



LYNNWOOD
WASHINGTON

42ND AVENUE W PRE-DESIGN REPORT

APRIL, 2017



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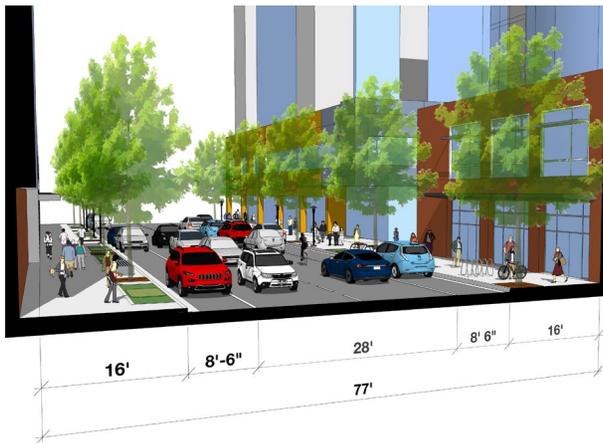
KPG, Inc.



EXECUTIVE SUMMARY

The City of Lynnwood desires to create a vibrant and dynamic City Center that provides residents and visitors alike with new opportunities to live, work, shop, and play. More than a decade of planning has identified numerous goals and needs for City Center, including creating a finer street grid that supports new development and improves walkability. To achieve this goal, the City has identified 42nd Avenue W, between 194th Street SW and 200th Street SW/Alderwood Mall Boulevard, as a primary roadway corridor at the heart of City Center, providing access and connectivity to future high-rise development and multi-modal transportation.

The purpose of the 42nd Avenue W Pre-Design Report is to present the City's and KPG's analysis and recommendations for the 42nd Avenue W corridor and establish parameters and direction for future design and construction.



KEY FINDINGS

The 42nd Avenue W Pre-Design Report reviewed more than fifteen years of City Center planning documents, analyzed preliminary design options, and developed strategies to implement the goals of the community's vision. Key findings from the analysis of the 42nd Avenue W corridor include:

- The roadway cross section will be 77' overall, with two 14' travel lanes, 8'-6" on-street parking on both sides of the roadway, and 16' sidewalks with lighting as well as landscape and urban design features. This conforms to the standard established by LMC 21.60.500 (see Appendix F, page 43).
- The City will retain, as right-of-way (ROW) or permanent easement, 67' of the overall roadway width; adjacent developers will be required to contribute the remaining 5' of frontage improvements on either side of the roadway.
- The alignment for 42nd Avenue W will extend from 194th Street SW to 200th Street SW/Alderwood Mall Boulevard and will include the "S" shape curve identified in the existing Net River Dedication (see Appendix E, page 38).
- Traffic signals and left turn lanes will be installed at the intersections of 42nd Avenue W and 196th Street SW as well as 200th Street SW/Alderwood Mall Boulevard.
- Existing 600' "superblocks" will be broken up into more urban-scale 300' blocks through the development of new cross streets for connections, such as alleyways and woonerfs.

NEXT STEPS

- Define what adjacent developers will be required to contribute toward frontage improvements and permanent easements for the roadway.
- Apply recommendations from the *City Center Streetscape Plan* to the roadway design, streetscape elements, and developer frontages.
- Refine the design of new minor cross streets, designed as alleyways and woonerfs, that incorporate lighting as well as landscape/urban design elements and signing to create inviting, accessible shared-use spaces for pedestrians and bicycles while still providing access to garages and accommodating service/emergency vehicles.

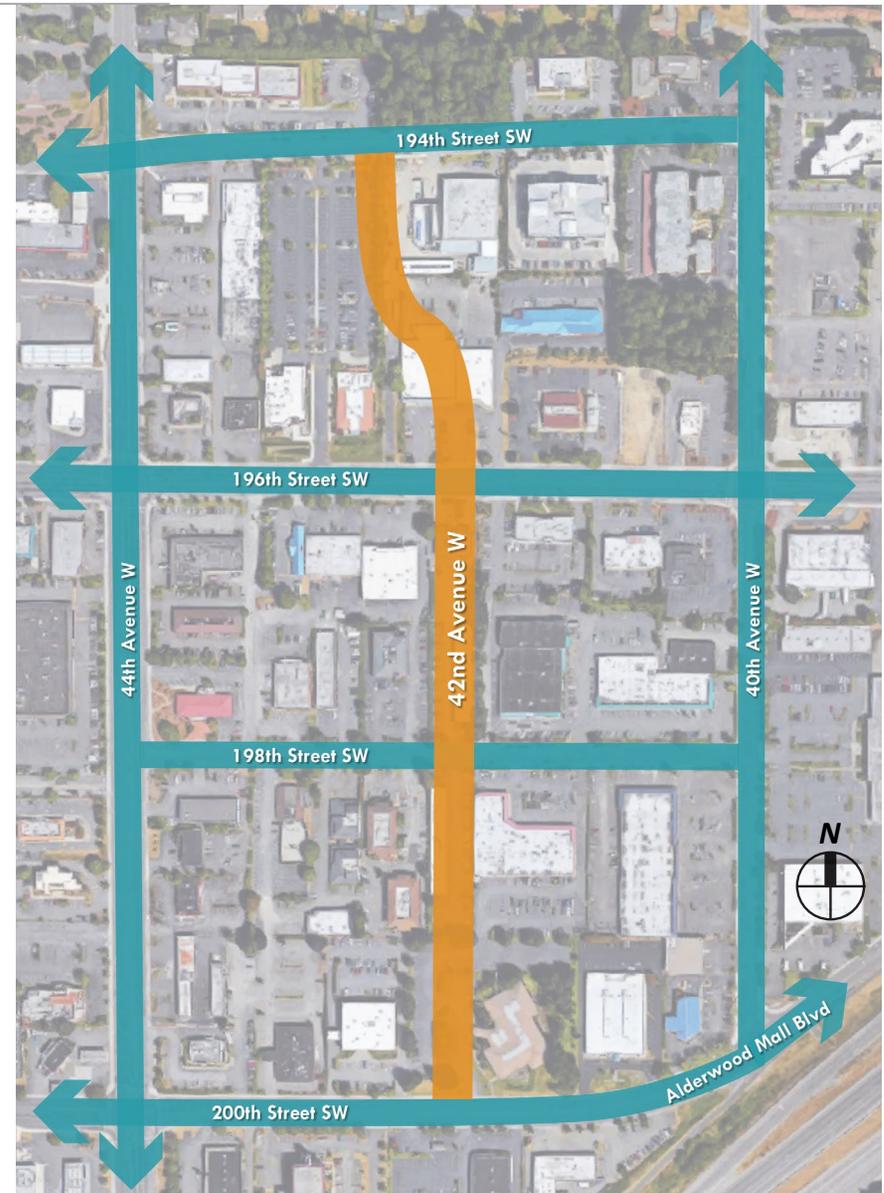
INTRODUCTION

The City of Lynnwood desires to become a premier city north of Seattle, with a vibrant, dynamic, walkable City Center. Over fifteen years of planning has built the foundation for the development of this new destination district, and the City is now beginning the work of implementing this vision and refining the specifics for design and implementation.

The core of City Center is bounded by 200th Street SW/Alderwood Mall Blvd to the south, 44th Avenue W to the west, 194th Street SW to the north, and 40th Avenue W to the east. The spine of the City Center core will be the future 42nd Avenue W corridor, running north-south from 194th Street SW to 200th Street SW/Alderwood Mall Blvd, which will also serve as the primary main street for City Center.

This Pre-Design Report builds upon the City's previous planning efforts, as well as an analysis of the corridor's opportunities, constraints and key design elements, to establish guidelines for the implementation of 42nd Avenue W. The report includes discussion of the roadway cross section and alignment alternatives; right-of-way (ROW) impacts, costs and acquisition strategies; and construction phasing/implementation alternatives. In addition, the report provides preliminary design recommendations for various streetscape elements including utilities, stormwater management, traffic control, and connectivity to the future City Center street grid.

