mockups for displays.

Graphic design of a variety of public interpretive materials will be done as a single project by the team, reflecting similar themes delivered by different media. By early 2013, we will have a draft of the travelling exhibit ready for display at the first public event, the Farm Show in January 2013. Using comments from the public, we will refine this draft before final production as roller banners. During 2013, the student team will work together with Bierman and Russell to design a web presence linked to the *Landscape Change Program* web site. There would be explicit images links as well as citizen interviews and town-by-town interpretation of Interstate cultural impacts. Over spring 2013, we will develop interpretive signage for rest areas using the Lake Champlain Basin Program template (www.lcbp.org/wayside/manual.htm); we are experienced in this process, having already created 7 such signs (see example in section 2.10.4) detailing the history of a Vermont park that was once home to the now-vanished, Webb-Vanderbilt mansion, *Oakledge Manor* (www.uvm.edu/landscape/learn/oakledge_posters.html). During the summer and fall of 2013, an intern, Russell, and Bierman will travel to fairs to set up and staff the portable exhibit. Between fairs, the exhibit will be on display at libraries in the 18 towns we worked with in Phase 2. All of the banners and signs will be rendered as PDF files on the web.

During the final year of the project, Bierman and Russell will work on the manuscript for a popular book of photographs about Interstate Highways in Vermont as part of Arcadia Publishing's *Then and Now* series (www.arcadiapublishing.com). We expect other, more academic, books and papers will follow from project scholars. Because this project serves as a proof of concept and a model, we will do extensive email dissemination of our approach and findings to State Archivists and Departments of Transportation in all 49 other states.

2.8 Samples of previous digital work

Our previous digital work is best displayed on the *Landscape Change Program* web site at www.uvm.edu/landscape. The website represents a decade of revision based on audience feedback; the archive has now evolved into sophisticated, mySQL-database, php-served website hosting over 33,000 images. Our webware has been developed and repeatedly refined by user and focus groups over the past decade under support from the National Science Foundation. The website is hosted on University servers and is accessible free of charge, 24/7.

2.9 Fundraising plans

We will use a combination of institutional cost sharing, local foundation support, limited existing grant support, and NEH funding to complete the project. Institutional cost-sharing will be 15% of Professor Bierman's academic year effort along with benefits and waived indirect costs. This amounts to \$93,413. We have already scanned about 2,700 images from the Interstate collection; about half are posted on-line. We will use remaining National Science Foundation funds to support description, key-wording, and uploading of the remaining 1,300 images. At an average total cost of \$20/image including all phases of image acquisition, this represents nearly a \$26,000 investment in the project. We are seeking support for permanent rest-area signage from local foundations including the Lintilhac Foundation and Vermont Community Foundation. We estimate that fabrication of 17 permanent signs (\$500-\$600 each; one for each Interstate rest area) will cost about \$10,000. All other equipment needed for the project including computers, scanners, and a Marantz digital voice recorder, has already be acquired from NSF support.

2.10 Special Requirements

2.10.1 Information on public accessibility and admission

We plan four means of disseminating the Interstate images and our findings with the public (see Table 2 below) – all will be available to the public free of charge.

Table 2. Interpreting the Interstates - Means of Dissemination	
Modular Exhibition	Roller banners on display at 20 fairs, 18 libraries, 17 rest stops, UVM, State Capitol
Rest Area Signage	Permanent signboards at 17 rest areas along Vermont Interstates 91 & 89
Project Web Site	Topical web pages, all data, photographs, and PDFs of roller banners
Public Programs	VHC sponsored talks in many towns; lectures, intern-led workshops in the 18 towns

2.10.2 Interpretive Strategy and design philosophy

The exhibition, rest-area signage, and project web site will all share common data and reflect the same interpretive strategy and design philosophy – they will use many of the same examples implemented differently in means appropriate for the medium. Images will be chosen based on their content, composition, and ability to grab people's attention.

- Our interpretive strategy will use a mixture of words and image sequences to communicate the impact of the Interstate Highway system – both during and after construction. We will use a mixture of short, punchy captions based on information associated with images as well as related information provided by the public. Quotations from those whose lives have been impacted by the Interstate will be a major interpretive player.
- Our design philosophy is based on the premise of rapid, informal dissemination of relevant information to as many people as possible – the Interstate Highway is not a museum piece – so why should an exhibit about it be overly formal, long-winded, and the same for everyone who sees it. Our exhibit design focuses on the power of the imagery to show a changing cultural and physical landscape; the power of our approach is that it is customizable – flexible enough to fit different venues and serve different clientele.

