

DOWNTOWN SPRINGFIELD CIRCULATION STUDY

Springfield, Oregon

March 2012



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

MOVING**FORWARD**THINKING™

Alternatives Analysis

Downtown Springfield Circulation Study

Springfield, Oregon

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EXECUTIVE SUMMARY



Executive Summary

The City of Springfield is contemplating the conversion of Main and South A Streets to two-way within the Downtown. This report summarizes the opportunities and trade-offs associated with this potential conversion. As discussed, converting the streets to two-way will likely be beyond the fiscal resources of the City in the near-term. Over the long-term, the City could investigate if potential conversion of the streets to two-way maintains block depths that can support redevelopment, provides for excellent quality of experience for all travel modes, and leverages transportation investments in a manner that supports the economic health and vitality of the overall community.

In the near-term, a three-phase implementation plan could be considered. This implementation plan includes efforts that are lower in cost, support both two-way and one-way streets, and show measurable progress toward achieving the vision for downtown. These three phases include:

- **Phase 1** – Main Street Demonstration Project and priority intersection and street lighting improvements on Main Street and South A Street.
- **Phase 2** – Reconstruction of all key intersections along Main Street and South A Street to strengthen the pedestrian and retail environment and the

connections to the Washburne Historical District.

- **Phase 3** – Extension of the Pioneer Parkway couplet south of South A Street.

In particular, emphasis could be placed on creating a Demonstration Project, such as on the block between Main Street, South A Street, 4th Street and 5th Street. In addition, South A Street could be converted to two-lanes rather than three-lanes to the east of Mill Street, while still preserving the right-of-way for future improvements to this section of roadway. Over time, all three phases of the implementation concept could be incorporated, while still preserving the option for two-way streets at some point in the future.



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INTRODUCTION



Introduction

The City of Springfield's Downtown District Urban Design Plan and Implementation Strategy (herein referred to as the "Downtown Plan") provides a vision and a list of priorities for community investment in the downtown. Fundamental to this plan is establishing downtown as a destination, rather than a "thoroughfare." The Downtown Plan identifies a number of transportation elements necessary to support this vision, such as:

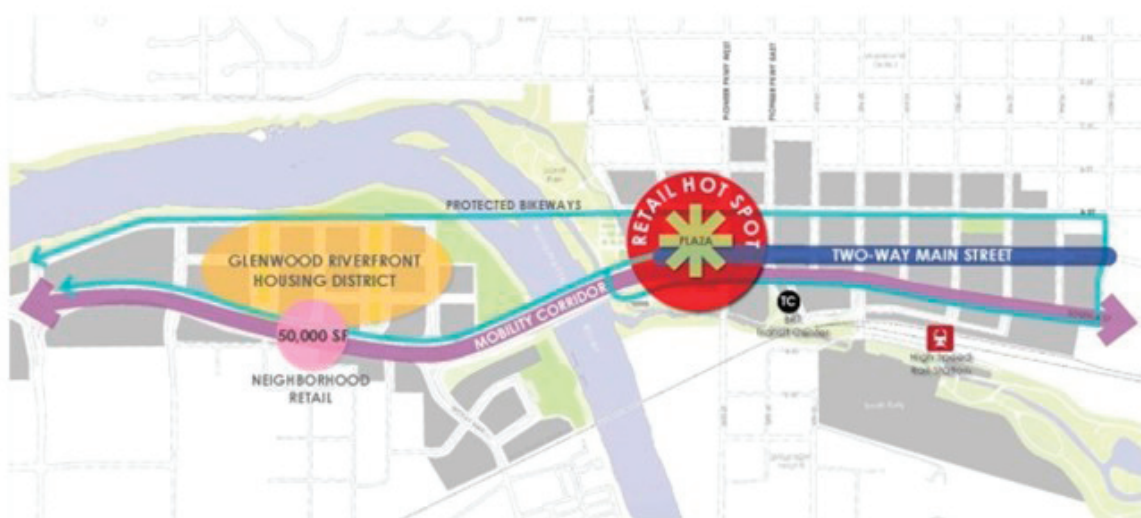
- Providing pedestrian and bicycle-friendly streets;
- Reducing the impact of truck traffic in downtown;
- Providing safe and direct connections to the adjacent neighborhoods; and,
- Improving access to the Willamette River and nearby parks and open spaces.

The Downtown Plan emphasizes providing multi-modal facilities within the area defined as the "Re-

tail Hot Spot". The Retail Hot Spot is the area within a ¼ mile radius from the proposed Mill Plaza and is intended as a concentration of retail, commercial, employment and civic uses. As shown below, this radius is generally bounded by the Willamette River on the west and 5th Street on the east.

The Downtown Plan identifies a two way Main Street as one of the seven fundamental concepts necessary to achieve the community's vision. Per the plan, a two-way Main Street will support the vibrancy of the retail environment, strengthen the pedestrian environment, and improve pedestrian and bicycle safety within the downtown.

Further, the Downtown Plan postulates traffic volumes on Main Street will reach levels (in the next five to ten years) inconsistent with the type of pedestrian and retail-friendly environment contemplated within the community's vision. Although the Downtown Plan does not cite specific transportation-related deficiencies, it provides a vision



Retail Hot Spot (Source: Downtown Plan)

and a list of aspirational projects to transform the downtown overtime.

The Downtown Plan recommends the City of Springfield perform a Transportation Study to analyze converting Main Street to two-way between Mill Street and 10th Street, at a minimum. This study would also evaluate converting South A Street to a two-way mobility corridor through downtown. This report presents our preliminary recommendations related to the potential conversion of Main Street and South A Street to two way facilities.

