Appendix C

Maps of Alternatives Dismissed from Further Evaluation

US 50/South Shore Community Revitalization Project

Project Description, Tentative Plans and Alternatives

Tahoe Transportation DISTRICT

Prepared October 2012

Introducing the Partners and this Paper

The US 50 South Shore Community Revitalization Project is located along US Highway 50 from approximately 0.25 miles west of Pioneer Trail within South Lake Tahoe, California to Nevada State Route 207 within Douglas County, Nevada.

The portion of the project located within California is subject to oversight and approval by the California Department of Transportation (Caltrans) and the City of South Lake Tahoe. Likewise, the portion located in Nevada is subject to review and approval by the Nevada Department of Transportation (NDOT) and Douglas County. Since the project is part of the federal highway system, it is also subject to review and approval by the Federal Highway Administration (FHWA).

This document is intended to provide historical and current information to all interested parties, including the public, regarding the following items:

Briefly what and why

The US 50/South Shore Community Revitalization Project is intended to complete the Loop Road and address existing transportation deficiencies and future transportation needs along the US 50 corridor between Pioneer Trail in South Lake Tahoe, California and Nevada State Route 207 (Kingsbury Grade) in Douglas County, Nevada.

There is a community demand for transportation improvements within the entire US 50 corridor to create a better, safer balance between pedestrian, bicyclist, transit, and private vehicle access while giving consideration to the unique environmental setting of the Lake Tahoe Basin. Facilitating revitalization of the area through public and private investment, as well as promoting economic vitality, are additional project goals.

The transportation system components to be addressed include: roadways, transit and business access, along with bicycle and pedestrian facilities and amenities. Plans will seek opportunities to:

- enhance pedestrian activities and safety
- decrease dependence on the use of private automobiles
- calm traffic in the corridor and develop a “complete street” for all users
- improve visual and environmental conditions within the corridor

The project must be consistent with Tahoe Regional Planning Agency (TRPA) thresholds regarding land use, air and water quality, noise, and scenic resources. It is important that the project also satisfy federal, state, and local transportation standards for design and operations.

As part of a plan for the development of an integrated system of transportation within the Tahoe Region, the project also complies with Article V(2) of the Tahoe Regional Planning Compact (Public Law 96-551, 1980). This law specifically calls for consideration of the completion of the Loop Road in the states of California and Nevada. The objective is to reduce dependency on automobiles and, to the extent feasible, air pollution from them around Lake Tahoe.

Who's guiding the process?

From feasibility studies to construction implementation, a Project Development Team (PDT) guides the process, following established regional, state and federal project management parameters. In essence, the PDT is technical steering committee, with a larger project team performing routine development activities.

The PDT conceptualizes and refines (as needed) the project, based on the adopted "Purpose and Need Statement," as required by the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The team employs multiple disciplines (such as engineering, environmental protection, aesthetics, operations and maintenance, and overall value analysis) to conduct studies and accumulate data for developing and evaluating alternatives. They make recommendations and detail the project work plan, schedule and budget for consideration by responsible parties such as local agencies and the public.

Members of the PDT participate in key presentations such as technical advisory meetings, public hearings and community workshops. For larger, more complex projects, PDTs are extended and formalized (as required by law) to include a wide range of disciplines and individuals from outside agencies. Representatives from established community groups may also be included as needed.

The PDT for the US 50/South Shore Community Revitalization Project represents a variety of federal, state and local agencies, as well as other stakeholders and interested parties. Below is a list of those currently represented:

- Tahoe Transportation District (TTD)
- FHWA
- TRPA
- Caltrans
- NDOT
- City of South Lake Tahoe
- Douglas County
- El Dorado County
- Lahontan Regional Water Quality Control Board
- Nevada Division of Environmental Protection
- Army Corp of Engineers
- California State Parks
- Nevada State Parks
- California Tahoe Conservancy
- South Tahoe PUD
- Business Owners
- Property Owners

Meeting throughout the development of this project, the PDT has been integral in providing direction, developing goals and objectives and creating the project's "Purpose and Need Statement." They have devised, reviewed and refined alternative solutions, based on technical and environmental data.

New members may be added to the PDT as needed. Other sources of input, such as community advisory committees, can also be organized.

A little history

Precursors to the US 50/South Shore Community Revitalization Project, to address existing and planned development as well as the area's designation as an air quality non-attainment area, were considered as early as the late 1970s. Following is an overview of the project's history.

Late 1970s Casino Expansion Approved

As part of the approval of the expansion of three major casinos, mitigation required the construction of a Loop Road to address traffic congestion in the US 50 corridor. Nevada's portion was built but California's was never completed.

1980 Revised Tahoe Regional Planning Compact (the Compact) Signed

When the Compact was revised in 1980, Article V(2) (Public Law 96-551) required "consideration of the completion of the Loop Road in the States of California and Nevada."

1985 Community Development Study Group Established

Created by the South Tahoe Redevelopment Agency, the study group included members of City government, TRPA, local businesses, the California Office of the Attorney General, the League to Save Lake Tahoe and neighborhood groups. Its findings were presented in a conceptual plan, adopted by the Redevelopment Agency in April 1986.

This conceptual plan established general parameters for the Loop Road system, including:

- closure of Pioneer Trail at US 50
- construction of two four-lane connectors between US 50 and the north and south Loop Roads (Pine Boulevard and Montreal Road in California and Lake Parkway in Nevada)
- upgrading Pine Boulevard to five lanes
- extending Montreal Road
- re-designating the bypassed portion of US 50 as one-way eastbound
- minor modifications to other streets, such as cul-de-sacs, within the immediate vicinity

To expand upon and implement the conceptual plan, the Redevelopment Agency contracted with ROMA Design Group of San Francisco.

1986-1987 ROMA Redevelopment Plan and Draft Environmental Impact Documents Written

The ROMA version included a circulation element, proposing expanded use of the Loop Road system on both sides of US 50, in the Stateline area, to reduce traffic along Lake Tahoe Boulevard. Refinements, through public input, were also made to the original conceptual plan, with alternatives developed that differed in numbers of lanes on the north and south Loop Roads and existing US 50.

In 1987 the Redevelopment Agency authorized preparation of an Environmental Impact Report/Statement (EIR/EIS) for the ROMA Redevelopment Plan alternatives. They were further vetted during the associated public outreach process and revised accordingly. However, the project was never constructed.

1990 Loop Road Project Preliminary Roadway Design Report Prepared

Based on the alternatives developed in the 1987 ROMA plan, South Lake Tahoe and Douglas County prepared a report including, for each alternative, preliminary roadway design, geometric analysis, preliminary cost estimate, traffic analysis, drainage improvements, landscape improvements and other engineering-related information.

1991 Loop Road Project Environmental Impact Documents Completed

To further analyze and document the impacts of the Preliminary Roadway Design Report alternatives, South Lake Tahoe sponsored and completed an EIR/EIS, covering: the One-Way, Five-Lane, Three-Lane and North Park Alternatives. All four included both north and south Loop Roads. A Technical Advisory Committee {TAC), several public outreach meetings and formal public hearings contributed to this effort. However, the final EIR/EIS was never certified.

1993 Stateline Community Plan (Nevada) Adopted

The Nevada side of the project area adopted a plan that anticipated completing the Loop Road and reducing the number of travel lanes on existing Highway 50. The following pertained to both:

- Loop Road: In conjunction with South Lake Tahoe, the mountainside Loop Road will be increased from two travel lanes to four and linked more directly to Highway 50.
- Highway 50: If a trial period proves successful; Highway 50 will be reduced from four travel lanes to two, with the resulting space used for pedestrian amenities and transit facilities.
- Traffic Flow: The plan for the Loop Road and Highway 50 will include improvements for access drives and internal circulation within the casino core.
- Pedestrian Facilities: A system of new paths, sidewalks and lighting for bikes and pedestrians will encourage walking, making decreased reliance on the automobile and associated environmental benefits possible.

1994 Stateline/Ski Run Community Plan (California) Adopted in May

On the California side of the project area, the City of South Lake Tahoe adopted a similar plan. Supporting the Loop Road system, this plan specifically stated, “Traffic congestion along the US 50 corridor in the Stateline area has not only created major circulation problems, but has resulted in a reduction in air quality. The Community Plan Team and the Redevelopment Agency propose to rectify these and related issues through the retirement and/or rehabilitation of existing tourist accommodations and retail commercial facilities, as well as the diversion of a significant share of vehicular traffic around the Stateline area by means of the proposed Loop Road system."

Additionally, this Community Plan proposed reconfiguring and extending the existing north and south Loop Roads to create a route around the congested Stateline Area and designating the mountainside loop as US 50. The “Proposed Transportation Improvements” section specified:

- The project will increase the mountainside loop to five vehicle lanes, create three lanes on the lakeside loop and reduce the existing US 50 (inside the Loop Roads) to three vehicle lanes. Incorporated into the improvements will be: bicycle facilities, pedestrian facilities, reductions in driveway accesses, landscaping and noise abatement devices.
- The through-traffic lanes between the Loop Roads and Stateline will be reduced to three lanes in conjunction with the similar reduction on US 50 east of Stateline. Lanes for turn movements and bike travel shall be a part of the project. Unused areas of the right-of-way shall be converted for transit and pedestrian uses.
- After completion of the Loop Roads and when traffic counts warrant, a new local road will be constructed to link Pioneer Trail at upper Ski Run to the Loop Road. This roadway shall have no access to any adjoining properties between the two intersections. Incorporated into the roadway design should be bicycle/pedestrian facilities. A Class I bike trail is the preferred alternative.
- Ski Run Blvd. shall have three lanes (to eliminate passing and provide for safe left turns into the adjoining neighborhood) and on street parking. In addition to the curb and gutter, there will be facilities for bicyclists and pedestrians.
- Intersection Improvements will include:
  - right and left turn lanes from US 50 to the Loop Road and the elimination of the Pioneer Trail connection to US 50. The intersection design shall assume that US 50 will be reduced to three lanes east of the intersection. This reduction shall not be permanent until after the Loop Road evaluation period.
  - improving right- and left-turn movements while maintaining four pedestrian crosswalks

2002-2004 US Highway 50/Stateline Area Transportation Study Conducted

Initiated in October 2002, this transportation planning effort was completed in May 2004 in cooperation with a robust Steering Committee established by TRPA. The Steering Committee included representation from the FHWA, Caltrans and NDOT, as well as participation by local governments, representatives of landowners and businesses in the project area, environmental advocacy groups and other interested parties. This study served to meet the Caltrans requirements for a Project Initiation Document (PID).

The study involved significant public outreach. Residents and business owners received surveys and postcards. Public notices were issued and a project website was developed. Two community open houses were also held, the first on October 15, 2003 and the second on March 4, 2004.

TRPA coordinated with the Steering Committee to prepare a report on the study, summarizing the planning process; identifying project goals and developing a purpose and need. The report also evaluated alternatives and associated design, engineering, and environmental considerations. Of four alternatives, the Steering Committee designated Alternative D (similar to the current 2 and 3 Build Alternatives, except for an additional roundabout proposed for the US 50/Lake Tahoe Boulevard/Pioneer Trail intersection.) as the preferred alternative. They recommended progressing into project development and the next phase of preparing a Caltrans-required Project Study Report.

2005 Caltrans Project Study Report Funded

TRPA received funding from the Southern Nevada Public Lands Management Act to develop the Caltrans-required Project Study Report, based on the alternatives developed as part of the 2004 transportation plan study.

2008 Project Re-initiated by TRPA, Coordinating with Caltrans, NDOT and FHWA

TTD, FHWA, NDOT, and Caltrans determined that the Caltrans project development process would be followed, throughout the course of the project, to ensure the most stringent requirements and processes for evaluations and delivery. A Project Development Team (PDT) was formed and the alternatives initially considered were those included in the 2004 US Highway 50/Stateline Area Transportation Study.

2009 Project Transitioned to Tahoe Transportation District (TTD)

The TTD assumed responsibility for the project because, per Article IX of the Compact, it is designated to implement transportation projects, while the TRPA is a regulatory and land use planning agency.

