How to prepare a corridor management plan: lessons learned from the historic Arroyo Seco Parkway, Los Angeles, California, United States of America

Abstract

Opened in 1940, the Arroyo Seco Parkway in Los Angeles, California, USA, is the oldest freeway in the western United States. By the early 1990s it began to show signs of serious deterioration due to age and increased traffic loads. Caltrans, the parkway's owner and operator, chose a novel preservation-based strategy to keep it in service. A Corridor Management Plan (CMP), that respected the parkway's historic fabric while providing for sensitive safety improvements, provided a vision and implementation strategy for future agency action. The CMP was written in stages over many years, using portions of studies prepared by other agencies for various projects in the parkway corridor. When the parkway was designated a FHWA National Scenic Byway in 2002, funding for a proper Corridor Management Plan became available. This paper details how public-private partnerships were created to highlight the corridor's cultural and historical strengths, while addressing its environmental and economic issues. Finally, it explains how political pressure gained government grants for planning studies and capital improvement projects, while community involvement kept the promised studies and projects on track towards completion. Strategies used to prepare a Corridor Management Plan for the Arroyo Seco Parkway are broadly applicable to historic roads everywhere.

The Historic Arroyo Seco Parkway Scenic Byway Project offers a prototypical approach for rehabilitating ageing urban parkways and their adjacent corridors, not only in America, but also elsewhere around the globe. Central to that strategy is the preparation of a Corridor Management Plan. A Corridor Management Plan is: 1) a written record, 2) of a planning process, 3) that provides an implementation strategy, 4) for future action.

Developing a plan requires an understanding of historical patterns, an analysis of current conditions, and a vision of future possibilities. In Southern California, the planning process is complicated by a vast geography, fragmented political jurisdictions, powerful single purpose agencies, and competing and/or conflicting stakeholder visions. Existing corridor conditions include ageing infrastructure, a degraded environment and a poor, multi-ethnic immigrant population, all of which strain limited public resources. Although daunting, these political, economic and social realities have actually benefitted the planning process. Enthusiasm, optimism and creativity have indeed turned lemons into lemonade. Finally, the incrementally slow exercise of planning is not for the faint of heart. When working with large public agencies, success is evaluated in terms of decades, not months or years.

The Arroyo Seco Parkway (State Route 110; Pasadena Freeway) is the first freeway in the West and the prototype for the world-renowned Los Angeles Freeway system (HAER 2001: 6). Dedicated on December 30, 1940, it linked the downtowns of Los Angeles and Pasadena through the scenic Arroyo Seco, a narrow valley created by a seasonal creek that was noted for its native vegetation and wildlife, abundant local parkland, and stunning mountain views. Considered an engineering marvel in its day, the parkway was determined eligible for the National Register of Historic Places in 1983 (NTHP 2002: 19), and declared a National Engineering Landmark by the American Society of Civil Engineers in 1999 (HAER 2001: 4, 8).

When it was originally built, its six lanes of high-speed travel (70 km per hour), limited access and elimination of cross-traffic (carried on overpasses), provided driving safety and convenience and marked the road as a thoroughly modern invention. As opposed to parkways, designed with contoured alignments within parkland to promote leisurely travel that maximized views of composed and natural scenery, freeways provided high-speed, no-nonsense travel direct to one's destination, mostly by disregarding physical features like trees, lakes and hills. Built at the end of the parkway era (1860-1940) and pre-figuring the freeway era (1940-present), the Arroyo Seco Parkway shares features of both traditions (HAER 2001: 6, 7). Located in parkland and initially conceived as a park access road, it gracefully curves through adjacent parks along its mid-section, while its two ends exhibit more freeway-like straight alignments. Because it is the only road whose history captures the moment in time when parkways became freeways, it is one of the most significant historic roads in America.

It is also a management headache because of its multiple 'non-standard' freeway features – a skinny median, non-existent shoulders, tight curve radii and narrow driving lanes. Perilous on-and-off ramps that feature rotting wooden guardrails, tight curves and no merge capacity, complete the list of design elements that are related to the parkway's historically constrained right of way. Eminent domain, the legal taking of private property for public purposes, was in its infancy at the time of parkway construction. Because of public outcry, road designers used only the minimum amount of land necessary for highway construction, leaving even less room for landscaping, which today consists of steep embankments covered with dying vegetation, faulty irrigation equipment and rusted chain link fencing. These underlying conditions, when combined with today's higher speeds (90-100 Km per hour) and traffic volumes (27,000 cars per day in 1940 vs 130,000 cars today) (HAER 2001: 4; Loukatou-Sideris & Gottlieb 2003: NP), result in hazardous driving conditions that are exacerbated by minimal maintenance and ineffective traffic enforcement. For commuters sitting in daily traffic, maintenance workers risking their lives to...
repair the roadway, and community members living in disrupted neighbourhoods, this road is neither cherished nor valued.