SCOPE OF STUDY

This report summarizes opportunities and constraints associated with converting Main and South A Streets to two-way in downtown Springfield. The following topics are discussed:

- Summary of issues gleaned as part of stakeholder interviews specifically conducted for the study;
- Findings from an alternatives analysis, including:
- Issues for consideration;
- Range of concept design footprints for Main Street and South A Street;
- Potential footprint impacts;
- Planning level cost estimates;
- A phased implementation concept, including a potential Demonstration Project.
- Recommendations for next steps.

STAKEHOLDER INTERVIEWS



Stakeholder Interviews

To help establish the context and identify issues and priorities for the Downtown Circulation Study, we conducted stakeholder interviews in October 2011, prior to performing any alternative analyses. The stakeholder interviews identified specific transportation-related issues, needs and desires that could shape our study, and potential near and long-term priorities for the City's transportation investments. The stakeholders interviewed represented downtown business owners, downtown property owners, transportation and utility service providers, regional freight operators, the school district, Downtown Citizen Advisory Committee members, and Main Street Committee members.

The majority of stakeholders believe near and long-term economic investments are needed first and foremost for the downtown to be vibrant today and in the future.

visible project is needed. Many also felt now is the time to implement policy changes to shape the future of the downtown, such as minimum design and maintenance standards for buildings. These efforts would show the community at-large that

the City is willing to invest in business and provide an environment that people desire to live, work, and visit, and consistently feel safe and secure during the day, the evenings and on weekends.

Second, many felt major public investment in downtown transportation infrastructure should be a low priority for the city as it would not be a catalyst for economic development. The one exception to this was a strong desire for additional lighting on many of the streets, especially those that run north-south.

PRIMARY THEMES

Two primary themes emerged from the interviews relating to the prioritization of the city's near-term economic investments.

The majority of stakeholders believe near and long-term economic investments are needed first and foremost for the downtown to be vibrant today and in the future. Further, the City needs to show visible progress toward meeting the goals and objectives articulated in the Downtown Plan. Some interviewees believed this could be accomplished through incremental projects to improve the "charm" of downtown; others believe a large,

The other primary themes expressed are highlighted below.

Definition of Downtown

Downtown is most often defined as the area between Mill Street and 7th Street, and between North A and South A Streets. This definition is consistent with the five minute (one-quarter mile) walk radius identified from the "Retail Hot Spot" in the Downtown Plan.

Connection to the Adjacent Neighborhoods

The City can better capitalize on the relationship between the Washburne Historic neighborhood and the downtown uses. Infusing neighborhood residents into the downtown for shopping, dining, entertainment and employment purposes could have mutual benefits for both areas.

South A Street

Some stakeholders expressed a desire to facilitate through traffic on South A Street and to transform Main Street into a local circulation and access street (primarily between Pioneer Parkway and 10th Street) by converting both streets to two-way. Others viewed this conversion as unnecessary and in some cases, as a significant obstacle to redevelopment to the south of South A Street.

Freight in the Downtown

Several of the freight users interviewed have been part of the community for more than 50 years and are frequently associated with industrial and logging operations near 28th Street as well as the land uses along 2nd Street, south of South A. There was varied opinion amongst the interviewees on the impact of freight downtown. Several do not view freight as a constraint or a problem. Most stakeholders acknowledge the role of freight in providing a healthy and diverse economy but there is varied opinion as to what routes should be used. Those viewing freight as problematic on Main Street cite issues related to aesthetics and noise. No one identified specific safety-related issues associated with freight.

Pedestrian and Bicycle Travel

Some stakeholders highlighted cyclists do not feel comfortable riding on street along Main Street or South A Street today. No one was able to identify specific safety-issues but felt it was more related to comfort and perception.

Most stakeholders noted walking along Main Street generally feels safe during the day. There are pockets of downtown adjacent to less desirable businesses where people feel uncomfortable walking at night but these areas are improving. Most stakeholders also noted Main Street crossings generally feel safe for pedestrians. Some expressed a desire for improved crossings of Main Street at 6th and 7th.

Several stakeholders noted walking along South A Street does not feel comfortable because of traffic volumes and speeds. They expressed a desire for improved pedestrian crossings, especially near the Lane Transit District station.

Most stakeholders felt vehicular speeds on Main Street are not problematic.

Downtown Parking

Most stakeholders believed there is ample parking downtown today. However, many also cited lack of enforcement of duration of stay limits on downtown streets negatively impacts businesses. Many of those interviewed perceive City Staff park in the neighborhoods and on downtown streets in areas that could and should be available parking for retail customers.

NEDCO

NEDCO has had a positive influence on making progress toward stability and economic devel-

opment in the downtown. Many view the efforts of NEDCO's four Main Street committees as key to carrying the community's vision forward.

CONCLUSIONS FROM STAKEHOLDER INTERVIEWS

Based on the outcomes of the stakeholder interviews, we explored the following issues in more detail as part of the alternatives analysis:

- The potential for a phased solution enabling transportation investments that would complement either continued one-way or eventual two-way configurations on South A and Main Streets.
- Additional pedestrian-scale lighting, especially along Main Street between 2nd Street and 7th Street.
- Strengthened pedestrian connections on the north-south streets to the Washburne neighborhood.
- Focused near term transportation investments on the areas in the vicinity of the Wildish Theater to capitalize on the momentum associated with the community's investments.
- A Demonstration Project to show progress toward achieving the transportation elements of the Downtown Plan vision.



Pedestrian Scale Lighting

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ALTERNATIVES ANALYSIS



Alternatives Analysis

The following section describes the alternatives analyses we conducted to evaluate the potential conversion of Main Street and South A Street to two-way in the downtown. We did not conduct any detailed operations analyses as part of this review; rather, we focused on potential right-of-way impacts, geometric considerations, and overall system needs.

