An aerial architectural rendering of an urban development project. The scene shows a dense grid of buildings, streets, and trees. A prominent feature is a large, curved building with a glass facade in the lower center. A river or canal flows through the upper portion of the image. The overall style is a detailed, hand-drawn architectural sketch with a color palette of greens, yellows, and browns.

BURNSIDE/COUCH TRANSPORTATION AND
URBAN DESIGN PLAN
TECHNICAL REFINEMENTS

Final Draft

June 2005

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The image on the preceding page is an artist's rendering of the reconfigured 12th/Sandy/Burnside/Couch intersection. With the opportunity of vacating a portion of Sandy between 12th and 14th, it will be possible to create a gateway to the Central Eastside at that location. This illustration does not represent specific planned or required development proposals by property owners or the City of Portland.

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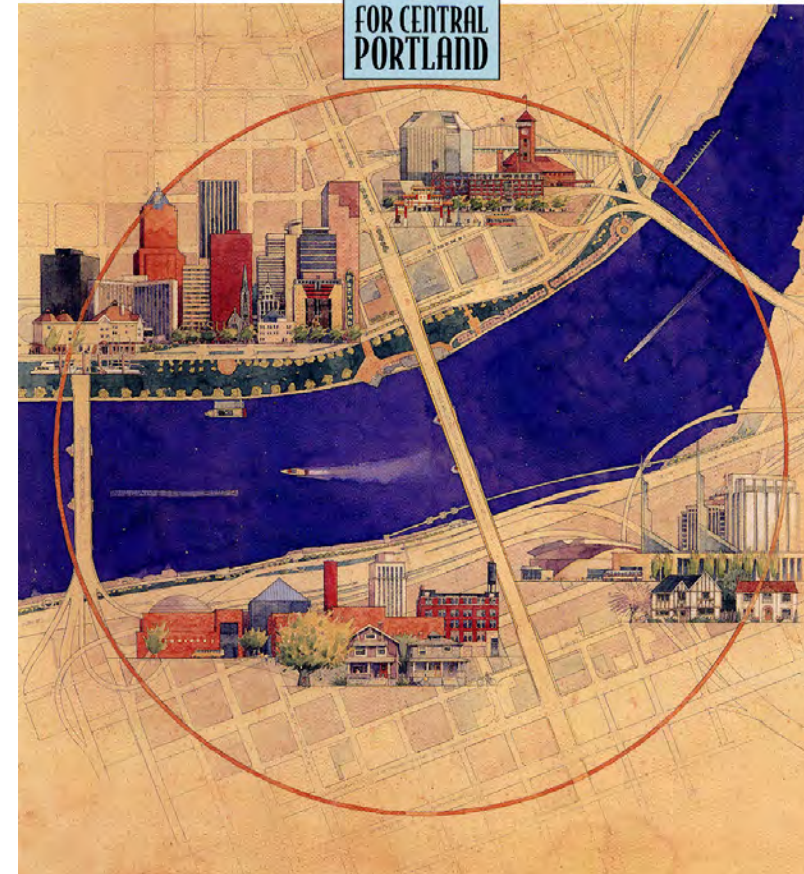
PROJECT MANAGEMENT AND FUNDING

The project was managed by staff members in the Project Management Division of the Portland Office of Transportation. A Technical Advisory Committee (TAC), comprised of representatives from a variety of city bureaus and outside agencies, advised the project team on the development and refinement of the tasks in this phase. The project was funded by the Portland Development Commission and the Portland Office of Transportation.

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A 25 YEAR
VISION
FOR CENTRAL
PORTLAND



"The central city is walkable now and will be so in the future. With growing urban intensity and more traffic, this means equitable access to our streets and public ways for all modes of transportation, while maintaining human scale and walkability. Additionally, we will build on Portland's remarkable design successes with improvements to Interstate-405, the east bank of the Willamette River, and Burnside Street, as well as other opportunities to upgrade the physical quality of central Portland."

~A 25-Year Vision for Central Portland
April 1999

INTRODUCTION

BACKGROUND

The Portland City Council adopted the *Burnside Transportation and Urban Design Plan* in December 2002. The 2002 plan's implementation strategy recommended a subsequent detailed design and analysis of the project area to enable the plan to proceed to preliminary engineering. It also called for refining the preliminary cost estimates, and implementation and funding strategies. This work is included in this report and completes all design work necessary to begin preliminary engineering.



Looking west from the Burnside Bridge to Lower West Burnside.

The plan provides a vision and strategy for “humanizing Burnside” by transforming the Central City’s most blighted area into a “people place” that is comfortable, safe and exciting. Street improvements and new development will create a place to walk, congregate, work, live and visit.

The proposed improvements eliminate the barrier between the adjacent neighborhoods and businesses that Burnside presents today. Burnside is envisioned as a gateway to Portland’s most dense neighborhoods, with diverse and interesting districts and activities.

The *Burnside Transportation and Urban Design Plan* promises to provide safe access for all modes of travel. It will improve and clarify vehicular access to, from and within districts and neighborhoods where underdeveloped properties have development potential. The project boundary includes a 2.3 mile reach through the Central City from East 14th Avenue to West 24th Place.

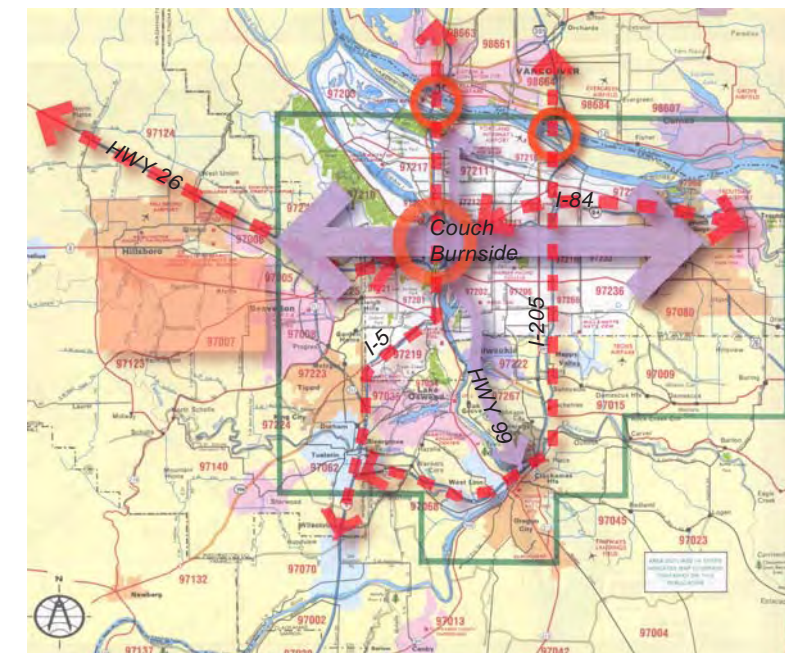
INTRODUCTION

The project area has the highest concentration of social services and affordable housing providers in the metropolitan area. Street life on Burnside and Couch is out of balance with other parts of the Central City although local service providers and businesses are making significant efforts to provide intervention and improvement. The transportation and urban design improvements recommended by this plan represent one important piece of a larger set of changes to preserve and enhance the delivery of those services and to bring this area into a healthy balance.

The *Burnside and Couch Catalyst Development Study* was prepared by the Portland Development Commission (PDC) in 2005. The study's Executive Summary is in the Appendix of this report. The *Burnside and Couch Catalyst Development Study* describes development opportunities and potential project feasibility. It also illustrates the potential return on investment of the Burnside right-of-way improvements and provides a basis for tax increment financing projections. The *Burnside and Couch Catalyst Development Study* identifies a potential of \$800 million of investment in the Burnside/Couch project area over a 20-year period. The study also projects the proposed development and transportation improvements to Burnside and Couch to result in 3,330 new jobs and 1,060 new housing units.

Transportation improvements and catalyst development study are directly linked and together release significant potential for creating jobs and housing. While both transportation improvements and catalyst development can advance separately, together they offer a much greater synergy and community benefit.

This report provides an overview of the transportation and urban design improvements, and detailed drawings and descriptions of specific project components. It also outlines a strategy for funding and moving the project into the preliminary engineering phase.



The Burnside and Couch Transportation and Urban Design project is at the center of the metropolitan region and at the heart of Portland's Central City.

PROCESS

Phase II continued the outreach and community involvement from the initial planning process that began with the pre-planning phase in 2000 and led to the adoption of the *Burnside Transportation and Urban Design Plan* in December 2002. An inclusive public process was designed to balance participation by a diverse constituency of property and business owners, residents, neighborhood organizations and citizens. The goal was to help participants and stakeholders visualize and advise refinements to the adopted transportation and urban design plan and to resolve technical refinements for each segment of the project area. For example, East Burnside work focused on technical design whereas Central Burnside work included visioning and alternatives development and selection as well as technical design.



STAKEHOLDER ADVISORY COMMITTEE

The Stakeholder Advisory Committee formed during the project's pre-planning phase continued through the planning phase and was reactivated to ensure that community, civic and business groups on and near Burnside and Couch had an opportunity to participate in the process and advise the project team. The committee met each month from March 2004 to February 2005 to provide input and guidance on the design details, and the funding/phasing strategy. Committee meetings were conducted as work sessions to enable extensive participation by members.



COMMUNITY EVENTS

Public open houses were held in July 2004 and February 2005 to inform the community about refinements to the plan and provide opportunities to comment on the recommendations.

COMMUNITY AND BUSINESS GROUPS

The project team gave informal presentations to business and community groups throughout the project to keep these groups informed about the project's progress and solicit their input. In addition, project team members met with individual property and business owners to discuss proposed design recommendations and give them an opportunity to voice their opinions.



The Stakeholder Advisory Committee met monthly beginning in March 2004 to provide advice for technical refinements to the 2002 plan.

PROJECT WEB SITE

The project's web site was updated monthly to include information about community events and Stakeholder Advisory Committee meetings. The draft report was posted on the web site to provide an opportunity for review and comment by the community.

COORDINATION WITH OTHER PROJECTS

Work from other on-going planning efforts, including the *NE 3rd Avenue and NE 4th Avenue Street Improvements*, *Portland Transit Mall Revitalization* and the *Portland Streetcar Project*, were considered throughout the project.

PREVIOUS GOALS AND DESIRES

The diagram on the following page summarizes actions and policies for Burnside as defined by adopted neighborhood and district plans. These community-defined actions and policies are the foundation for the Burnside and Couch Transportation and Urban Design Plan.



The above photograph is a view looking along Sandy Boulevard southwest toward the Willamette River.

Goose Hollow Station Community Plan (Jan. 1995)

Develop Burnside Street as a place that integrates pedestrians, cars and bicycles in a quality environment.

Identify improvements for safe and convenient crossings at specific locations and design standards for future adjoining developments.

Improve pedestrian crossing along I-405, especially Burnside with adequate sidewalks, curb cuts and signals.

Examine building heights, FAR's, bonuses along Burnside commercial zone to address the character and scale of the neighborhood and continuity of the street.

Apply a special 10-foot setback for new development on both sides of Burnside

Goose Hollow District Design Guidelines (Feb. 1995)

Buffer and separate the sidewalk from vehicular traffic with street trees, plantings, and bollards.

Enhance the pedestrian promenade along Burnside Street and make it a linear focus for safe pedestrian activity by widening the sidewalk

Maintain visual contact and surveillance between the inside of buildings and the adjacent public right-of-way space on Burnside.

Punctuate ground floors of buildings with many destination points such as entries for pedestrians and display windows.

Locate driveways and garage entrances on side streets where feasible, rather than crossing sidewalks along Burnside.

Provide pedestrian scale to buildings fronting the street with awnings and/or second floor balconies.

Vision Plan for the West End (July, 1999)

Redevelop Burnside Street as the district's front door.

Enhance the pedestrian environment.

Create a gateway to the West End at West Burnside.

Improve the link across Burnside Street to the Pearl District .

Provide a continuous streetscape treatment on West Burnside from 9th Avenue to the I-405 bridge overpass.

Old Town/Chinatown Development Plan (Dec. 1999)

Remove barriers that West Burnside possesses: width, high traffic speeds and difficult pedestrian crossing

Provide a left turn lane for eastbound West Burnside Street traffic onto 4th Avenue.

Reduce West Burnside to two lanes in each direction rather than three; add parking meters on street.

Reclaim sidewalk space by reducing excess roadway space.

Increase number of pedestrian crossings.

Commence study for the reconstruction of West Burnside as soon as possible.

Add curb extensions.

Revise or eliminate medians.

Provide special paving at crosswalks.

Lower Burnside Redevelopment Plan (Feb.1999)

Create an identity that reflects the character of the Central East side.

Increase on-street parking on or near East Burnside.

Investigate possible off-peak turn signals at Grand, MLK and East Burnside.

Investigate possible signal at 7th Avenue and East Burnside.

Improve streetscape with ornamental lighting, street trees, tree grates and special sidewalk scoring pattern.

Analyze feasibility of gateway feature at 12th/Sandy/ Burnside.



Northwest District Plan (Apr. 2003)

Create a gateway at NW 18th/19th Avenues and West Burnside.

Improve pedestrian and bicycle connections across West Burnside.

Improve pedestrian and bicycle access across I-405 on West Burnside and NW Couch.

Goose Hollow/Civic Stadium Committee Vision (Mar. 2000)

Improve pedestrian crossings at 18th, 19th, Trinity Place, 20th, 20th Place and 21st.

Reconfigure intersections at 20th Place, 19th and 18th Avenues.

Change 19th Avenue to a two-way street from Morrison to West Burnside; design street so it could be closed for special events.

Close Morrison Street from West Burnside to 20th.

Bridge the Divide and Cap I-405 (Oct. 1998)

Develop capped blocks at West Burnside.

Build an oval shaped plaza at West Burnside over I-405 that slows traffic, provides a pedestrian-oriented environment.

Midtown Blocks (May, 1999)

Vision: The Park Blocks act as a north/south pedestrian link between district.

Provide a continuous and identifiable connection between the mid-town and North Park Blocks across West Burnside.

Bring park continuity and pedestrian accessibility into balance with the auto-dominated Burnside corridor, enhance pedestrian crossings.

Conduct traffic analysis for proposed lane reductions on West Burnside.

Conduct traffic analysis for proposed lane reductions on West Burnside.

Add traffic signal at West Burnside and 9th/Park Avenues.

Improve streetscape at Burnside near bathrooms.

DESTINATIONS



Most people use Burnside to access the Central City for business, work, shopping and entertainment. Today, more and more people are choosing to live in the neighborhoods of the Central City. Free left turns from Burnside and Couch and a new focus on Burnside as the heart of the city will connect everyone with desired destinations in the Central City.

AN INTEGRATED STRATEGY FOR CHANGE

The *Burnside and Couch Transportation and Urban Design Plan* is one part of an overall strategy to improve the social, economic and physical environment of Burnside and Couch Streets. This strategy includes efforts by both public and private sectors to deliver social services, create new jobs and preserve existing businesses. Taken together, these efforts humanize Burnside and Couch and enhance the quality of adjacent residential neighborhoods, offices and businesses.



STRATEGY FOR CHANGE

TRANSPORTATION: The plan balances the Burnside and Couch transportation system to better serve all modes and surrounding neighborhoods and businesses.

ECONOMIC DEVELOPMENT: PDC and other public and private partners are working to encourage new development and redevelopment of underdeveloped properties.

SOCIAL SERVICES: Public and private service providers are enhancing social services delivery and the manner in which the services interface with the street.

NEW JOBS AND HOUSING: PDC and other public and private partners are working to increase the quantity and variety of jobs and housing types in the Central City.

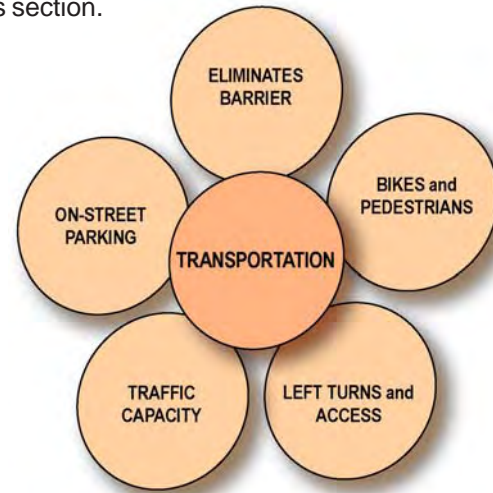
EXISTING BUSINESSES: The health and vitality of existing businesses along Burnside and Couch is essential to community livability and creating great streets.

HISTORIC PRESERVATION: Maintain historic architecture that contributes to the cultural character and quality of neighborhoods and districts.

HUMANIZE BURNSIDE: Taken together, the above efforts make Burnside a most diverse and interesting street. As a “people place” it will be comfortable yet exciting - a place to walk, congregate, work, live and visit. As a gateway to Portland’s most dense neighborhoods with diverse and interesting districts and activities, Burnside provides safe access for pedestrians as well as vehicles.

ACHIEVEMENTS OF THE PLAN

Taken alone, the transportation improvements provide significant benefit to Burnside, Couch and surrounding areas. Improvements include eliminating Burnside as a barrier, enhancements to the pedestrian and bicycle network, direct access to the north and south sides of Burnside and Couch via permissible left turns, more efficient traffic flow and increased on-street parking. These improvements address many of the transportation goals and aspirations found in the adjacent neighborhood plans as illustrated in the previous section.



TRANSPORTATION ACHIEVEMENTS

ELIMINATES THE BURNSIDE BARRIER: The physical and perceived width of Burnside will be radically reduced to a crossable and less intimidating street environment.

SUPPORTS PEDESTRIANS AND BIKES: Wider sidewalks throughout provide enhanced pedestrian areas on Burnside. Curb extensions at all intersections on Couch will reduce pedestrian crossing distance. Extensive bicycle improvements on and parallel to Burnside will provide greater connectivity to the bike system.

PROVIDES LEFT TURNS AND ACCESS: Provides direct left and right turns from Burnside and Couch eliminating out-of-direction travel and providing more direct access to areas north and south. This will support business, residential and cultural destinations.

MAINTAINS TRAFFIC CAPACITY: Traffic signals on Burnside and Couch at every intersection between East 14th and West 16th Avenues will add efficiency for maintaining capacity and the movement of cars, buses and service vehicles.

INCREASES ON-STREET PARKING: Increases on-street parking by approximately 15%.

TRANSPORTATION ACHIEVEMENTS

ELIMINATES BURNSIDE BARRIER



Today, Burnside is a significant barrier between the neighborhoods and districts bordering its north and south edges. Multiple travel lanes, severely limited left turn opportunities, restricted on-street parking, narrow sidewalks (8 feet), barren streetscape, long pedestrian crossings (77 feet), pedestrian crossing prohibitions and underdeveloped properties all contribute to the barrier-like qualities that Burnside creates at the heart of our City.

Above from left to right:

East 12th/Sandy/Burnside today

W Burnside between W 13th and W 14th Avenues in front of Everyday Music

West Burnside at West 5th Avenue looking east before the improvements

Burnside looking east with the improvements

PEDESTRIAN IMPROVEMENTS



The Burnside Barrier is eliminated by the street design that remakes Burnside into lively streets with improved traffic flow, two travel lanes eastbound with full time on-street parking from I-405 to W 4th Avenue and three eastbound travel lanes with on-street parking and a bike lane from MLK to E 12th Avenue, pedestrian accessibility at every intersection, increased on-street parking and the opportunity for redevelopment of underdeveloped properties.

Above from left to right:

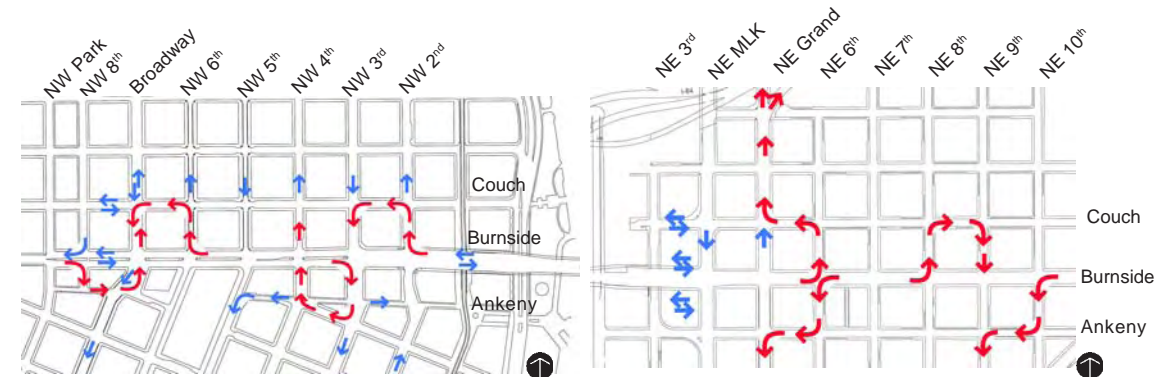
West 2nd and Burnside with full pedestrian access and left turns from Burnside to West 2nd Avenue

Reduced pedestrian crossings on Burnside and West 3rd Avenue

West 2nd And Burnside looking west in front of Alexis Restaurant before the improvements

West 2nd And Burnside looking west in front of Alexis Restaurant with the project complete

LEFT TURNS



Today, eastbound traffic on Burnside has only two left turn opportunities within the Lower West Burnside segment. The first opportunity is at 8th Avenue via Ankeny and Broadway. The second is at 3rd Avenue via Ash and 4th Avenue. If these two turning opportunities are missed, then vehicles must cross the Burnside Bridge to east Portland and make a similar multi-block turning movement to recross the bridge to turn north into Old Town/Chinatown. This same required out of direction movement is found in the Lower East Burnside Couch segment where access to the Central Eastside District and I-84 is circuitous and confusing which compromises truck and automobile access.



The Burnside and Couch one way system allows four left turns from the eastbound direction into Old Town/Chinatown. The same advantage occurs from Couch to Downtown south of Burnside. This frequency of left turns is found between W 15th and E 14th Avenues.



The project will increase on-street full time parking by approximately 15%. Signals at every intersection on Burnside and Couch will calm traffic and create greater balance in traffic flow during all times of the day. All intersections will operate at a Level of Service C or better.

SUMMARY OF PROPOSED IMPROVEMENTS

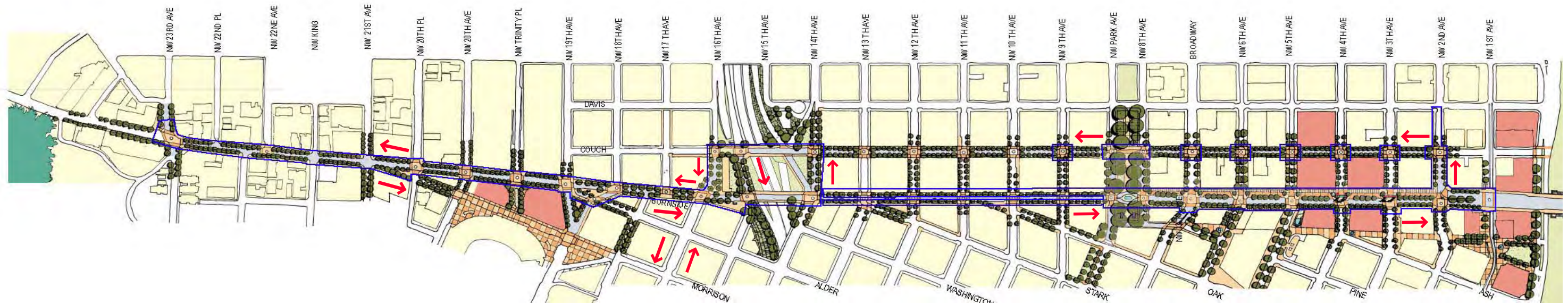
The proposed improvements were identified as part of the *Burnside Transportation and Urban Design Plan* adopted by City Council in 2002. These proposed improvements are the basis of the Technical Refinements that follow.



Looking north on NW 4th Avenue from Burnside. Proposed improvements include relocating the Chinese Gate into open space created when westbound traffic travels on Couch rather than Burnside.