For over thirty years, the California Department of Transportation (Caltrans) investigated various alternatives to bring the road up to current driving standards (Kane, project files 1992-2003). Mostly because of limited right of way, all studies concluded that it was neither economically or physically feasible to expand highway capacity or to realign the road—the two most common engineering solutions for dysfunctional freeways. By the early 1990s, it was clear that a new approach was needed. By redefining the road as a historic parkway instead of a freeway (Marriott 1998: 73, 78, 140; Kane 1998: 149-154; NTHP 2004: 21), new solutions to managing the road became possible. If driver behaviour could be modified to observe the parkway's historic design speeds, the road's high accident rate—directly related to speeding—would drop. But how could drivers be convinced—or compelled—to drive slower? Since behavioural psychology is not part of standard traffic engineering practices, a community proposal to lower the road's speed was met with agency disbelief. Political pressure was needed.

In 1993, State Senator Richard Polanco designated the Arroyo Seco Parkway a California State Historic Parkway (Kane & Marriott 1998; HAER 2001: 8). This was a new category of road within the state's Scenic Highway System that would enable the posted speed to be lowered. Two years later, Senator Polanco convened a 40-member Task Force of local organizations, agencies, and citizen activists to develop a vision for the corridor (NTHP 2004: 18). The Task Force recommended a historic preservation approach to improving the parkway and its adjacent community—the largest historic district in Los Angeles. The six-page list of citizen recommendations became the outline for a future Corridor Management Plan (NTHP 2004: 19).

Central to the strategy of rehabilitating the road was to return it, as much as possible, to its 1940s appearance (NTHP 2002: 8). In the summer of 1999, Caltrans hired a team of architecture and history students to sketch, photograph and research the historic features of the parkway, thus providing baseline data about the road itself (HAER 2001). This study eventually became the first two chapters of the Corridor Management Plan (History, Principles, Policies; Restoring and Rehabilitating the Parkway). The following year, a team of graduate landscape architecture students prepared a Landscape Framework Plan for the Arroyo Seco Corridor. This study, developed with extensive citizen input, fleshed out many of the Task Force recommendations for the corridor—what could be seen from the road. It provided material for chapters in the Corridor Management Plan on parkland rehabilitation to improve the aesthetic experience of driving the parkway (Building a Landscape Framework) (CSPU 2002).

In thinking beyond the roadway, it became apparent that parkway traffic congestion could be better managed if it was redefined as a corridor issue, not a roadway issue. The concurrent planning of a regional rail system in the parkway corridor enabled a multi-modal transportation approach to reduce congestion on the parkway (LACMTA 2003; Loukatou-Sideris & Gottlieb 2003: 15; Gottlieb & Rener 2003: NP). Bus and bicycle feeder lines could link the various transportation modalities in the corridor into a seamless web, while improved pedestrian access would encourage locals to walk, rather than drive, for short trips (CSPU 2002: 82-84; 86-89). Unfortunately, the Landscape Framework Plan pointed out that railroads, freeways, and flood control channels had so physically fragmented the corridor's public space that walking, or riding a bike, was nearly impossible. The social landscape had been carved up by gang rivalries that made walking or riding a bike dangerous, and the political landscape was so fractured that no one entity could do anything about it (CSPU 2002: 104-105, 112-115). The community decided to take back their neighbourhood and demanded action (Loukatou-Sideris & Gottlieb 2003).

More studies were needed to link the corridor's bicycle, pedestrian, bus, rail, surface street and freeway systems into a user-friendly network. The area's multi-ethnic, low-income socio-economic composition worked to the project's advantage. In 2001, grant monies targeted to socially disadvantaged communities, were secured for additional research on multi-modal linkage opportunities in the corridor. Jointly awarded to the state, county and city departments of transportation, the grant's goal was to reduce traffic demand on the parkway and to make the Arroyo Seco Southern California's first truly multi-modal corridor (Huitz-Zollars 2002: NP; Kane 2002-2003: 8). Its recommendations, again developed along with community input, informed another chapter in the Corridor Management Plan (Operating a More Efficient Transportation Corridor).

In 1999, recommendations from a Los Angeles County-sponsored task force to identify new bicycle facilities in the Arroyo Seco/Los Angeles River corridor (County of Los Angeles 2005: 1-2) quickly resulted in a federally funded grant to install bicycle, bus and pedestrian amenities in the airspace beneath the parkway interchange. At the confluence of the Los Angeles River and the Arroyo Seco, this project has the capacity to transform an industrial sink into badly needed urban parkland (Price 2003). Projects, such as this one, implement community visions for multi-modal transportation, open space and parkland expressed in the Corridor Management Plan. Although the project took advantage of a specific grant opportunity, it is being coordinated with other initiatives along the Los Angeles River, including the Los Angeles State Historic Park (Cornfields), Río de Los Angeles State Park (Taylor Yards) and Artesian Park (CDPR 2005), that will eventually convert the channelled riverbed into an 80-mile long linear regional greenway. Through an inter-agency Cooperative Agreement, it also became a pilot exercise for state-level coordination in the corridor.

