

Creating a Sense of Place Through Context Sensitive Design from a Community Perspective

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ABSTRACT

Public involvement, design flexibility, and interactive visualization techniques facilitated the development of a context sensitive design (CSD) for the historically and culturally significant Isleta Boulevard, which had been a point of controversy for over 20 years. Isleta Boulevard is not only a part of the original Route 66 alignment but also holds the distinction of being “El Camino Real,” the oldest, continuously-used roadway in the United States. Bernalillo County had proposed expanding this two-lane road into a five-lane thoroughfare. The 3.0-mile (mi) or 4.8-kilometer (km) stretch of roadway carried 15,000 to 20,000 vehicles per day. The community strongly opposed this alignment, because this proposed thoroughfare would dissect the community without providing economic or other benefits. Community opposition led to the formation of the Citizens’ Advisory Committee (CAC). CAC’s public involvement process was key to developing alternatives not previously considered. New ideas emerged through the use of CSD principles resulting in the harmonization of diverse community interests with technical engineering concerns. The compromise design is enhancing the mobility and connectivity of South Valley citizens. This success was led to other collaborations including the design of Isleta North and Isleta South. Isleta North was completed in 2003. Construction on Isleta South will begin in the summer 2005.

INTRODUCTION

Isleta Boulevard is a two-lane road that parallels the meandering Rio Grande River for 7.3-miles (mi) or 12.6 kilometers (km) between Bridge Boulevard and the Isleta Pueblo. This principal arterial is one of only two major north-south roadways serving the South Valley west of the river. Isleta Boulevard is a significant corridor that serves locally-owned businesses and small residential areas and is a major connector to east west 4-lane principal arterials: Bridge and Rio Bravo Boulevards.

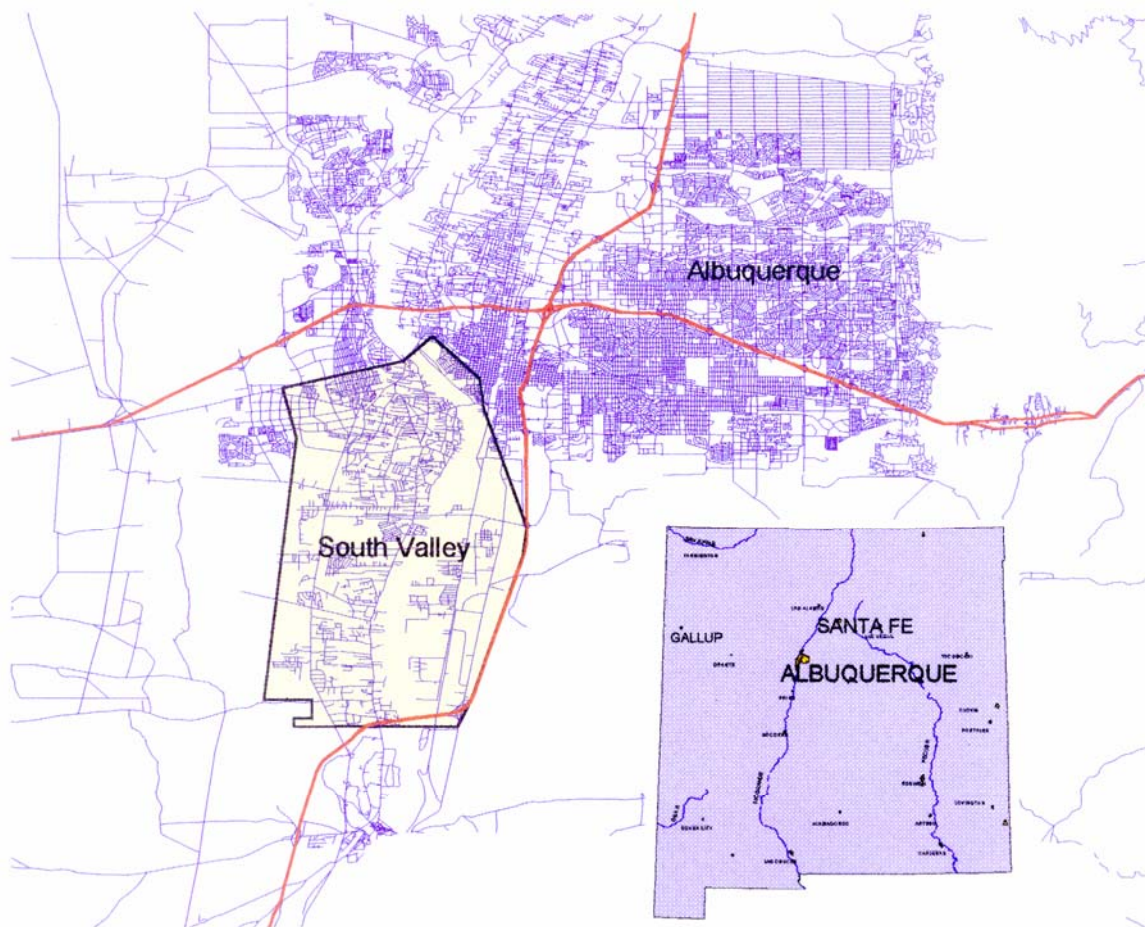


FIGURE 1 Location of the South Valley, Bernalillo County relevant to Albuquerque, NM