BURNSIDE/COUCH TRANSPORTATION AND URBAN DESIGN PLAN

SUMMARY OF PROPOSED IMPROVEMENTS



UPPER WEST BURNSIDE

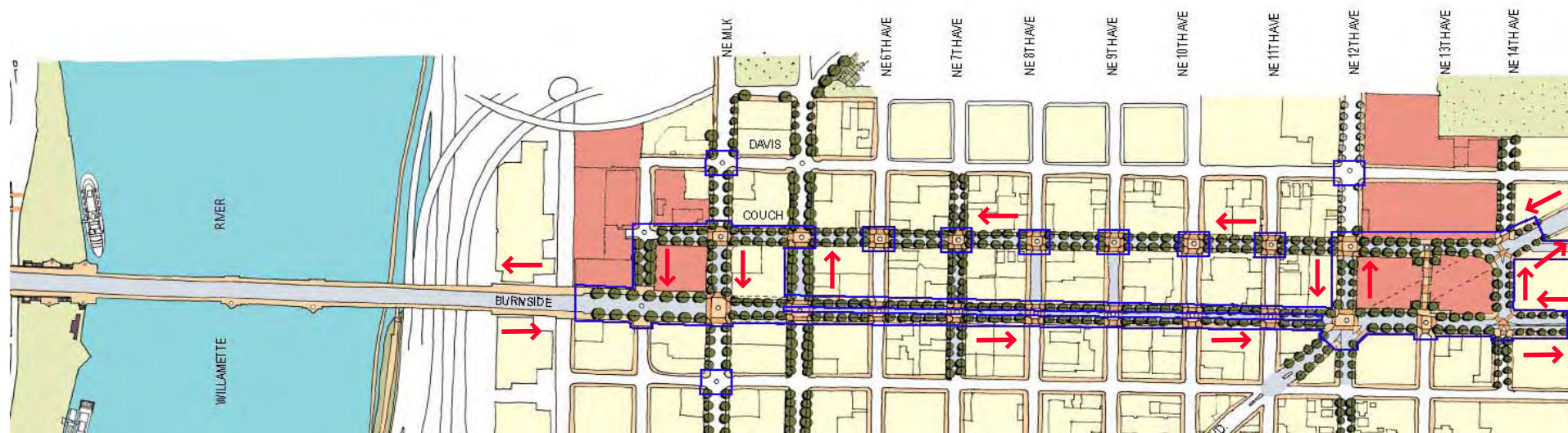
- Reconfigure two-way Burnside from 16th Avenue to 23rd Avenue with:
 - Four 10-foot travel lanes
 - 10-foot wide sidewalks
 - Ornamental street lights and street trees
- Reconfigure 18th /19th /Burnside/Alder intersection and add parking
- Reconfigure 20th Place intersection and add parking
- Add new signals at 20th Place and 22nd Avenue
- Close Washington between SW 15th and SW 16th Avenues for improved transit facilities, on-street parking and gateway features
- Adjust and enhance transit stops

CENTRAL WEST BURNSIDE AND COUCH

- Continue eastbound traffic on Burnside.
- Transition westbound Couch to Burnside at 15th Avenue
- Convert Couch to two one-way westbound lanes preserving on-street parking, existing sidewalks and healthy existing street trees
- Provide traffic signals at every intersection from 8th Avenue to 16th Avenue on Burnside and Couch
- Close Couch between 15th Avenue and 16th Avenue:
 - Preserve bicycle and pedestrian access
 - Realign 16th Avenue north of Burnside to connect to 16th Avenue south of Burnside
 - Convert 16th Avenue south of Burnside to two-way operation
 - Direct exiting I-405 traffic onto 15th Avenue
- Build curb extensions at all intersections on Couch and Burnside
- Infill street trees and ornamental street lights on Couch and Burnside

LOWER WEST BURNSIDE AND COUCH









- Convert Burnside to two lanes, one-way eastbound with:
 - Traffic signals at every intersection beginning at West 8th
 - Add full time on-street parking on both sides of street
 - Rebuild sidewalks, expanded to 12 feet
 - Curb extensions at all intersection
 - Install new street trees and ornamental street lights
 - Widen sidewalks on the I-405 bridge
- Grind and overlay Burnside Street pavement section
- Convert Couch to two one-way westbound lanes with:
 - Traffic signals, curb extensions at every intersection
 - Preserve on-street parking, existing sidewalks and healthy existing street trees
 - Widen sidewalks on the I-405 bridge
 - Rebuild Couch Street pavement section
- Enhance Burnside pedestrian crossings at W 8th, W Park
- Close Oak Street between Burnside and SW 10th Avenue
- Stripe angled parking on SW Oak north side, SW 9th-SW 10th
- Transition westbound Couch traffic to Burnside at 15th Avenue
- Rebuild SW 16th Avenue to align with NW 16th Avenue
- Preserve Couch ROW from NW 15th to NW 16th for peds, bikes
- Create gateway feature opportunities at 15th and Burnside
- Use sustainable practices in street area design



LOWER EAST BURNSIDE AND COUCH

- Close Sandy between NE 14th and NE 12th Avenues
- Convert NE 14th between Burnside and Couch to three lanes, one-way northbound, remove on street parking, provide pedestrian refuge
- Preserve the NE 13th right-of-way with two-way movement
- Realign NE 12th to include four lanes (two southbound, two north bound), and two striped bike lanes
- Install signals at every intersection on Burnside and Couch.
- Enlarge pedestrian island at 12th /Sandy/Burnside
- Install a new signal on NE 12th and NE Davis
- Provide diagonal parking on Couch east of NE 14th Avenue
- Transition west end of couplet at NE 3rd Avenue
- Convert Burnside to three lanes from the bridgehead to 11th Avenue. Burnside will be one-way eastbound with full-time on-street parking, a striped bike lane, wider sidewalks; existing street trees and street lighting will be preserved.
- Transition Burnside to four lanes west of 11th Ave. to 14th Ave.
- Convert Couch to two lanes, one-way westbound, preserve on-street parking, existing sidewalks and healthy existing street trees
 - Provide curb extensions at all intersections
 - Infill street trees and ornamental street lights
- Maintain NE 3rd Avenue as a two-way street
- The area from NE 3rd to NE Grand did not receive technical refinements.

LEGEND

-  Catalyst Development Areas
-  Project Context
-  Street
-  Crosswalk
-  Project Limit Line
-  Vehicular Traffic Flow
-  Traffic Signal
-  Street Tree

NOTES:

The Flanders Bike Facility is shown beginning on page 52.

Improvements and trees shown outside the project limit lines are illustrative.

Refer to sections for detailed list and typical details.



Burnside looking east from 5th Avenue showing proposed right-of-way improvements with conceptual architecture.

TECHNICAL REFINEMENTS

INTENT

The goal of this phase was to develop technical refinements in preparation for preliminary engineering. In adopting the 2002 plan, City Council directed this work to reconcile technical details of the plan and to refine the preliminary budget estimates. This report provides more detailed design and engineering work for specific elements of the project based on the adopted 2002 *Burnside Transportation and Urban Design Plan*.

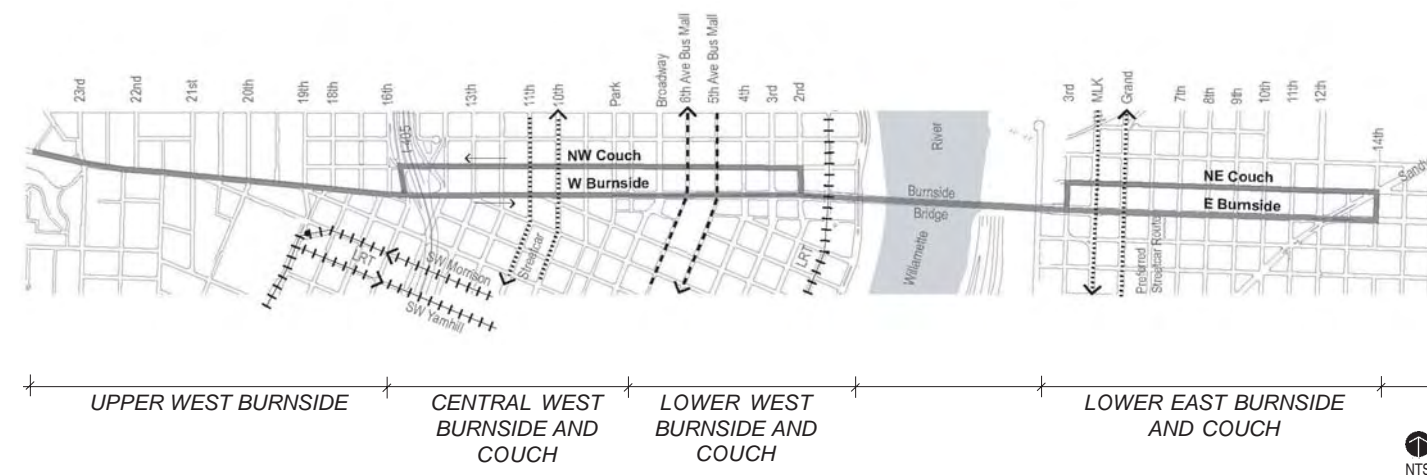
APPROACH

The project was divided into five sub-areas. The design team and Stakeholder Advisory Committee identified and reviewed concepts, alternatives and details for specific locations within each sub-area. Typical details were prepared for all other areas. The refined design work was used to revise the cost estimates and funding and implementation strategy. No significant amendments were made to the 2002 *Burnside Transportation and Urban Design Plan*. The sub-areas are as follows:

SUB-AREAS

- Upper West Burnside - 16th Avenue to 24th Place
- Central West Burnside and Couch - 8th to 15th Avenue
- Lower West Burnside and Couch - Willamette River to Park Avenue
- Lower East Burnside and Couch - East Burnside Bridgehead to East 14th
- Flanders Bike Improvements - Waterfront Park to Westover (not shown on diagram)

NOTE: Sections and plans are diagrammatic and are not meant to be scaled. The provision and design of specific corner curb extensions is to be determined by the traffic engineer during the preliminary engineering phase and will be based on such factors as turning movement, volume, design and vehicle type and size.





Looking west over Burnside and Couch with Sandy cutting diagonally through the street grid.

LOWER EAST BURNSIDE AND COUCH

EAST BURNSIDE BRIDGEHEAD TO 14TH AVENUE

Reconfiguring the NE 12th/Sandy/Burnside/Couch intersection eliminates traffic and transportation conflicts, significantly improves bicycle and pedestrian connectivity, enhances transit access and assembles two new city blocks for potential development. These capital improvements provide a more understandable and safe intersection between Sandy and Burnside.

RECOMMENDATIONS

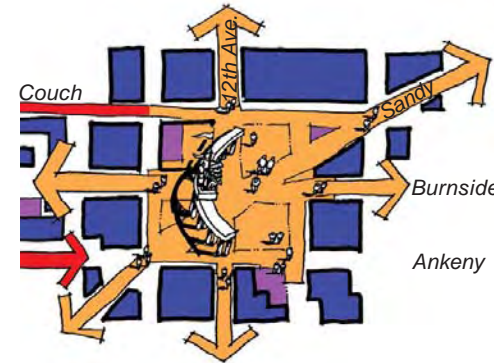
The most significant technical refinements for this sub-area are to the 12th/Sandy/Burnside/Couch intersection. Typical details are shown for all other sections of Burnside and Couch.

The 12th/Sandy/Burnside and Couch improvements contain the following elements and actions:

- Close Sandy between NE 14th and NE 12th Avenues.
- Convert NE 14th to three lanes, one way northbound, removing on-street parking and provide pedestrian refuge with gateway elements.
- Preserve the NE 13th 60-foot right-of-way with two-way movement.
- Realign NE 12th to include four lanes (two southbound, two northbound) and two striped bike lanes.
- Enlarge pedestrian island at 12th/Sandy/Burnside.
- Install a new signal at NE 12th and Davis.
- Provide diagonal parking on Couch east of NE 14th Avenue.

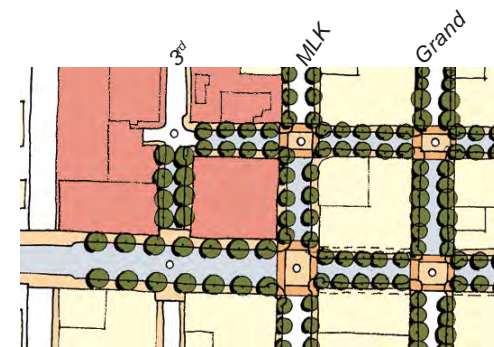
The following improvements are for the entire sub-area:

- Convert Burnside to three lanes from the Burnside Bridgehead to 11th Avenue. Transition Burnside to four lanes west of 11th Avenue to 14th Avenue. Burnside will be one-way eastbound with full time on-street parking, a striped bike lane, wider sidewalks; existing street trees and street lighting will be preserved.
- Convert Couch to two lanes, one way westbound
 - Preserve on-street parking, existing sidewalks and healthy existing street trees.
 - Build curb extensions at all intersections.
 - Infill street trees and street lights.
- Transition west end of couplet at NE 3rd Avenue.
- Maintain NE 3rd Avenue as a two-way street.
- Rebuild Couch Street pavement section.
- Grind and overlay Burnside Street pavement section.
- Install signals at every intersection on Burnside and Couch.
- Install signals at NE Davis and SE Ankeny on Martin Luther King Jr. Blvd.
- Install a striped biked lane on Burnside from MLK to east 13th.
- Use sustainable practices in street and pedestrian area design including stormwater management, porous paving and street tree species diversity.

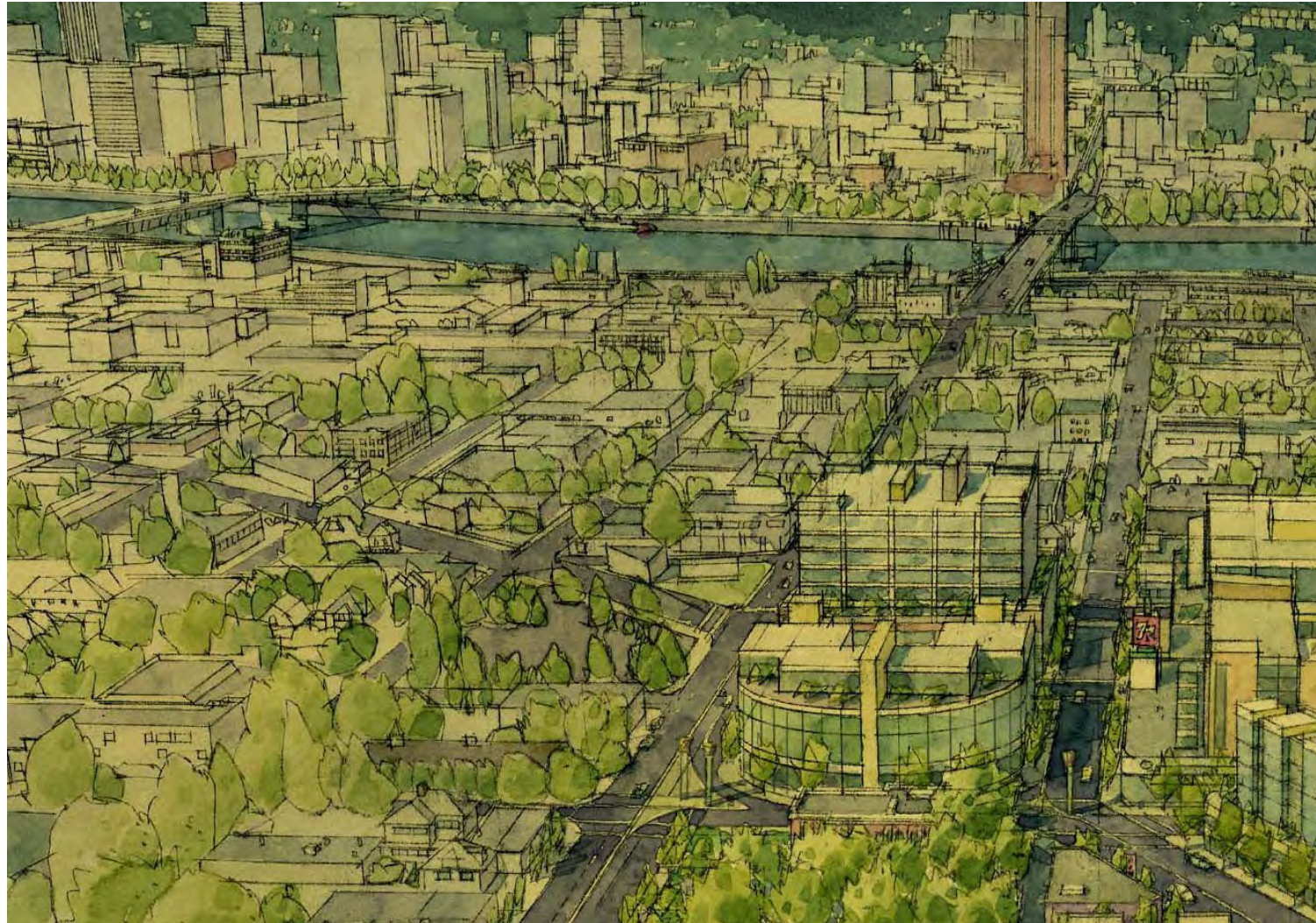


"Analyze feasibility of gateway feature at 12th/Sandy/Burnside."

~Lower Burnside Redevelopment Plan 1999



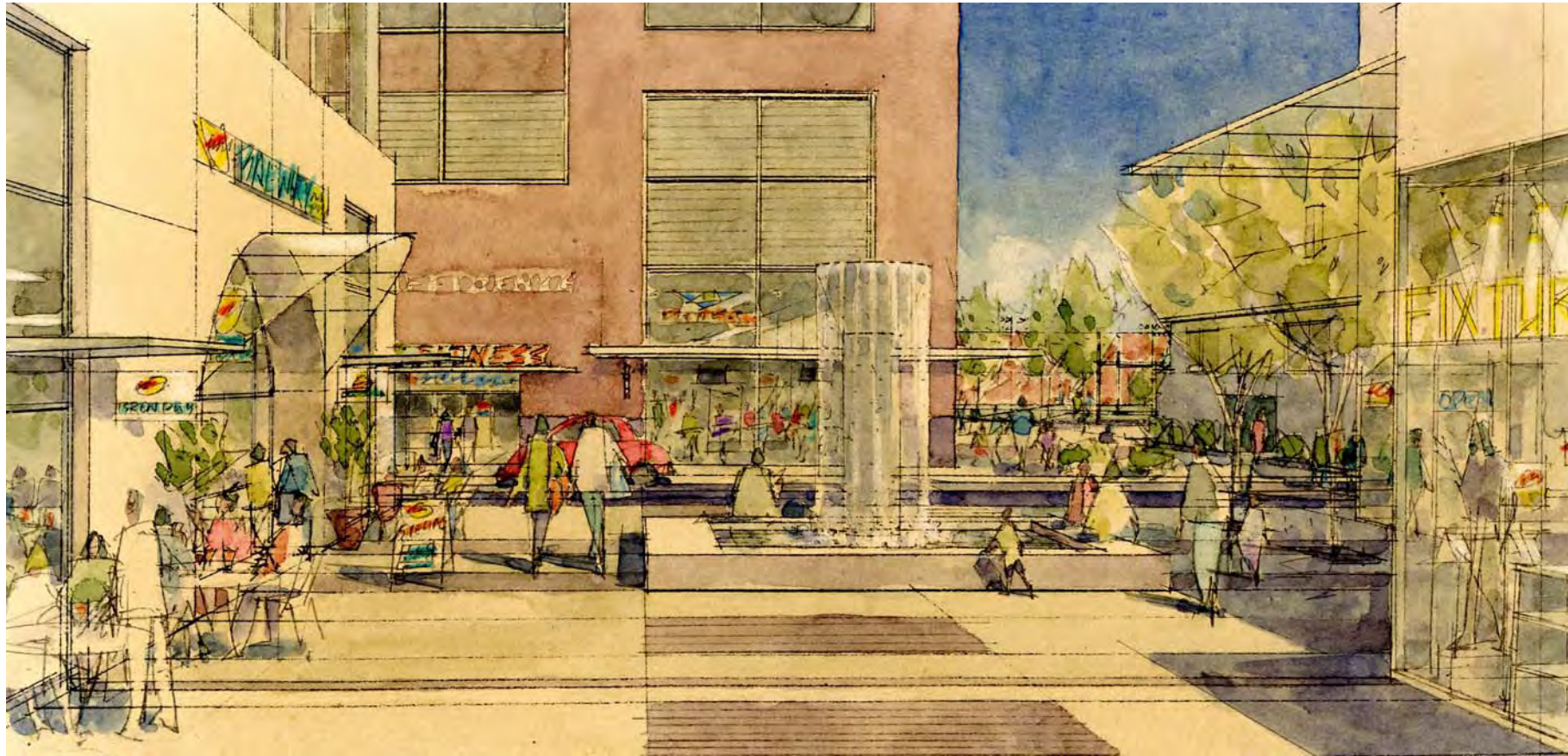
Technical refinements to the Burnside and MLK transition will occur upon resolution of PDC's Burnside Bridgehead Project.



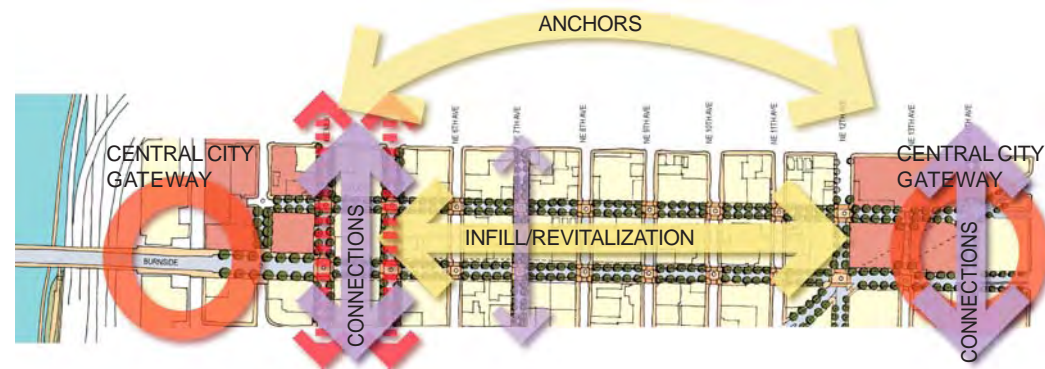
Concept illustration showing street configuration at the east transition of 14th/Burnside/Sandy/Couch. The diagram also illustrates the development concept for newly assembled blocks between 12th, 13th, Burnside and Couch.



The aerial photograph above shows current conditions of concept illustration at top.



Concept illustration showing the 60-foot right-of-way of NE 13th Avenue with Buckman Field and Benson High School in the background.

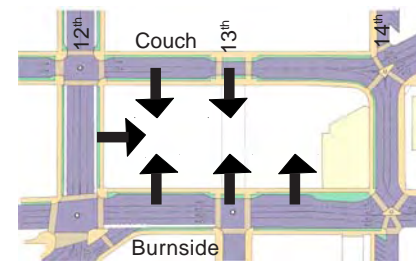


The above Urban Design diagram illustrates the envisioned city form resulting from the improvements that enable anchor gateway developments at the east and west ends of this sub-area and greater access to points north and south. The improvements also enhance the sustainability of smaller businesses and encourage infill development between.

