SOUTH 27TH STREET

2007

CITY OF OAK CREEK | CITY OF FRANKLIN

Corridor Streetscape Manual

HNTB

eua eppstein uhen : architects

OakCreek

City of Franklin

HNTB

> “Great streets do not just happen. Overwhelmingly, the best streets derive from a conscious act of conception and creation of the street as a whole. The hands of decision makers are visible.”
>
> *– Allan B. Jacobs*

acknowledgements

This plan would not have been completed without the support and many hours invested by all of the individuals involved from both the communities of Franklin and Oak Creek, including local stakeholders and members of the public who participated in the planning and design of this corridor enhancement study. A special thanks to the following individuals who contributed to the success of this project:

Ex Officio Members

- **Mayor Tom Taylor**, City of Franklin
- **Mayor Richard Bolender,** City of Oak Creek

Project Steering Committee

- **Ted Grintjes**, City of Franklin CDA, Steering Committee Chair
- **Ashley Booth**, City of Franklin, Senior Planner
- **Sandy Adam**, City of Franklin
- **John Bennett**, City of Franklin, Engineer
- **Jim Rhiner**, City of Franklin CDA
- **Doug Wheaton**, City of Franklin, Director of City Development
- **Al Foeckler**, City of Oak Creek Alderman District 2
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- **Ed Heidenreich**, Animation Designer

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Executive Summary

Corridor Master Plan

Introduction: One Corridor, Two Cities

The *27th Street Corridor Streetscape Manual* defines a vision and describes expectations for the cities of Franklin and Oak Creek.

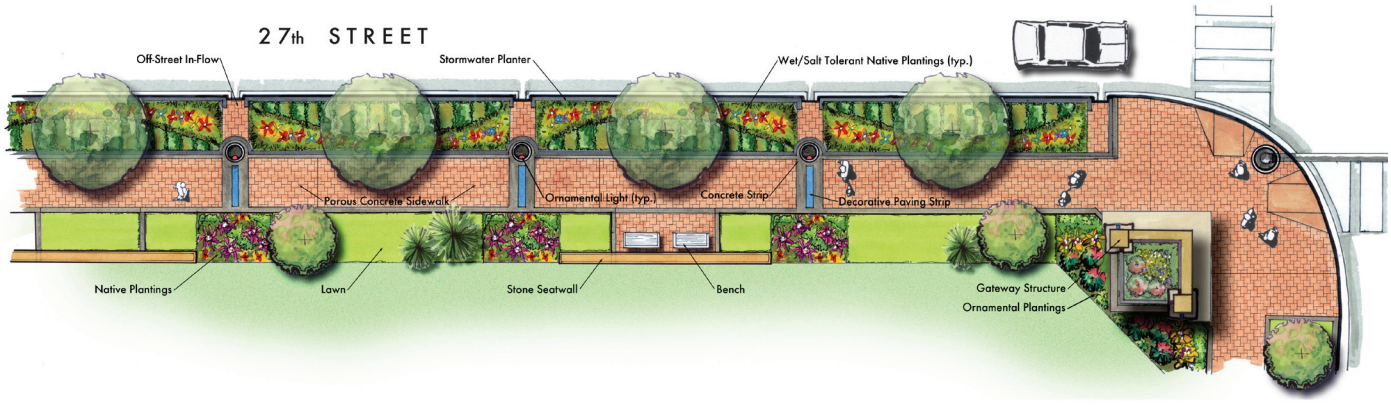
By assembling a committed group of stakeholders to lead the effort, these two communities have demonstrated their commitment to this project by broadening the group that can act in partnership with the cities to enhance, revitalize and market the corridor.

The planning and design process was an inclusive one that included stakeholder interviews, public open house sessions and survey input forms that eventually channeled into an intensive collaborative effort between the consultant design team and the 27th Street Steering Committee, which represented a cross-section of both Franklin and Oak Creek leadership. This group, in conjunction with the respective cities, must now champion the plan recommendations, promote them to the larger community, and act as stewards for the design and enhancement principles of the plan as conditions change and actual development proposals are made.

Enhancing the Streetscape

The 27th Street corridor has always been a source of interest from developers and potential investors, and has long-served as a key transportation route for the southern Milwaukee area.

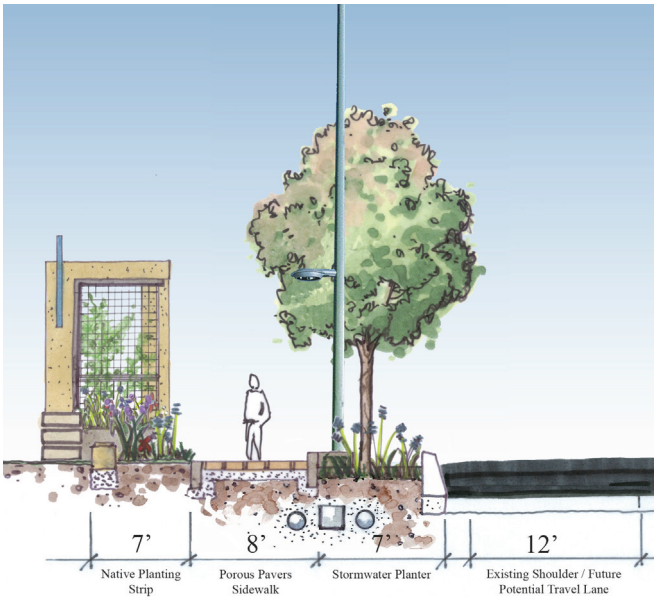
After completing an initial Existing Conditions and Opportunities and Constraints Analysis, the design team led a visioning process to identify key themes for enhancement guidelines. The key concepts that evolved from this process included defining the



streetscape enhancement recommendations around creating a "Sustainable and Smart Street." The development of an urban streetscape as a "smart street" is one that provides both sustainable recommendations and high-tech solutions. The concept of developing a "smart street" reflects a forward-thinking community that promotes an innovative approach to urban infrastructure design.

Key elements of the execution of this concept included recommendations for stormwater management, use of recycled materials in pedestrian furniture, incorporation of high-tech infrastructure to support and encourage new development and the utilization of porous pavements along the pedestrian areas.

Using the "smart street" as a guiding theme, a series of prototypical design concepts for the physical elements proposed along the corridor were developed. When these concepts are applied to the right of way, design guidelines emerge that can be used throughout the various zones along the corridor. The intent of the prototypical design elements are to set standards to help guide the future design construction of the roadway and adjacent properties, while also forming a seamless connection between the two cities.



The results of utilizing these design elements along the corridor will bring a high-quality statement and promote a "sense of place" that was identified as a leading project goal by the steering committee and community.

Corridor enhancement concepts were developed for the following items:

- Gateway Treatments
- Special Enhancement Areas
- Landscape Treatments
- Lighting Enhancements
- Graphic and Signage Enhancements
- Pedestrian Treatments
- Corridor Branding

Coordination of the enhancements with the Wisconsin Department of Transportation (WisDOT) will be an ongoing process. The concepts illustrated as part of this plan are only a "first step" in the design process. As preliminary engineering for the corridor begins, refinement of these concepts will need to occur.

As a final design task, the team created a computer animated visualization of the corridor that illustrated prototypical enhancements. It is intended that this computer animation be utilized by both communities to market the corridor for future economic development purposes, and to communicate to the larger public the desired vision for the streetscape enhancements.

Porous Block Pavers

These pavers are constructed primarily from concrete. They interlock with one another, but leave open a void space between the pavers to permit water to infiltrate into the underlying gravel reservoir. The thickness of the gravel subbase, and the type of material used to fill in the void spaces, determines the amount of infiltration permitted. The void space around the pavers can be filled with either gravel, soil or grass.

Stormwater Planter

A stormwater planter is an alternative to a stormwater sewer system. This method of capturing water allows the stormwater to directly bypass the storm sewer system, and immediately begin to fill the planted area. Water will slowly soak into the ground while wetland plants filter pollutants from the stormwater runoff before they reach rivers and streams. This method of stormwater treatment uses runoff as a resource rather than a waste, while also improving water quality, reducing the amount of stormwater that enters the sewer system and aesthetically enhancing the streetscape.

Natural Look

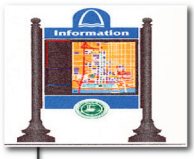
Along the corridor, the vegetation will include a variety of native plant material. Once established, this planting technique will give a natural look to the plantings along the corridor and reinforce the sustainable nature of the design concept.

Plant material will be selected to be salt tolerant and hardy for the variable climate conditions of the region.

Wayfinding Signage

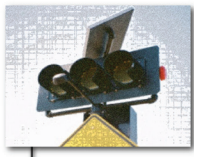
Wayfinding signage to include both vehicular and pedestrian signage system. Coordinate with branding exercise for uniform corridor treatment.

Signage system to include electronic/LED message boards.



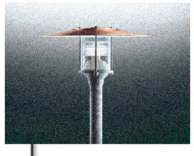
Preemptive Emergency Signal

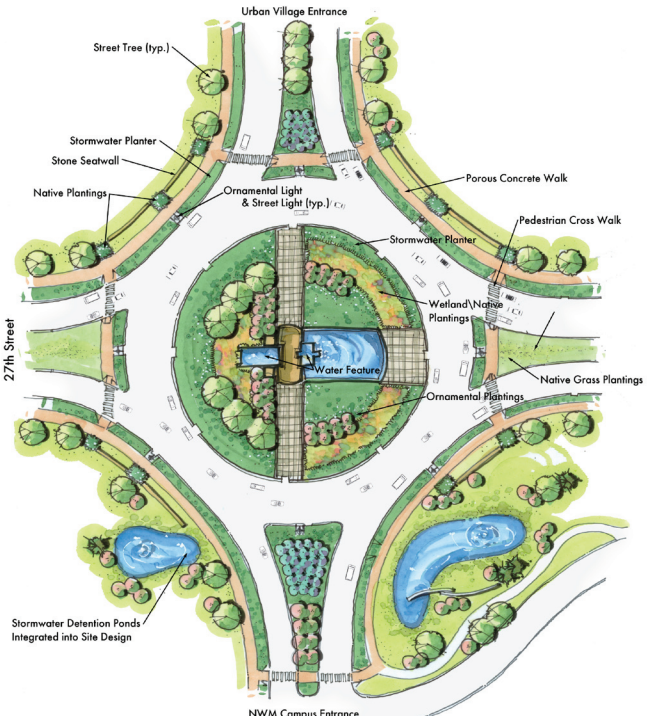
An attachment for a traffic signal that overrides the normal sequence in response to preemptive emergency signals, and a electro-optically responsive data display panel on the housing to provide clear and direct instructional messages to motorists as to the appropriate actions to be taken.



Pedestrian Lights

Ornamental pedestrian lights are proposed to bring the wide cross-section of the corridor to a more human scale. These lights are to be energy-efficient standards with protective light-reflectors to shield from excessive light pollution. Alternative standards that are solar-powered could also be used at certain low-traffic areas of the corridor.





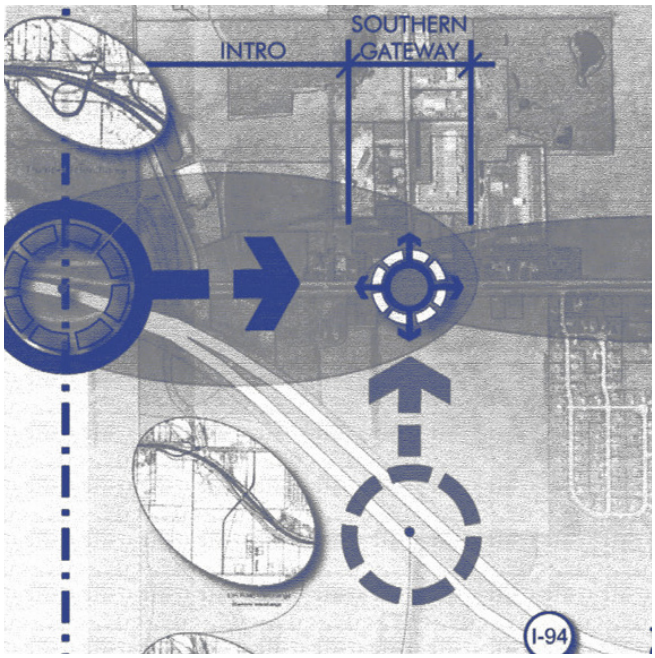
Conclusion

Because economic shifts and an active regional real estate market will always result in a dynamic development process, all of the partners committed to the 27th Street corridor will have to stay focused on the task at hand – creating a vibrant and active street that reflects the communities of Franklin and Oak Creek.

This plan is the beginning of creating the vision, and several key implementation tasks, including identification of potential funding sources, are identified in the plan. It will be critical to review and monitor the progress of implementation, and continue to engage both public and private sector partnerships involved in this effort, including continued coordination with WisDOT.

Chapter 1

Introduction



Corridor Enhancement Can Refocus Community Character

The design and construction of roadways has, historically, been a utilitarian exercise. From the earliest recorded history, roads were built for either military or commercial purposes. The primary design objective was often to create a long, flat surface to make the movement of troops and commercial goods easy and efficient. In many ways, this basic premise continues to drive the design of our roadways and corridors today.

Roadways have become a significant part of our contemporary lives. We have evolved into a society that relies on this critical infrastructure to carry out all aspects of our daily lives. An average city in the United States will have up to 15 percent of the land area dedicated to streets and roads. The realization of the impact that this type of land can have on the design and character of the city has been a driving force behind the creation of the South 27th Street Corridor Streetscape Manual.

Just as the appearance and character of the front door of a home provides a first impression of its owners, roads often provide the first impression of a city.

In today's urban and suburban environments, an automobile driver often has little or no impression of change when traveling between cities. Typically, a simple green sign is all that marks the change from one city to the next. In many cities, the singular character of the McDonald's®™ restaurant, Wal-Mart®™, gas stations, houses, schools and apartments has resulted in the absence of a unique "sense of place" by the functions of the site design, which does not enliven the street.

The cities of Franklin and Oak Creek have recognized that the future development and enhancement of the 27th Street corridor can provide a positive "front door" to their communities. This recognition – that roadways play a critical role in defining the image and aesthetics of the community has led to the development of this corridor streetscape manual.

The South 27th Street Corridor Streetscape Manual highlights the flavor of the local character, creating an aesthetic theme for the corridor that differentiates it from many other suburban communities. In turn, this type of investment provides a signature address for future economic development, leveraging the investment in amenities to attract future growth along the corridor as a premier economic development location.

Project Description

Today, 27th Street is a well-traveled four- to six-lane arterial roadway that is bordered by both the cities of Franklin and Oak Creek. Extending from College Avenue on the north to I-94/County Line Road on the south, it is envisioned that the corridor shall be an *"attractive center of economic activity in*

Figure 1-1: Existing roadway conditions.

southeast Wisconsin with clearly and conveniently linked strong neighborhoods, beautiful parks and open spaces, and engaging civic and institutional places. This corridor will serve as a unifying place for the cities of Franklin and Oak Creek, and for Milwaukee County." (source: South 27th Street Corridor Plan)

The planned character of the corridor is unique, representing the character of both cities. It will continually evolve as the road is expanded to meet new traffic demands or as new, larger commercial and institutional buildings are constructed.

A coordinated effort that involves the City of Franklin, the City of Oak Creek and the Wisconsin Department of Transportation is critical to implementation of a unified investment project. This study looks forward to this end goal by establishing guiding principles for overall public investment along the corridor right of way.

Charge to the Design Team

The steering committee formed to guide this project represents both communities of Franklin and Oak Creek. The committee developed the following project intent and purpose, which became the design team's charge:

"Provide a design concept and framework for both physical and functional enhancements within the corridor with the objective of illustrating unified corridor enhancement strategies and policies in order to guide new development, influence improvement of existing businesses and enhance the aesthetic image within the public right-of-way."

The development of the concepts and design recommendations that are illustrated as part of the South 27th Street Corridor Streetscape Manual reflect this vision.

Previous Studies

Existing data and research was collected from a variety of sources including the cities of Franklin and Oak Creek as well as key stakeholder interviews. Previous studies that are relevant to the corridor were reviewed and incorporated into the recommendations for the 27th Street corridor as appropriate. These include:

- South 27th Street Corridor Plan, Schreiber/Anderson Associates
- South 27th Street Sub-Area Vision Plan, EUA
- South 27th Street Urban Village Implementation Plan, HNTB
- The Conceptual Layout for I-94 Safety and Design Improvements, WisDOT
- SEWPRC reports
- MMSD reports
- WIS 241 (South 27th Street) Access Management Plan
- City of Franklin and City of Oak Creek zoning ordinances
- I-94 North-South Corridor Study, WisDOT
- 2020 Vision – A Comprehensive Plan for the City of Oak Creek (2002)
- Franklin First – Economic Development Strategic Plan

Chapter 2

Existing Conditions

Study Area

The City of Oak Creek is located on the eastern side of the corridor and the City of Franklin is located on the western side. Property and land uses adjacent to South 27th Street were also taken into account.

Existing Conditions

The information collected and utilized to develop the existing conditions analysis involved the use of on-site photographs, field visits, existing land use and zoning documentation, and communication between the steering committee members and the design team. When the existing conditions analysis was complete, an opportunities and constrains analysis was developed to address and highlight key areas along the corridor. Then the design team highlighted specific corridor issues, both positive and negative, that could be relevant to developing and designing the streetscape elements. By examining the existing corridor make-up and character, the design team was able to understand:

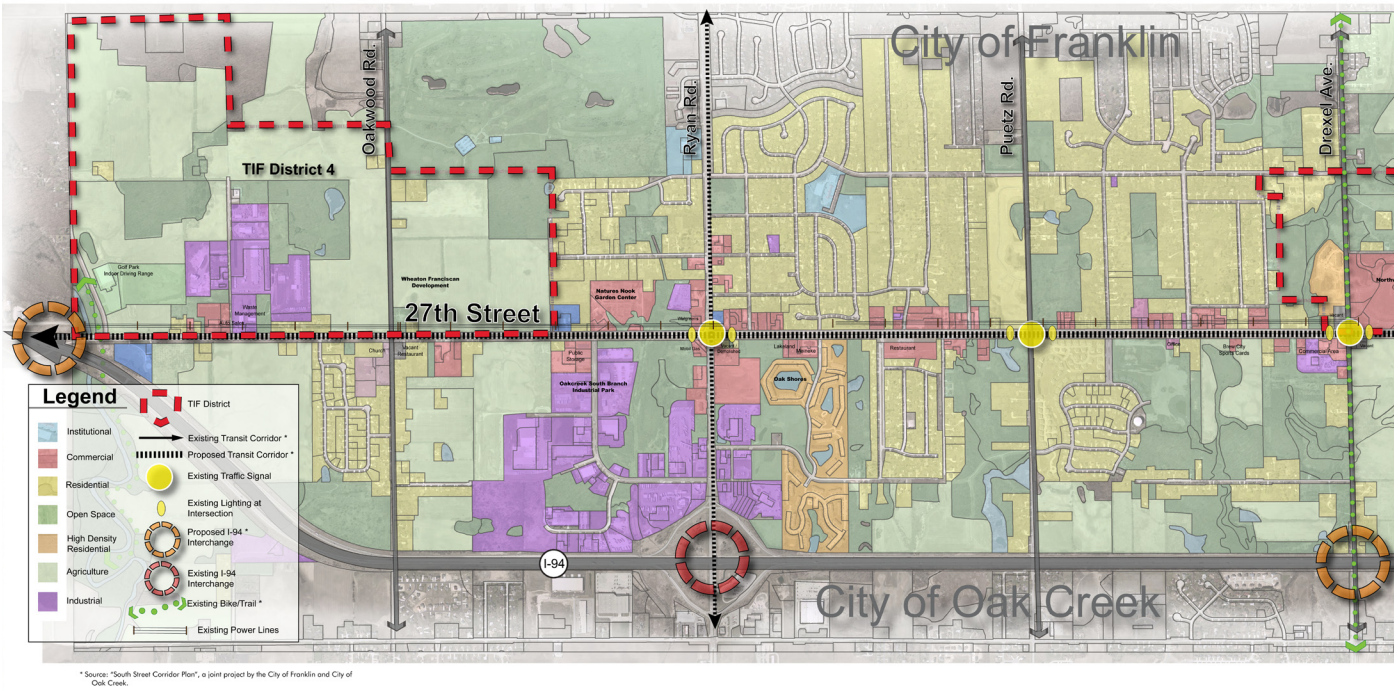


Figure 2-1: Existing Conditions Analysis Map

- Right of way restrictions.
- Visual character of existing neighborhoods.
- Specific environmental opportunities or concerns.
- Pedestrian connections.
- Proposed roadway improvements/impacts

Figure 2-1 illustrates the existing conditions along South 27th Street.

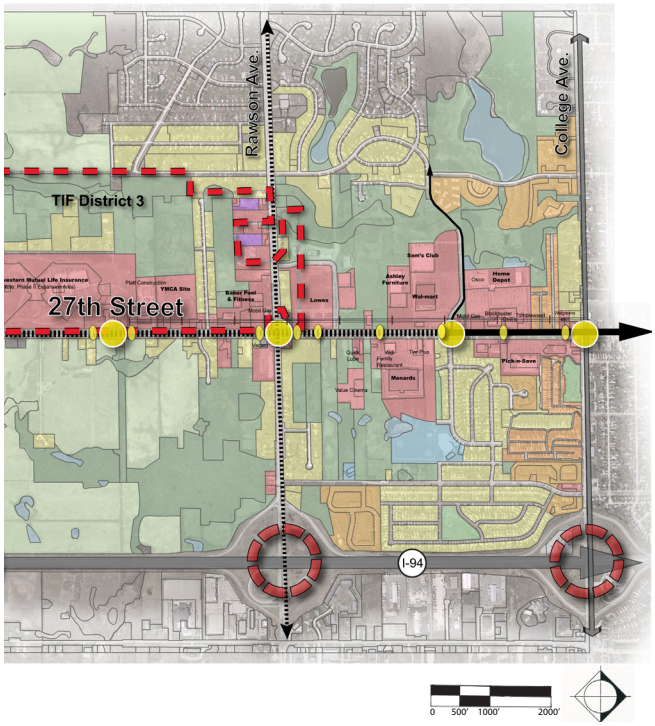
South 27th Street is currently a four- and six-lane highway with an approximately 45-foot center median. Median widths vary at certain locations along the corridor to accommodate for the addition of other travel and turn lanes.

Currently, South 27th Street has seven existing traffic signal intersections that are illuminated with cobra-head light fixtures.
A major visual barrier along the corridor is the existing power and telephone lines running along the west side of the roadway. These utility lines run the entire length of South 27th Street from West College Avenue to West South County Line Road, except for the area immediately in front of the Northwestern Mutual campus.

The only sidewalks that currently exist are from College Avenue to Rawson Avenue on the west side of the corridor, and from West College Avenue to West Sycamore Street on the east side of the corridor. In all, there is only approximately 1.4 miles of sidewalk for this six-mile-long corridor.

Milwaukee County Transit Route 27 runs along the corridor only from College Avenue to Sycamore Street. The route also extends into the Wal-Mart®™/ Sam's Club®™ development.

The City of Franklin has two TIF districts in place to help fund infrastructure and development



projects along South 27th Street. The City of Oak Creek is in the process of preparing a TIF district on the east side of the corridor.

Existing Land Use

The existing land uses within the study area are classified into seven categories: agriculture/ open space, commercial, industrial, institutional, recreational, single-family residential, and multi-family residential.

Agriculture/Open Space – Typical land uses include small farmsteads, nurseries, and environmental areas. Some remnant agricultural parcels surrounding the South 27th Street corridor remain at the southern end of the corridor.

Commercial – Commercial uses are typically related to the sale of products and services; this can include shopping centers, central business districts, office

buildings, automotive and other repair services, motels, restaurants, gas stations, neighborhood stores, and most any other enterprise which serves clients or provides employment (except industrial uses). This land use tends to locate near major transportation arterials. An example of commercial land use along the corridor includes the shopping centers between Rawson Avenue and College Avenue.

Industrial – Industrial land uses include manufacturing and industrial parks, light industry (fabrication or packaging products), and transportation/ distribution facilities. The location of industrial sites, like commercial, are usually near major transportation arterials and the demand is driven by the workforce, transportation systems, and the end users. The Oak Creek South Branch Industrial Park, just south of Ryan Road, is an example of an industrial land use located along the corridor.

Institutional – Land uses such as education, government, religious, health, correctional, and military facilities are classified as institutional land uses. Institutional land uses along the corridor include the day care facility located between West Ryan and West Oakwood roads.

Recreational – Recreational land uses typically include all indoor and outdoor recreational facilities, public parks, pedestrian and bicycle trails and all associated buildings, parking areas, and surrounding grounds. Some recreational uses within and near the study area include a portion of the Oak Leaf Trail along Drexel Avenue, and Falk, Johnstone and Grobschmidt parks.

Residential – Residential uses include the land and all dwelling structures designed for living such as single-family houses, townhouses, multi-family, manufactured houses, and all ancillary structures such as shed, garages, car ports, etc. Mobile home parks are also classified in this category.

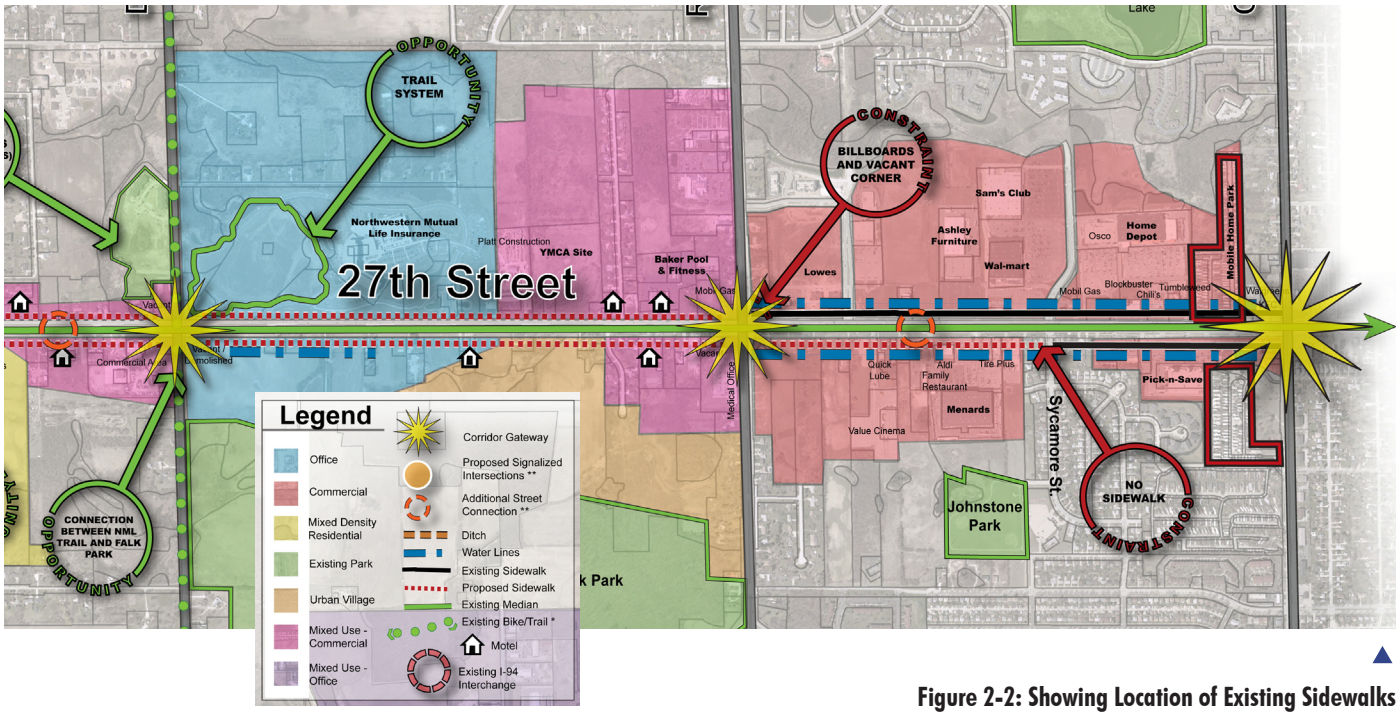


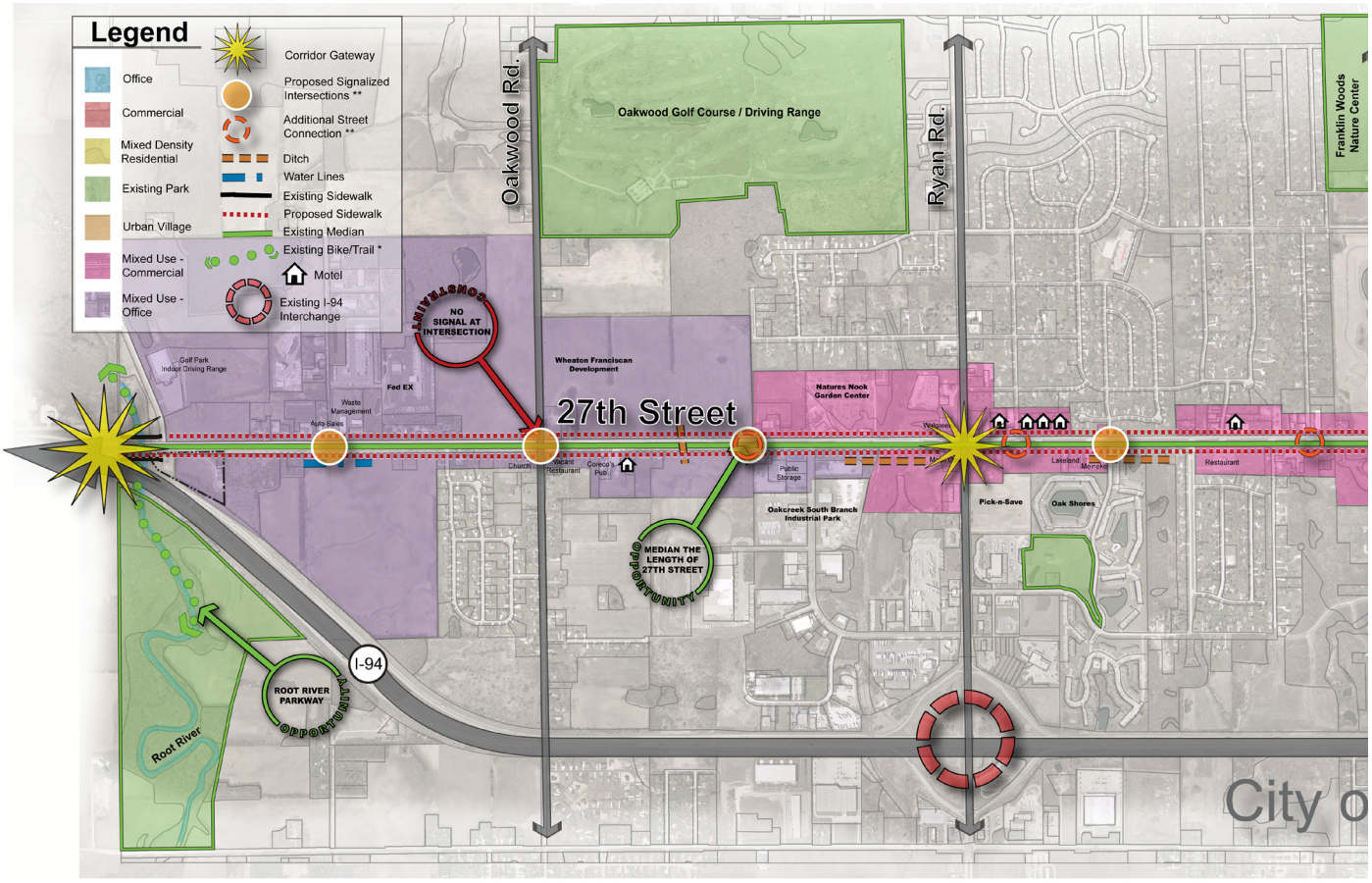
Figure 2-2: Showing Location of Existing Sidewalks

Single-family land uses in this area consist mainly of neighborhood and subdivision developments. These are concentrated primarily in the area between Drexel Avenue and Ryan Road. Multi-family residential development is also present within the study area. An apartment complex is located just north of West Ryan Road, and a heavier concentration of multi-family is located just south of West College Avenue. This area includes a mix of apartment complexes, duplexes, and a mobile home park.