(c) 1998 Map & Geographic Information Center
 Albuquerque, NM, USA
 Constructed by Jan Teisinger



Congestion and safety problems have existed on Isleta Boulevard between Bridge and Arenal Road for twenty years. Bernalillo County had presented two Environmental Assessment (EA) proposals to the community which reflected traffic capacity issues without input from the community except the public hearing. This 3-mile (mi) or 4.8-kilometer (km), two-lane road segment had a high accident rate, no lighting, sidewalks, bike lanes, or storm-runoff drainage. The 1999 EA proposed a 5-lane design which was rejected by public hearing participants as too large, divisive, and not in keeping with the community's social, cultural, and historic fabric. Strong community objections to the proposal led to the formation of the Citizens' Advisory

Committee (CAC) and the utilization of context sensitive design principles. Depicting the Valley's sense of place in this CAC process was a critical because it reflected community values. The project-based planning efforts of the CAC coupled with community outreach by other groups facilitated the development of an acceptable road design.

The CAC developed an alternative for the project design (later named "the hybrid alternative") and presented it at the public Environmental Reassessment hearing in January 2001. The hybrid alternative met the County's engineering needs while minimizing negative community impacts on the community and preserving the community's sense of place.

CURRENT CONDITIONS

The Isleta Boulevard Improvement Project area is a 3.0-mile (mi) or 4.8-kilometer (km), two-lane segment that extends from Bridge Boulevard to Rio Bravo Boulevard. Because of the complexities of the project, the Bernalillo County Public Works Division and the FHWA divided the Project into two phases: Isleta North, a 1.2-mile (mi) or 1.9-kilometer (km) segment from Bridge Boulevard to Arenal Road; and Isleta South, a 1.8-mile or 2.9-kilometer (km) segment from Arenal to Rio Bravo Boulevard.

Hazardous road conditions have existed on Isleta Boulevard since the 1980's. Congestion problems are at their worst during the morning and evening rush hours. Traffic volume between signalized intersections varies from 15,100 to 23,200 vehicles per day (1998) exceeded capacity for a 2-lane road. Safety, mobility and capacity problems existed due to congestion, risky left-hand turns, numerous driveways, hazardous parking on dirt shoulders and no amenities for pedestrians, bicyclist or transit riders. Additionally, Isleta Boulevard does not have lighting, sidewalks, paved shoulders, or storm drainage systems.

Since the mid-1980s, two attempts have failed to develop an acceptable plan to improve this dangerous road segment. Consequently, there has been a steady deterioration and increasing vacancies in residential and commercial properties in the corridor. Mistrust about the County's commitment to address these infrastructure deficiencies was growing.

Sense of Place

The roots and influences of Native American Pueblo Indians, Spanish, Mexican, and early U.S. settlers find expression in the place names, economic and land use patterns, and the strong feelings of community by the South Valley residents. Its social fabric and sense of place can be found in its beautiful scenic landscape, history, close-knit neighborhoods, religious institutions, community spirit, and cultural expressions (1).

As a naturally occurring travel corridor along the west bank of the Rio Grande River, evolved in the sixteenth century as a segment of a 1,600-mile (mi) or 2,576-kilometers (km) El Camino Real, connecting major trade centers between Mexico City and Santa Fe, New Mexico. The Boulevard also has the distinction of being included in the famous U.S. Route 66 alignment from 1927 to 1937 (prior to the evolution of engineering techniques allowing roadways to traverse mountain ranges and rivers).

Many buildings in the South Valley have historical significance including two buildings on Isleta Boulevard that are registered on the National Historic Register and the State of New Mexico's Register of Cultural Properties. Examples include the Old Armijo School built in 1914 and the Mushroom Store, a local landmark built in 1910. There are also 45 buildings and residences on Isleta that were built before 1945 (2).

METHODOLOGY

Traditionally, transportation research papers have been presented from a transportation engineering perspective. This paper uses a qualitative, case analysis approach relying on participant observation from a community perspective. The participant-observer has dual roles: experiencing the current setting as an insider and concurrently observing and engaging in the design process. The author filled these dual roles as a participant in the CAC process, as a resident in the South Valley, and an active member of the community. The author is also a researcher at the Alliance for Transportation Research Institute (ATRI) at the University of New Mexico (UNM), and served in a technical role with the CAC as well.

The information-rich environment lent itself to results that are usually descriptive and could be instructive for other communities and projects. CSD principles were used to examine the public involvement process and the CAC decision-making processes and outcomes.

PROCESS

1999 Environmental Assessment (3)

Ten years following its first EA for Isleta Boulevard, the County published a second EA in 1999, which was also developed without public involvement. The 1999 EA proposed constructing 3-lanes for Isleta North. For Isleta South, three scenarios were discussed: no-build, 3-lane, and 5-lane. The County selected as the preferred alternative the 5-lane option with a 35-mile per hour (mph) or 56-kilometer per hour (kph) design speed. The design would include a center left-turn lane, sidewalks, bike lanes, lighting, bus stops, bus bays, landscaping and storm run-off drainage system.