The next parkland-related initiative involved Caltrans and the Los Angeles city parks department, who jointly considered sponsoring a feasibility study to develop alternatives, like earthen berms, to sound walls in this historic corridor. Several frontage roads are wider than necessary. Because at many locations there are no barriers between the parkway and residential streets, there is no mechanism to protect adjacent properties from errant vehicles that leave the travel way. In this historic corridor, adding park-like berms would be an aesthetically superior solution to a safety, as well as a noise, issue. First mentioned in the Landscape Framework Plan (CSPU 2002: 61 & 71-75), this concept would involve land use conversion and eminent domain. Because it is politically sensitive, as well as technically challenging and costly, this 2002 grant proposal was not funded and is currently on hold. Nonetheless, it is a critical piece of the overall corridor vision because it simultaneously addresses several corridor issues, including multi-modal transportation, new parkland, water quality and flood control. (Maintaining the Parkway; Improving the Environment).
New linear parks would provide room for not only a needed regional bicycle path, but also for diversionary flood control channels. These features were called for in another feasibility study, authored by two non-profit groups in 2002, to naturalize the Arroyo Seco by removing flood control measures where feasible (NET & ASF 2002: I-2, I-17). A model for the State of California, this regional study aims to improve water quality, reduce runoff, improve local water retention, improve and connect native habitat, and provide new recreational amenities. Greening of the Arroyo benefits the parkway by providing a naturalized edge that will make it look more like a pleasure drive and less like a freeway. In 2001, the state-sponsored Wayne Watershed Act named the Arroyo Seco Watershed one of the 10 most significant watersheds in the State of California (NET & ASF 2002: I-2, I-17), thus enabling it to qualify for millions of dollars in state and federal monies associated with various clean water measures. Many of the technical studies and recommendations of the Arroyo Seco Watershed Rehabilitation Feasibility Study were adopted by reference into the Corridor Management Plan (Improving the Environment).

Caltrans used the Watershed Rehabilitation Feasibility Study as an in-kind match for a Federal Highways Administration Scenic Byways Grant to initiate a proper Corridor Management Plan for the Arroyo Seco Parkway. By this time, Caltrans had been partnering with the various community groups, non-profits and agencies in the Arroyo for seven years. An outline version of the plan was presented to the Federal Highway Administration, which resulted in the designation of the Arroyo Seco Parkway as a National Scenic Byway in 2002 (NTHP 2004: 3). Federal designation provides national recognition of the corridor's scenic, natural and historic features, and international visitor potential to enhance the local economy through heritage tourism (Byways website).

The Arroyo Seco is the birthplace of the Arts and Crafts Movement in Southern California, and many of its major monuments, like the Lummis House and the Southwest Museum, can be seen from the parkway. Scenic Byway designation will provide additional funding for visitor's centres, historic interpretation, scenic easements and parkland/habitat linkages to fulfill residents' visions of their neighbourhood. A new Scenic Byways grant is currently being programmed to complete the heritage tourism portion of the Corridor Management Plan. This study will involve the corridor's museums, cultural groups, shops and galleries, hotels, restaurants, tour operators and visitor bureau in interpreting the corridor's history and evaluating its tourist infrastructure (Welcoming the Visitor).

Another chapter of the Corridor Management Plan involves the community, which has embraced the project in several ways. First of all, community enthusiasm and support from elected officials enabled Caltrans to successfully win several highly competitive grants to proceed with its innovative planning and programming. But, more importantly, the community engaged in its own activities to promote the corridor. The most unusual, sponsored by Occidental College, was a day-long celebration entitled 'Arroyofest' ( Gottlieb & Renner 2003: 1; Loukatou-Sideris & Gottlieb 2003: 'Day'; Arroyofest website). An unprecedented bike ride and community walk on the closed parkway highlighted multi-modal transportation, environmental restoration and historic preservation possibilities in the corridor. This event generated massive media coverage – all of it positive - and finally convinced Caltrans decision makers that the community was serious about removing a failing freeway and flood control channel from their neighbourhood and replacing it with a beautiful, safe parkway (Engaging the Community).