2010 Project Study Report (PSR) Approved in May

This scoping document, sponsored by TTD, evaluated the need for the project and considered potential engineering and environmental issues, as well as design alternatives. Evolving from the May 2004 study, three build alternatives were included. (One was excluded by the PDT as it did not meet the “Purpose and Need.”) During development of the PSR, the project was presented at a community open house, along with other TTD projects, as well as to the South Lake Tahoe City Council on several occasions.

2010 Project Approval & Environmental Documentation (PA&ED) Initiated in June

Upon Caltrans’ approval of the PSR, TTD sponsored the PA&ED phase of the project to begin developing detailed engineering and environmental studies. The PDT reconvened and refined the project's “Purpose and Need” for consistency with Caltrans’, FHWA’s and NDOT’s requirements and to include both community and environmental goals.

During the PA & ED process, significant public outreach was conducted: focus group meetings, community open houses, outreach to business owners and potentially displaced residents, including minority populations, and project presentations at City Council and TTD Board Meetings.

2010 Value Analysis (VA) Study Completed in November

Conducted from June 21-25 and published in November, this TTD-sponsored study:

- reviewed the validity of the design alternatives,
- evaluated additional potential design solutions to improve constructability and reduce cost,
- identified opportunities to enhance environmental features,
- evaluated right-of-way concerns and
- addressed maintenance issues, including snow removal and storage.

The VA Team included representatives from Caltrans, NDOT, TTD and Wood Rodgers (design consultant). Douglas County also participated. The City of South Lake Tahoe was asked to join the team, but wasn't able to at the time.

2012 Current Activities

Engineering and environmental technical studies are ongoing. Further analysis of alternatives is being completed as the result of public and stakeholder input. This could result in the need to supplement all studies.

The project's foundation

What is the "Purpose and Need"? A project's "Need" is an identified, existing and future transportation deficiency or problem. The objectives that will be met to address the transportation deficiency constitute its "Purpose" and are the basis for developing and evaluating a solution or range of solutions.

A clear, concise, and well justified "Purpose and Need Statement" is the foundation of every transportation project. It is critical for identifying, developing and evaluating a reasonable range of project alternatives, resulting in the selection of a preferred alternative. It also leads to a more precisely defined project cost, scope and schedule, expediting project delivery.

Just as importantly, a well-crafted "Purpose and Need" explains to the public, stakeholders, and decision-makers that the expenditure of funds is necessary and worthwhile, and that the project's priority, relative to other transportation projects, is warranted. It ensures that the right project is built, accomplishing its primary goals and objectives.

An effective "Purpose and Need Statement" also satisfies federal and state regulations: an environmental impact statement (EIS) shall "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (40 Code of Federal Regulations §1 502.1 3); an environmental impact report (EIR) shall "contain a statement of objectives sought by the proposed project" and it "should include the underlying purpose of the project" [I 4 California Code of Regulations §1 51 24(b)].

The "Purpose and Need" for the US 50/South Shore Community Revitalization Project, included in the Project Study Report, was refined to more closely align with Caltrans', FHWA's and NDOT's requirements and to ensure the statement is responsive to environmental statutes (NEPA, CEQA) and TRPA thresholds.

Establishing consistency with all planning documents for the project area is another important component of preparing a comprehensive "Purpose and Need." For example, Caltrans' Transportation Corridor Concept Report (TCCR) for US 50 serves as one of the planning documents for the California side of the US 50/South Shore Community Revitalization Project. The "Purpose and Need" must reference the project area as it is defined in the TCCR: as a "four-lane conventional urban arterial with a center turn lane" and as the "main street of South Lake Tahoe." Additionally, the TCCR identifies the Loop Road Project on the list of planned projects.

Following is the current "Purpose and Need Statement" for the US 50/South Shore Community Revitalization Project:

Purpose:

The purpose of this project is to make improvements to the corridor consistent with the Loop Road System concept, reduce congestion; improve vehicle, pedestrian, and bicycle safety; advance multimodal transportation opportunities; improve the environmental quality of the area; enhance visitor and community experience; and promote the economic vitality of the area.

Need:

A. Article V(2) of the Tahoe Regional Planning Compact (Public Law 96-551), 1980 (the Compact), requires a transportation plan for the integrated development of a regional system of transportation within the Tahoe Region. The Compact requires the transportation plan to include consideration of the completion of the Loop Road System in the States of California and Nevada. Improvements are required to the corridor to meet the intent of the Loop Road System concept.

B. Ongoing and proposed resort redevelopment in the project area has increased pedestrian traffic, creating a need for improved pedestrian safety, mobility, multi-modal transportation options. Improvements to pedestrian facilities, bicycle lanes and mass transit are needed to connect the outlying residential and retail-commercial uses with employment and entertainment facilities, including hotels and gaming interests. Currently, there are no bike lanes on US 50 through the project area and sidewalks are either not large enough to meet the increased demand, or do not exist. These issues impact the visitor and community experience within the area.

C. Environmental improvements are needed in the area to help achieve the Tahoe Regional Planning Agency's (TRPA's) environmental thresholds, including water quality and air quality. Improvements to storm water runoff collection and treatment facilities are needed to meet TRPA and Lahontan Regional Water Quality Control Board regulations and requirements. Reduction of vehicle congestion and reducing the number of vehicles on the roadway through enhanced pedestrian and multi-modal opportunities is needed to provide for improved air quality. Landscape improvements are needed to enhance the scenic resource element of the project area to facilitate compliance with TRPA's Scenic Threshold and to enhance the community and tourism experience.

D. The project is needed to mitigate severe summer and winter peak period traffic congestion along US 50 in the project area. During peak hours, traffic often operates at Level of Service "F" (breakdown) when tourism is at its peak during the summer and winter months.

Four comprehensive phases

As previously mentioned, since the project is a bi-state cooperative effort, it is subject to review and approval by multiple entities (Caltrans, NDOT, FHWA, Douglas County, South Lake Tahoe and TRPA). However, when the project was re-initiated by TRPA in 2008, the agencies decided to follow, for the most part, one project development process, Caltrans'. This determination was made because it:

- is considered the most thorough, ensuring comprehensive analyses during all project phases.
- generally aligns with FHWA requirements, with which the project must comply in both California and Nevada. (FHWA staff, in both state offices, accepts the Caltrans process.)
- is more comprehensive than NDOT's project delivery process, which would not provide the in-depth analysis required for the California side. (NDOT staff concurred that the Caltrans project delivery process should be followed.)
- meets the stipulations of multiple potential funding sources for eventual project construction.

Although Caltrans' project development process will be followed, the actual design and construction standards of the agency that has jurisdiction, and will ultimately own and operate a specific segment, will also be applied to that segment. In addition, any special requirements of a jurisdictional agency will be adhered to throughout project development.

Caltrans' project development process is divided into four main phases (page 12): Project Initiation Document (PID), Project Approval and Environmental Documentation (PA&ED), Plans, Specifications and Estimates (PS&E) and, finally, Construction.

The full circle

Phase 1 – PID

- Prepare Project Initiation Document (PID) and study report with
  - traffic study and preliminary environmental analysis
  - initial Purpose and Need statement
  - alternative approaches evaluated per design standards
  - preliminary ROW Requirements
- Initiate inter-agency coordination

Phase 2 – PA & ED

- Redefine Purpose and Need, alternatives
- Perform
  - topographic survey
  - engineering and environmental studies
- Provide
  - project report and environmental documentation
  - ROW and relocation evaluation/ assessment
- Continue community outreach

Phase 4 – Construction

- Build project
- Comply with mitigation and monitoring requirements
- Closeout project

Phase 3 – PS & E

- Select preferred alternative
- Complete
  - detailed design
  - permitting and agreements
- Acquire right of way (ROW)
  - relocate displacees
- Develop plans, specifications and estimate (PS & E) package
- Advertise and award project

Compensation, Acquisition and Relocation

All of the project alternatives currently under consideration require Right of Way (ROW) property acquisition and relocation. Likely to be one of the most challenging aspects of the project, ROW activities are of great concern to the community and the City of South Lake Tahoe and are subject to very strict state and federal laws and regulations.

The TTD is receiving Federal Highway Administration (FHWA) funding to develop the US 50/South Shore Community Revitalization Project. Whenever federal funds are used for a project, affected property owners and displaced residents and businesses are entitled to be justly compensated for losses they experience. The laws and regulations are also intended as a safeguard to ensure that federal funds are not unnecessarily or inappropriately expended.

Right of way acquisition and relocation must comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended in 1987 (the Uniform Act). This law can be found in Chapter 10 of the Caltrans *Right of Way Manual*, the FHWA *Project Development Guide* (Appendices A and B) and at Section 49 of the Code of Federal Regulations (CFR), Part 24. *Noncompliance with the Uniform Act can result in ineligibility for reimbursement of project costs, including both ROW and construction.*

The project must also comply with all requirements of Title VI of the 1964 Civil Rights Act for federal-aid projects. This guarantees that all services and/or benefits derived from any ROW activity will be administered without regard to race, color, gender, or national origin.

According to Federal Highway Administration (FHWA) policy, state DOTs are ultimately responsible for ROW activities on federal-aid projects. Essentially, this places the responsibility on Caltrans and NDOT for the TTD's actions within their respective jurisdictions. These actions will follow Caltrans' procedures. A review of both DOTs' ROW processes determined that Caltrans' are generally more comprehensive, ensuring that federal funding eligibility is retained.

To evaluate residential requirements, a Relocation Assistance Study (RAS) was prepared. The study began with interviews of affected residents, analyses of their demographics, an estimate of the number of dwelling units impacted and a survey of available replacement properties.

The completed RAS includes a summary of relocation needs and requirements, an outline of a project-specific relocation process, an overview of rules and regulations pertaining to residential relocation and a cost estimate. The RAS also addresses potential business impacts.

Following are some of the key points relating to ROW property acquisition and residential and business relocation. For more detailed information, please refer to the RAS and/or the Uniform Act. (Note: pursuant to the Uniform Act, acquisition and relocation cannot begin until a preferred alternative has been selected and agreed upon in the form of a certified environmental document.)

Property Acquisition

- Consistent with the Uniform Act, TTD will determine the amount of just compensation to be offered the property owner in a two-step process:
  - After researching the real estate market, a licensed appraiser will present an assessment of fair market value.
  - The assessment will be evaluated by a second appraiser who will recommend an amount to be approved by a TTD official as the agency's estimate of just compensation.

Residential Relocation

- Relocation assistance will be offered to displacees.
- Relocation payment cannot be made unless the displaced person moves to a dwelling deemed decent, safe and sanitary.
- Comparable replacement dwellings, in compliance with appropriate local housing codes, will be identified for displacees.
- Although relocation assistance will be provided, displacees will ultimately choose where they want to live.

Business Relocation

- Relocation assistance will also be offered to displaced businesses.
- Assistance may include: help with filing claims; identification of a potential new location; payment of eligible moving expenses and/or property improvements; reimbursement for eligible expenses incurred for replacement property search, re-establishing the business and/or loss of business goodwill. For a complete list and limitations, please refer to the RAS and/or the Uniform Act.

Exploring the possibilities

At least 15 alternative approaches for the US 50 South Shore Community Revitalization Project are or have been under consideration, complying with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

NEPA stipulates that all reasonable alternatives must be rigorously explored and objectively evaluated. Each alternative identified for further consideration must be substantially investigated so that reviewers may evaluate comparative merits.

In addition, the statute requires a brief discussion/explanation of the reasons for considering, but rejecting, alternatives not carried forward for further analysis. Consideration must also be given to a "No Action" possibility. The "No Action" alternative is defined as the most likely future in the absence of the project.

Like NEPA, CEQA specifies evaluation of a "No Project" alternative. The other alternatives considered by the Project Development Team (PDT), according to CEQA guidelines, should include those that could:

1) accomplish most of the basic objectives of the project (Purpose), and
2) eliminate or substantially mitigate one or more of the significant issues (Need) targeted by the project.

The CEQA process only requires a detailed Environmental Impact Report (EIR) for alternatives that meet these guidelines. In other words, those meeting the goals of the "Purpose and Need Statement."

To document the review process, the PDT developed an Alternative Analysis Matrix (pages 16-20). It covers not only those alternatives currently under consideration, but also those that have been recently proposed but not yet formally considered, as well as those that were analyzed and rejected during previous project development efforts. (See Project timeline, pages 4-9.)