Nearly 100 persons attended the 1999 EA public hearing. No opposition was expressed on the proposed 3-lane Isleta North segment. However, the 5-lane Isleta South proposal was very controversial for the following reasons:

- ◆ Isleta Boulevard would become a highway thoroughfare with increased traffic rather than remaining a community-scale road.
- ◆ The Valley's cultural and historical context was not considered in the EA.
- ◆ Data and methodologies used in the EA were outdated.
- ◆ The 20-year population and employment growth projections as well as traffic volumes were questioned.
- ◆ 80% of the ROW purchases were minority-owned businesses and residences which raised concerns about compliance with the National Environmental Protection Act.
- ◆ Level of Service (LOS) would not improve in the 5-lane configuration.

Community Response

The South Valley citizenry mobilized. The South Valley Transportation Committee (SVTC) and the South Valley Coalition of Neighborhood Associations (SVCNA) called for a community meeting and invited County officials to discuss the next proactive steps that the community could take. The County Public Works Director acknowledged the need for facilitated dialogue with the community. A Citizens' Advisory Committee (CAC) was formed to recommend a workable compromise for the Project's design.

The Role of the CAC

The first CAC meeting did not occur until three months later. Because of FHWA funding deadlines, a revised EA was required for FHWA action by May 2000; a short period of time for a public involvement process. The stated purposes of the CAC were to:

- ♦ Actively promote and encourage input from the community, motorist and non-motorist users of Isleta Boulevard.
- ♦ Provide opportunity for continued public engagement through the project development process.
- ♦ Identify and address community-level issues relevant to the impacts anticipated from the proposed improvements to Isleta Boulevard.
- ♦ Educate those affected about the project development process, purpose and need for the project, and their role in the decision-making process.

The CAC Process

Meetings were open to the community and notices were mailed to those who had attended previous meetings. Meeting fliers were distributed by community groups to households and business operators along the Isleta South route. The community was kept informed of CAC meetings, actions, and deliberations through organizations such as the SVCNA, the SVTC, the Rio Grande Development Corporation, and local newspapers.

Initially, an engineering consultant facilitated the first two months of CAC meetings. This was ineffective and the County decided to change the facilitation responsibility. The Public Works Division's Planning Director was asked to facilitate the CAC process which was a crucial decision point for the County. As an effective facilitator and a champion for the CAC process, the Planning Director's role made an enormous difference in the tone of the proceedings as well as its decision-making process.



Information Gathering

A mutual engagement and education process between transportation experts and the community was important for establishing a sound foundation for understanding technical information. To accomplish this, many innovative techniques were used during the environmental reassessment process with the assistance of academic institutions, community organizations and CAC participants. Information tools were developed for visualizing complex information and documenting the considerations for project alternatives. CSD tools such as graphic presentations of 20-year employment, population, and traffic projections as well as visual preference surveys, evaluation matrices for community impacts and engineering considerations for design alternatives, community surveys, aerial photographs, current/ historic photos of the project area by a CAC member.

To assist the CAC understanding of the EA, documents were developed by the Alliance for Transportation Research Institute (ATRI) at UNM, SVTC, and the SVCNA which presented complex information in less technical ways. One chart was a visual presentation of the LOS in the 5-lane proposal for the 1999 EA hearing. This chart shows that compared to existing conditions only 7% of the project intersection configurations would improve, that 64% would be no better off, and 29% would experience worse congestion.

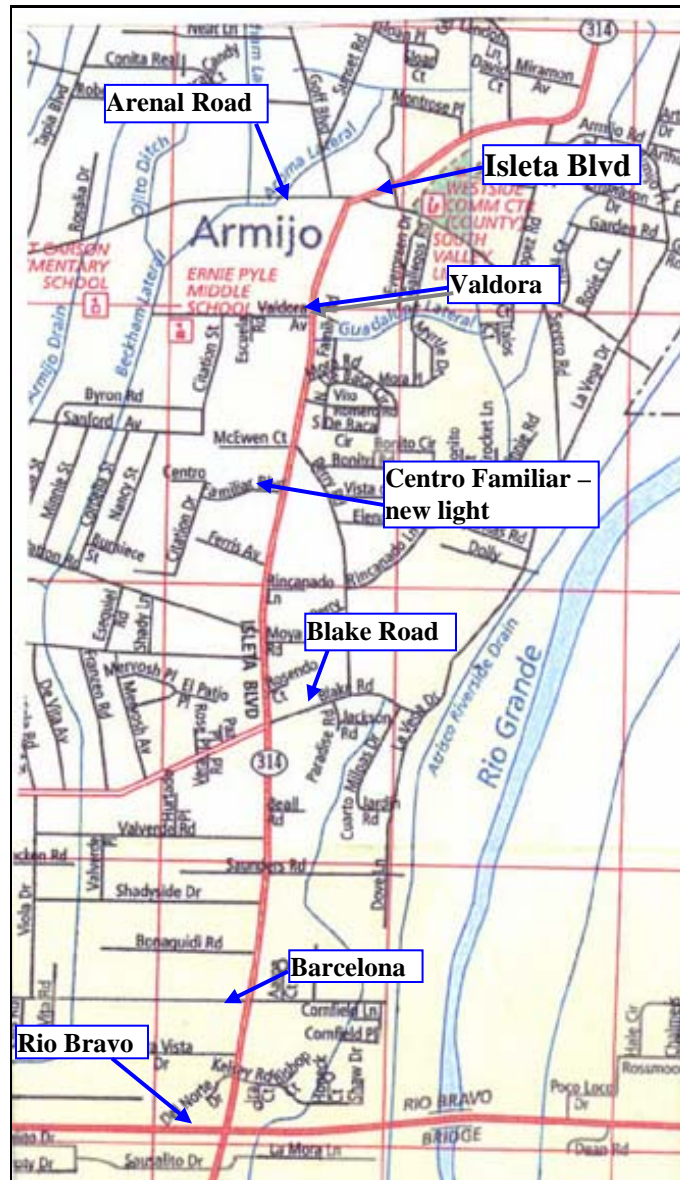
TABLE 1 Roadway Level of Service for Existing 2020 No-Build And 2020 5-Lane Build Alternatives—PM Peak