As the 42nd Avenue W corridor moves beyond the planning stages and into implementation, the City's 2014 *City Center Streetscape Plan* provides the basis for the type of roadway design and streetscape detailing. These documents are intended to clarify frontage improvements for developers and establish the standards for quality for the new roadway.



BACKGROUND INFORMATION

The City's previous planning efforts for City Center were reviewed and assessed to determine the applicability of existing design criteria to the new 42nd Avenue W corridor. This review of existing documentation included the *City Center Sub Area Plan*, *Lynnwood Municipal Code*, *City Center Street Master Plan*, *City Center Streetscape Plan*, *Final Environmental Impact Statement (EIS)*, and *City Center Design Guidelines*, as well as other related reports and studies that pertain to the Corridor. The following summarizes the cross sections defined for the 42nd Avenue W corridor:

- *City Center Sub Area Plan*: 42nd Avenue W is defined as a "New Collector Street" with a cross section of 70' ROW, including two 12' travel lanes, 8' on-street parking on both sides, and 15' sidewalks.
- *LMC 21.60.500*: 42nd Avenue W is defined as a "Grid Street" with a proposed cross section of 77' ROW, including two 14' travel lanes, 8' on-street parking on both sides, and 16' sidewalks (see Appendix F, page 43).
- *City Center Street Master Plan*: 42nd Avenue W is identified as an arterial traffic mitigation route through City Center with a cross section of 91' ROW, including three 14' travel lanes, 8' on-street parking on both sides, and 16' sidewalks.
- *City Center Streetscape Plan*: 42nd Avenue W is envisioned as a north-south pedestrian connector street with wide (16') sidewalks and urban design elements such as benches, decorative lighting, stamped concrete, and street trees/landscaping.
- *2008 Preliminary Design Concept*: This document focuses on minimizing cut for 42nd Avenue W and following the existing topography. The plan did take into account the future cross streets, but would have resulted in inconsistent building frontages, creating a less attractive and less urban street environment.

These existing reports and studies revealed contradictory recommendations for the development of the 42nd Avenue W corridor, which had to be reconciled in determining the City's preferred alternative. Based on this analysis, the City selected a 67' ROW section with two 14' travel lanes, 8'-6" parallel on-street parking on both sides of the roadway, and 11' city-owned sidewalks. An additional 5' of sidewalk on both sides of the Corridor will be constructed by future developments and provided as permanent easement, for an overall roadway section of 77'. Both travel lanes will be designated as a bicycle route and marked with shared-lane markings (sharrows). The selected cross section is consistent with the 77' roadway width specified in LMC 21.60.500. Various mechanisms for retaining the ROW necessary to build the corridor are explored below in the *Right-of-Way Analysis* section of this report (see page 17).



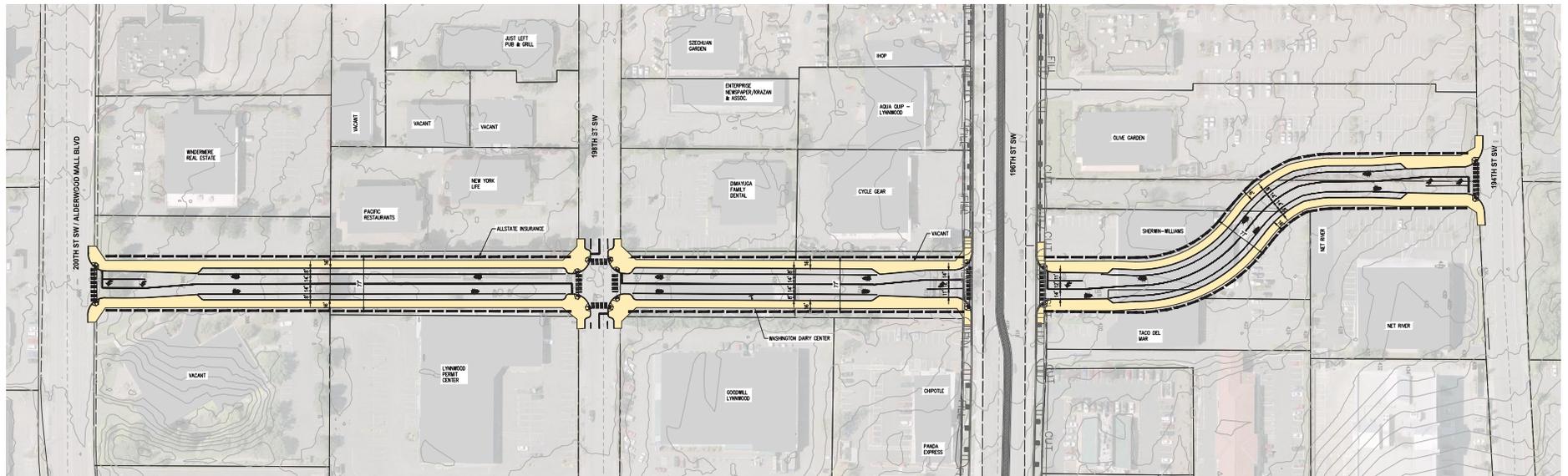
TYPICAL ROADWAY SECTION

PRELIMINARY DESIGN ANALYSIS

Recommendations for other key design elements for 42nd Avenue W were evaluated based on selected design criteria and considerations, including:

- Current urban design standards for mixed-use districts, which are typically being applied to new urban districts throughout Puget Sound. In contrast to previous suburban models, these standards are intended to create safe, accessible, multimodal streets.
- Multimodal transportation requirements (pedestrian, bicycle, public transit and vehicular capacity) and connections to Alderwood Mall Boulevard, 194th Street SW, 196th Street SW and 198th Street SW, in order to meet demand from planned future growth.
- Sewer and water-main requirements for roadway and adjacent future developments.
- Utility undergrounding opportunities and development coordination.
- Streetscape and urban design requirements per the *City Center Streetscape Plan*.
- Driveway access for new buildings.
- Roadway grades and wall impacts to existing overhead/underground utilities.
- Previous agreements between property owners and the City (e.g. Net River Dedication).

Note: *Layouts shown are for illustrative purposes only; actual roadway and streetscape design to be approved by the City of Lynnwood. See Appendix B for specific roadway sections including travel lanes, on-street parking requirements and multi-modal facilities.*



PREFERRED ALIGNMENT ALTERNATIVE

ALIGNMENT ALTERNATIVES

Two alternative roadway alignments were analyzed for the 42nd Avenue W corridor. Both alternatives share the same alignment between 200th Street SW and 196th Street SW, based upon impacts to surrounding parcels, alignment to the future intersection location at 200th Street SW, and support for redevelopment. The two alignments vary between 196th Street SW and 194th Street SW.

- **Alternative 1** creates a continuous corridor between 200th Street SW and 194th Street SW, based on approved plans and agreements. The northernmost section of the Corridor, 194th Street SW to 196th Street SW, will form an “S” curve as agreed upon per the Net River Dedication (see *Appendix E, page 38*). Other variations to this alignment were vetted to determine whether different angle points or intersection offsets could straighten out the “S” curve, however due to existing land uses, impacts to parcels (such as parking and access), and parameters in both AASHTO and the WSDOT Design Manual, the “S” curve alignment proved to be the best fit for Alternative 1.
- **Alternative 2** terminates in a “T” intersection in between 196th Street SW and 194th Street SW, at the south property line of the Net River parcel (see *Appendix E, page 38*), with a hammerhead turnaround at approximately mid-parcel of Sherwin-Williams and Taco Del Mar. Future development of a minor east-west cross street between 196th Street SW and 194th Street SW would tie into this northern terminus of the corridor. Alternative 2 would allow for a phased approach to future east-west connectivity, redevelopment of northern parcels, and Capital Improvement Project (CIP) funds. The road alignment south of 196th Street SW is the same as Alternative 1.