2.10.3 Modular travelling exhibition - design/interpretive strategy and walkthrough.

Our goal with the travelling exhibition is to reach as many people in Vermont and travelling through Vermont as possible – to convey both the power of the raw imagery and the voices of the people who have participated in the project. Vermont's population is dispersed; there are no large cities –Burlington has only 40,000 residents. To accomplish our goal of widespread distribution, the exhibition we create must travel widely and appear in many different venues. For ease of installation, the exhibition must be transportable; it must be flexible and modular so that it can fit in the both larger and smaller spaces. For example, booths typical of Vermont fairs have only ~ 100 square feet of floor space whereas larger rest areas and some town libraries may have several hundred square feet available for display.



The best way to create a mobile, flexible exhibition at moderate cost is to use “roller banners”. These banners are free standing and collapse easily for transport. We envision using a series of “roller banner” displays (~ \$200 dollars each). Each banner will approach a germane topic or one of five different geographic areas representing sections of the interstate (Tables 3, 4). An example banner and details of the six core interpretive banners (Table 3) are presented on the following pages to illustrate our approach to the exhibition.

Example banner explaining design philosophy and interpretive approach

Each banner tells a story.

Enlarged sections of high resolution images show pertinent details.

Dates allow viewers to place images in time context.

Quotations provided from people who have seen and commented on images, both online and in person.

Mock up of free-standing banner to be used in the travelling exhibition. Banners will measure, 2010mm(h) by 850mm(w). We will create 15 different banners. Depending on the size of the exhibition space available and its location in the state, different numbers and combinations of banners will be installed.

Going, going, gone...

Putting a highway through a state that's been settled for 200 years isn't easy. Houses, farms and people get in the way. Some, like *Elm Farm*, vanish.

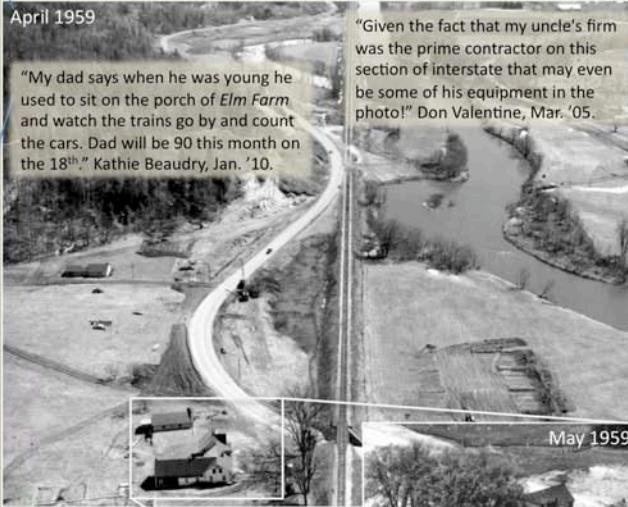

THE ELM FARM, MRS. M. G. HEDGES, PINE MOUNTAIN, Vt.

Summer, 1929, warm and steamy, when a travelling postcard photographer – from Eastern Illustrating – snapped this view of the *Elm Farm*, a quintessential Vermont farmhouse.


You knew the Interstate was coming. The Highway Department men showed you the plans.

April 1959

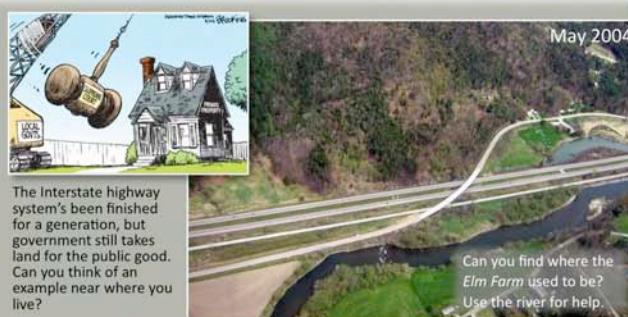
"My dad says when he was young he used to sit on the porch of *Elm Farm* and watch the trains go by and count the cars. Dad will be 90 this month on the 18th." Kathie Beaudry, Jan. '10.


"Given the fact that my uncle's firm was the prime contractor on this section of interstate that may even be some of his equipment in the photo!" Don Valentine, Mar. '05.

April 1959. Here comes the Interstate; the farm's days are numbered.