KEY CONCEPTS FROM DOWNTOWN PLAN

The primary circulation elements from the Downtown Plan include:

- Re-establishing Main Street as a “pedestrian-oriented retail destination.”
- Converting South A Street to an automobile and truck mobility street.
- Creating “plaza streets” adjacent to the proposed Mill Plaza. These streets would be curbless, would incorporate significant street furniture and landscape elements, and could be closed to travel during special events at the Mill Plaza.
- Strengthening connections to the neighborhoods to the north via Mill Street, 5th Street, 7th Street and 10th Street. These connections would include a minimum sidewalk width of six feet, providing protected bikeways, bike lanes or bike boulevards, and ladder-striped crosswalks.

- Providing protected bikeways along North A Street, 10th Street, South A Street, Pioneer Parkway East, and S 2nd Street.
- Constructing a new pedestrian/bicycle bridge north of the existing Main Street bridge, and providing a 10-foot separated pedestrian and bicycle facility on the existing bridge.
- Adding Bus Rapid Transit (BRT) lines along South A Street and Pioneer Parkway (east and west), creating a new high-speed rail station in downtown, and providing a new bus and BRT transit street between Pioneer Parkway East and 8th Street.



Example of Pedestrian-oriented Improvements

We reviewed all of these elements in detail to inform the context of our alternatives analysis. Further details of the Main Street and South A Street visions articulated in the Downtown Plan are discussed below as they pertain to the analyses of potential two-way configurations on both streets. The Circulation Diagram presented in the Downtown Plan is shown below.

MAIN STREET

The Downtown Plan identifies a two-way Main Street between Mill Street and 10th Street, at a minimum. Under this vision, Main Street facilitates local, destination-oriented traffic and all through traffic and freight would be directed to South A Street. The primary design elements for Main Street include:

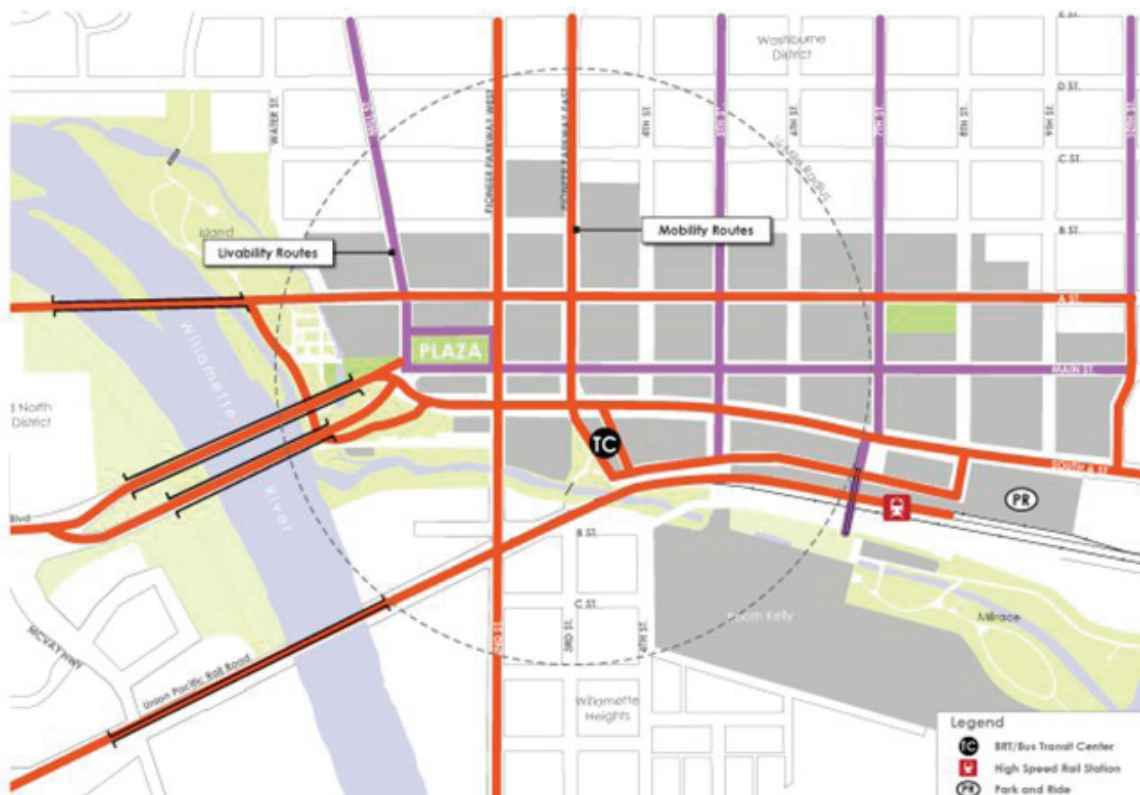
- Preserving the existing curbs, street width, and sidewalk width.

- Preserving the on-street parking.
- Removing the Main Street truck route designation.
- Enhancing intersections to facilitate shorter pedestrian crossing and provide additional crosswalks with ladder striping, and the use of “tabled intersections” to raise the grade of the street at specific intersections to provide traffic calming.
- Adding pedestrian-scale lighting, street furniture and landscaping elements.

Under this vision, the typical right-of-way for Main Street is approximately 65 – 66 feet with a 40-foot curb-to-curb width.

SOUTH A STREET

As a primary mobility route, the Downtown Plan envisioned South A Street would facilitate the ef-



Circulation Diagram (Source: Downtown Plan)

efficient movement of people and goods to and through the downtown. Under this vision, the primary design elements of South A Street include the following:

- Providing a contra-flow truck lane under the existing one-way configuration until such a time that South A Street is converted to a two-lane mobility street;
- Creating a shared BRT lane from the bridgehead to the LTD transit center and a dedicated BRT lane east of 8th Street;
- Providing eastbound left-turn lanes at the South A Street/Pioneer Parkway East intersection;
- Providing five to six travel lanes on South A Street between Mill Street and 10th Street; and,
- Creating an eastbound and westbound truck route designation to encourage freight travel around the downtown core.