The City has determined that Alternative 1 is the preferred horizontal alignment for 42nd Avenue W, creating a continuous corridor through the heart of City Center from 200th Street SW/Alderwood Mall Boulevard to 194th Street SW (see **Preferred Alignment Alternative**, page 9). The vertical alignment will seek to flatten the roadway grade and provide a consistent profile between intersections and match surrounding grades at the major cross streets.

Left-turn lanes will be included at the intersections of 42nd Avenue W and 196th Street SW as well as 200th Street SW, with no on-street parking and wider “plaza-style” sidewalks at these locations.

Key Decisions:

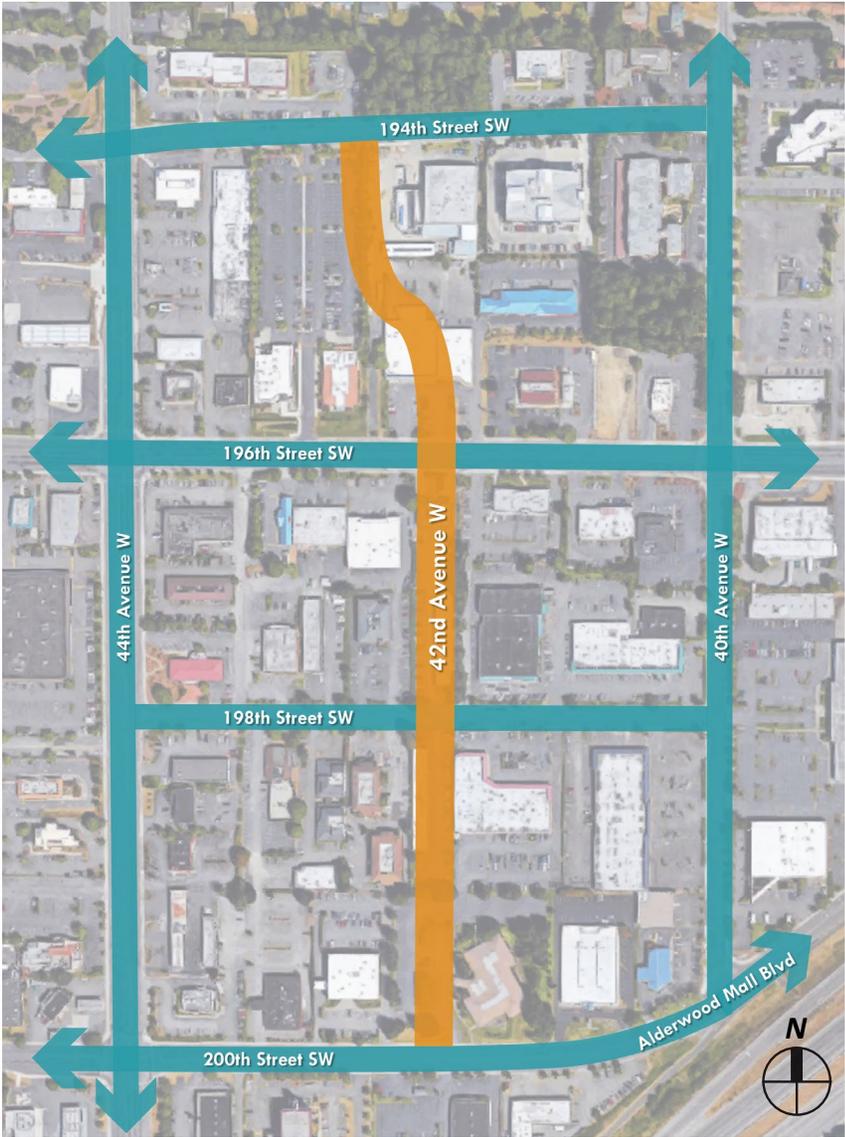
- *The horizontal alignment of 42nd Avenue W will create a continuous corridor from 200th Street SW/Alderwood Mall Boulevard to 194th Street SW, following the “S” curve alignment per the Net River Dedication (see Appendix E, page 38).*
- *The vertical alignment will match existing grades at major cross streets and seek to flatten the grade in between intersections.*

Next Steps:

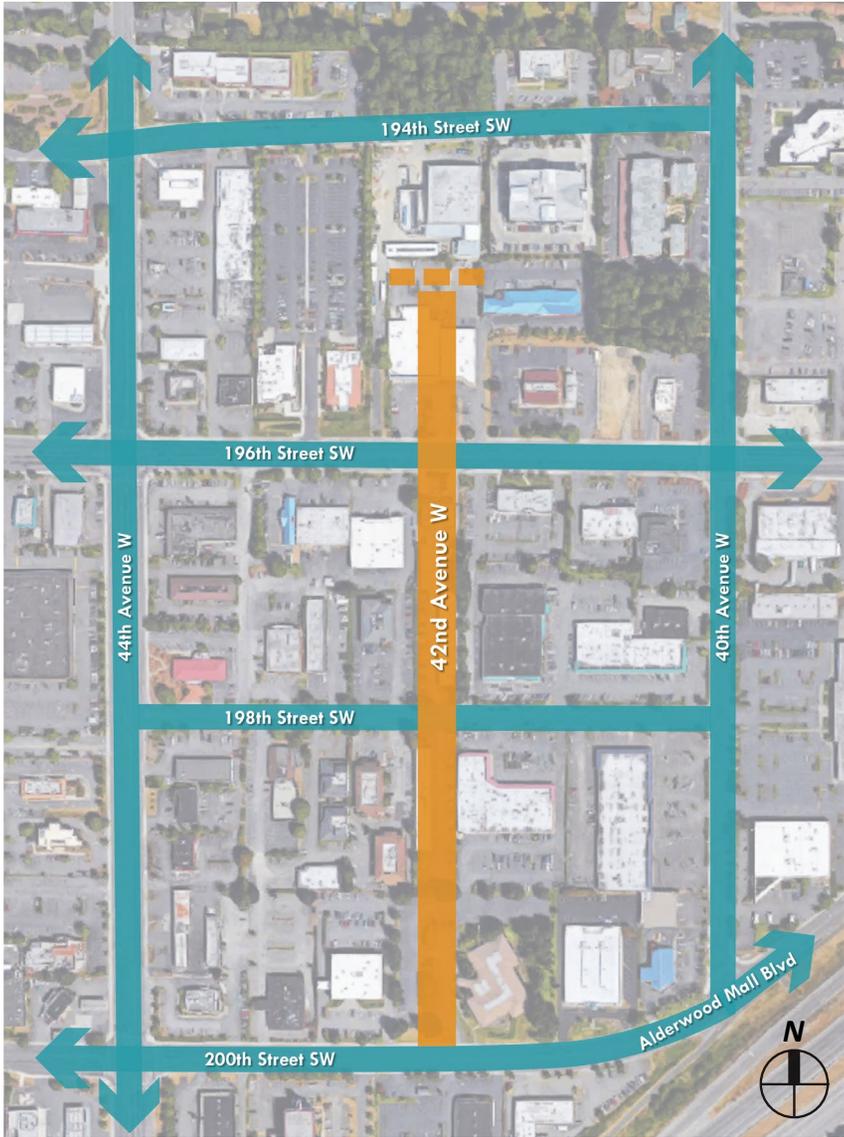
- *Confirm both horizontal and vertical alignment during final design.*
- *Analyze vertical alignment relative to adjacent parcels to determine requirements for temporary slopes or walls until redevelopment occurs.*

KEY

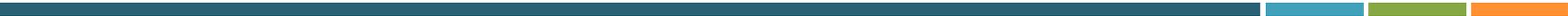
- 42nd Avenue W
- Existing Street Grid



ALTERNATIVE 1



ALTERNATIVE 2



ROADWAY UTILITIES

The full buildout of 42nd Avenue W will include all public infrastructure and franchise utilities necessary to service adjacent parcels as they are redeveloped.