May 1959. Elm Farm is gutted. In days, the highway will cover the homestead, the underpass will vanish, but the elms will remain.


May 1959. Elm Farm is gutted. In days, the highway will cover the homestead, the underpass will vanish, but the elms will remain.


The Interstate highway system's been finished for a generation, but government still takes land for the public good. Can you think of an example near where you live?


Can you find where the *Elm Farm* used to be? Use the river for help.

Interesting, catchy title attracts viewers.

Well composed historical images draw attention.

Short, catchy captions are easy to read and understand.

Quotations provided from people who have seen and commented on images, both online and in person.

Sequences of images are used to illustrate change over time.

Banners are subtly subdivided to emphasize different but related ideas.

Captions pose questions and images provide visual puzzles to engage viewers.

Table 3. Description, scope and representative images for the six core, topical banners.

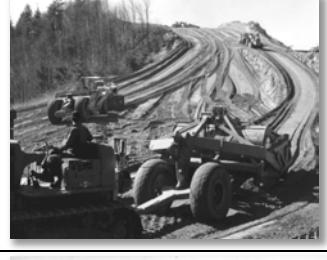
<p><i>4. Road Through my Life</i> – The cones mark the centerline of coming highway – a metaphor for the splitting of landscapes and lives that interstate construction caused (LS23995). This panel will use images and quotations to illustrate how the Interstate right of way split farms (LS15573) and towns that had developed organically along the contours of Vermont's hills and valleys.</p>		
<p><i>5. Waiting for a Shopping Center</i> – Cars queue up for their first drive on I-89 (LS8770) as a new cloverleaf waits for development that has since filled the open fields (LS8732). Sequential imagery will show how landuse along the Interstate corridor changed with the coming of the highway. The memories and words of citizens will tell how these changes affected their daily lives.</p>		
<p><i>6. Alien Landscape</i> – Interstate construction was at a scale beyond the ordinary. An incredible amount of rock and soil were moved in little more than a decade (LS7819). Massive bridges spanned wild rivers (LS25776). Personal reflections and reactions, both to the images and to the changing landscape will bring to life people's reaction to disturbance then and the imagery now.</p>		
<p><i>7. Only Imagined</i> – Some plans just never quite make it - be they curvy cloverleaves (LS8723) or angular rest stops (LS6453). This panel will use paired imagery to contrast what was planned and what actually was built. The narrative will focus on questions such as: Did they get it right? What might the future bring? Can plans ever really convey the impact of change on a landscape?</p>		
<p><i>8. The Changing Face of Vermont</i> – What a contrast! A collection of rural road signs (LS25756) couldn't be more different in content and form than the new, simple signs of the Interstate (LS22536). This panel, and the citizen comments it includes, will compare old and new to illustrate how the homogeneous design of the Interstate both meshed and clashed with the rural ethos.</p>		
<p><i>9. Going, going, gone</i> – The small white notice nailed by the door marks the end, State of Vermont property (LS25833). The coming of the Interstate leveled historic buildings, took private land, and displaced Vermonters from land they occupied for generations (LS25755). Images will speak for vanished building while voices of those displaced will narrate the loss with their quotations.</p>		

Table 4. Roller Banners for Modular Exhibition (shaded banners described in Table 3)

Roller Banner Title	Content
1. <i>Interpreting the Interstates</i>	Explains the NEH-supported project
2. <i>Interstate History</i>	Synopsis of Interstate History in the US and VT
3. <i>Find the Vermont Highways</i>	Illustrated physiographic map of VT Interstate highways
4. <i>Road Through my Life</i>	How the Interstates split many farms, towns and lives
5. <i>Waiting for the Shopping Center</i>	Built and natural landscape change near the Interstate
6. <i>Alien Landscape</i>	The biggest construction project in VT history
7. <i>Only Imagined</i>	Plans that never did come to pass
8. <i>The Changing Face of Vermont</i>	What did the Interstate do to the VT rural ethic?
9. <i>Going, going, gone</i>	Vanished landscapes, building, and cultures
10. <i>What will the future bring?</i>	Looking ahead – what's next?
11. <i>I-89, Williston to Canada</i>	Regional Information #1
12. <i>I-89 White River to Williston</i>	Regional Information #2
13. <i>I-91 Mass. border to White River</i>	Regional Information #3
14. <i>I-91 White River to St. Johnsbury</i>	Regional Information #4
15. <i>I-91 St Johnsbury to Canada</i>	Regional Information #5

Where power is available, we will bring a portable server and 6 laptop computers, allowing us to establish a stand-alone wireless network on which the *Landscape Change Program* web site and the *Interpreting the Interstates* can be served to the laptops. We used this arrangement at the History Expo; there were lines of people waiting to use the computers.