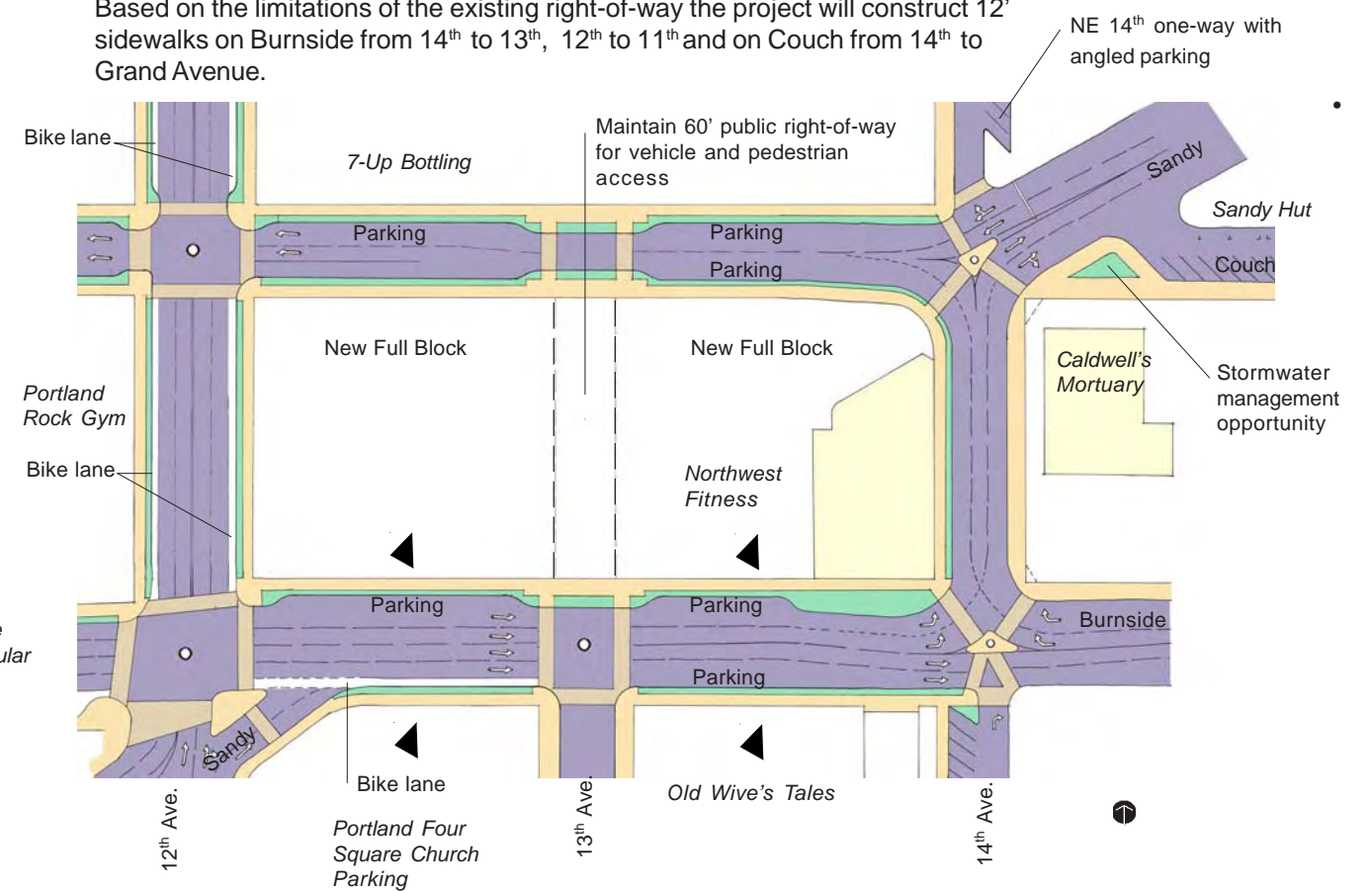
12TH/14TH/SANDY/BURNSIDE/COUCH INTERSECTION

Based on the limitations of the existing right-of-way the project will construct 12' sidewalks on Burnside from 14th to 13th, 12th to 11th and on Couch from 14th to Grand Avenue.

ACCESS DIAGRAM



Site access will be available from 12th, 13th, Burnside or Couch. Pedestrian and bicycle access on 13th will be integrated with vehicular access.



NOTES

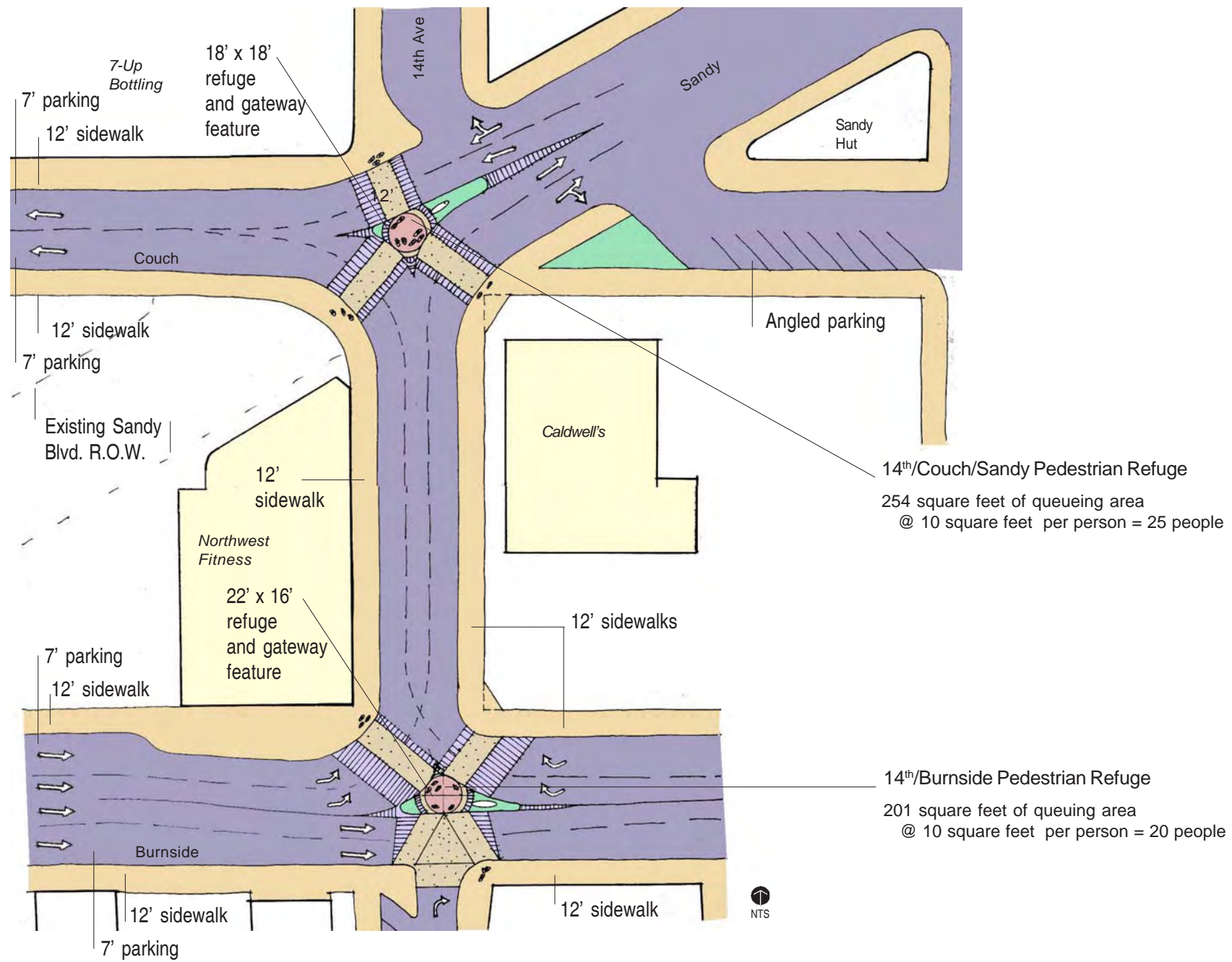
13th Avenue between Burnside and Couch Access Criteria

- Maintain 13th Avenue as a 60-foot right-of-way for pedestrian access and limited two-way auto circulation
- In no instance shall the roadway be reduced below 40 feet.
- Use sustainable design criteria in this right-of-way for stormwater management and forest canopy.

Angled parking

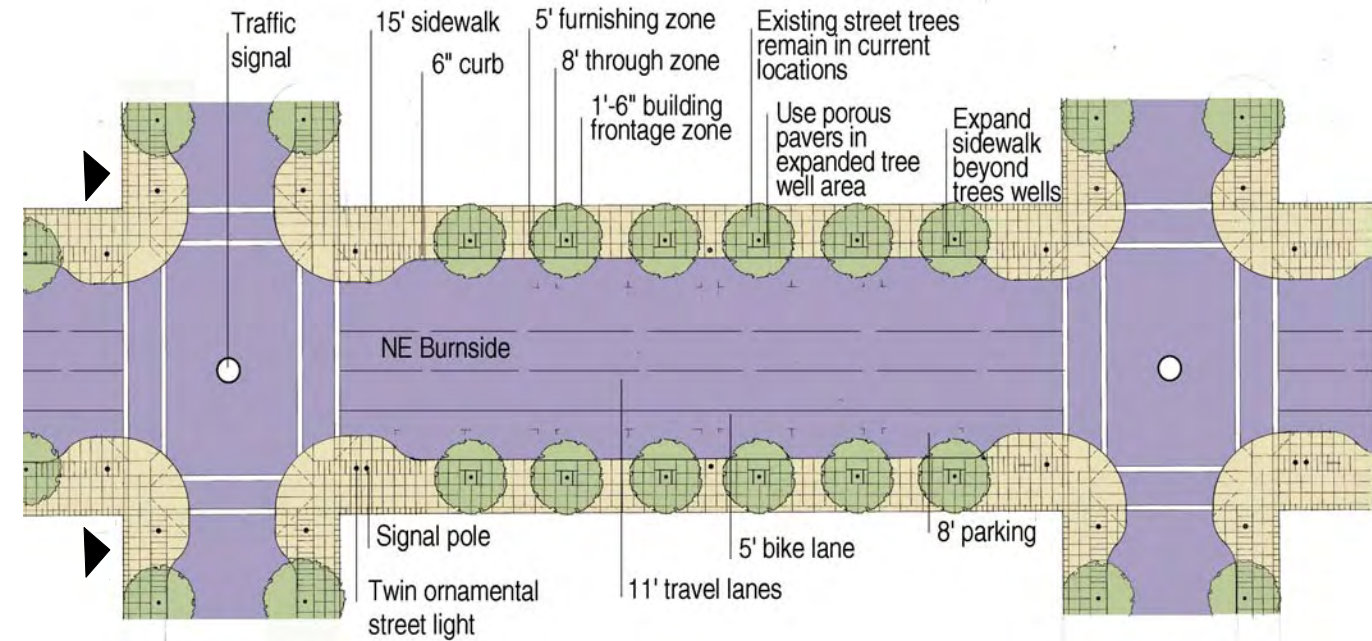
- Angle parking shown in figure is conceptual only. Actual parking and traffic operations on side streets will be determined through a separate process.

14TH/SANDY/BURNSIDE/COUCH
TRANSITION AND PEDESTRIAN REFUGES

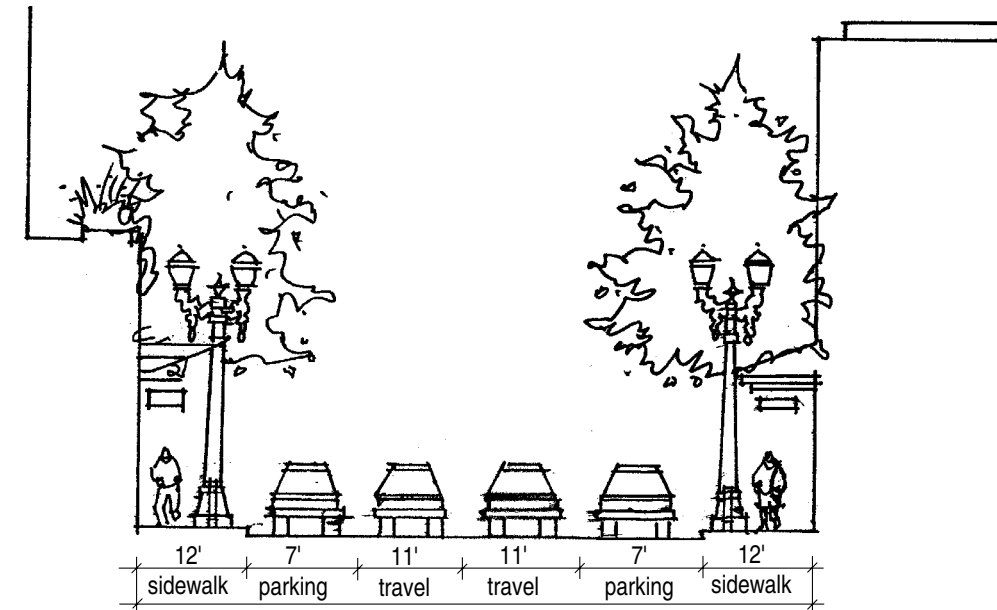


BURNSIDE RETROFIT

The Portland Development Commission recently completed the *Burnside Street Improvements Phase 2* and *MLK/Grand Avenue Improvements Phase 3* on Martin Luther King Jr. Boulevard and Grand Avenue between Everett and Alder Streets. The *Burnside Transportation and Urban Design Plan Technical Refinements* will retain the rebuilt sidewalks, 6'x6' tree wells, new street trees, utilities and signal poles from those projects.

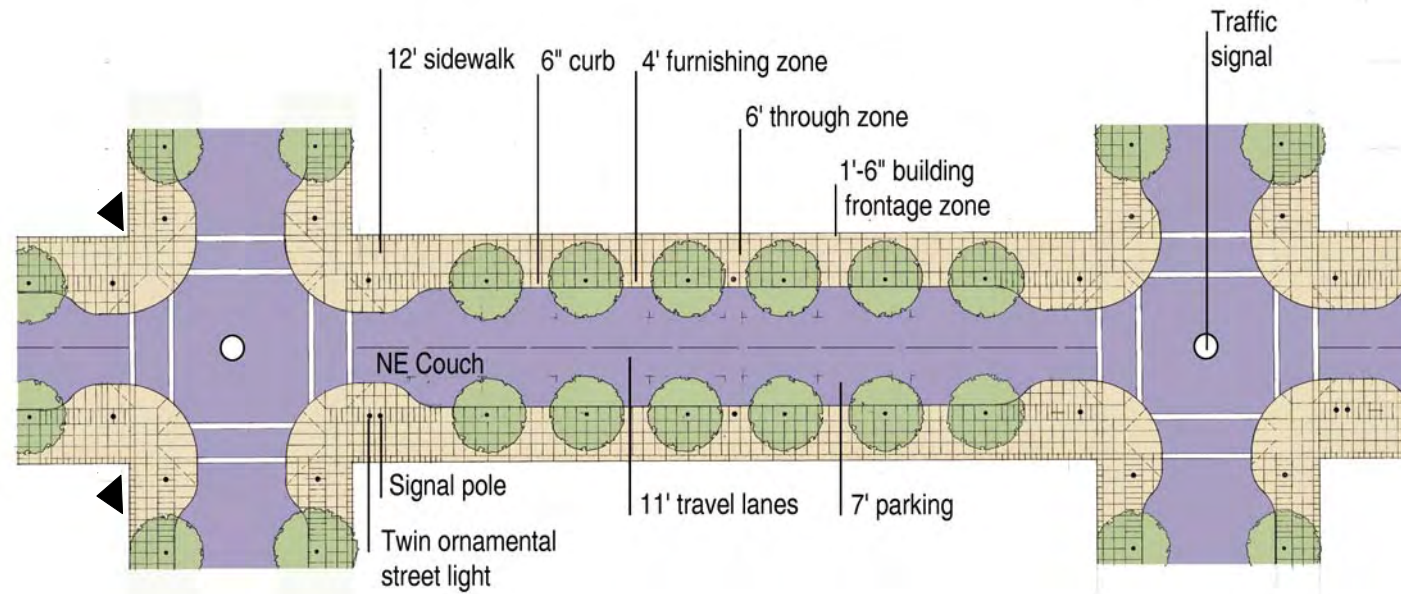


Burnside retrofit plan

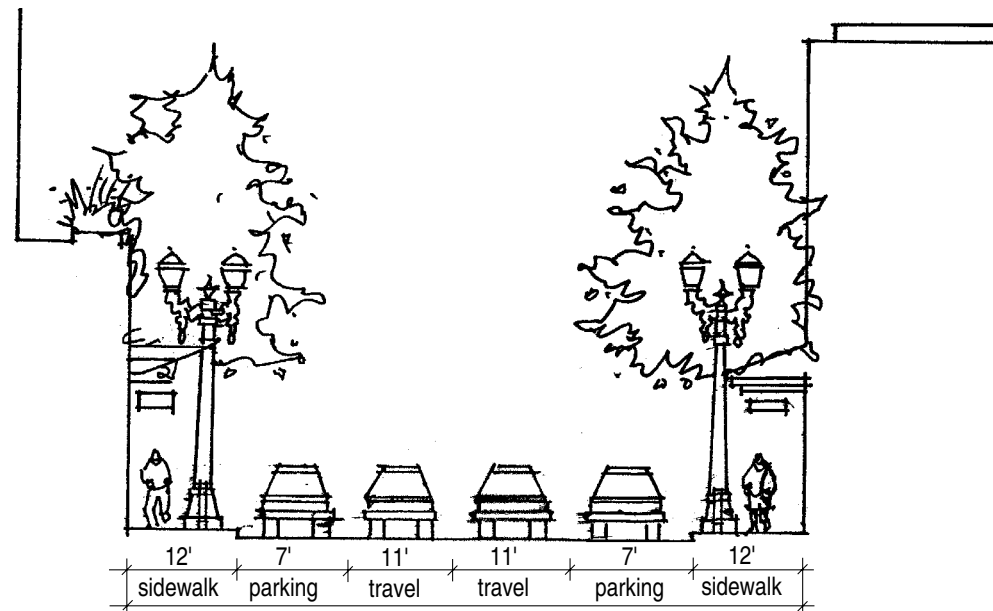


Burnside retrofit section

TYPICAL DETAIL - NORTHEAST COUCH FROM 14TH AVENUE TO GRAND AVENUE

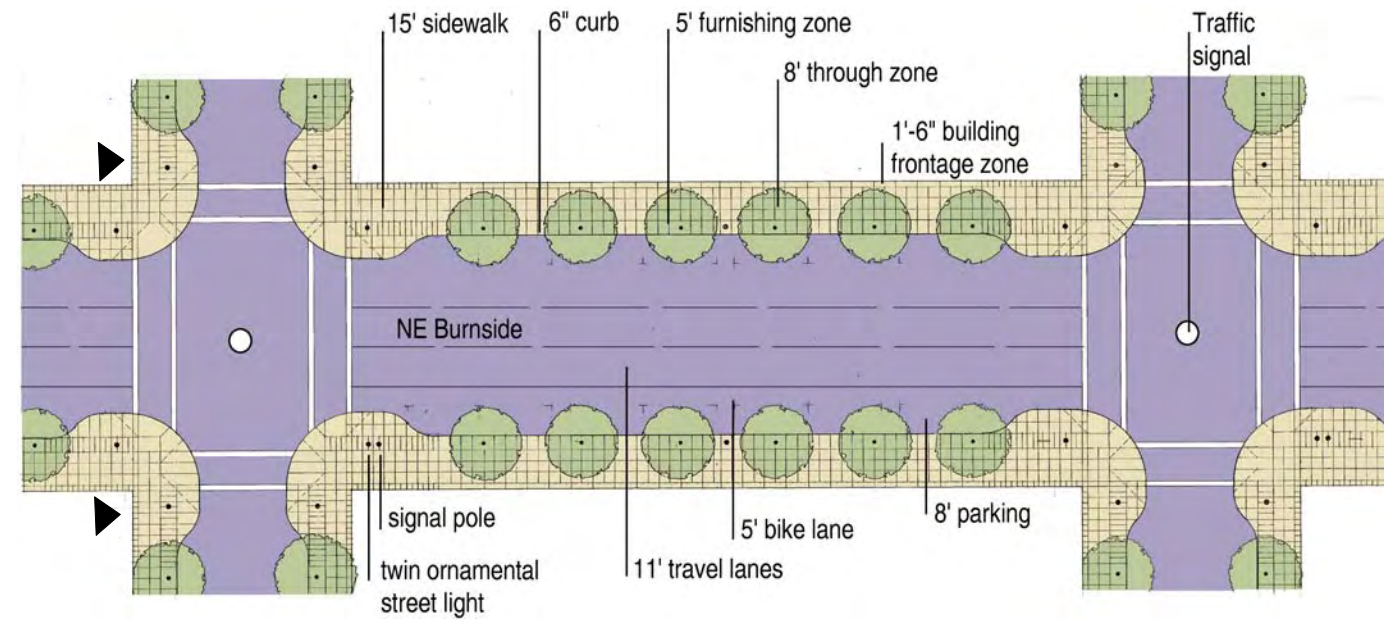


Typical Plan - NE Couch from NE 14th to Grand Avenue

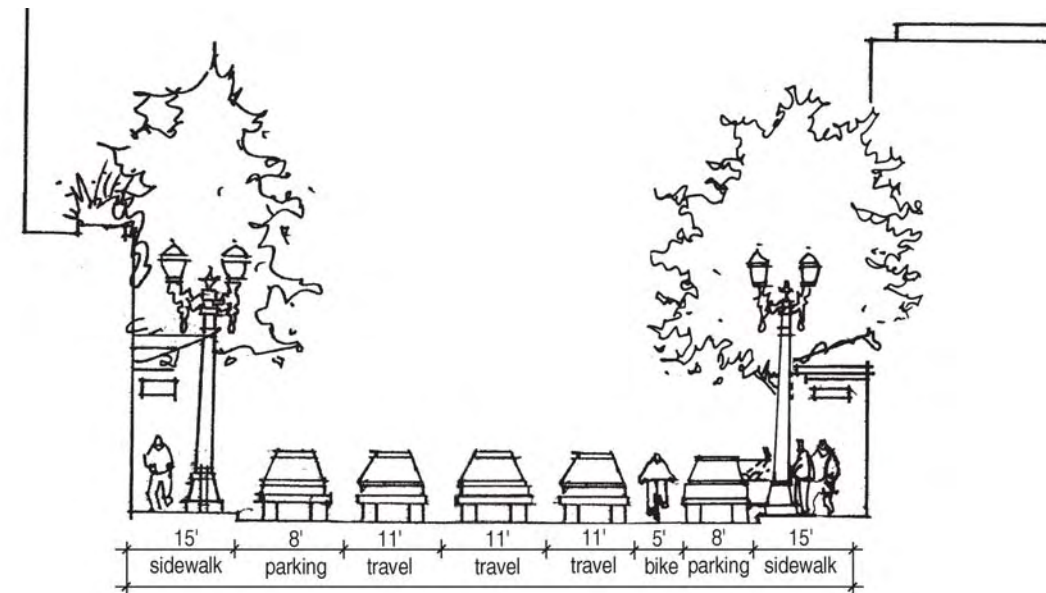


Typical Section NE Couch from NE 14th Avenue to Grand Avenue looking west

TYPICAL DETAIL - EAST BURNSIDE FROM 11TH TO GRAND AVENUE



Typical Plan East Burnside from 11th to Grand Avenue



Typical Section East Burnside from 11th Avenue to Grand Avenue looking east.

TYPICAL DETAILS

LOWER EAST BURNSIDE AND COUCH STREET DESIGN STANDARDS TABLE

STREET SECTION	Right-of-Way	Curb-to-curb	Travel lanes width/quantity	Bike lane	Parking	Curb	Sidewalk	Furnishing Zone	Through Zone	Building frontage zone	Tree well
Burnside E 14 th to E 13 th	84	58	11/4	0	8	.5	12	4	6	1.5	4 ¹
Burnside E 13 th to E 12 th	84	57	11/4	6	8	.5	13	5	6	1.5	5 ¹
Burnside E 12 th to E 11 th	87	67	11/4	5	8	.5	12/10	4/3	6/5	1.5	5 ¹
Burnside E 11 th to Grand	84	54	11/3	5	8	.5	15	5	8	1.5	4x4
Couch E 14 th to Grand	60	36	11/2	0	7	.5	12	4	6	1.5	4 ¹
E 14 th Burnside to Couch	60	33	11/3	0	0	.5	12	4	6	1.5	4 ¹
E 13 th Burnside to Couch ²	-	-	-	-	-	-	-	-	-	-	-
E 12 th Burnside to Couch	80	54	11/4	5	0	.5	13	5	6	1.5	5 ¹

Refer to typical sections and plan for configuration
 New development will set back from the face of curb 15 feet to enable wide sidewalks per Major City Transit Street requirements on Burnside, Couch, 12th and 14th Avenues at the 12th/Sandy/Burnside and Couch intersection.