The matrix is organized according to these criteria:

- Design Considerations - traffic operations and safety, geometrics, transit and multi-modal opportunities, pedestrian and bicycle accessibility, ease of use and safety, operations and maintenance, acceptability of approving agencies
- Environmental Considerations - residential and commercial relocation, water quality, cultural and historic resources, biological, noise, air quality, floodplain, hazardous waste, stream environmental zone (SEZ), wetlands, land use capability (including Section 4(f) of the US Department of Transportation Act of 1966 limitations)
- Constructability - feasibility and challenges
- Reason Alternative Dropped from Consideration - brief explanation

Capital costs are included for information purposes only.

Maps, showing each of the 15 alternatives, follow the Evaluation Matrix.

US 50/South Shore Community Revitalization Project - Alternative Analysis Matrix										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
	1		No Build	2011	PA&ED	• LOS - F • No safety improvements • No improvements for multi-modal access	• Increased AQ Emissions • No WQ Improvements to meet TMDL • Traffic could impact multi-modal/pedestrian opportunity/safety	None	• None	
1	2	Modi-fied D	US 50 between Park Avenue and Lake Parkway would be converted to one lane each direction with bike and ped improvements. Montreal Road/Lake Parkway would become US 50, and be widened to provide two travel lanes in each direction, with turn pockets at major intersections and driveways. The roadway would extend west of Park Avenue, passing to the south and west of the Village Center shopping complex, to a new intersection near the existing US 50/Pioneer Trail intersection. A two-lane roundabout would replace the current US 50/Lake Parkway signalized intersection.	2011	PA&ED	• LOS - D • Enhances bike and pedestrian opportunity and safety • Agency approvable geometrics	• Improves AQ • Avoids Historic District • Improves access to Van Sickle State Park with pedestrian bridge • Minimal noise impacts • 25 residential parcels impacted (84 DU) • 6 Commercial properties impacted • Modified access required for 2 commercial properties, and potential for access modification for approximately 10 residences • Impacts existing WQ basins but provides opportunities to address TMDL requirements	$70 Million	• Typical construction techniques • Minor traffic handling challenges	
2	3	Modi-fied C	US 50 between Park Avenue and Lake Parkway would be converted to one lane in each direction. Montreal Road/Lake Parkway would become US 50, and be widened to provide two travel lanes in each direction, with turn pockets at major intersections and driveways. The roadway would extend west of Park Avenue, passing to the south and west of the Village Center shopping complex, to a new intersection near the existing US 50/Pioneer Trail intersection.	2011	PA&ED	• LOS - D • Enhances bike and pedestrian opportunity and safety • Agency approvable geometrics	• Improves AQ • Avoids Historic District • Improves access to Van Sickle State Park with pedestrian bridge • Minimal noise impacts • 25 parcels impacted (84 DU) • 6 Commercial properties impacted • Modified access required for 2 commercial properties, and potential for access modification for approximately 10 residences • Impacts existing WQ basins but provides opportunities to address TMDL requirements	$80 Million	• Typical construction techniques • Minor traffic handling challenges	

Alternatives Requiring Action										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
3	Triangle Alter-native		This Alternative would essentially be the same as Build Alternatives 2 & 3 except the Pioneer Trail/US 50 Intersection would be moved to the southwest.	2012	Public Out-reach	• LOS - D • Enhances bicycle pedestrian opportunity and safety • Agency approvable geometrics	• Improves AQ • Opportunity to meet TMDL requirements • Potential impacts to Linear Park • Improves access to Van Sickle Park if pedestrian bridge added •Approx. 90 DU impacted • Approx. 8 Commercial properties impacted • Would significantly modify access to several businesses and residences • Potential for improved access at "triangle"	$70 to $80 million	• Typical Construction techniques • Minor traffic handling issues	
4	Stateline/Ski Run Community Plan Alternative		This alternative is similar to the North Park alternative. The major difference is that in this alternative US 50 is a through movement at the US 50/Lake Tahoe Boulevard intersection in California and in Nevada at the US 50/Lake Tahoe Boulevard Intersection the free rights do not exist.	1994	State-line/Ski Run Commu nity Plan	• LOS - D • Requires more infrastructure than current Alternatives • Improves bicycle and pedestrian opportunities and safety	• Improves AQ • Impacts existing basins but provides opportunity to meet TMDL requirements • Impact Linear Park • Should have comparable impacts to residential and business parcels as the North Park Alternative; which is Per 1991 Draft EIR, impacts 144 DU and 27,000 SF commercial (approx. 17 businesses)	$125 to $135 million	• Typical Construction techniques • Moderate traffic handling issues	

Alternatives Considered But Rejected										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
5		Alter-native A	US 50 between Park Avenue and Lake Parkway would be converted to two eastbound traffic lanes. Lake Parkway West, Pine Boulevard, and Park Avenue to the lake side of US 50 would be improved to provide two through lanes westbound, plus a single eastbound lane for local access and a center two-way left-turn lane. Existing US 50 would be re-designated as US 50 East, while the Lake Parkway West/Pine Boulevard/Park Avenue alignment would become US 50 West. A frontage road would be constructed parallel to Pine Boulevard to consolidate driveways.	2010	PSR	• LOS - E • Caltrans dislikes EB/WB 50 highway split • Way finding difficulties and DOT concerns related to EB/WB highway split • Enhances transit and multi modal opportunity • Enhances pedestrian and bicycle opportunity	• Full impact to approximately 40 businesses due to roadway, frontage roads, and consolidated driveways Significant access impacts to remaining commercial and residential • Impacts to approximately 75-100 DU • WQ improvements will require additional right of way • Impacts Linear Park	$90 Million	• Typical Construction Techniques • Traffic Handling could pose challenges to maintain business/reside ntial access	• Rejected by PDT on March 17, 2011 - Constructability and cost impacts outweigh benefits
6		Alter-native A	US 50 between Park Avenue and Lake Parkway would be converted to two eastbound traffic lanes. Lake Parkway West, Pine Boulevard, and Park Avenue to the lake side of US 50 would be improved to provide two through lanes westbound, plus a single eastbound lane for local access and a center two-way left-turn lane. Existing US 50 would be re-designated as US 50 East, while the Lake Parkway West/Pine Boulevard/Park Avenue alignment would become US 50 West.	2004	US Highway 50/ Stateline Area Transpor tation Study	• LOS - F (Does not meet standards without frontage roads and driveway consolidation) • Caltrans dislikes EB/WB 50 highway split • Way finding difficulties and DOT concerns related to EB/WB highway split • Enhances transit and multi modal opportunity • Enhances pedestrian and bicycle opportunity	• Significant access impacts to remaining commercial and residential • Impacts to approximately 75-100 DU • WQ improvements will require additional right of way • Impacts Linear Park	$90 Million	• Typical Construction Techniques • Traffic Handling could pose challenges to maintain business/reside ntial access	Constructability and cost impacts outweigh benefits

Alternatives Considered But Rejected (continued)										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
7		Alternative B	US 50 between Park Avenue and Lake Parkway would be converted to two eastbound general traffic lanes plus one transit-only lane. Lake Parkway West, Cedar Avenue, and Park Avenue to the lake side of existing US 50 would be improved to provide two through lanes westbound, plus a single eastbound lane for local access and a center two-way left-turn lane. Existing US 50 would be re-designated as US 50 East, while the Lake Parkway West/Cedar Avenue/Park Avenue alignment would become US 50 West. A new transition roadway segment would be required between the Cedar Avenue/State Line Avenue intersection and the existing Lake Parkway West alignment north of Harvey's. Signal improvements would be implemented as needed at existing signalized intersections, and new signals will be provided at US 50 West/State Line Avenue.	2004/ 2010	US Highway 50/ Stateline Area Transportation Study / PSR	• LOS - F (Does not meet standards without frontage roads and driveway consolidation) • 5-legged intersection not acceptable to PDT • Way finding difficulties and DOT concerns related to EB/WB highway split • Way finding difficulties related to EB/WB highway split • Enhances transit and multi modal opportunity • Enhances pedestrian and bicycle opportunity	• Full impact to approximately 20 businesses due to roadway and consolidated driveways • Significant access impacts to remaining commercial and residential • Impacts to approximately 60-80 DU • Would impact existing WQ basins • WQ improvements will require additional right of way • Impacts Linear Park	$90 - to $100 Million	• Typical Construction Techniques • Traffic Handling could pose challenges to maintain business/residential access	• Rejected during PID for geometrics, and constructability and cost impacts outweighing benefits
8		Alter-native D	US 50 between Park Avenue and Lake Parkway would be converted to 2 eastbound lanes and one transit lane, with bike and ped improvements. Montreal Road/Lake Parkway would become US 50, and be widened to provide two travel lanes in each direction, with turn pockets at major intersections and driveways. The roadway would extend west of Park Avenue, passing to the south and west of the Village Center shopping complex, to a new two-lane roundabout intersection near the existing US 50/Pioneer Trail intersection. A two-lane roundabout would replace the current US 50/Lake Parkway signalized intersection.	2004	US Highway 50/ Stateline Area Transportation Study	• See Alternative 2 • New traffic study shows that two-lane roundabout at Pioneer Trail would have to be a three-lane roundabout. Caltrans will not approve a three-lane roundabout	• See Alternative 2	$70 Million	• See Alternative 2	• Alternative modified to one lane in each direction with additional streetscape type improvements to improve the pedestrian and bicycle experience.

Alternatives Considered But Rejected (continued)										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
9		Alter-native C	US 50 between Park Avenue and Lake Parkway would be converted to 2 eastbound travel lanes and one transit only lane. Montreal Road/Lake Parkway would become US 50, and be widened to provide two travel lanes in each direction, with turn pockets at major intersections and driveways. The roadway would extend west of Park Avenue, passing to the south and west of the Village Center shopping complex, to a new intersection near the existing US 50/Pioneer Trail intersection.	2005	US Highway 50/ Stateline Area Transportation Study	• See Alternative 3	• See Alternative 3	$80 Million	• See Alternative 3	• Alternative modified to one lane in each direction with additional streetscape type improvements to improve the pedestrian and bicycle experience.
10	CL-08 Tunnel		Construct a tunnel under the current US 50 alignment through the downtown area. Local traffic and traffic from Pioneer Trail would use the existing US 50 above the tunnel and through traffic would utilize the tunnel. Westbound traffic would enter the tunnel west of Lake Parkway and surface on US 50 west of Pioneer Trail. The approximate length of the tunnel is 3500 feet with 2500 foot transitions on each end of the tunnel. The tunnel width would include two 12-foot lanes each way with a 4 foot wide center divider and sidewalk for emergency access. The Pioneer Trail/US 50 intersection would be eliminated with this alternative. This alternative also includes a frontage road along US 50 west of the Pioneer Trail to allow business access after construction.	2010	Value Analysis Study	• LOS - D • Pedestrian/vehicle separation would improve safety • Would improve multi modal opportunity • Concerns with agency approvable geometrics and operations and maintenance • Utility conflicts	• Impacts to approximately 15 commercial properties • Impacts to approximately 30-40 DU • Access to properties would be significantly modified • WQ concerns due to de-watering and potential impacts to groundwater	$750 to $800 million	• Extremely challenging construction, will require specialized contractor • Multi-year construction will require complex traffic handling/detours • Excessive export material	Constructability and cost impacts outweigh benefits