SYSTEM ISSUES FOR CONSIDERATION

Based on our stakeholder interviews as well as a detailed review of the Downtown Plan, we identified a number of broader system issues need that could be incorporated into a potential re-design of the downtown streets, as discussed below. Figure 1 illustrates some of the system issues for consideration.

Western Terminus of the Two-way Configuration

As shown in Figure 1, Main Street and South A Street could be converted to two-way operations along the entire couplet route from Mill Street to 20th Street over the long-term. West of Mill Street, the streets would need to maintain their existing one-way configuration over the Willamette River Bridges. The one-way to two-way transition could occur at a single intersection near the existing Mill Street although Mill Street would need to be closed to any vehicular traffic when this reconfiguration occurs.

The City could consider modifying the conceptual intersection design presented in the Downtown Plan. In the Plan, eastbound through vehicles were aligned toward Main Street; drivers destined to South A Street would become eastbound right-turns at the new intersection. To promote through traffic on South A Street, the eastbound through movement from the Bridge should have direct continuity to South A Street instead. Drivers wishing to access Main Street at this western intersection would do so via an eastbound left-turn movement. This alternative configuration is also shown in Figure 1.

Eastern Terminus of the Two-way Configuration

Over the long-term, the two-way operations on Main Street and South A Street could continue to 20th Street. At this eastern terminus, a roundabout or traffic signal could be used to transition between South A/Main Streets in the downtown and Main Street to the east. The details of the street connections at 19th Street will need to be

considered in a future evaluation that will also consider access management needs near the new intersection.

As an alternative, the two-way configuration could transition back to the existing couplet at 10th Street. To the east of 10th Street, the existing one-way system could be used. The area to the east of 10th Street is outside of the Retail Hot Spot and in an area where the land uses generally transition to be more auto-oriented in nature than pedestrian-scale. The conversion could be accomplished using raised islands supported by complementary signing and striping.

Future BRT Needs in the downtown

The existing BRT lane currently terminates at the transit center near South A Street/4th Street. In the future, the Lane Transit District and City of Springfield envision extending BRT east along Main Street, possibly out to Thurston. The Downtown Plan identifies future BRT service but recommends creating a transit-only street to the south of South A Street between Pioneer Parkway and 8th Street. There are other mentions in the Downtown Plan of auto/bus only lanes on South A Street when the street is converted to two-way operations. A clear definition of the preferred BRT alignment and associated right-of-way requirement must be established prior to conversion of South A Street to two-way configuration. Ultimately, the selected lane numbers and arrangements will influence the right of way impacts and the pedestrian crossing distances of South A Street.

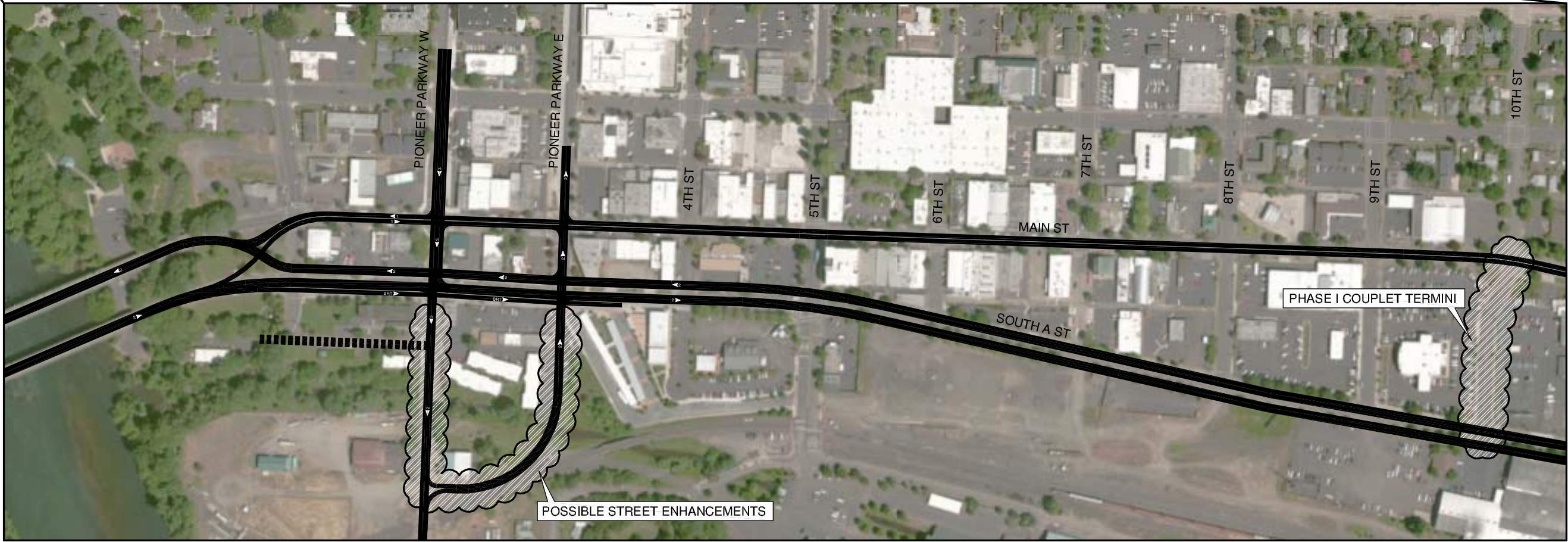
Weaving on South A Street between Pioneer Parkway East and West

Today, 2nd Street connects to South A Street opposite the Pioneer Parkway West intersection. Second Street serves a variety of industrial users as well as neighborhoods to the south. Northbound travelers on 2nd Street who desire to continue north onto Pioneer Parkway or to head west across the Willamette River must weave across three lanes of traffic in one short block on South A Street to turn left onto Pioneer Parkway East. Stakeholders have reported difficulty in making this maneuver in such a short distance, especially for freight and other large vehicles. Some northbound travelers on 2nd Street today divert to 5th Street to access the existing couplet, thereby avoiding the weave maneuver.