Another community initiative involved four college classes concurrently taught at UCLA, Occidental College and Cal Tech during the Spring of 2002 to explore Arroyo topics, including the parkway and its environs (UEP 2002). Student projects, papers and presentations raised community awareness about the area's history, natural resources, and cultural diversity. An award-winning UCLA master's thesis even mapped a pedestrian trail through the Arroyo that featured its cultural and historical highlights (Fowler 2002). Named 'Arroyowalk,' it linked Los Angeles City Hall to Pasadena City Hall with a series of interpretive kiosks. This idea will also be folded into the tourism portion of the Corridor Management Plan.

Finally, professors at UCLA and Occidental College helped Caltrans evaluate the safety record of the parkway by analyzing five years of agency-collected accident statistics. This published study indicated that the parkway had by far the highest accident rate of any comparable road in Los Angeles County (Loukatou-Sideris & Gottlieb 2003). With input from the California Highway Patrol, it strongly recommended lowering the posted speeds to the original design speed. Using the UCLA traffic analysis, a nationally respected traffic consultant concurred that posted speeds were far too high. He further advised Caltrans to decommission problematic ramps and to reduce the number of travel lanes from three to two in selected locations. These two studies became the final chapter of the Corridor Management Plan – Enhancing Safety and Improving Highway Efficiency. The agency is seriously evaluating these recommendations with follow-up traffic studies involving computer modelling at both regional and local scales.

So, a Corridor Management Plan is really an organized compilation of ideas, supported by technical studies that result in specific projects to realize a future vision. The final product of the plan is a prioritized wish list of projects, with estimated price tags, potential funding sources, responsible parties and anticipated timelines (Fulfilling the Vision). The first item, to form a Byway organization, was accomplished in 2005, courtesy of a FHWA Scenic Byways grant. The non-profit 'Scenic Arroyo Seco', will secure funding, track projects and coordinate community and agency efforts to implement the plan.

Some project-related projects have also been funded, or are waiting for funding at Caltrans. A gateway sign with a new logo has recently been installed at the parkway's entrance, while a project to renew the historic landscaping, replace the historic wooden guardrails with steel backed replicas, restore the original ornamental lighting and construct a decorative stem wall to elevate the right of way fencing to reduce maintenance is moving into the design stage. Replacing the existing metal beam median barrier with a decorative concrete barrier is another project in the construction pipeline. A recent Congressional infusion of $1.12 million should complete required traffic modelling studies for the Corridor Management Plan, enabling the transformation of an ugly duckling freeway into a swan of a parkway (SAFETEA-LU, 2005).

A study funded in 2007 by the Transportation Research Board, that is using the Arroyo Seco Parkway as a national model, is considering the formulation of federal guidelines for managing historic roads in America. If this important study results in nationally adopted guidelines, it will assist historic highway owners, managers and their adjacent communities throughout...
America. Ironically, it would also assist the Historic Arroyo Seco Parkway, whose Corridor Management Plan is still not adopted by the agency that commissioned it due to concerns over the report’s unorthodox recommendations for traffic management and safety improvements. Written national guidelines allowing for non-standard highway features and new management techniques for historic roads would relieve traffic engineers of their liability burden, hence their reluctance to innovate where needed to preserve national transportation heritage for future generations.

What conclusions can be drawn from a ten year effort to create a Corridor Management Plan for the Historic Arroyo Seco Parkway? Experience has shown that the Traffic Engineering profession is a conservative one and that Departments of Transportation, as large bureaucracies staffed by traffic engineers, are extremely resistant to change. Even if traffic engineers and highway managers are sympathetic to one’s cause, large public works projects are complex and expensive and take time to put into motion. (A comparable analogy would be to envision the amount of effort exerted by a tugboat to reposition an ocean liner.)

Here are some strategies, developed in the trenches of the Historic Arroyo Seco Parkway Project, to keep historic road projects moving forward:

1. Look for grey or silent areas in regulations where actions not expressly prohibited can be interpreted as permitted.
2. If the initial bureaucratic response is ‘no,’ reframe the question or use the system to change the rules.
3. Use elected officials to help change the rules, apply pressure to reluctant bureaucrats and appropriate funding for your studies and projects.
4. Channel community discontent into positive action.
5. Partner with local, county, state and federal levels of government to leverage funding for mutually beneficial projects.
6. Use non-profits for cost effective management of grants and contracts.
7. Use student brainpower and labour. It is plentiful, good and cheap.
8. Use university talent. It brings cost effective credibility and impartiality to your studies.
9. Use successful research, products, materials and methods from other states and countries.
11. Connect with other road groups for good ideas and morale enhancement.
12. Cultivate unlikely alliances within your project area. There is strength in numbers and diversity.
13. Think outside the box. Challenge underlying assumptions.
14. Creativity, optimism and positive thinking can make anything happen.

References

Articles


Government, Non-Profit and University Reports

Arroyo Seco Parkway funding: http://www.fhwa.dot.gov/safetealu/fundtables.htm

Unpublished Materials