Alternatives Considered But Rejected (continued)										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
11	CL-24 Short Tunnel		This alternative would construct a tunnel under the housing area that would be impacts by the highway under Alternatives 2 & 3. The tunnel would start west of Pioneer Trail going eastbound and then surface the tunnel at the curve on the mountain side. In order to construct the tunnel the housing would have to be removed during construction and then reconstructed after completion of the tunnel. The businesses west of the Pioneer Trial intersection would maintain access via Frontier Road along the tunnel entrance. The tunnel construction would require relocation of the gondola pole. The existing topography makes this alternative infeasible to construct.	2010	Value Analysis Study	• LOS - D • Pedestrian/vehicle separation would improve safety • Would improve multi modal opportunity • Concerns with agency approvable geometrics and operations and maintenance• •Significant ongoing O&M costs	• Impact to same number of businesses and residential as Alts 2 and 3, except after construction, much of the area above the tunnel could be redeveloped • Properties at ends of the tunnel would have significantly modified access • WQ concerns with dewatering and potential impacts to groundwater	$300 to $350 million	• Extremely challenging construction, will require specialized contractor • Multi-year construction will require complex traffic handling/detours • Excessive export material	Constructability and cost impacts outweigh benefits
	EP-02 - One Lane in Each Direction		Provide one through lane in each direction. The Build Alternatives were modified to incorporate this alternative.	2010	Value Analysis Study	• See Alts 1 and 2	• See Alts 1 and 2	N/A	• See Alts 1 and 2	• Adopted into current proposed Alternatives
12	One-Way Alter-native		The one-way alternative was proposed to reduce the amount of traffic passing through the core area by making US 50 a one-way travel corridor. The North Loop (Pine Boulevard) would have three one-way, westbound lanes and would be designated as US 50 westbound. Lake Tahoe Blvd. between the proposed Loop Road Intersections would be designated as US 50 eastbound and would be widened to 3-lanes. The present 5-lane roadway would be restriped to 3-lanes between West and East Loop Road intersection and flared out slightly at the Park Avenue and Stateline Avenue intersections to allow for turn lanes.	1991	EIR	• LOS - D • Requires more infrastructure than current Alternatives • Improves bicycle and pedestrian opportunity and safety • Caltrans dislikes EB/WB 50 highway split	• Improves AQ • Opportunity to meet TMDL requirements • Impact Historic District • Impact Linear Park • Per 1991 Draft EIR, impacts 192 DU, 393 rental units, and 27,000 SF commercial (approx. 16 businesses)	$100 to $125 million	• Typical Construction techniques • Moderate traffic handling issues	• All features not currently required • More impacts than current Alternatives

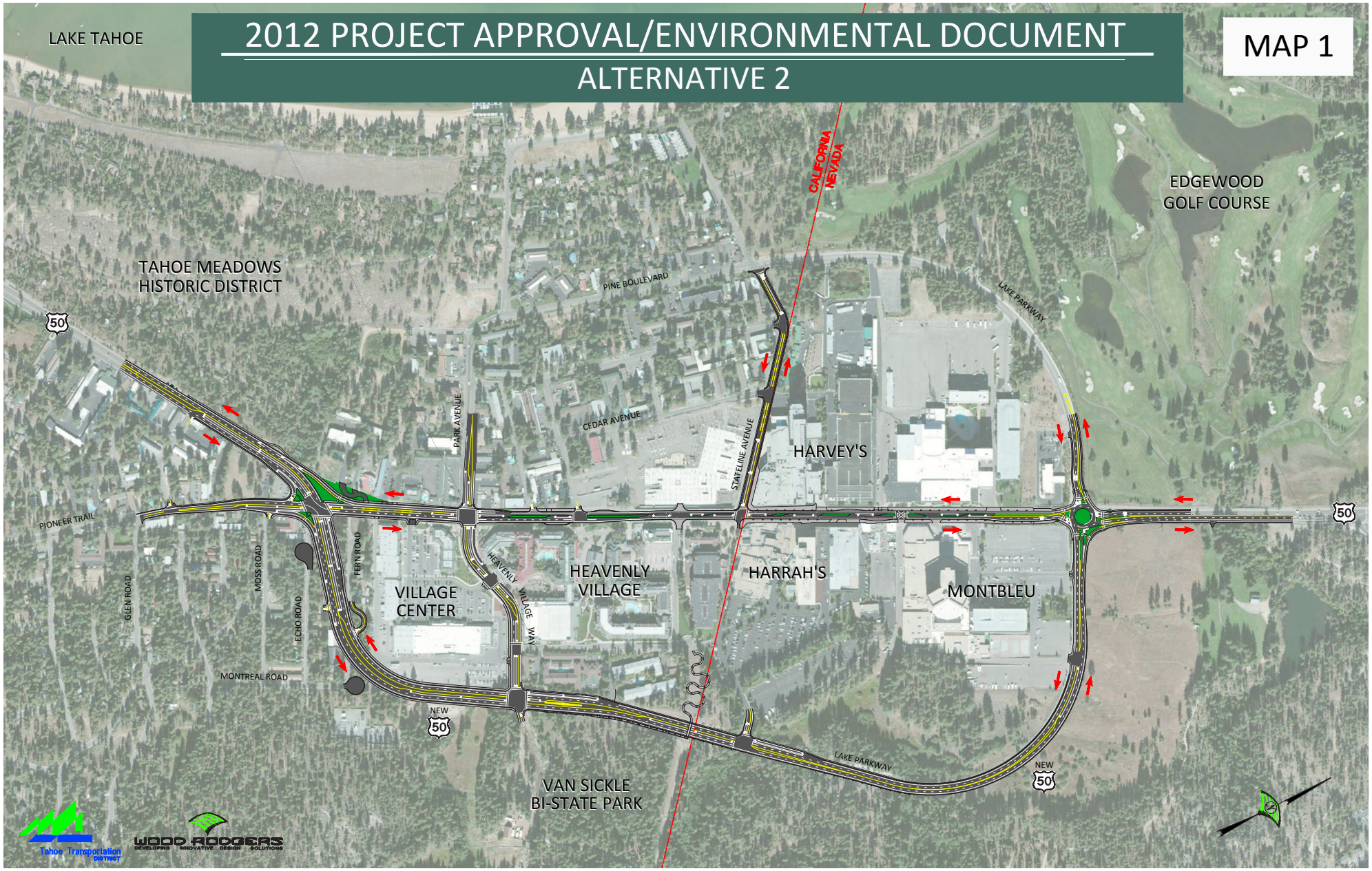
Alternatives Considered But Rejected (continued)										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
13	Five Lane Alter-native		The five lane alternative consisted of the core route between the West and East Loop Road intersection to remain as is with two travel lanes in each direction and a center turn lane. The North Loop Road (Pine Boulevard) would be three lanes wide and would allow two-directional traffic with one lane in each direction and a center turn lane. The South loop Road would be five lanes wide, two-directional, with two turn lanes in each direction and a center left-turn lane. The South Loop Road would be designated as US 50 from the proposed Loop Road west intersection to the Loop Road east intersection.	1991	EIR	• LOS - C • Requires more infrastructure than current Alternatives • Approvable Caltrans/NDOT geometrics	• Improves AQ • Opportunity to meet TMDL requirements; impacts existing basins • Impact Historic District • Impact Linear Park • Per 1991 Draft EIR, impacts 159 DU, 393 rental units, and 27,000 SF commercial (approx. 16 businesses)	$125 to $135 million	• Typical Construction techniques • Moderate traffic handling issues	• All features not currently required • More impacts than current Alternatives
14	Three Lane Alternative		The three-lane alternative would be the same as the five-lane alternative except that the core route between the West and the east Loop Road intersections would be reduced from five to three lanes, one travel lane in each direction and a center turn lane. this would be accomplished by restriping the existing roadway. The South Loop Road from the proposed Loop Road west intersection to the proposed Loop Road east intersection would be designated as US 50.	1991	EIR	• LOS - D • Requires more infrastructure than current Alternatives • Improves bicycle and pedestrian opportunities and safety • Approvable Caltrans/NDOT geometrics	• Improves AQ • Impacts existing basins but provides opportunity to meet TMDL requirements • Impact Historic District • Impact Linear Park • Per 1991 Draft EIR, impacts 159 DU, 393 rental units, and 27,000 SF commercial (approx. 16 businesses)	$125 to $135 million	• Typical Construction techniques • Moderate traffic handling issues	• All features not currently required • More impacts than current Alternatives

Alternatives Considered But Rejected (continued)										
Map No.	**Alt**	**Old Alt Name**	**Description**	**Yr Dev**	**Docs**	**Design Considerations**	**Environmental Impacts**	**Cap. Cost (Est)**	**Construct-ability**	**Reasons Alternative Dropped**
15	North Park Avenue Alter-native		This alternative is similar to the three lane alternative. The major difference being that with the North Park alternative, Pine Boulevard would not extend through Tahoe Meadows to the west intersection. Rather, the North Loop Road would follow Pine Boulevard and then North Park avenue to the intersection of Park Avenue and Lake Tahoe Boulevard. This would create a system where the north and south elements of the loop were offset at the west end. The section of Lake Tahoe Boulevard between the section between the Park Avenue and east intersections would be restriped to three lanes. Implementing the North Park Alternative would require reconfiguration of the proposed Loop Road west intersection and the Park Avenue and Lake Tahoe Boulevard intersection. In all other ways the North Park alternative would be the same as the three-lane alternative. The South Loop Road from the proposed Loop Road west intersection to the proposed Loop Road east intersection would be designated as US 50.	1991	EIR	• LOS - D • Requires more infrastructure than current Alternatives • Improves bicycle and pedestrian opportunities and safety	• Improves AQ • Impacts existing basins but provides opportunity to meet TMDL requirements • Impact Linear Park • Per 1991 Draft EIR, impacts 144 DU and 27,000 SF commercial (approx. 17 businesses)	$125 to $135 million	• Typical Construction techniques • Moderate traffic handling issues	• All features not currently required • More impacts than current Alternatives