Opportunities and Constraints

After the existing conditions analysis was complete, the design team created an opportunities and constraints analysis. The opportunities and constraints analysis identifies sites where enhancements could be implemented and key areas where development could occur to enhance the character of the corridor. Figure 2-3 illustrates the opportunities and constraints analysis of the corridor. A summary of key findings include:

- Sidewalks – Currently sidewalks do not exist along the corridor except for a small section just north of Rawson Avenue, see Figure 2-2. At this time, it presents itself as a constraint for the movement of pedestrians and bicyclists along the corridor. Sidewalks would allow pedestrians to safely move throughout the corridor gaining access to businesses, places of residence, recreational destinations, and regional trails.



Note: Desired Land Use referenced from "South 27th Street Corridor Plan", a joint project by the City of Franklin and City of Oak Creek.

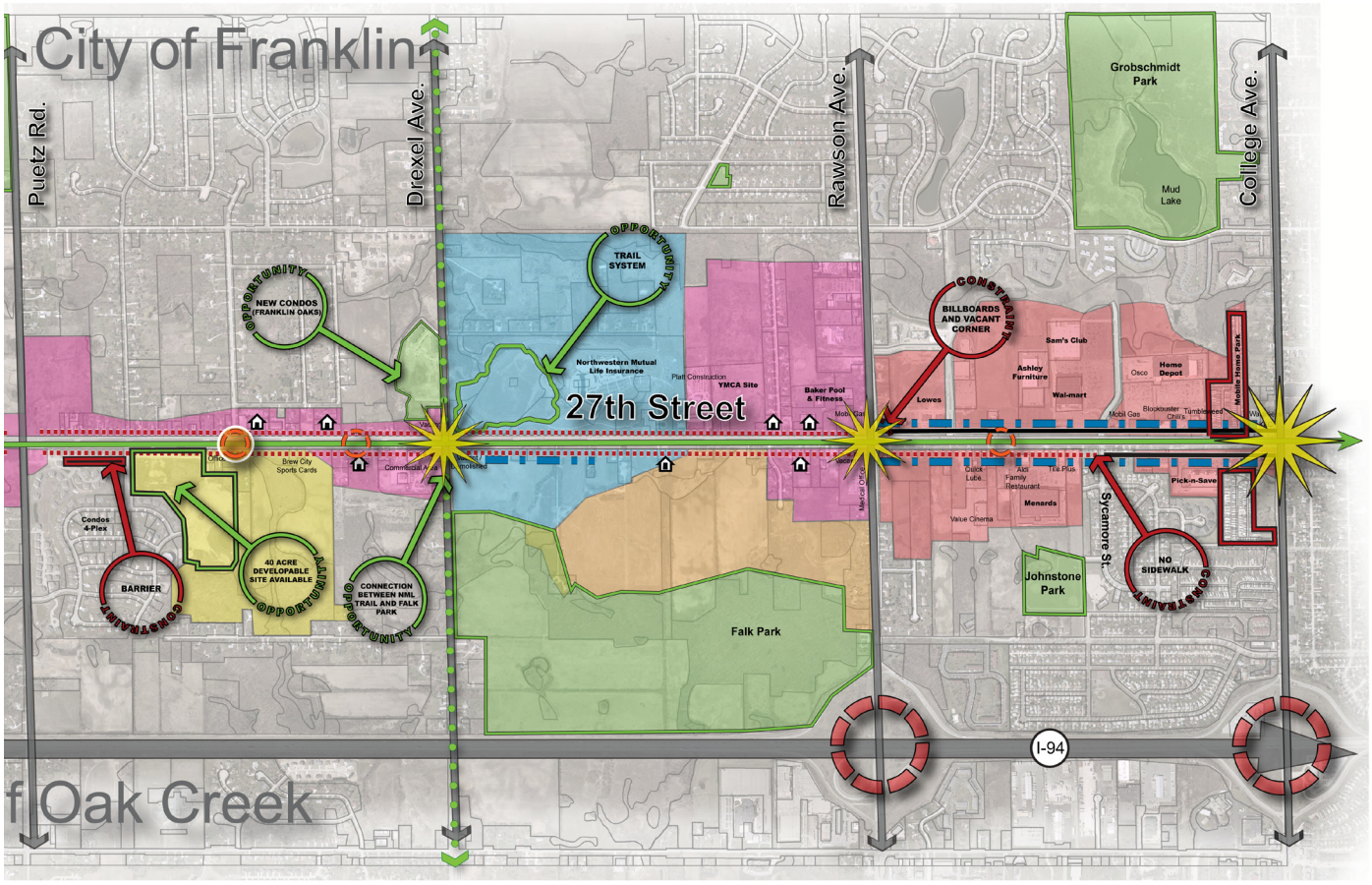
* Source: "South 27th Street Corridor Plan", a joint project by the City of Franklin and City of Oak Creek.

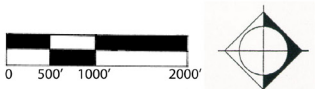
** Source: "WIS 241 (South Street) Access Management Plan"

Figure 2-3: Opportunities & Constraints Diagram

- **Trail System –** The existing trails within or near the study area are not connected and are underdeveloped. As mentioned previously, only a small portion of South 27th Street has sidewalks. The Oak Leaf bike trail along Drexel Avenue bisects South 27th Street; however, the trail does not have dedicated right of way or trail markings in this location, and it is not widely known or used in this area. Northwestern Mutual also has a trail system on their campus but, it is maintained for employee use. Additionally, Falk Park contains some limited grass-mowed trails that are used by area residents. The nature of the trails in the area presents a constraint for pedestrian and bicycle movement.

- **Median –** There is an existing center median stretching the entire length of the South 27th Street study area. The median provides a great opportunity to enhance the character and image of the corridor by including new signage, gateway markers, and a plant palette that allows for more visual appeal.


City of Franklin
Puetz Rd.
Drexel Ave.
Rawson Ave.
College Ave.
Grobschmidt Park
Mud Lake
OPPORTUNITY
NEW CONDOS (FRANKLIN OAKS)
OPPORTUNITY
TRAIL SYSTEM
CONSTRAINT
BILLBOARDS AND VACANT CORNER
Northwestern Mutual Life Insurance
YMCA Site
Baker Pool & Fitness
27th Street
Sam's Club
Ashley Furniture
Wal-mart
Lowes
Home Depot
Mobile Home Park
Brew City Sports Cards
Condos 4-Plex
CONSTRAINT
BARRIER
OPPORTUNITY
40 ACRE DEVELOPABLE SITE AVAILABLE
OPPORTUNITY
CONNECTION BETWEEN NNL TRAIL AND FALK PARK
Falk Park
Menards
Pick-n-Save
Sycamore St.
CONSTRAINT
NO SIDEWALK
Johnstone Park
I-94
f Oak Creek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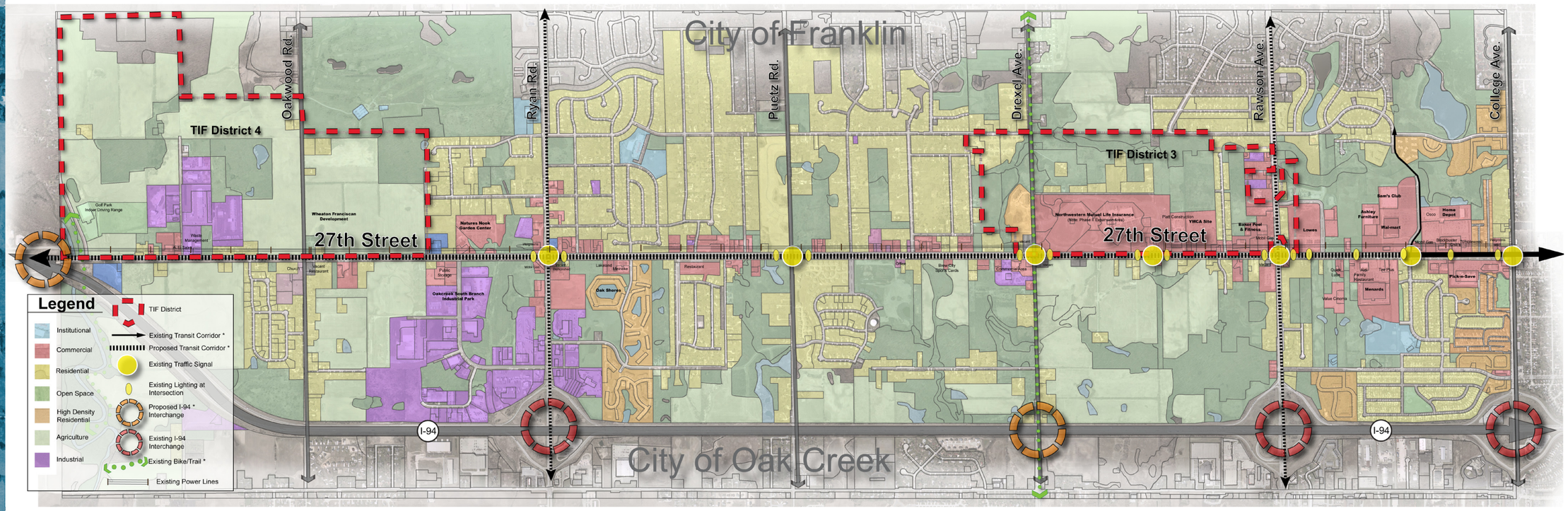
Chapter 2:
Presentation Material

This presentation material is a summary of the concept boards used during the design charrettes and public open house.

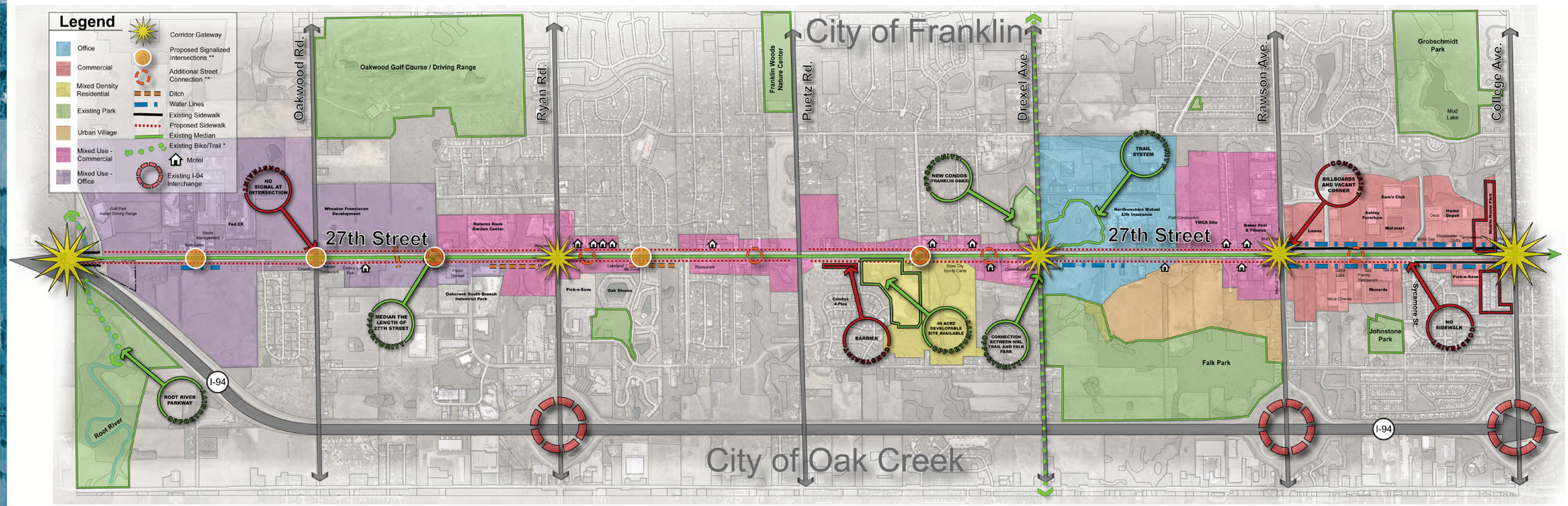
EXISTING CONDITIONS ANALYSIS



* Source: "South Street Corridor Plan", a joint project by the City of Franklin and City of Oak Creek.

27th Street Corridor plan and streetscape design

OPPORTUNITIES AND CONSTRAINTS DIAGRAM



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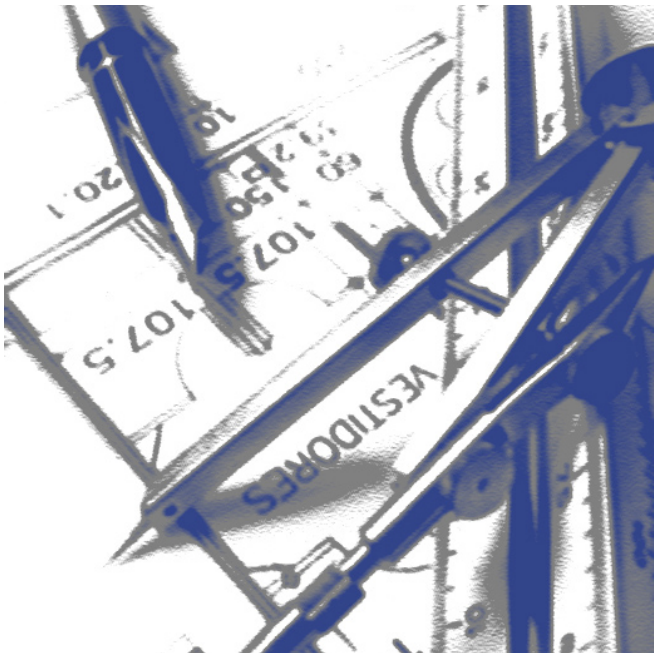
Chapter 3

The Planning and Design Process



Who's Involved?

The 27th Street Streetscape Design Manual is the result of a 10-month process designed to determine how the cities of Franklin and Oak Creek envision the future of this vital transportation corridor. A number of tools were utilized to gather and quantify the opinions of stakeholders and participants in the process. Those tools included:

- Key stakeholder interviews.
- Public open houses held Nov. 2, 2006, and May 31, 2007.
- Development of a community input sheet.
- Regular Steering Committee meetings.
- Joint Franklin and Oak Creek Common Council and Community Development Authority presentations.
- Feedback from representatives of Franklin and Oak Creek.

The steering committee for the 27th Street Streetscape Corridor Plan was made up of people and public officials representing the two communities. The responsibility of this group was to act as a review committee for design concepts and other ideas intended to enhance the corridor and strengthen the sense of community.

As part of the visioning process, the public was invited to two open-house workshops. The open houses were opportunities for residents and local business operators to choose design elements and thematic images that they think will create an attractive and functional corridor. By integrating the various opinions, comments and positions that were expressed by the participants, a general consensus on the future direction of improvements was reached.

The Process

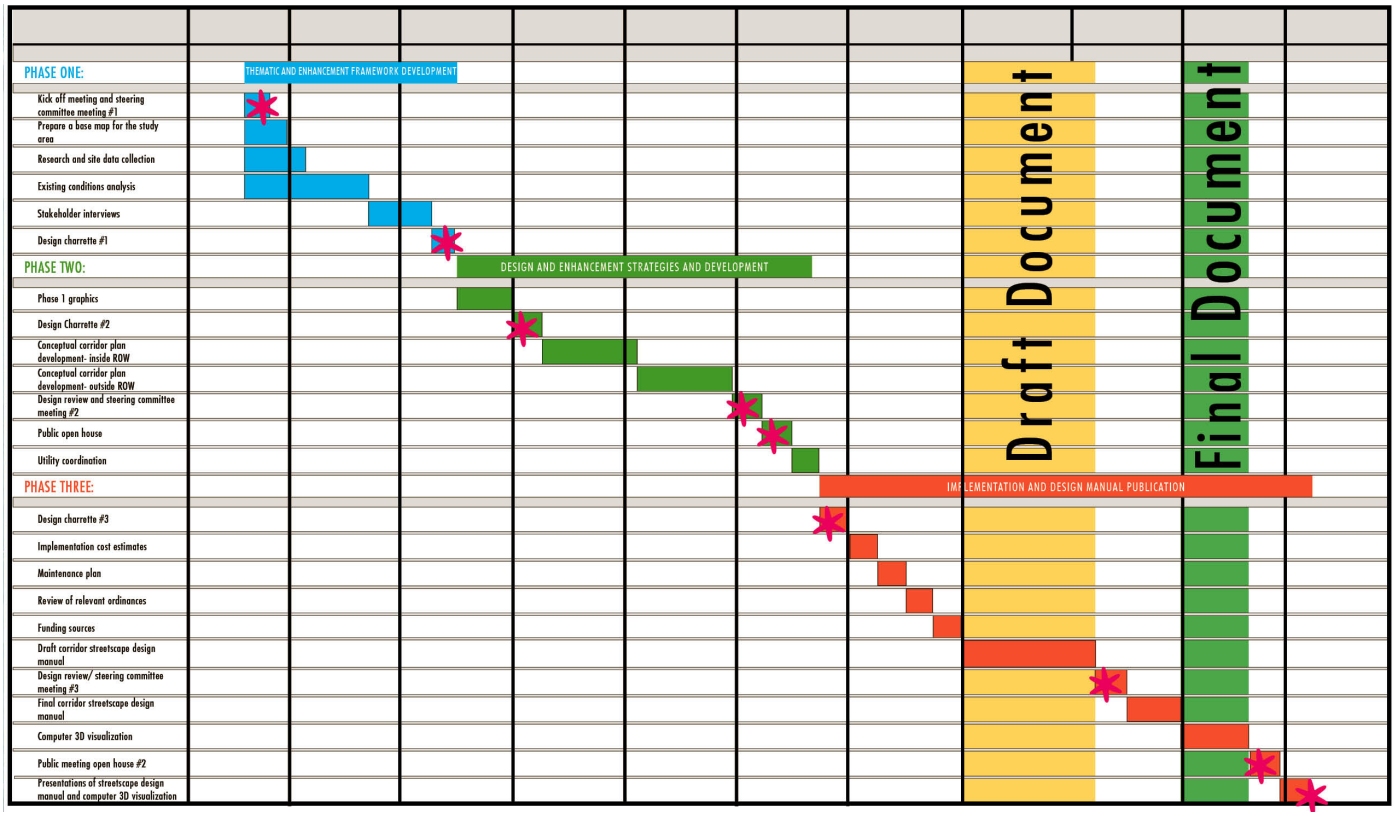
The design process was a three-phase process:

- **Phase I:** Thematic Enhancement Framework Development
- **Phase II:** Design Enhancement Strategies and Development
- **Phase III:** Implementation and Design Publication.

This three-phase approach addressed:

- Conditions of the corridor
- Integration of stakeholder and community vision
- Development of roadway enhancement design elements
- Recommendations for best-practice policy development
- Transportation review
- Creation of implementation tools.

During each major phase of work, members of the design team met in a design charrette format to review the analysis and design concepts and craft the preliminary conceptual design recommendations. At the conclusion of each charrette, a formal steering committee meeting was held to present the team's findings and the outcomes of the charrette.



The work completed during Phase I included inventory and analysis of the corridor and the identification of several opportunities and constraints along the route. The primary product of Phase 2 was a theme for the corridor and the development of prototypical streetscape design concepts.

The final phase included key steps and resources for implementation, a computer animated model, and the development of this design manual.

Establishing a Vision for This Project

During the first phase of the project, a visioning workshop was conducted with members of the steering committee to gain insight and establish a clear direction for the preparation of the corridor design treatments.

Steering committee members were asked to review a series of issues related to aesthetics (the style and character of proposed elements) and amenities. In each case, they were asked to rank their top three issues as appropriate or not appropriate. This exercise was repeated at the November 2006 public open house. Detailed responses to this visioning exercise are located in Appendix C and illustrated in Figure 3-1. A summary of the top ranked issues for each exercise follows.

Aesthetics

1. Consistent signage
2. Use of ornamental lighting

3a. A series of gateway statements

3b. A single, monumental gateway marker

Amenities

1. Walking paths / pedestrian accommodations sidewalks

2a. Traffic signal upgrades

2b. Use of traditional materials

3. Use of softscape (vegetation) along corridor

Figure 3-1: Images taken from the visioning exercise presentation.

Development Guidelines

1. Design guidelines for architectural review
2. Development of a town center
3. Design guidelines for signage

4a. Limited / controlled access onto corridor

4b. Parking located behind structures

As a final task in the visioning exercise, participants were asked to provide their opinion on the character of the cities of Franklin and Oak Creek. These responses were used to help establish a clear direction of the design treatments for the roadway. Highlights of some specific questions and their summarized responses follow.

1. What are the top two things that will make this project successful?

- Financing/money
- Clear development guidelines along with clear and uniform zoning
- To get the cities of Franklin and Oak Creek to work together and develop a local theme
- The development of the Oak Creek Urban Village
- Support from the local officials
- Innovation in lighting/landscaping/signage
- Public support
- High-quality design

2. What two things will act as barriers/challenges to the success of this project?

- Financing/money
- Unknown road rehabilitation schedule/design
- WisDOT support
- Developer standards
- Existing land use challenges/site condition challenges
- Cost of maintenance

3. If a good friend were to visit you who had never been to Franklin/Oak Creek, where would you take him/her to "show off" your community?

- Northwestern Mutual Campus
- Harley Davidson
- Executive residential development
- Open rural areas
- Parks and golf courses (Bender Park, Whitnall Park, Oakleaf Trail, Oakwood Public Golf Course, Tuckaway County Club)
- Howell Avenue
- Franklin civic buildings (library, civic center, city hall)
- Lakefront
- Southridge Mall
- Business park
- New retail concepts
- Oak Creek Community Center

4. What elements about Franklin/Oak Creek best capture the essence of the region?

- Colonial Woodlands, combination of traditional farming with growth of industry/ business
- Planned open space
- The current balance of development
- Preservation of natural resources

5. What are some of the unique elements along the enhancement area that should be capitalized upon in this Corridor Streetscape Manual?

- Focus on pedestrian and bicycle amenities
- Make pedestrian friendly
- Northwestern Mutual campus, Wheaton Franciscan Healthcare Center
- Planned urban village
- Woodlands/open space

Stakeholder Involvement

Discussions and feedback for several critical issues were also facilitated with both the project steering committee and the key stakeholders. In total, nearly 40 interviews were conducted representing public officials and agencies, local developers, business owners, property owners and special interest groups. A listing of stakeholders that participated in these interviews can be found in Appendix B. The interviews helped to add additional perspectives to the development of the conceptual treatments and to identify potential concerns on a more specific basis.

Key issues discussed include:

1. ***How should gateways be expressed?***
   The general sentiment was that the gateways should be exciting, with natural landscape accents, but bold in design. It was noted that the gateways should include an architectural feature that allows for the development of a unique corridor logo. The gateways could be represented in several physical forms, and could include signage application.

2. ***Where and to what degree should additional landscaping be encouraged in existing setbacks?***
   A native planting application with key considerations to low maintenance were preferred. The idea of creating a sustainable corridor using a planting application scheme was also discussed favorably.

3. ***How can any existing open spaces or natural features be used to add character to the corridor?***
   Most participants agreed that the preservation of some existing open space should be encouraged. The creation of a stormwater system as a feature was also discussed. Incorporating the stormwater system into the larger regional system was viewed as a long-term activity of interest.

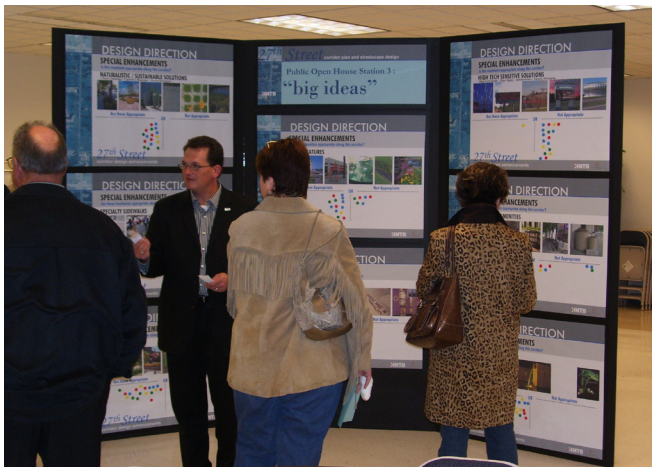


Figure 3-2: Images taken from the public open house.

4. ***To what degree should the South 27th Street corridor become more accessible to pedestrians and cyclists?***
   The consensus was to encourage pedestrian and bicycle movement along the corridor, but separated from the roadway via a planted parkway strip if possible. Inclusion of other pedestrian friendly elements, such as site furniture and signage, was also a high priority to establish a more friendly scale to the overall corridor.

5. ***What architectural elements (materials, roofline, signage, etc.) should be regulated?***
   Providing signage regulations, including the use of grouped signage and imposing stricter height restrictions on signage should be encouraged. New signage for the purpose of advertisements (e.g. billboards etc) should not be permitted

   However, the introduction of a coordinated wayfinding and graphic identity system for the corridor that could communicate community events and aid in traffic mobility should be encouraged. Participants were mixed as to the control of building architecture. Some preferred diversity in high-quality styles rather than a common design theme.

Priority Exercise

Once the existing conditions analysis was complete, it was important to gauge the community's desire for the character of the corridor as well as the level of investment they desired on specific built enhancements.

As shown in Figure 3-2, participants were asked to take part in an enhancement priority exercise that focused on determining the appropriateness of enhancements at the steering committee meeting and the public open house.

First, character was evaluated for a variety of potential corridor improvements. Three to four enhancement images were presented that ranged from traditional examples to contemporary applications of each enhancement, and participants were asked to "vote" on which enhancements were appropriate for the South 27th Street corridor.

Next participants were asked to evaluate the level of treatment. For this, three to four images were once again presented, ranging from "minimal" applications to "aggressive" applications. This further enabled the design team to determine the level of investment desired for each type of enhancement that were appropriate for the South 27th Street corridor. The results of the full exercise can be found in Appendix C of this design manual.

In general, the discussion of the preferences and direction of overall corridor enhancements fell into two categories: physical/capital improvements and regulatory issues.

Key desired physical improvements included:
- Burial of overhead utilities and power lines.
- Consistent corridor signage.
- Provision for corridor gateway structure/marker.
- Extensive use of native vegetation/plant material/softscape.
- Controlled future access onto corridor.

Key desired regulatory or operational components included:
- Provision of consistent signage as it relates to signage controls.
- Removal/restriction of billboards.
- Establishment of annual maintenance program.
- Design guidelines for new corridor signage standards.
- Design guidelines for new architectural review standards.

Conclusions

The series of steering committee, stakeholder and public input meetings resulted in a summary of the general design direction for the corridor elements. The Steering Committee and the public generally agreed on the following concepts:

- Preferred applications along the corridor that **were naturalistic/green/site sensitive solutions**.
- Strong desire to include **graphics** – special enhancements (including decorative street signage and banners).
- Strong desire to include appropriate **water features**.
- Desire to utilize **natural materials** in the various design elements.
- Preferred concepts that included detailed **ornamentation** of pedestrian elements (decorative plantings, trees, lighting, etc.).
- Restriction of **billboard** signage.
- Include decorative and accent **landscape lighting** throughout the corridor.
- Elevate the **pedestrian amenities** along the corridor.

Items or issues that the steering committee and public had varied opinions on included:

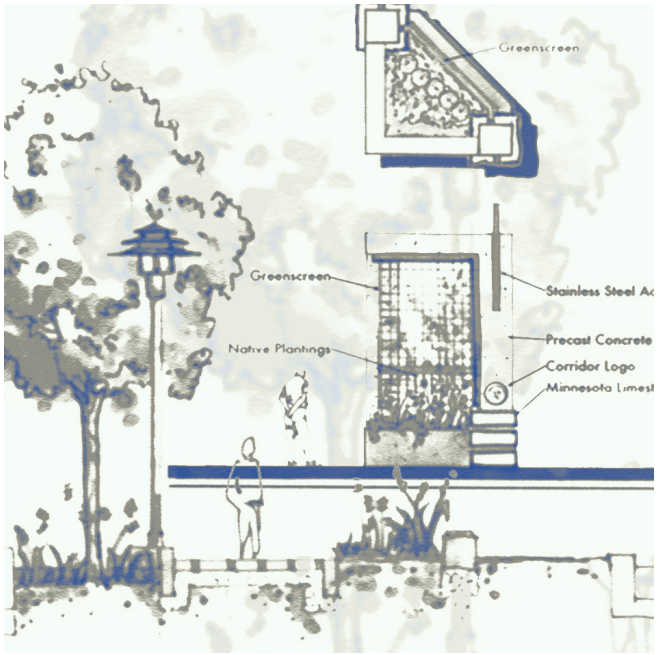
- **High Tech / Electronic Corridor** – Steering committee endorsed the concept stronger than the public.
- **Public Art** – Public approved of the idea, but the steering committee was more neutral.
- **Signage** – Public was cautious about additional signage, whereas the steering committee endorsed a comprehensive wayfinding/signage system.
- **Traffic Calming** – Public was cautious about roundabouts, however were open to the idea of creating them as a focal point/element along the corridor where conditions were favorable to do so and/or permitted.

Figure 3-3: Public open house flyer.

The data gathered through the participants' surveys and workshops provided valuable information that was used to establish a common language of design throughout the conceptual phase. By encouraging a high level of participation through these facilitated exercises, the recommendations included in the conceptual design plan reflect their values and ideas.

Chapter 4

Conceptual Design



What is Conceptual Design?

The conceptual design of the corridor creates a "physical form" for the various themes and ideas developed as project goals. These enhancements further defined the overall vision for the corridor, setting a high-quality design statement for the cities of Franklin and Oak Creek.

Conceptual Design Framework

During the conceptual design phase, the corridor was divided into three character zones. Each zone reflects the character and intensity of the corridors' land uses or development patterns.

As shown in Figure 4-1, character zone "A" begins at West Ryan Road and extends south to the I-94 interchange with West South County Line Road Exit 325. Character zone "B" begins at West Drexel Avenue and extends south to West Ryan Road. Character zone "C" begins at West College Avenue and extends south to West Drexel Avenue.