So, let's take a “descriptive tour” of the exhibition, on display at the Guilford Welcome Center (700,000 visitors in 2008; bgs.vermont.gov/information_centers/guilford). At the entrance are three roller banners – #1 explains the NEH-supported project; #2 provides a concise, illustrated history of the Interstate Highway system focusing on Vermont, and #3 is a colorful map showing Vermont interstates and topography with images of the landscape. Moving into the exhibit space, some visitors examine the five geographically focused banners (#10-15, Table 4) – perhaps hoping to find an image of their home or the place they are visiting. Others focus on the thematic banners (#4-9, Table 3). The exhibition is non linear; each banner stands alone and different people take different paths. Some, maybe the kids, look only images on the computers scattered about the exhibit hall. The number of banners presented can change depending on the size of the space. For example, at a small town library in northern Vermont, only the local geographic banner and three or four of the topical banners fit in the lobby.

The most obvious takeaway messages are the extent to which the Interstate changed the physical landscape of Rural America and the impact construction, particularly the loss of familial homes, had on the emotions of Vermonters. However, there are more subtle things to learn; we want people to consider the delayed impacts; many of the changes, particularly build-out patterns and the extension of the commuting lifestyle continue decades after the last mile of interstate pavement was laid. All dissemination products will compare the Interstate's impact in Rural American to the urban and suburban experience elsewhere.

2.10.4 Permanent Rest Area signage (wayside exhibits)

To ensure long-term dissemination of the core project findings to tourists and Vermonters, we will work with Edward VonTurkovich, Director of the Vermont Information Centers (letter of support included with this proposal) to install permanent interpretive signboards (wayside exhibits) at each of the 17 rest areas and welcome centers. These signs will be

Example of Interpretive signage (wayside) created and installed by Bierman and students as part of the Landscape Change Program. (www.uvm.edu/landscape/learn/oakledge_posters.html)

laid out using a template established by the Lake Champlain Basin Program and implemented widely in Vermont (170 installed, <http://www.lcbp.org/Wayside/>). We have experience with this program, having already created and installed 7 interpretive signs at a local historical site. Signage content will be condensed from the roller banners and will use examples and images relevant to the installation location.

2.10.5 Project web site

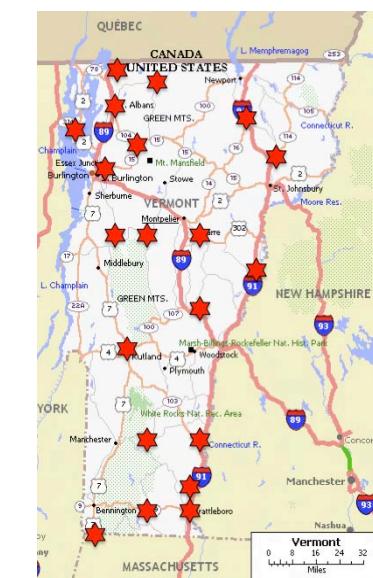
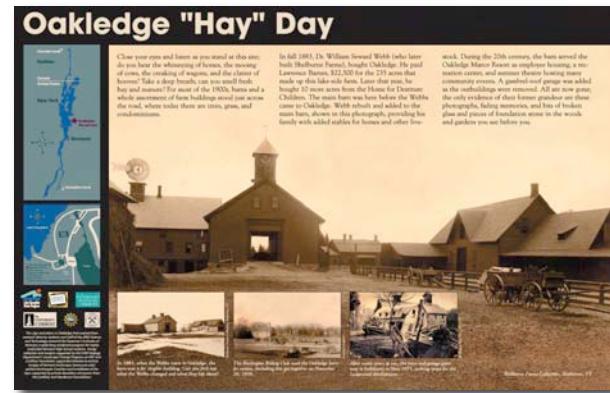
We will use the established and extensively user-tested *Landscape Change Program* web site as a means to disseminate our findings widely. The new pages we create, will follow the topical organization of the banners (Table 4) but with layout appropriate for the web consistent with the look and feel of the current website. We will use the *Landscape Change Program* web site to archive and present all of the data we collect during *Interpreting the Interstates* as well as PDFs of all the banners and signage.