Water, sewer and stormwater utilities will be provided for new developments. Size, type and location of these facilities will consider not only the roadway footprint but also the full buildout of adjacent parcels as they redevelop. A new water main and sewer main, sized for the size and types of future developments (as identified in the City's zoning code), will be installed as part of the CIP project. The City will determine additional codes for fire-connection locations (i.e. standalone or on building facade). The stormwater utility will also be designed to meet regulatory requirements (see *Stormwater Analysis*, page 13).

In addition, all franchise utilities servicing the future mixed-use developments shall be located in a joint utility trench beneath the City-owned ROW, primarily under the sidewalk. Undergrounding utilities creates a more appealing urban environment by minimizing wire, pole, and cabinet exposure and is consistent with new urban street design practices (outside of older cities where costs can be prohibitive). All the utilities required to service new buildings shall be located within the joint utility trench, creating easier connection access for future developments.

The City will coordinate with franchise utilities for the preliminary design of utility undergrounding along the corridor. At a minimum, empty conduit with sweeps to junction boxes every 500' will be installed along the length of the corridor and across intersections for future franchise utility use. This will minimize trench cuts or the need for reconstruction upon redevelopment of adjacent parcels by enabling franchise utilities to cut into spare conduits, add vaults where necessary, or utilize existing junction boxes and pull new wire with minimal damage to the City sidewalk.

In addition, street lighting and pedestrian lighting will be installed along the length of the corridor to meet City and safety standards and in support of creating a vibrant, pedestrian-friendly environment.

Key Decisions:

- *New water, sewer and stormwater utilities will be installed along the full length of the corridor and sized to service future developments and emergency needs.*
- *All franchise utilities will be located in a single underground joint-utility trench with connections to future developments.*
- *Street and pedestrian lighting will be installed along the full length of the corridor.*

Next Steps:

- *Determine size, type and location of water, sewer and stormwater utilities for the corridor.*
- *Determine additional City codes for fire-connection locations.*
- *Coordinate with franchise utilities for preliminary design of utility undergrounding.*
- *Identify illumination standards and photometrics.*

STORMWATER ANALYSIS

The *Final EIS* for City Center was analyzed for stormwater requirements, along with the *Soil Permeability Report*, *Stormwater Management Initial Options Memo*, and related City documents.

In addition, redevelopment of City Center will require the City to meet the stormwater runoff requirements established by the Department of Ecology *Stormwater Management Manual for Western Washington (SWMMWW)* and the *Snohomish County Drainage Manual*. Provisions for flow control of stormwater runoff will likely not be needed due to the nearly totally impervious nature of the existing environment. However, due to the City's concern for flow control and water quality within the City, a few options have been identified for on-site stormwater management, runoff treatment, and flow control.

- **On-Site Stormwater Management:** Four best management practices (BMPs) were evaluated based on Minimum Requirement (MR) #5, List #2, from the 2014 SWMMWW: full dispersion, permeable pavement, bioretention for an area equal to 5% of the contributing area, and sheet flow dispersion. Based on the project assessment of current land use and impervious area, only two items from MR #5 apply: permeable pavement and bioretention. As identified by previous stormwater reports, the project site is limited for large scale infiltration. However, the use of pervious pavement for sidewalks or bioretention for the roadway could be investigated with further geotechnical exploration.
- **Runoff Treatment:** Options are dependent on the approach taken to comply with requirements for on-site stormwater management. If bioretention is used to comply with on-site management requirements, no additional runoff treatment is required. If a flow control facility is used, the most cost effective treatment approach may be to install proprietary media filters downstream of the facility.
- **Flow Control:** It appears that only 7,000 cubic feet of detention storage would be required due to the large area of existing impervious surfaces. Fully evaluating flow control alternatives will require a thorough study of stormwater management within the entire City Center redevelopment area. However, for the purposes of considering City Center flow-control measures that could be implemented in conjunction with 42nd Avenue W, three alternatives have been identified: construct a 7,000 cubic foot vault beneath the roadway for the project, construct a series of vaults for flow control for 10.2 acres worth of private development (with developers financially contributing to system), or construct a regional flow control facility beneath the proposed future park.

More details of the stormwater analysis for the project can be found in the *Stormwater Management Technical Memorandum* (see Appendix C, page 27).

Next Steps:

- **Analyze the stormwater options and alternatives presented to determine a stormwater management plan for 42nd Ave W and City Center** (see Appendix C, page 27).

TRAFFIC ANALYSIS

The City's existing and future-year traffic operations models for the City Center street network were reviewed to assess the impact of the redevelopment of 42nd Avenue W. Based on previous studies done by Transportation Solutions, Inc. (TSI), 42nd Avenue W will be a two-lane roadway. There will be one travel lane in each direction with on-street parking and left turn lanes for both the northbound and southbound approaches to the 196th Street SW intersection as well as for the southbound approach to the Alderwood Mall Boulevard intersection. At these left-turn locations, there will be no on-street parking.

Traffic signals will be included at the intersections of 42nd Avenue W and 196th Street SW as well as 200th Street SW/Alderwood Mall Boulevard in order to maintain traffic flow and circulation. The 198th Street SW and Veterans Way intersections can be controlled with stop signs due to the lower volumes at these locations.

Key Decisions:

- *Traffic signals will be installed at the intersections of 42nd Avenue W and 196th Street SW as well 200th Street SW/Alderwood Mall Boulevard.*
- *Left turn lanes will be included for the north and southbound approaches to the 196th Street SW intersection as well as the southbound approach to the 200th Street SW/Alderwood Mall Boulevard intersection.*

STREETSCAPE AND PEDESTRIAN ENVIRONMENT

A goal of the City Center vision is to create a pedestrian-friendly environment that encourages walking to new developments. To accomplish that goal, development of the sidewalk/pedestrian space is crucial to the success of City Center. The City previously identified the character of the streetscape and urban design elements for 42nd Avenue W in the *City Center Streetscape Plan*. These details will be applied to the design of the corridor as it progresses into final design.

Key Decisions:

- *The Lynnwood City Center Design Guidelines and City Center Streetscape Plan provide guidelines for streetscape elements and details.*
- *The City will coordinate between 42nd Avenue W project and 196th Street SW project, consistent with the City Center Design Guidelines.*

Next Steps:

- *Apply City Center Streetscape Plan guidelines to initial street design to refine specific streetscape elements and details and provide guidance for future development frontages.*

BLOCK SIZES

The City Center core is bounded by 200th Street SW/Alderwood Mall Boulevard to the south, 44th Avenue W to the west, 194th Street SW to the north, and 40th Avenue W to the east. The City Center Subarea Plan shows new north-south and east-west cross streets, in between the major streets, to break up the future 600' "super" blocks into more urban 300' blocks. These new streets are intended to serve as minor vehicular or pedestrian connections that provide additional frontage for new development and create inviting, accessible shared-use spaces for pedestrians and bicycles. The design of these corridors can range from a small urban street section with sidewalks and other streetscape amenities, to an alleyway section that provides access for service and emergency vehicles.

The alignment of the 42nd Avenue W corridor will reflect these smaller block sizes and include connections to the new mid-block cross streets and alleyways. These new intersections will emphasize pedestrian-friendly connections, with crosswalks and either radius returns or driveway approaches for the east-west crossings.