| ROAD SEGMENT | INTERSECTION | | | | | | | | | | | |
|------------------|--------------|----|----|----|---------------|----|----|----|------------|----|----|----|
| | Existing | | | | 2020 No Build | | | | 2020 Build | | | |
| | EB | WB | NB | SB | E B | WB | NB | SB | EB | WB | NB | SB |
| Isleta/Bridge | C | F | C | D | C | F | C | D | C | F | C | D |
| Isleta/Lopez | B | B | B | B | C | B | B | B | C | B | B | B |
| Isleta/Goff | B | B | C | B | B | C | B | B | C | C | B | C |
| Isleta/Valdora | B | B | F | F | B | B | F | F | B | B | B | B |
| Isleta/Blake | B | B | B | C | C | B | C | E | C | B | B | C |
| Isleta/Barcelona | C | C | C | C | C | C | D | C | B | B | B | B |
| Isleta/Rio Bravo | C | F | C | E | D | F | D | F | D | F | D | F |

 = No Change  = Better  = Worse

LOS Chart shows in yellow the intersections that would have no change in its LOS designations (congestion) with a 5-lane roadway alignment. Blue boxes show improvement while the red blocks show worsened condition with 5-lanes. This chart was distributed at the 1999 EA public hearing. (Source: Environmental Assessment, 1999)

During the first months of CAC meetings, the focus was on developing a sound base of engineering information on current and projected conditions that could be understood by the community. Not only was the traffic and LOS data in the 1999 EA difficult to understand, in some instances the engineering data was outdated or source documents could not be located. The CAC requested current and 2020 projected traffic volumes for each of the three road segments of Isleta South as well as the LOS for each of the five signalized intersections. Figure 2 is a map of Isleta South which identifies in the major intersections in the project area. Traffic data showed that the highest volume road segment was Valdora to Arenal due to traffic destinations to the Ernie Pyle Middle School and Kit Carson Elementary School.

FIGURE 2 Isleta South Project Area

Map of Isleta South Project with existing and proposed signaled intersections

The CAC invited representatives from the County's Sheriff and Fire Departments to discuss public safety issues. From the information presented, the CAC determined that there were 288 accidents from 1996 to 1998 on this section of Isleta. Of those accidents, 73% were rear-end accidents and accidents while making left turns. Staff from County's Planning Division also presented information on the Southwest Area Plan (SWAP). The SWAP contains many policies focused on land use issues and preserving the semi-rural character of the South Valley. The development of SWAP was the result of extensive public involvement.

To assess the 20-year conditions, the Planning Division provided Year 2020 population and employment projections as well as traffic volumes for each roadway alternative. This data showed that most growth in the South Valley would be west of Coors Boulevard and would not

significantly impact Isleta which is further to the east. The County's traffic modeling projected that traffic volumes were 15,100 to 23,200 per day (1998) and that a 2020 projection for traffic in a 5-lane alignment would generate approximately 10% more traffic than the hybrid.

LOS and traffic delays were a significant concern to the CAC. Based on the County's projections, the SVTC and the ATRI prepared Table 2 which depicts LOS and travel time information for each road alignment option.

TABLE 2 LOS for 1999 Existing Conditions and Projected 2020 Traffic

| Level of Service (LOS) | | | | | | |
|---|---------------|---------------|---------------|--|------------|------------|
| <i>Ratings based on delays at intersections at peak hrs. & in various segments. Grading: A through traffic, F gridlock; D & above acceptable.</i> | | | | | | |
| A=5 secs. or less | B=5.1 - 15 | C=15.1-25 | D=25.1 - 40 | E=40.1 - 60 | F= 60.1+ | |
| Existing 1999 | | | | | | |
| <i>Signalized Intersection</i> | 3 Lane | | Hybrid | | 5 Lane | |
| | LOS | Delay (sec.) | LOS | Delay | LOS | Delay |
| Isleta/Goff Arenal | D | 38 | D | 38 | D | 38 |
| Isleta/Valdora | E | 61 | B | 19 | B | 19 |
| <i>Isleta/Centro Familiar</i> | | | | | | |
| Isleta/Blake | C | 22 | C | 21 | B | 16 |
| Isleta/Barcelona | D | 37 | B | 16 | B | 16 |
| Isleta/Rio Bravo | F | 247 | F | 247 | F | 247 |
| Total seconds | | 405 | | 341 | | 336 |
| Segments | | | | | | |
| North/South Valdora | E | | B | | B | |
| North/ South Blake | E | | E | | B | |
| North/ South Barcelona | E | | B | | B | |
| Based on Projected 2020 Traffic Volumes | | | | | | |
| <i>Bold and italicized indicate a change from 1999</i> | | | | | | |
| <i>Signalized Intersection</i> | 3 Lane | | Hybrid | | 5 Lane | |
| | LOS | Delay (Sec) | LOS | Delay | LOS (Sec) | Delay |
| Isleta/Goff Arenal | D | 38 | D | 42 | D | 46 |
| Isleta/Valdora | F | 184 | C | 20 | C | 22 |
| <i>Isleta/Centro Familiar</i> | <i>new</i> | | <i>new</i> | | <i>new</i> | |
| Isleta/Blake | C | 22 | C | 23 | B | 17 |
| Isleta/Barcelona | E | 64 | B | 18 | B | 18 |
| Isleta/Rio Bravo | F | 247 | F | 247 | F | 249 |
| Total seconds | | 555 | | 350 | | 352 |
| Segments | | | | | | |
| North/ South Valdora | F | | C | | C | |
| North/ South Blake | F | | F | | C | |
| North/ South Barcelona | F | | C | | C | |
| LOS in seconds | | | | | | |
| | 3 Lane | Hybrid | 5 Lane | Difference in LOS | | |
| LOS 1999 | | 341 | 336 | 5 lane - 5 seconds less than hybrid | | |
| LOS 2020 | | 350 | 352 | hybrid - 2 less seconds than 5 lane | | |

