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STREET DESIGN METHODOLOGY AND PLANS

PROJECT

The Peoria Streetscape Master Plan Project encompasses 302 acres across 4 districts with 28 street alignments. The planning effort included a three phase process; 1 - Data Collection and Analysis, 2 - Synthesis and Alternative and 3 - Master Plan Development. This document is intended as a design narrative and framework for an initial Complete Streets Peoria Pilot Project to be followed by a phased implementation throughout the balance of the Central Business District.

DATA COLLECTION AND ANALYSIS

The Data Collection and Analysis phase helped the design team and the steering committee understand the existing conditions and identify issues, opportunities and constraints. An extensive photo inventory was made for each of the 28 street alignments within the study area. Each street and intersection was walked to allow for a clear understanding of context and proportion. Each alignment was

OPPORTUNITY

“The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually (and economically) its people thereby enliven and support well-located parks that can thus give back grace and delight to their neighborhoods instead of vacuity. ”

Jane Jacobs, The Death and Life of Great American Cities

documented with photos, narrative and a summary of findings.

Additional analysis was collected from a series of discussions and interviews with the steering committee members and key stakeholders. A review of existing City of Peoria Planning documents was also made. These documents include the Peoria 2029 Update, draft of Manual Practice prepared by the Public Works Department, Heart of Peoria Form Based Districts Document, CityLink Bus Routes and Washington Street Improvements Documents.

In addition to current plans and urban overlays the design team reviewed common streetscape design references including the American Association of State Highway Transportation Officials Manual (AASHTO), Manual of Uniform Traffic Control Devices (MUTCD), Landscape Architecture Graphic Standards, Guide for the Development of Bicycle Facilities (AASHTO), Complete Streets Local Policy Workbook and Precedent Studies identified by the team.

During the data collection and analysis phase project goals were established. These goals served as guiding principles during the Synthesis and Alternatives Phase and the Master Plan development.

PROJECT GOALS

- *“A streetscape for Peoria” - Activates Downtown Districts*
- *“A Streetscape that is Green and Environmentally Sensitive” - Smart Systems, Low Maintenance, Smart Systems*
- *“Walkable Complete Streets” - Streets for Pedestrians, Bicycles, Automobiles and Accessibility for all Users*
- *“Peoria - Safe Streets” - Organized Network with a Unified Design*

At the completion of the Data Collection and Analysis Phase several Key Findings identified needs and opportunities within the Central Business District Framework. It was identified that Complete Streets could help the city address current needs associated with the Combined Sewer Overflows (CSO) issues downtown. A review of the recently completed parking study identified an overabundance of surface parking. Stakeholder and public input identified the need to connect pedestrian and bicycling with corridors through the central business district.



SYNTHESIS AND ALTERNATIVES

The Synthesis and Alternatives Phase began with the establishment of a set of Design Methodologies. These guiding methodologies allowed the team to begin testing each of the urban overlays. The design and planning technique for the street framework and ultimate streetscape design does not follow a series of consecutive steps. The process was a progression of developing alternatives while concurrently processing a number of variables that required the design and technical considerations to be adjusted and retested. This process will include equal parts art and science as initial concepts are developed and revisions are vetted by the design team and updated in the plan.

The initial overlay began with a study of the existing traffic network and then testing alternatives to this system of one-way and two-way alignments. In parallel, a second alternative explored the option of redefining the traffic network as a two-way system. The planning also included a detailed study of key intersections and alignments where issues had been identified related to vehicular and pedestrian movements or unique configurations.

The final traffic diagram recommends a two-way system. This plan transitions Glendale Avenue, Perry Street and Fayette Street with Perry Street from full and partial one-way streets to two-way configurations. Jefferson Street and Adams Street were modified to reduce the current number of 5 one-way lanes down to 3 one-way lanes. A second phase for these two alignments reconfigures the 3 one-way lanes to a center turn lane and median to one-lane in each direction.

Concurrent with the traffic planning, additional layers were overlaid to vet parking, bicycle connectivity, walkability and open space. This layering allowed the steering committee to make informed adjustments to each of the layers for a composite integrated street

network. As each of the urban overlays was in the process of being analyzed, the design team explored options for intersection configurations, lane-widths, bicycle facilities, street sections along with street elevations and accessibility considerations.

The Synthesis and Alternatives Phase included the establishment of a Design Methodology, Testing of Urban Overlays and the study of Preliminary Plans, Intersection Layout, Street Elevations and Sections. This process allowed the team to study user relationships and balance level of service for vehicles and pedestrians.

DESIGN METHODOLOGIES

Develop a traffic plan for the existing one-way / two-way system within the Central Business District and the Warehouse District. Provide an alternative traffic plan that establishes a one-way system with the Central Business District and the Warehouse District.