Key Decisions:

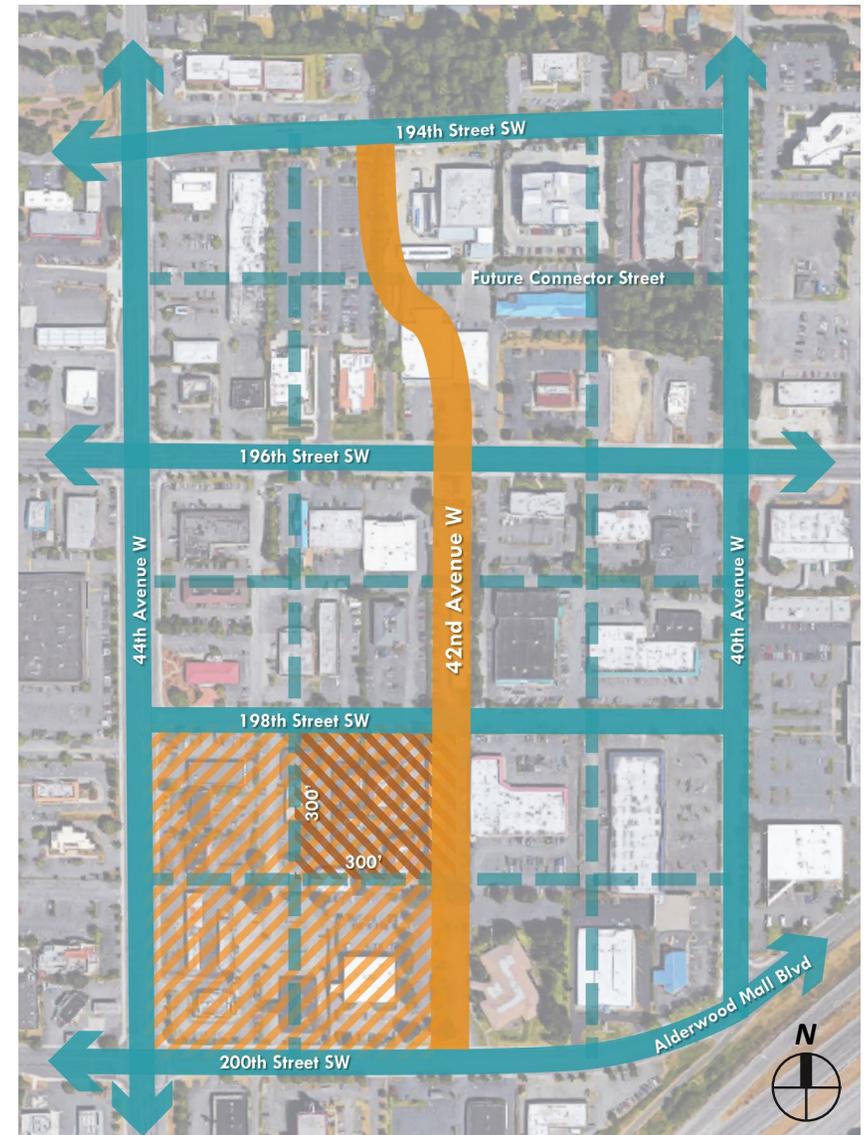
- The 42nd Avenue W corridor will feature urban scale 300' blocks and include connections to the new minor cross streets identified in the City Center Subarea Plan.
- The new cross street intersections will include crosswalks across 42nd Avenue W and will emphasize pedestrian-friendly connections within City Center.

Next Steps:

- Refine the design of the new cross streets (see Appendix B, page 26).

KEY

- 42nd Avenue W
- Existing Street Grid
- Future Cross Street
- ▨ Existing 600' Block
- ▨ Future 300' Block



SMALLER BLOCK SIZES

RIGHT-OF-WAY ANALYSIS

The existing land use in the City Center area consists of large, auto-oriented shopping centers with expansive asphalt parking lots and strip mall developments. The parcels were developed to minimize cost, with no or little relation to adjacent parcels. The existing developments also have limited property value and opportunities for growth due to their lack of connectivity and small size relative to current development standards. The area has been rezoned to allow mixed-use buildings, parks, and pedestrian friendly amenities, which will lead to increased property values and growth within City Center.

Construction of the full 42nd Avenue W corridor between 194th Street SW and 200th Street SW/Alderwood Mall Blvd will impact eight properties. Based on the implementation strategies discussed below, construction of the Corridor will require full acquisition of five parcels and entail the relocation of five businesses and compensation for damages to 60 parking stalls. The following sections outline the various options for retaining the property required to construct/maintain the 42nd Avenue W corridor and the relative cost implications of each option.

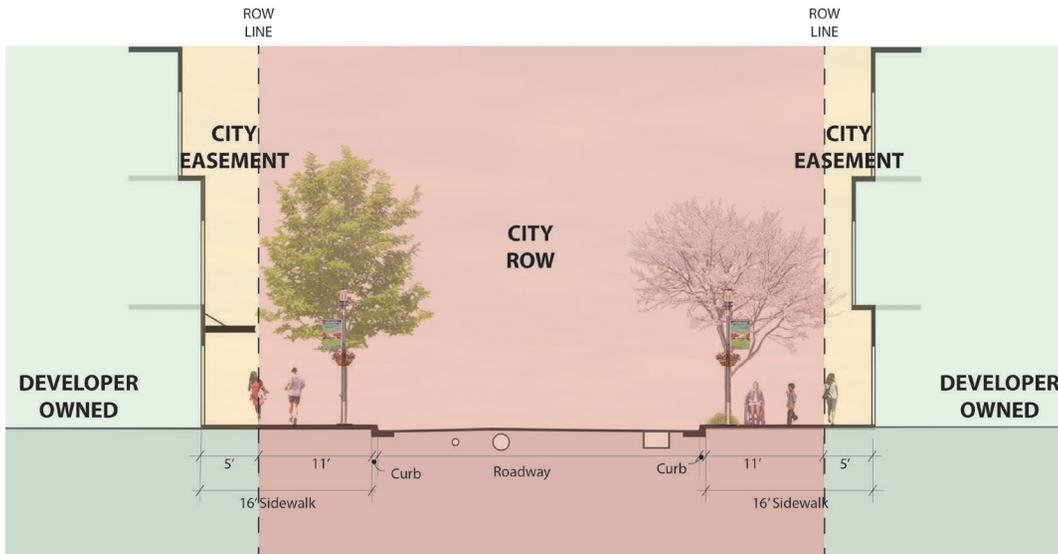
PROPERTY RETENTION STRATEGIES

After the 42nd Avenue W corridor is constructed, the City has two primary options for retaining the property utilized for roadway and sidewalk improvements. This land can either be sold back to developers and retained by the City as an **easement** or retained in **fee** as City-owned right-of-way (ROW).

- **Retain Roadway/Sidewalk in Easement:** This option would retain the square footage required for some or all of the sidewalk or road width via easements. The benefits of this option are that it reduces costs (relative to retaining the property as City-owned ROW) and allows the developer to utilize the easement area as part of their Floor Area Ratio (FAR). It also allows the Developer to include private utility trenches and underground parking within their sidewalk frontage, while the City retains control over what they need now and in the future. This mechanism would result in a cost savings of about 25% to the City over the cost of retaining the same square footage as City-owned ROW, and it would increase the property value for the Developer. The roadway itself could also be retained as an easement, which would allow the full width of the corridor (to the centerline) to be applied toward a developer's FAR. This would also enable developers to incorporate private utilities and underground parking into the corridor.
- **Retain Roadway/Sidewalk in Fee:** This option would retain the square footage required for the sidewalk and roadway as City-owned ROW. The land would be dedicated solely to roadway improvements, which places limitations on what developers can construct beneath the sidewalk. The benefit of this option is that it gives the City complete control over future land use/allowances, but it also results in higher costs (relative to selling the property back to developers and retaining it as an easement).