This data showed that the 5-lane travel time would be only 5 seconds less than the hybrid and that the hybrid and 5-lane alternative would have acceptable LOS with 2020 projected traffic volumes.

The CAC Evaluation of Design Alternatives matrices was the most important and crucial tool used in the CAC process. These matrices were developed jointly by the CAC and the County. Information was presented in such a way that comparisons between the four road alternatives could be easily portrayed. This tool enabled the CAC to document and track its discussions and readily compare different aspects of transportation engineering considerations such as congestion, safety, transit, and right-of way costs. Community factors which were more qualitative included impacts of differing alignments on existing land uses, scale of the project, cultural and historic implications, redevelopments and effects on neighborhoods. This was an excellent communication tool.

TABLE 3 CAC Evaluation of Design Alternatives

| Engineering Factors | | | | |
|--|-----------------|---------------|---------------|---------------|
| Item | No Build | 3-Lane | 5-Lane | Hybrid |
| Safety | | | | |
| Drainage | | | | |
| Congestion | | | | |
| Right of Way Costs | | | | |
| Construction Costs | | | | |
| Business Impacts | | | | |
| Transportation Functionality | | | | |
| Transit | | | | |
| Environmental | | | | |
| Community Impacts | | | | |
| Item | No Build | 3-Lane | 5-Lane | Hybrid |
| Existing Land Use | | | | |
| Scale/ Experience/ Perception | | | | |
| Cultural/ Historic Nature | | | | |
| Redevelopment Opportunities | | | | |
| Adjacent Communities/ Neighborhoods | | | | |
| Long Term Transportation Implications | | | | |
| Southwest Area Plan | | | | |
| Isleta/ Bridge Revitalization Plan | | | | |

Five drafts of the matrices were developed as the assumptions, measurement and impacts were refined by the CAC and the County before agreement was reached. Community impacts were particularly difficult to develop.

Photographs were also taken by the author of each building along Isleta in the impacted area as another method for depicting sense of place. Historical photos were also provided by the Albuquerque Museum, the Middle Rio Grande Conservancy District, and the UNM Center for Southwest Research.

The information sharing tools did not include 2 or 3-dimensional sketches which made it difficult to visualize the scale or context of each of the design alternatives. A visual preference survey was used to assist the CAC in conceptualizing alternative alignments and assessing community impacts. Variations in scale, place, and streetscaping were reflected in 65 photographs. CAC members were asked to rate each photo from 0 (least preferred) to 10 (most preferred). The photos in Figure 3 indicate the settings that had the strongest preferences by those who favored the 5-lane and those who supported the hybrid configuration.

FIGURE 3 Visual Preference Survey



The scene from Bridge Boulevard (left) was the preferred photo of those who favored the 5-lane option. The scene of Jefferson Boulevard near the Journal Center (right) was the preferred photo of those who favored the hybrid alternative.

| | |
|--|------------|
| Total score average: | 8.2 |
| Average for those for 5-lanes: | 7.7 |
| Average for those for the hybrid: | 8.9 |

The visual preference survey was a helpful tool for conceptualizing a CAC member's thoughts about sense of place, scale of development, the function roadways beyond being a traffic mover, and roadway streetscaping.

CAC Decision-Making Process

Competing points-of-view emerged in the CAC discussion process particularly around the functionality of the road. These conflicting and wide ranging views reflect the differences in community values and perceptions.

Some business and property owners along Isleta believed that they should have the larger voice in determining the road alignment rather than the community-at-large. As supporters of the 5-lane alignment alternative, they felt that roads are for vehicles. As a 5-lane road would best facilitate the flow of unimpeded traffic and would increase large-scale economic activity.

They also believed that the hybrid 2020 traffic projections were understated for the hybrid alternative.

The hybrid option was a combination of the 3- and 5-lane alternatives and reflected flexibility in traditional engineering designs and innovative ideas from the community. The CAC was proactive and a significant contributor to the project design team. Traffic data, congestion and safety issues were examined. Data for each roadway segment were analyzed. The CAC concluded that Isleta traffic not move through the Valley but rather were dispersing to destinations within the Valley. Isleta was a community boulevard. A uniform lane alignment would not be necessary since road capacity was not the main issue. Unacceptable LOS also indicated congestion at intersections. As a consequence, recommendations were tailored to the specific problems at each signalized intersection which included dedicated right turn lanes with 3-lanes between signalized intersections. Two road segments with high traffic volumes would have five-lanes.