In the future, the City may consider extending the Pioneer Parkway couplet south of South A Street to avoid this weaving maneuver. This extension, as shown in Figure 1, would work under the existing Main Street/South A Street one-way configuration as well as an eventual conversion to two-way operations on those streets. This configuration promotes connectivity to areas south of South A Street. In the northbound direction, we envision transit signal priority to favor BRT traffic at the transit center.



POSSIBLE TWO-WAY CONVERSIONS



SYSTEM NEEDS

FIGURE
1

Phased Implementation with Main Street as Two-Way and South A as One-Way

The Downtown Plan suggests that Main Street could be converted to two-way operations prior to the converting South A Street. Under this scenario, the Downtown Plan envisioned eastbound through traffic would use South A Street and only those eastbound travelers destined for the downtown would use Main Street. All westbound travel would continue to use Main Street, with the exception of freight.

Under this phased implementation, the Downtown Plan envisions creating a contra-flow truck lane on South A Street to remove through freight travel from Main Street. The contra-flow truck lane proposal is not common and will require special consideration of its geometric design including lane widths, turning radii, and separation distance from general purpose lanes. The number of lanes on South A Street will affect properties between South A Street and Main Street.

POTENTIAL CONCEPT DESIGN FOOTPRINTS AND IMPACTS

As discussed previously, the Downtown Plan articulated a vision for the eventual cross-section and related design footprint for both Main Street and South A Street when they are converted to two-way operations. We evaluated a range of footprint options, based on the Downtown Plan vision.

MAIN STREET CONCEPTUAL DESIGN

For Main Street, the Downtown Plan envisions the existing curb lines, sidewalks, on-street parking, and travel lanes widths will stay the

same as they are today. The southern travel lane would be converted to facilitate eastbound travel but would remain in its same location. To make this change, the existing traffic signals would be converted. No new right-of-way or street widening is required. Under this configuration, the intersections along Main Street would be re-designed to accommodate shorter pedestrian crossings. This is shown in Exhibit 3.

Based on our analyses, no modifications to the Main Street conceptual footprint are needed. Further, the redesign of key Main Street intersections to facilitate shorter pedestrian crossings and to incorporate landscaping and street furniture elements could occur under the existing one-way configuration. The same intersection design would work under either one-way or two-way configurations, thereby leveraging scarce city resources if a phased implementation plan is used.



Main Street (Source: Downtown Plan)

SOUTH A STREET CONCEPTUAL DESIGN

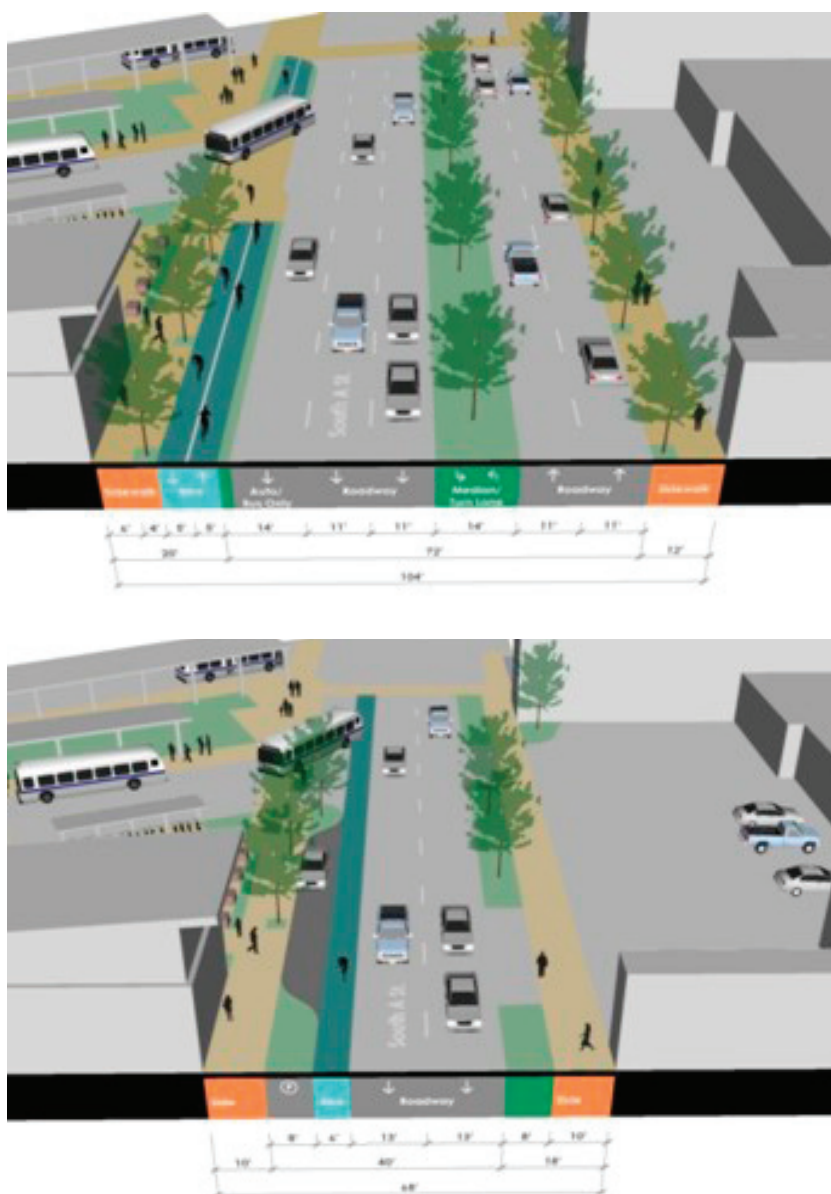
The conceptual cross-section and footprint needs for South A Street, from the Downtown Plan, are shown above. As discussed previously, these cross-sections reflect the desire for South A Street to serve as the primary vehicular mobility route. As such, South A Street is envisioned to be five to six lanes wide between Mill Street and 10th Street.