2012 PROJECT APPROVAL/ENVIRONMENTAL DOCUMENT

ALTERNATIVE 2

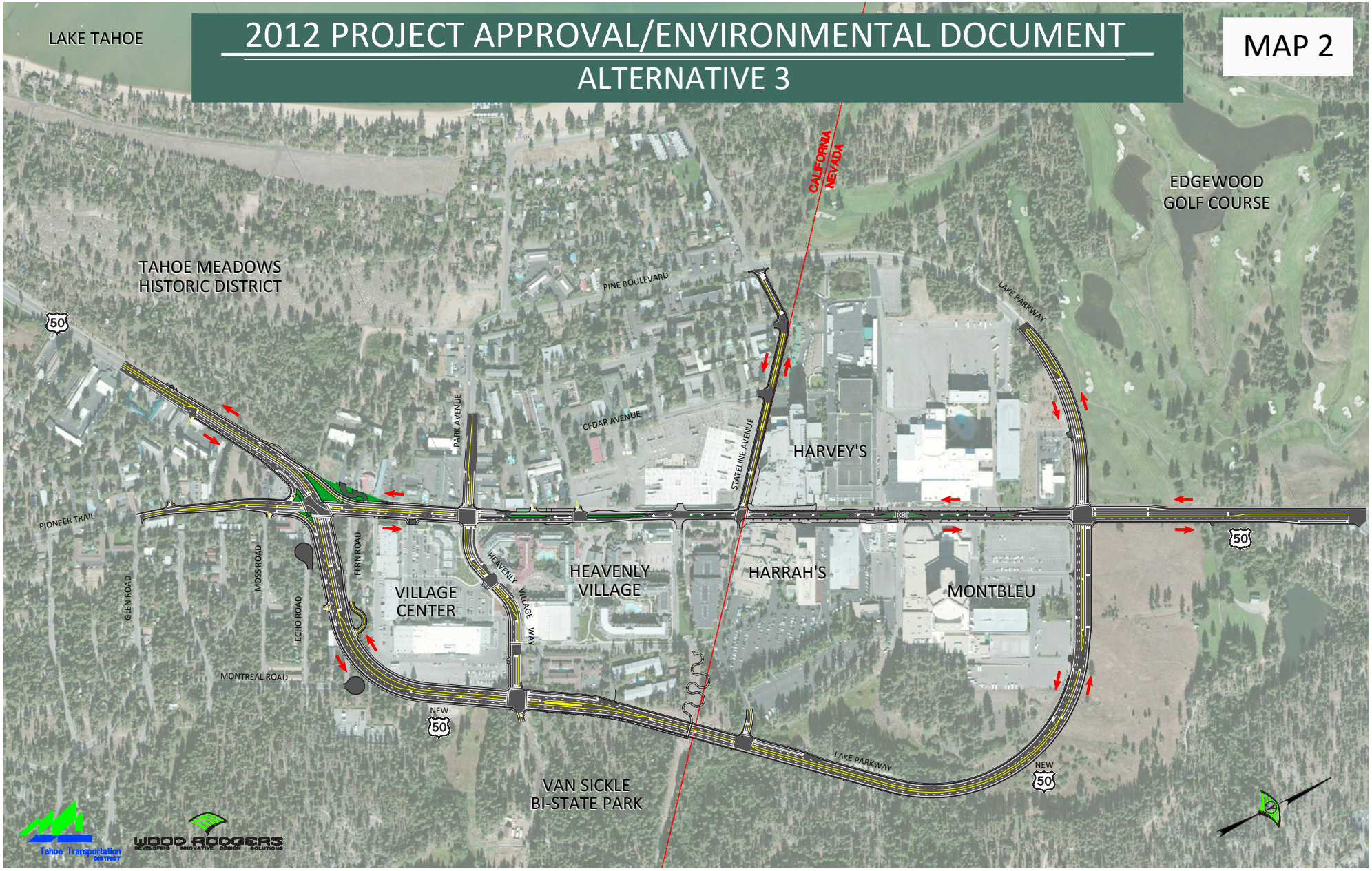
MAP 1



2012 PROJECT APPROVAL/ENVIRONMENTAL DOCUMENT

ALTERNATIVE 3

MAP 2

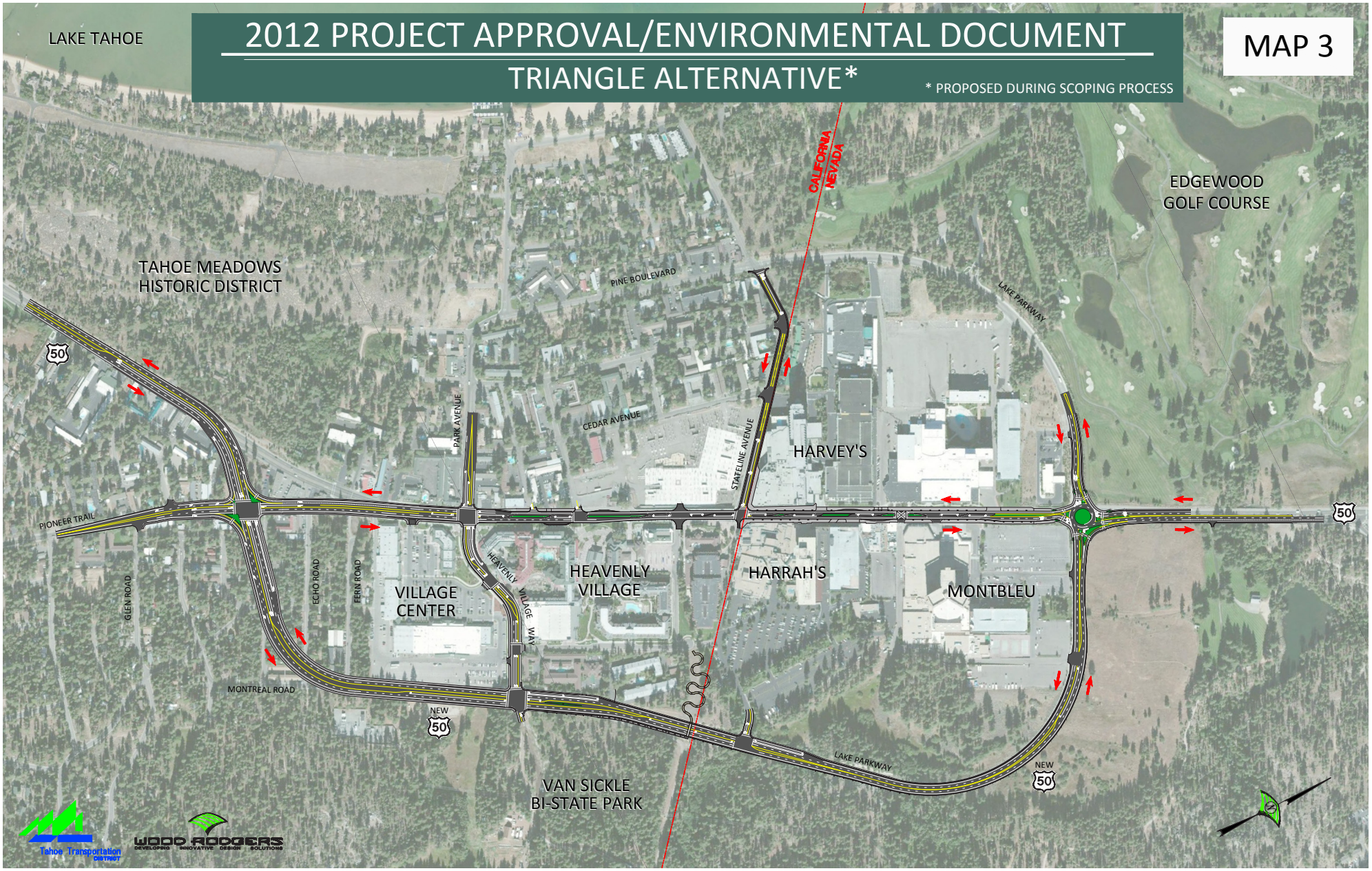


2012 PROJECT APPROVAL/ENVIRONMENTAL DOCUMENT

TRIANGLE ALTERNATIVE*

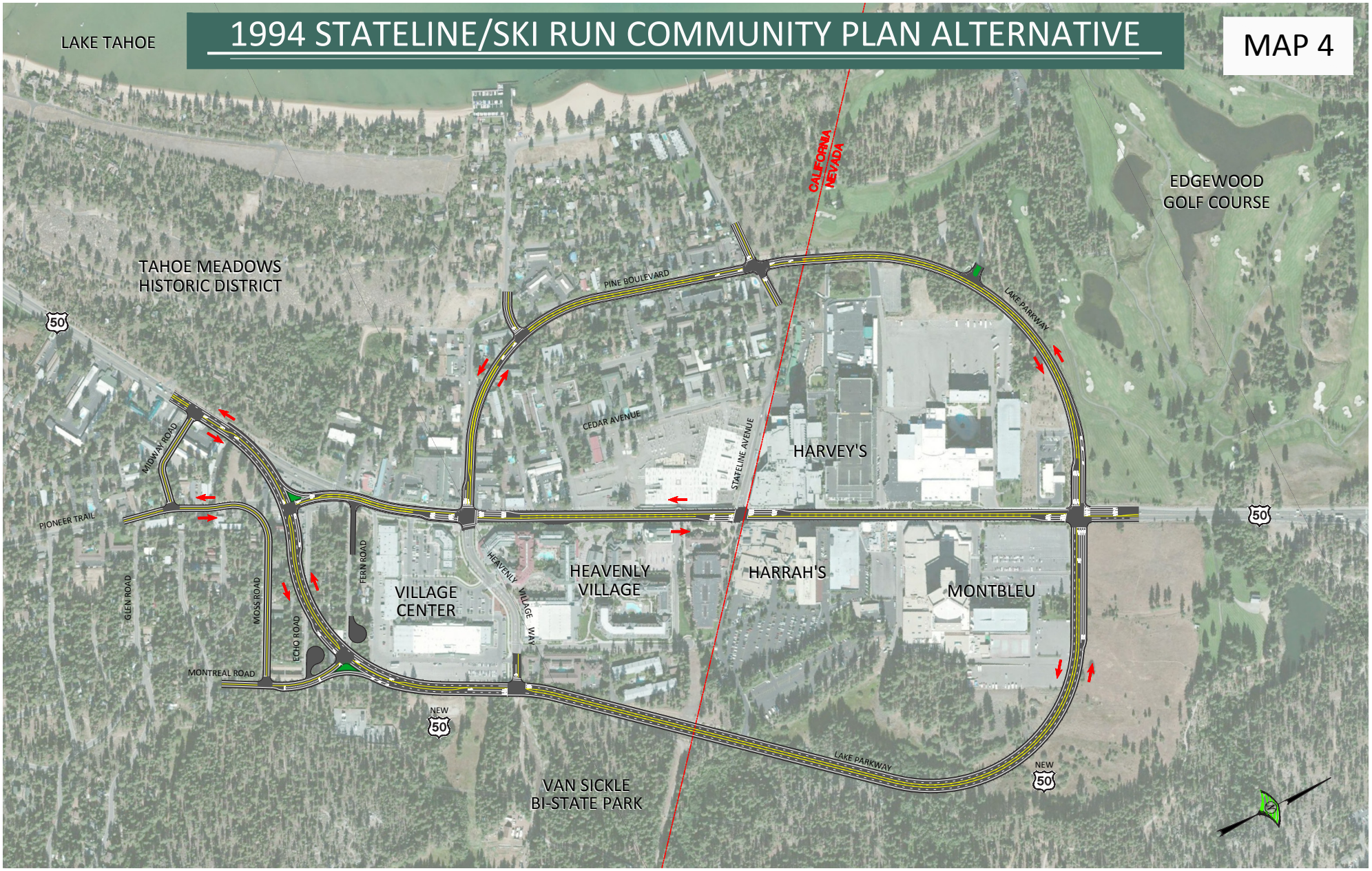
* PROPOSED DURING SCOPING PROCESS

MAP 3



1994 STATELINE/SKI RUN COMMUNITY PLAN ALTERNATIVE