- Establish a provision for an appropriate level of service to the downtown environment.
- Encourage a system in which alternative transportation, mass transit, walking and bicycling are encouraged.
- Minimize travel lane widths. Provide for 11'-0" wide vehicular lanes where possible.
- Minimize turning radii at intersections. Provide for a 15'-0" radius at intersections.
- Provide for automatic "walk" signalization on all pedestrian crosswalks.
- Eliminate right-hand turn lanes from the traffic system. This recommendation would also encourage the incorporation of signage to promote a no-right-on-red policy. This practice has

been effective in reducing vehicular/pedestrian conflicts at intersections.

- Eliminate or minimize left-hand turn lanes from the traffic diagram.
- Maximize on-street parking within the Central Business District, Warehouse District and Riverfront.
- Provide provisions for an integrated bicycle system in the Central Business District, Warehouse District and Riverfront.
- Introduce bike lanes between on-street parking spaces and vehicular traffic lanes when allowed by street widths. Provide sharrow lanes to allow for continuous bike routes within the district and beyond.
- Provide a clear delineation between the pedestrian, bicycle, and vehicular travel paths.
- Provide for pedestrian walkability and accessibility for all users.
- Develop a maintenance friendly street section that considers weather conditions and future flexibility.
- Create a continuous canopy throughout the Central Business District, Warehouse District and Riverfront.

URBAN OVERLAYS

Urban overlays provide a framework that allowed the design team to look at each of the key streetscape components. The urban layers can be reviewed for design criteria and best practices. Each overlay is then worked into the preliminary plans and sections for a test fit into the existing conditions. Key overlays include:

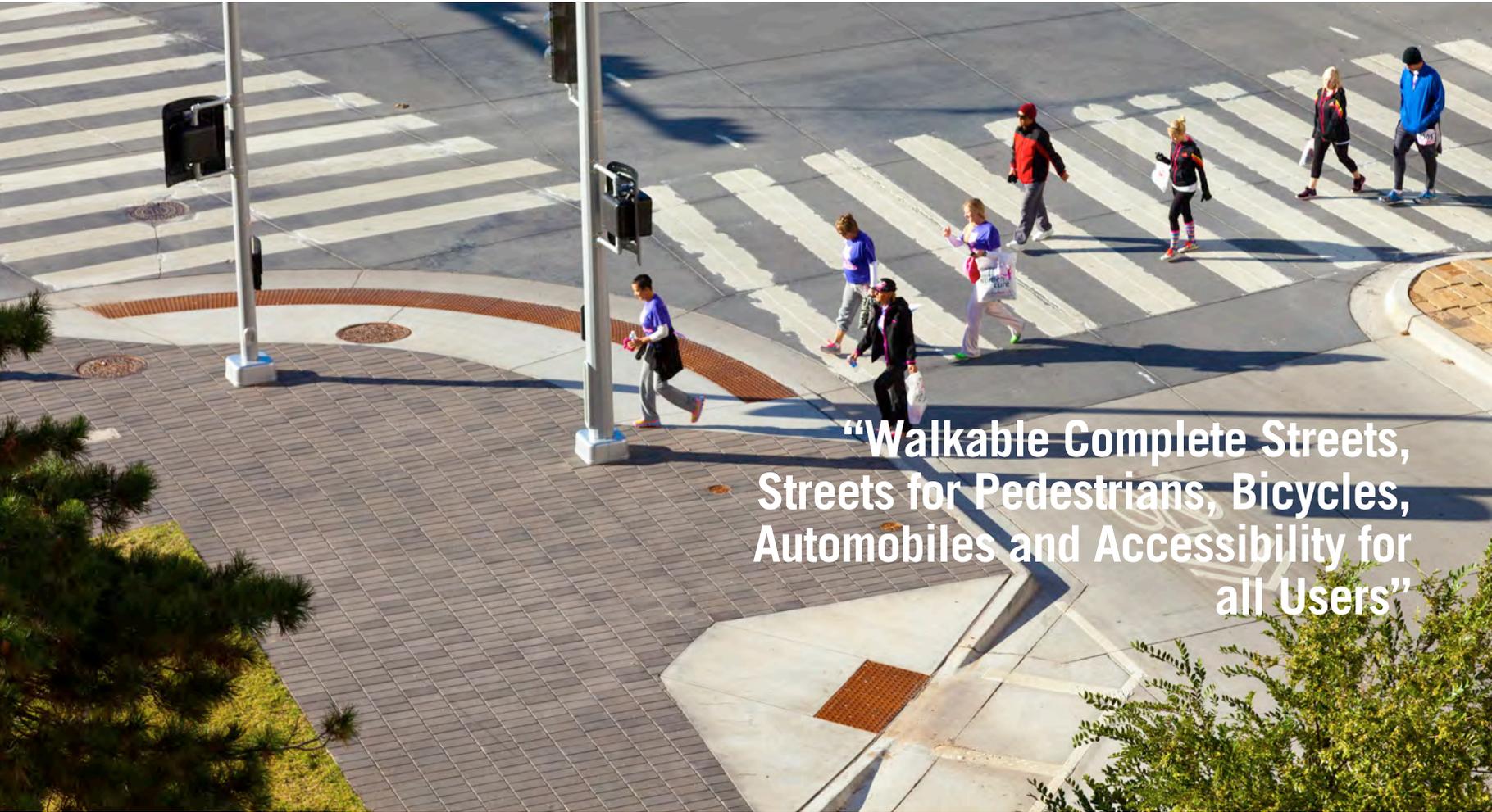
- Existing Traffic Circulation – Baseline Plan
- Existing Transit Routes – Current Routing
- Street Network Planning Diagram