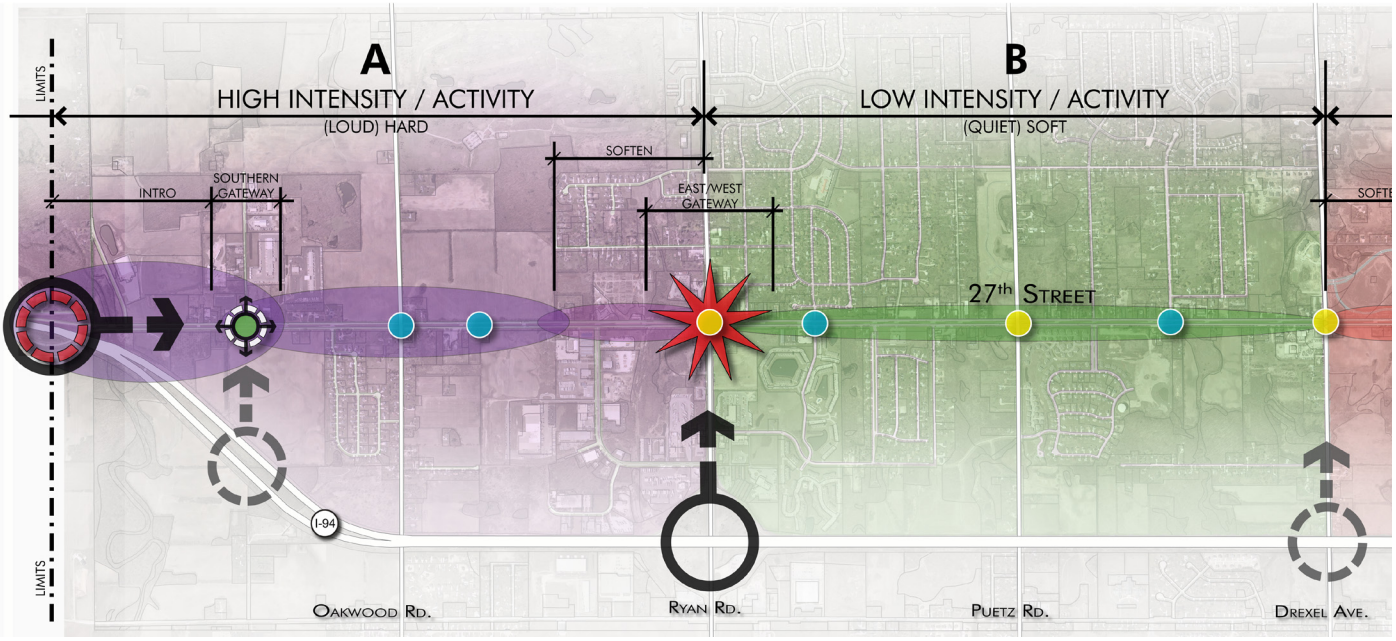


Figure 4-1: Corridor Character Map

Character Zone 'A'

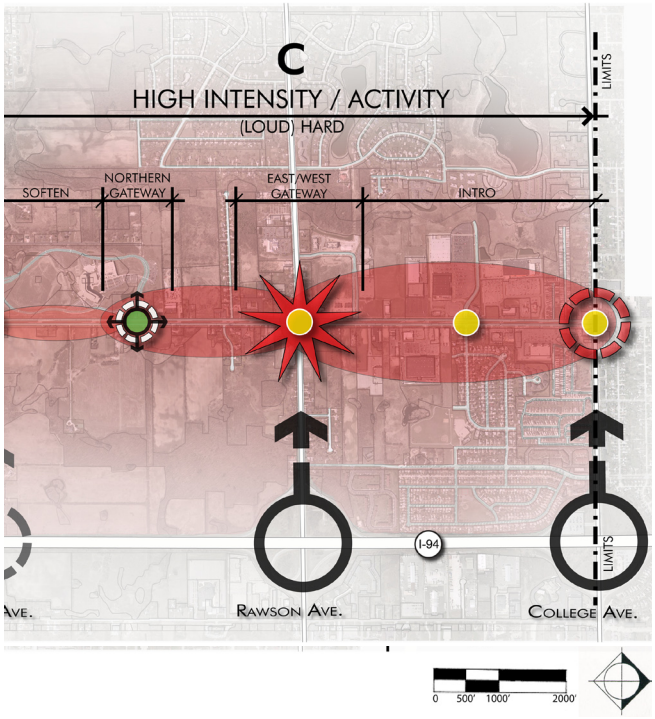
Zone "A," located at the southern end of the corridor, is characterized as a high intensity area with a concentration of planned commercial space. The main entrance into this zone will contain a primary gateway at the intersection of South 27th Street and West Ryan Road. This major gateway will be one of two developed for the entire corridor. Planned land use in this zone includes office, small business parks, and commercial development, connected by a series of secondary roads, which are outlined in the Wisconsin Department of Transportation's Access Management Plan (See Appendix F).

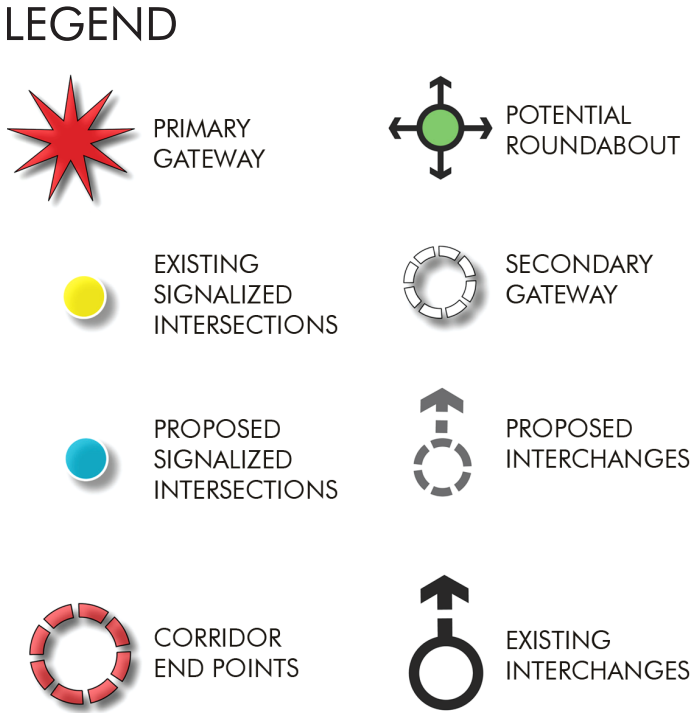
As new development continues to increase in this area, two proposed signalized intersections are recommended by WisDOT (see Appendix F). Through the I-94 North-South Corridor study, WisDOT is evaluating construction of a full-access interchange near Elm Road with a roadway extension to South 27th Street. The interchange would replace the existing partial-access interchange at West South County Line Road Exit 325.

For this particular zone, a roundabout is proposed at this new interchange connection point to South 27th Street. Further engineering review will have to be conducted by WisDOT to determine the feasibility of constructing the roundabout at this location. If it is determined that a roundabout is not feasible, then application of other gateway elements or signage is recommended.

Character Zone 'B'

Zone "B" is characterized by the low-intensity area of activity along the corridor. This low-intensity, or "soft and quiet," area is reflected by the smaller scaled business, residential and undeveloped land uses within this area. The most prevalent land use adjacent to South 27th Street within this zone is residential. As a result, this zone reflects a development pattern with





softer edges, and more native landscaping and natural systems along the sidewalks and roadways.

The physical enhancements in this zone will be used primarily as a connecting point between South 27th Street and the adjacent residential neighborhoods. This zone recommends that the existing signalized intersections be upgraded with pedestrian crossing markers and lights. The addition of two more signalized intersections with pedestrian crossing enhancements is also highly encouraged for this zone. The addition of these signalized intersections will be further evaluated during the engineering phase.

Character Zone 'C'

Zone "C" is similar to zone "A" because it is also characterized by a highly intense area of activity. The primary difference between Zones "A" and "C" is their land uses, with mainly large-scale retail and commercial uses dominating this section of the corridor. A primary gateway entrance into the corridor off Rawson Avenue is proposed. In addition, it is recommended that the existing signalized intersections be upgraded to follow the standard pedestrian crossing treatments proposed in this plan.

A potential roundabout at the entrance to Northwestern Mutual and the planned Oak Creek Urban Village will serve as this zone's secondary gateway and a major physical statement of the importance of the adjacent land uses/development opportunity in this area.

Like the proposed roundabout at the southern edge of the corridor, this roundabout will also require a series of engineering and transportation reviews by WisDOT. WisDOT is in the process of evaluating the need for a new interchange at Drexel Avenue and I-94. If an interchange is constructed, it will allow vehicular traffic access to the South 27th Street corridor between character Zones "B" and "C."

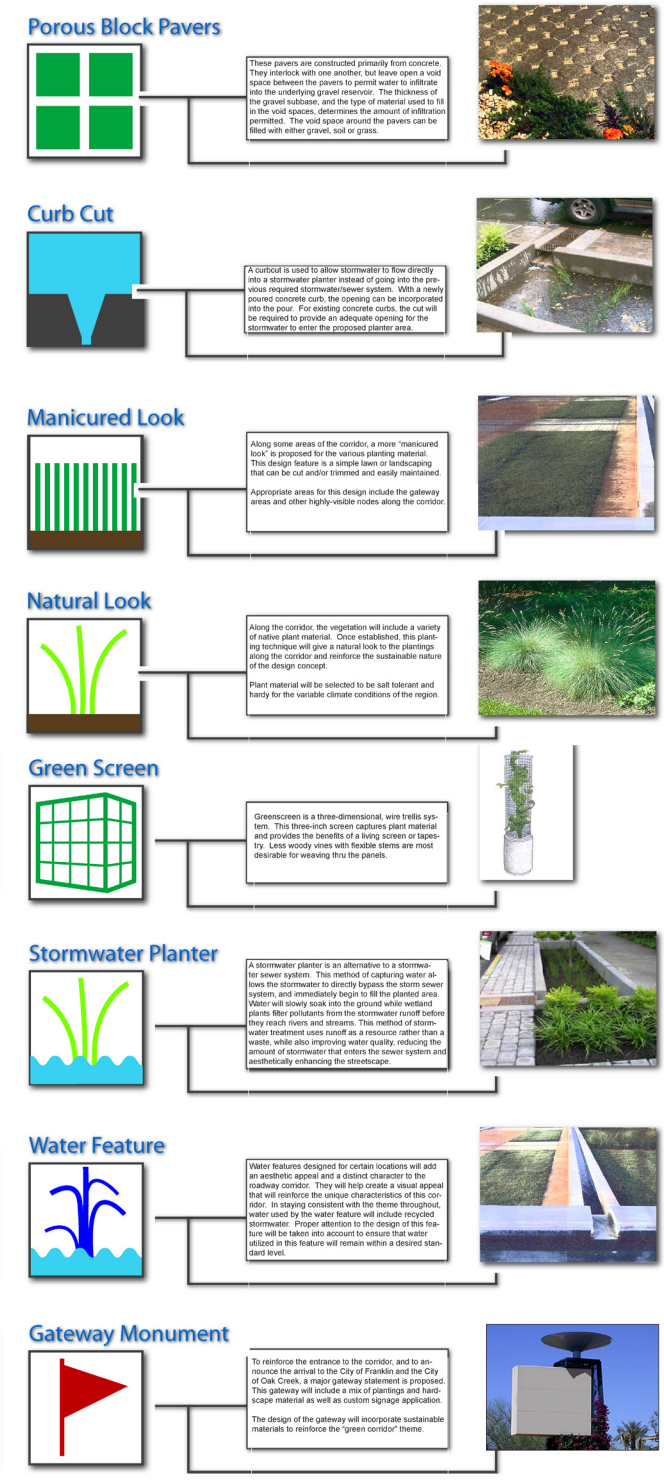


Figure 4-2: Smart Street elements: Sustainable concepts proposed along the corridor.

Conceptual Design Themes: Creating a Sustainable and Smart Street

Design Inspiration

Once the conceptual design framework was established by the corridor character zone analysis, a theme for the corridor was refined. During the stakeholder interviews and Steering Committee meeting exercises, ideas for a "sustainable street" corridor (Figure 4-2) or "high-tech electronic" corridor (Figure 4-3) were discussed. It was paramount to develop a theme for the corridor that was inclusive of all the input gathered to date, and one that reflected the desire to express both a "high-tech" and "sustainable" design.

Creating a "Smart Street"

The development of an urban streetscape as a "smart street" was the underlying thematic design concept. The definition of a "smart street" is one that provides both sustainable recommendations and high-tech solutions. The concept of developing a "smart street" reflects a forward-thinking community that promotes an innovative approach to urban infrastructure design.

High-Tech and Sustainable Solutions

Several key recommendations are proposed as design concepts for the creation of a "smart street" along the South 27th Street corridor. Through the use of stormwater management techniques, environmentally friendly lighting and recycled materials throughout the corridor, the "smart street" demonstrates how the design of an urban corridor can greatly promote a positive identity for the community. Specific elements proposed along the corridor include:

- ***Stormwater management recommendations***
  - Uses water efficient native plantings
  - Collects rainwater
  - Promotes stormwater infiltration
  - Includes porous paving

- ***Use of recycled materials in pedestrian furniture***
  - – Recommends recycled concrete aggregate
  - – Uses high recycled content in site furnishings
  - – Utilization of porous pavements
  - – Recommends recycled concrete aggregate
  - – Provides opportunity to include range of paving materials

- ***Utilization of native planting applications***
  - – Includes tress and native vegetation planting applications
  - – Encourages green-roof technology for future development

- ***Utilization of energy-efficient lighting***
  - – Includes energy efficient, solar powered accent and pedestrian lighting

- ***Utilization of high-tech infrastructure***
  - – Includes fiber optic technology, "smart" street signage concepts

A stormwater planter is recommended for the South 27th Street corridor (Figures 4-4, 4-6) to collect a portion of the roadway runoff through small curb cuts in the side of the planter to minimize the need for large stormwater basins. This system will not replace the need for traditional stormwater sewer systems, but will allow some water to filter into the ground reducing the amount of runoff volumes; which will then recharge groundwater and help sustain stream base flow.

The use of native plants also allows for filtration of the water by transpiration. The concept for the stormwater planter includes an approximately 7-foot-wide area set a foot in depth below street level. During the winter, the stormwater planter will also serve as a space for snow collection and retention.

The stormwater concept will have to be evaluated and accepted by WisDOT and the Milwaukee

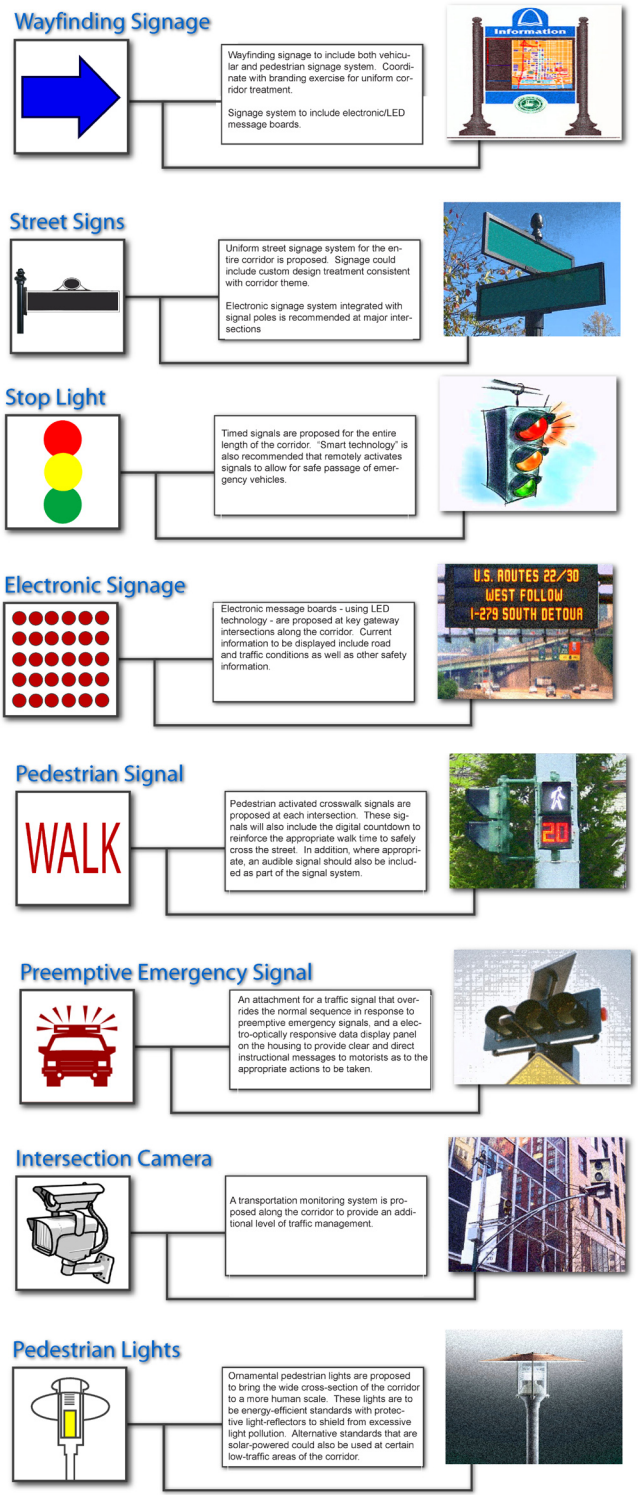


Figure 4-3: Smart Street elements: High-tech concepts proposed along the corridor.

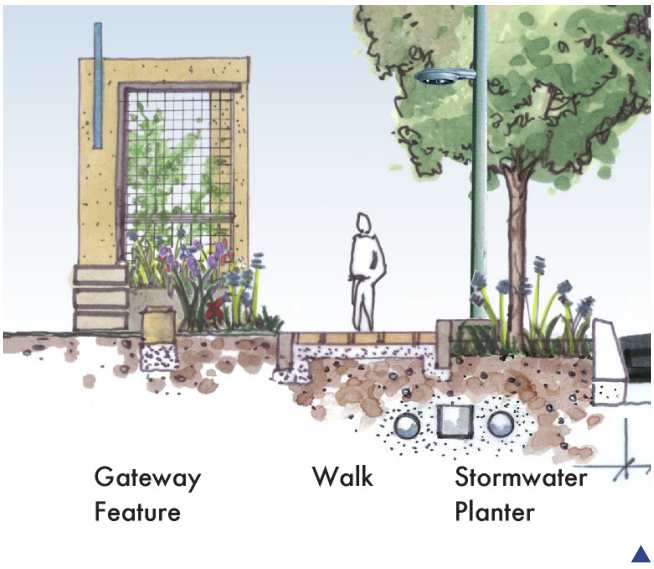


Figure 4-4: Porous pavement sidewalk.

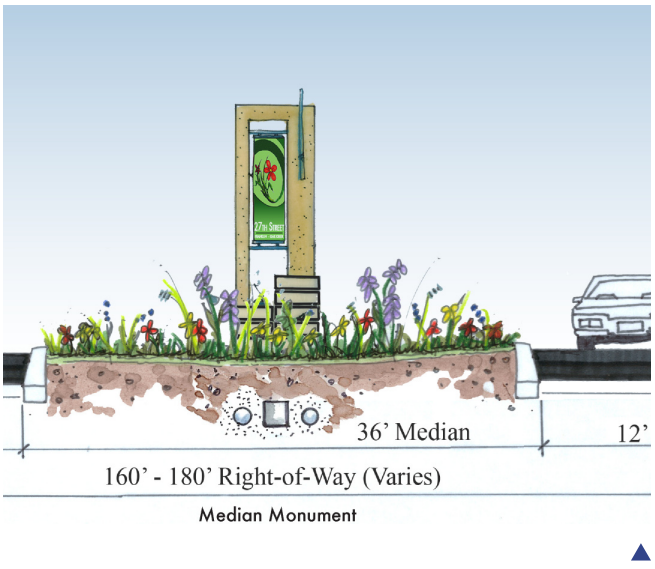


Figure 4-5: Typical median section.

Metropolitan Sewerage District (MMSD). A detailed environmental analysis regarding soil compatibility will need to be conducted and a detailed list of appropriate plantings for these collection areas will need to be refined. See Appendix D for the recommended stormwater seed mix for this type of planting approach.

A similar stormwater management feature is also recommended for the center medians (Figure 4-5). Instead of a more formalized stormwater planter, the median will include a series of curb-cuts to allow the runoff to enter a bio-swale. A bio-swale is a drainage ditch along the roadway that collects and filters stormwater naturally with the use of native plantings. Some of the same native plantings that exist within the stormwater planter could also be included in the median bio-swale. With the addition of some different plantings added to the mix, the median can provide a variety of color, height, and even seasonal interest accent plantings. See Appendix D for a sample bio-swale seed mix. For areas in the median where visual barriers are an issue, the use of low-profile prairie seed mix is recommended. This seed mix will provide a diverse mix of shorter-profile prairie grasses and wildflowers, while staying in the four feet or less range. Once the mix gets established the wildflower community will display a wide range of color from early spring to late summer. See Appendix D for a sample low-profile prairie seed mix.

A stormwater planter is just one component in creating a sustainable/smart street. Porous pavement can play a huge role in both the physical environment and aesthetics of a smart street. The use of porous pavement can facilitate biodegradation of the oils and pollutants from vehicles using the corridor. It can also help to reduce the amount of runoff by letting the water infiltrate soil and thus completing the same cycle water takes when it is collected into a stormwater planter.

By integrating these techniques into the South 27th Street design, the creation of a "smart and sustainable street" will:

- Be a visible component of the "sustainable/ smart street" that will make the South 27th Street corridor more desirable to new businesses.
- Aid in the reduction of localized flooding of adjacent properties.
- Reduce the urban heat island thru the use of street trees.
- Reduce amount of waste materials to landfills by promoting the use of recycled materials for site furnishings.
- Provide a unique theme and identity for the Franklin and Oak Creek communities.

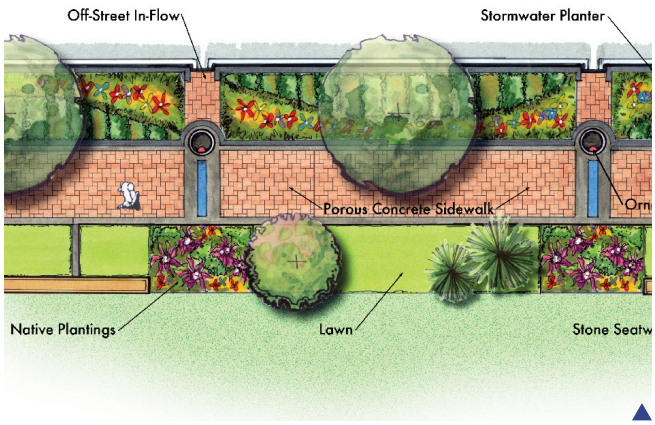


Figure 4-6: Porous pavement sidewalk.

Illustrations/Descriptions of Various Elements

Using the "smart street" as a guiding theme, a series of prototypical design concepts for the physical elements proposed along the corridor were developed. When these concepts are applied to the right of way, design guidelines emerge that can be used throughout the various corridor zones. The intent of the prototypical design elements are to set standards to help guide the future design and construction of the roadway and adjacent properties, while also forming a seamless connection between the two cities. The result of utilizing these design elements along the corridor will bring a high-quality statement and promote a "sense of place" that was identified as a leading project goal by the steering committee and community.

It is intended that these corridor enhancement recommendations be applied throughout the course of the corridor's development, but also with understanding this may be a long process. The recommendations contained in this document are meant to serve as guidelines. They are not meant for construction; rather they are meant as a visual guide for designers and decision-makers.

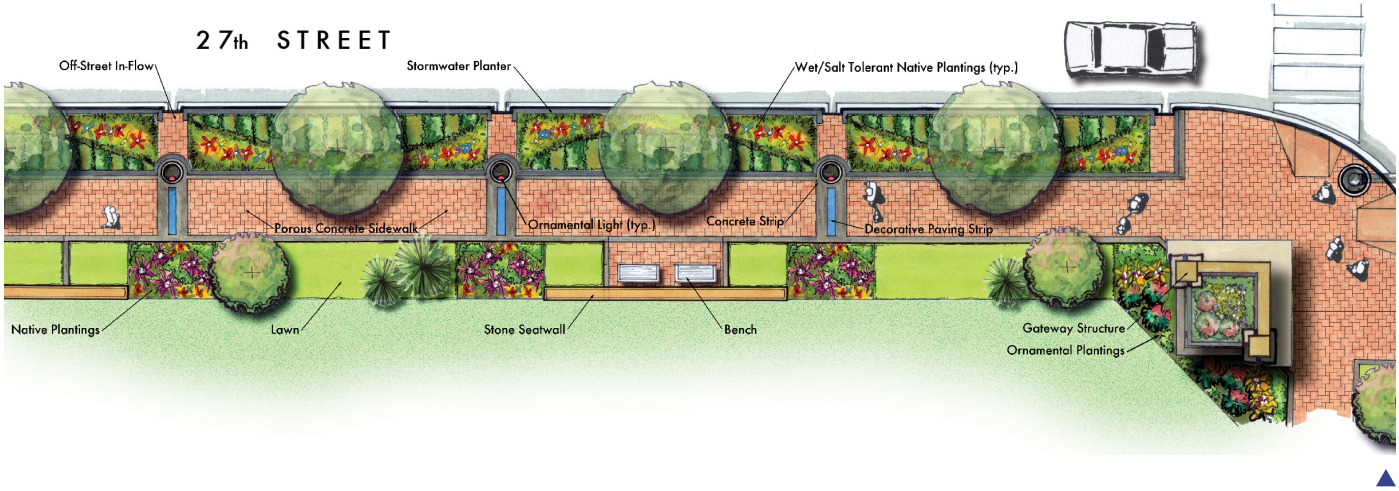


Figure 4-7: Plan View of South 27th Street "Smart" Design Approach

Construction details should be developed in coordination with WisDOT and during the final design phases of each segment of the project.

Corridor enhancement concepts were developed for the following items:

- Gateway Treatments
- Special Enhancement Areas
- Landscape Treatments
- Lighting Enhancements
- Graphic and Signage Enhancements
- Pedestrian Treatments

These corridor enhancements should be applied to the entire corridor, with varying applications depending on the desired level of treatment in each activity zone. Highlights of the prototypical corridor design elements follow.

Gateway Treatments

The gateway markers designed for South 27th Street offer a very distinctive monumental entrance to two key intersections along the corridor. As one of the single most important features for creating a memorable impression for those who travel its path, gateway features will set this corridor apart from others in the neighboring communities. They have been developed as signature design elements and will also provide valuable information for motorists using the corridor. In each gateway intersection, there are four gateway monuments proposed. Two of which will include a digital electronic message board that will provide motorists with important roadway information (see Figure 4-9). The other two will be enhanced with a vertical trellis system used for plantings, commonly called Greenscreen™ (see Figure 4-10). This will accentuate the "smart street/sustainable" approach for the roadway corridor theme.

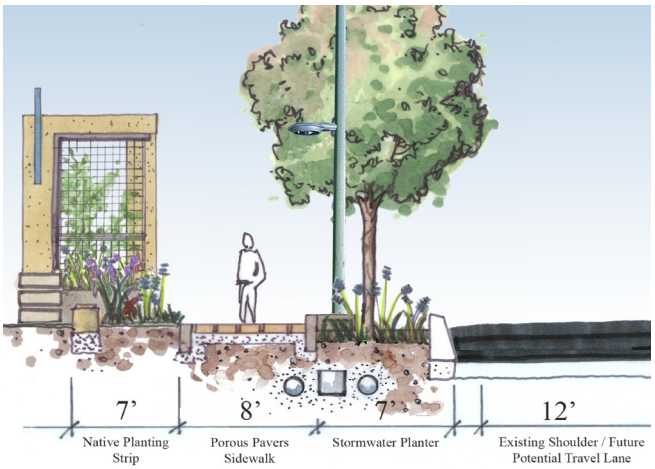


Figure 4-8: Typical section showing gateway structure placement.

The prototypical design of the gateway structure containing the electronic message board system is a 10-by-10-foot square, cast-in-place concrete structure. The proposed structure will be approximately 15 feet high. The message board will be large enough to be viewed by motorists traveling along South 27th Street. The corridor logo will be incorporated into the structure along with a seat ledge as a resting point for pedestrians/ bicyclists traveling the corridor or waiting to transfer to the local transit system.

The other two gateway structures will be the vertical trellis structure, which will be located on the opposite corners from the gateway structures with the digital message boards. This proposed structure has a smaller footprint because it is proposed as a three-sided modification of the larger gateway structure design.

Gateway Intersections

At two locations along the corridor, Rawson Avenue and West Ryan Road, gateway structures

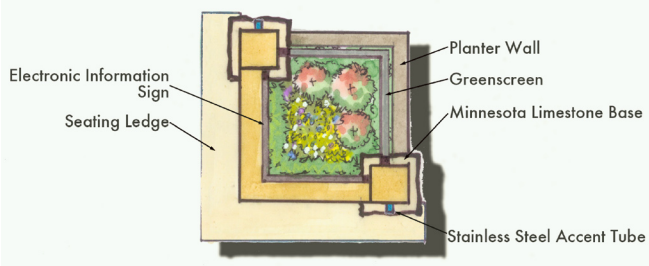
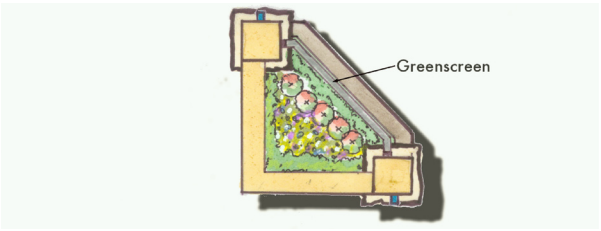


Figure 4-9: Gateway marker – electronic board option.



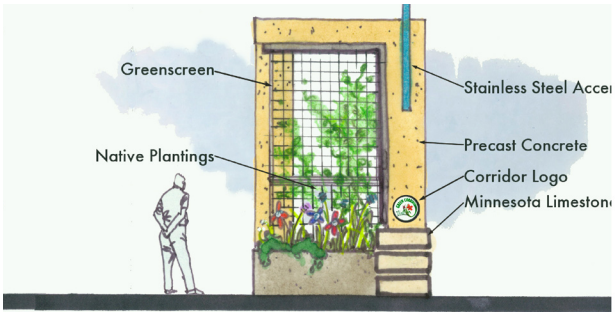
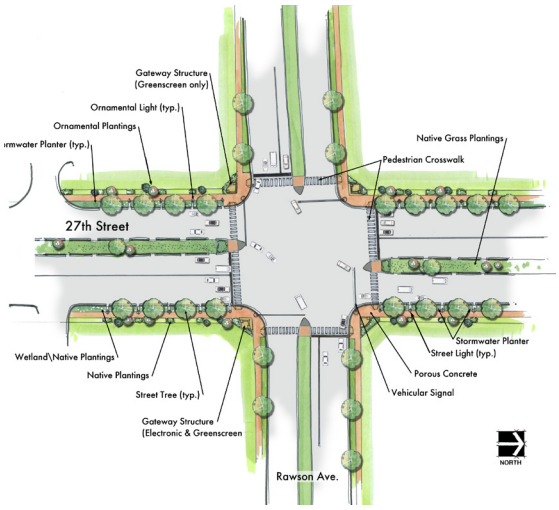


Figure 4-10: Gateway marker – Greenscreen™ option.



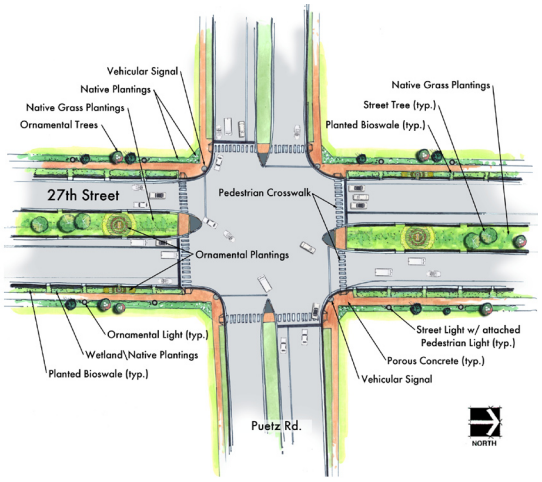


Figure 4-11: Gateway Intersection Treatments

are proposed for all four corners. It is also recommended that each intersection be equipped with pedestrian signals, pedestrian-activated crosswalks and decorative lighting (see Figure 4-11). The crosswalks should be delineated by white reflective paint in the form of strips crossing the vehicular travel lanes. Each sidewalk at the gateway intersections will also be delineated by the use of colored concrete. This will allow a different look to the sidewalks at these key intersections than seen throughout the rest of the corridor.