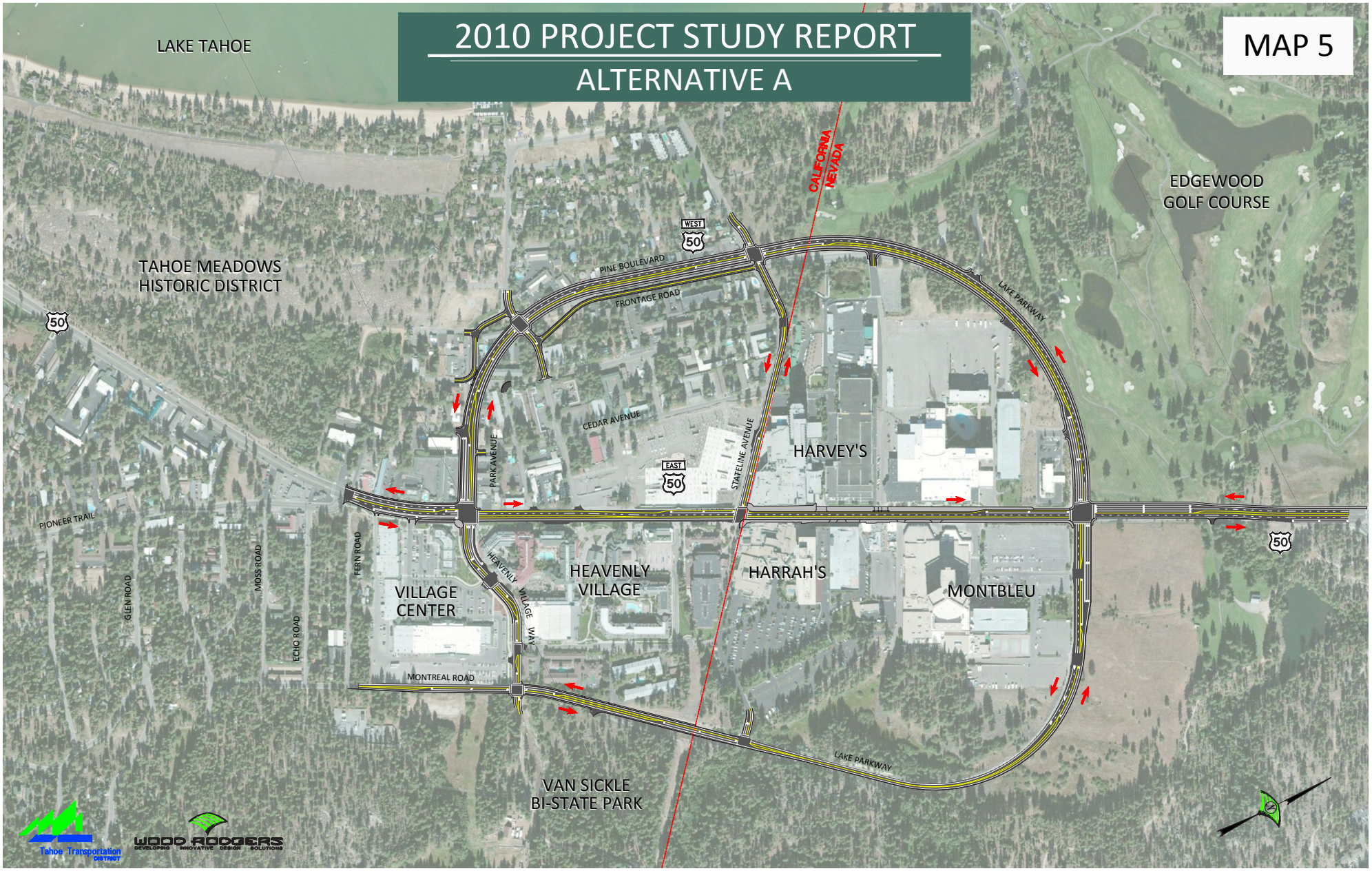
MAP 4



2010 PROJECT STUDY REPORT

ALTERNATIVE A

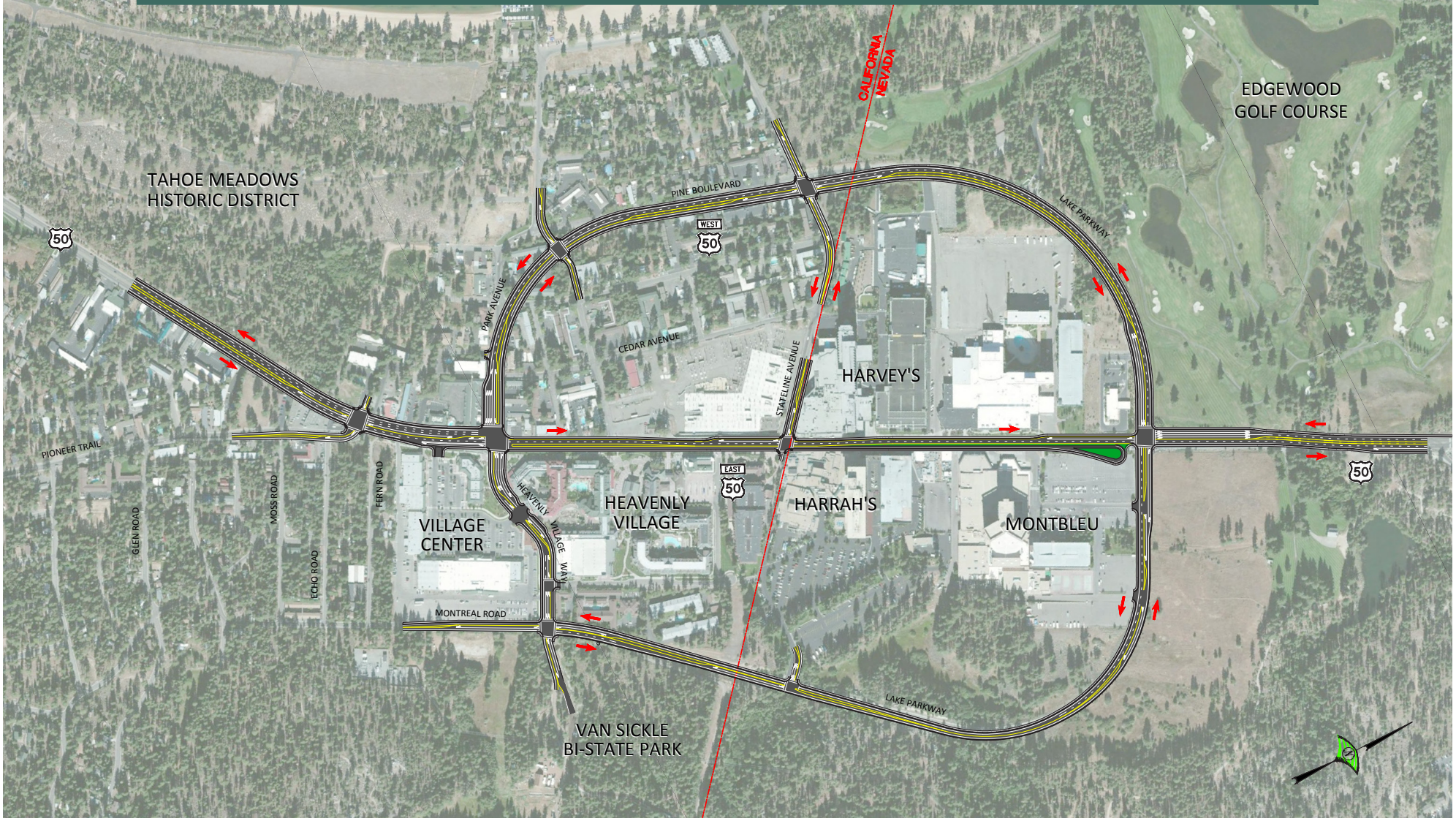
MAP 5



2004 US HIGHWAY 50/STATELINE AREA TRANSPORTATION STUDY

ALTERNATIVE A

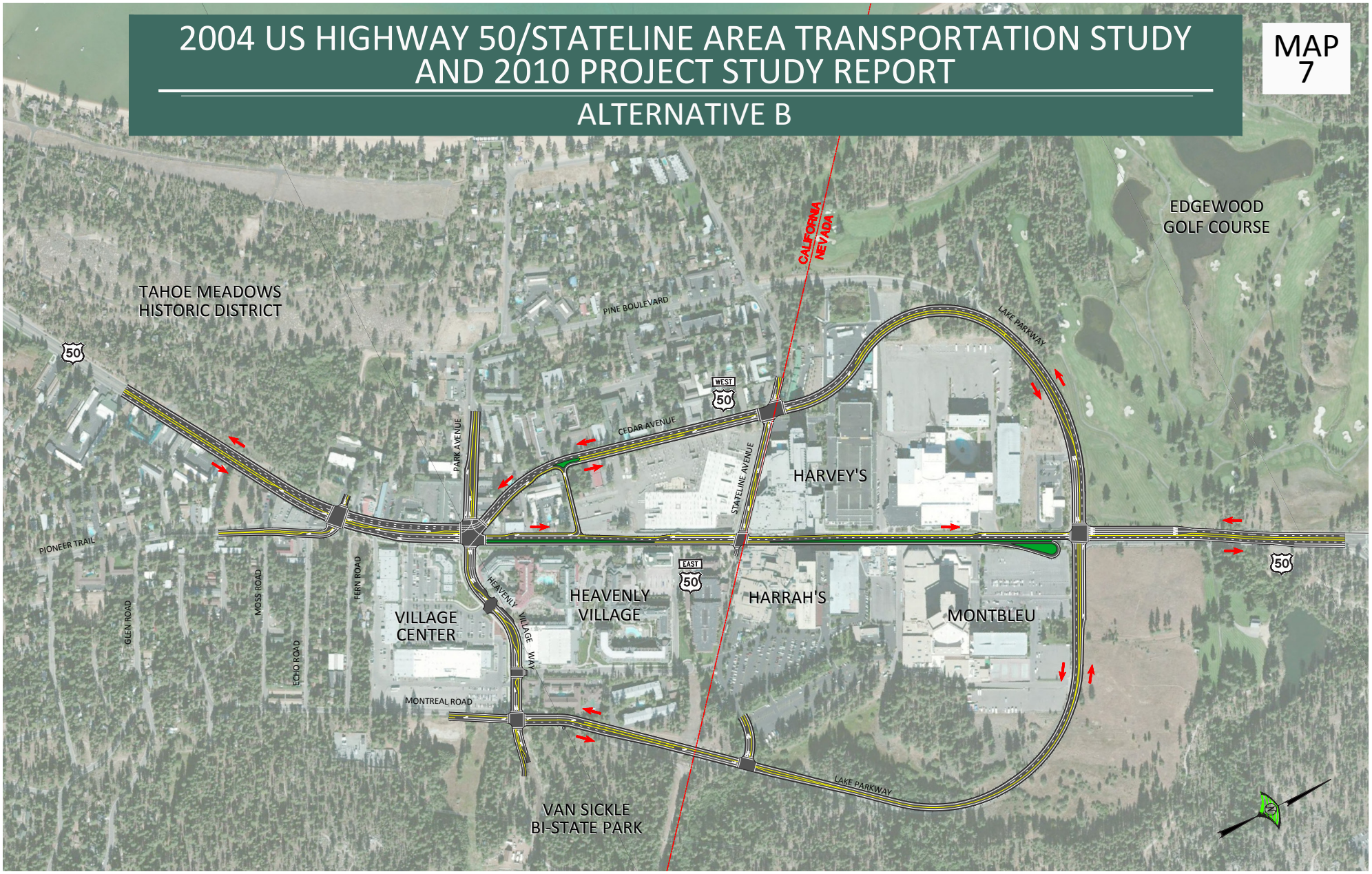
MAP 6



2004 US HIGHWAY 50/STATELINE AREA TRANSPORTATION STUDY AND 2010 PROJECT STUDY REPORT

ALTERNATIVE B

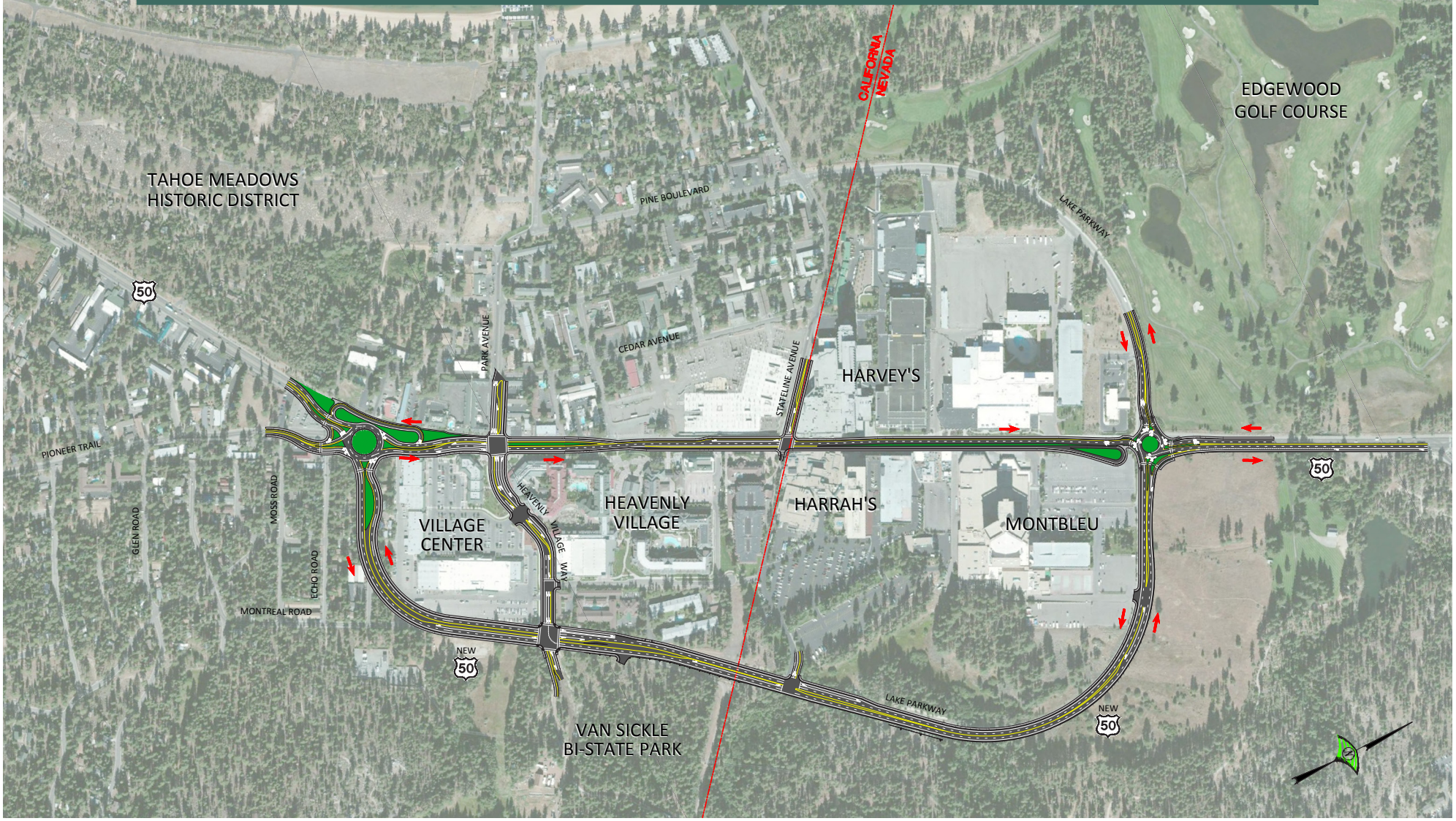
MAP 7



2004 US HIGHWAY 50/STATELINE AREA TRANSPORTATION STUDY