Footnotes

¹Continuous planting strip

²Preserve 60-foot right-of-way and provide special pedestrian oriented accessway to accommodates cars, trucks, bikes and stormwater management systems.



LOWER EAST BURNSIDE AND COUCH



View looking northeast from Burnside at Broadway. Burnside and Couch extend from the North Park Blocks (foreground, lower left) to the Burnside Bridge (upper right).

LOWER WEST BURNSIDE AND COUCH

WILLAMETTE RIVER TO 8TH AVENUE

Transitioning westbound traffic from the Burnside Bridge to Couch at West 2nd Avenue allows Burnside to become a two lane, one-way eastbound street with on-street parking and wider sidewalks. From the Park Blocks to West 2nd Avenue, traffic will operate on the south side of the existing median. The 54 feet of right-of-way north of the existing median will provide flexible public space for parking and public event uses. The design refinements include the following elements.

RECOMMENDATIONS

- Convert West 2nd between Burnside and Couch to three one-way northbound lanes, remove on-street parking on the east side of the street.
- Transition westbound Burnside bridge traffic to Couch at 2nd Avenue
- Eastbound traffic remains on Burnside
- Convert eastbound on Burnside to:
 - Two lanes from 8th Avenue to 4th Avenue
 - Four lanes from 4th to 2nd Avenue
 - Three lanes from 2nd Avenue across the bridge to the east side
 - Add left-turn only lane from 3rd Avenue to 2nd Avenue to provide left turn movements to northbound 2nd Avenue
 - Traffic signals at every intersection from West 1st to West 8th
 - Full-time, on-street parking (south side only)
 - Full-time north side parking in flexible public space
 - Striped bike lane from 4th Avenue to the bridge on Burnside
 - Wider sidewalks
 - Curb extensions at all intersections
 - Infill street trees and twin ornamental street lights
 - Preserve existing median trees
 - Add pedestrian scale single ornamental street lights on the north side of the Burnside median between 2nd and 8th Avenues
 - Rebuild substandard sidewalks
- Convert Couch to two one-way westbound lanes with:
 - Traffic signals at every intersection
 - Preserve on-street parking, existing sidewalks and healthy existing street trees
- Provide angled parking on NW 2nd north of Couch on the west side
- Rebuild Couch Street pavement section
- Grind and overlay Burnside Street pavement section
- Use sustainable practices in street and pedestrian area design including stormwater management, porous paving and street tree species diversity

“A special challenge, or opportunity, is the condition of Burnside Street and the buildings which line it. Many of the buildings along Burnside, and the nature of some of the uses housed in those buildings, do not present an inviting face to visitors coming from the heart of downtown. This problem is exacerbated by traffic levels in Burnside, and the width of the street (which makes for an unpleasant pedestrian experience).

*~Old Town/Chinatown Vision Plan
September 1997*

NOTE: 3rd and 4th Avenue Streetscape Improvements are outside the scope of this project.

LOWER WEST BURNSIDE VISION

The concept design for Lower West Burnside includes a 54-foot “flexible public space” on the north side of the street between West 2nd and West 8th Avenues. This flexible public space preserves nearly all the existing median street trees and provides space for parking, sidewalks, opportunities for public art and places for special events. The concept design provides for the evolution of this flexible public space over time as the needs and development opportunities of the area change. Although initially designed to accommodate parking between the existing median island and the sidewalk, the parking area can be used as a plaza.

Future development applications for blocks adjacent to the 54-foot flexible public space may apply for a right-of-way full vacation for redevelopment. A street vacation would eliminate the on-street parking and could yield added development area to the adjacent blocks. The trade-off for doing this however, is a discontinuous public space. Consideration of this alternative should receive community review.

A permanent plaza space could be allowed if a sponsor or steward would accept the management and maintenance responsibilities that are required to operate public open space.



Concept sketch looking north on SW 2nd Avenue with full pedestrian access and a pedestrian refuge and gateway to OldTown/Chinatown.

1



This flexible public space on the north side of Burnside preserves the existing median tree canopy while providing a dynamic urban place that allows parking in a curbless plaza.



View showing existing median trees framing the north side of Burnside Street where flexible public space can provide on-street parking. . .

2



The flexible public space could also provide space for festival uses or special events, and would encourage active ground floor activities on the north side of Burnside. Temporary tents could be utilized for a festival or special events.



. . . or be permitted for special events such as display of Rose Parade floats and Chinese New Year festivities.

NOTE: These illustrations do not represent specific planned or required development proposals by property owners or the City of Portland.



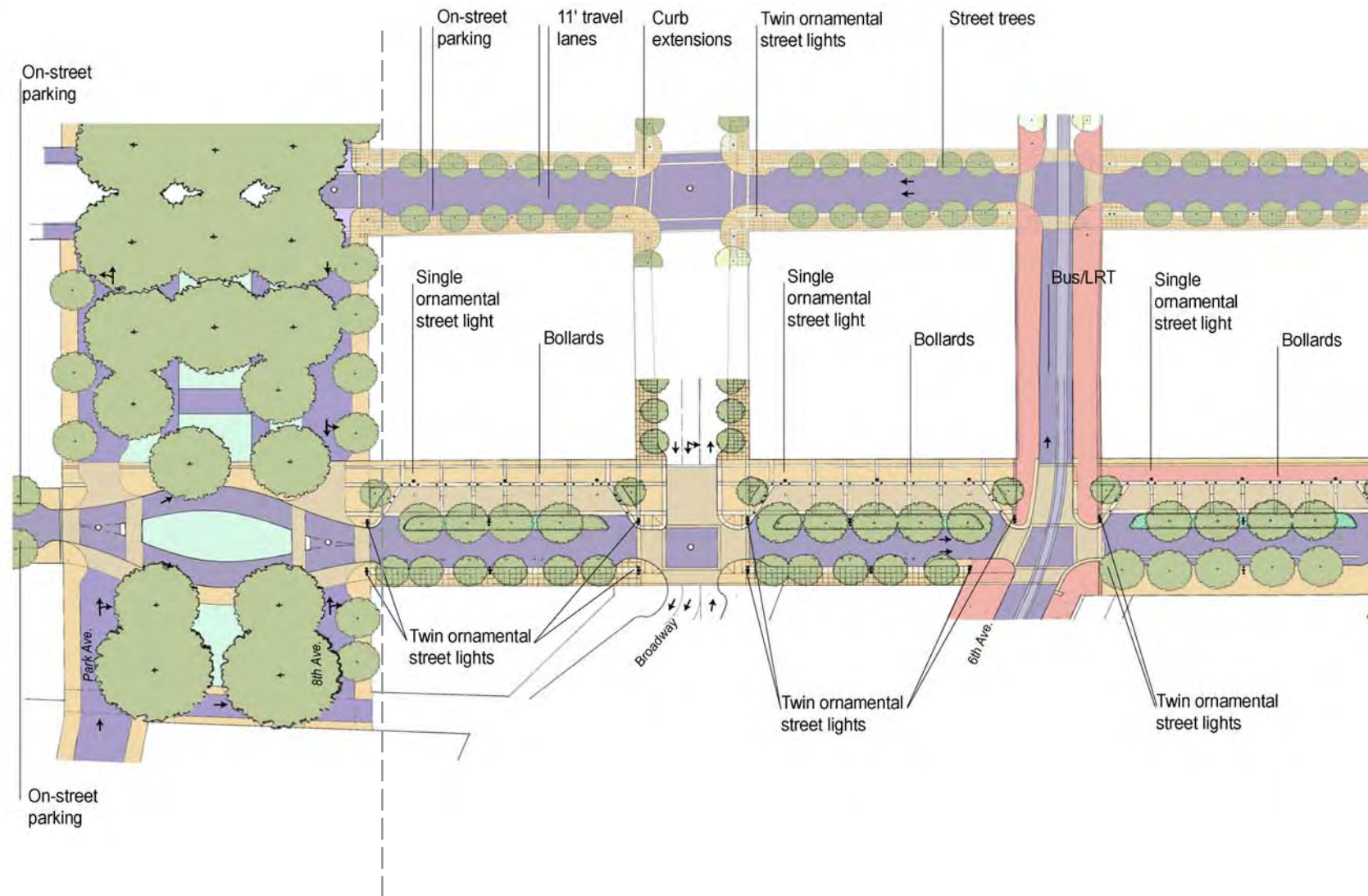
3 Ultimately the vision for the north side of Burnside is a grand public space or series of spaces that would become a destination known for historic architecture, a green canopy of flourishing trees, public art and special paving. Burnside would become an exciting urban place with an open air marketplace of pavilions, news kiosks, flower stands and street level entertainment. The streetscape and trees frame storefronts and create an elegant place for strolling through an exciting series of walks and plazas that connect Downtown to Old Town/Chinatown and the Park Blocks to the River.



4

Because of dimensional restrictions, a plaza space will be built with the project between West 2nd and West 3rd Avenues with on-street parking south of a new planted median.

LOWER WEST BURNSIDE AND COUCH PLAN

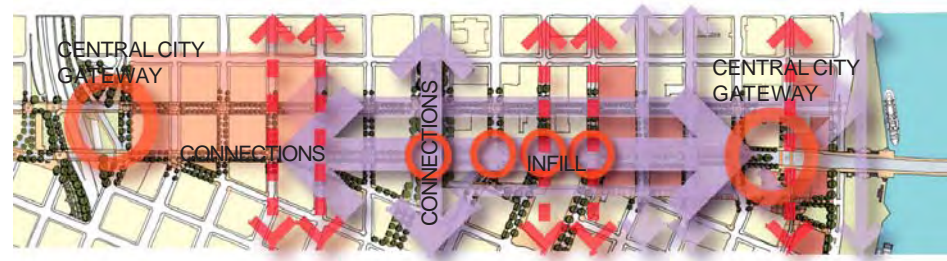
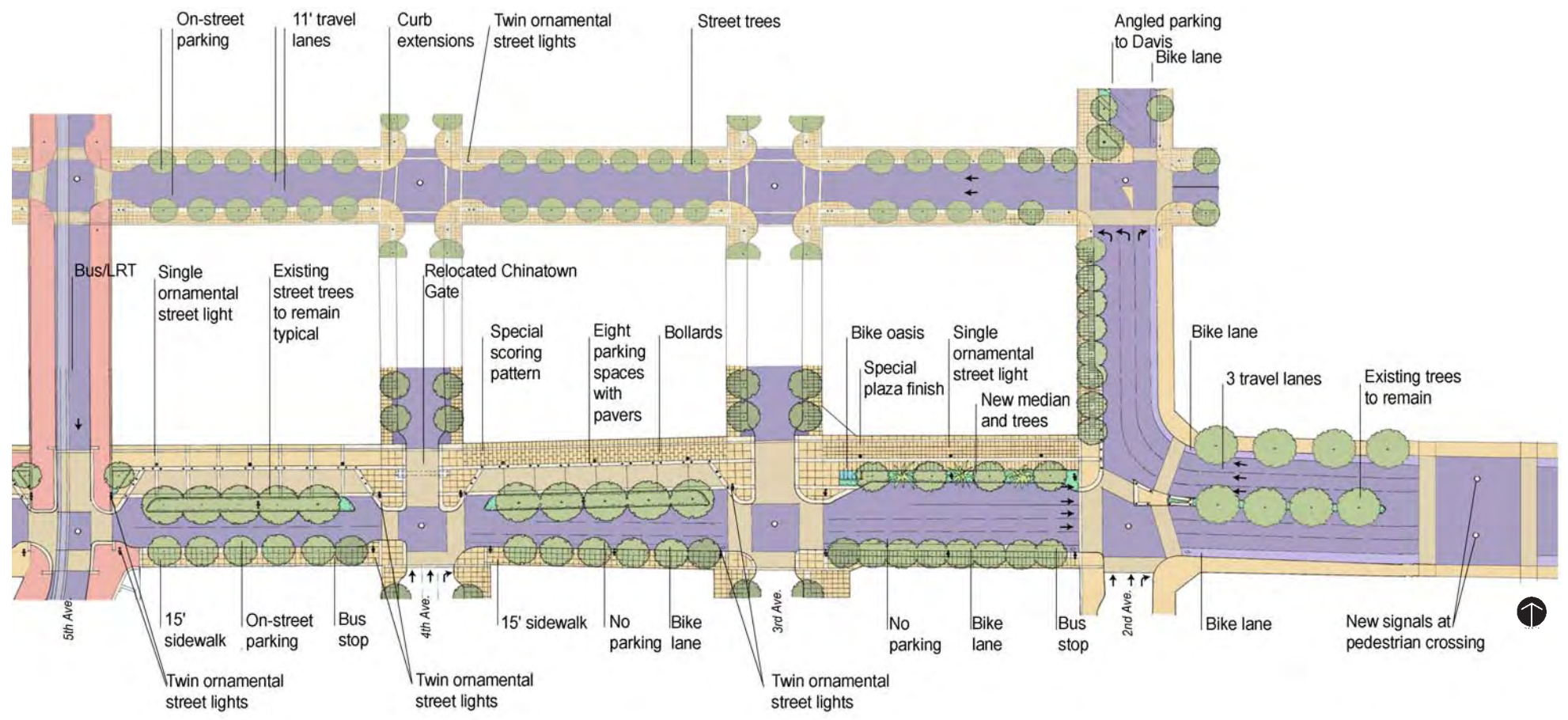


NOTE:
The area shown between 8th and Park Avenues is part of the Central West Sub-area and shown for reference only.

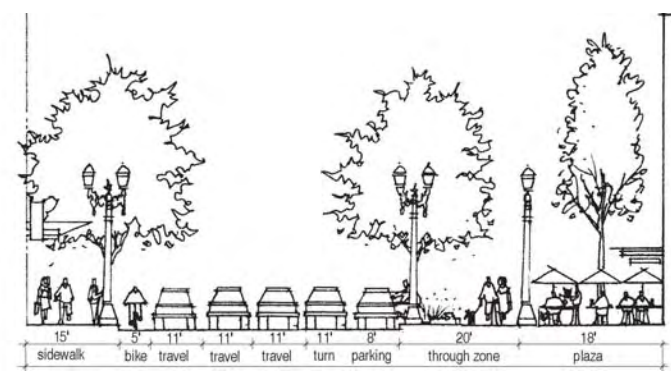
- The following minimum improvements occur on each block:
- Twin ornamental street lights
 - Street trees (preserve median trees and infill other existing healthy trees)
 - Signals
 - Curb extensions

LEGEND

 Street	 Traffic Signal
 Sidewalk specialty paving	 Street Tree
 Crosswalk	 Street lights
 Landscaped area	 Bollards
 Transit Mall	

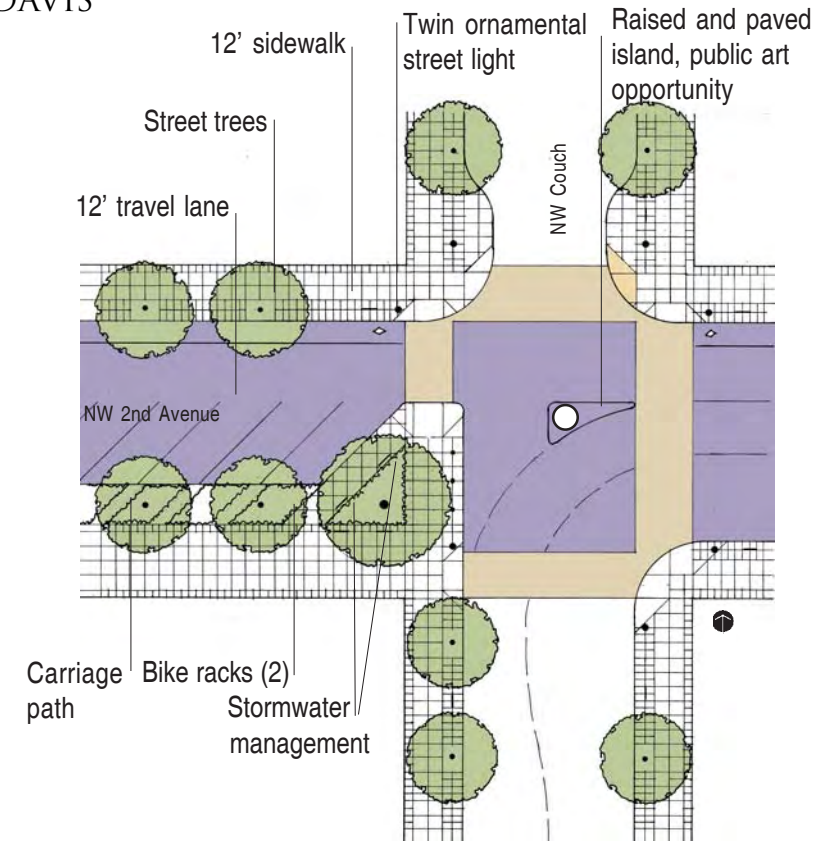


Lower West Burnside and Couch Urban Design diagram

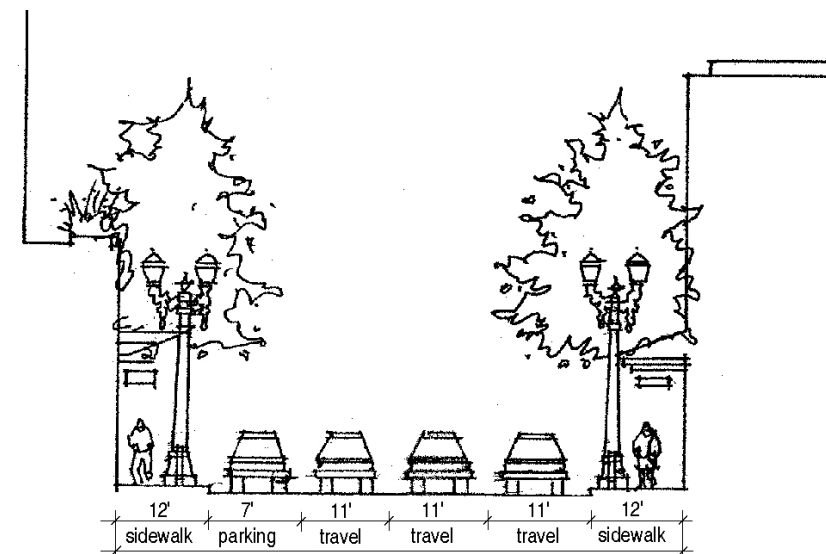


West Burnside Section between West 2nd and West 3rd looking west

TYPICAL DETAIL - NW 2ND AVENUE BETWEEN COUCH AND DAVIS

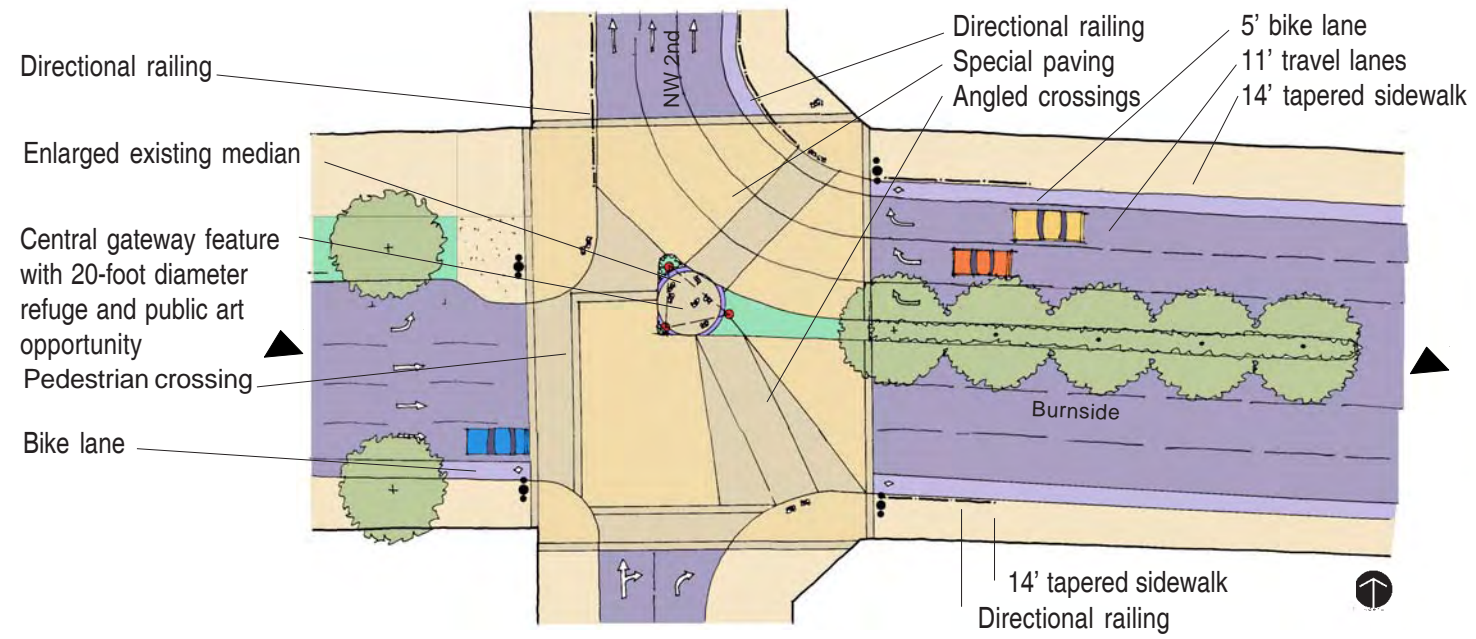


West 2nd Avenue Between Couch and Davis with angled parking on NW 2nd Avenue.