Based on our analyses, there are a number of design issues that need to be resolved prior to making the decision to convert South A Street to two-way. These issues have the potential to affect right-of-way needs and the depths of the adjacent blocks, potentially compromising the amount of redevelopment that can occur adjacent to South A Street. Examples of these issues are discussed below.

The quality of service for pedestrians and cyclists traveling along and across South A Street needs to be further analyzed. Creating a 6-lane mobility street along South A Street may not support a pedestrian friendly-environment and may not result in a strong connection between existing and future land uses south of South A Street and the existing downtown. These issues may be especially acute related to preserving/establishing a strong connection between the downtown and the transit center, a future high speed

rail station, redevelopment of the Booth Kelly property as well as other redevelopable properties to the east.

The future alignment needs of the BRT need to be better understood. Would future eastbound and westbound BRT occur along South A Street, Main Street, a transit only street or some combination thereof?



South A Street (Source: Downtown Plan)

The need for future turn lanes at key intersections needs to be further analyzed. As shown below, the Downtown Plan does not show left-turn lanes on South A Street between Pioneer Parkway East and West. The need to provide reasonable mobility consistent with the Downtown Plan vision would likely necessitate turn lanes in both directions on this block. Adding these turn lanes would widen the right-of-way impact beyond that shown in the Downtown Plan.

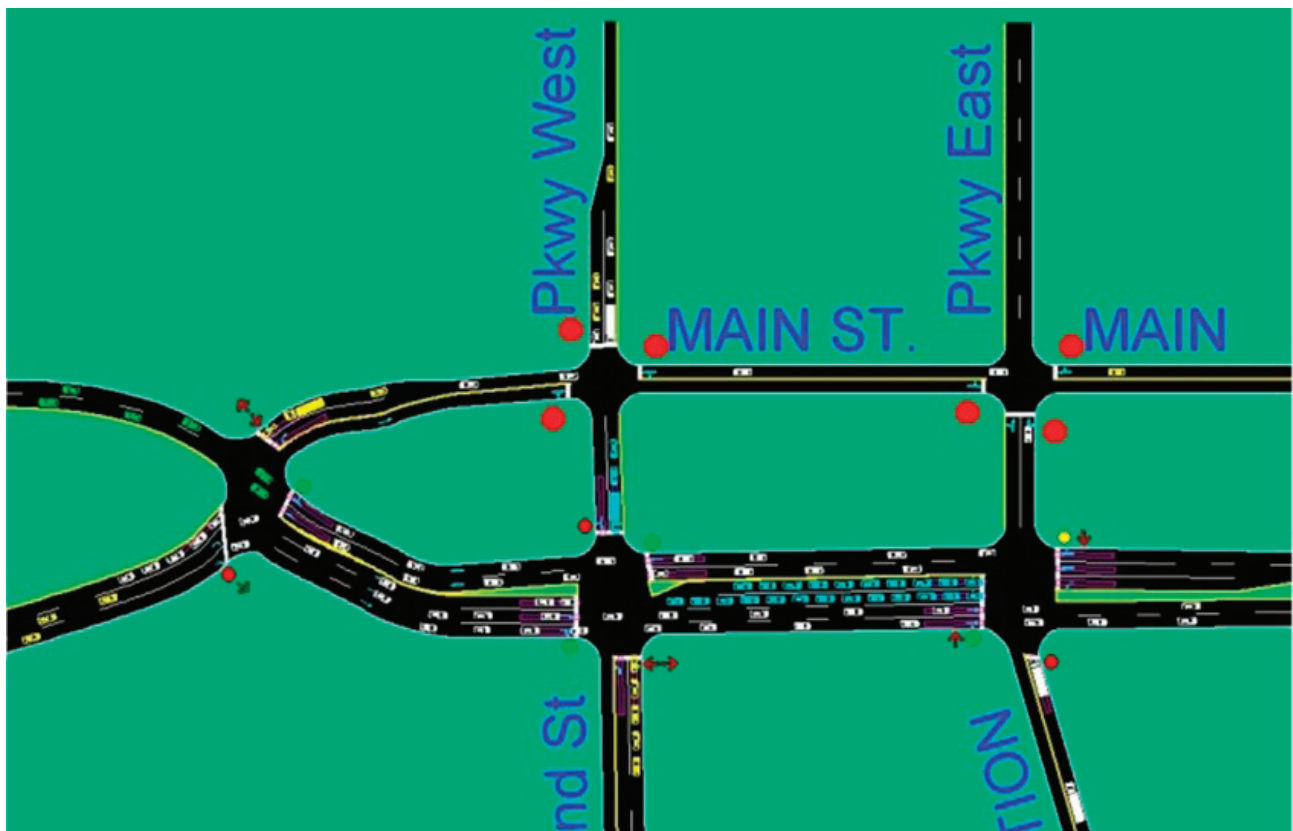
Based on our analyses, Figure 2 illustrates the possible range of footprint impacts along South A Street. As shown in this figure, resolution of the above issues could result in a 60 foot width on the

The planning level cost for converting South A Street and Main Street to two-way operations is estimated to be \$9.5 to \$10 million

blocks between Main Street and South A Street. This reduced block depth could pose constraints to achieving the type of land uses envisioned in the Downtown Plan over time. The functional block depths could be assessed in the future by others familiar with building footprint design experience.

PLANNING LEVEL COST ESTIMATES

Based on the Downtown Plan vision and the Circulation Study Alternatives Analyses, we estimate the order of magnitude capital re-construction costs for converting South A Street and Main Street to two-way operations to be \$9.5 - \$10 million. These costs do not include right-of-way acquisition.