ALTERNATIVE D

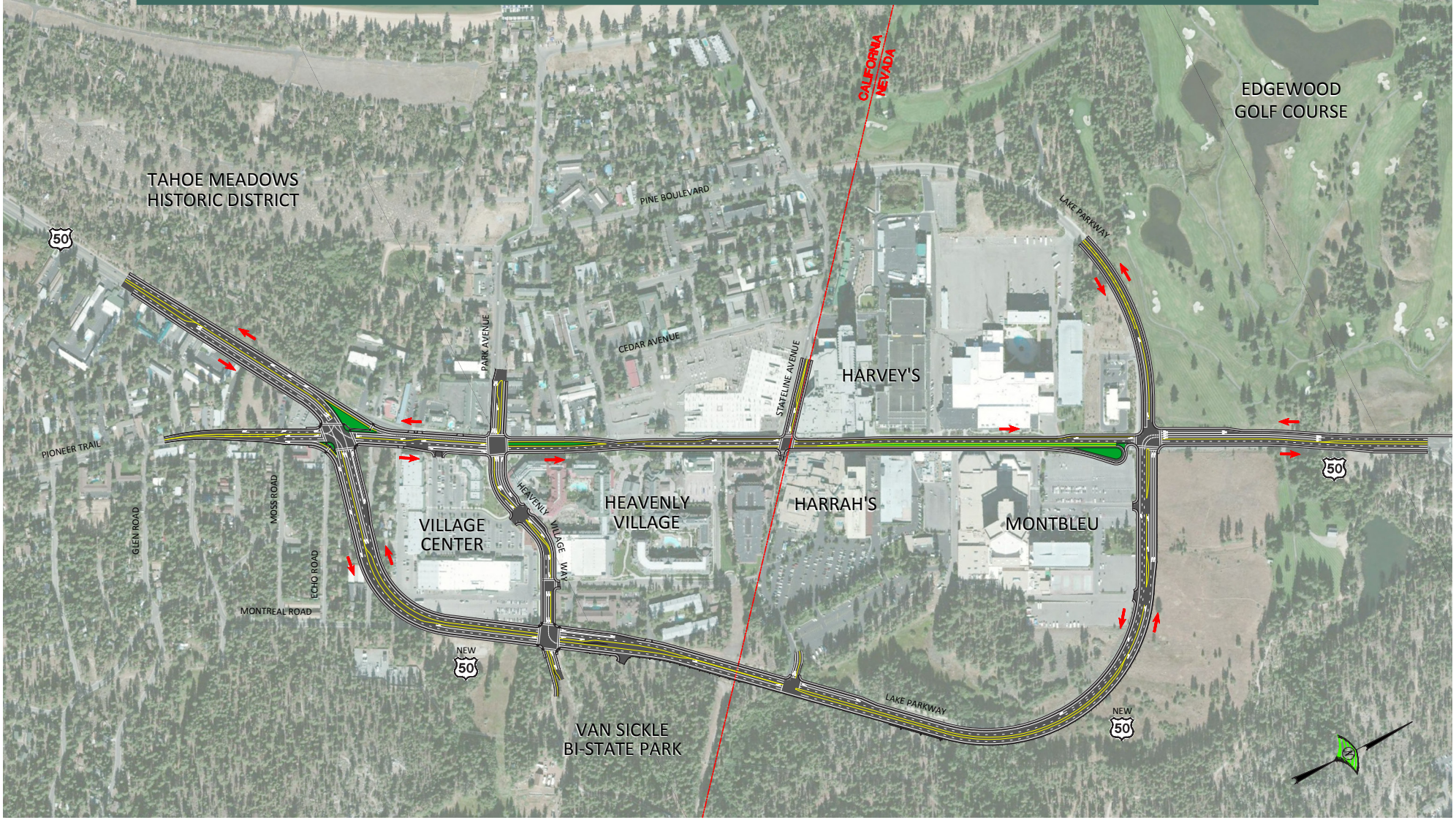
MAP 8



2004 US HIGHWAY 50/STATELINE AREA TRANSPORTATION STUDY

ALTERNATIVE C

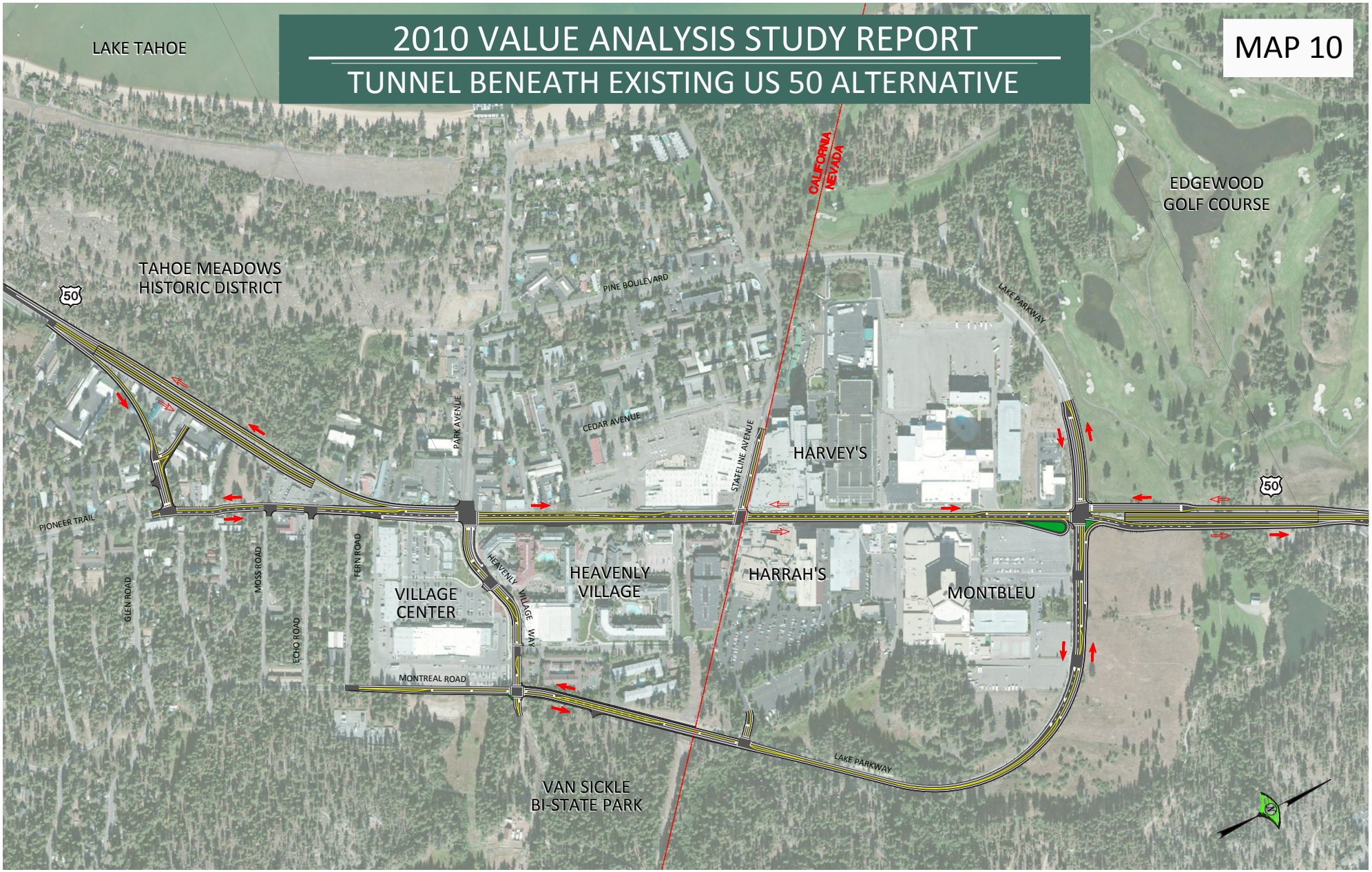
MAP 9



2010 VALUE ANALYSIS STUDY REPORT

TUNNEL BENEATH EXISTING US 50 ALTERNATIVE

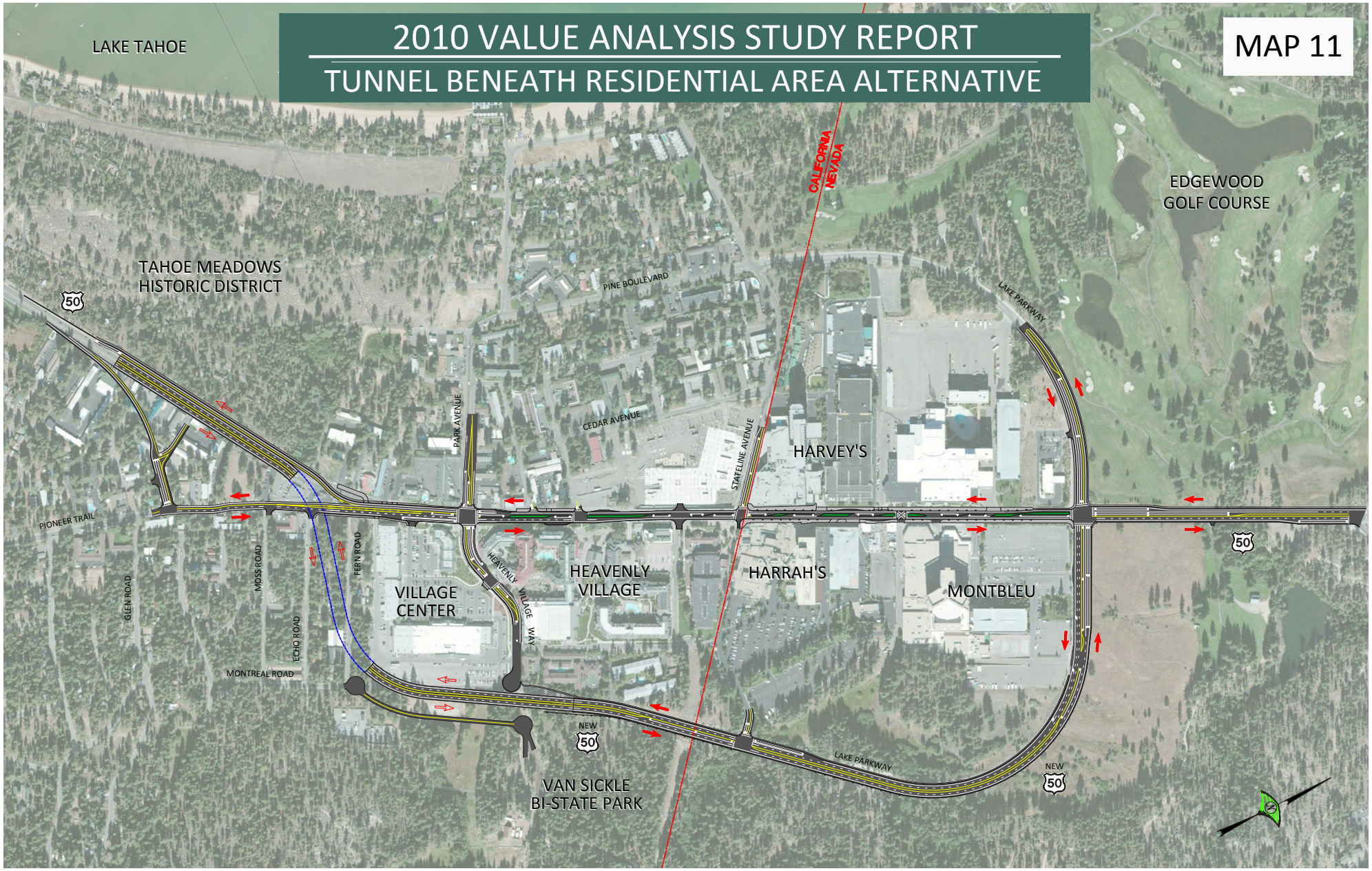
MAP 10



2010 VALUE ANALYSIS STUDY REPORT

TUNNEL BENEATH RESIDENTIAL AREA ALTERNATIVE

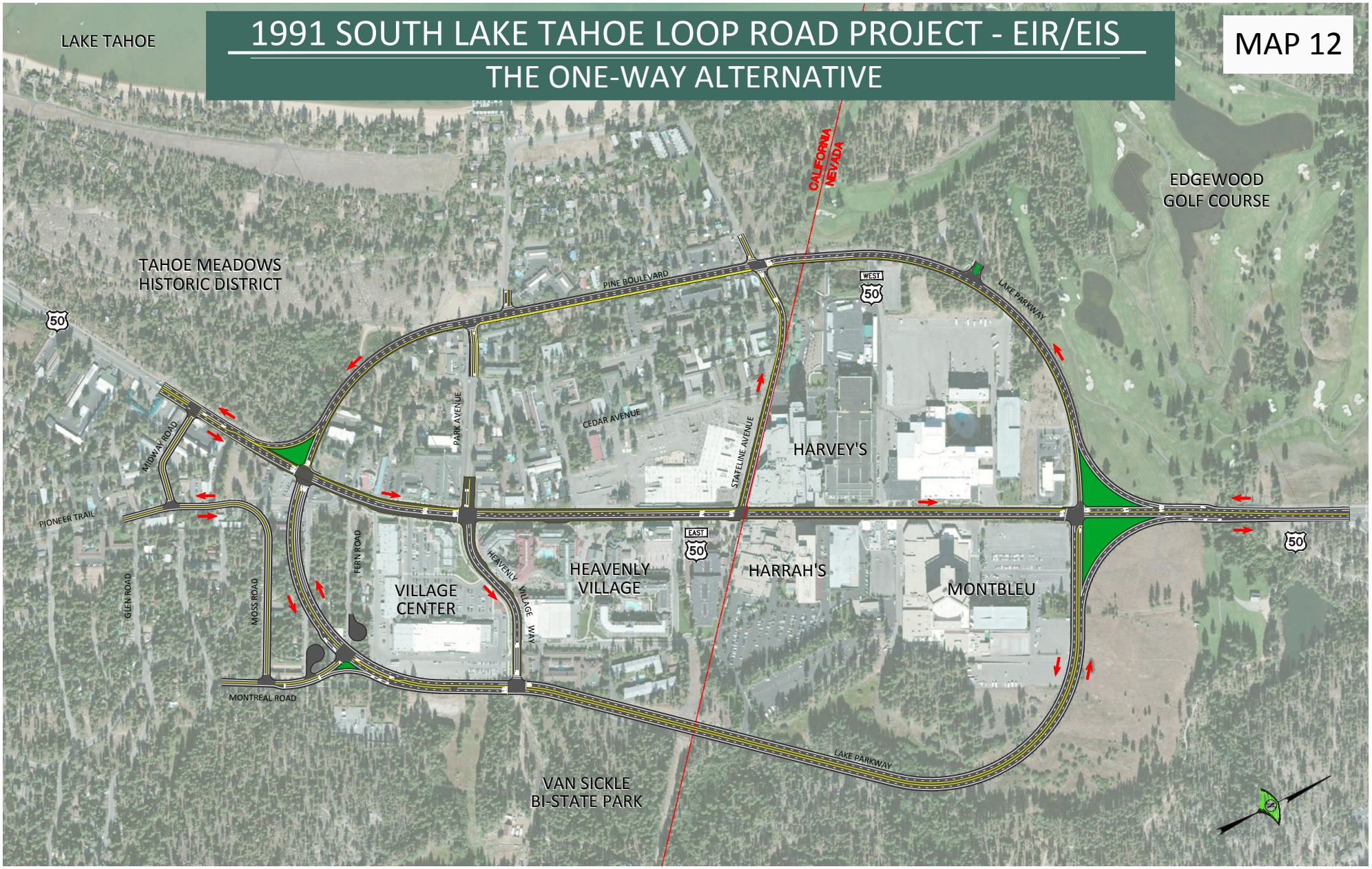