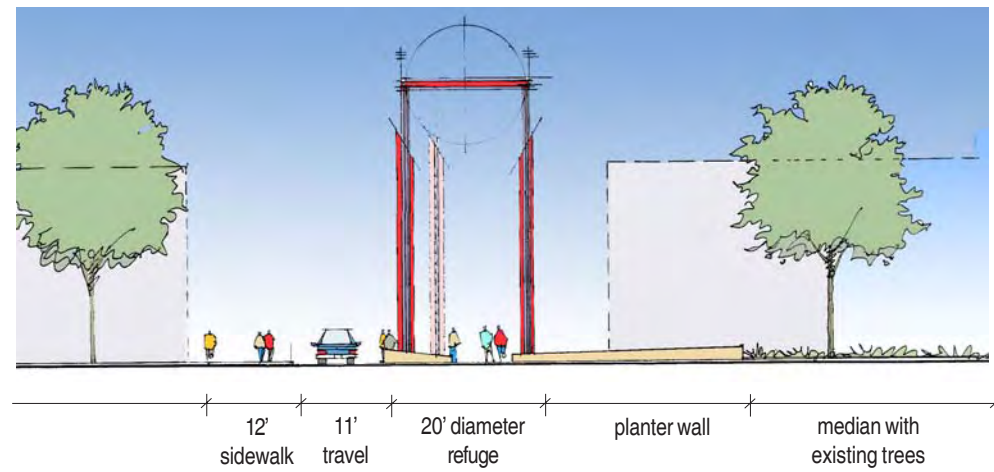


West 2nd Avenue Section looking north

TYPICAL DETAIL - 2ND AVENUE AND BURNSIDE

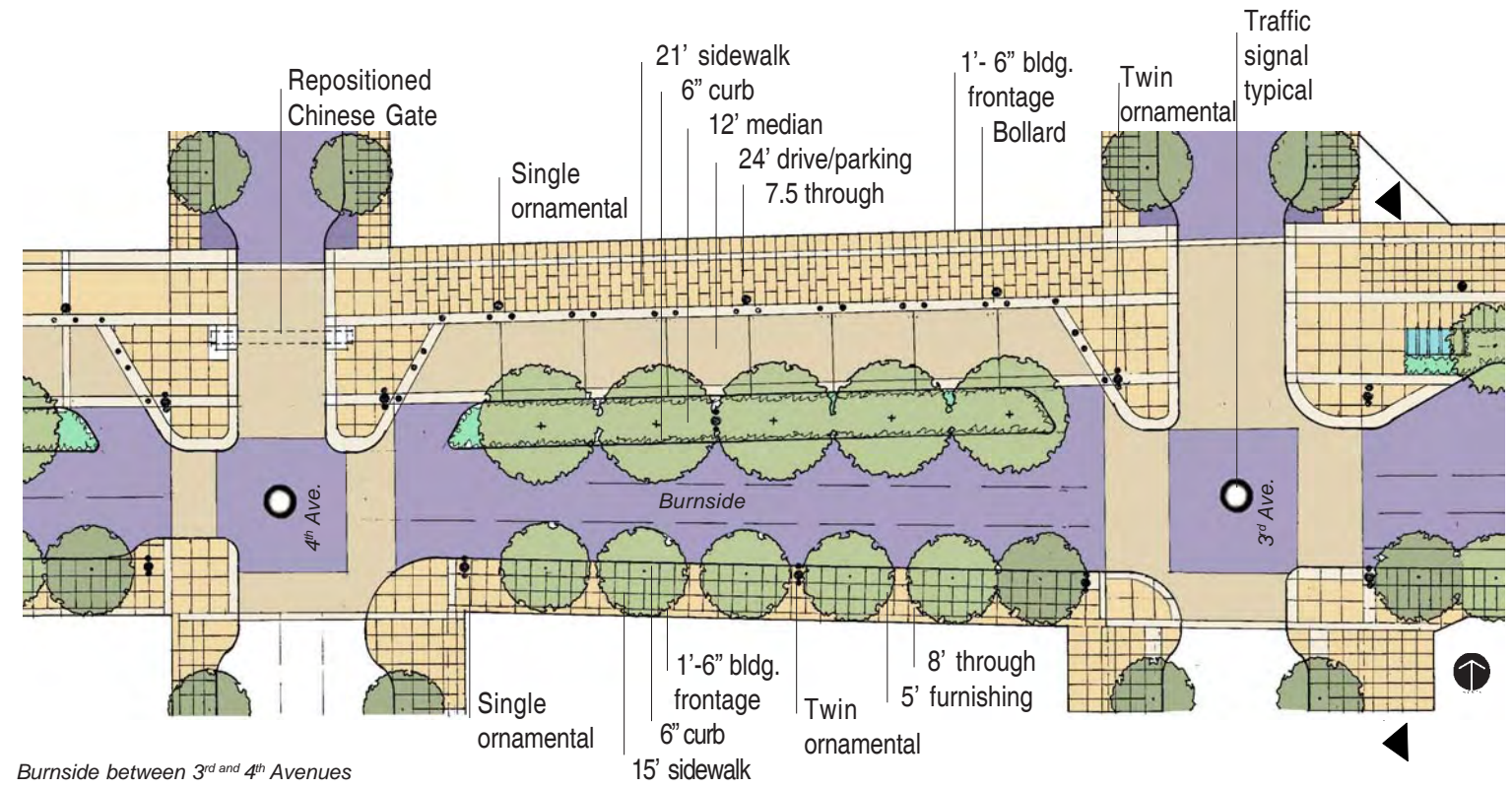


Burnside and 2nd Avenue detail plan showing gateway feature.

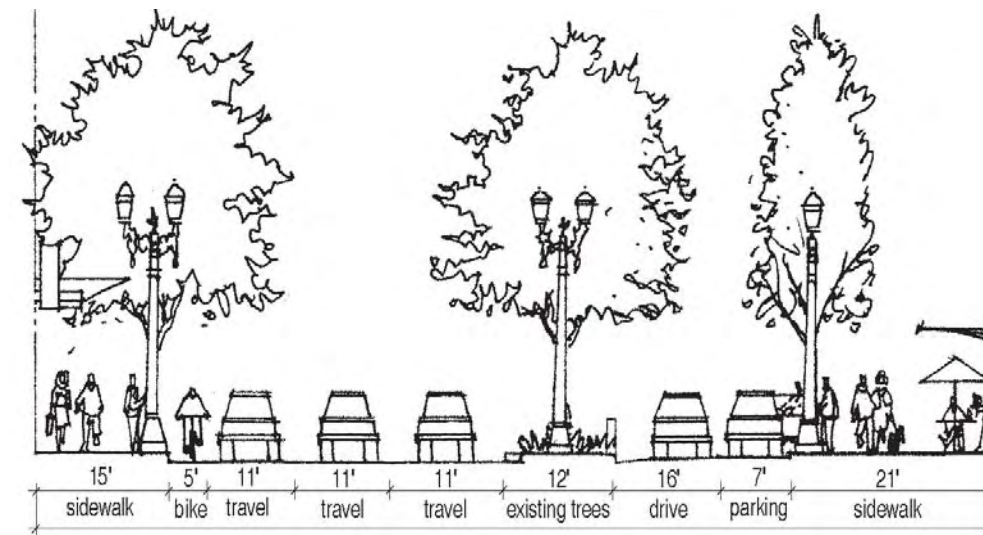


Section at 2nd and Burnside looking north showing northbound traffic on 2nd Avenue to Couch. A proposed gateway feature provides protected refuge for pedestrians crossing Burnside at 2nd Avenue, a district identity and public art opportunity.

TYPICAL DETAILS - LOWER WEST BURNSIDE
 BETWEEN 3RD AND 4TH AVENUES



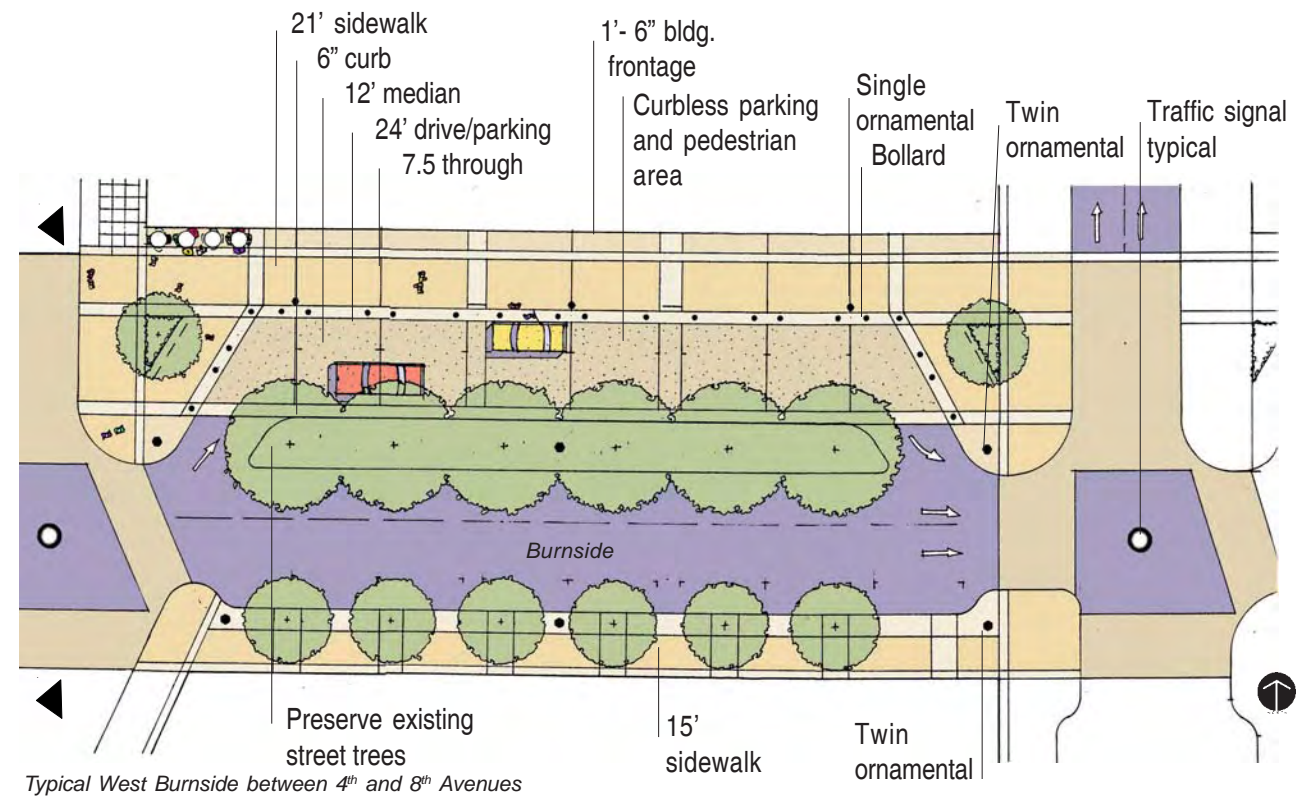
Burnside between 3rd and 4th Avenues



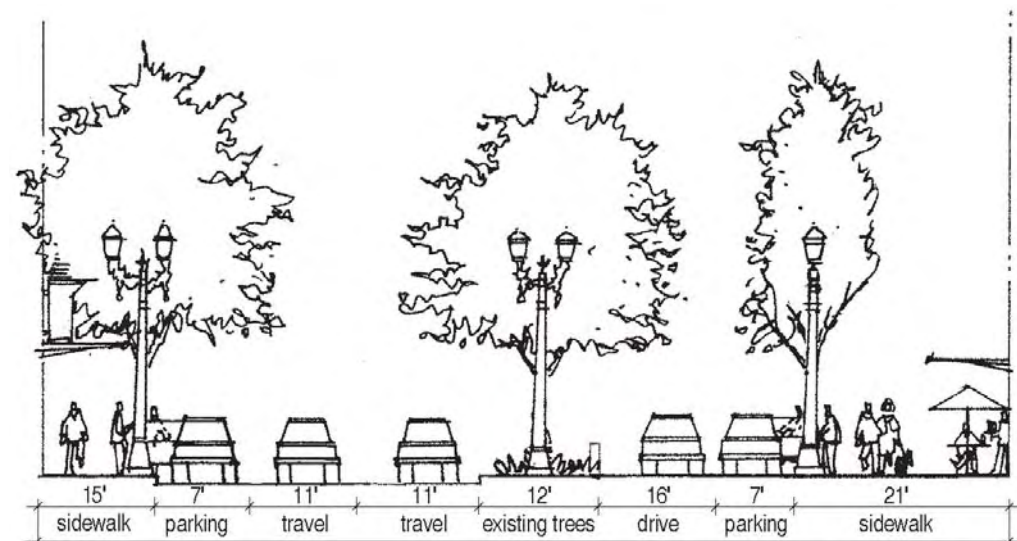
Typical West Burnside Section from 3rd and 4th to looking west

TYPICAL DETAILS - LOWER WEST BURNSIDE

BETWEEN 4TH AND 8TH AVENUES

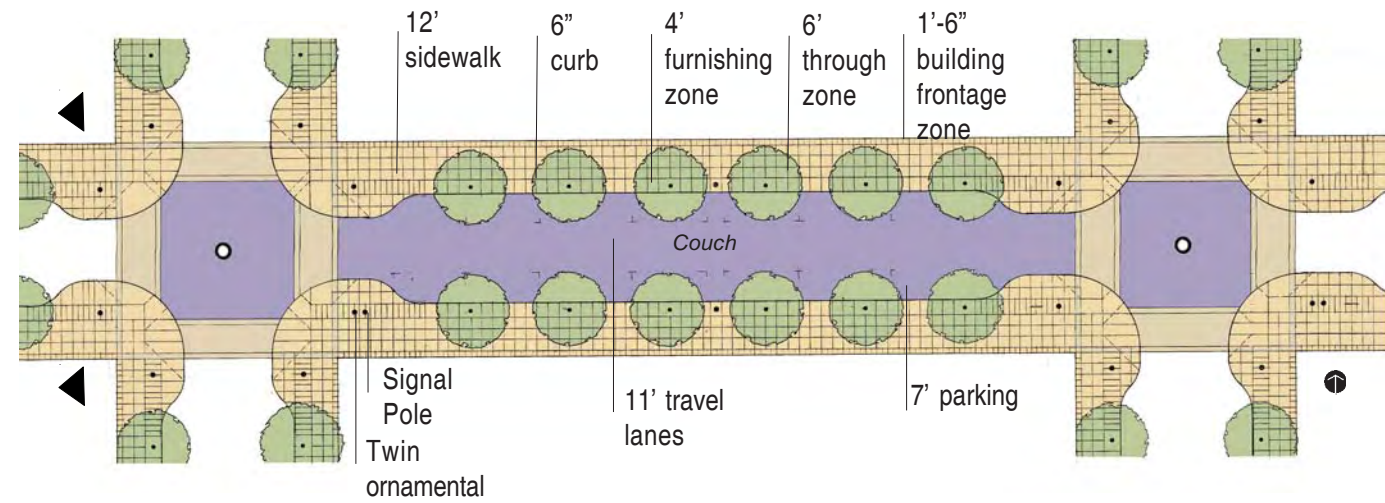


Typical West Burnside between 4th and 8th Avenues

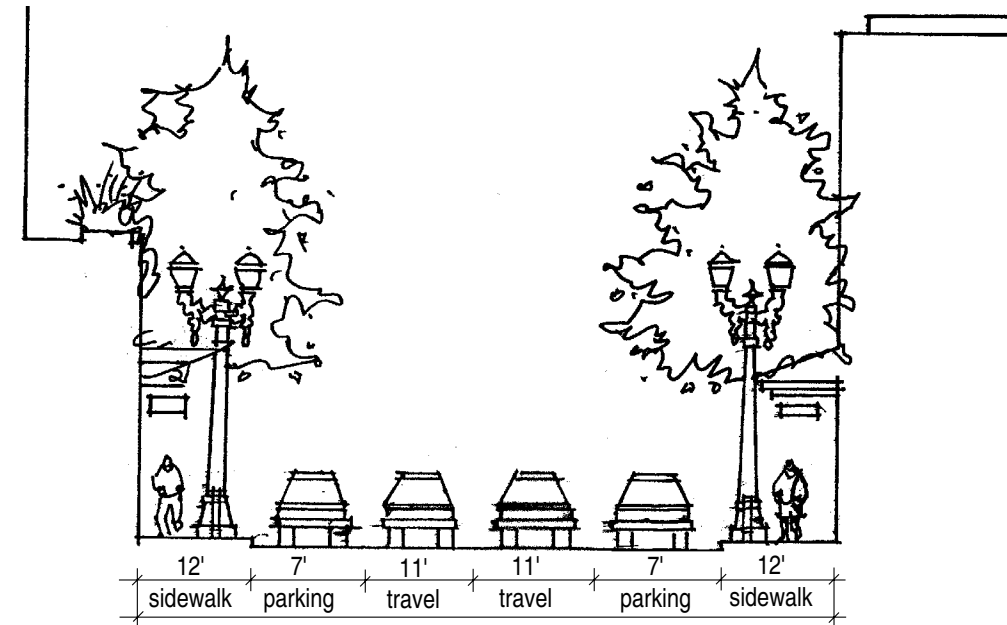


Typical West Burnside Section from 4th to 8th looking west

TYPICAL SECTION - COUCH FROM 4TH TO 8TH AVENUE



Typical West Couch plan from NW 4th to NW 8th Avenues



Typical West Couch section from NW 4th to NW 8th Avenues looking west

STREET DESIGN STANDARDS TABLE

STREET SECTION	Right-of-Way	Curb-to-Curb	Travel lanes width/quantity	Bike lane	Parking ¹	Curb	Sidewalk ¹	Furnishing Zone ¹	Through Zone ¹	Building frontage zone ¹	Tree Well	
Burnside W 1 st to W 2 nd	110	90	11/6	5	0	.5	14	5	7	1.5	4	11 ²
Burnside W 2 nd to W 3 rd	110	57	11/4	5	0/8	.5	15/38	5/12	8/20	1.5/6	5 ¹	12 ²
Burnside W 3 rd to W 4 th	110	38	11/3	5	0/24 ¹	.5	15/21	5	8/7.5	1.5/6	5 ¹	12 ²
Burnside W 4 th to W 8 th	100	29	11/2	0	7/24 ¹	.5	15/20	5	7.5	1.5/6	5 ¹	12 ²
Couch W 2 nd to W 8 th	60	36	11/2	0	7	.5	12	4	6	1.5	4x6	NA
W 2 nd Burnside to Couch	70	46	11/3	5	7	.5	12	4	6	1.5	4x6	NA
W 3 rd Burnside to Ankeny	80	47	11/3	0	7	.5	15/18	5	8	1.5/4.5	4x6	NA
W 3 rd Burnside to Couch ⁵	70	42	10.5/2	5	8	.5	14	4	7.5	2	4x6	NA
W 4 th Burnside to Ankeny	100	36	11/2	0	7	.5	29/38	5	8	14/20	4x6	NA
W 4 th Burnside to Couch ⁵	60	36	11/2	0	7	.5	12	4	6	1.5	4x6	NA

Refer to sections and plans for configuration

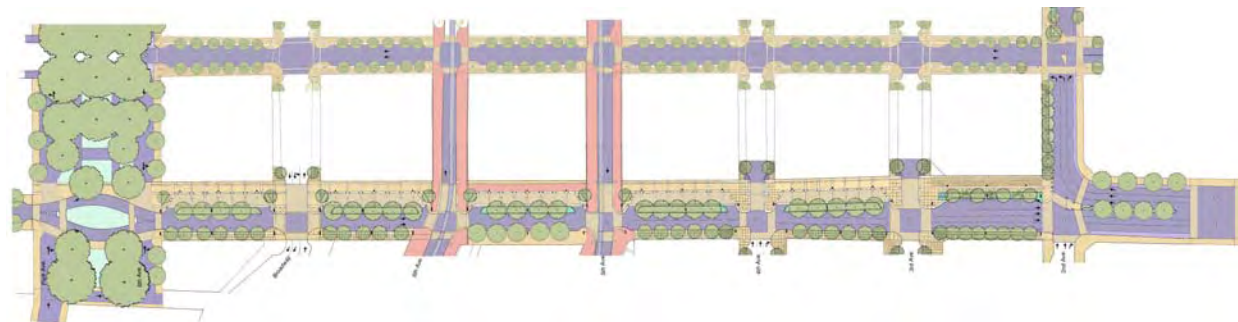
Footnotes

¹ Parking north of existing median

² Continuous planting strip

³ Combined PDOT and ODOT right-of-way

⁵ Refer to 3rd and 4th Avenue Improvements Project – Job No. 37255 outside of project scope



LOWER WEST BURNSIDE AND COUCH PLAN



Burnside and Couch from NW 10th Avenue west to I-405.

CENTRAL WEST BURNSIDE AND COUCH

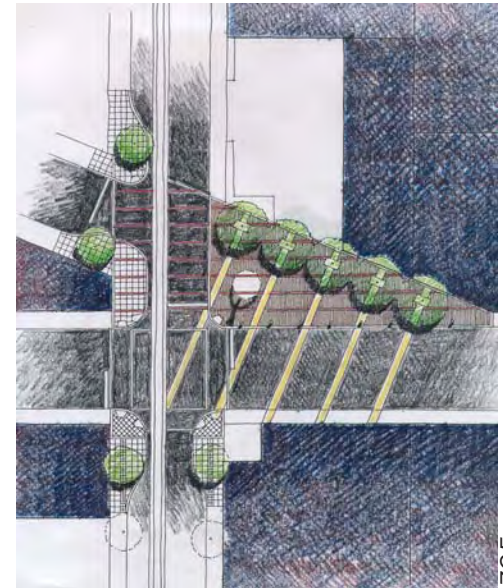
8TH TO 16TH AVENUE

On Burnside from the North Park Blocks to West 16th Avenue, wider sidewalks, curb extensions, on-street parking and traffic signals at every intersection will provide improved access and a more balanced transportation system. Couch, while experiencing more vehicular traffic, will gain curb extensions, twin ornamental street lights, street trees and traffic signals at every intersection.

RECOMMENDATIONS

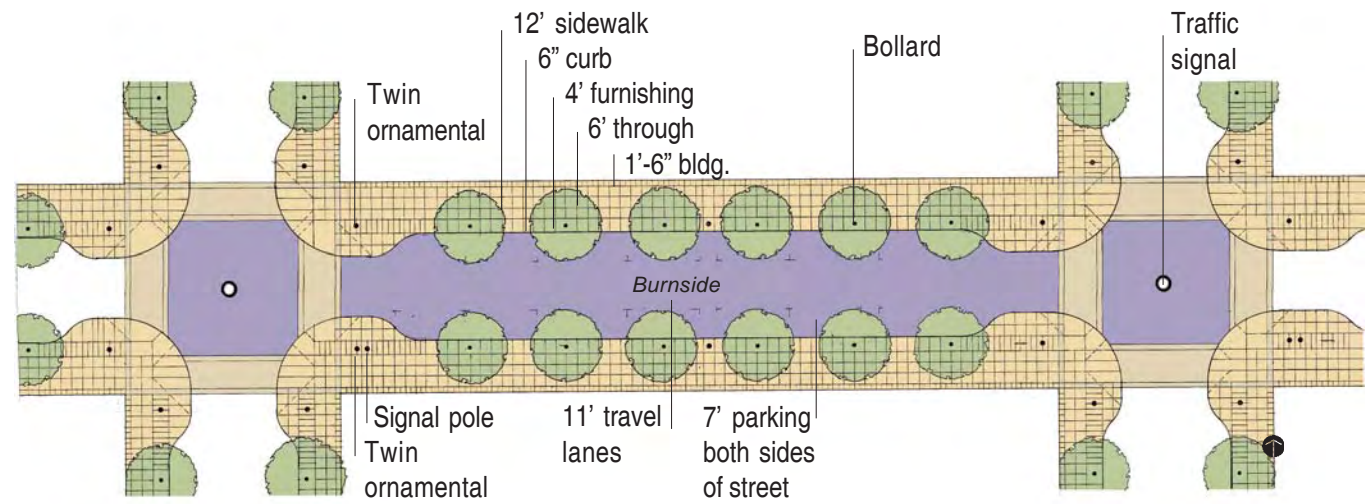
The design refinements include the following elements:

- Convert Burnside to two lanes, one-way eastbound with:
 - Traffic signals at every intersection beginning at West 8th Avenue
 - Add full time on-street parking on both sides of street
 - Rebuild sidewalks, expanded to 12 feet
 - Curb extensions at all intersection
 - Install new street trees and ornamental street lights
 - Widen sidewalks on the I-405 bridge
- Grind and overlay Burnside Street pavement section
- Convert Couch to two one-way westbound lanes with:
 - Traffic signals at every intersection
 - Preserve on-street parking, existing sidewalks and healthy existing street trees
 - Widen sidewalks on the I-405 bridge
 - Curb extensions at all intersections
 - Rebuild Couch Street pavement section
- Enhance the pedestrian crossings at W 8th and W Park on Burnside
- Close Oak Street between Burnside and SW 10th Avenue
- Stripe angled parking on the north side of SW Oak Street between SW 9th and SW 10th Avenues
- Transition westbound Couch traffic to Burnside at 15th Avenue
- Rebuild SW 16th Avenue to align with NW 16th Avenue
- Preserve Couch right-of-way between NW 15th and NW 16th for pedestrian and bicycle access
- Create gateway feature opportunities at 15th and Burnside
- Use sustainable practices in street and pedestrian area design including stormwater management, porous paving and street tree species diversity

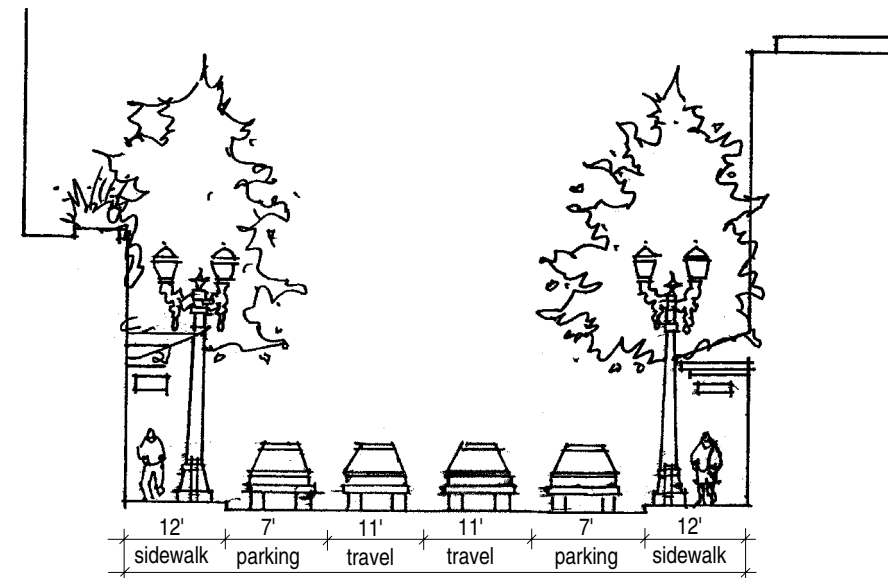


The project enables the removal of the existing "jughandle" at 10th, Burnside and Oak. Development of a small plaza provides a foreground to Powell's City of Books, an enhanced bus stop and better viewing of the existing public sculpture.