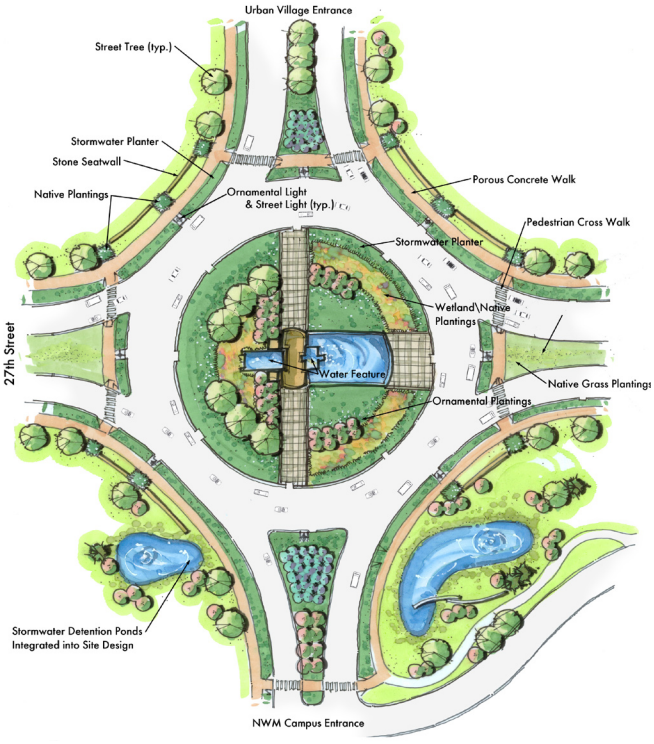
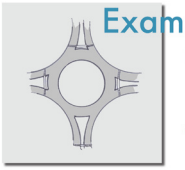


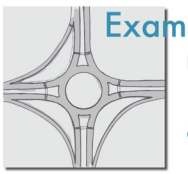
Figure 4-12: Typical roundabout treatments.



Example 1: At Grade

PROS: -Minimal costs compared to examples 1 & 2.
-Overall diameter is less than example 2.

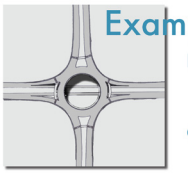
CONS: -Center area diameter is greater than examples 1 & 2.



Example 2: At Grade w/ Slip Lane

PROS: -Less traffic in roundabout circle due to traffic merging onto slip lanes.
-Diameter of center area is much less than example 1.

CONS: -Overall diameter is the greatest.
-Much more land is needed to develop roundabout.



Example 3: Grade Separated

PROS: -Area needed to build entire roundabout is less than other two.
-Center area diameter is comparable to example 2.

CONS: -Cost to build is the greatest of all.

Typical Intersections

All other intersections will be enhanced with the same treatment on traffic signals, decorative light poles, and pedestrian crossings. A vehicular wayfinding sign will be placed in a location that is easily viewed by all motorists traveling the roadway. To accent the vehicular wayfinding signage a median marker will also be placed near the intersections. Both the location and design of the signage and median markers will be per the approval of the WisDOT review that they meet the appropriate setback and breakaway design criteria for utilization along this urban roadway.

Intersection Enhancement Guidelines

All intersections along the corridor shall convey a consistent character, and crosswalks should be marked at all intersections. Pedestrian-activated crosswalk signals should be included and decorative pavement should be considered at major gateway areas.

Roundabouts

Two locations along the corridor provide a potential place for the development of a roundabout. Not only does the concept of a roundabout provide solutions to transportation issues, they provide the opportunity to include significant visual enhancement of the corridor through the use of public art, plantings, and water features.

These roundabouts would have all the features of the gateway intersections, stormwater planters, pedestrian crosswalks, porous concrete sidewalks, ornamental lighting for vehicular traffic and pedestrians, and similar native landscape plantings. A series of engineering and traffic reviews will have to be conducted to finalize the potential opportunities and challenges of developing a roundabout at the two proposed areas. In general,

there will be three different types of roundabouts to review, including:

- ***Example 1 – At Grade***
  Positive aspects for this type of roundabout include: minimal costs associated with construction compared to other alternatives, and the overall diameter is less than example two. Challenges of this design include the potential limitations of traffic volume that the at-grade design can handle.

- ***Example 2 – At Grade w/ Slip Lane***
  Positive points about this type are less traffic will have to enter the center lanes because traffic is diverted via the use of slip lanes or "exits." This allows for the diameter of the center to be less, but the overall space (and right-of-way required) actually larger because of the added geometry of the slip lanes.

- ***Example 3 – Grade Separated***
  This type of roundabout provides the least amount of land area due to the volume of traffic actually traversing the roundabout being reduced by eliminating the thru-traffic via the grade separated corridor. However, this is, by far, the most expensive of all of the options due to the various structural design and bridge/tunnels required for a grade separated roundabout concept.

Review of roundabouts as a potential treatment at these locations will be coordinated and ultimately approved by WisDOT.

Landscape Treatments

A moderate to aggressive level of treatment was selected for all landscape areas within the right of way in order to provide a natural look to the corridor while still making a remarkable impression

to travelers using the corridor. In zone "A" and "C" a more manicured look was obtained while still having the qualities of a natural sustainable environment. Along the roadway in the stormwater planters, a wet- and salt-tolerant plant selection is recommended. This type of plant palette would include vegetation that help filter pollutants from road runoff. According to JFNew, this seed mix will include at least seven to 12 native permanent grass and sedge species, and 10 to 13 native forb species. Between the sidewalk and right-of-way line, a different plant palette is recommended. This plant selection would be composed of a general prairie grass and wildflower mix to provide a wide variety of species and quick color at an affordable price. This plant palette would also be easily maintained and work well with the other tree plantings in the area.

Landscape Treatment Guidelines

The corridor should portray a natural appearance in plant types and densities.

Tree and shrub plantings shall be planted in patterns or clusters to convey a naturalistic appearance. The trees and plants selected should reflect the surrounding regional landscape, and preference should be given to

native species. Locally grown nursery stock is highly encouraged. Groundcovers, shrubs, perennials, and native seed mixes are encouraged at gateway areas and special accent areas.

Natural woodland areas or mature existing trees should be protected to the greatest extent possible. At street intersections, proper sight-lines shall be maintained with any landscape plantings. Special attention shall be given to plant trees to provide shade in areas of anticipated high pedestrian activity.

Lighting Enhancements

Several options were presented to the steering committee for potential lighting treatments. Under existing guidelines, WisDOT will not install or maintain decorative street lighting, it is up to individual communities to support this enhancement function. The design style for the lighting selected by the steering committee was the Circa luminaire from Gardco Lighting along both sides of the roadway is intended to illuminate the travel lanes (Figures 4-13 & 4-14). The simple design will serve as a complement to the detailed ornamentation of the pedestrian lighting standards along the corridor. Motor-vehicular scaled street lighting and pedestrian-scaled ornamental lighting

Figure 4-13: Absence of light arm is recommended for typical lighting in all zones of the corridor.

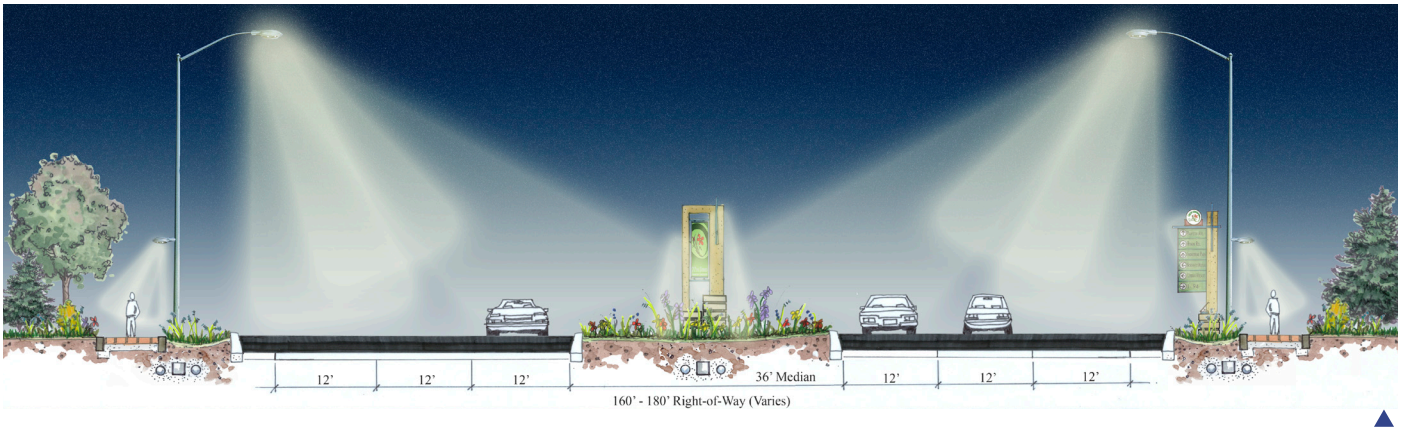


Figure 4-14: Possible typical lighting treatments along Zone "B."

are provided to complement one another, ensuring that both the travel lanes and pedestrian paths are effectively illuminated. The signals could be integrated into a uniform mast arm that also includes cross-roadway signage. This simple design will help improve intersection appearance, and can be applied in a variety of styles and configurations.

Lighting Enhancement Guidelines

Streets, sidewalks and paths should be illuminated with a low-intensity, high-quality light, which provides good, uniform visibility while minimizing light pollution.

Lighting shall be fully shielded and full cut-off in order to minimize light pollution. Lighting style shall be consistent along the entire length of the corridor.

Streetlights shall be spaced at least every 300 feet to 350 feet on center, depending on photometrics review standards. Accent lighting, such as up-lights on signage or street trees, solar-powered illuminated bollards and LED lighting on gateway elements, should be included as part of the overall lighting package.

Care should be taken to coordinate the location of street and pedestrian lighting in relation to trees in the right of way. The placement of trees, considering their mature height, should not obstruct lighting.

Graphic and Signage Enhancements

A comprehensive signage program is an important component of the corridor design, and contributes to both the function of guiding travelers to their destinations and the visual identity of the corridor. In addition, well-designed wayfinding signs should communicate a welcoming message to visitors and help make their experience memorable.

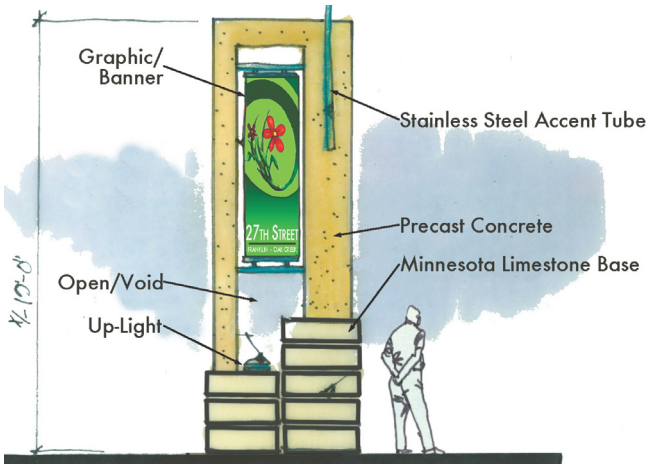


Figure 4-15: Typical median monument – front elevation.

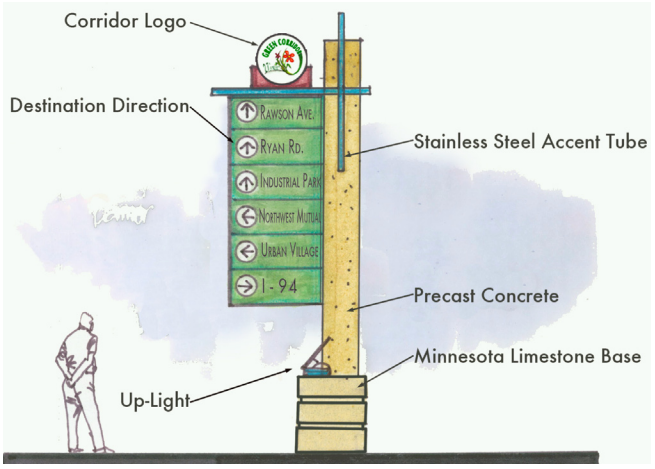


Figure 4-16: Typical vehicular wayfinding sign – front elevation.

Figures 4-15 and 4-16 illustrate two signage types proposed along the South 27th Street corridor. At each gateway intersection a gateway marker with an electronic message board is proposed used to display all types of information. The message boards would be equipped to relay up-to-date information to local vehicular and pedestrian traffic.

The median marker includes a display space for a graphic banner that can be interchanged throughout various times of the year. This banner could display the corridor logo or seasonal graphics. It is WisDOT policy that no obstructions be located in the median that are not designed as breakaway structures. Evaluation of the design, or shielding the elements with attenuators or a traffic barrier will have to be reviewed.

At key areas of the corridor, a vehicular wayfinding sign should be placed on the right side of the roadway. This vehicular sign would permanently display the corridor logo, and be lit by up-lighting from underneath.

Throughout the corridor, color should be used uniformly and consistently to tie all elements together (Figure 4-17). To reinforce the concept throughout the corridor, the use of natural materials in geometric patterns should also be used. All sign structures will use natural materials to convey this inspirational concept. A graphic or logo should be developed for branding purposes to reinforce the character and identity of the corridor that will set it apart from every other roadway in its surrounding area.

Signage and Graphic Guidelines

Signs should be designed as an entire system (not as separate signs), utilizing the same background color, layout, color-coding, corridor logo, pole/structure design, etc. A corridor logo, icon or name should be developed and utilized on all wayfinding/corridor signage applications for a means of reinforcing this specific corridor identity.

Destinations listed on wayfinding signage should be a fixed facility or site. Placement of a destination shall be name only, and advertisements on wayfinding signage should not be permitted. Signs should meet the setback, clear zone and breakaway or barrier protected standards of WisDOT. When possible, signs should be placed on the near side of an approaching intersection to the right to reinforce to drivers that they are being directed to make a turn at the nearest intersection. Sign locations should not interfere with visibility or pedestrian movement.

Figure 4-17: Uniform color palette.

Typestyle characters should be designed to be visible from a car while traveling. Characters should be uppercase sans serif typestyle and at least 5 inches in height. Background finish should be eggshell, matte or other non-glare finish and colors must adequately contrast with type for readability.

Street signage should coordinate with the wayfinding signage application to reinforce a strong visual identity and aesthetic for the corridor.

Pedestrian Treatments

Pedestrian use of the corridor was an important issue of concern from both the community and steering committee input. Several key pedestrian treatments are recommended that reinforce the "smart street" concept of the corridor. Porous pavement should be used on all sidewalks running parallel to South 27th Street.

Porous pavement can facilitate biodegradation of the oils from cars and trucks, help rainwater infiltrate soil, decrease urban heating, replenish groundwater, allow tree roots to breathe, and reduce total runoff. For the South 27th Street corridor, the use of open-jointed paving blocks, porous asphalt, pervious concrete and porous turf is recommended. As porous pavement installations have become more numerous and appropriate for a variety of climate conditions, the potential to revolutionize stormwater management is an important technology for the future.

Pedestrian signals are recommended at each signalized intersection in order to promote a high-level pedestrian-friendly streetscape environment. Pedestrian-activated push buttons with raised lettering and Braille are preferred.

Pedestrian lighting is recommended to create a more human-scaled environment along the corridor. The use of the Circa luminaire from Gardco should be used and attached directly to the street light pole to illuminate the sidewalks at night.

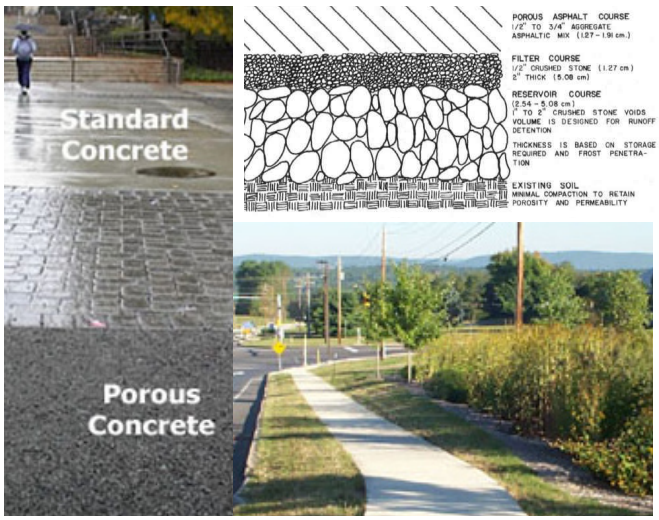


Figure 4-18: Examples of porous concrete.

Figure 4-19: Examples of pedestrian signals.

Figure 4-20: Accent lighting - solar powered SONNE light.

Figure 4-21: Typical roadway lighting (arm for light fixture is not needed) – Circa luminaire.

Figure 4-22: Typical site furniture – "Chase Park" collection by Landscapeforms.

Options to further highlight the corridor include the incorporation of solar-powered and LED lighting. The SONNE lighting system is used to further illuminate high-pedestrian areas and is powered by long-life batteries that store solar energy until needed. Light Emitting Diode (LED) lighting uses a semi-conductor chip to emit light. It is a small, durable, long-lasting light source, and can be used to accent gateway structures or variable message signage systems. The light can be varied colors and can be programmed to a variety of sequences.

Pedestrian furniture was selected to reinforce the "Sustainable and Smart Street" concept. The site furniture recommended is from Landscapeforms "Chase Park" collection. Made from 60 percent recycled materials, the design features cast aluminum and steal frames for a highly refined look.

Pedestrian multi-use path is recommended along the entire length of the corridor to provide an attractive and safe mode of transportation to pedestrians and bicyclists. This path should be detached from the roadway in order to provide a safe pedestrian zone that is buffered from the street. Linkages to regional trails should also be accommodated from the pedestrian path system.

Figure 4-23: Develop branding to reinforce the character of the corridor.

Corridor Image Branding

It is recommended that a unique logo and name be developed to "brand" the corridor. The logo will reinforce community character and be used on the amenities discussed in this chapter. The logo will be important in solidifying the corridor's visual theme.

WisDOT Review

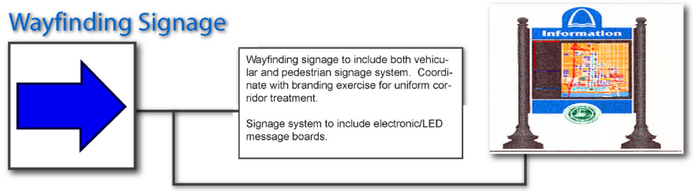
WisDOT is the ultimate decision-maker, and coordination of the enhancements with the department will be ongoing. The concepts illustrated in this section are a first step in the design process; as preliminary engineering for the corridor begins, these concepts will be refined. For information about these standards, refer to the State of Wisconsin Department of Transportation Facilities Development Manual, Chapter 11 Design, Section 20 Cross Section Elements for Urban Highways.

Chapter 4:
Presentation Material

This presentation material is a summary of the concept boards used during the design charrettes and public open houses.

ELEMENTS: *"E" Corridor*

Wayfinding Signage



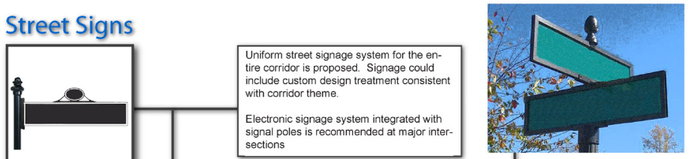
Wayfinding signage to include both vehicular and pedestrian signage system. Coordinate with branding exercise for uniform corridor treatment.

Signage system to include electronic/LED message boards.

Pedestrian Signal

Pedestrian activated crosswalk signals are proposed at each intersection. These signals will also include the digital countdown to reinforce the appropriate walk time to safely cross the street. In addition, where appropriate, an audible signal should also be included as part of the signal system.

Street Signs



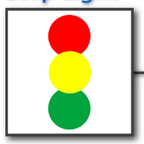
Uniform street signage system for the entire corridor is proposed. Signage could include custom design treatment consistent with corridor theme.

Electronic signage system integrated with signal poles is recommended at major intersections

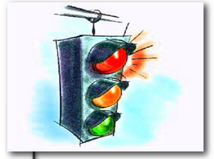
Preemptive Emergency Signal

An attachment for a traffic signal that overrides the normal sequence in response to preemptive emergency signals, and a electro-optically responsive data display panel on the housing to provide clear and direct instructional messages to motorists as to the appropriate actions to be taken.

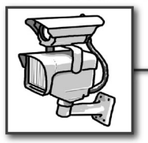
Stop Light



Timed signals are proposed for the entire length of the corridor. "Smart technology" is also recommended that remotely activates signals to allow for safe passage of emergency vehicles.

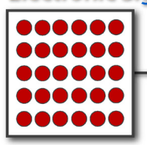


Intersection Camera



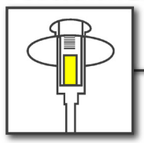
A transportation monitoring system is proposed along the corridor to provide an additional level of traffic management.

Electronic Signage



Electronic message boards - using LED technology - are proposed at key gateway intersections along the corridor. Current information to be displayed include road and traffic conditions as well as other safety information.

Pedestrian Lights



Ornamental pedestrian lights are proposed to bring the wide cross-section of the corridor to a more human scale. These lights are to be energy-efficient standards with protective light-reflectors to shield from excessive light pollution. Alternative standards that are solar-powered could also be used at certain low-traffic areas of the corridor.

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ELEMENTS: *Green Street*

Porous Block Pavers

These pavers are constructed primarily from concrete. They interlock with one another, but leave open a void space between the pavers to permit water to infiltrate into the underlying gravel reservoir. The thickness of the gravel subbase, and the type of material used to fill in the void spaces, determines the amount of infiltration permitted. The void space around the pavers can be filled with either gravel, soil or grass.

Curb Cut

A curbcut is used to allow stormwater to flow directly into a stormwater planter instead of going into the previous required stormwater/sewer system. With a newly poured concrete curb, the opening can be incorporated into the pour. For existing concrete curbs, the cut will be required to provide an adequate opening for the stormwater to enter the proposed planter area.

Manicured Look

Along some areas of the corridor, a more "manicured look" is proposed for the various planting material. This design feature is a simple lawn or landscaping that can be cut and/or trimmed and easily maintained.

Appropriate areas for this design include the gateway areas and other highly-visible nodes along the corridor.

Natural Look

Along the corridor, the vegetation will include a variety of native plant material. Once established, this planting technique will give a natural look to the plantings along the corridor and reinforce the sustainable nature of the design concept.

Plant material will be selected to be salt tolerant and hardy for the variable climate conditions of the region.

Green Screen

Greenscreen is a three-dimensional, wire trellis system. This three-inch screen captures plant material and provides the benefits of a living screen or tapestry. Less woody vines with flexible stems are most desirable for weaving thru the panels.

Stormwater Planter

A stormwater planter is an alternative to a stormwater sewer system. This method of capturing water allows the stormwater to directly bypass the storm sewer system, and immediately begin to fill the planted area. Water will slowly soak into the ground while wetland plants filter pollutants from the stormwater runoff before they reach rivers and streams. This method of stormwater treatment uses runoff as a resource rather than a waste, while also improving water quality, reducing the amount of stormwater that enters the sewer system and aesthetically enhancing the streetscape.

Water Feature

Water features designed for certain locations will add an aesthetic appeal and a distinct character to the roadway corridor. They will help create a visual appeal that will reinforce the unique characteristics of this corridor. In staying consistent with the theme throughout, water used by the water feature will include recycled stormwater. Proper attention to the design of this feature will be taken into account to ensure that water utilized in this feature will remain within a desired standard level.

Gateway Monument

To reinforce the entrance to the corridor, and to announce the arrival to the City of Franklin and the City of Oak Creek, a major gateway statement is proposed. This gateway will include a mix of plantings and hardscape material as well as custom signage application.

The design of the gateway will incorporate sustainable materials to reinforce the "green corridor" theme.

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ELEMENTS: *"E" Corridor*

"E" Corridor (E'*kor'i-dor) *n.* 1. a densely populated region that is served by a major transportation route that integrates electronic/high-technology into both the infrastructure and aesthetic environment.

"E-Corridors" include elements designed to:

- Provide fiber optic technology to support economic and commercial development;
- Increase safety thru pedestrian activated signals, emergency responders and digital monitoring;
- Support alternative energy consumption thru solar or LED lighting technologies and;
- Provide current information regarding transportation or community issues thru electronic message boards.

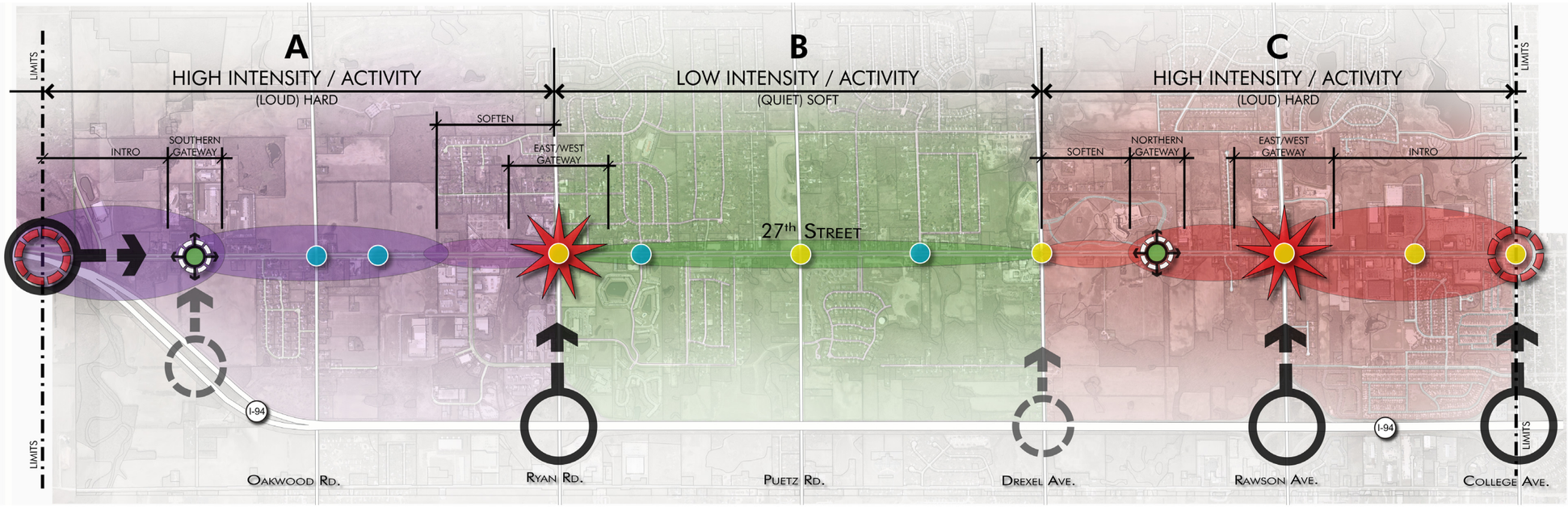
ELEMENTS: *Green Street*

Green street (gren*stret) *n.* 1. a street that handles stormwater on site through the use of surface vegetated facilities (such as swales and planters) for stormwater management purposes prior to discharge. Ultimate discharge could be directly to the ground through infiltration, an Underground Injection Control Structure (UIC), a surface water body or a combines or separated sewer.

"Green Streets" are designed to:

- Integration of stormwater management system within right-of-way;
- Reduce amount of water piped directly to streams and rivers;
- Be a visible component of a "green infrastructure" system that is incorporated into the aesthetics of the community;
- Make the best use of street canopy for temperature mitigation and air quality improvement; and
- Ensure the least impact on their surroundings, particularly at stream crossings or other environmentally sensitive areas.

