

CONTEXT-SENSITIVE DESIGN CASE STUDY NO. 10

Bridgeport Way - Washington

LOCATION:

Bridgeport Way (University Place, Washington)

PROJECT DESCRIPTION:

Bridgeport Way is a major urban arterial and it could be considered as a “Main Street” of University Place. The project involved reconstruction of an existing five-lane road into a four-lane divided roadway over a distance of approximately 1.5 miles. The route serves local traffic and regional commuters, it is the highest transit volume corridor for Pierce County, and it is often used as a bypass of the I-5 freeway (when congestion is heavy). There were three construction phases included in the project as shown below:

Phase 1A
(35th to 40th Streets) Length: 0.50 miles
Letting: May 1998
Work Start: June 1998
Work Complete: February 1999
Contractor: R.W. Scott Construction, Inc.
Amount: \$2,215,103 (engineering, right-of-way, construction, and inspection)

Phase 1B
(27th to 35th Streets) Length: 0.50 miles
Letting: May 1999
Work Start: June 1999
Work Complete: February 2000
Contractor: R.W. Scott Construction, Inc.
Amount: \$2,672,955 (engineering, right-of-way, construction, and inspection)

Phase 2
(40th to Cirque Dr.) Length: 0.5 miles
Letting: August 2001
Work Start: September 2001
Work Complete: June 2002
Contractor: DLB Earthwork
Amount: \$3,348,458 (engineering, right-of-way, construction, and inspection)

PURPOSE AND NEED

The purpose of this project was to address the safety concerns due to the high number of crashes over the past years. At the same time it was viewed essential to the vision statement of the City Council that aimed in improving the quality of life in the community by creating a town center. The goal of the project is to develop Bridgeport Way as a corridor that will improve traffic safety, increase the mobility and cohesiveness of the community, enhance the appearance of the corridor, and control traffic growth.

CONTEXT-SENSITIVE FACTORS

A number of issues dealing with aesthetics, public involvement, and promotion of multi-modalism were central to this process. Context-sensitive design issues implemented as part of the Bridgeport Way project included the following:

- An extensive public involvement process was initiated to solicit input on how the street should be redesigned. The process utilized design charrettes, public meetings, open houses, meetings with neighborhood groups, and one-to-one meetings.
- A design charrette was completed with citizen participation to develop potential design alternatives for Bridgeport Way. There were two sessions, one for adults and a second for high school students.
- The use of flared intersections to accommodate U-turns for long vehicles at signalized intersections due to the use of the divided median to improve access management and reduce traffic crashes.
- Landscaped median with specially designed streetlights. Planter strips along the entire corridor with streetlights matching the median lights. Bike lanes along the entire corridor.
- Mid-block pedestrian crossings with in-pavement flashing lights at two mid-block crosswalks along Phase 1A. Because of reduced driver compliance over time and five vehicle-pedestrian collisions, the in-pavement lights are being replaced in Summer 2002 with pedestrian traffic signals. The signals will be interconnected with other signals along the corridor to optimize traffic progression and minimize vehicle-pedestrian conflicts.
- Undergrounding utility wires to enhance aesthetic appearance of the roadway.
- Use of a single corridor for all modes of transportation, i.e. passenger cars, public transportation, bicyclists, and pedestrians.

HISTORY OF PROJECT

University Place is a recently incorporated city (8/31/95) but it has been inhabited continuously for the past 130 years. Bridgeport Way has been the main street running through the City and it is used both by local residents and commuters residing in neighboring communities. The City Council adopted a vision statement that indicated that the goal was to make University Place a “safe, attractive city that provides a supportive environment for all citizens to work, play, get an education, and raise families.” To achieve this objective, land use, transportation, and economic development goals were established to promote walking, biking, use of aesthetic treatments for roadways and development, and infill development. Central to this goal was the creation of a town center and a main street. Both of these concepts were considered essential in improving the quality of life in the community.