South A Street Intersection Concept Phase I (Source: Downtown Plan)

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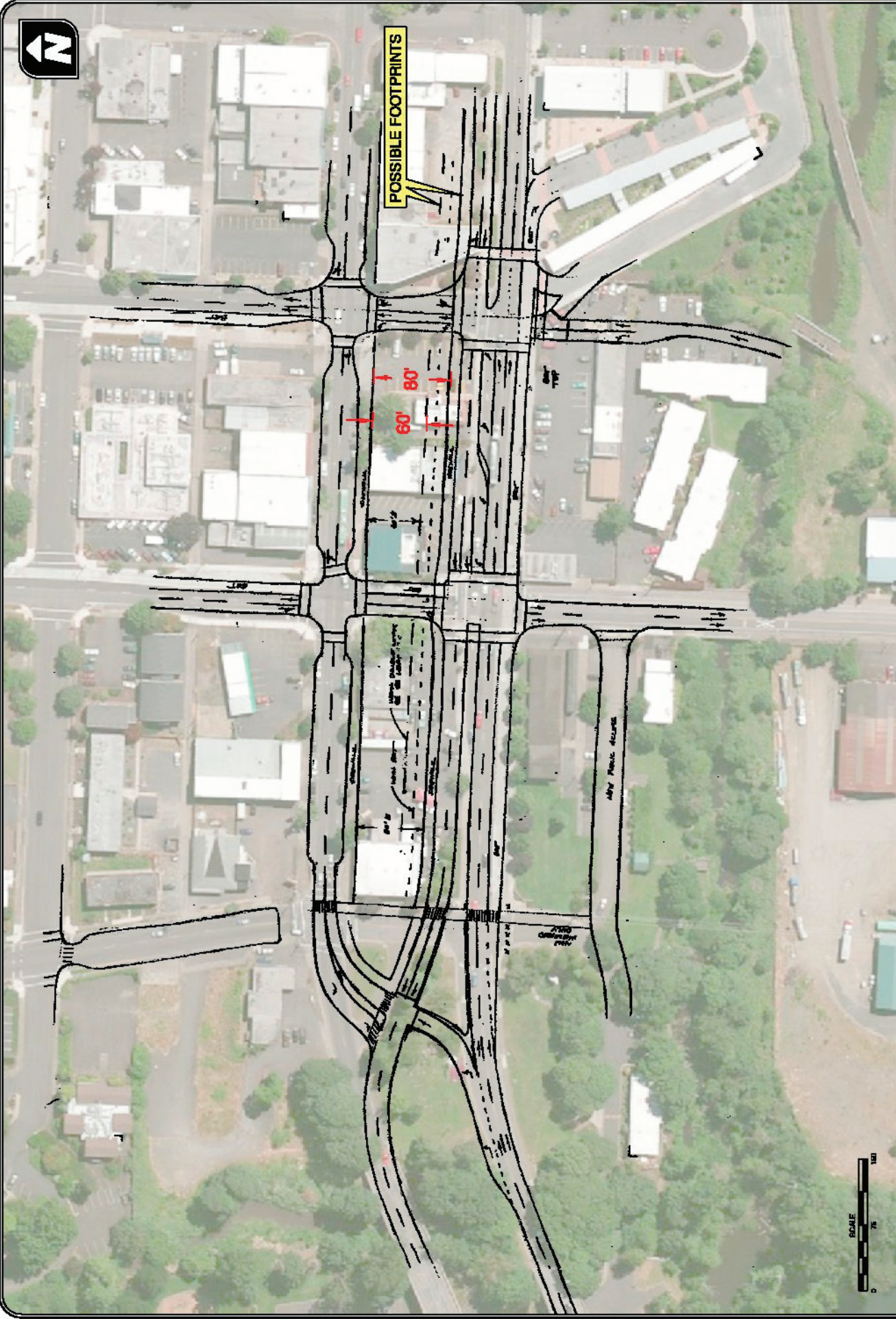


FIGURE 2
POSSIBLE FOOTPRINT IMPACTS

PHASED IMPLEMENTATION CONCEPT



Phased Implementation Concept

Prior to converting Main Street and South A Street to two-way, the City could consider a phased implementation approach to demonstrate progress toward the Downtown Vision and to capitalize on the community momentum occurring, especially near the Wildish Theater and the A3 Schools. These phases would be compatible with either one-way or two-way operations on both streets and are discussed below and illustrated in Figure 3.

IMPLEMENTATION PLAN PHASE 1

Phase 1 would focus near-term transportation improvements on the following:

- Establishing a Main Street demonstration block(s) near 5th Street. This block could include enhanced bulb-outs and pedestrian crossing improvements, street furniture, pedestrian-scale lighting, hanging baskets, etc. as well as building maintenance/aesthetic improvements. This is conceptually illustrated in Figure 4. The concept could be applied on adjacent blocks, customized to the configuration, opportunity, and constraint of each subsequent block.
- Identifying priority locations for enhanced street lighting on Main and A Streets as well as some of the key north-south streets. In particular, Main Street between 3rd and 7th Streets and 1 – 2 of the north south connections into the neighborhood may be a higher priority for street lighting.
- Identifying priority locations to reconstruct the bulb-outs/curb-extensions to improve pedestrian crossings of downtown blocks. In the near-term, these priority locations may be on Main Street between Pioneer Parkway and

8th Street as well as on South A Street near Pioneer Parkway.