TYPICAL DETAILS - CENTRAL WEST BURNSIDE

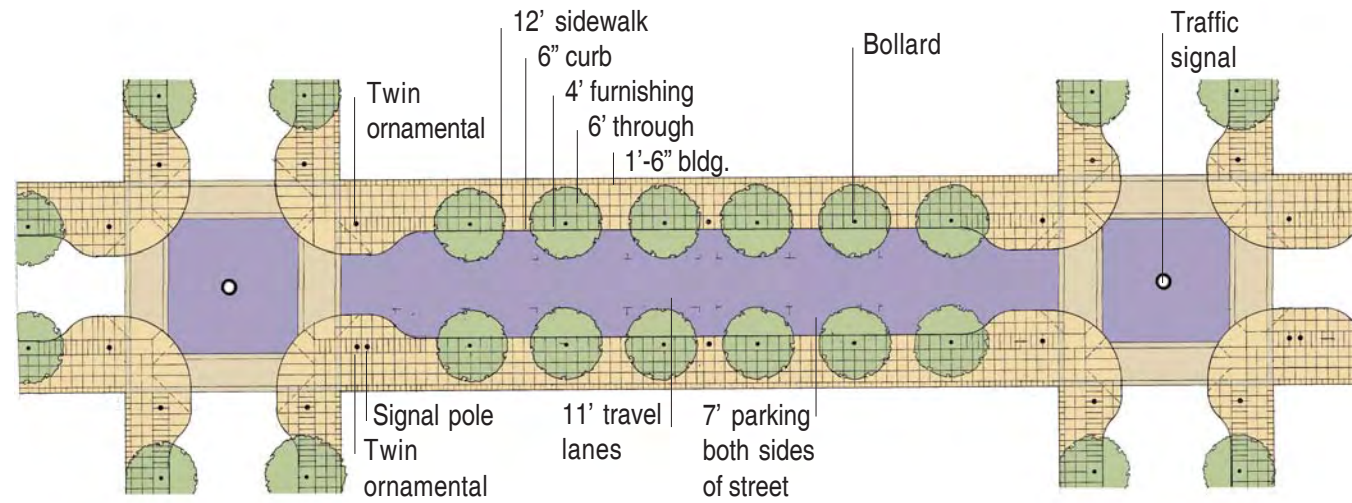


Typical West Burnside from West Park Avenue to West 14th Avenue

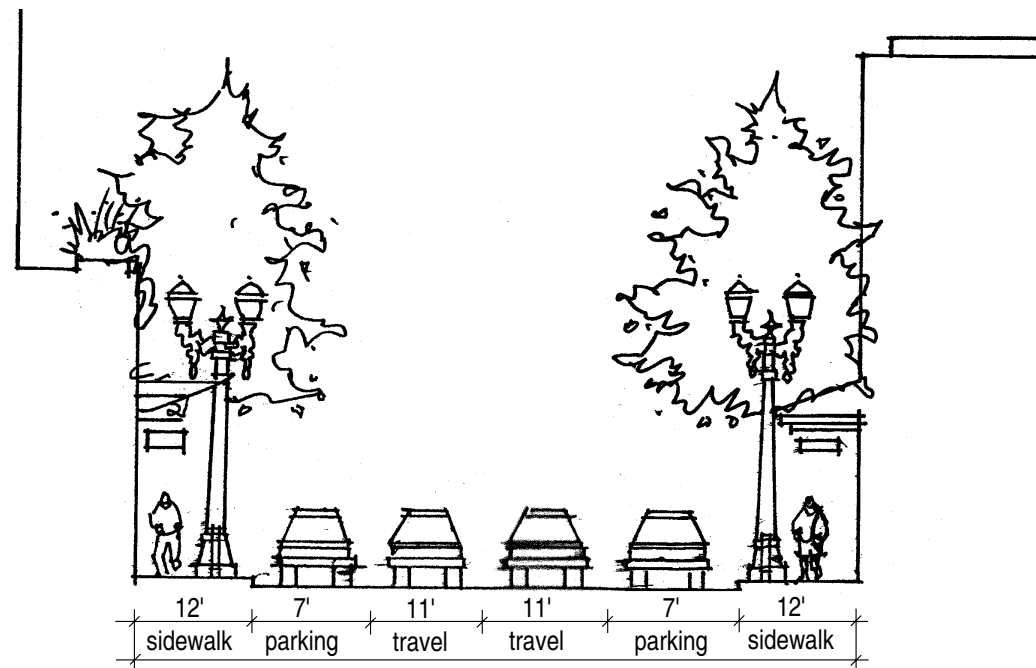


Typical West Burnside from West 8th to 14th Avenue looking west.

TYPICAL DETAILS - CENTRAL WEST COUCH

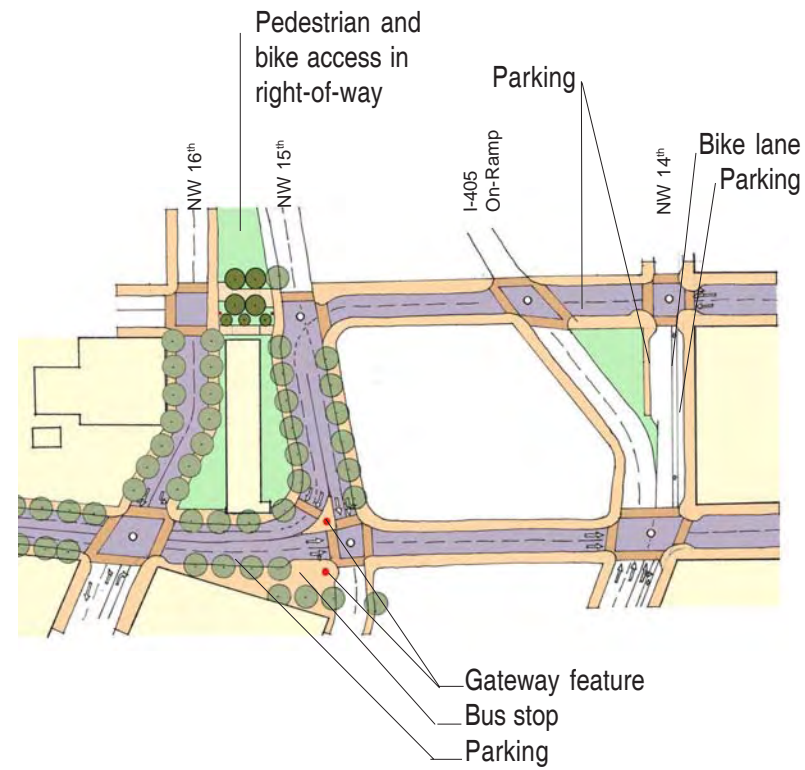


Typical West Couch plan from NW Park to 14th Avenue



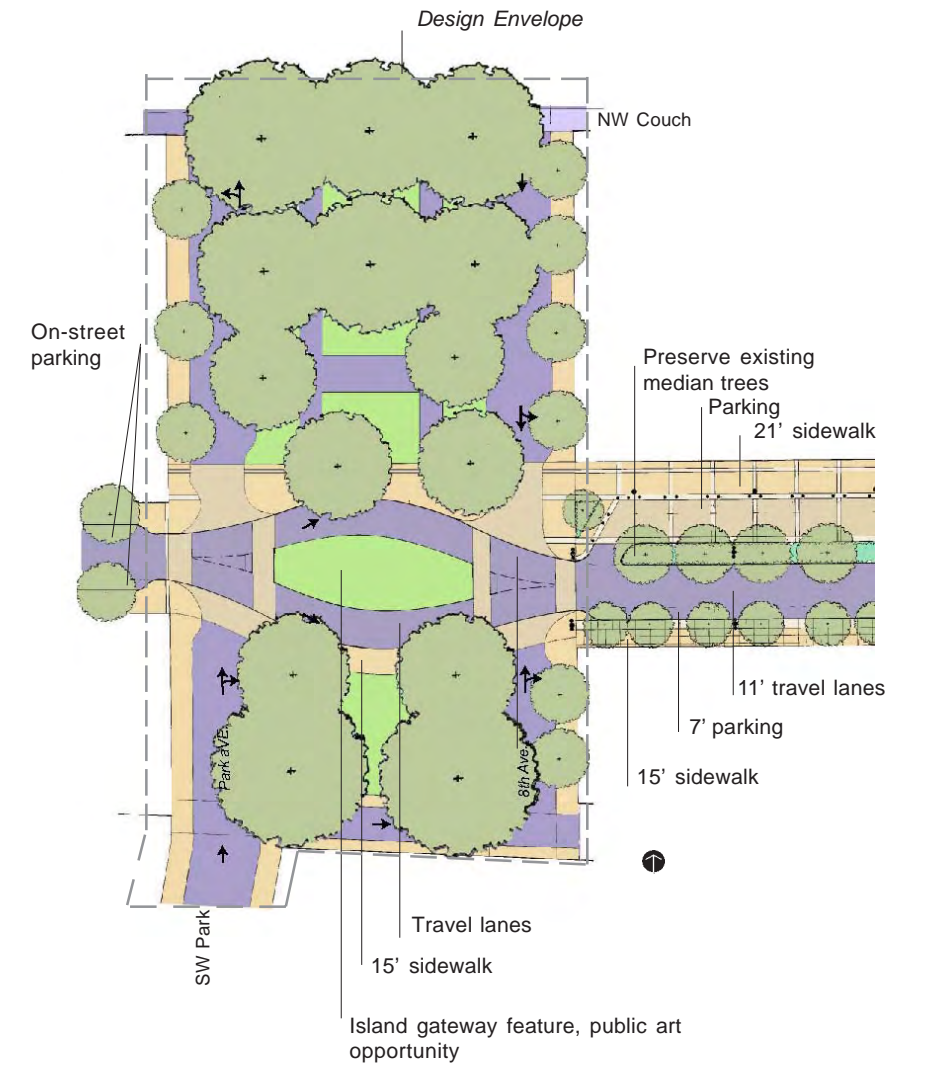
Typical NW Couch section from NW Park to 14th Avenue looking west.

BURNSIDE AND COUCH AT I-405



Burnside and Couch between 14th and 16th Avenues plan showing a gateway feature and bus stop at SW 15th Avenue.

PARK BLOCKS CROSSING



Park Blocks crossing at Burnside showing park and open space between Ankeny, Park and 8th Avenues.

STREET DESIGN STANDARDS TABLE
CENTRAL WEST BURNSIDE AND COUCH

STREET SECTION	Right-of-Way	Curb-to-Curb	Travel lanes width/quantity	Bike lane	Parking	Curb	Sidewalk	Furnishing Zone	Through Zone	Building frontage zone	Tree Well
Burnside W 8 th to Park	100	24	12/2	0	0	.5	15/15	5	8	1.5	5 ¹
Burnside Park to W 14 th	60	36	11/2	0	7	.5	12/12	4	6	1.5	4x6
Burnside W 14 th to W 15 th	*	*	11/2	0	0	.5	12	4	6	1.5	0
Couch NW 8 th to Park	60	22	11/2	0	0	.5	12	4	6	1.5	0
Couch NW Park to NW 14 th	60	36	11/2	0	7	.5	12	4	6	1.5	4x6
Couch NW 14 th to NW 15 th	*	*	11/2	0	0	.5	12	4	6	1.5	0
W 14 th Burnside to Couch	60	36 ²	11/2	0	7	.5	12	4	6	1.5	4 ¹
W 15 th Burnside to Couch	72	48	12/4	0	0	.5	12	4	6	1.5	4 ¹
W 16 th Burnside to Couch	60	36	11/2	0	7	.5	12	4	6	1.5	4 ²

Refer to sections and plan for configuration

Footnotes

- ¹ Continuous planting strip
- ² Combined PDOT and ODOT right-of-way
- * I-405 bridge



CENTRAL WEST BURNSIDE AND COUCH



View of West Burnside from I-405 looking west with West 15th in the foreground.

UPPER WEST BURNSIDE

WEST 16TH AVENUE TO WEST 24TH PLACE

Upper West Burnside will continue to provide two-way vehicle travel. The traffic lanes, however, will be reduced to 10 feet enabling the sidewalks to expand from eight feet to 10 feet in width. The “triangles” will be reconfigured to allow on-street parking and provide better bus stops and stormwater management facilities.

RECOMMENDATIONS

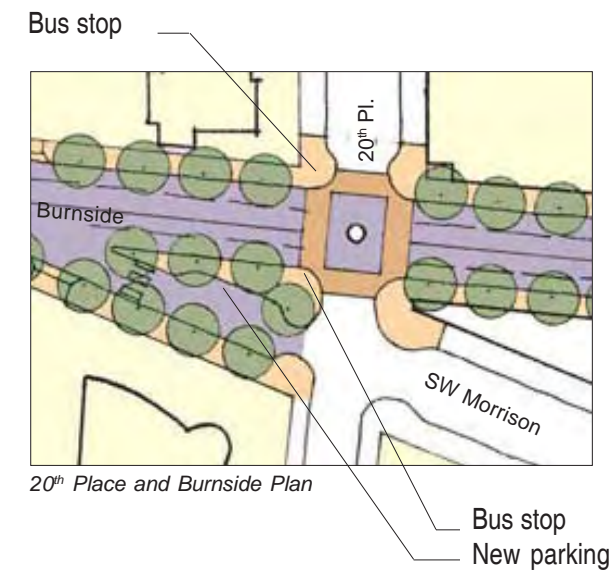
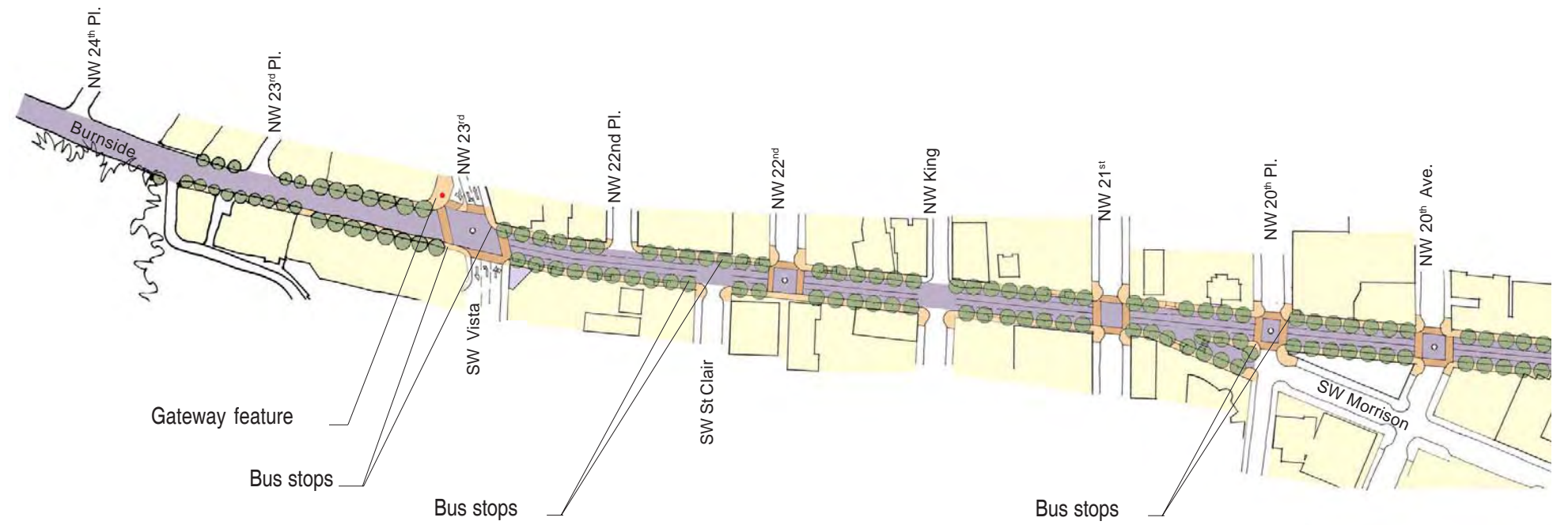
The Upper West Burnside improvements include the following elements and actions:

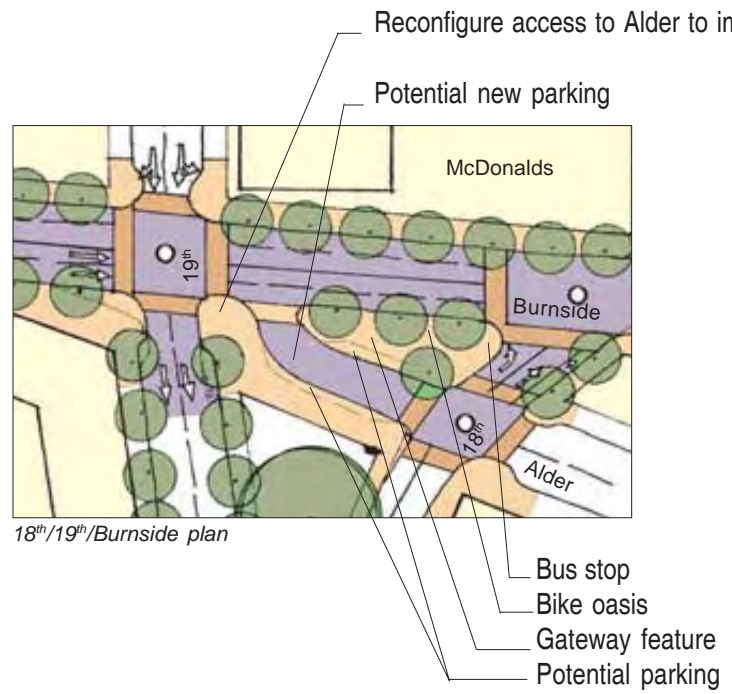
- Reconfigure two-way Burnside from 16th Avenue to 23rd Avenue with:
 - Four 10-foot travel lanes
 - New 10-foot wide sidewalks
 - New ornamental street lights and street trees
- Reconfigure 18th/19th/Burnside/Alder intersection
- Reconfigure 20th Place intersection and add parking
- Evaluate opportunity for pro-time parking
- Add new signals at 20th Place and 22nd Avenue
- Rebuild street pavement sections
- Use sustainable practices in street and pedestrian area design including stormwater management, porous paving and street tree species diversity



The above photograph shows Burnside west from SW 19th. This stretch of Burnside would have four 10-foot travel lanes, new 10-foot sidewalks, ornamental street lights and street trees on both sides of Burnside.

UPPER WEST BURNSIDE PLAN

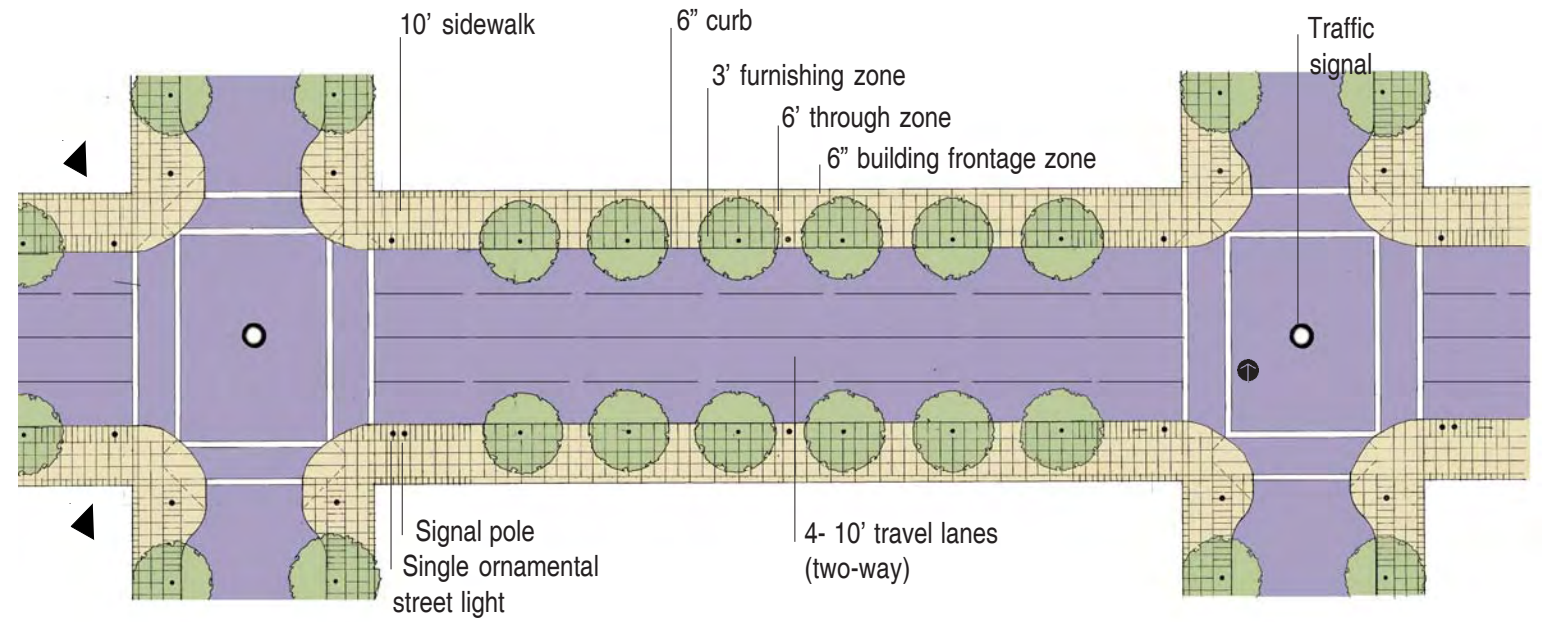




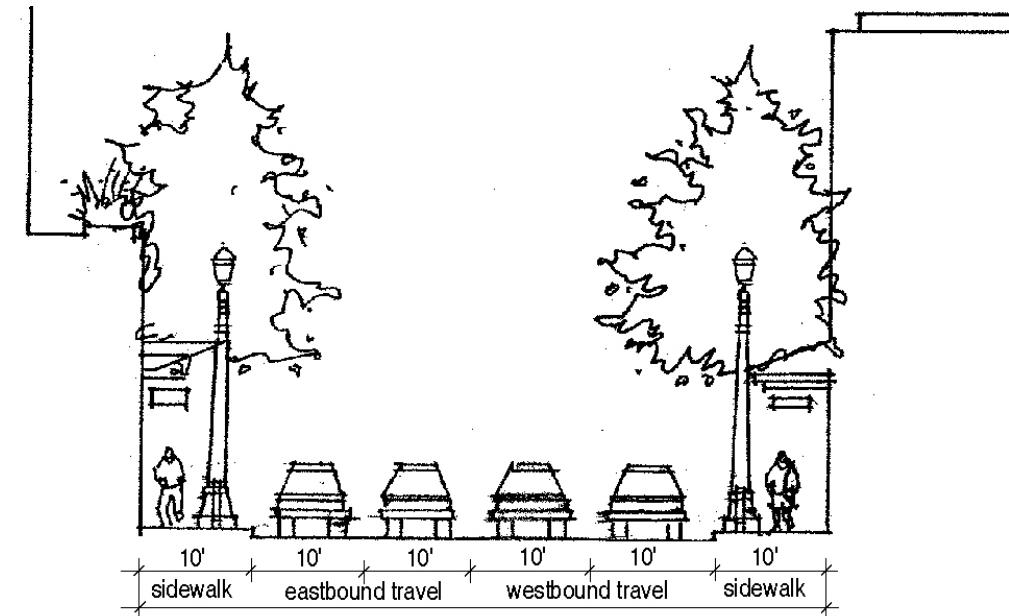
LEGEND

- Project Context
- Street
- Crosswalk
- Gateway Feature
- Traffic Signal
- Street Tree
-

TYPICAL DETAILS - UPPER WEST BURNSIDE



West Burnside typical plan from 16th to 23rd.