Proponents for a smaller scale project felt that the road was a community asset which should be in the purview of the broader community. The hybrid supporters felt that Isleta was a community road for motorist and motorist within the Valley rather than primarily functioning as a mover of traffic through the Valley. A smaller size road would be more in scale with the community, preserve the South Valley's character and sense of place, and provide more amenities for non-motorists including transit.

Another concern was that a significant number of ROW takings would be required for the 5-lane roadway adversely impact the social and business fabric as well as existing land uses. ROW takings would impact 88% of the 147 parcels in this segment, most are minority-owned. A larger capacity road would induce traffic into the area thereby increasing traffic volumes beyond those needed to serve the South Valley.

The evaluation matrices summarized in Table 4 includes selected information that was developed in the CAC process. This matrix was instrumental in focusing and documenting the CAC discussions. Information sheets were prepared by the County for each evaluation criterion. Table 5 includes excerpts from the matrix. The completed matrices included information on the no-build and 3-lane alternatives.

TABLE 4 Excerpts from CAC Decision Process Matrices for Isleta South (combines CAC Matrices and ATRI March 2000 Matrices)

| Impact | Hybrid | 5-Lane |
|----------------------------------|---|--|
| Right of Way Land Impact | | |
| ROW Purchases | 5.222 acres | 8.485 acres |
| Land Parcels Impacted (%) | 67% of 147 parcels | 88% of 147 parcels 80% minority-owned |
| Right of Way Needed | 58' | 80' |
| Purchase Cost | \$9 million | \$13 million |
| Traffic volume | 17,200 to 26,500 | 17,400 to 28,300 |
| Peak Hour Travel Time | 341 seconds | 336 seconds |
| Transportation System | | |
| Recommendation Focus | People, Community, Sense of Place; Local, designed to scale for South Valley destinations | Traffic Capacity; Thoroughfare to go through the Valley |
| Road orientation | Semi-rural | Urban - traffic inducer |

| Impact | Hybrid | 5-Lane |
|--|--|---|
| Community/Neighborhood Impacts | | |
| Scale of Project | Hybrid in keeping with character and scale of surroundings; traffic calming | Proposed project intended for high volume, faster speed traffic |
| Non-Motorist Activity | | |
| General Impact | Large segment of population are not vehicle oriented; provides most alternatives for the non-motorized South Valley population | Option focused on traffic going through the South Valley not those in the Valley |
| Pedestrians Impact | Sidewalks significantly increase safety; project scale encourages pedestrian traffic and walkable boulevards | Sidewalks increase safety but high volume traffic does not encourage pedestrian activity |
| Transit: Impact on ridership | Isleta (#53) -6th highest ridership of 26 routes in the City; 5 bus bays offers most service and amenities to ridership. | Three bus bays |
| Bike Facilities | 4' bike lanes will greatly enhance bike ridership. Scale of project encourages such non-motorized activities. | Enhanced bike ridership potential (4' lane) will be limited because of traffic volumes and speed |
| Cultural/ Historic Assets/ Community | | |
| El Camino Real since 1590; Route 66 from 1927 to 1937; 2 buildings on historic register; 154 homes and businesses built before 1945 | Preserve historic and cultural roots of South Valley; Build on the strengths and assets of South Valley community; maximizes economic value and community beauty—do not want homogenized roads | 5-lane highways not in scale of neighborhoods; would negatively impact the cohesion of South Valley; Does not believe that historic and cultural significance would be diminished by 5-lane; want quality like NE Heights |
| Social/Economic Impact | | |
| Business | Attract businesses that reflect local culture; historical and cultural roots provide economic development opportunities and funding potential; Need preservation of rural character and build on the assets of community's uniqueness. | Want to attract large commercial businesses, chain stores; will not reflect character that reflect the South Valley. Reflects urban not semi-urban roads. |
| Lost Parking Spaces | 68 spaces lost | 136 spaces lost |
| Social | Modern infrastructure improvements will facilitate significant improvements in quality of life; sidewalks, drainage, lighting and streetscape enhancements. Reflects the South Valley quality of life; road will enhance community | Encourages flow through traffic not neighborhood destination driving. |
| Environment: Trees Lost | 109 trees lost | 139 trees lost |
| Southwest Area Plan | Project in keeping with natural resources and built environment goals. | Conflicts with right of way, built environment and natural resources recommendations |

A community survey was conducted in the spring 2000 by UNM's Resource Center for Raza Planning (RAZA) to assess the awareness of residents and businesses in the impacted area about the proposed road. The 113 respondents indicated that 72% were knew about the changes being proposed for Isleta and 68% of those surveyed supported a smaller scale project, either the 3-lane or the hybrid configuration.

The County accepted the CAC recommendations and the public hearing was held in January 2001 to discuss the 2000 Environmental Reassessment (4) which recommended the hybrid alternative. The EA included extensive information about the CAC public involvement process. The FHWA made a "Finding of No Significant Impact" (FONSI) in May 2001. With the FHWA approval of the hybrid alignment, the County and the CAC proceeded with the development of the road design as well as the streetscape for Isleta North and South. The total estimated cost for Isleta North and South including storm drainage systems is \$36,000,000.