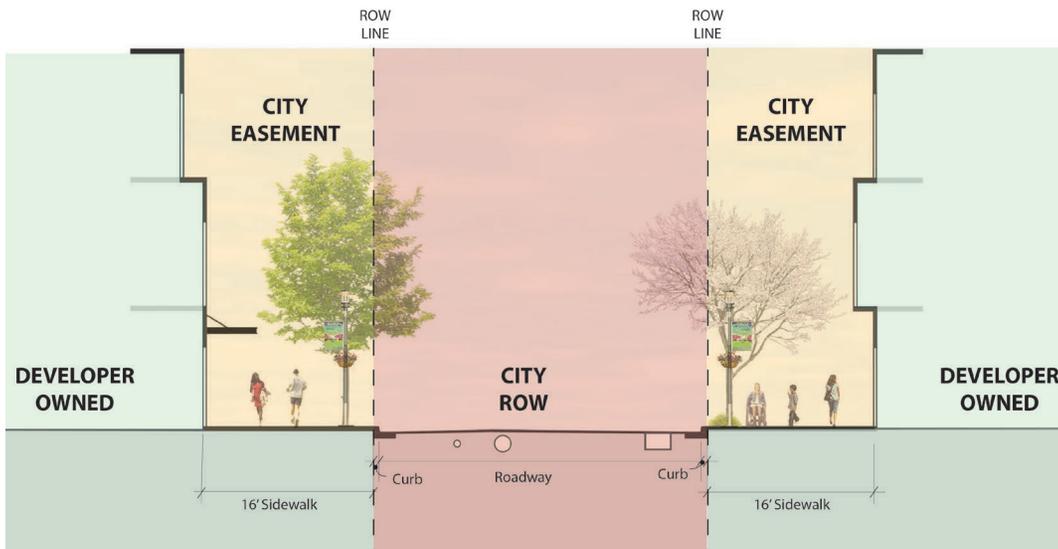
The design team reviewed the corridor on a parcel-by-parcel basis and worked closely with Roland Resources, to begin assembling the preliminary Project Funding Estimate. Based on the costs associated with parcel acquisition, building relocation fees, and compensation for damages, three acquisition strategies, based on a combination of the retention strategies discussed above, were agreed upon with the City and Roland Resources during the pre-design phase (see *Appendix D, page 36*): **retain roadway and sidewalk in fee, retain roadway in fee, or retain roadway and sidewalk as easement.**

PROPERTY RETENTION OPTIONS



RETAIN ROADWAY & SIDEWALK IN FEE

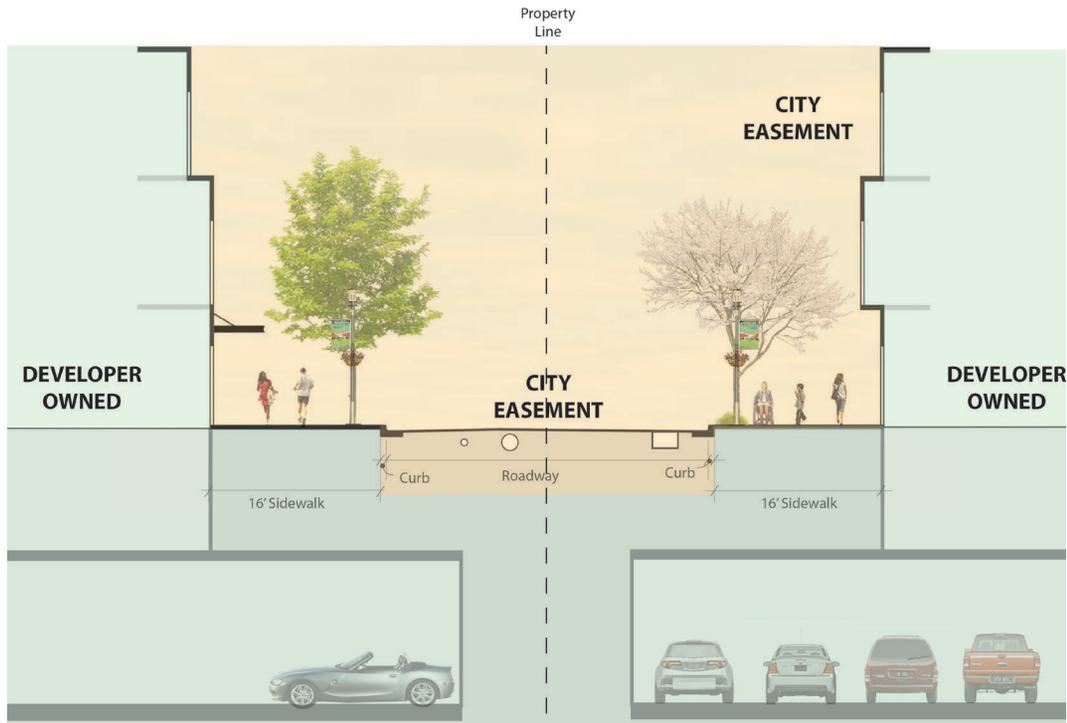
This option allows the City have full control of the full corridor swath (roadway and sidewalk), including aerial rights and underground rights, and provides for some cost recovery, as any remaining surplus land can be sold back to a developer or property owner.



RETAIN ROADWAY IN FEE

This options allows the City to control the roadway portion of the corridor, from back of curb to back of curb. The sidewalk width, as well as any surplus land, can be sold back to the developer and retained as an easement for the City sidewalk.

PROPERTY RETENTION OPTIONS



RETAIN ROADWAY & SIDEWALK AS EASEMENT

This option allows the City to sell the entire roadway swath and surplus land back to the developer and retain the roadway and sidewalk areas as an easement for the construction and/or maintenance of 42nd Ave W. This option has the greatest cost recovery but may not provide the control over the corridor that the City desires.

Next Steps:

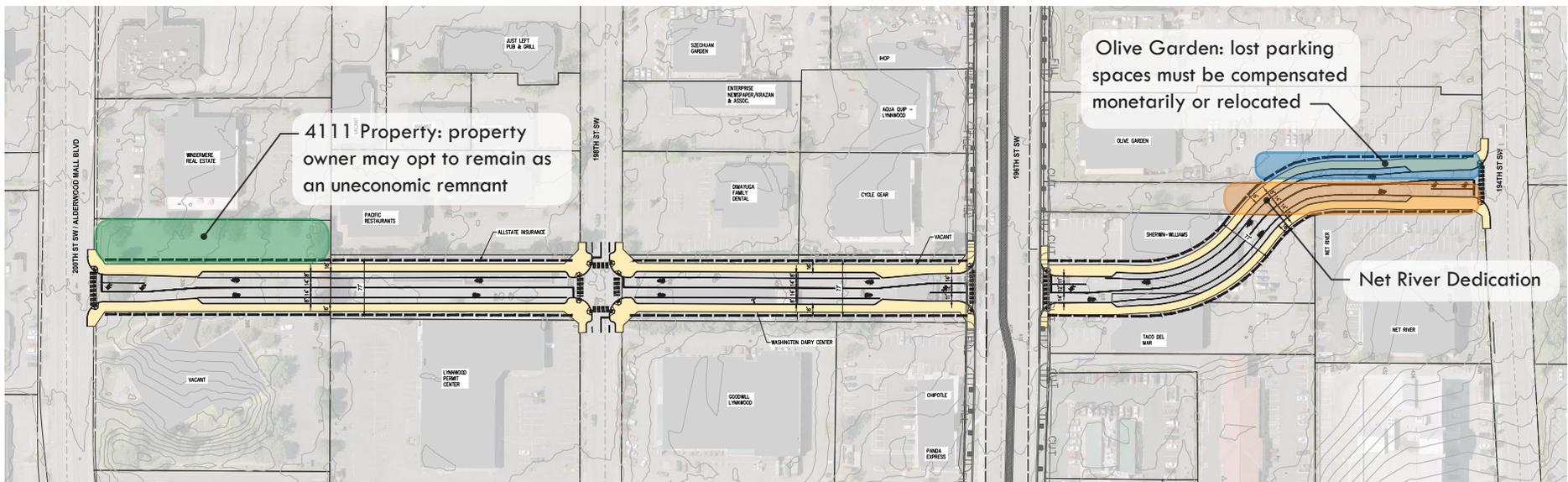
- *Select a preferred property-retention option through further analysis and continued collaboration with KPG and Roland Resources.*
- *Study impacts of uneconomic remnants which will be left once construction of the corridor is complete.*

EXCEPTIONS

There are three exceptions to the property retention options (see map below).