MAP 11



1991 SOUTH LAKE TAHOE LOOP ROAD PROJECT - EIR/EIS

THE ONE-WAY ALTERNATIVE

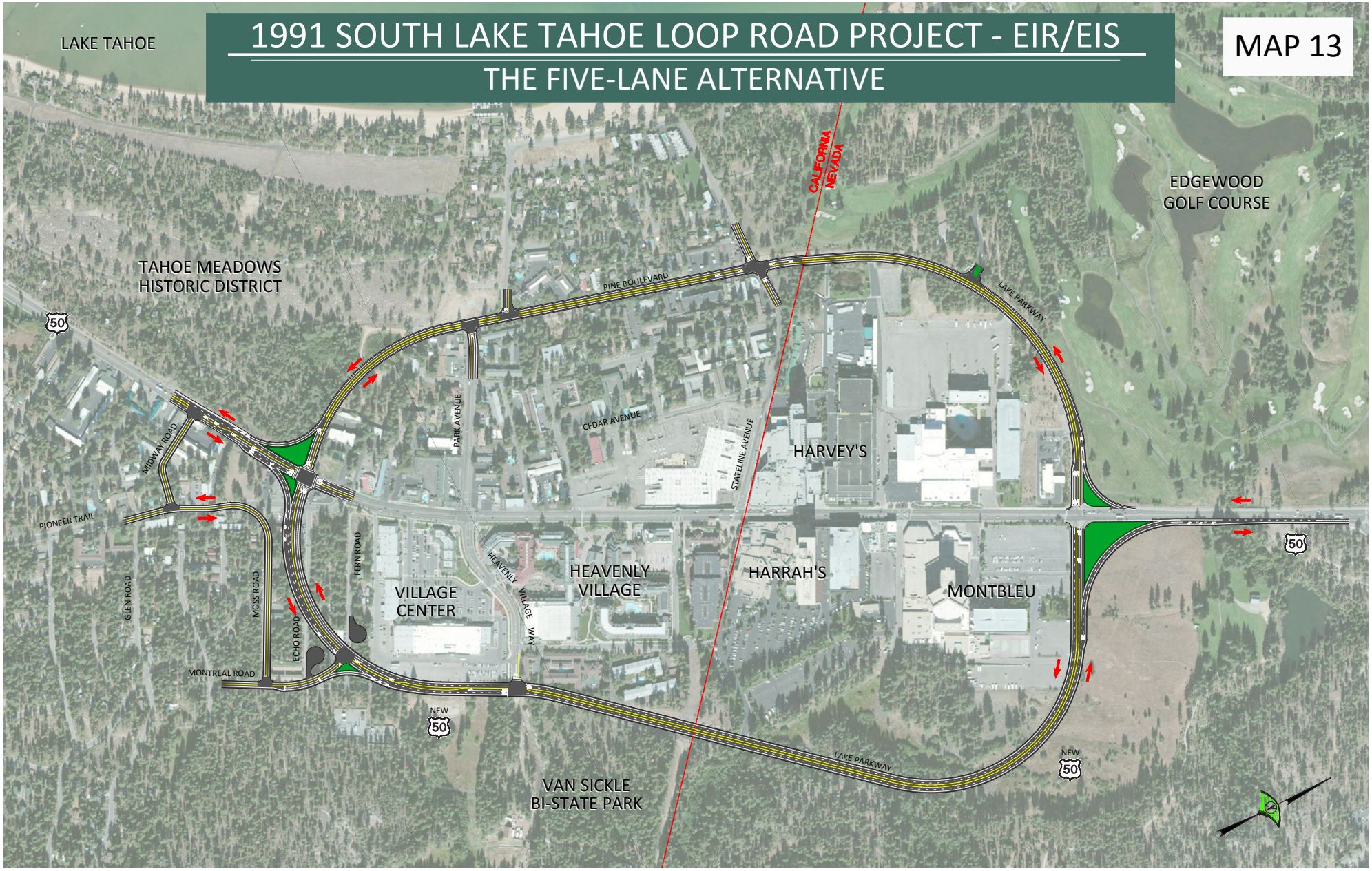
MAP 12



1991 SOUTH LAKE TAHOE LOOP ROAD PROJECT - EIR/EIS

THE FIVE-LANE ALTERNATIVE

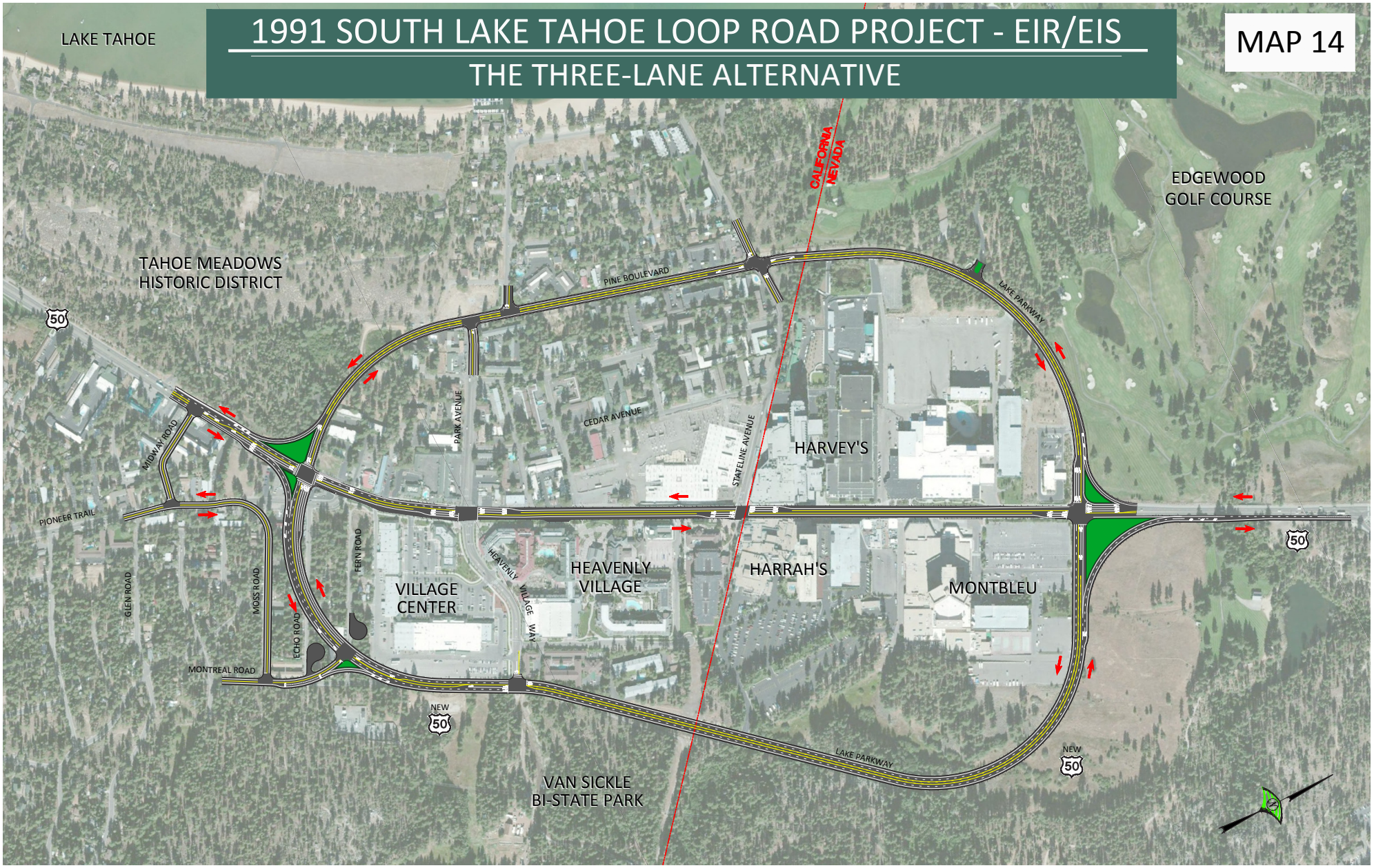
MAP 13



1991 SOUTH LAKE TAHOE LOOP ROAD PROJECT - EIR/EIS

THE THREE-LANE ALTERNATIVE

MAP 14



1991 SOUTH LAKE TAHOE LOOP ROAD PROJECT - EIR/EIS

THE NORTH PARK AVENUE ALTERNATIVE

MAP 15