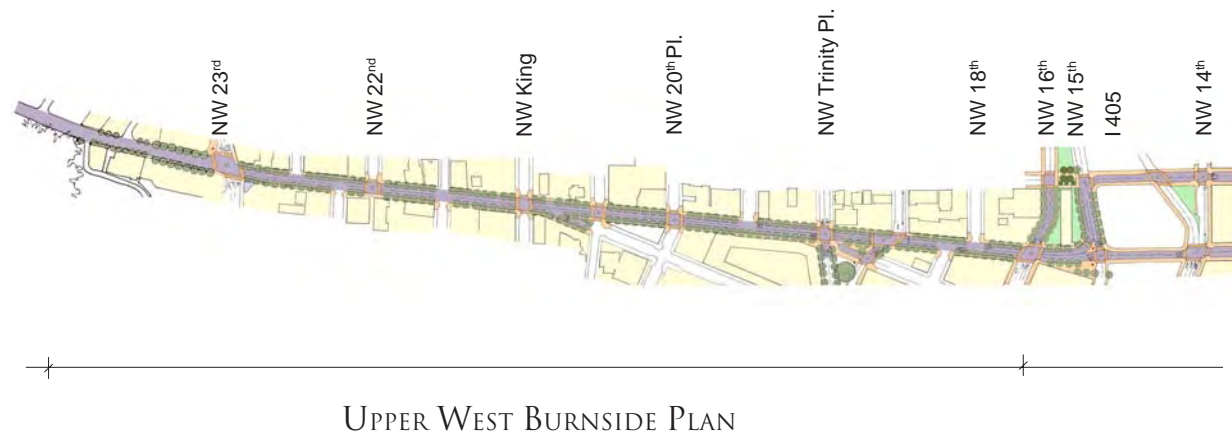
West Burnside typical section from 16th to 23rd looking west.

STREET DESIGN CRITERIA TABLE
UPPER WEST BURNSIDE

STREET SECTION	Right-of-Way	Curb-to-Curb	Travel lanes width/quantity	Bike lane	Parking	Curb	Sidewalk	Furnishing Zone	Through Zone	Building frontage zone	Tree Well
Burnside W 16 th to W 23 rd	60 ¹	40	10/4	0	0	.5	10	3	6	.5	3x3
West 16 th Avenue	60	36	12/3	0	0	.5	12	4	6	1.5	4x6

Refer to sections and plans for configuration.

Footnotes
¹ Triangles



BICYCLE IMPROVEMENTS

FLANDERS BIKE BOULEVARD

Northwest Flanders replaces NW Couch as the designated east-west bicycle route through the district. NW Couch Street, between NW 2nd and 19th Avenues, is designated as a City Bikeway in the Central City Transportation Master Plan. The proposed designation of Couch Street to be the westbound half of the Burnside/Couch couplet requires relocating this bikeway. Although NW Davis Street, located one block south, was evaluated, the proximity of I-405 on and off ramps made a new pedestrian bike structure over I-405 at this location problematic. The next closest two way street through the district is Flanders. Although located further to the north than Couch and Davis Streets, NW Flanders offers a number of advantages, including:

- Extends to the west as far as NW Westover
- Extends to the east as far as Naito Parkway/Waterfront Park
- Provides most constructable location for a new pedestrian-bicycle bridge across I-405
- Intersects Naito Parkway at a previously-identified future signalized location
- Connects directly to Waterfront Park at a location with direct access to Waterfront Park, the Eastside Esplanade and Lloyd District and Central Eastside bike facilities

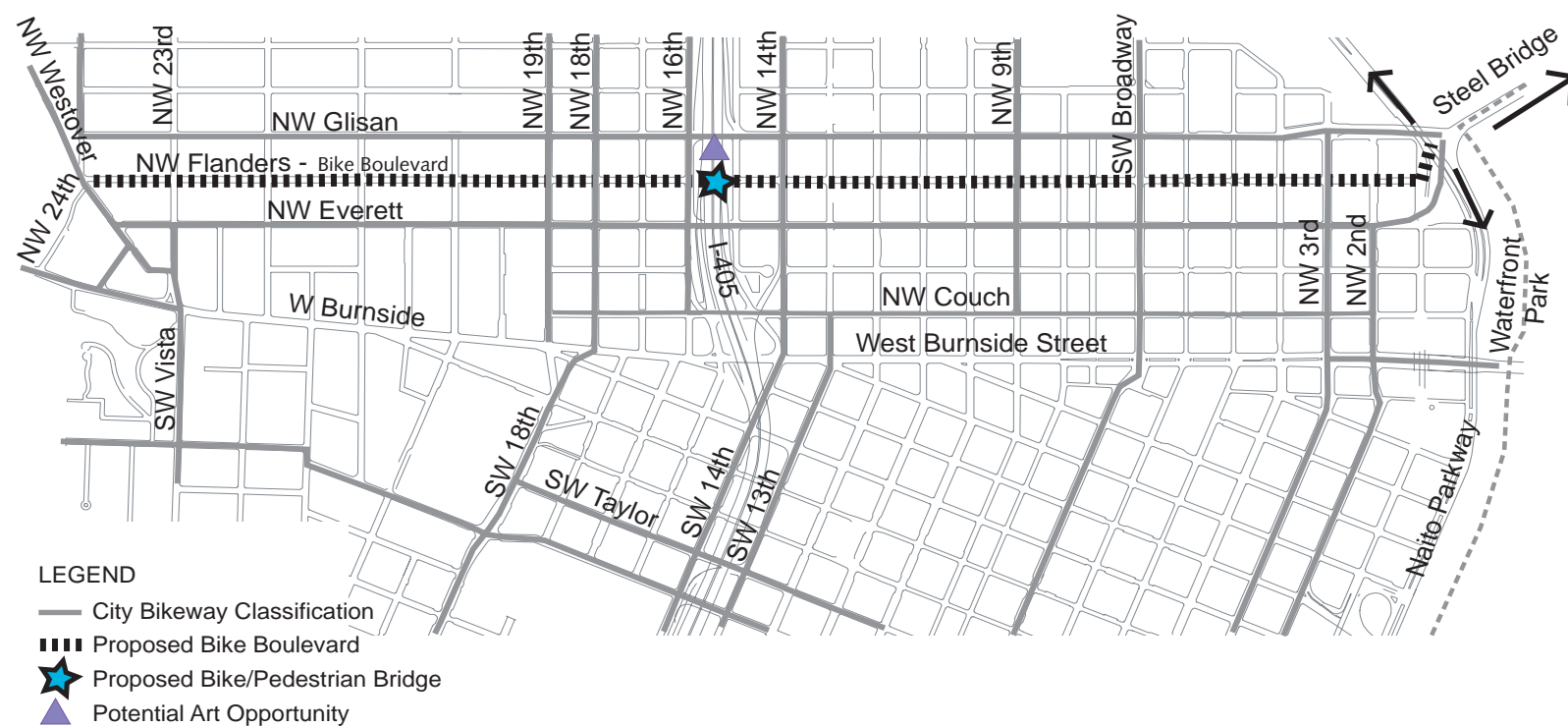
The Flanders Bikeway would be developed as a bicycle boulevard. The City's Bicycle Master Plan defines a bicycle boulevard as follows:

"A bicycle boulevard is a street with low traffic volumes where through movement of bicycles is given priority over motor vehicle travel. A bicycle boulevard is created by modifying the operation of a local street to function as a through street for bicycles while maintaining local access for automobiles. Traffic calming devices can be used to control traffic speeds and discourage through trips by automobiles. Traffic control is designed to limit conflicts between automobiles and bicycles and give priority to through bicycle movement. Bicycle lanes are typically not needed on a bicycle boulevard."

ROUTE ELEMENTS

The Flanders bike facility will include:

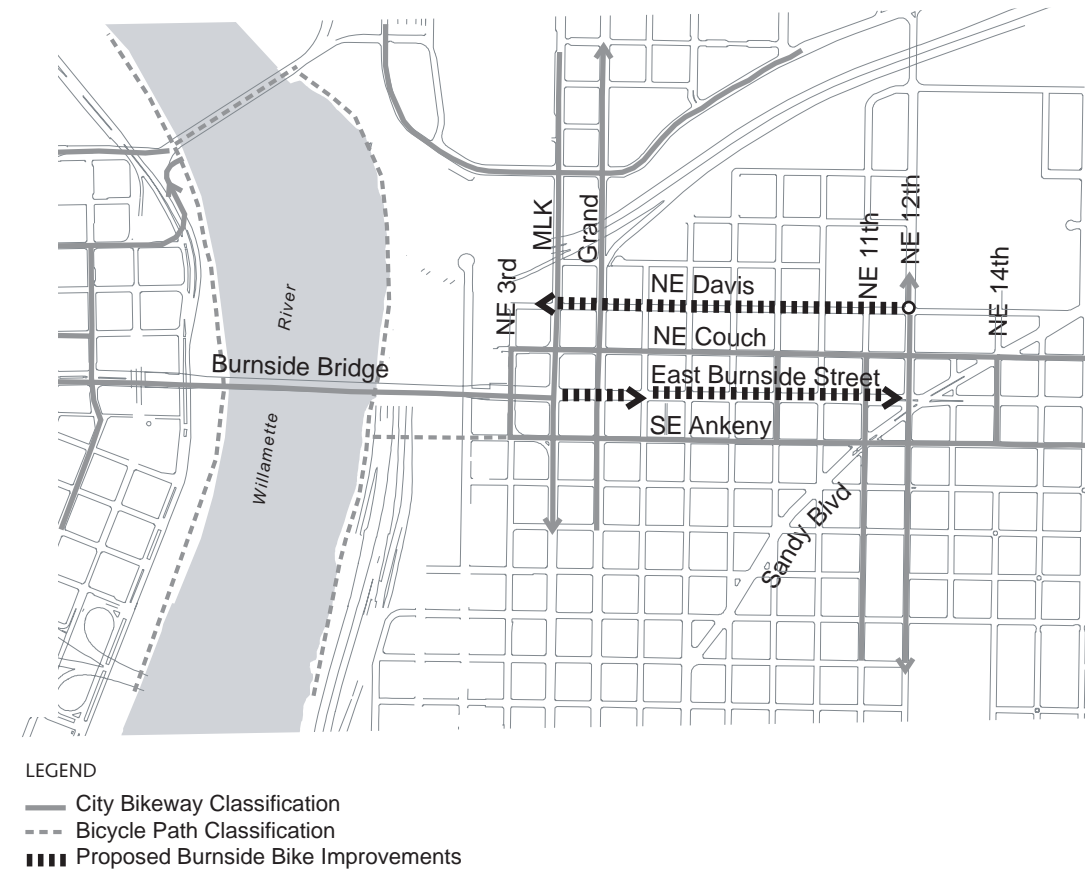
- A new bike boulevard on Flanders from NW 24th to the Steel Bridge
- A new bike/pedestrian bridge over I-405 on Flanders
- Connections to bikeways on NW Vista, NW Westover, NW 18th, NW 14th, NW 13th, NW Broadway, NW 3rd, NW 2nd, NW Glisan and NW Everett
- A connection to Waterfront Park
- A connection to Washington Park



EAST SIDE BIKE IMPROVEMENTS

The eastside bike improvements include:

- Striped bike lane(s) on:
 - Burnside from Martin Luther King Jr. Boulevard to East 13th
 - Bike boulevard on NE Davis
- Signals at 12th and Sandy, Martin Luther King Jr. Blvd. and Davis, Grand and Davis, Ankeny and MLK
- Stop control on Davis
- Install traffic signals at every intersection on Burnside and Couch



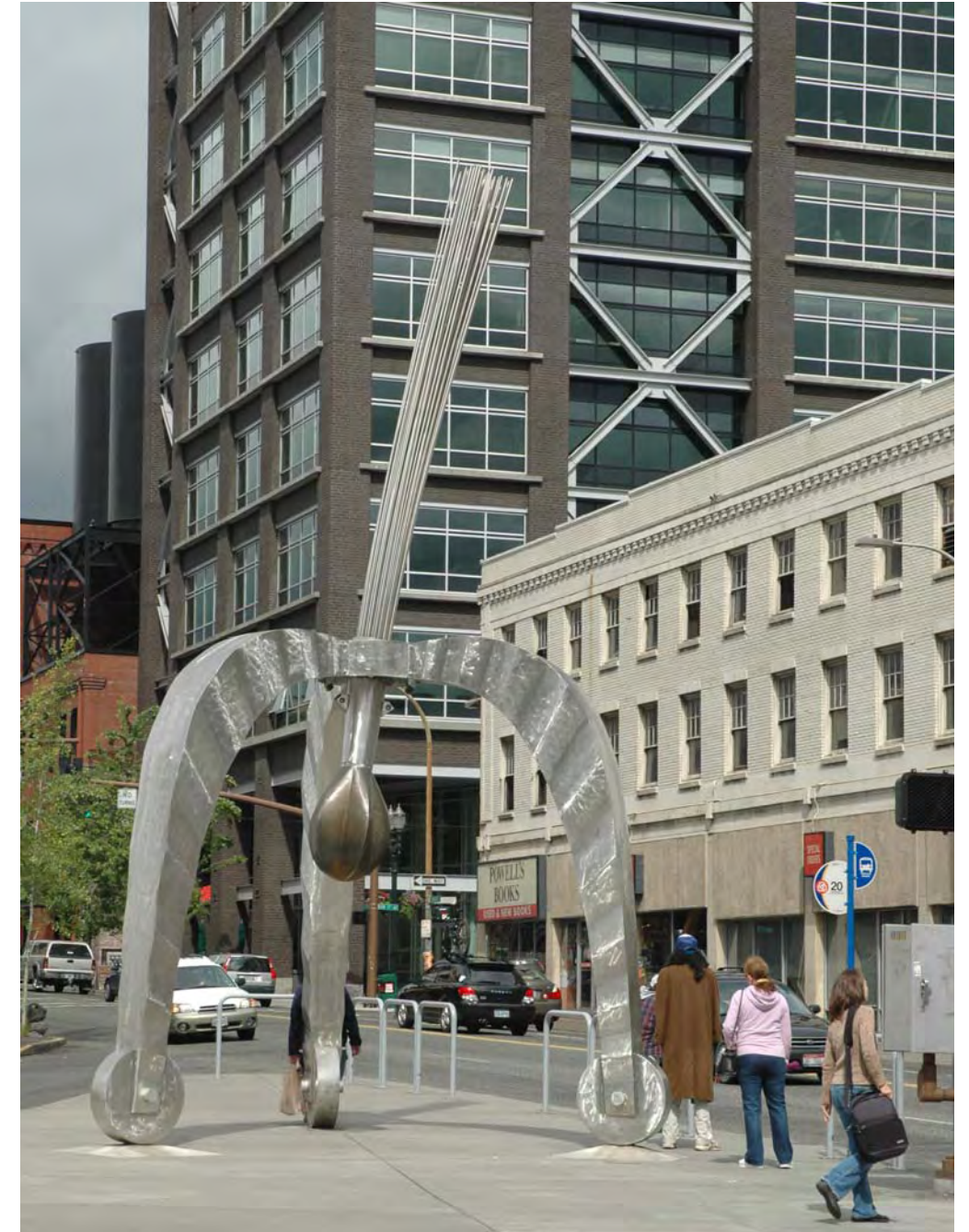
PUBLIC ART

The streetscape improvements provide an opportunity to integrate public art into a wide variety of places and construction systems. Public art contributes to the historic and cultural aspects of our community. Public art is enhanced when artists are integrated into the initial phase of preliminary engineering design and continue on through construction. Therefore, it is critical that the Regional Arts and Culture Council (RACC), stakeholders and PDOT work together to identify artists to work with the engineers and designers as the next phase begins. Following are some initial opportunities for integrating public art into the Burnside/Couch project:

- Triangular spaces created where the two downtown grid systems come together at Burnside
- Gateway locations and features on east and west sides
- Central West Burnside flexible public spaces
- North Park Block crossing area
- Reconfigured 12th/14th/Sandy/Burnside/Couch intersection
- Eastside Burnside Bridgehead
- Pedestrian access way between Burnside and Couch at NE 13th Avenue
- NE 14th and SE 14th Avenues between Burnside and Davis
- Bicycle/pedestrian bridge over I-405



Regional Arts & Cultural Council arranged the installation of the above enlarged replica of an elephant shaped Zun, late Chang Dynasty (about 1,200 to 1,100 BC) donated by FIVE RINGS ART of Xian, China. This public art installation is located on Burnside between SW 8th and Park Avenues. The original wine vessel was excavated in Shixing Hill, Liling County, Hunan Province, China in 1975. The original is in the History Museum of Hunan Province.



The Regional Arts & Culture Council managed the installation for "Pod" by Pete Beeman which was commissioned by Portland Streetcar, Inc. This stainless and bronze kinetic sculpture stands at the corner of Burnside and SW 10th Avenue and was installed in 2002.

PUBLIC ART POTENTIAL LOCATIONS



▲ Potential public art locations



IMPLEMENTATION

INTRODUCTION

The *Burnside Transportation and Urban Design Plan*, adopted by the Portland City Council in December 2002 with wide-ranging public support, outlines recommendations that respond to the diverse needs of the central city and integrate Burnside more fully into the city's fabric. The plan:

- Identifies catalyst development opportunities;
- Recommends improvements to the right-of-way; and,
- Establishes a blueprint for public and private investment.

Implementation of the project, in conjunction with related catalyst development, has been estimated to catalyze approximately \$800 million in new development or redevelopment over the next twenty years, including the creation of 1,060 housing units and 3,330 new jobs. One of the primary challenges to implement the project is in securing funding given scarce transportation and public resources.

COST ESTIMATES

Given the nature and geographical location of the project, costs and funding are easily and logically divisible into four distinct segments, each of which can be constructed independent of the others:

- Lower East (from E 14th Avenue to the east Burnside Bridgehead)
- Lower/Central West (from west Burnside Bridgehead to W 16th Avenue)
- Upper West (from W 16th Avenue to W 24th Avenue)
- Flanders Bike Boulevard

Estimated Costs by Segment (as of February 15, 2005)

	Lower East	Lower/ Central West	Upper West	Flanders Bike Blvd.	TOTAL
Estimated Construction Costs	\$9.9 M	\$10.5 M	\$5.2 M	\$1.9 M	\$27.5 M
3% - 2 Years Escalation	\$0.6 M	\$0.6 M	\$0.2 M	\$0.1 M	\$1.5 M
Soft Costs	\$3.6 M	\$3.6 M	\$1.7 M	\$1.1 M	\$10.0 M
ROW Acquisition	\$.04 M	\$0.04 M	\$0 M	\$0 M	\$0.08 M
SUBTOTAL EST PROJECT COSTS	\$14.1 M	\$14.8 M	\$7.1 M	\$3.1 M	\$39.1 M
15% Contingency	\$2.1 M	\$2.3 M	\$1.2 M	\$0.5 M	\$6.1 M
TOTAL ESTIMATED PROJECT COST	\$16.2 M	\$17.1 M	\$8.3 M	\$3.6 M	\$45.2 M

FUNDING OPPORTUNITIES AND STRATEGY

The following table catalogs possible sources of project funding. Assessments regarding the ability to obtain financing or amounts to be associated with each source are also provided. The proposed umbrella strategy for project financing focuses on federal funding for the Lower East and Flanders Blvd. segments, Portland Development Commission financing for the Lower/Central West segment, and Portland Office of Transportation allocation for the Upper West segment.

SOURCE	NOTES/DESCRIPTIONS	SOURCE APPLICABILITY			
		Lower East ¹	Lower/Central West ²	Upper West ³	Flanders Bikeway
<i>Cost Reduction Strategies</i>					
Elemental Phasing	<ul style="list-style-type: none"> Phase installation of some project elements; for example, coordinate sidewalk reconstruction with land/building development. 				
Stormwater Quality Measures	<ul style="list-style-type: none"> Savings through coordination with Big Pipe project 				
Overhead Recovery Reduction					
<i>Portland Office of Transportation (PDOT)</i>					
System Development Charges (SDC)	<ul style="list-style-type: none"> Project could be added to annually amended ordinance authorizing receipt of SDC revenues 	●●●	●●		
General Transportation Revenue (GTR)	<ul style="list-style-type: none"> Combination of funds received in the form of transfers from the State Highway Fund, Multnomah County Gas Tax, on-street parking receipts, and other discretionary revenue. Intense competition for funds and project not currently on receiving list; however, upper west segment could be candidate if additional funds become available. 	●	●	●●●●●	●●
Revenue Enhancements	<ul style="list-style-type: none"> Possible increase to on-street parking rates (as was done in conjunction with Transit Mall imp/Light Rail ext) Project would need to be prioritized to receive funds. 		●●		
Other Programmatic Expenditures	<ul style="list-style-type: none"> Savings through coordination with ongoing improvements within project area. For example, General Fund Capital for direct burial street lighting in downtown could be coordinated with project implementation 		●		
<i>Municipal Utilities</i>					
	<ul style="list-style-type: none"> Costs for relocating water facilities and for stormwater facilities could be borne by the municipal utilities rather than the project. Combined water/sewer capital budget=\$187.8 M (FY 04-05)—incorporating project cost has minimal impact. 	●●●	●●●		
<i>Portland Development Commission (PDC)</i>					
	<ul style="list-style-type: none"> Project is within the legal funding capacity of several Urban Renewal Districts including Downtown Waterfront, Central Eastside and River District. Any PDC financial participation is limited to portions of projects within current urban renewal areas. 	● ⁴	●●●●● ⁵		

CONCLUSION

Funding each of the four project segments will rely on different “majority” sources and a combination of other “minority” sources and the challenge should not be underestimated. However, it is important for all parties to visualize the entire project and place their contribution in perspective. Only through completion of the entire project can the leverage of each party’s contribution be maximized.