- Parking Facilities Diagram
- Bike Facilities Diagram
- Walkability Diagram
- Open Space Diagram

MASTER PLAN DEVELOPMENT

With the finalization of key urban overlays completed, the design team was able to prepare a comprehensive street framework plan. The plan laid out the roadway alignments for 16 downtown streets, as follows:

1. Fulton Street has been proposed as a two-way alignment that strengthens north-south connectivity to existing businesses located on the east side of the street.
2. Hamilton Avenue has been developed as a core-to-shore connection for the historic Randolph-Roanoke neighborhoods to the north and through the Medical Center down to the river front park along the Illinois.
3. The Main Street alignment has been proposed as a pedestrian and bicycling corridor connecting the Central Business District with Bradley University to the northwest.
4. Fulton Street has been designed to allow for a vehicular connection from William Kumpf Boulevard past City Hall and proposes the re-connection of the street between Jefferson Avenue and Adams Street. This revised alignment will eliminate the circulation challenges of the super block associated with the Peoria Civic Center.
5. Liberty Street improvements include the incorporation of back-in angled parking to reduce the overall wide right-of-way condition. Maximized on street parking will serve transitioning retail on the edge of the Central Business District and Warehouse Districts.
6. The Harrison Street improvements propose the same types of improvements as Liberty Street.
7. Walnut Street improvements propose the same conditions and improvements as Liberty Street.
8. State Street improvements propose the same conditions and improvements as Liberty Street.
9. Glendale Avenue / William Kumpf Boulevard is proposed as a true two-way street connecting all streets within the city center to this cross-town connector.
10. Perry Street has been designed to become a two-way alignment with bike lanes serving as a connection between the neighborhoods on the east and west of downtown.
11. Monroe Street has been proposed with back-in angled parking to reduce the right-of-way width and to maximize on street parking within the heart of the city.
12. Madison Street has been proposed with improvements similar to Monroe Street.
13. Jefferson Street which is currently a one-way pair with Adams Street has been right-sized by eliminating 2 lanes of travel and adding a bike lane in a first phase. A second phase proposes two-way traffic with bike lanes in both directions.
14. Adams Street has been designed to match the improvements of Jefferson Street.
15. Washington Street has been as an extension of the existing Washington Street Tiger II improvements. The street sections amenity zone and sidewalk will be updated to match the revised details of this plan.
16. Water Street proposes an extension of the streetscape that has been completed as part of the Peoria Riverfront Museum and the Caterpillar Experience.



**“Walkable Complete Streets,
Streets for Pedestrians, Bicycles,
Automobiles and Accessibility for
all Users”**

The Master Planning further developed the street framework plan by completing a series of sections for each of the roadway, amenity zone and sidewalk conditions. Parking studies looked at the details associated with parallel parking along with the proposal of back-in angled parking for streets with wide right-of-way widths. Bike lanes, sharrow lanes and cycle track plans and sections were studied and developed as part of each applicable roadway section. An open space framework was studied in detail and developed to connect key corridors through the city with plazas, parks and open space. Walkability in the plan looked at details studies giving proportion and scale to the amenity zone and sidewalks. Intersections were also laid out to ensure clarity of pedestrian users including accessibility.

The final master plan proposes the development of an “Eco-Street” that addresses the Combined Sewer Outflow (CSO) issues in Peoria. Detailed studies explored the collection of storm water and developed detailed plans and sections that can address this key environmental challenge.

NEXT STEP / PHASING

The Master Plan recommendations were presented and accepted by the Steering Committee. This plan was then presented in the Final Public Meeting. The final plan will be presented to the City Council and Mayor with the recommendation of a pilot project followed by a phased implementation throughout the Central Business, Medical Center and Warehouse Districts found in the last chapter of this plan.