OVERALL CORRIDOR CHARACTER/ZONES

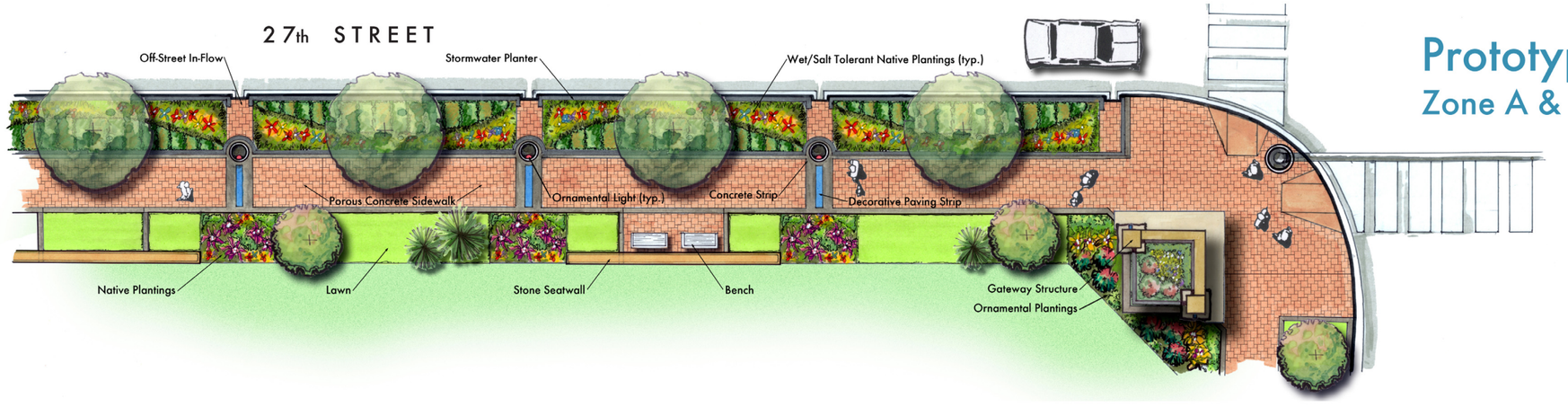


LEGEND

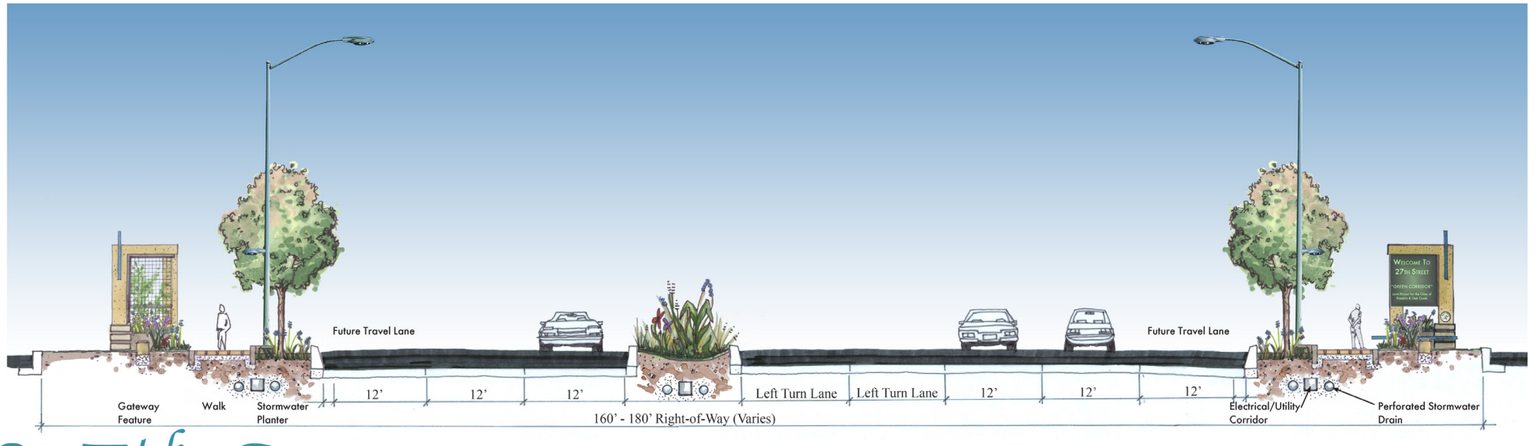
- PRIMARY GATEWAY
- EXISTING SIGNALIZED INTERSECTIONS
- PROPOSED SIGNALIZED INTERSECTIONS
- CORRIDOR END POINTS
- POTENTIAL ROUNDABOUT
- SECONDARY GATEWAY
- PROPOSED INTERCHANGES
- EXISTING INTERCHANGES

0 500' 1000' 2000'

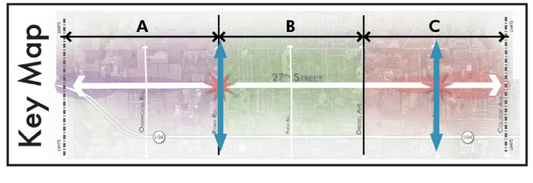
DESIGN TREATMENT: Zone A & C



Prototypical Plan
Zone A & C



Prototypical Section
Zone A & C



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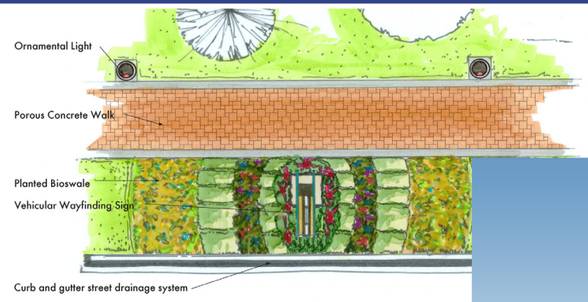
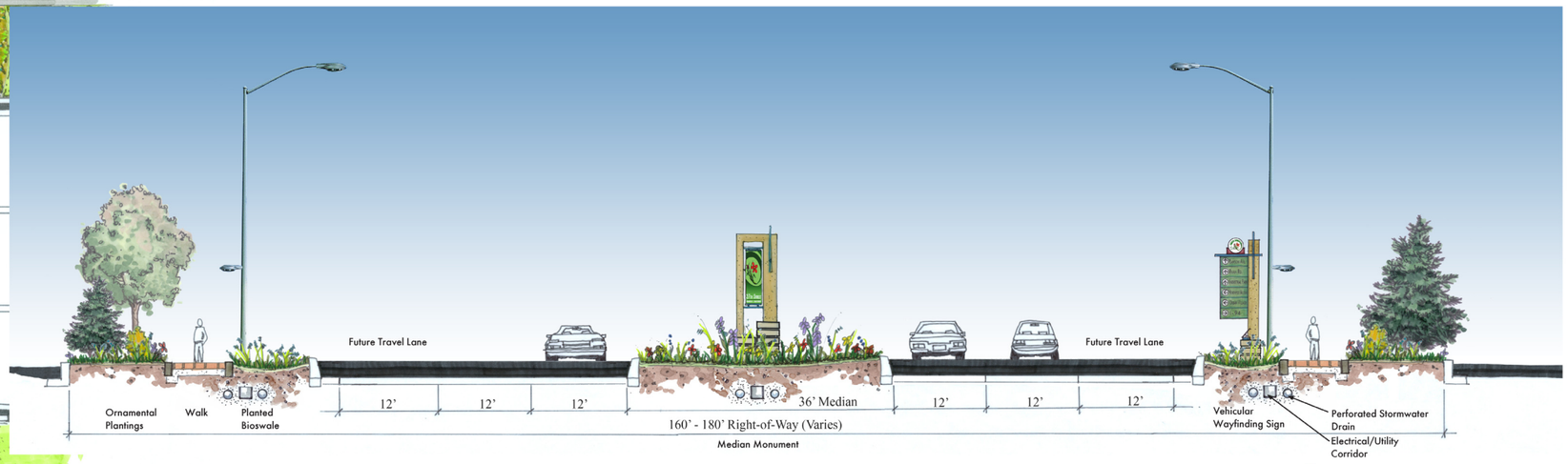
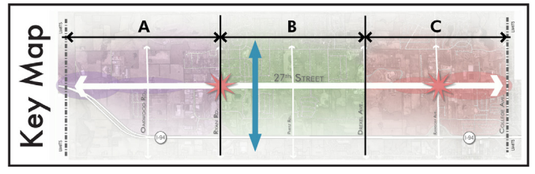
DESIGN TREATMENT: Zone B



Prototypical Plan
Zone B



Prototypical Section
Zone B



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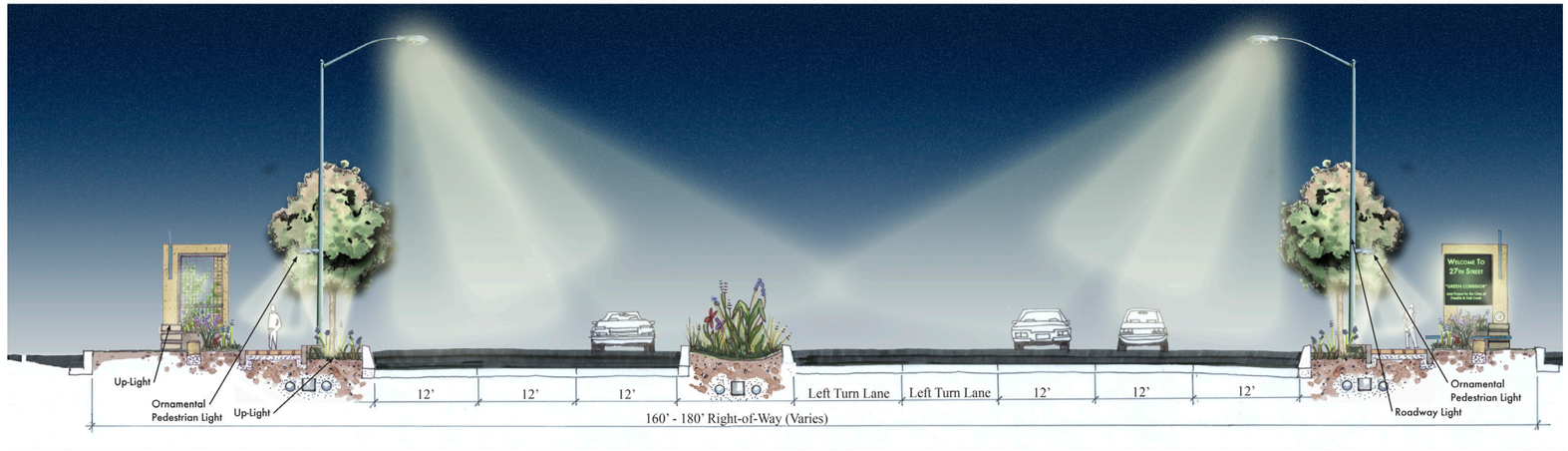
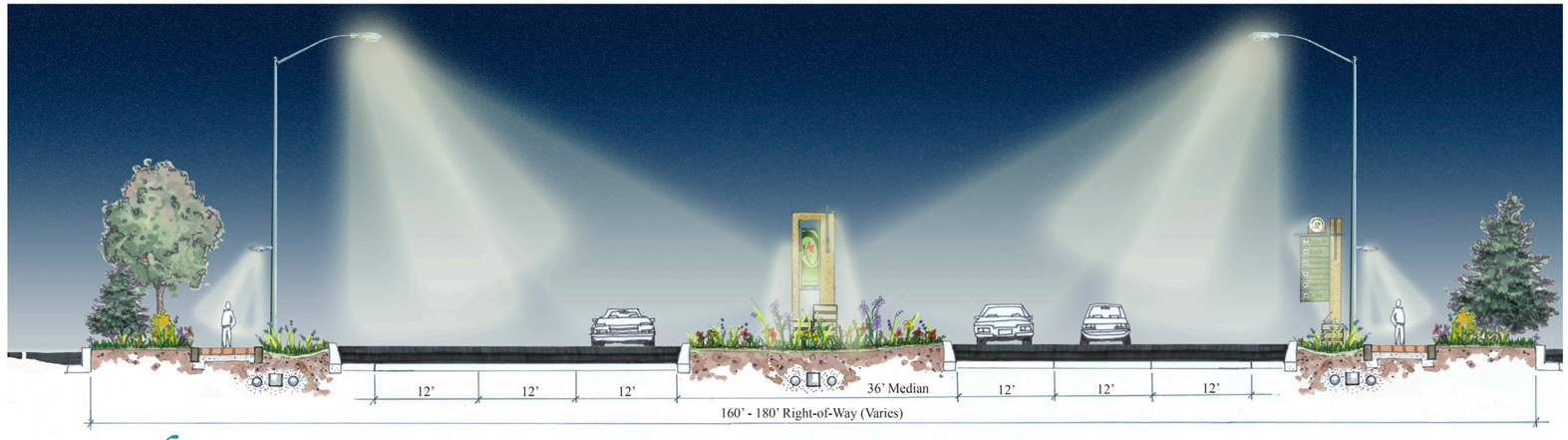
DESIGN TREATMENT: Lighting Enhancements

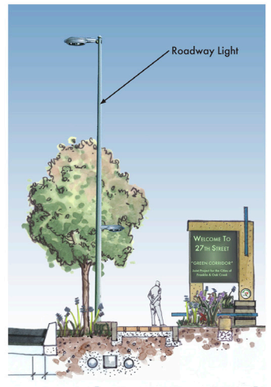


Prototypical Section
Night View - Zone A & C



Prototypical Section
Night View - Zone B

Early Warning Signage



Desired Street Lighting
- No Arm Required For Fixture

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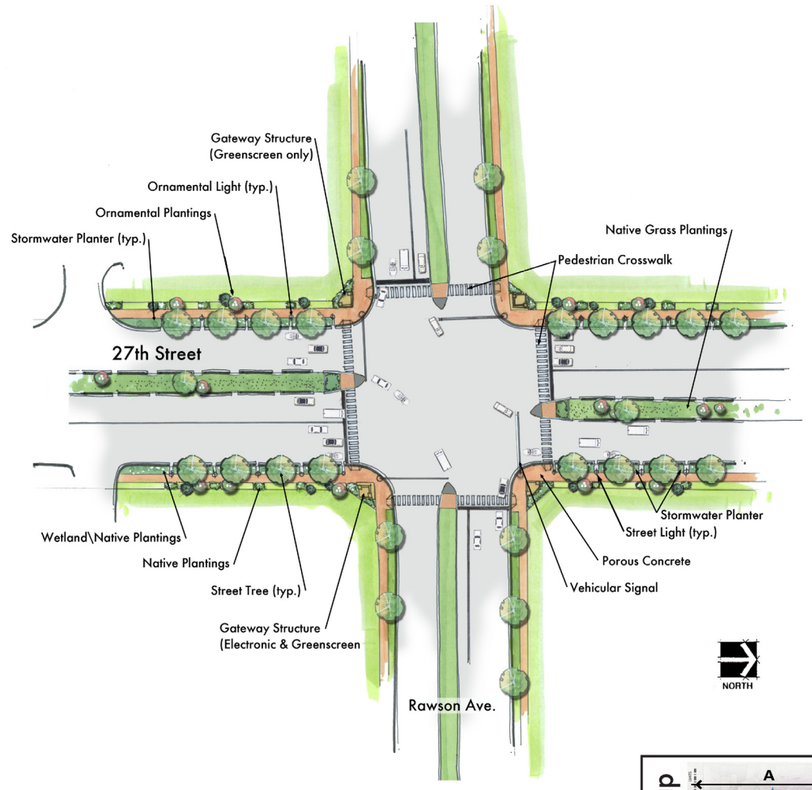
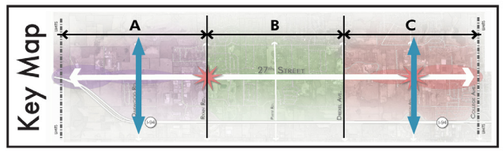
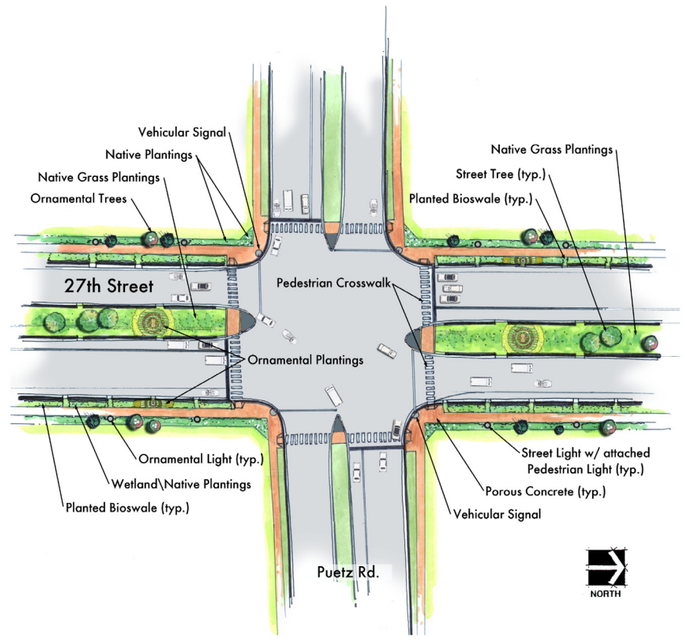
DESIGN TREATMENT: Special Enhancement Areas

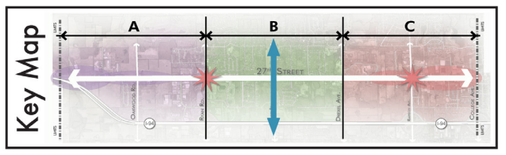


Prototypical Plan View
Intersection Treatment - Zone A & C





Prototypical Plan View
Intersection Treatment - Zone B



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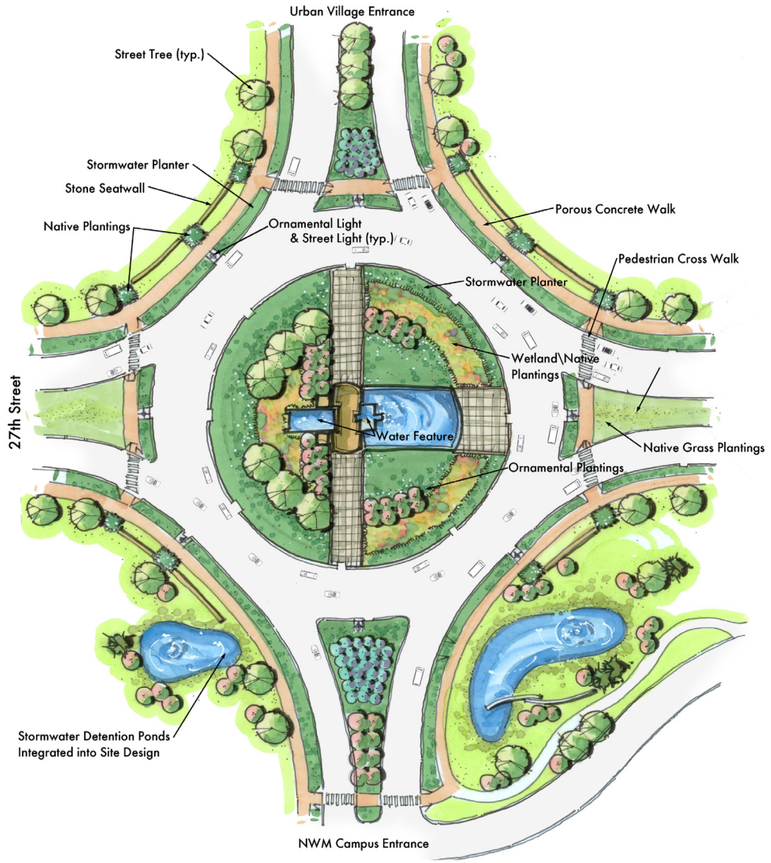
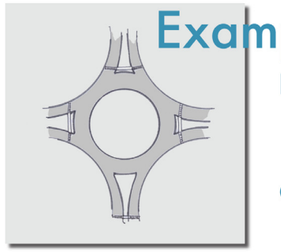
DESIGN TREATMENT: Special Enhancement Areas



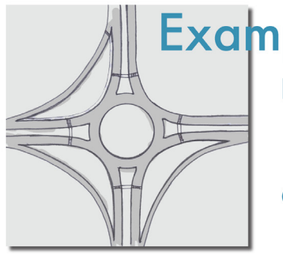
Prototypical Plan View
Roundabout Treatment - Zone A & C



Example 1: At Grade

PROS: -Minimal costs compared to examples 1 & 2.
-Overall diameter is less than example 2.

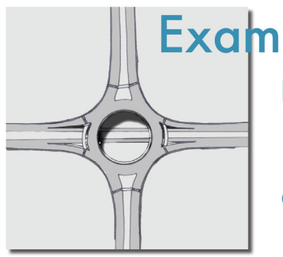
CONS: -Center area diameter is greater than examples 1 & 2.



Example 2: At Grade w/ Slip Lane

PROS: -Less traffic in roundabout circle due to traffic merging onto slip lanes.
-Diameter of center area is much less than example 1.

CONS: -Overall diameter is the greatest.
-Much more land is needed to develop roundabout.



Example 3: Grade Separated

PROS: -Area needed to build entire roundabout is less than other two.
-Center area diameter is comparable to example 2.

CONS: -Cost to build is the greatest of all.

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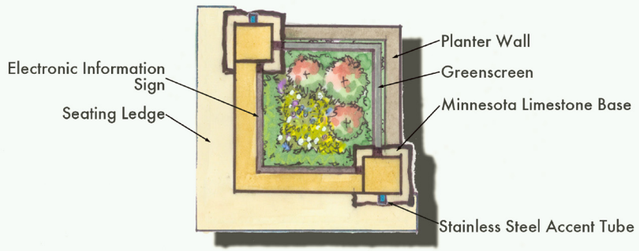
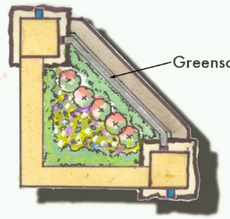
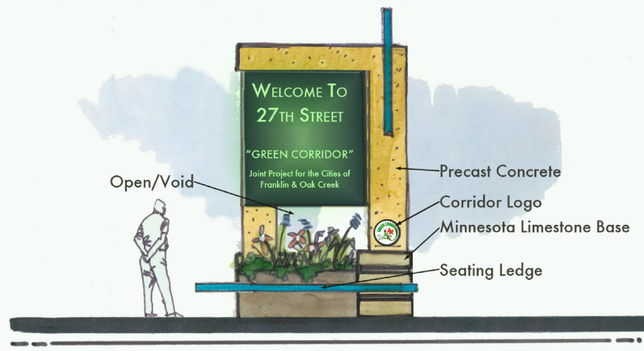
DESIGN TREATMENT: Gateway

Gateway Marker
Plan View: Square Option

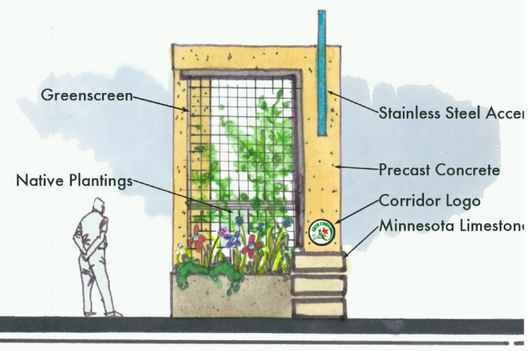


Gateway Marker
Plan View: Triangle Option

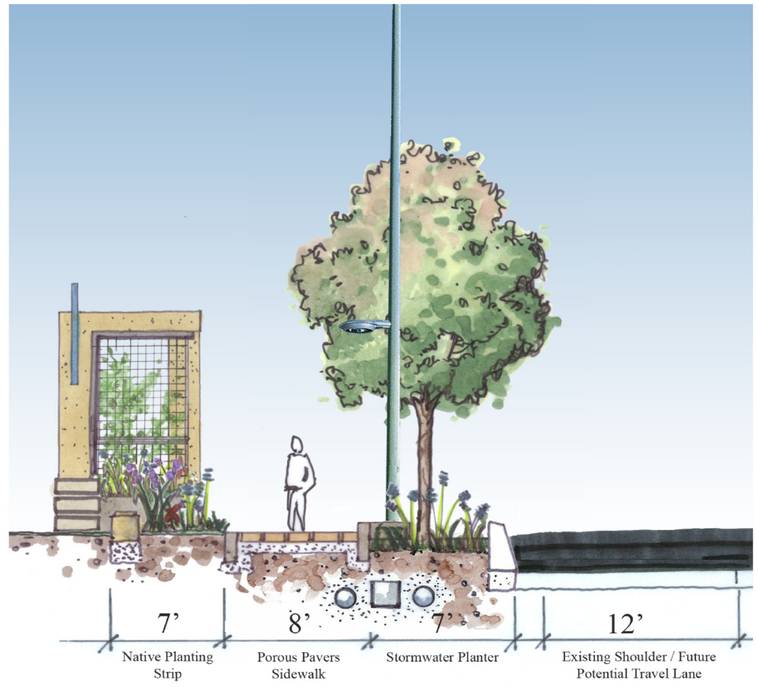




Gateway Marker
Front Elevation



Gateway Marker
Side Elevations



Prototypical Gateway Section

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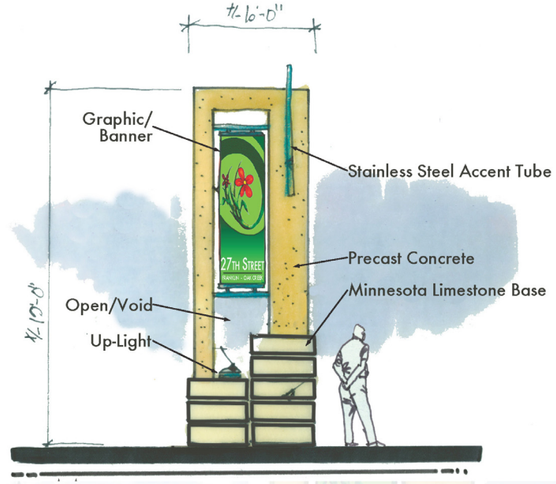
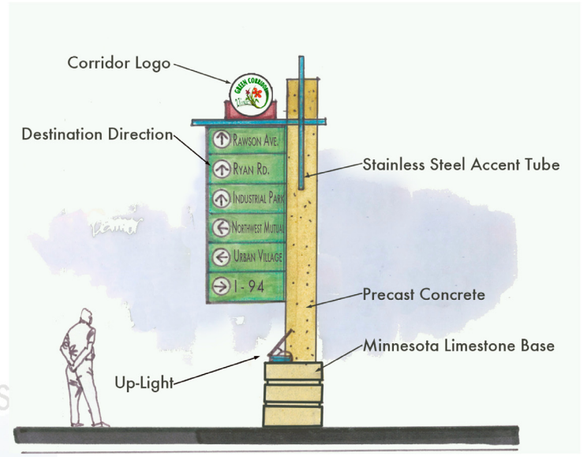
DESIGN TREATMENT: Graphic & Signage Application

Gateway Marker
Front Elevation



Median Monument
Front Elevation



Vehicular Wayfinding
Front Elevation

Inspiration
Reinforce concept through the use of natural materials in geometric patterns.

Color
Use uniform and consistent color to tie corridor elements together.

Graphic / Logo
Develop branding to reinforce character / identity of corridor.

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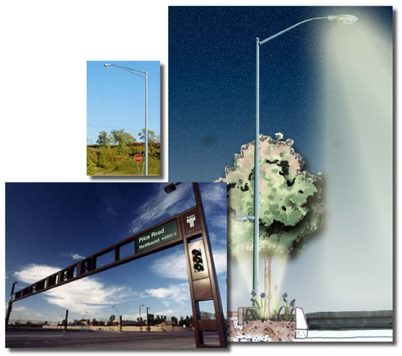
DESIGN TREATMENT: Furniture Board



Lighting & Signals

The lighting in the median is intended to illuminate the roadway, and will include the WisDOT standard 30' poles with double mast luminaires. The simple design will serve as a complement to the detailed ornamentation of the pedestrian lighting standards along the corridor. The signals could be integrated into a uniform mast arm that also includes cross-roadway signage. This simple design will help improve intersection appearance, and can be applied in a variety of styles and configurations.

Ornamental Lighting

To bring the corridor into a pedestrian scale and reinforce both the high-tech and sustainable corridor concept, the Circa luminaire from Gardco Lighting was designed to seamlessly accept the mast arm pole of any outdated, standard cobra head light. With this opportunity you have the chance to make quantum improvements in aesthetics, preformance and energy usage.

Accent Lighting

Options to further highlight the corridor include the incorporation of solar-powered and LED lighting. The SONNE lighting system is used to further illuminate high-pedestrian areas and are powered by long-life batteries that store solar energy until needed. Light Emitting Diode (LED) lighting uses a semi-conductor chip to emit light. It is a small, durable, long-lasting light source, and can be used to accent gateway structures or variable message signage systems. The light can be varied colors and can be programmed to a variety of sequences.

Site Furniture

In keeping with the "Green Street" concept, the site furniture selected is from Landscapeforms "Chase Park" collection. Made from 60% recycled materials, the design features cast aluminum and steel frames for a highly refined look.

Pedestrian Signals

Pedestrian signals are recommended at each signalized intersection in order to promote a high-level pedestrian-friendly streetscape environment. Pedestrian-activated push buttons with raised lettering and braille are preferred.

Porous Pavement

Porous pavements can facilitate biodegradation of the oils from cars and trucks, help rainwater infiltrate soil, decrease urban heating, replenish groundwater, allow tree roots to breath, and reduce total runoff. Nine categories of porous pavement exist, including: 1) decks, 2) open-celled paving grids, 3) open–graded aggregate, 4) open-jointed paving blocks, 5) plastic geocells, 6) porous asphalt, 7) pervious concrete, 8) porous turf, and 9) soft paving. For the 27th Street corridor, the use of open-jointed paving blocks, porous asphalt, pervious concrete and porous turf is recommended. As porous pavement installations have become more numerous and appropriate for a variety of climate conditions, the potential to revolutionize stormwater management is an important technology for the future.

Bollard

Landscapeforms "Annapolis Smart Bollard" integrates solar powered lighting provided by advanced light-emitting diode (LED) technology. It is a reliable, economical, energy-saving solution for marking pathways, dividing pedestrian and vehicular traffic, and providing securing along urban streetscapes.

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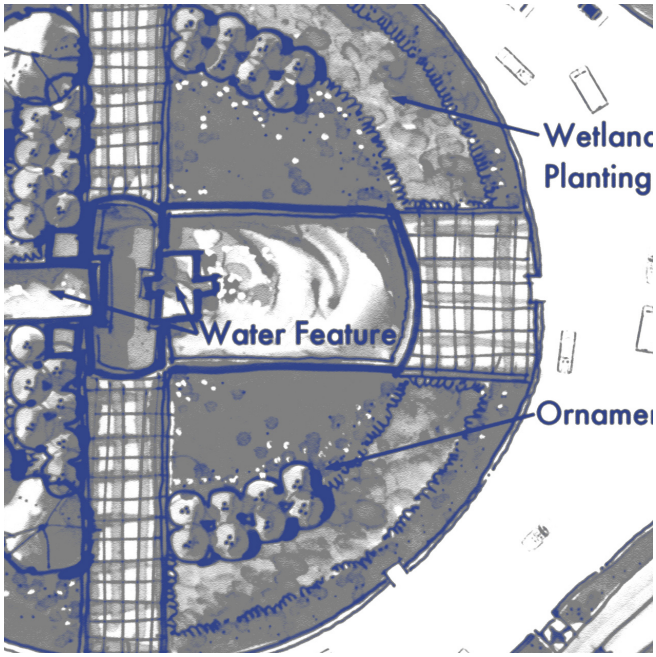
Chapter 5

Infrastructure



Utility Coordination

During the months of January and February 2007, HNTB contacted several major private utilities that provide service to the South 27th Street corridor. The purpose of this task was to learn about the state of existing services, future trends and considerations for the reconstruction of the roadway. Costs relating to utilities that could be occurred by Oak Creek and Franklin were also investigated.

The utility providers that were contacted provided information on a range of services including gas, electric, land-line and wireless services. HNTB contacted We Energies, American Transmission Company (ATC), Time Warner Cable, AT&T, TDS Metrocom, and Cingular Wireless. HNTB also used a press release published on WISBusiness.com on January 23, 2007, that explains new services being provided by Verizon Wireless.

Existing Utilities and Future Trends

The South 27th Street corridor is served by the most up-to-date technology available to users including fiber-optic land lines and wireless technologies. The corridor has a high level of service because many utility providers recently upgraded facilities to serve the Northwestern Mutual and Wheaton Franciscan Healthcare developments. The following is a summary of the existing conditions and future trends that were discussed with the major private utility providers mentioned above.

Gas and Electric Services

Existing gas and electric services are more than adequate to serve the needs of the South 27th Street corridor according to the service providers. These industries are less dynamic in comparison to the land-line and wireless services, but are certainly important to businesses and residents.

- We Energies provides gas and electric services throughout the South 27th Street corridor. Their facilities are located primarily on the west side of the road including the overhead electric distribution wires. According to WE Energies, they have sufficient capacity to serve existing development needs. The company also feels its existing gas and electric distribution system will be able to serve new development for at least the next 5 to 10 years. We Energies recently expanded their facilities in the corridor to serve the needs of Northwestern Mutual. Therefore, no upgrades are programmed or needed at this time. According to We Energies, no new trends are emerging in this industry. Gas and electric distribution lines as they currently are today will be around for the foreseeable future.
- ATC is responsible for the long distance high-voltage transmission lines that carry electricity from the power plant to the community. ATC has a transmission line easement that bisects South 27th Street in an east west direction near Elm Road at the southern end of the corridor. ATC feels it has a good transmission system in place in southeastern Wisconsin. Improvements at the Oak Creek power plant will require ATC to upgrade the transmission lines that run through Oak Creek and Franklin within the next few years. However, no major improvements in this area are needed for the next 20 years according to ATC's long rang plan. According to ATC, the transmission industry is likely to remain using overhead wires into the foreseeable future. ATC feels the technology is improving, but commented that it is generally not cost effective to bury wires at this point in time.

Land-line Services

Currently, land-line technology is the preferred method for delivering data and voice services to businesses. It is the most reliable and has the fewest security concerns. Fiber optic lines are the most desired land-line technology, allowing the fastest movement of data. Companies providing land-line services are largely driven by market demand and will extend fiber optic lines where demand exists. Land-line companies have already invested in the South 27th Street corridor to provide fiber optic lines that serve new developments such as Northwestern Mutual and Wheaton Franciscan Healthcare Center.