- **Net River Dedication** (see Appendix E, page 38): The Net River Dedication set aside the necessary land on the Net River property to construct 42nd Avenue W. This will result in no additional ROW acquisition cost to the City, however the City may incur additional costs to compensate for lost parking, per the agreement.
- **Olive Garden Parcel:** The acquisition of a strip of property from the Olive Garden parcel would require the City to purchase exactly the area required and compensate Olive Garden for lost parking either monetarily or through parking lot restriping or relocation.
- **4111 Property:** The property at 4111 Alderwood Mall Boulevard will be left with an uneconomic remnant once the required property for the construction of 42nd Avenue W is acquired. While the City is required to offer to purchase any uneconomic remnants, this property owner may opt to remain as an uneconomic remnant, not wishing to sell the entire property to the City.

In addition, the Sherwin Williams and Taco Del Mar properties will also be left with uneconomic remnants once the roadway corridor is constructed. These properties present the opportunity for the City to consolidate the newly purchased property and provide mitigation for the impacted parking damage to the Net River and/or Olive Garden parcels.



IMPLEMENTATION STRATEGIES

Due to CIP funding limitations, ROW impacts, and probable redevelopment scenarios, a phased construction approach for 42nd Avenue W should be taken. Although there are multiple opportunities to phase corridor construction, this report explored two concepts: **constructing the corridor segment-by-segment** and **minimizing the width of corridor construction**.

Constructing the Corridor Segment-by-Segment: One option for constructing 42nd Avenue W is to break the corridor into two segments, based on existing parcel sizes and connectivity to adjacent streets: 200th Street SW to 196th Street SW, and 196th Street SW to 194th Street SW.

- **200th Street SW to 196th Street SW:** The first phase of construction would complete the two southernmost blocks of 42nd Avenue W. These blocks provides good connectivity to both 198th Street SW and 196th Street SW and would provide a finished frontage for immediate redevelopment opportunities for the adjacent parcels.

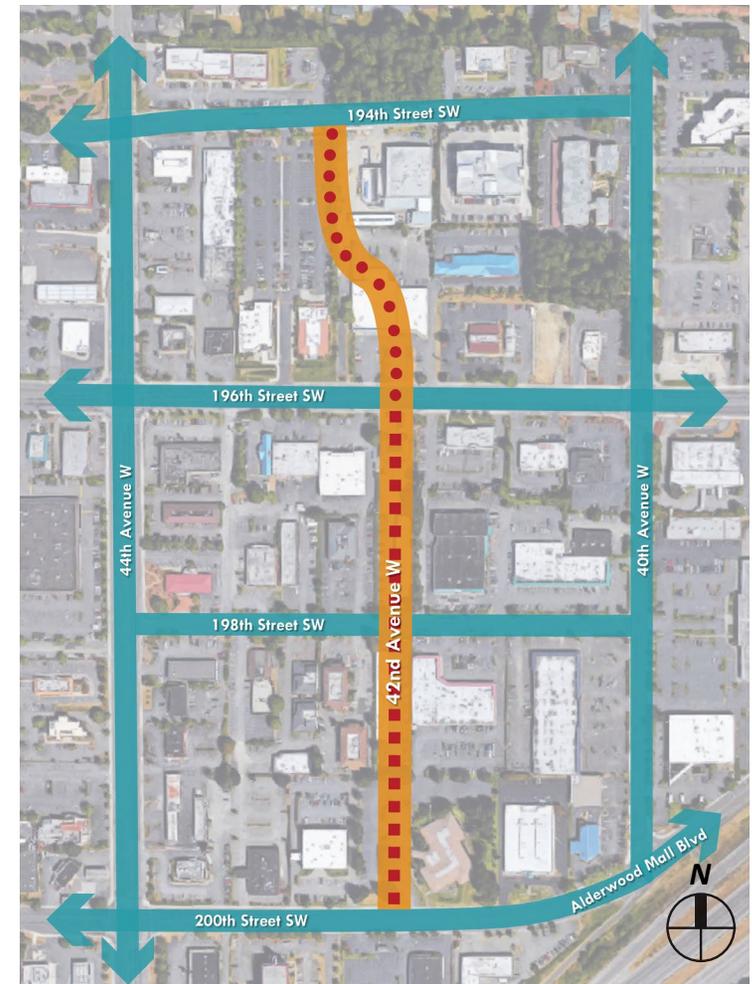
Construction of the full roadway section in this segment, including underground utility infrastructure, would require the outright purchase of three properties. Pending property negotiations, the owner of the 4111 property may decide to sell only the western half of the property impacted by the road but retain the east remnant even though it would become non-conforming. Either opportunity gives the City the option to sell or lease back the remnants of the parcel. City Ordinance 3258 addresses non-conforming parcels.

- **196th Street SW to 194th Street SW:** The second phase of construction would be the “S” curve segment at the northern end of 42nd Avenue W. This phase of construction would take advantage of Net River Dedication (see *Appendix E, page 38*), but would still require the purchase of two full parcels and relocation/replacement of 51 displaced parking stalls (additional surplus lands may be available to be utilized for parking in this area). It would also displace an HVAC cooling structure on the Net River property.

Constructing the 42nd Avenue W corridor in two segments lessens initial ROW costs and gives the City control over the full buildout, including setting utilities in the right location. It also demonstrates, on a small scale, to both residents and developers what the full vision looks like. However, this phased approach makes it harder to obtain grant funding due to the lack of overall connectivity. In addition, this approach can lead to higher construction prices and ROW costs for later phases and could create confusion among the public as to the overall benefits of the project.

KEY

- 42nd Avenue W
- Existing Street Grid
- Phase 1
- Phase 2



SEGMENT-BY-SEGMENT

IMPLEMENTATION STRATEGIES

Minimizing the Width of Corridor Construction: Another option for completing the 42nd Avenue W corridor is to construct the entire segment from 200th Street SW to 194th Street as a single project, but limit the width of the City's improvements to the roadway, curb and gutter, and 11' of the desired 16' sidewalk width (67' of the 77' overall roadway section).

The CIP project would include installation of new stormwater conveyance, water and sewer mains, and street lighting along the entire corridor, as well as excavating and setting a consistent roadway profile for future redevelopment on cross streets and providing improved ADA access. The back of sidewalk would include embankments that would minimize throw-away improvements once redevelopment occurs. This approach would give the City complete control over the utility zone, roadway profile, and streetscape aesthetics, and would require the outright purchase of five (5) parcels and compensation for damage/displacement of 51 parking stalls.

Once the City's improvements are complete, developers along each side of the corridor would construct the remaining 5' of the sidewalk as part of their frontage improvements. This 5' zone would allow them to place their tie backs for shoring and provide additional room for construction of underground parking facilities or building foundations.

Constructing the entire length of roadway but minimizing the cross section gives the City a competitive edge for seeking grant funding, as a brand new road provides better connectivity, and it also allows the City to set the stage for what their ultimate City Center will look like while providing complete frontages for future development. The downside of this implementation strategy lies solely in cost impacts from ROW requirements, as discussed above.

ROW Funding Options: Per Appendix D, three strategies have been identified for funding ROW acquisition.

- **Grant Funding:** The City could front the cost of acquiring ROW and apply for reimbursement through federal grant funding.
- **Bond Measure:** The City could place a \$20-\$30 million bond measure on the ballot to fund ROW acquisition.
- **Developer Partnerships:** The City could partner with developers, with the developers contributing easements for the corridor improvements.

In addition, a fourth option has been identified by the City, which would include applying for grant funding first, prior to securing required ROW, with construction being contingent on receiving grant funding to implement the project.