FINDINGS

Flexibility in geometric design standards facilitated the development of the successful hybrid proposal. The community-driven CAC process met nine times over an 8-month period from October 1999 to May 2000. Nearly 100 citizens participated in the CAC process that had a core group of about 20 members. Stakeholders in the CAC process included community participants, County officials, educational institutions, community organizations, and regulatory agencies. For the most part, the CAC process was generally collaborative rather than conflictive although differing agendas and community values did emerge.

The hybrid option was a compromise between proponents of 3-lanes and 5-lane roadway. The hybrid option balanced the functionality of the roadway and the community wishing to preserve its semi-rural character. The County's recommendation was also based on a cost-benefit analysis which showed that the hybrid would cost \$5 million less than the 5-lane option and travel time for the hybrid would only be 5 seconds more than the 5-lane alignment.

The Isleta Boulevard Improvement Project demonstrated what can be achieved through public engagement with an active citizenry. The striking differences between the three EA processes that took place over a 15-year period show the importance of process transparency. The 2000 EA resulted from collaboration between the community and the County to define a major public space. This transparent and authentic community process garnered the public's support for the Isleta Project and the hybrid option. Partnerships among community, governments, and institutions that evolved during this process developed the momentum and the political will to make the Isleta Project come to fruition.

Other findings about the context sensitive design process include the following:

- ◆ Public involvement does not have to be expensive but not providing can be very costly in the long term. According to one public official the first two Isleta EAs (1989 and 1999) and related activities cost about \$2,000,000; whereas the costs associated with the CAC and the resulting 2000 EA cost about \$100,000.

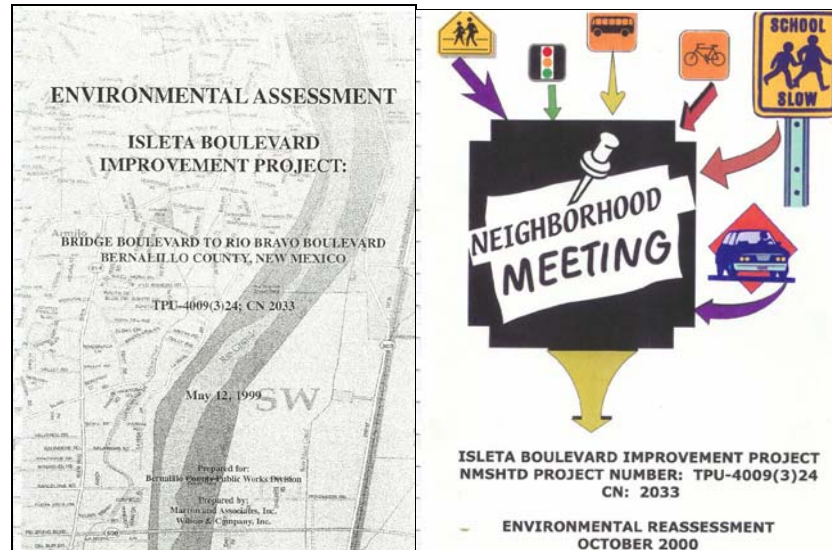
- ◆ Attendance continuity by participants was problematic because the CAC was a volunteer, self-selected group of citizens. Communication tools provided some continuity particularly the matrices which tracked information and decisions.

- ◆ There was concern about frequent turnover in County staff assigned to the project even during the relatively short 2000 CAC process and four different engineering consulting firms worked on the two EAs. These changes concerned the community.

♦ Engineering drawings of different lane cross sections were provided in the EAs. However, these drawings are too technical for conceptualizing differences in scope and impact of various alternatives. The CAC would have been assisted by multi-dimensional concept sketches to envision scale and context.

♦ Graphic images created for the project, even the EA document covers, reflect the evolution of the public input process. The cover on the left in Figure 4 below focuses only on the roads while the one on the right focuses has more of a community perspective.

FIGURE 4 Comparison of 1999 and 2000 EA Covers



1999 Environmental Assessment Plan cover (left); 2000 Environmental Reassessment Plan cover (right)

♦ Engaging the public complex technical processes require interdisciplinary approaches to problem solving and creative methods for engineering information in an understandable fashion.

♦ The Bernalillo County Arts Board provided \$115,000 for public art to be installed at many of the bus stops and bus bays which will reflect the history and culture of the South Valley.

The CSD process for transportation projects was a relatively new process for the County to undertake. While the Isleta South CAC accomplished its objectives, the County did not elect to conduct a formal evaluation of the process beyond its ‘satisfaction survey’ that was distributed to CAC members. Instead, the County chose to identify lessons learned from its first experience with the Isleta CAC and apply them to the subsequent streetscape designs of Isleta North and South processes.

CONCLUSIONS

After the May 2001 FHWA approval of the Environmental Reassessment, the CAC process continued for the streetscape design for Isleta North and South areas. Visualization tools used in the Isleta North design process were not as effective as those used in the previous reassessment process for Isleta South. The only summary of CAC activities and decisions was provided a CAC member and discussion became bogged down in hotly debated topics like the location of telephone poles in the new sidewalks. Concurrent to discussions about streetscape was the

development of an extensive storm-runoff drainage system was developed which included a large detention located on nearby Sanchez Farm. Group visioning through a public engagement process resulted in the property being transformed into a community asset including a park, bikeways, walking paths, and a demonstration farm.