- Time Warner Cable provides a range of land-line services that are available to businesses and residents along South 27th Street including high speed data, internet, cable television and telephone. Time Warner Cable recently added fiber optic lines to the South 27th Street corridor to serve Northwestern Mutual. Therefore, no additional improvements are planned at this time. Time Warner Cable is beginning to invest in wireless technology to cover all voice and data technologies. However, they feel fiber optic

land-line services will be their strong hold for the foreseeable future.

- AT&T, who recently merged with SBC, is the local exchange carrier. This means they own the land lines and other providers rent from them. AT&T provides voice and data services (telephone and internet) along the South 27th Street corridor. AT&T has manholes and conduit running from approximately College Avenue to Ryan Road that contains fiber optic lines. Fiber optic is currently being extended south to serve Wheaton Franciscan Healthcare. According to AT&T, fiber optic can be easily extended to the remainder of the corridor if demand increases because they already have an established pathway in the roadway. AT&T feels this area is generally well served and does not have upgrades planned at this time. AT&T is currently investing in wireless technology. However, they feel the technology is not yet proven. It is less reliable than land-line technology due to lost connections. Also, their customers have concerns about security on wireless systems.
- TDS Metrocom rents lines from AT&T. As a result, they are able to provide the same voice and data land-line services as AT&T (internet and telephone) throughout the South 27th Street corridor. They do not have any upgrades to service planned in this area in the near future as they feel service is adequate to serve existing development. According to TDS, the demand for data services is quickly outpacing the demand for voice services. Currently, they are viewed as a traditional telephone company that happens to offer broadband services. In the future, they feel they will become a broadband company that happens to offer telephone service.
  Like the other land-line providers, TDS is also investing in wireless services. Theoretically, they could avoid renting lines from AT&T and provide wireless services instead. However, they are concerned how wireless technology will be viewed by their customers. At this time, TDS feels businesses are reluctant to run solely on wireless due to inconsistencies with the technology and security concerns. TDS is currently testing wireless technology in the Fox Valley. They anticipate wireless technology will be more viable in the next 5 to 10 years.

Wireless Technology

The wireless companies, like the land-line companies, are largely driven by market demand. As long as the corridor has businesses to support the demand for these services, South 27th Street will be served by the latest wireless technologies. Therefore, it is important for Oak Creek and Franklin to continue to support new development along the corridor to ensure the most up-to-date technology is available. Also, it is important for the communities to provide locations for these companies to place their facilities.

- Cingular Wireless provides wireless voice and data services (cell phone and internet) to the South 27th Street corridor. According to Cingular, they have good coverage in this area of the county. They do not have any plans for the next two years to upgrade facilities unless a large business moves to the area that needs additional services. Cingular feels the demand for wireless is growing rapidly. More high speed service is desired by customers as wireless laptop use becomes more common. The demand for data services is quickly outpacing the demand for voice services.
- Verizon wireless provides voice and data (cell phone and internet) services that are available to the South 27th Street corridor. Verizon recently announced it has completed a 7,500 square mile broadband wireless system around Wisconsin which includes Milwaukee County and the South

27th Street corridor. The service allows users to access the internet via a wireless connection anywhere within the service area. Verizon has been aggressively investing in their wireless data services to create a high speed national wireless network.

Construction Considerations

This section provides some considerations to accommodate future utility needs when the roadway is reconstructed. The streetscape plans are being designed to accommodate many of these options already. At this point in the planning process, these are just ideas that will need to be explored further as detailed plans are developed to determine if they are viable and needed for the South 27th Street corridor. The list includes the following:

- It is good practice to reserve space in the terrace area for future infrastructure expansion and needs.
- It is good practice to allow space to accommodate future water and sewer main expansions.
- Nodes for wireless technology facilities should be incorporated into the roadway plans. It is now common for wireless technology to be attached to light poles, kiosks and streetscape signs.
- Space for future communication hubs at intervals along the corridor should be provided. The streetscape kiosks and wayfinding locations may be good locations for these facilities.
- Space for water quality devices that could be used to reduce stormwater runoff should be considered.
- Intelligent traffic systems if warranted could be considered. Cameras placed at intersections are being used to manage traffic, conduct accident investigation, and aid emergency dispatch. These optical intersection traffic systems are being used more frequently in place of the closed loop response system embedded in roadways.
- Duct banks have been used to consolidate utilities within a roadway. This may be an option for the South 27th Street corridor. However, utilities can be resistant to these facilities because other utility companies would have access to their lines. Also, the need for such consolidation may not be necessary and should be evaluated as the design process proceeds.
- A common element while discussing services with utility companies was a request to minimize disturbances to their facilities to reduce the utility's costs during construction. Forward planning regarding corridor development and continued coordination with the utilities as design plans proceed will keep utilities informed and aware of changes along the corridor. It will be important to communicate to the utility companies that this is a long-term investment.

Cost Considerations

Generally, utility providers will pay for the relocation of utilities that are located within a public right of way when it is required for construction purposes. Communities are required to cover costs that are considered non standard. A common non standard cost is for the burial of overhead wires for aesthetic purposes. Communities may also be required to incur costs for the relocation of utilities if they are located within a utility easement that is not considered part of the pubic right of way.

For this project, Franklin and Oak Creek are most likely to incur costs for We Energies, AT&T, Time Warner and ATC overhead lines if they wish to burry those facilities. The communities will also need to consider costs for municipal utility upgrades during the design process. As previously stated, land-line and wireless services are currently at a high level of service within the corridor. Upgrades

to those services that are located within the public right of way are covered by the providers. Market demand will determine when additional upgrades to these services are provided.

In each discussion initiated with the utilities as part of this process, an inquiry was made regarding cost impact implications for burying the above ground utilities along the corridor. The utilities were not willing to share cost information due to the unknown design variables of the roadway reconstruction at this time.

Generally, utility relocation for above ground distribution services on a roadway project range from 3 percent to 5 percent of the roadway construction cost. This guideline does not include the relocation of the ATC transmission lines. Since the communities are in the early planning phases for this project, a preliminary construction cost estimate has not been generated. Therefore, it is difficult to determine a ballpark estimate at this time.

To gain a better of understanding of the communities' costs, it is recommended that Oak Creek and Franklin request early utility coordination with Time Warner Cable, AT&T and We Energies during the upcoming WisDOT design process initiated in February 2007. A special request will need to be made because utility coordination as required by Trans 220 is not a required element of the WisDOT design process until the Preliminary Engineering phase.

The communities could begin coordination with ATC at any time, since the costs associated with burying their lines is not directly related to the roadway reconstruction. Since the ATC transmission lines are within an easement, the communities may be required to not only pay for the burying of lines, but also all relevant engineering costs incurred by ATC.

Elements that are required in the design phase to allow for cost estimate impacts include:

- Vertical and horizontal location of existing utilities.
- Utilities contained within private easement and locations of easements.
- Utilities located within public right of way and locations.
- Future roadway alignment and cross section.
- Proposed location for utilities within new roadway alignment.

As mentioned, an attempt was made to determine per mile average costs for utility relocation during discussions with utility representatives. However, to the number of unknown variables at this time, estimations were not possible. The upcoming WisDOT corridor study will provide the communities with preliminary roadway plans that will aid further utility discussions and potential cost implications for Oak Creek and Franklin.

Chapter 6

Implementation

Getting it Done

Implementing a plan for improvements along the South 27th Street corridor is a complex endeavor that requires a thorough understanding of proposed program activities, financial tools and roles of all the stakeholders. It also requires the proper perspective to realize that the process is fluid, rather than a rigid "paint by numbers" exercise. The right balance needs to be struck between maintaining the discipline of the plan and taking advantage of new opportunities that arise, which will undoubtedly change after completion and adoption of this plan.

Because the South 27th Street corridor is a state highway, access and other transportation related decisions directly related to the operation of South 27th Street fall under the authority of WisDOT. As such, coordination with WisDOT and the cities of Franklin and Oak Creek should continue. Local organizations, as representatives of the local community, cities, and the state, should be partners in implementing the elements outlined in the plan. In this way, each body has a distinct role to play in implementing the plan while at the same time understanding the full scope of the program to keep the other parties advised of the level of progress being made.

Partners for the South 27th Street corridor implementation include:

- State of Wisconsin
- City of Franklin
- City of Oak Creek
- Southeast Wisconsin Regional Plan Commission (SEWRPC)
- 27th Street Steering Committee
- Federal agencies (e.g., DOT)
- Private development community
- Local business community
- Citizens

Programs for Implementation

Establishing a financing program to fund development activities should be a joint effort between the two cities as well as other local organizations. The local cities should take advantage of certain key initiatives, such as obtaining federal funding through various federal transportation enhancement grants. Other methods for funding include the development or amendment of tax increment financing (TIF) district(s) similar to the ones already established in the city of Franklin.

Adoption of Streetscape Plan

The South 27th Street Corridor Plan completed in 2005 laid the foundation for the vision of an economic development corridor for the cities of Franklin and Oak Creek. To further archieve implementation of the South 27th Street corridor, it is important to adopt by resolution the South 27th Street Corridor Streetscape Manual. The adoption of this manual will allow public officials and staff to utilize this document as a policy guide when making decisions that affect the corridor.

Intergovernmental Agreement

The adoption of an intergovernmental agreement would help to further ensure the success of the plan and would reinforce the cooperative spirit between the communities of Franklin and Oak Creek in developing this design plan. In a typical intergovernmental agreement, those parties entering into the resolution agree to adopt the principles of the plan, and to adhere to its overall vision.

The intergovernmental agreement should require that each participating body also pass a resolution that would include an agreement to participate in intergovernmental meetings on a regular basis to discuss the progress and implementation of key plan objectives. Furthermore, the resolution should require each jurisdiction to notify the other when they receive a development proposal in the corridor. The use of an intergovernmental agreement will contribute to the progress of implementing the design plan, and further strengthen the commitment and cooperation of both local jurisdictions.

Zoning Tools

Franklin and Oak Creek have implemented new zoning standards to address the architectural and site design elements of private development within the corridor. Having the proper zoning in place is important to carry-out the desired character of South 27th Street. Since the communities have already implemented new zoning for the corridor, the existing codes should be reviewed to determine if they are compatible with this plan and other planning documents developed for the South 27th Street corridor.

WisDOT Participation

Cooperation with the Wisconsin Department of Transportation (WisDOT) is an integral component of the plan. Enhancements along the South 27th Street corridor will require review and approval of all proposed project elements. In their February 2007 Quarterly Solicitation, WisDOT identified the South 27th Street corridor, WIS 241, for a corridor

study to determine any needed future safety and capacity improvements and to identify the right of way needed for corridor preservation. The anticipated WisDOT schedule for deliverables, as outlined in the Quarterly Solicitation, included:

- NEPA Scoping: September 2007
- Complete Corridor Study: July 2009
- Environmental Document: September 2009
- Functional Plan & DSR: January 2010

A local maintenance agreement is required for streetscaping and non-standard items incorporated into any state highway project. WisDOT will commit a percentage (typically 3 percent) of the construction cost to be utilized for "Community Sensitive Design" or enhancement elements. This amount should be agreed upon with WisDOT and the communities as the process moves along. These include aesthetic treatments to retaining walls, bridge abutments, noise walls, benches, flags/ banners, kiosks, pedestrian furnishings, wildlife crossings and colored pavements.

For sidewalks, separated multi-use paths, and landscaping, the current cost share is 75 percent state and 25 percent local. Cost share is 50-50 percent for standard lighting. Decorative lighting costs over and above the standard cost would be 100 percent local cost.

WisDOT has maintenance concerns with decorative traffic signal poles and a strict sign policy for signs within the highway right of way. Review and coordination of decorative signage standards will have to be coordinated with WisDOT as the design moves from this initial conceptual level to preliminary engineering.

Alternative Funding Sources

At the conclusion of this design effort, it was the consensus of the steering committee that all parties involved should work towards the completion of the project in an expedited manner. Ideally, the entire project would be constructed in a holistic way. This approach would allow the project to proceed as a single concerted effort, rather than as various interconnected segments over an extended period of time. The planning of the corridor as a single large-scaled corridor project would have several advantages. First, a consistent design treatment would be ensured. Second, construction would occur within a shorter time frame, rather than the build-out of several small segments over a long period of time. Finally, funding could be handled in a single project, which may significantly reduce costs. The following financing techniques are listed as potential options for assisting in the completion of this project.

Tax Increment Financing

As one of the most viable tools for implementation of this streetscape plan, TIF, as allowed by City/Village TIF Law (s.66.1105) in the State of Wisconsin Code, allows for the establishment of "development districts" within which new taxes generated by private development are redirected to infrastructure and other public improvements necessary to support new development. Two such districts already exist along the corridor in the city of Franklin.

Upon establishing a district, a new property tax assessment is frozen and becomes the "base" assessed value. As new development occurs, the total assessed value of the district increases and the taxes generated from that increased assessment over the base, called the "increment", are captured. These funds are then redirected back into the district through such public activities as installation of utilities and other public infrastructure improvements and property acquisition.

Most commonly, these activities are not funded directly using the annual increment, but through the issuance of tax-exempt revenue bonds, with the

TIF revenues used in turn to provide debt service on those bonds. In this way, the local jurisdictions obtain a larger amount of money up front and can use those funds for substantial public improvements, and then pay for those improvements over a period of time with the new taxes.

Federal Enhancement Funding

The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU), formerly known as the Transportation Equity Act for the 21st Century (TEA-21) is a program operated by the U.S. Department of Transportation to provide funds for transportation enhancements. These enhancements can include transit facilities, pedestrian and bicycle improvements and infrastructure safety mechanisms. SAFETEA funds have been successfully used in many communities for implementing enhancement projects similar to those proposed for South 27th Street.

Typically, the grants and projects must be $100,000 or more in construction. The funding can include preliminary engineering and right of way services. The community match may include local appropriations, cash or land donations, or other grant sources, as long as the other sources allow their money to be used as a SAFETEA match. The program is administered thru the Wisconsin Department of Transportation, and applications are received during even numbered years, the next application date is scheduled for 2008. Allocation is not guaranteed, and not all applications are accepted for funding.

Capital Improvement Program

The cities of Franklin and Oak Creek, through their annual Capital Improvement Programs, can establish an annual fund for implementing, maintaining and securing matching funds to be utilized for various corridor projects. This should be a priority to guarantee the availability of matching funds for grants or other programs.

Developer Improvements

It is recommended that the private developers be responsible for making or contributing to corridor improvements as it relates to a development. These improvements could include investment of a percentage of the site design to the public right-of-way improvements negotiated into a developers agreement.

Congestion Mitigation and Air Quality Program

The primary purpose of the Congestion Mitigation and Air Quality (CMAQ) Improvement Program is to fund projects and programs that reduce travel and/or emissions in areas that have failed to meet air quality standards for ozone, carbon monoxide, and small particulate matter. Bicycle and pedestrians projects are eligible for CMAQ if they reduce the number of vehicle trips and miles traveled. Almost all bicycle projects eligible for Transportation Enhancements and STP-D are likely to be eligible, but a higher burden of proof that the project will reduce air pollution will be required. CMAQ is **not** a statewide program, only bicycle projects in Milwaukee, Kenosha, Racine, Ozaukee, Waukesha, Washington, Sheboygan, Kewaunee, Manitowoc, and Door Counties are eligible. (Source: Funding for Bicycle and Pedestrian Activities, WisDOT).

Hazard Elimination Program

Bicycle and pedestrian projects are now eligible for this program. This program focuses on projects intended for locations that should have a documented history of previous crashes.

Surface Transportation Urban Funds

Metropolitan areas receive an allocation of Surface

Transportation Urban Funds annually. These funds can be used on a variety of improvement projects including bicycle and pedestrian projects. Most of the regional plan commissions that administer this program have been using these funds to integrate bicycle and pedestrian projects as larger street reconstruction projects are taken on.

Transportation Economic Assistance (TEA)

The Transportation Economic Assistance (TEA) program provides 50 percent state grants to governing bodies, private businesses, and consortiums for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage business and industry to remain and expand in the state.

The goal of the TEA program is to attract and retain business firms in Wisconsin and thus create or retain jobs. The businesses cannot be speculative and local communities must assure that the number of jobs anticipated from the proposed project will materialize within three years from the date of the project agreement and remain after another four years.

Grants of up to $1 million are available for transportation improvements that are essential for an economic development project. It must begin within three years, have the local government's endorsement, and benefit the public. The program is designed to implement an improvement more quickly than normal state programming processes allow. The 50 percent local match can come from any combination of local, federal, or private funds, or in-kind services. Applications are first come, first serve, and funded when all eligibility information is complete and satisfactory.

The TEA program began in September 1987. Through February 2006, 59,942 jobs have been directly and indirectly created through the $63.05 million invested in grants awarded to 167 communities. Some 269 businesses have benefited from the grants. A September 2005 job audit reveals that actual job creation and retention is 12.5 percent above that promised. The state average cost to date has been $2,458 per direct job created/retained.

2005-2007 funding:

$8,425,000 State segregated funds

$8,425,000 Local matching funds

(Source: Programs for Local Government, Wisconsin Department of Transportation)

Economic Development: State Infrastructure Bank Program

In order to stretch limited federal funds, Congress authorized some innovative uses of federal transportation funds. Funds were authorized to create state "banks" to complement traditional transportation grant programs and provide states with flexibility to offer many types of financial assistance. The State Infrastructure Bank (SIB) Program, similar to a private bank, offers a range of loans and credit options to help finance eligible surface transportation projects. SIBs offer states the ability to undertake transportation projects that would otherwise go unfunded or experience substantial delays.

WisDOT applied for federal seed money to create a revolving loan program. Communities can borrow the money to provide needed transportation infrastructure improvements to help preserve, promote and encourage economic development and/or promote transportation efficiency, safety and mobility.

The Wisconsin SIB program is a revolving loan program providing capital for transportation projects from loan repayments and interest earned from funds remaining in the bank. SIBs can be

used in conjunction with other programs to better facilitate the timing of economic development projects.

WisDOT was authorized $1.5 million to start an infrastructure bank. WisDOT provided a 20 percent match in order to receive the federal funds. The state started the program with a total of $1,875,000. The program currently has $700,000 available for loans to eligible applicants. WisDOT charges 2 percent interest rate on the loan principal and projects can be amortized up to 25 years.

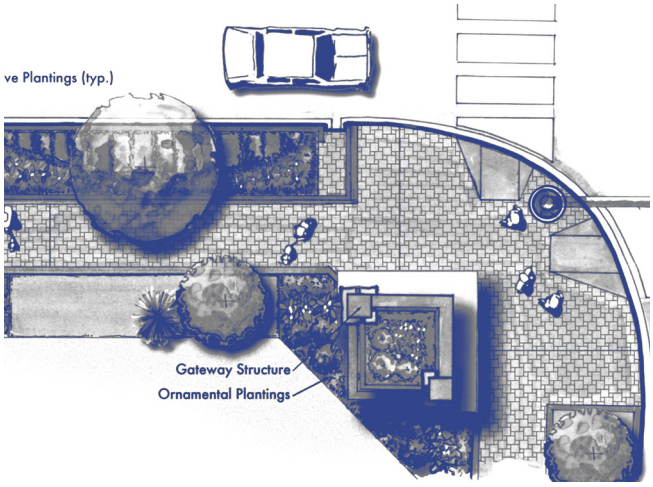
Eligibility includes a county, city, village, town or combination thereof, Amtrak Railroad, a private non-profit organization (sponsored by an eligible community) and Transit Commissions. Funds are available on a "first come, first served" basis. *(Source: Programs for Local Government, Wisconsin Department of Transportation)*.

Special Funding

The two cities should consider the development of a cooperative roadway redevelopment program. This program would be based on establishing a public/private partnership between land owners, business owners/lessors and other stakeholders for the sole purpose of improving, maintaining and redeveloping segments of the corridor with a focus around the unified character established in the South 27th Street Corridor Streetscape Manual. This planning process would establish a district, boundaries and zones that would enable both cities to pursue a variety of capital improvement sources, such as Special Taxing Districts, CIP, State Industrial or Economic Development.

Organizing Implementation Actions

An important element of implementing the plan is establishing strategic policies to guide future decision making. The South 27th Street Corridor Streetscape Manual must be viewed as a long-term effort, and conditions will change over the course of time. In addition, a range of worthwhile initiatives to pursue strategic policies are needed to maintain clarity of direction. Strategic policies will help to provide a hierarchy and framework for the allocation of the limited financial resources, and must be coordinated between the two communities. The following policy recommendations should be used as a guide to monitor the activities as the elements of the plan are implemented over time.



Policy #1:
Enhance the physical environment to create a positive image that supports an attractive, functional and unique corridor.

The physical elements that combine to form an attractive physical setting and create a positive identity are often referred to as "cosmetic" improvements. This term discounts the symbolic significance of an attractive environment. Visible enhancements are needed to make a positive statement about the two communities.

Actions that relate to this policy include:

- Seek to implement corridor improvements in tandem with the reconstruction efforts being led by WisDOT.

- Seek to implement corridor improvements as part of new or redevelopment projects.
- Develop a logo and graphic identity to effectively market and brand the South 27th Street corridor.
- Seek additional federal highway enhancement funds or other assistance for efforts to secure a wider participation and more significant projects.

Policy #2:
Seek funding sources for improvement projects and activities that cannot be implemented using grants.

The prospect of including 3 percent of future roadway construction dollars as part of the WisDOT Context Sensitive Solutions program and obtaining federal highway grant funding offers great potential for implementing corridor improvements. It must be recognized, however, that these funds will not provide 100 percent of the funding required to implement all of the elements discussed and illustrated in this plan. Other sources of funding will be needed to implement the full improvement agenda.

Actions that relate to this policy include:

- Seek federal funding for comprehensive corridor improvements.
- Establish a joint city non-for-profit foundation to lobby existing businesses along the corridor to participate in an enhancement program and ongoing maintenance.
- Seek local government funding from both communities for matching grants to be designated for corridor improvements.
- Seek alternative transportation funding resources (trail/greenway development funds, etc.).
- Maintain funding for community planning organizations and technical assistance to promote the implementation of the plan.

Policy #3:
Create ordinances that are mutually agreed upon between the two communities and that are consistent with the vision established in the South 27th Street Corridor Streetscape Manual.

Zoning and subdivision controls regulate the manner in which development occurs, where it is located, how it looks ensuring consistent application throughout the corridor.

Actions that relate to this policy include:

- Redefine district boundary.
- Review restrictions for new development and uses.
- Address standards for lighting, parking, landscaping, access and signage.
- Establish site plan review management program.

Phasing Schedule

Schedule coordination with WisDOT will drive the completion of the full reconstruction of the corridor. Anticipated schedule, as released by WisDOT in February 2007 is as follows:

- NEPA Scoping: September 2007
- Complete Corridor Study: July 2009
- Environmental Document: September 2009
- Functional Plan & DSR: January 2010

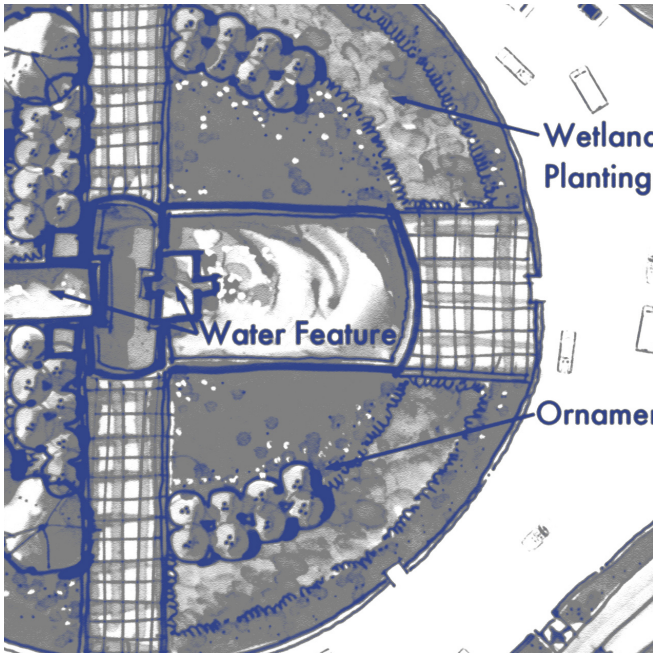
Implementation Summary

This section provides an approach to implementation that emphasizes an understanding of key principles and guiding policies in the South 27th Street Corridor Streetscape Manual. This approach to implementation is intended to provide overall guidance to get the process started.

It must be stressed that implementation recommendations, as well as the plan in general, should be viewed as a working document. The fundamental principles and policies should serve the two communities well in directing efforts to improve the overall aesthetics and function of the corridor. The way in which improvements are implemented and the final form and substance of these improvements will undoubtedly vary from that described in the plan. This does not invalidate this plan, but is merely a necessary evolution and refinement of the ideas and recommendations included as part of the plan.

Chapter 7

Conclusions



Summary

The cities of Franklin and Oak Creek can influence the future of the South 27th Street corridor through development review and other implementation tools. The modification of local zoning and sign regulations also should be carefully considered.

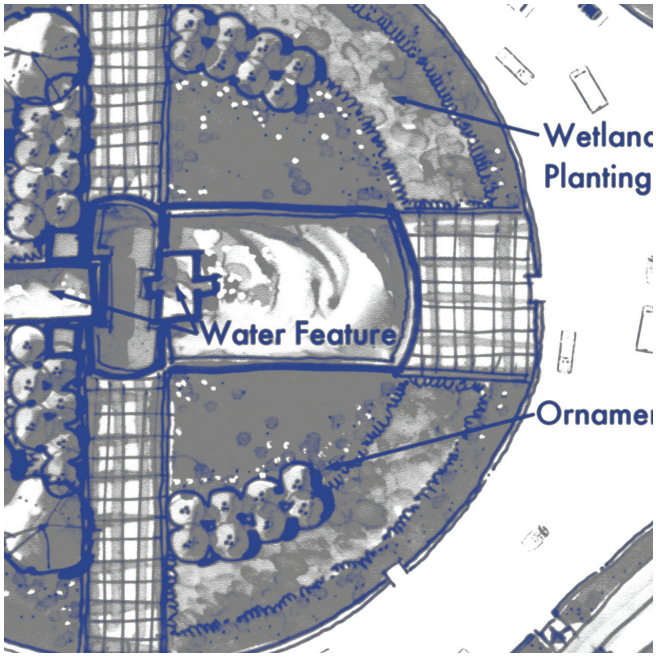
The South 27th Street Corridor Streetscape Manual outlines for the corridor what is generally described as a "schematic design," which illustrates the overall concept, sets the location and design of specific features, and establishes general construction costs.

The future of the South 27th Street corridor belongs to the area's citizens, property and business owners, and local governmental staff. The improvements proposed in the South 27th Street Corridor Streetscape Manual are essentially limited to the public right of way; however, with the appropriate zoning tools in place, the private sector will contribute equally to the visual and functional improvements suggested.

The proposed South 27th Street corridor is a "smart and sustainable" street that represents significant and progressive-thinking commitment by the cities of Franklin and Oak Creek. Over time, the implementation of these improvements will spur new private investment, reinvestment and property value enhancement. With commitment from the private and public sectors, the cities of Franklin and Oak Creek have an opportunity to enhance and define their communities' images and characters with the "Smart and Sustainable South 27th Street Corridor!"

Chapter 8

Appendices



Appendix A: Conceptual Cost Estimate

Preliminary cost estimates were developed to help guide the development of an ongoing capital improvement program in order to implement the vision for the South 27th Street corridor. Using the prototypical design treatments for each area, conceptual costs were developed for the various project recommendations.

It is important to know that these preliminary cost estimates are for budgeting purposes only. They are based on an average that includes both material and labor. When new roadway improvements are proposed, these estimates must be updated and refined to reflect a more accurate construction budget.

Elements not included as part of the enhancement costs include:

- Roadway improvements/reconstruction
- Major utility work (such as relocation and burying of existing power lines or the inclusion of a fiber optic technology network)
- Irrigation
- Right-of-way acquisitions
- Video monitoring and emergency signal response systems
- Project studies, such as special environmental considerations
- Final design and engineering fees

Costs are based on 2006 construction costs, and will need to be adjusted accordingly to account for yearly inflation and material costs. Additional factors that also may affect the eventual cost of the enhancements include the timing of construction and phasing.