SOURCE	NOTES/DESCRIPTIONS	SOURCE APPLICABILITY			
		Lower East ¹	Lower/Central West ²	Upper West ³	Flanders Bikeway
<i>TriMet</i>					
	<ul style="list-style-type: none"> Project positively affects provision/efficiency of transit, positive impact could be quantified in \$s. Requires discussion about agency’s willingness/ability to contribute financially. 	●●●	●●●	●	
<i>Federal Government</i>					
Federal Highway Funds ⁴	<ul style="list-style-type: none"> Intense competition for Metro’s limited federal transportation funds. Current Metropolitan Transportation Improvement Program (MTIP) has allocated \$2 M to Lower East segment. Congressman Blumenauer earmarked \$1.5 million for eastside in current transportation reauthorization bill pending in Congress. Other future funding may be obtained by working with legislative delegation and regional partners. 	●●●●●			
Housing and Community Development (HUD)	<ul style="list-style-type: none"> East, central west segments are within HUD eligible areas, Federal Housing and Community Development block grant funds could be applicable. Funds largely dedicated to affordable housing projects. In the past, a portion of City’s block grant funding transferred for infrastructure projects improving environment of low/moderate income housing. 		●●		
Enhancement Funds	<ul style="list-style-type: none"> Flanders Street Bikeway qualifies for portions of federal transportation funds dedicated to Metro set-aside for bicycle, pedestrian network enhancements. 				●●●●
<i>State of Oregon</i>					
Infrastructure Bank (Gap Financing only)	<ul style="list-style-type: none"> Federally sponsored infrastructure bank with low interest revolving loan fund possible source of short-term gap financing for the project. 	●●●	●●●	●●●	
Highway Safety Funds	<ul style="list-style-type: none"> Federally funded grant to improve high accident intersections and corridors. Availability depends on analysis of project area traffic safety history. 	●●●			
Oregon Transportation Investment Act (OTIA)	<ul style="list-style-type: none"> ODOT has sponsored “quality of life” projects assisting with redevelopment. Funds would need to be renewed in future. 	●●●●	●●●●●		
<i>Property Owners</i>					
Local Improvement District (LID)	<ul style="list-style-type: none"> Requires detailed analysis to demonstrate relationship between project and property value increase/amount of property owner contribution. Existing Streetcar, Transit Mall LIDs significantly impact property owners. 	●●	●●	●●	

NOTES:

¹ The challenge to fund the Eastside Segment will be obtaining sufficient federal funding and State controlled Highway Safety Funds over a reasonable period of time and with a certainty to allow borrowing from the Infrastructure Bank. Work will be required with Portland’s regional partners to insure that the Burnside/Couch Project is identified as a regional priority to the congressional delegation.

² All other local resources should be closely examined and applied as appropriate to maximize the leverage of any TIF invested in the project.

³ Federal funding for this segment is ruled out by relatively narrow travel lane widths resulting from increasing sidewalk width and improving the pedestrian environment. This segment’s reconstruction needs and on-going maintenance places a disproportionate burden on limited transportation dollars. PDOT has indicated an interest in addressing some of these needs through a revenue-bonding program tied to increases in the state or county gas tax and vehicle related fees.

⁴ The Portland Development Commission, through the Central Eastside Urban Renewal District, has extremely limited financing capacity.

⁵ Competition for PDC TIF funds is stiff, and the overall total indebtedness of the districts limited. Key to securing a high level of support for TIF is the ability to demonstrate the benefit of the project to the redevelopment of the Old Town/China Town area, which is the priority for expenditures directed by the City Council and PDC.

⁶ Initial meetings have been held with the Salem FHWA Division Office. FHWA has a keen interest in this segment due to implications for “highway” safety and eliminating the bottleneck at NE 12th/Sandy/Burnside. Federal funds received through MTIP process require a local match of no less than 10%.

NEXT STEPS

LOWER EAST BURNSIDE AND COUCH

TASK	RESPONSIBLE PARTY
Continue to solicit federal funds both through MTIP and earmark process.	PDOT
Continue to work with the congressional delegation to solicit support for the project.	PDOT
Begin the federal prospectus work immediately as prerequisite to federal funding.	PDOT
Investigate ways to fund local match assuming federal funds allocated, approximately \$2 million.	PDOT
Proceed with preliminary engineering in FY 05-06.	PDOT
Coordinate with Portland Streetcar Inc.	PDOT
As additional funding becomes available, complete final engineering and construction.	PDOT
Determine funding for right-of-way acquisition at East 14 th for couplet design.	PDOT
Acquire right-of-way for East 14 th Avenue couplet design.	PDOT
As part of the Central Eastside Urban Renewal Study, continue using Tax Increment Financing (TIF) for local 10% match for federal funding for construction.	PDC
Expand the Central City Pedestrian Wayfinding Signage Program to include the Central Eastside, more specifically Burnside and Couch.	PDC
Pending selection of developer and due diligence for the Burnside Bridgehead development, finalize the streetscape and transportation design for the area.	PDC PDOT
Pursue the advance funding permit with the federal funding agency.	FHWA
Engage Regional Arts and Culture Council (RACC) to identify design team artist for preliminary engineering, final engineering and construction.	PDOT
Reinstall the Benson Fountain on Martin Luther King Jr. Boulevard and Burnside.	PDOT

LOWER AND CENTRAL WEST BURNSIDE AND COUCH

TASK	RESPONSIBLE PARTY
Consider creation of a local improvement district (LID) for partial funding.	PDOT
Determine funding for area between W 14 th and W 16 th and outside the urban renewal area.	PDOT
Continue to refine funding strategy to determine availability of additional funding sources.	PDOT
Appropriate funds to begin 50% preliminary engineering in fiscal year 2005/06.	PDOT
Engage Regional Arts and Culture Council (RACC) to identify design team artist for preliminary engineering, final engineering and construction.	PDOT
Proceed with preliminary engineering in FY 05/06.	PDOT
Partner with TriMet to coordinate transit improvements and mall reconstruction.	PDOT TriMet
As additional funding becomes available, complete final engineering and construction.	PDOT
Acquire right-of-way at west 16 th Avenue for couplet design.	PDOT
Continue to coordinate with Bill Roberts Transit Mall renovation for light rail transit expansion.	PDOT
Coordinate with the Park Bureau's Park Avenue plan for the Park Blocks crossing at Burnside and Couch.	PDOT
As development opportunities emerge in the Lower West Burnside and Couch sub-area, allow for flexibility of the roadway design to accommodate development opportunities. Any modifications to the roadway design must be consistent with the intent and vision of the plan. Any modifications would happen within the development application process	PDOT
Include Burnside and Couch in the city's wayfinding program.	PDOT
Reconsider the existing building setback requirements (Zoning Code Chapter 33.510.215C – Special Building Lines) that apply to West Burnside between 10 th and 21 st Avenues in the context of a broader legislative planning project.	BOP
Reconsider the Old Town/Chinatown neighborhood maximum FAR and building heights in the vicinity of NW 4 th and 6 th Avenues in the context of a broader legislative planning project	PDOT BOP
Reevaluate zoning	BOP

BOP Bureau of Planning
 FHWA Federal Highway Authority
 ODOT Oregon Department of Transportation
 PDOT Portland Office of Transportation
 PDC Portland Development Commission
 RACC Regional Arts and Culture Council
 WLB Willamette Light Brigade

UPPER WEST BURNSIDE

TASK	RESPONSIBLE PARTY
Allocate local transportation funds for this section of the project	PDOT
Consider forming a local improvement district to supplement local transportation funds	PDOT
Proceed with preliminary engineering in FY 05-06.	
As additional funding becomes available, complete final engineering and construction.	PDOT
Investigate converting SW 16 th Avenue from one-way to two-way operation.	PDOT
Working with adjacent neighborhoods and businesses, examine the feasibility of providing pro-time parking on Burnside during off-peak hours.	PDOT
Reconsider the existing building setback requirements (Zoning Code Chapter 33.510.215C – Special Building Lines) that apply to West Burnside Street between 10 th and 21 st avenues in the context of a broader legislative planning project.	PDOT BOP
Engage RACC to identify design team artist for preliminary engineering, final engineering, and construction.	PDOT RACC
Research funding source for expanding the City's Central City Pedestrian Wayfinding Signage Program into NW Portland.	PDOT
Support TriMet efforts to modify bus routing to Morrison	PDOT

FLANDERS BIKE FACILITY

TASK	RESPONSIBLE PARTY
Pursue federal and local transportation funds to pay for improvements	PDOT
Coordinate with Oregon Department of Transportation for constructing the bike/pedestrian bridge over I-405	PDOT
Coordinate design and construction of improvements with the Bicycle Transportation Alliance	PDOT
Engage RACC to identify design team artist for preliminary engineering, final engineering and construction.	PDOT RACC

PUBLIC INVOLVEMENT

TASK	RESPONSIBLE PARTY
Appoint design advisory committees for each segment of the project	PDOT
Form a project-wide coordinating committee comprised of a representative from each advisory committee and Friends of Burnside/Couch	PDOT

BRIDGE ENHANCEMENTS

TASK	RESPONSIBLE PARTY
Pursue ornamental bridge and street lighting.	WLB
Support installation of ornamental bridge and street lighting.	PDOT/Mult.Co.
Pursue a joint city/county plan to identify pedestrian and bicycle enhancements on the Burnside Bridge.	PDOT/Mult. Co.

- BOP Bureau of Planning
- FHWA Federal Highway Authority
- ODOT Oregon Department of Transportation
- PDOT Portland Office of Transportation
- PDC Portland Development Commission
- RACC Regional Arts and Culture Council
- WLB Willamette Light Brigade

TECHNICAL APPENDIX

BURNSIDE COUCH CATALYST DEVELOPMENT STUDY
EXECUTIVE SUMMARY

BURNSIDE BRIDGE STREET LIGHTING WHITE PAPER

BURNSIDE AND COUCH CATALYST DEVELOPMENT STUDY EXECUTIVE SUMMARY (TO BE UPDATED)

INTRODUCTION

In December 2002, the City Council adopted the *Burnside Transportation and Urban Design Plan*, which provides a vision and strategy for humanizing Burnside from E 14th Avenue to W 24th Place. In addition to outlining specific capital improvements, the plan also recommends that staff complete a market analysis to determine development potential and financial return given the plan's proposed investment of \$45 million of transportation and streetscape enhancements.

The *Burnside and Couch Catalyst Development Study* implements this next step and demonstrates the economic impact of potential catalyst development and capital investment on Burnside and Couch over the next 20 years. The study is a companion document to the *Burnside Transportation and Urban Design Plan Technical Refinements*, which more exactly describes the transportation and urban design scheme outlined in the 2002 plan. Development study goals include:

- Determine private development interest that might result from proposed capital improvements
- Analyze development potential of future catalyst sites and study area; and,
- Calculate the economic impact of capital investment and catalyst development on assessed property value within the study area.

STUDY AREA

The study area for this report is generally bounded by Davis Street on the north, Ankeny and Ash Streets on the South, E 14th Avenue on the east, and W 24th Place on the west. Three catalyst development sites were selected for analysis based on the number of contiguous blocks available for redevelopment, connection to proposed street reconfiguration, and the properties' blighted character. These sites are:

- Site 1. E 12th/Sandy/Burnside/Couch
- Site 2. E 3rd/Burnside/Couch
- Site 3. W 4th/Burnside/Couch/Ankeny

ECONOMIC IMPACT

The economic impact of catalyst development and construction of transportation and streetscape improvements was quantified by:

- 1) Determining feasible development programs for each catalyst site, and
- 2) Using a trending analysis to model the incremental increase in study area taxable property value (Maximum Assessed Value) and resultant property taxes given improvements and potential catalyst development over a 20-year period starting in 2005.

The incremental increase in taxable property value (MAV) was calculated as the difference between what the trended MAV would be if the project (including transportation and urban design improvements and catalyst development) moves forward as envisioned compared to a baseline trending without the project.

The MAV trending analysis divided the study area into three distinct segments:

- Lower East Burnside and Couch: from E 14th Avenue to the E Burnside bridgehead
- Lower/Central West Burnside and Couch: from the W Burnside bridgehead to W 15th Avenue
- Upper West Burnside: from W 15th Avenue to W 24th Place

The following table summarizes the public investment, economic return, and physical improvements required for and resulting from capital improvements and potential catalyst development in each segment of the study area.

INVESTMENT/COST					
	Flanders Bike Blvd. ¹	Lower East Burnside and Couch	Lower & Central West Burnside and Couch	Upper West Burnside	STUDY AREA (as available)
Transportation Improvements	\$3.5	\$16 M	\$17 M	\$8.5 M	\$45 Million
Development Investment ("Gap Funding")	\$0 M	\$29 M	\$10 M	\$0 M	\$39 Million
Total Project Investment/Cost	\$3.5 M	\$45 M	\$27 M	\$8.5 M	\$84 Million

ECONOMIC RETURN				
	Lower East Burnside and Couch	Lower & Central West Burnside and Couch	Upper West Burnside	STUDY AREA (as available)
New Net Assessed Value	\$300 M	\$425 M	\$25 M	\$750 Million
New Net Taxes in Year 20²	\$7 M/year <i>(7 year payback after Year 20)</i>	\$9 M/year <i>(3 year payback after Year 20)</i>	\$5 M/year <i>(17 year payback after Year 20)</i>	\$16.5 Million/Year³ <i>(6 year payback after Year 20)</i>

NEW PHYSICAL IMPROVEMENTS			
	Lower East Burnside and Couch	Lower & Central West Burnside and Couch	STUDY AREA (as available)
Site Description	Site 1 <ul style="list-style-type: none"> • New commercial and light industrial node at E Burnside and 14th • Create new multi-family housing to link residential neighborhoods of Buckman and Kerns • Improve neighborhood connection to adjacent public open space Site 2 <ul style="list-style-type: none"> • Gateway development to serve as catalyst for other redevelopment in the area • Link the east side of the central city to Downtown Portland • Create new mixed-use development with housing, light industrial, retail, and other commercial uses 	Site 3 <ul style="list-style-type: none"> • Integrate new mixed-use development with rehabilitated historic buildings. • Improve connectivity across Burnside with high-density offices to the south and lower-density housing and retail to the north. • Active ground floor uses to provide better link to downtown development. 	
Housing	710 units	350 units	1,060 units
Office	411,000 SF	395,000 SF	806,000 SF
Retail/Commercial	406,000 SF	87,800 SF	495,000 SF
Industrial	35,000 SF	0 SF	35,000 SF
Community Services	0 SF	10,300 SF	10,300 SF
Hotel	0 rooms	230 rooms	230 rooms
Parking	1,975 spaces	934 spaces	2,910 spaces
Jobs ⁴	1,880 jobs	1,450 jobs	3,330 jobs

¹ The Flanders Bike Boulevard is not within the Catalyst Development Study area, and, therefore, the improvements were not considered as part of the MAV trending analysis. The cost is included here to maintain a consistent project cost in all Phase II documents.
² Assumes constant property tax rate of 2.2% of Maximum Assessed Value.
³ This figure reflects new net taxes in Year 20 only. In addition, there are new net taxes generated every year subsequent to catalyst development and streetscape improvements; therefore, this is a conservative payback period.
⁴ Job estimates based on PDC Economic Development Department ratios.

CONCLUSIONS

The *Burnside Transportation and Urban Design Plan* is a sound development investment. An estimated \$45 million transportation and streetscape investment effectively creates a physical environment which, when coupled with about \$39 million in gap development financing, could well lead to several major catalyst projects and infill which generates:

- New assessed value of \$750 million
- Net new annual tax revenues, including \$16.5 million/year additional tax revenues in Year 20 or a 6-year payback of total project costs
- Construction of 1,060 housing units
- Accommodation of 3,330 permanent jobs

LOWER EAST BURNSIDE AND COUCH

In general, it appears that the development issues are relatively straightforward in the Lower East Burnside and Couch segment. The development issues are different from those of downtown based on land use, zoning, land value and achievable rents.

Catalyst development sites on the eastside, especially Site 1, are clearly linked to the street reconfiguration as proposed in the 2002 plan and the *Burnside Transportation and Urban Design Plan Technical Refinements* providing new land for development. The improvements assist the development potential of Site 2, at the east Burnside Bridgehead, which gains improved access and circulation to existing redevelopable parcels.

Development potential is enhanced due to:

- Current property values that are relatively low (compared to Lower/Central West Burnside and Couch and downtown)
- More opportunities for infill development.
- Fewer impediments to development, with major parcels that are under single ownership facilitating development efforts.

Pressure for high-density development is lower compared to downtown. Therefore, while development is expected without the transportation improvements and public investment, it would likely be fairly modest.

LOWER/CENTRAL WEST BURNSIDE AND COUCH

The Lower/Central West Burnside and Couch segment has greater pressure to develop and at higher densities. In addition, the proposed transportation and urban design improvements will certainly enhance the image of the area. The improvements include wider sidewalks for improved pedestrian access, increased auto access, and additional parking. This segment also has numerous challenges to catalyze surrounding development and provide balance within this area of the Central City. These challenges include:

- No major short-term interest in redevelopment from existing area property owners
- Numerous historic properties, many with possible seismic upgrade concerns
- Existing underdeveloped properties that are income generating (primarily surface parking lots)
- Problems assembling large parcels of land and diverse property ownership

Given these development challenges and current lack of redevelopment interest, new development will likely occur in 10 to 15 years - a longer time frame compared to the east segment.

UPPER WEST BURNSIDE

Upper West Burnside is a dynamic segment poised for redevelopment due to its proximity to downtown as well as Portland Heights, Kings Heights, and Willamette Heights, all affluent urban neighborhoods. The adjacent Pearl District and NW Portland, to the east and north respectively, also place strong pressure for continual upgrade of property. Currently, however, there are few redevelopment sites; many underdeveloped businesses on these sites have recently changed hands or been renovated and are operating successfully.

NEXT STEPS

The study's recommended next steps are contingent on actions taken on the *Burnside Transportation and Urban Design Plan Technical Refinements*. In addition, funding availability for the *Burnside Couch Transportation and Urban Design Plan's* proposed improvements will help determine budget availability policy direction on catalyst development. Given those qualifications, the study's next steps include:

TASK	RESPONSIBLE PARTY
LOWER EAST BURNSIDE AND COUCH	
As part of the Central Eastside Urban Renewal Study, consider possible inclusion of some or all of catalyst development site at E Burnside/Couch/Sandy/14th.	PDC
LOWER/CENTRAL WEST BURNSIDE AND COUCH	
Determine priority of implementing catalyst development at W Burnside/Couch/4 th /5 th given other Downtown Waterfront Urban Renewal Area projects.	PDC, OTCT and other neighborhood groups

If project is determined a priority, then:

Determine funding availability for catalyst development.	PDC, OTCT and other neighborhood groups
Pursue predevelopment work on catalyst development site at W Burnside/Couch/4 th /5 th to include: <ul style="list-style-type: none"> - Perform public outreach to help determine redevelopment priorities. - Work with property owners to redevelop properties on Blocks 1, 2, 4 and 5, with priority given to the Grove Hotel. - Coordinate with owners of Blocks 1 and 2 to develop long and short term redevelopment goals. - Research potential developers for private investment. - Study ways to provide for more active ground floor uses. 	PDC
Work with the Old Town/Chinatown neighborhood to consider other efforts to revitalize the Burnside/Couch corridor—possibly through the development of housing, social services, or retail strategies.	PDC
Promote private sector development on catalyst development site.	Friends of Burnside/Couch

LEGEND

PDC Portland Development Commission
OTCT OldTown/China Town

BURNSIDE BRIDGE STREET LIGHTING

AESTHETIC RESTORATION AND TECHNICAL IMPROVEMENTS

A single vision for Burnside Street cannot be created by only addressing transportation and design improvements for its eastside and westside segments. Burnside Street, of central importance because it stretches virtually from the eastern to the western edges of the city, does so only by the grace of the Burnside Bridge. Returning “period” street lighting fixtures to the bridge will link streetfront design elements on either side, complement the architectural style of the bridge itself, improve night vision on the bridge for motorized and non-motorized travelers, emphasize the east/west connection provided by the continuity of the bridge and street, and eliminate current fixtures which detract from the landmark structure.

HISTORY

In its original design, the deck of the Burnside Bridge was illuminated using pole lights spaced about 66’ apart and integrated into the design of the bridge’s railings. The luminaries topped out at about 15’ above the deck. The design, both ornamental and functional, enhanced the experience for those on and off the bridge, whether walking or riding. It was part of the beauty of the bridge—the only bridge across the Willamette in Portland designed with the help of an architect.

At some point the original streetlights were replaced with highway-style cobra head lights on mast arms extended from narrow poles. The poles were attached to the deck, rather than to the railing, and spaced approximately every 100’-120’. The luminaries were set about 25’ above the deck.

RECOMMENDATION

To preserve and celebrate the original bridge design, decorative pole lights with optical performance luminaries will replace the existing cobra head streetlights, including their related poles and mast arms.

This proposal by Willamette Light Brigade (WLB), the non-profit dedicated to adding architectural lights to all of the Willamette river bridges in Portland, was adopted as one of the elements of the City Council-approved Burnside Transportation Plan. Period streetlights are part of WLB’s overall design to illuminate the structure of the bridge. The design concept was developed by Bill Will, a local artist noted for his public art (see design at www.lightthebridges.org). WLB’s working committee includes several professional lighting designers who have confirmed the feasibility of returning period-style street lights to the Burnside.

Specifics concerning poles and luminaries will be deferred until the project planning phase to incorporate industry and technological improvements and to evaluate choices for efficiency, system-wide compatibility and maintenance issues. As with all WLD-sponsored bridge-lighting projects, Multnomah County, owner of the Burnside Bridge, will be involved in design development and will exercise its installation authority. Several elements of style, composition and installation, however, are included in this recommendation, along with one manufacturer's illustration of sample lamp bases, poles and luminaries.

LAMP POST STYLE AND LIGHT SOURCE

The cobra head lights currently mounted on the bridge are considered efficient and, because they are equipped with semi cut-off luminaries, they limit light pollution somewhat. However, their style evokes a mid-century highway atmosphere not at all befitting the historic Burnside Bridge or downtown Portland.

An ornamental style pole and lamp fixture is more appropriate for the bridge's urban setting and its distinctive architecture (decorative railings and Italian Renaissance towers, which reflect the early 20th century City Beautiful Movement).

There are several fixtures appropriate for the Burnside Bridge, including the "Portland ornamentals" already widely used east and west of the bridge (and elsewhere downtown).

They can use any light source and, if outfitted with cut-off opticals or with internal shields and refractors (as well as with good quality globes), they can be quite efficient and produce low amounts of light trespass and pollution and meet or exceed Illumination Engineering Society (IESAA) recommendations.

WLB recommends white light (i.e., typically a metal halide source for streetlights) to complement the effect of architectural lights to be installed on the bridge and because it produces superior human visual performance and sense of security.

STRUCTURAL CONSIDERATIONS

Lighting poles will be placed on both sides of the bridge, consistent with the original design as well as current practice. The structural conditions now (or in the near future) of the railings will determine in large part whether poles will be integrated into the railings or placed on the sidewalk against the railing (as most are now). It is believed that many of the applications will be applied to existing pole bases, in which case the base plate can have a bolt pattern to match the existing base.

To reduce weight and maintenance, WLB recommends cast aluminum poles and bases supplied with modern ornamentals. That pole weight is believed to be similar to existing poles, but by eliminating the mast arm the structure load will be more symmetric. The combination of straight pole and larger luminary is expected to be similar to the existing mast arm poles with respect to wind load. A state of the art composite pole is another possibility to be discussed as part of the final design and engineering phase.

Installing ornamentals at approximately the same distance as originally designed (i.e., more than the current number of cobra heads) should achieve both the desired aesthetic and optical effects. The exact number of poles and height of luminaries will be determined during the final planning to assure compliance with all applicable visibility requirements. Preliminary calculations for either single or double-headed luminaries, mounted at original locations and 20' – 25' above the deck, show that appropriate lighting levels and uniformity can be achieved, consistent with IESNA requirements.

FUNDING/IMPLEMENTATION

Mayor Katz's "Legacy Committee" adopted adding architectural lighting to the downtown bridges as a memorial of the millennium and "gift to the City" for its 150th birthday. City Commissioner Sam Adams, then chief of staff to Mayor Katz, chaired a series of meetings for representatives of all stakeholders (City and County offices, WLB and public and private lighting experts) to ensure mutual understanding of process and issued relevant to WLB's lighting proposals.

It was decided that the street light portion of the Burnside proposal would be pursued separately from the architectural lights and that the new fixtures would be contributed by the City's street light fund (purchases and installation to be scheduled once the City, county and WLB agreed on specific poles and luminaires).

"When period lampposts are re-installed along the balustrade railing, they will restore by day as well as night a component of the bridge's original charm. Their lights, like a string of pearls, will punctuate above deck what the bridge architectural lights will reveal below—Portland's central, graceful, expansive crossing, the Burnside jewel across the Willamette."

~Paddy Tillett
Willamette Light Brigade Chair

The above provided by the Willamette Light Brigade, a nonprofit organization dedicated to lighting Portland's bridges.