In recent years, Bridgeport Way experienced a safety problem. There have been 301 crashes over a 4.5-year period (1996-1998) with an average of approximately 67 crashes per year. A third of these crashes were injuries. Factors that contributed to this large number of crashes were the lack of sidewalks, large number of access points, and uncontrolled access.

HIGHWAY AGENCY INVOLVEMENT

The Washington State Transportation Improvement Board (TIB) was the funding agency for this project and had a significant involvement beginning with the initial application, which had as its objective to improve safety. Their involvement continued throughout the project and

was critical to the evolution of events. In Phase 2, additional transportation, planning, and funding agencies were involved including the Washington DOT, FHWA, Puget Sound Regional Council, and Washington State Public Works Board.

RESOURCE AGENCIES INVOLVEMENT

The Chamber of Commerce was a stakeholder involved in the entire process. Tacoma Power, the local electric utility company, was also involved and participated in the project by funding 50 percent of the cost of undergrounding power lines.

COMMUNITY INVOLVEMENT

There was a direct and continuous community involvement from the beginning of the project. There have been several approaches taken to solicit input from the community, including:

- A design charrette (8-9 November, 1996) was held with 100 adult participants where focus group, brain storming, design sessions were completed. Solutions provided included a 4-lane roadway with signals and median and a 2-lane road with median and roundabouts.
- A design charrette (12 November, 1996) at Curtis Junior High School was also held where the students came up with similar designs but they added several youth oriented facilities (skate parks, sports center, and bike trails).
- A charrette public forum was held on November 12 in a joint meeting of the City Council and Planning Commission to discuss the designs and get public input.
- A presentation to the TIB was the next step (January 1997) due to significant negative public campaign in the press and by a citizen's group (Citizens Against Repetitious Roundabouts-CARR). The TIB was favorable of the project and requested additional public input.
- Four neighborhood meetings were held over a two-week period where the two alternatives were presented and comments were solicited. Frequently asked questions and their answers were provided after the first two meetings. A special town hall meeting was held following these meetings (2/26/97) to consolidate the public input.
- A public hearing was held on March 4, 1997 to present the 4-lane alternative, since the roundabout option was deemed very controversial. It should be noted though that the Council approved the installation of a roundabout as a demonstration project in another location.

SIGNIFICANT ISSUES

City Council's Involvement

The City Council's vision statement was central to the design of Bridgeport Way. The development of a town center and a main street that would promote a walkable community was the main objective of the council. Most of the council members were behind the idea of redeveloping Bridgeport Way in such a manner that would enhance the quality of life of the community.

The continuous solicitation of ideas and comments from the public was considered essential in the development of a design that would be accepted by the community. The City Council was committed to involve the public and the business community throughout the process and they spent several nights and meetings discussing the various alternatives. To proceed with

the design and to dispel any reservations regarding the roundabout issues, the Council supported a demonstration project in an alternative location (Grandview) and installed a roundabout. This demonstration test project was so successful that several roundabouts were installed along the same street with the demonstration project.

Public Education

A pamphlet describing proper driving at roundabouts has been developed by the City Council and a video has been developed as well. Additional education efforts regarding nomenclature and terminology were developed during the public involvement phase.

Public Involvement

Extensive public involvement was utilized to seek input and guide the project from the conception of the project development. To notify the public regarding the meetings, newspaper notices were printed, fliers to all property owners in University Place were delivered, and posters were placed in City Hall, supermarkets, banks, library, fast food locations, and other places. Overhang signs were placed along Bridgeport Way as additional means of increasing public awareness. A representative of the City government visited each property owner along Bridgeport Way.

A new technique pioneered by City Manager Bob Jean during a recent public hearing on a road diet and roundabout project was that of “round tables.” During this hearing, instead of the usual public meeting format where each individual has an opportunity to voice his/her concerns about a project, round tables for 8-10 persons were set up. The participants sat at the tables and were asked to discuss the issues at hand, i.e. the possible alternatives, and identify a spokesperson that would summarize the table’s comments. This way, each table heard the pros and cons for each choice from the peers instead of the Council and they were able to make a more informed decision by understanding the concerns of other citizens.