27th Street (I-94 Interchange to Ryan Road)	
CORRIDOR AMENITIES - Includes Both Sides of Road and Median *Corridor amenities were figured for both sides of the road and median and consists of the following: Standard concrete pavement with accent brick pavers, custom light poles with a corridor logo panel and pedestrian light fixture, median marker including foundation and banner, pervious brick pavers, stormwater planter with concrete curbs, and stone seatwalls.*	**$2,200,000**
CORRIDOR PLANTINGS **Includes both sides of road:** *The following corridor plantings were figured for both sides of the roadway: Shade and ornamental trees, 3 gal. deciduous shrubs, ground cover, perennial and plug plantings for the stormwater planters, prairie plugs and an estimate of general seeding. Additional calculations were done for median areas which include additional prairie plugs, prairie seed and general lawn seeding.*	**$670,000**
PEDESTRIAN AMENITIES - Includes Both Sides of Road *Pedestrian amenities were figured for both sides of the road and include both pedestrian benches and litter receptacles.*	**$16,000**
GATEWAY AREA: 27th Street and Ryan Road	
GATEWAY AMENITIES *Corridor gateway amenities include the following: Standard concrete pavement with brick accent pavers, signal poles and mast arms including foundations, pedestrian signal including foundation, vehicular and pedestrian wayfinding signage, two (2) gateway markers with electronic message boards, four (2) greenscreen gateway markers. It does not include any necessary video monitoring and emergency response signals.*	**$410,000**
GATEWAY PLANTINGS *Gateway plantings include ornamental trees, 3 gal. evergreen and deciduous shrubs, prairie plugs and seed and general lawn seeding.*	**$4,000**
Intersections of Oakwood Road and Southbranch Boulevard	
INTERSECTION AMENITIES (2X's) *Corridor intersection amenities include the following: Standard concrete pavement with brick accent pavers, Signal poles and mast arms including foundations, pedestrian signal including foundation, vehicular and pedestrian wayfinding signage. It does not include any necessary video monitoring and emergency response signals.*	**$530,000**
INTERSECTION PLANTINGS (2X's) *Intersection plantings include ornamental trees, 3 gal. evergreen and deciduous shrubs, prairie plugs and seed and general lawn seeding.*	**$4,000**
Intersection of 27th Street and Elm Road	
ROUNDABOUT AMENITIES - Includes All Sides and Median *Roundabout amenities were figured for all sides of the road and median and consists of the following: Standard concrete pavement with accent brick pavers, custom light poles with a corridor logo panel and pedestrian light fixture, median marker including foundation and banner, brick pavers, stormwater planter with concrete curbs, stone seatwalls, a central water feature, vehicular and pedestrian wayfinding signage. It does not include roadway construction costs or right-of-way acquisition costs.*	**$620,000**
ROUNDABOUT PLANTINGS - Includes All Sides and Median *Roundabout plantings were figured for all sides of the roadway and median and consist of the following: Shade and ornamental trees, 3 gal. deciduous shrubs, ground cover, perennial and plug plantings for the stormwater planters, prairie plugs and an estimate of general seeding.*	**$71,000**
PEDESTRIAN AMENITIES - Includes All Sides and Median *Pedestrian amenities were figured for both sides of the road and include both pedestrian benches and litter receptacles.*	**$10,000**
Estimate enhancements costs for Zone 'A'	**$4,535,000**
10% Contingency	**$433,500**
Total estimate enhancements costs for Zone 'A'	**$4,968,500**

27th Street (Ryan Road to Drexel Avenue)	
CORRIDOR AMENITIES - Includes Both Sides of Road and Median *Corridor amenities were figured for both sides of the road and median and consists of the following: Standard concrete pavement, custom light poles with a corridor logo panel and pedestrian light fixture and median markers including foundation and banner.*	**$1,200,000**
CORRIDOR PLANTINGS - Includes Both Sides of Road *The following corridor plantings were figured for both sides of the roadway: Shade and ornamental trees, 3 gal. deciduous shrubs, ground cover, perennial and plug plantings for the stormwater planters, prairie plugs and an estimate of general seeding. Additional calculations were done for median areas which include additional prairie seed and general lawn seeding.*	**$1,100,000**
PEDESTRIAN AMENITIES - Includes Both Sides of Road *Pedestrian amenities were figured for both sides of the road and include both pedestrian benches and litter receptacles.*	**$8,000**
27th Street (Puetz Road and Drexel Avenue)	
INTERSECTION AMENITIES (2X's) *Corridor intersection amenities include the following: Standard concrete pavement with brick accent pavers, Signal poles and mast arms including foundations, pedestrian signal including foundation, vehicular and pedestrian wayfinding signage. It does not include any necessary video monitoring and emergency response signals.*	**$500,000**
INTERSECTION PLANTINGS (2X's) *Intersection plantings include ornamental trees, 3 gal. evergreen and deciduous shrubs, prairie plugs and seed and general lawn seeding.*	**$7,000**
Intersections of Lakewood Lane and Forest Hill Avenue	
INTERSECTION AMENITIES (2X's) *Corridor intersection amenities include the following: Standard concrete pavement with brick accent pavers, Signal poles and mast arms including foundations, pedestrian signal including foundation, vehicular and pedestrian wayfinding signage. It does not include any necessary video monitoring and emergency response signals.*	**$500,000**
INTERSECTION PLANTINGS (2X's) *Intersection plantings include ornamental trees, 3 gal. evergreen and deciduous shrubs, prairie plugs and seed and general lawn seeding.*	**$7,000**
Estimate enhancements costs for Zone 'B'	**$3,322,000**
10% Contingency	**$331,650**
Total estimate enhancements costs for Zone 'B'	**$3,653,650**

27th Street (Drexel Avenue to College Avenue)	
CORRIDOR AMENITIES - Includes Both Sides of Road and Median *Corridor amenities were figured for both sides of the road and median and consists of the following: Standard concrete pavement with accent brick pavers, custom light poles with a corridor logo panel and pedestrian light fixture, median marker including foundation and banner, pervious brick pavers, stormwater planter with concrete curbs, and stone seatwalls..*	**$2,200,000**
CORRIDOR PLANTINGS **Includes both sides of road:** *The following corridor plantings were figured for both sides of the roadway: Shade and ornamental trees, 3 gal. deciduous shrubs, ground cover, perennial and plug plantings for the stormwater planters, prairie plugs and an estimate of general seeding. Additional calculations were done for median areas which include additional prairie seed and general lawn seeding.*	**$670,000**
PEDESTRIAN AMENITIES - Includes Both Sides of Road *Pedestrian amenities were figured for both sides of the road and include both pedestrian benches and litter receptacles.*	**$16,000**
GATEWAY AREA: 27th Street and Rawson Avenue	
GATEWAY AMENITIES *Corridor gateway amenities include the following: Standard concrete pavement with brick accent pavers, signal poles and mast arms including foundations, pedestrian signal including foundation, vehicular and pedestrian wayfinding signage, two (2) gateway markers with electronic message boards, two (2) greenscreen gateway markers. It does not include any necessary video monitoring and emergency response signals.*	**$400,000**
GATEWAY PLANTINGS *Gateway plantings include ornamental trees, 3 gal. evergreen and deciduous shrubs, prairie plugs and seed and general lawn seeding.*	**$3,700**
Intersections of Sycamore Street and College Avenue	
INTERSECTION AMENITIES (2X's) *Corridor intersection amenities include the following: Standard concrete pavement with brick accent pavers, Signal poles and mast arms including foundations, pedestrian signal including foundation, vehicular and pedestrian wayfinding signage. It does not include any necessary video monitoring and emergency response signals.*	**$530,000**
INTERSECTION PLANTINGS (2X's) *Intersection plantings include ornamental trees, 3 gal. evergreen and deciduous shrubs, prairie plugs and seed and general lawn seeding.*	**$3,700**
Intersection of 27th Street and NM Drive	
ROUNDABOUT AMENITIES - Includes All Sides and Median *Roundabout amenities were figured for all sides of the road and median and consists of the following: Standard concrete pavement with accent brick pavers, custom light poles with a corridor logo panel and pedestrian light fixture, median marker including foundation and banner, brick pavers, stormwater planter with concrete curbs, stone seatwalls,vehicular and pedestrian wayfinding signage. It does not include roadway construction costs, right-of-way aquisition, or central water feature.*	**$320,000**
ROUNDABOUT PLANTINGS - Includes All Sides and Median *Roundabout plantings were figured for all sides of the roadway and median and consist of the following: Shade and ornamental trees, 3 gal. deciduous shrubs, ground cover, perennial and plug plantings for the stormwater planters, prairie plugs and an estimate of general seeding.*	**$71,000**
PEDESTRIAN AMENITIES - Includes All Sides and Median *Pedestrian amenities were figured for both sides of the road and include both pedestrian benches and litter receptacles.*	**$10,000**
Estimate enhancements costs for Zone 'C'	**$4,224,400**
10% Contingency	**$332,040**
Total estimate enhancements costs for Zone 'C'	**$4,556,440**

Appendix B: Stakeholder Involvement

The following is a list of stakeholders who participated in interview sessions prior to beginning design work on the South 27th Street corridor. The purpose of these interviews was to get information from key people who might have an interest or special knowledge on a particular topic or area regarding the project.

June 15, 2006
Location: Inspection Conference Room, City of Franklin
9229 West Loomis Road
Franklin, WI 53132

- Barbara Wesener — South Suburban Chamber of Commerce, Executive Director
- James Martins — City of Franklin Fire Chief
- Richard Oliva — City of Franklin Police Chief
- Jerry Schaefer — City of Franklin Public Works Superintendant
- Ron Romeis — City of Franklin Assistant City Engineer
- Ashely Booth — City of Franklin Senior Planner
- Andy Maxwell — WisDOT
- Jim Rhiner — City of Franklin CDA, EDC and 27th Street Steering Committee
- Ken Skowronski — Alderman, District 6 of Franklin, and City of Franklin Plan Commission
- Ted Grintjes — City of Franklin CDA, 27th Street Steering Committee
- Pete Kosovich — City of Franklin Alderman District 4
- Bob Bastien — Director Asset Management, Northwestern Mutual Insurance
- Steve Radke — Northwestern Mutual Insurance
- Chris Amidzich — Northwestern Mutual Insurance
- Mike Mooney — MLG Development
- Jeff Fahs — HDR Architects, Architect
- Gerard Revolinski — Arnold & O'Sheridan, Inc., Landscape Architect
- Jim Joehnk — Arnold & O'Sheridan, Inc., Civil Engineer
- John Bennett — City of Franklin Engineer, City of Franklin Plan Commission
- Gary Kautzer — Irgens
- Jim Kerr — City of Franklin EDC
- Joe Haselow — City of Franklin EDC
- Al Foeckler — City of Oak Creek Alderman District 2
- Tom Michalski — City of Oak Creek Alderman District 6
- Alan Hammelman — City of Franklin Alderman District 3
- Marie Myszkowski — City of Oak Creek CDA

June 16, 2006
Location: Conference Room, City of Oak Creek
8640 South Howell Avenue
Oak Creek, WI 53154

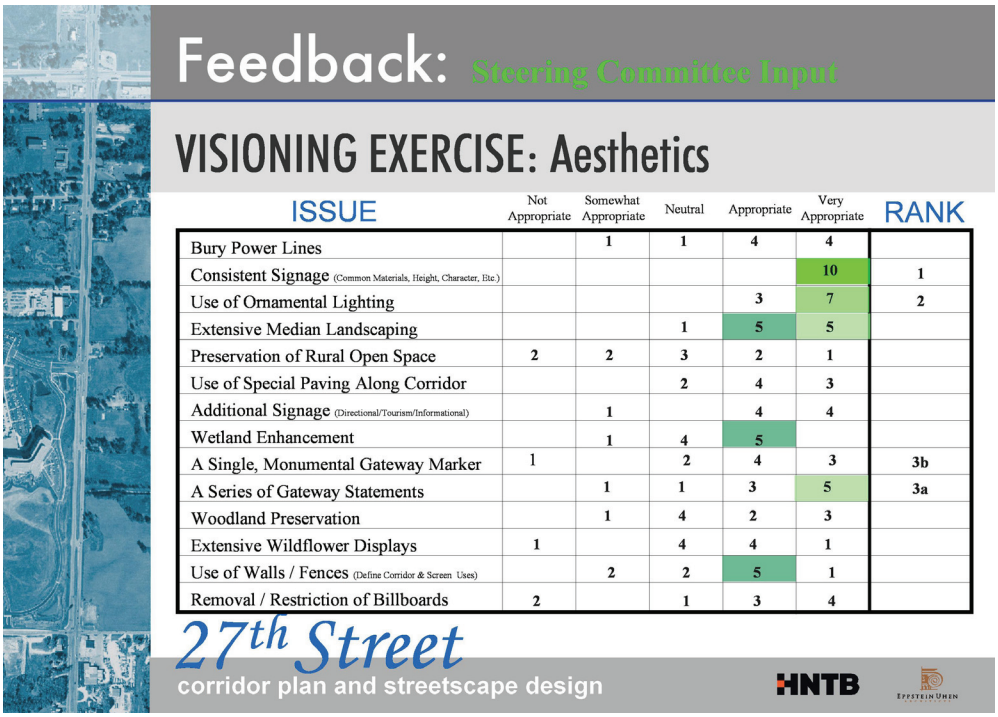
• Norb Theine	Apple Tower Development, Inc.
• Doug Seymour	City of Oak Creek Community Development Director
• Dave Laehn	City of Oak Creek Street Division Supervisor
• Brian Staula	City of Oak Creek Fire Chief
• Thomas Bauer	City of Oak Creek Police Chief
• Rebecca Lane	City of Oak Creek Parks and Recreation
• Richard Bolender	Mayor, City of Oak Creek
• Mike Dilworth	Dimiceli Investments
• Bob Anderson	WisDOT
• Roger Rhodes	Wheaton Franciscan
• Dimity Grabowski	City of Oak Creek Alderman District 5

Appendix C: Input Exercise Results

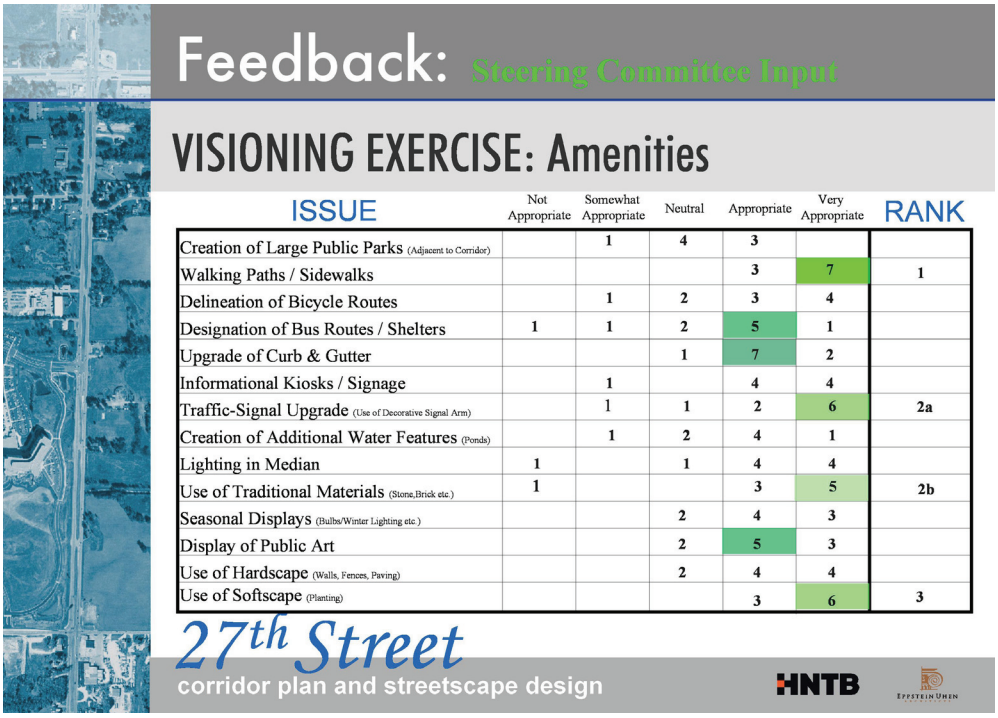
As referenced in Planning and Design Process (Chapter 3 of this manual), several input techniques were utilized in order to gain a better understanding of key corridor issues and design theme opportunities. This section includes the full summary of the Steering Committee and public input as related to this input survey.


corridor plan and streetscape design
Input
• Stakeholder Input Sessions
July 13, 2006
September 28, 2006
• Public Input – Open House
November 2, 2006
27th Street
corridor design enhancements
HNTB


PUBLIC & STAKEHOLDER INPUT
Design Direction
Steering Committee Exercise
design concepts
27th Street
corridor design enhancements
HNTB



ISSUE	Not Appropriate	Somewhat Appropriate	Neutral	Appropriate	Very Appropriate	RANK
Bury Power Lines		1	1	4	4	
Consistent Signage (Common Materials, Height, Character, Etc.)					10	1
Use of Ornamental Lighting				3	7	2
Extensive Median Landscaping			1	5	5	
Preservation of Rural Open Space	2	2	3	2	1	
Use of Special Paving Along Corridor			2	4	3	
Additional Signage (Directional/Tourism/Informational)		1		4	4	
Wetland Enhancement		1	4	5		
A Single, Monumental Gateway Marker	1		2	4	3	3b
A Series of Gateway Statements		1	1	3	5	3a
Woodland Preservation		1	4	2	3	
Extensive Wildflower Displays	1		4	4	1	
Use of Walls / Fences (Define Corridor & Screen Uses)		2	2	5	1	
Removal / Restriction of Billboards	2		1	3	4	



ISSUE	Not Appropriate	Somewhat Appropriate	Neutral	Appropriate	Very Appropriate	RANK
Creation of Large Public Parks (Adjacent to Corridor)		1	4	3		
Walking Paths / Sidewalks				3	7	1
Delineation of Bicycle Routes		1	2	3	4	
Designation of Bus Routes / Shelters	1	1	2	5	1	
Upgrade of Curb & Gutter			1	7	2	
Informational Kiosks / Signage		1		4	4	
Traffic-Signal Upgrade (Use of Decorative Signal Arm)		1	1	2	6	2a
Creation of Additional Water Features (Ponds)		1	2	4	1	
Lighting in Median	1		1	4	4	
Use of Traditional Materials (Stone,Brick etc.)	1			3	5	2b
Seasonal Displays (Bulbs/Winter Lighting etc.)			2	4	3	
Display of Public Art			2	5	3	
Use of Hardscape (Walls, Fences, Paving)			2	4	4	
Use of Softscape (Planting)				3	6	3


Feedback: Public Input
PRIORITY EXERCISE: Highest Ranked Design Elements
ISSUE
19% Creation / Extension of Sidewalks/Paths
13% Consistent Signage (Common Materials, Height, Character, Etc.)
6% Use of Ornamental Pedestrian Lighting
6% Extensive Median Landscaping
8% Preservation of Rural Open Space
<2% Use of Special Paving Along Corridor
8% Wayfinding Signage (Directional/Tourism/Informational)
0% Median Marker
6% Gateway Marker
<2% Digital / Electronic Signage
8% Woodland Preservation
5% Extensive Wildflower Displays
0% Use of Walls / Fences (Define Corridor & Screen Uses)
17% Removal / Restriction of Billboards
ISSUE
2% Addition of Street Furniture (benches, bollards, etc.)
2% Stormwater Management
0% Use of Roundabouts
55 Accent Lighting (on signage/landscaping)
2% Upgrade of Curb & Gutter
0% Informational Kiosks / Signage
12% Traffic-Signal Upgrade (Use of Decorative Signal Arm)
19% Creation of Water Features (Ponds/Fountains)
14% Roadway Lighting along Corridor
14% Use of Traditional Materials (Stone,Brick etc.)
7% Seasonal Displays (Bulbs/Winter Lighting etc.)
5% Display of Public Art
2% Use of Hardscape (Walls, Fences, Paving)
16% Use of Softscape (Planting)
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Feedback: Public Input
PRIORITY EXERCISE: Lowest Ranked Design Elements
ISSUE
19% Creation / Extension of Sidewalks/Paths
13% Consistent Signage (Common Materials, Height, Character, Etc.)
6% Use of Ornamental Pedestrian Lighting
6% Extensive Median Landscaping
8% Preservation of Rural Open Space
<2% Use of Special Paving Along Corridor
8% Wayfinding Signage (Directional/Tourism/Informational)
0% Median Marker
6% Gateway Marker
<2% Digital / Electronic Signage
8% Woodland Preservation
5% Extensive Wildflower Displays
0% Use of Walls / Fences (Define Corridor & Screen Uses)
17% Removal / Restriction of Billboards
ISSUE
2% Addition of Street Furniture (benches, bollards, etc.)
2% Stormwater Management
0% Use of Roundabouts
55 Accent Lighting (on signage/landscaping)
2% Upgrade of Curb & Gutter
0% Informational Kiosks / Signage
12% Traffic-Signal Upgrade (Use of Decorative Signal Arm)
19% Creation of Water Features (Ponds/Fountains)
14% Roadway Lighting along Corridor
14% Use of Traditional Materials (Stone,Brick etc.)
7% Seasonal Displays (Bulbs/Winter Lighting etc.)
5% Display of Public Art
2% Use of Hardscape (Walls, Fences, Paving)
16% Use of Softscape (Planting)
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PUBLIC & STAKEHOLDER INPUT
DESIGN DIRECTION
Steering Committee Summary and
Public Input Summary
27th Street
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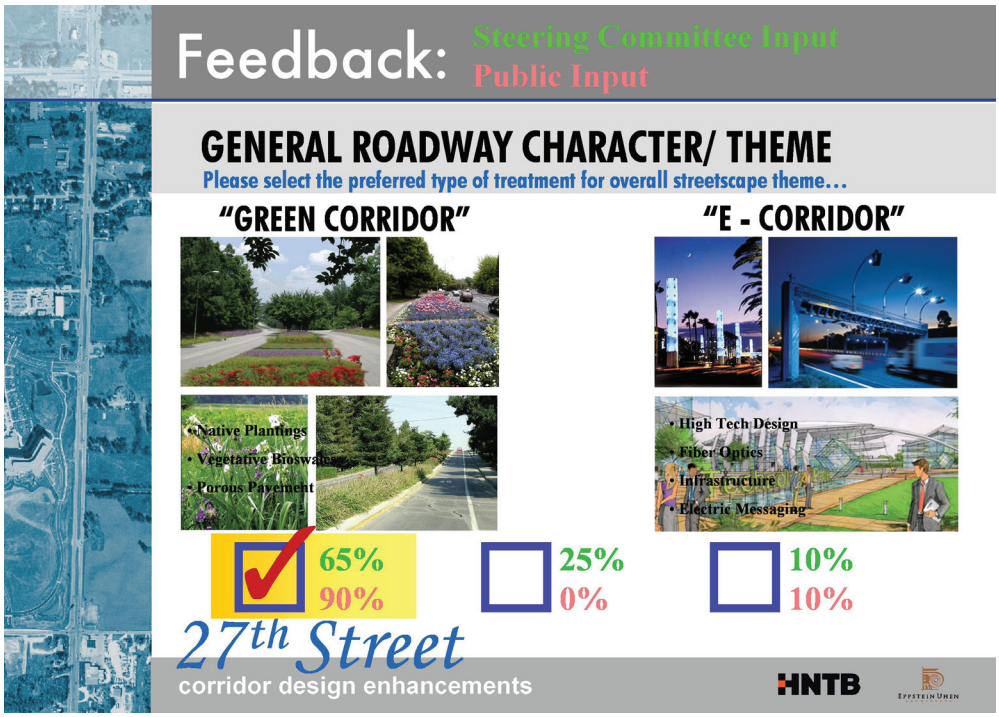
PUBLIC & STAKEHOLDER INPUT
PUBLIC OPEN HOUSE
Opportunity to provide input regarding design theme and concepts
Four "stations" with opportunity for input at each station
Two sessions, with nearly 100 attendees
Participants were asked to "vote" for their preferred design issue based on level of appropriateness for the corridor design
27th Street
corridor design enhancements
HNTB
EPPSTEIN UHEN


Feedback:
Steering Committee Input
Public Input
GENERAL ROADWAY CHARACTER/ THEME
Please select the preferred type of treatment for overall streetscape theme…
"GREEN CORRIDOR"
"E - CORRIDOR"
• Native Plantings
• Vegetative Bioswales
• Porous Pavement
• High Tech Design
• Fiber Optics
• Infrastructure
• Electric Messaging
65%
90%
25%
0%
10%
10%
27th Street
corridor design enhancements
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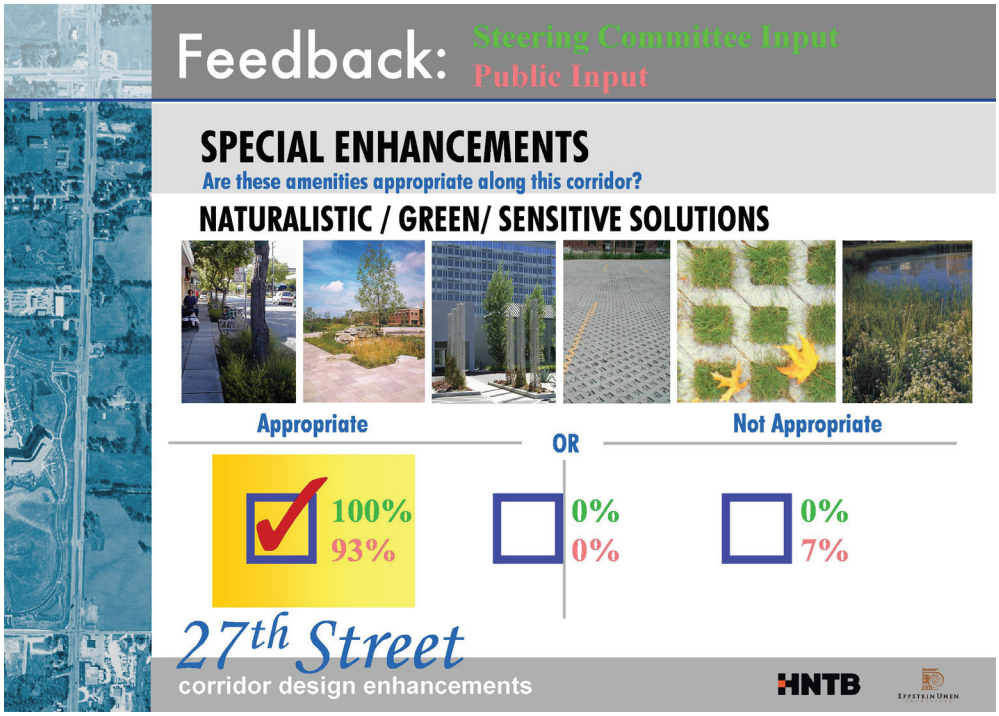
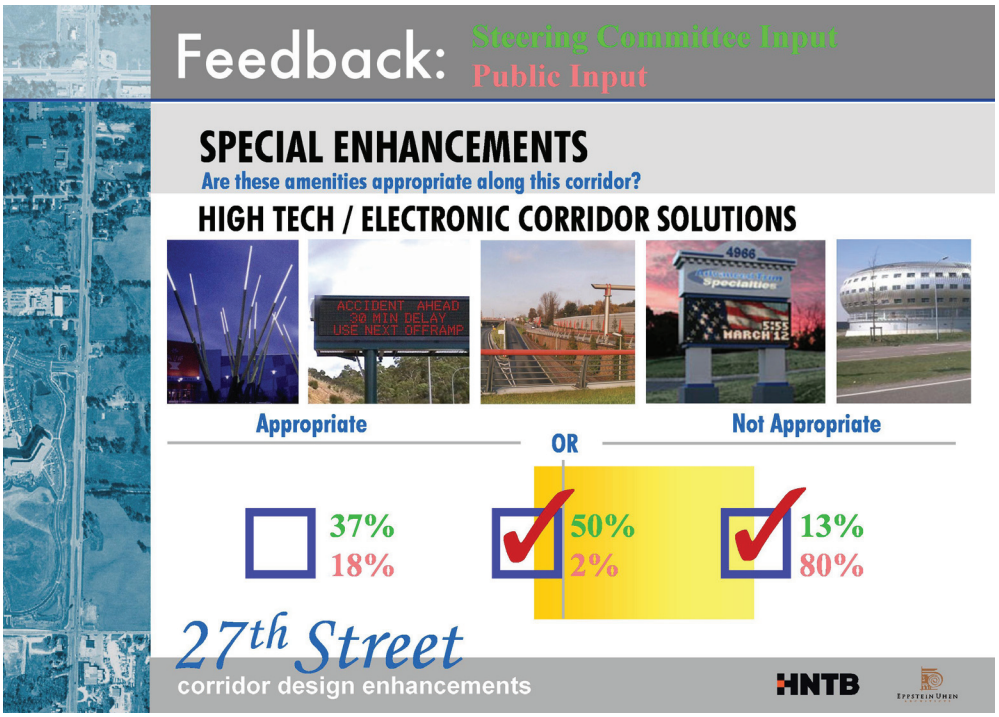
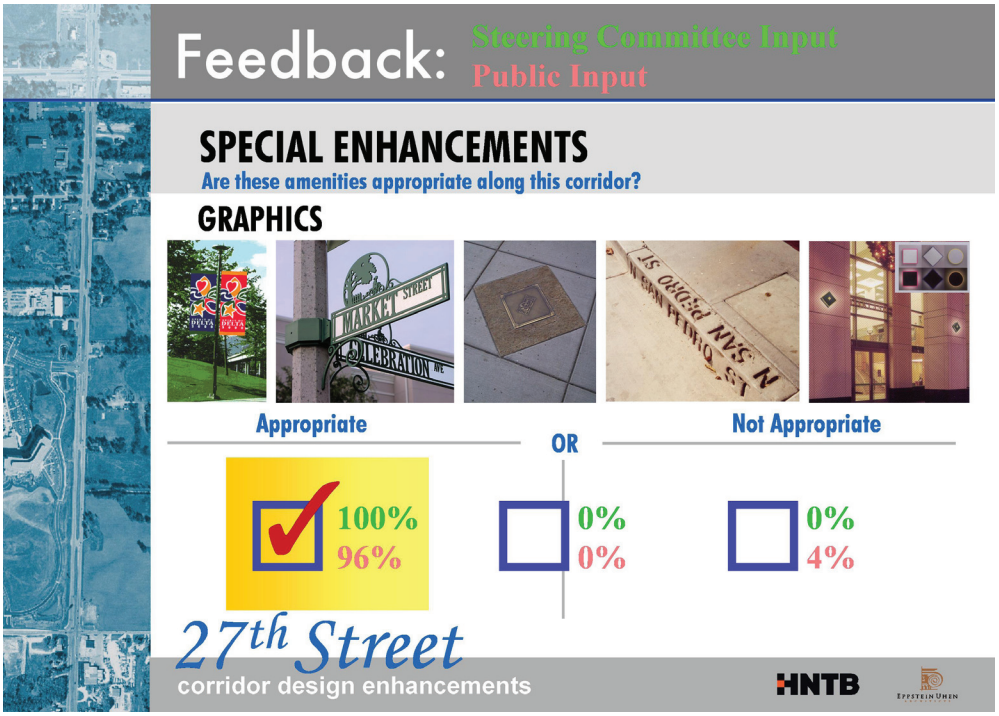
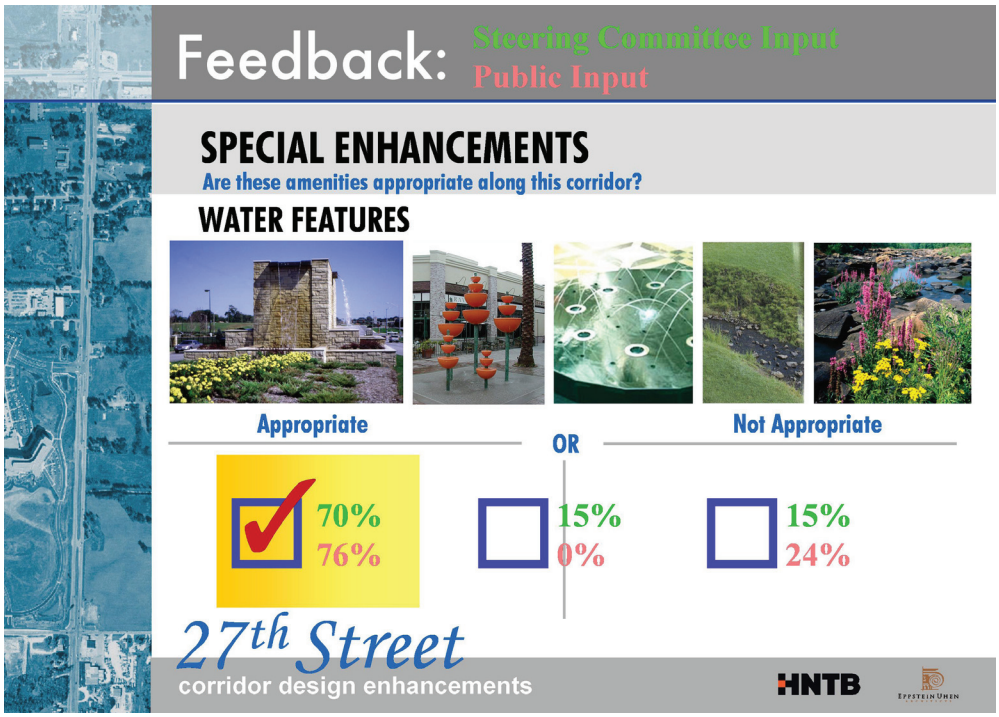
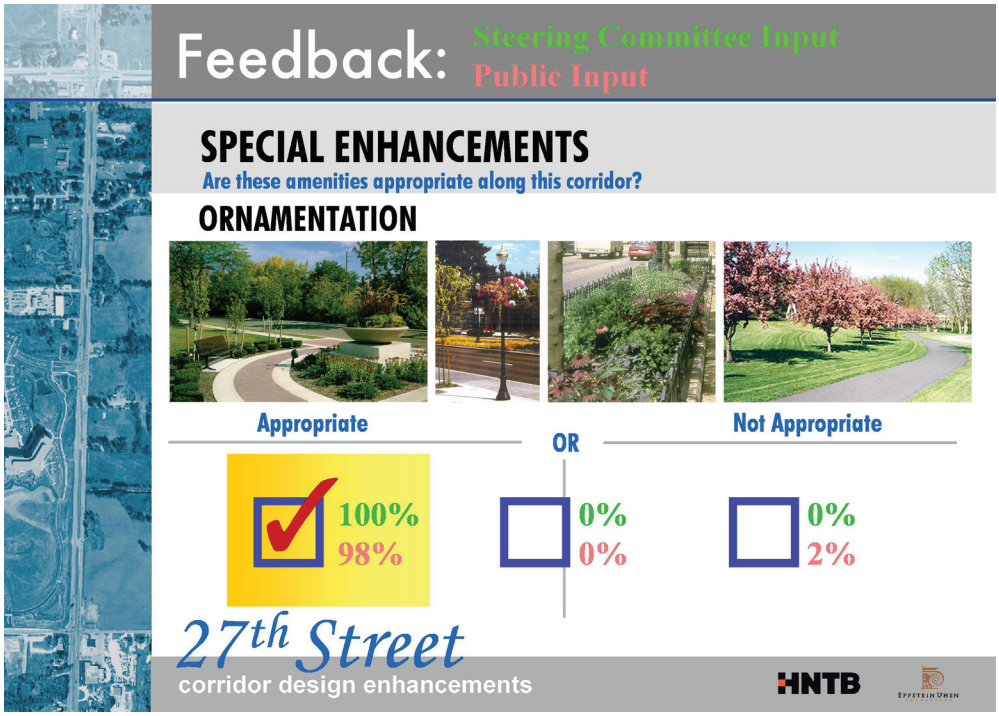

Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
NATURALISTIC / GREEN/ SENSITIVE SOLUTIONS
Appropriate
OR
Not Appropriate
100%
93%
0%
0%
0%
7%
27th Street
corridor design enhancements
HNTB


Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
HIGH TECH / ELECTRONIC CORRIDOR SOLUTIONS
ACCIDENT AHEAD
30 MIN DELAY
USE NEXT OFFRAMP
Appropriate
OR
Not Appropriate
37%
18%
50%
2%
13%
80%
27th Street
corridor design enhancements
HNTB


Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
GRAPHICS
MARKET STREET
Appropriate
OR
Not Appropriate
100%
96%
0%
0%
0%
4%
27th Street
corridor design enhancements
HNTB


Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
WATER FEATURES
Appropriate
OR
Not Appropriate
70%
76%
15%
0%
15%
24%
27th Street
corridor design enhancements
HNTB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Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
ORNAMENTATION
Appropriate
OR
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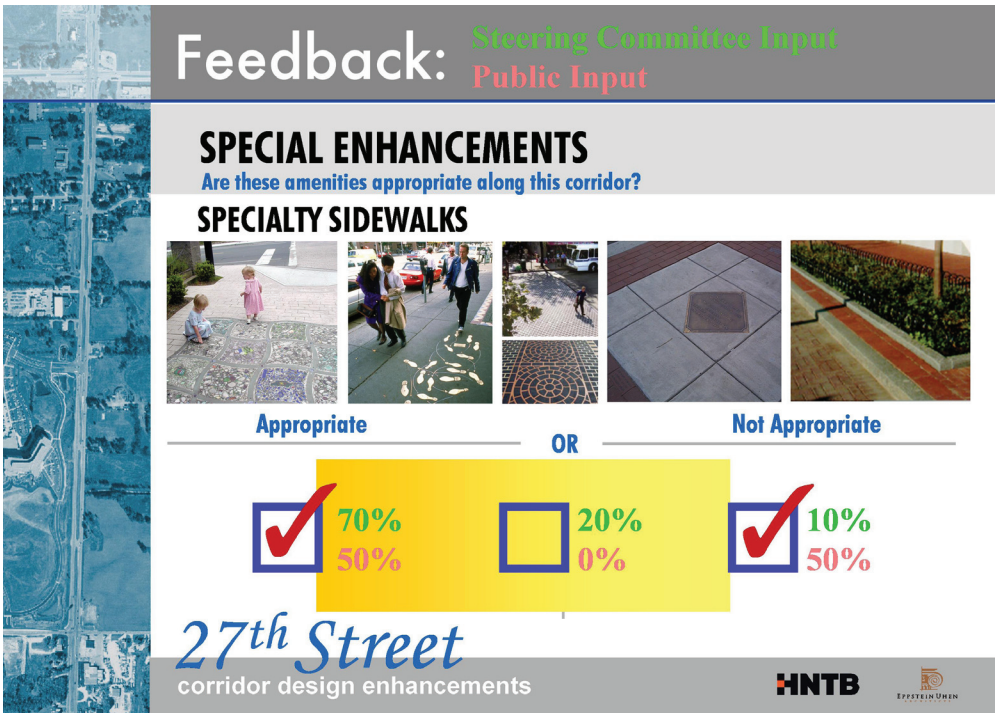
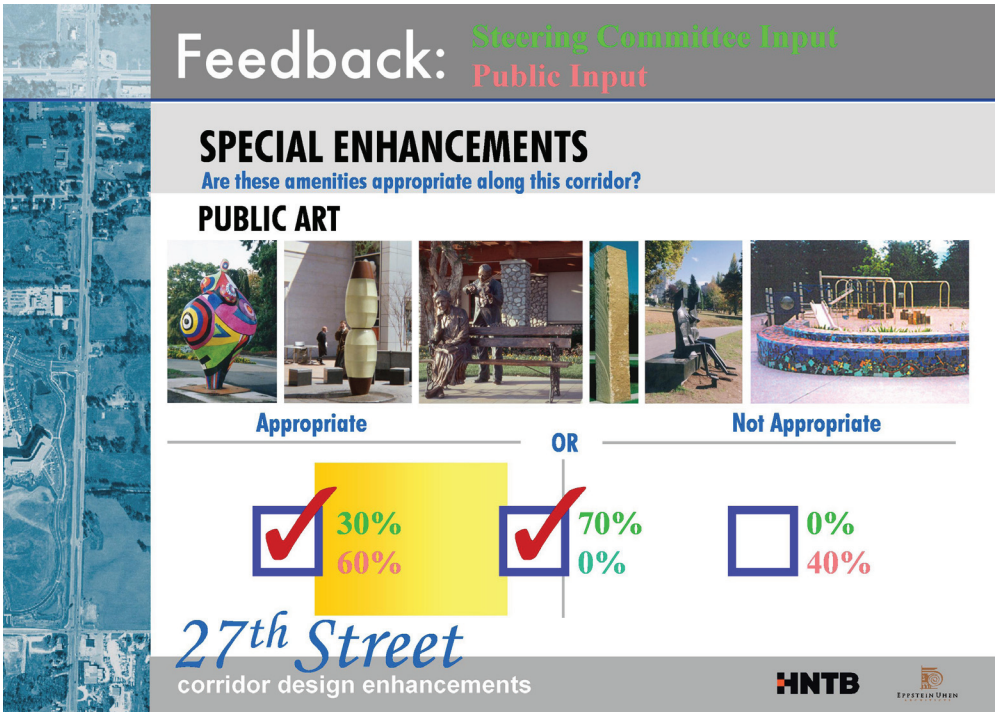
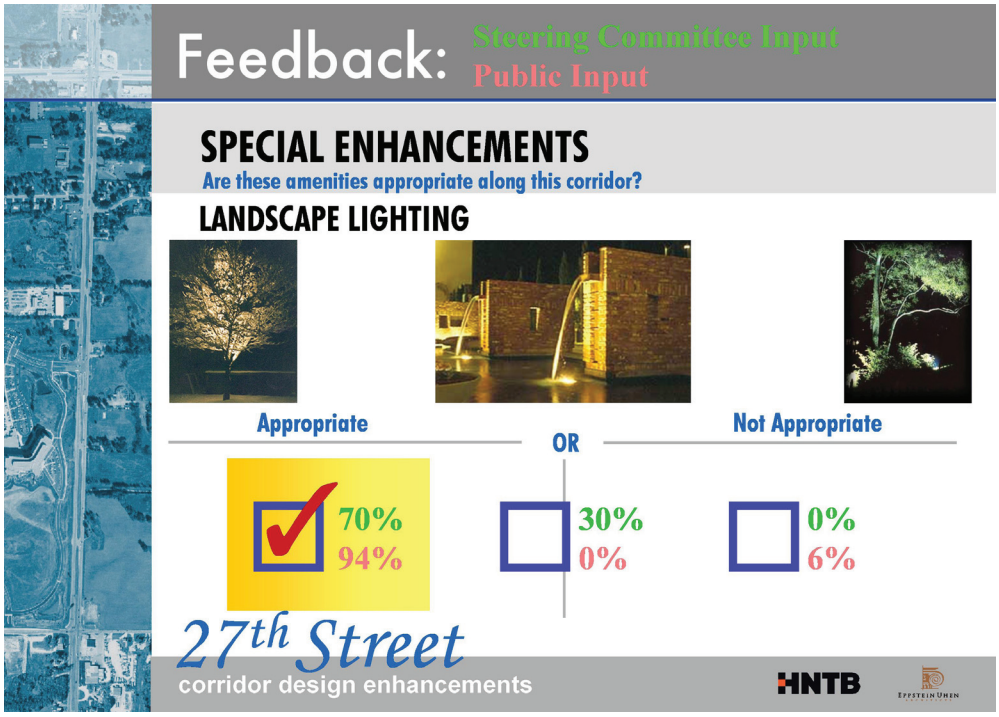
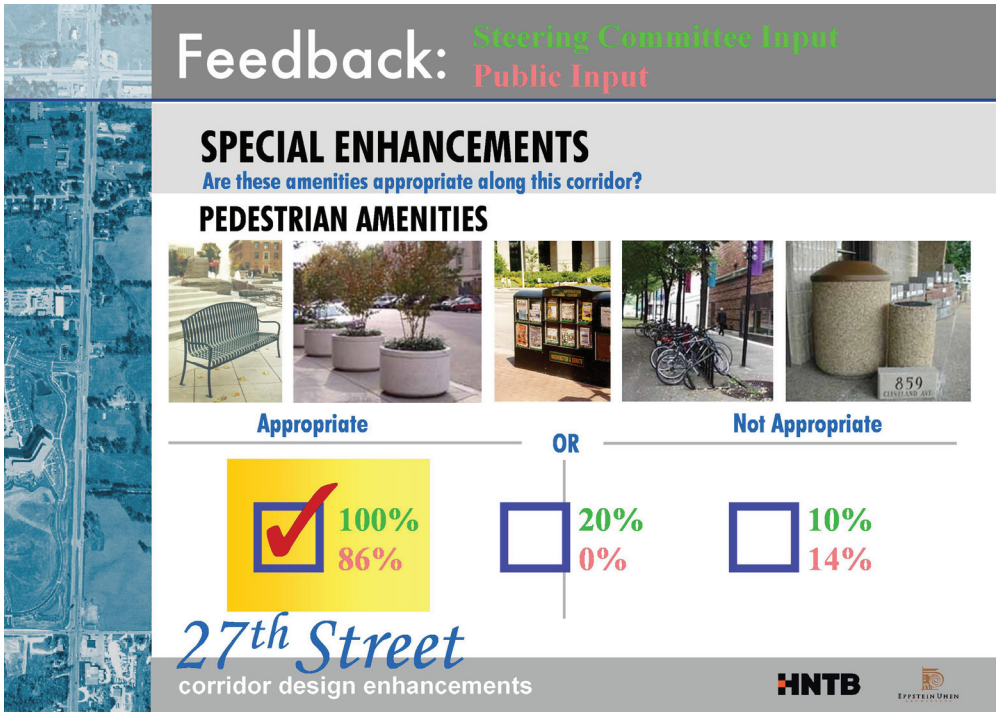
0%
0%
2%
27th Street
corridor design enhancements
HNTB


Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
SPECIALTY SIDEWALKS
Appropriate
OR
Not Appropriate
70%
50%
20%
0%
10%
50%
27th Street
corridor design enhancements
HNTB


Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
PUBLIC ART
Appropriate
OR
Not Appropriate
30%
60%
70%
0%
0%
40%
27th Street
corridor design enhancements
HNTB


Feedback:
Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
LANDSCAPE LIGHTING
Appropriate
OR
Not Appropriate
70%
94%
30%
0%
0%
6%
27th Street
corridor design enhancements
HNTB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Steering Committee Input
Public Input
SPECIAL ENHANCEMENTS
Are these amenities appropriate along this corridor?
PEDESTRIAN AMENITIES
Appropriate
OR
Not Appropriate
100%
86%
20%
0%
10%
14%
27th Street
corridor design enhancements
HNTB


corridor plan and streetscape design
Input Summary
• What does this tell us?
27th Street
corridor plan and streetscape design
HNTB


PUBLIC & STAKEHOLDER INPUT
DESIGN DIRECTION: Conclusions
• Steering Committee & Public Input achieved consensus on the following:
• Preferred applications along the corridor that were NATURALISTIC/GREEN/SITE SENSITIVE SOLUTIONS;
• Strong desire to include GRAPHICS – Special Enhancements (includes decorative street signs, curbs, banners, etc.);
• Strong desire to include appropriate WATER FEATURES;
• Desire to use NATURAL MATERIALS (brick/stone etc.) in design elements;
27th Street
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PUBLIC & STAKEHOLDER INPUT
DESIGN DIRECTION: CONCLUSIONS
Consensus (cont.)
Preferred concepts that included detail ORNAMENTATION of pedestrian elements (includes decorative plantings, trees, lighting, etc.);
Would like to restrict BILLBOARD signage;
Would like to include decorative and accent LANDSCAPE LIGHTING throughout corridor;
Strong desire to elevate the PEDESTRIAN AMENITIES along the corridor.
27th Street
corridor design enhancements
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PUBLIC & STAKEHOLDER INPUT
DESIGN DIRECTION: CONCLUSIONS
The Steering Committee and the Public had varied consensus on :
HIGH TECH/ELECTRONIC CORRIDOR
Steering Committee endorsed concept stronger than the public
PUBLIC ART
Public approved of the idea. Steering Committee was more neutral.
27th Street
corridor design enhancements
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PUBLIC & STAKEHOLDER INPUT
DESIGN DIRECTION: CONCLUSIONS
• Varied consensus cont'd:
• SIGNAGE
➢ Public was cautious about additional signage, whereas the Steering Committee endorsed a comprehensive wayfinding/signage system.
• TRAFFIC CALMING
➢ Public was cautious about roundabouts, however were open to the idea of creating them as a focal point/element along the corridor where permitted.
27th Street
corridor design enhancements
HNTB
Epstein Uhen

Appendix D: Plant Material Reference Guide

A range of plant material suitable to harsh urban conditions will need to be reviewed and approved by the cities of Franklin and Oak Creek, and WisDOT.

Reference material regarding plant material that is suitable for the planting application in stormwater management scenarios as recommended by JFNew and is provided as reference on the following pages.

Economy Prairie Seed Mix

Botanical Name	Common Name	Oz./Acre
Permanent Grasses / Sedges		
Andropogon gerardii	Big Bluestem	32.00
Bouteloua curtipendula	Side-Oats Gramma	18.00
Carex bicknellii / Carex brevior	Prairie Sedge Mix	1.00
Elymus canadensis	Canada Wild Rye	16.00
Panicum virgatum	Switch Grass	2.50
Schizachyrium scoparium	Little Bluestem	24.00
Sorghastrum nutans	Indian Grass	12.00
	Total	**105.50**
Temporary Cover		
Avena sativa	Common Oat	360.00
Lolium multiflorum	Annual Rye	120.00
	Total	**480.00**
Forbs		
Asclepias syriaca	Common Milkweed	0.50
Asclepias tuberosa	Butterfly Milkweed	1.00
Aster leavis	Smooth Blue Aster	0.25
Aster novae-angliae	New England Aster	0.75
Chamaecrista fasciculata	Partridge Pea	8.00
Coreopsis lanceolata	Sand Coreopsis	3.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	5.00
Heliopsis helianthoides	False Sunflower	0.25
Lupinus perennis	Wild Lupine	0.50
Pycnanthemum tenuifolium	Mountain Mint	0.50
Ratibida pinnata	Yellow Coneflower	2.50
Rudbeckia hirta	Black-Eyed Susan	6.00
	Total	**28.25**
Annual/Perennial Forbs Mix		**24.00**

Mix Statistics

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	1.76	472,190	10.84	34%
Grasses	6.59	916,502	21.04	66%
Total Natives	8.35	1,388,693	31.88	100%
Non-Native Forbs	1.50	609,997	14.00	
Cover	30.00	4,627,379	106.23	
Totals	39.83	6,626,068	152.11	

Low- Profile Prairie Seed Mix

Botanical Name	Common Name	Oz./Acre
Permanent Grasses / Sedges		
Bouteloua curtipendula	Side-Oats Gramma	10.00
Carex bicknellii / Carex brevior	Prairie Sedge Mix	1.00
Elymus canadensis	Canada Wild Rye	16.00
Koeleria pyramidata	June Grass	2.00
Panicum virgatum	Switch Grass	1.00
Schizachyrium scoparium	Little Bluestem	28.00
Sporobolus heterolepis	Prairie Dropseed	3.00
	Total	**61.00**
Temporary Cover		
Avena sativa	Common Oat	360.00
Lolium multiflorum	Annual Rye	120.00
	Total	**480.00**
Forbs		
Amorpha canescens	Lead Plant	1.00
Anemone cylindrica	Thimbleweed	0.50
Aquilegia canadensis	Wild Columbine	0.50
Asclepias tuberosa	Butterfly Milkweed	2.00
Aster ericoides	Heath Aster	0.25
Aster laevis	Smooth Blue Aster	0.75
Aster novae-angliae	New England Aster	0.25
Baptisia lactea	White Wild Indigo	2.00
Chamaecrista fasciculata	Partridge Pea	9.00
Coreopsis lanceolata	Sand Coreopsis	1.50
Coreopsis palmata	Prairie Coreopsis	1.00
Dalea purpurea	Purple Prairie Clover	1.50
Echinacea purpurea	Broad-Leaved Purple Coneflower	3.50
Eryngium yuccifolium	Rattlesnake Master	2.50
Kuhnia eupatorioides v. corymbulosa	False Boneset	0.50
Lespedeza capitata	Round-Head Bush Clover	2.00
Liatris aspera	Rough Blazing Star	0.50
Lupinus perennis	Wild Lupine	2.00
Monarda fistulosa	Wild Bergamot	0.50
Parthenium integrifolium	Wild Quinine	1.00
Penstemon digitalis	Foxglove Beard Tongue	0.50
Petalostemum candidum	White Prairie Clover	1.50
Physostegia virginiana	Obedient Plant	0.25
Pycnanthemum virginianum	Common Mountain Mint	1.00
Ratibida pinnata	Yellow Coneflower	3.00
Rudbeckia hirta	Black-Eyed Susan	2.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	1.00
Silphium integrifolium	Rosin Weed	3.00
Silphium terebinthinaceum	Prairie Dock	0.50
Solidago nemoralis	Old-Field Goldenrod	0.50
Solidago rigida	Stiff Goldenrod	1.00
Tradescantia ohiensis	Common Spiderwort	0.75
Vernonia gigantea	Smooth Tall Ironweed	1.75
Veronicastrum virginicum	Culver's Root	0.25
	Total	**49.75**
Annual/Perennial Forbs Mix		**32.00**

Mix Statistics

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	3.11	1,589,940	36.5	66%
Grasses	3.81	811,958	18.64	34%
Total Natives	6.92	2,401,898	55.14	100%
Non-Native Forbs	2.00	195,149	4.48	
Cover	30.00	2,370,535	54.42	
Totals	38.71	4,967,582	114.04	

Stormwater Seed Mix

Botanical Name	Common Name	Oz./Acre
Permanent Grasses / Sedges / Rushes		
Carex comosa	Bristly Sedge	2.50
Carex lacustris	Common Lake Sedge	0.25
Carex lurida	Bottlebrush Sedge	4.00
Carex vulpinoidea	Brown Fox Sedge	6.00
Eleocharis ovata	Blunt Spike Rush	1.00
Juncus effusus	Common Rush	1.00
Leersia orzyoides	Rice Cut Grass	3.00
Scirpus acutus	Hard-Stemmed Bulrush	2.50
Scirpus pungens	Chairmaker's Rush	4.00
Scirpus validus	Great Bulrush	6.00
	Total	**30.25**
Temporary Cover		
Avena sativa	Common Oat	360.00
Lolium multiflorum	Annual Rye	104.00
	Total	**464.00**
Forbs		
Acorus calamus	Sweet Flag	1.00
Asclepias incarnata	Swamp Milkweed	1.50
Alisma spp.	Water Plantain (Various Mix)	2.00
Cephalanthus occidentalis	Buttonbush	1.00
Decodon verticillatus	Swamp Loosestrife	1.25
Eupatorium maculatum	Spotted Joe-Pye Weed	0.50
Hibiscus spp.	Rosemallow (Various Mix)	3.00
Iris virginica	Blue Flag Iris	6.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	1.50
Ludwigia alternifolia	Seedbox	0.25
Mimulus ringens	Monkey Flower	1.00
Peltandra virginica	Arrow Arum	16.00
Pontederia cordata	Pickerel Weed	10.00
Sagittaria latifolia	Broad-Leaved Arrowhead	2.00
Sparganium americanum	American Bur Reed	2.00
Sparganium eurycarpum	Common Bur Reed	4.00
Verbena hastata	Blue Vervain	1.00
Zizania aquatica	Wild Rice	8.00
	Total	**62.25**

Mix Statistics				
Native Component	**PLS lbs./Acre**	**PLS Seeds/Acre**	**PLS Seeds/Sq. Ft.**	**% of Native Mix**
Forbs	3.89	1,805,126	41.44	48.34%
Grasses	1.89	1,929,708	44.3	51.66%
Total Natives	5.78	3,734,834	85.74	100.00%
Non-Native Forbs		-		
Cover	29.00	4,400,431	101.02	
Totals	34.78	8,135,266	186.76	

Swale Seed Mix

Botanical Name	Common Name	Oz./Acre
Permanent Grasses/Sedges		
Andropogon gerardii	Big Bluestem	12.00
Carex comosa	Bristly Sedge	2.00
Carex cristatella	Crested Oval-Sedge	2.00
Carex lurida	Bottlebrush Sedge	2.50
Carex sparganioides v. cephaloidea	Rough Clustered Sedge	3.00
Carex vulpinoidea	Brown Fox Sedge	3.00
Elymus virginicus	Virginia Wild Rye	8.00
Glyceria striata	Fowl Manna Grass	1.00
Panicum virgatum	Switch Grass	2.00
Scirpus atrovirens	Dark Green Rush	2.00
Scirpus cyperinus	Wool Grass	0.50
Spartina pectinata	Prairie Cord Grass	2.50
	Total	**40.50**
Temporary Cover		
Avena sativa	Common Oat	360.00
Lolium multiflorum	Annual Rye	28.00
	Total	**388.00**
Forbs		
Alisma spp.	Water Plantain (Various Mix)	1.00
Asclepias incarnata	Swamp Milkweed	2.00
Aster novae-angliae	New England Aster	0.50
Coreopsis tripteris	Tall Coreopsis	2.00
Eupatorium maculatum	Spotted Joe-Pye Weed	0.25
Iris virginica	Blue Flag Iris	3.00
Liatris spicata	Marsh Blazing Star	2.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.50
Sagittaria latifolia	Broad-Leaved Arrowhead	0.75
Silphium terebinthinaceum	Prairie Dock	1.00
Verbena hastata	Blue Vervain	1.00
Zizia aurea	Golden Alexanders	0.75
	Total	**15.00**

Mix Statistics

Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	0.94	732,679	16.82	31.68%
Grasses	2.53	1,579,921	36.27	68.32%
Total Natives	3.47	2,312,600	53.09	100%
Non-Native Forbs		-		
Cover	24.25	3,322,321	76.27	
Totals	27.72	5,634,922		

Appendix E: WisDOT Reference Material

WisDOT Access Management Plan

Provided as reference only, the WIS 241 (South 27th Street) Access Management Plan is intended to provide WisDOT, local units of government, and developers with a long-range access management plan for the corridor. The plan provides WisDOT with both a comprehensive and collaborative tool for evaluation of access requests along WIS 241 (South 27th Street).

The objective of the plan is to preserve the safe and efficient operations and primary mobility function of WIS 241 (South 27th Street) and balance this function with access needs along the corridor.

I-94 Safety and Design Improvements

The Wisconsin Department of Transportation is currently conducting a study to review the safety and design improvements along I-94 from Rawson Avenue to the County Line Road. The study is reviewing expected operations in the year 2035. Among the items under potential consideration include the reconstruction of the West Rawson Avenue, West Ryan Road and West South County Line/South 27th Street interchanges and the potential addition of the West Drexel Avenue and West Elm Road interchanges.

Upon final alternative selection, these plans should be reviewed as to the impact they will have on the 27th Street corridor, and coordinated accordingly.

WisDOT Access Management Plan Map

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Appendix F: Landscape Maintenance Plan

General Landscape Maintenance Notes

The following general landscape maintenance notes are provided as reference only. It is intended that the specific planting design be refined during the preliminary and final engineering phases. However, the general issues covered as part of this recommended maintenance plan are applicable for general corridor standards.

Turf

Mowing and Edging: Areas designated as turf shall be cut enough to maintain a uniform appearance. Frequency of mowing shall be adjusted to the growth rate of the turf. Clippings should be collected to reduce quantities from accumulating on the lawn surface.

Fertilizer: Apply a balanced fertilizer four-times per year as required. A preventive grub control should be applied as necessary.

Reseeding/Resodding: When lawn repair is required, either reseed the area or resod as directed.

Perennials and Ornamental Grasses

General Care: The single most important maintenance rule for growing healthy, attractive grasses and perennials is to cut back the foliage at least once per year. Cutting back the grasses and perennials is a substitute for the natural process of periodic burning and grazing that take place in a natural grassland setting. The principal of spring burning is that it removes last year's growth and exposes the soil to the warming rays of the sun, thus providing a boost to the newly emerging plants. Obviously, for safety reasons burnings are not allowed along the corridor, therefore cutting the plants back annually will be required.

Cut back the ornamental grasses just prior to the new season's growth begins to appear, generally late February or early March depending on the weather. This timing allows the grasses to display their winter foliage, which is what the design calls for.

Dormant grasses left standing are not only attractive, but they are useful as well. The dormant foliage above the plants helps to insulate it from the cold/snow and it directs the water away from the clump, thus preventing root rot. The grasses selected for use along this corridor were selected for their summer and winter look. They hold their color well into the season, and are an attractive addition to the winter landscape.

Do not mow/cut perennial planting beds until they have finished blooming and have gone to seed, typically late winter/early spring. Allowing the perennials to stand allows the seeds from the plants to disperse naturally, providing somewhat an effective weed control. Perennials that are multi-season bloomers should be deadheaded to encourage growth and blooms throughout the growing season.

How to Cut Back: Grasses and perennials should be cut back within a few inches of the ground. Grasses with soft foliage can be cut with a string trimmer (a weed eater). Tough, tall perennial grasses are most easily cut with a weed trimmer with a saw blade attachment. Keep all blades sharp. Some grasses develop thick canes and will quickly dull a blade.

Dividing and Transplanting: Grasses and perennials need to be divided and transplanted to propagate more plants, to renew old plants or to relocate existing plants. Many grasses and perennials require thinning or dividing to keep them looking their best. Older clumps may grow too large for the space they occupy or may die out in the center and require rejuvenation through division.

Division and transplanting are done at different times of the year depending on the type of plant and the plants condition. Warm-season grasses, like Prairie Drop Seed, Fountain Grass and Maiden Grass, are best divided in late winter and early spring, while cool-season grasses, such as Feather Reed Grass, in fall, winter and early spring. Perennials should be divided in the same manner, about a month prior to when the ground freezes in late fall or before the new growth begins in early spring. This division should occur every four to five years to ensure healthy and vibrant perennial/grass plantings.

Tree Maintenance

Pruning: Trees generally require less pruning than other plants in the landscape, but may occasionally need corrective pruning to maintain health and vigor. Pruning reduces breakage in wind and ice storms, particularly important throughout the corridor site. All dead, broken or diseased limbs should be cut back at the point of origin or to a strong lateral branch. Other pruning may be needed for shaping the tree to correct storm damage or to keep it contained. Be familiar with the natural form of the species and avoid pruning the plant to a form incompatible with its natural form.

The ideal time for pruning is during February, prior to new growth. An exception would be spring flowering species, such as Serviceberry, which should be pruned after flowering.

Shrub Maintenance

Pruning: Proper pruning is both necessary and essential to shrubs, yet improper techniques and timing can result in considerable damage to both the appearance and health of the plant. Select shrubs along the corridor for their natural shape and form,

and shearing them into hedges is not the intent. Thinning the shrub prevents unsightly branch formation at the top of the plant and maintains the natural growth habit. Be familiar with the natural character of the species being pruned, and remove most of the sucker growth which may occur at the base of the plant, leaving only a few of the more vigorous shoots to renew the shrub as it grows.

Prune spring flowering shrubs after they have completed flowering. Prune summer flowering shrubs in March or until the danger of a late frost has passed.

Mulch: It is essential to keep all formal planting beds and base of tress well mulched. This will help retain soil moisture, keep weeds down and buffers the soil from extreme temperatures.

Top dress existing mulch beds with a minimum of two inches shredded hardwood mulch as needed to maintain a depth of three inches in all beds. A good time to replenish the beds is late fall after it has decomposed during the warm months and prior to the freezing temperatures occur. The edges of the mulch bed should be redefined at the time new mulch is spread on the beds.

Care should be taken to maintain an area free of mulch around the base of the plant stem. Mulch should not come into contact with the trunk of the plant material.

Weed and Insect Control: Keep all planting beds relatively weed-free at all times during the growing season. The selection of plant material should fill in the median and corridor planting beds, thus eliminating significant weed growth. A combination of hand-weeding and applying herbicides could be used to maintain the planting beds weed-free.

Apply a general insecticide/miticide spray to all plants as necessary to control aphids, scale mites and other insects.

Site Clean-up: Trash and debris such as glass, plastic, paper, branches, etc. shall be picked up and legally disposed of. Areas which shall be cleaned of trash and debris include all turf areas, planting beds and median planters.

Agencies and Funding Sources

The costs associated with maintaining the South 27th Street streetscape design elements will vary depending on the amount of improvements implemented. Since it is anticipated that these improvements will occur during a phased period of time, the scope of the maintenance services will need to be re-evaluated upon completion of each new segment. WisDOT and the two municipalities of Franklin and Oak Creek should share in the initial maintenance costs, and look to additional revenue sources to supplement the added maintenance costs. These additional sources could include the adjacent businesses, chamber or a non-profit group that is formed to continue oversight on the South 27th Street project for the long-term. This group could also solicit sponsorship to aid in funding the maintenance package.

In order for the streetscape design elements to remain uniform, it is suggested that an outside source ultimately be contracted with to oversee the maintenance of all the corridor enhancement elements. A suggested process for the selection of this maintenance contract with an outside vendor is provided below.

Task 1 – Preparation and Review Bid Document for Maintenance Contract

- Meet with WisDOT and city officials prior to release of the document to respond to questions regarding the bid specs.
- Prepare bid specification for maintenance contract.

- Write Request for Proposal for potential bidders to prepare submittal for maintenance of all corridor elements, including maintenance contract specification.
- Contact potential bidders to notify them about the project.
- Provide bidding assistance, fielding questions from potential contractors.
- Attend pre-bid meeting with interested contractors on-site.

Task 2 – Recommendation of Selected Bidder

- Meet with WisDOT/city officials to review submitted bids
- Attend joint Council meeting to make recommendation of preferred contractor

Task 3 – Assist with Contract Preparation

- Attend meeting with successful bidder and municipal Attorney(s) to review contract
- Review final contract for compliance with maintenance specifications

Optional Service (Hourly on-call services)

- Provide an hourly agreement for future on-call assistance regarding the maintenance contract execution and procedures.
- Provide general coordination of data sheets and maintenance check-lists as necessary during the contract period.
- Attend meetings as requested by the municipalities to clarify the intent of the maintenance procedures