Unanticipated road closures that were not originally projected became a major issue with the community due to installation of the storm drainage system. The communication with property owners during construction was sometimes problematic. Other concerns emerged later such as poor quality workmanship particularly in sidewalks, ADA compliance issues, and poor installation of landscaping.

During construction of Isleta North, the County established a website for the Project so that the public would have regular updates on detours and construction activities. Construction for Isleta North began in August 2002 and was completed one year later. Figure 5 shows before and after photos for a re-engineered segment locally known as Deadman's Curve. The excess ROW purchased provided space for a bus bay, a Plaza, and a community soccer field.

FIGURE 5 Before and After Photos of Isleta North Improvements

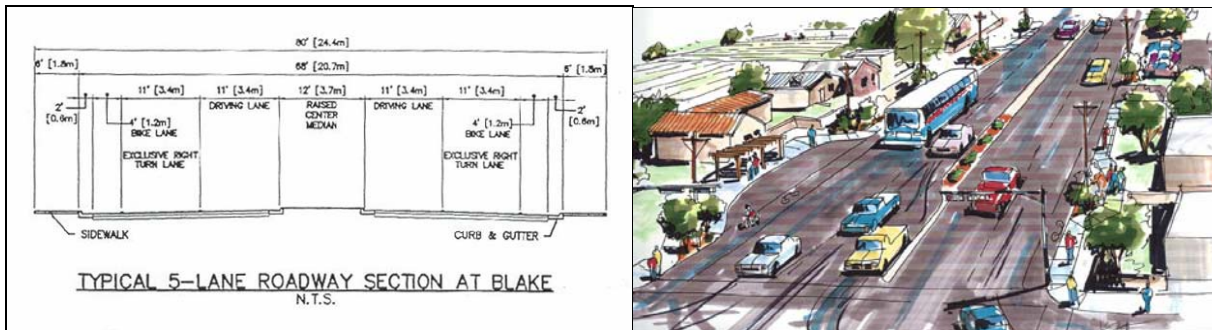


With the experience gained through the Isleta North design project, a significantly more organized and active CAC process was used to develop the design for the most complex road section, Isleta South. Improvements to the design process included:

- ◆ Developing mechanisms for proactive outreach to the community to encourage participation in the CAC processes including engaging an outside agency to support the public involvement process;
- ◆ Employing additional information tools to inform the broader community about the Isleta Project; and
- ◆ Providing concept sketches to augment technical presentations.

Figure 6 is an excellent example of improvements in the visualization tools used is a comparison of the engineer's roadway design and a contextual artist's rendering of the same segment.

FIGURE 6 Traditional Engineering Roadway Section and Artist Sketch of Proposed Improvements



Traditional technical engineering drawing of a typical 5-lane roadway section of Isleta South (left) (Wilson & Company). Artist rendering of Isleta South by Morrow Reardon & Associates entitled Perspectives II for CAC design process for Isleta South (right).

The CAC met eleven times and began its process with a facilitated community visioning session developing a visioning matrix which became the basis for many of the CAC meeting agendas. This Isleta South design process was effectively facilitated by an engineering consultant. Widespread drainage problems resulted in an expansion of the Project area, increasing the number of side street roadway miles impacted and forcing the construction of more detention ponds.

The County expanded the involvement of the UNM's RAZA Center to provide support to the Isleta South design public involvement process. Attendance at CAC meetings increased significantly by informing participants of meeting dates by mail and phone, facilitating group visioning processes, and documenting and distributing outcomes and decisions. A visioning session was conducted by the RAZA Center to help the County and its consultants understand what the community wanted in terms of streetscaping. Isleta South construction is scheduled to begin summer 2005.

It would be very useful to the County to document the processes and outcomes of all three of the CAC processes. Lessons Learned would be instructive for other public works projects and, if written from a community perspective, could become a resource for other community projects and CSD techniques can be improved and replicated in other transportation projects.

The CSD public involvement process was a mutual learning process that enhanced and furthered the interests of the South Valley community. Other conclusions drawn from this process include:

- ♦ Transportation consulting and engineering firms need experience with CSD and public involvement to be effective.
- ♦ The facilitator of the CAC process must be selected with great care and, must act as a neutral party. A key role of the facilitator is to champion the CAC process.
- ♦ Commitments made to the planning and design phases must be carried out during the construction and maintenance phases of the project area including:
 - construction quality and adherence to ADA requirements;
 - adequate communication with neighborhoods and businesses impacted by construction activities;
 - construction and maintenance of streetscaping;

- continuous CAC involvement during construction.
- ♦ Regular updates are needed to the County's Project website.
- ♦ Continue to develop informational tools which assist citizens in understanding complex, technical information. This should include developing a "Traffic 101" document to teach basic transportation concepts. While the EA is the formal document for FHWA review and approval, it should be also presented in such a way to be understandable to the public.
- ♦ Procedures for measuring the effectiveness of public involvement processes need to be developed and tested.

The CAC Isleta design process for project has concluded. Since then, a CAC member was elected as a County Commissioner representing the South Valley. This successful CAC collaboration has led to many other public engagement processes including the Isleta Sector Development Plan and policies developed to preserve South Valley agricultural resources. The community has found its voice through the CSD process and public engagement.

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