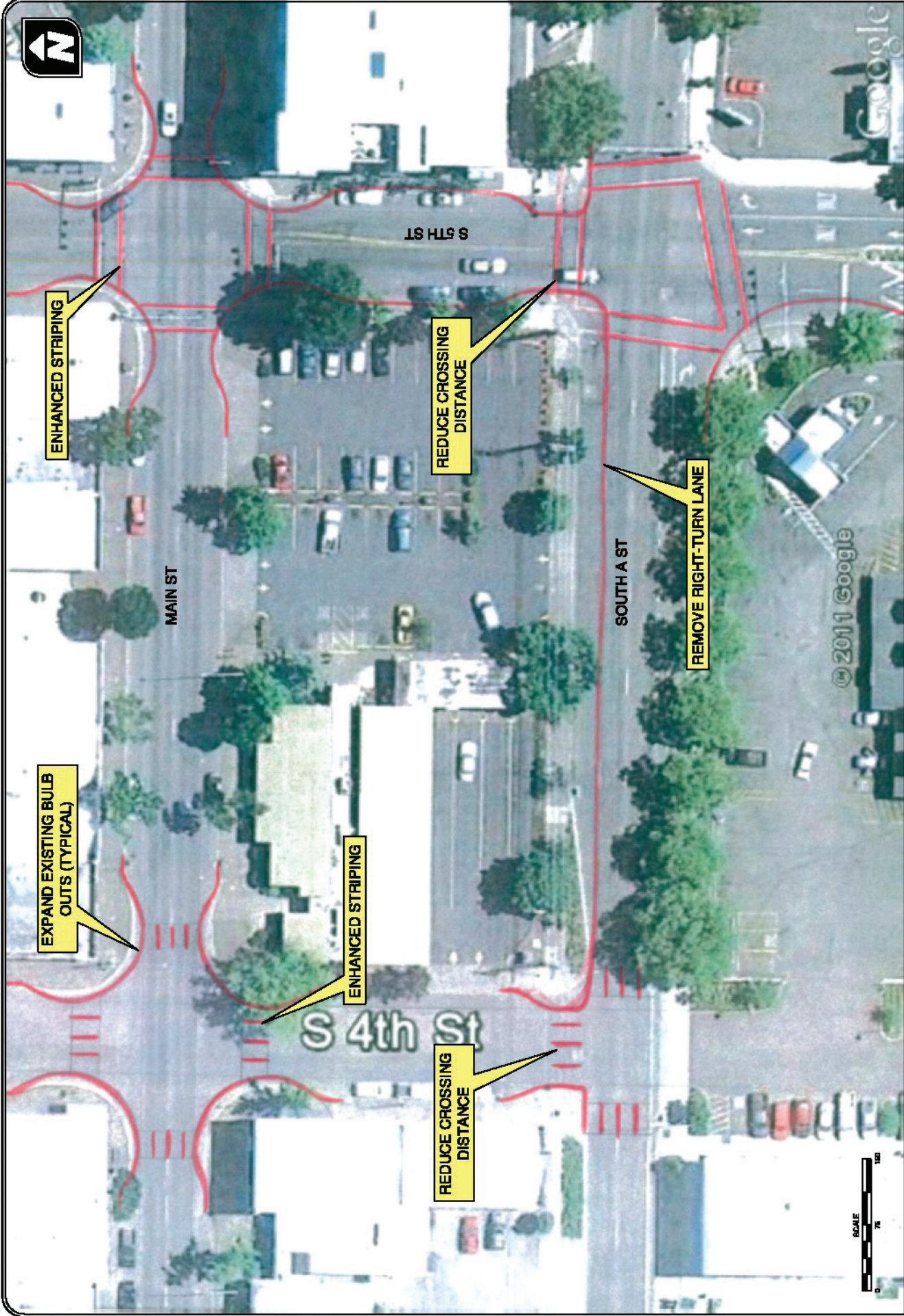
- Identifying the potential for public-private partnerships involving the City, business owners, and the A3 students to improve the aesthetic appeal of downtown.
- Identifying a consistent branding and way-finding configuration for downtown streets related to pedestrians, parking, and bicycle routes.
- Converting South A Street to two travel lanes throughout its length in downtown.
- Providing Gateway Treatments on South A Street west of Mill Street and on Main Street east of 8th Street to indicate to drivers the impending downtown environment, rather than a “thoroughfare.” These treatments could support with speed transitions from a higher to lower speed environment and could incorporate landscaping, hardscaping, visual design elements, etc.

IMPLEMENTATION PLAN PHASE 2

Phase 2 would include continue reconstructing intersections along Main Street and South A Street to shorten pedestrian crossing distances by constructing bulb-outs, enhancing crosswalk striping and adding other design elements. In addition, Phase 2 could expand pedestrian-scale lighting in the downtown and emphasize north-south streets that connect to the adjacent neighborhoods, including the Washburne Historical District.



PHASED IMPLEMENTATION CONCEPT



POTENTIAL DEMONSTRATION PROJECT

In addition, Phase 2 could improve South B Street and extend 5th Street south of South A Street to enhance connections to Booth Kelly and the neighborhoods to the south.

IMPLEMENTATION PLAN PHASE 3

Phase 3 could include extending the Pioneer Parkway couplet south of South A Street to remove the weaving maneuver that occurs today on South A Street between the two couplet blocks. This couplet extension would provide enhanced access into the neighborhoods and industrial areas served by South 2nd Street and would complement either one-way or two-way operations on South A Street.

while still preserving the right-of-way for future improvements to this section of roadway. Over time, all three phases of the implementation concept could be incorporated into the downtown, while still preserving the option to convert the streets to two-way operations at some point in the future.

RECOMMENDATIONS

The cost to convert Main and South A Streets to a two-way configuration will likely be beyond the fiscal resources of the City in the near-term. Over the long-term, the City could investigate if potential conversion of the streets to two-way configurations maintains block depths that can support redevelopment, provide for excellent quality of experience for all travel modes, and carefully consider how transportation improvement dollars are invested in a manner that supports the economic health and vitality of the overall community.

A number of efforts can be undertaken in the immediate future that are lower cost, would support both two-way and one-way streets, and would show measurable progress toward achieving the Downtown Plan's vision. In particular, emphasis could be placed on creating a Demonstration Project on the four blocks between Main Street, South A Street, 4th Street and 5th Street. In addition, South A Street could be converted to two-lanes rather than three-lanes to the east of Mill Street,