2.10.6 Travel schedule with venues

The modular exhibition we create will travel to 20 fairs in Vermont, each drawing thousands to tens of thousands of visitors. The exact dates for 2013 have yet to be set but the schedule for each year can be found on-line (<http://cvexpo.org/vtfairs.aspx>).

1. January, Barre, Vermont Farm Show
2. April, St. Albans, Vermont Maple Festival
3. June, Enosburg Falls, Vermont Dairy Festival
4. June, Brattleboro, Strolling of the Heifers
5. July, Springfield, Windsor County Agricultural Fair
6. July, Bradford, Connecticut Valley Fair
7. July, Johnson, Lamoille County Field Days
8. July, Pownal, Pownal Valley Fair
9. July, Highgate, Franklin County Field Days
10. August, New Haven, Addison County Fair & Field Days
11. August, Waitsfield, Washington County Fair & Field Days
12. August, Barton, Orleans County Fair
13. August, Lyndonville, Caledonia County Fair
14. August, Wilmington, Deerfield Valley Farmers' Day
15. August, Bondville, Bondville Fair
16. September, Essex Junction, Champlain Valley Fair
17. September, Rutland, Vermont State Fair
18. September, Guilford, Guilford Fair,
19. September, Tunbridge, Tunbridge World's Fair
20. October, South Hero, Applefest & Craft Show

In the spring, we will install the exhibit in the libraries of the 18 towns involved in this project. After October 2013, the exhibition will move between 17 rest stops on the Vermont Interstate highways, spending several weeks at each stop. We will arrange for display at the Vermont State Capitol and on the UVM campus.



Vermont fairs (red stars) are well distributed around the state and more than half are within minutes of an Interstate Highway.

2.10.7 Public programs

We will conduct two types of public programs. The first public programs will be led by the Vermont Humanities Council and be part of its popular *First Wednesdays* speaker series. Each month, *First Wednesdays* speakers draw large audiences (greater than 70 people) to nine venues around Vermont. Some *First Wednesdays* talks will focus on developments such as roads and highways and feature speakers with a variety of expertise related to the cultural impact of transportation: historians, writers, and geographers – including authors of books and articles cited in the proposal bibliography. Talks will be heavily advertised by the Humanities Council and conducted in the spring of the second year of the project before the town gatherings. The goal of the speaker series is to build public interest and make people aware of *Interpreting the Interstates*.

The second public set of public programs, led by interns and shaped by the advisory team, will be public gatherings (year 2) conducted in 18 towns throughout Vermont; 15 of the towns will be located on or near an Interstate Highway; the other 3 will be located far from the highways. At each town, we will hold an initial, heavily advertised lecture to attract public interest, during which Bierman or Russell will present an overview of the *Landscape Change Program* in general and *Interpreting the Interstates* specifically. Soon after, we will follow up with an intern-led town gathering for a weekend afternoon with a dozen or more poster prints of Interstate images from that town. We will have both an “open house” where people comment on the images (comments will become part of the image descriptions in the archive) and a moderated group discussion where images of the town become catalysts for discussing impacts of Interstate Highways on Vermonter’s lives and culture. Our prior experience with dozens of *Landscape Change Program* public presentations in Vermont, suggests 30-50 people will attend each program.

2.10.8 Oral histories

Graduate Students will each conduct six interviews in each of the 18 towns we study – three with people who remember the town before the Interstate and three with people younger than the Interstate or who came to Vermont after the Highway was completed. We will focus our interviews on the highway and how people perceive it has affected their town and their lives. We will ask questions specific to changes in town culture, mobility, development, community, and the perceived availability of services. As prompts for the interviews, we will use images of the Interstate in the town – before, during, and after construction. We will work closely with local historical societies and town governments to find people to interview. We will recruit people during the initial public lecture and at the follow-up, public gathering. During a two-day, intensive workshop led by staff of the Vermont Folklife Center, interns will be trained in oral history and interview techniques. We will review and discuss the guidelines of the *Oral History Association* (<http://www.oralhistory.org/do-oral-history/oral-history-evaluation-guidelines/>) before interns go to the field and will use NSF-supported digital recording equipment.

Interviews will serve several purposes. They will directly compliment images providing interpretive information that would otherwise be difficult to gather and they will provide primary data for understanding the cultural impact of the Interstate Highway system both on individual Vermonters and on their perceptions of the communities in which they live. A copy of the release form we will adapt for this project is included as appendix 3.6.

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