Value Management and Value Engineering Analysis

A Value Management analysis was performed to assist the City Council with the analysis of the Bridgeport alternatives. This approach was a scoring method that allowed each member to grade each alternative based on eight attributes: pedestrians, bicycles, vehicles, economic impact, safety, beautification, emergency, response, and project cost. The 4-lane alternative with a landscaped median was the alternative with the highest score.

A Value Engineering study was also required by TIB as part of the funding requirements by state law. The objective was to reach a design solution at a lowered cost or improved value. The basic premise for this study was that Bridgeport Way should be “a corridor that will improve traffic safety, increase the mobility and cohesiveness of the community, enhance the appearance of the corridor, and control traffic growth.”¹ This study evaluated additional cross sections based on the same criteria used in the Value Management analysis and arrived at a solution that used narrower lanes but added bicycle lanes. This solution also recommended the use of a landscaped median and left turn lanes and U-turns at the signalized intersections.

¹ Stephen Sugg (2001) *Bridgeport Way Project, University Place, Washington*.

Economic Development

Initial concerns of the business community were voiced regarding the loss of revenue from the proposed access management due to the presence of the median. A recently completed before and after study indicates that there has been an increase in business revenues due to the project. Significant activity in redevelopment due to the Bridgeport Way project has also been observed with new businesses recently relocating to the area and others are applying for redevelopment and relocation.

SCHEDULE OF ACTIVITIES

Following is a time-line of significant events in the Bridgeport Way project development process:

- 1996 - February Grant application to TIB for safety improvements
May Application approved
October Seminar by Dan Burden
November 3-day Design Charrette
- 1997 - January Presentation to TIB
February 5 public meetings
March Council selects “best” alternative
May Value Engineering study
June Design Phases 1A and 1B
- 1998 – May Finish Phase 1A design
June Award construction bid
July Start construction for Phase 1A
- 1999 – February Finish construction of Phase 1A
March Complete design and right of way acquisition for Phase 1B
May Award construction bid
June Start construction for Phase 1B
- 2000 – February Finish construction for Phase 1B
July Design for Phase 2
- 2001 – May Award construction bid
February Start construction for Phase 2
- 2002 – June Finish construction for Phase 2

PROJECT OUTCOME AND LESSONS LEARNED

Key attributes of the Bridgeport Way project were summarized to provide insight into the performance results and how these results differ from other highway projects where the concepts of context-sensitive design were not implemented. Following is a listing of the most prominent attributes of the project and an assessment of the success achieved.

- A major emphasis of the project was public involvement and solicitation of comments from all stakeholders throughout the entire process
- The strong commitment by the City Council to develop a town center and sense of community played an important role in completing this project.
- The flexibility and open mindedness of the Council to develop a demonstration project for roundabouts indicated to the public and the stakeholders that their opinion is valued and is

seriously considered. This level of trust between the government and the public has helped the more efficient completion and acceptance of other transportation related projects.

- The application of the Value Management and Value Engineering analysis facilitated the development of appropriate solutions for the context of the roadway.
- The involvement of the area business owners from the outset of the project has been beneficial.
- The “road diet” concept (where a roadway with more lanes is converted to one with fewer lanes) has worked very well by reducing crashes up to 60% for some areas and speeds by about 6%.
- New techniques used for public involvement such as the “round table” format.
- Incorporation of innovative designs for pedestrian crossings.
- A systematic approach to educate public about design options and the purpose of the road using visual aids. A post-construction education was also undertaken to ensure proper driving.



Figure 1. Bridgeport Way before



Figure 2. Bridgeport Way before



Figure 3. Bridgeport Way after, north view



Figure 4. Bridgeport Way after, south view



Figure 5. Bridgeport Way U-turns



Figure 6. Bridgeport Way bus stop



Figure 7. Bridgeport Way pedestrian crossing



Figure 8. Bridgeport Way flared intersection design



Figure 9. Demonstration roundabout