Key Decisions:

- *The City has decided to construct the entire 42nd Avenue W corridor as a single project, with the City building 67' of the roadway swath and developers constructing the remaining 5' of sidewalk width on either side of the roadway.*

APPENDICES

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To: City of Lynnwood
CC: Sessyle Asato - KPG, Paul Fuesel – KPG
From: Bryce Corrigan, KPG
Date: 4/29/2016
Re: *Preliminary Analysis & Findings Technical Memorandum*

Introduction

This memorandum summarizes the discoveries and considerations identified during the pre-design investigation for the 42nd Avenue W Extension Project. This information was presented by KPG to the City of Lynnwood at the pre-design meeting on April 29, 2016.

The pre-design investigation reviews each aspect of the street to determine the standards to be used in developing the design for 42nd Avenue W. This includes bicycle facilities, turn lane, parking, street section and right-of-way. The investigation uses this information to determine the design of the roadway, to determine the impacts to property, and to provide cost estimates for the project. In addition, the analysis identifies potential design considerations that will affect the character and quality of the street.

42nd Avenue W Standards

The City of Lynnwood has conducted many studies and plans regarding the proposed City Center. As part of the pre-design investigation, the City Center Plans were reviewed and inconsistencies were noted between the different plans. Adopted Ordinances No. 2627 & No. 2937 established and revised the horizontal alignment for 42nd Avenue W. A dedication agreement between the City and DREAL 2004 LLC provides a route around the existing structure at 4200 194th Street SW.

Bicycle Facilities

Bicycle facilities add width to the roadway and ROW but provide a functional multi-modal transportation corridor. Bicycle facilities, in the form of shared-use travel lanes, were agreed to be provided, per Ordinance No. 2937, in the north and southbound directions to achieve bicycle connectivity throughout the planned City Center.

Left-turn Lanes

Left-turn lanes at major intersections help improve the free flow of thru-traffic. Left-turn lanes are planned to be provided at 196th Street SW and Alderwood Mall Blvd/ SW 200th Street. Providing left-turn lanes at these intersections increases the roadway width and removes on-street parking, but improves intersection function and traffic operations.

Street Parking

Street parking is planned to be provided on the northbound and southbound side throughout the 42nd Avenue W corridor. Street parking will be removed where left-turn lanes occur to provide a consistent 16' wide sidewalk as desired by the City Center plans.

ROW width and Easement Designation

The typical section of 42nd Avenue W is 77' wide. The ROW, the area that is owned by the City, can contain as much or as little as the City would like to control. The advantage of owning the entirety of the section is that a consistent standard can be maintained throughout the roadway corridor. The City can elect to sell a certain width to developers and/or adjacent property owners and retain control as an easement. Easements are dedicated areas that are owned by the developer but have a specific infrastructure designation or use, such as sidewalks, communications, streetscape elements, utilities, etc.

Property Impacts

There are eight (8) affected parcels along the proposed 42nd Avenue W alignment. Six (6) parcels must be purchased in full to accommodate the roadway width of 42nd Ave W. If there is an operating business on the property the City must provide relocation for that existing business. The City may lease the building and property to the current owner until 42nd Avenue W is prepared for construction, but the City must still provide relocation for that business.

Two (2) properties are partially affected and must be provided just compensation. A total of 60 parking stalls between the DREAL 2004 Property and the Olive Garden Property must be relocated and compensated for upon construction of 42nd Ave W. The purchase price for one parking stall is approximately \$20,000. Parcel impacts and their compensation can add approximately 20% onto the purchase price of property.

Design Considerations

Intersection, Access Control, Future Street Grid Considerations

Driveways or future secondary streets should provide building and parking access off of 42nd Avenue W. Limited curb cuts should be designed and provided along 42nd Avenue W. The alleys, streets, woonerfs, etc extended from the 42nd Avenue W curb cuts will provide building access and pedestrian connectivity. Installing the secondary streets breaks the super block size of 600 linear feet to approximately 250-300 linear feet, creating a pedestrian friendly, walkable downtown.

Roadway Profile

The existing topography along the 42nd Avenue W corridor is inconsistent due to the past developments of the different businesses in the City Center. The profile design of 42nd Avenue W can follow this inconsistent topography or provide consistent roadway slopes from intersection to intersection cutting through the existing topography. Following the existing topography and introducing the mid-block access/intersections would produce roadway profile slopes ranging from 0.77% to 6.4%. This scenario may not provide the most enjoyable experience for cars, pedestrians and bicycles and may create difficulties for ADA accessibility and the future store front-sidewalk interface. By cutting through the existing topography roadway profile, slopes could range from 1.9% to 4.7%. This smaller variation provides more consistency for developers, and a more multi-modal friendly downtown.

Cost Estimates

Per the SEIS, Ordinance No. 2937, and the Street Master Plan, construction of 42nd Avenue W should be completed as two sections; Section 1 begins at Alderwood Mall Blvd/200th Street SW and ends at 196th Street SW; Section 2 begins at 196th Street SW and ends at 194th Street SW, with an S-Curve per the dedication agreement with DREAL 2004. A project estimate was completed for each section. Section 1 is estimated between \$15.8 and \$28.3 million for the ROW negotiations, design, and construction. Section 2 was estimated between \$10.1 and \$15.3 million. The cost difference in Section 1 is determined by a strip take (purchasing the ROW width) or whole take of 4111 200th

Street SW/Alderwood Mall Blvd. The cost difference in Section 2 results from installing the entire S-curve or creating a T-intersection at the property line of DREAL 2004's property.

Conclusions

As the arterial roadway of the City Center, 42nd Avenue W must be a high quality, urban place, which will set the standard for the City Center and surrounding development. Many cities in the Puget Sound Region have seen a private development boom after an initial investment in infrastructure was successfully completed. This does not ensure private development for the Lynnwood City Center but trends in similar markets prove that a highly functional and quality street can set the standard for the City Center and attract development.

This pre-design effort identified the issues and the contradictory information related to the design and identified where the City needs to provide direction on the design considerations for the 42nd Avenue W corridor.

To: City of Lynnwood
CC: Sessyle Asato - KPG
From: Bryce Corrigan, KPG
Date: 5/23/2016
Re: *Access Management Technical Memorandum*

Introduction

This memorandum reviews the intersection spacing and access control criteria based on the City Center Design Guidelines and provides recommendations for 42nd Avenue W corridor.

Background

Walkable downtowns are characterized by frequent blocks every 300 to 400 linear feet. Block size can be achieved with roadways, alleys, pedestrian promenades or other access techniques. Short block sizes can allow property access to occur on side streets, reducing curb cuts on the major street, allowing for the creation of a high quality pedestrian environment.

Access management controls the frequency and location of access points to individual parcels. Providing too many vehicle access points along a roadway can create congestion and limit the functionality of the roadway to vehicular traffic.

Block Size

The current block size in Lynnwood City Center is 1,300 linear feet. While this allows higher levels of traffic flow with frequent driveways to provide property access, it does not create the walkable environment desired for Downtown Lynnwood. The extension of 42nd Avenue W reduces the block size to 600 linear feet, creating a more walkable City Center as desired by the City Center Master Plan.

Access to Property

Per the City Center Design Guidelines, curb cuts for driveways shall not be located closer than 200' from the property line, 150' from a signalized intersection, 100' from an unsignalized intersection or 75' from any other intersection; shall be consolidated to provide shared use, and shall be no wider than 30' along the curb. It is recommended that along the 42nd Avenue W corridor, curb cuts be limited to one per block on both sides of 42nd Avenue W. Access is to be through the back or side of future buildings off of alleys, not off 42nd Avenue W. Limiting the curb cut to one per block will maximize street parking along the 42nd Avenue W corridor.

Private vehicle connections between blocks can be created to provide vehicle access to property and to create a pedestrian connection. A maximum of two 10' wide access lanes shall be provided for vehicular access, or as needed by the building and fire codes. These lanes must be compatible with pedestrian circulation requirements. KPG recommends that these connections be located halfway between existing streets (thereby creating an alley way or private drive access for garages, pedestrian corridors, and/or deliveries).

For pedestrian connections, walkways of a minimum of 10' wide shall provide pedestrian access to the adjacent properties. Where adjacent properties do not exist, the walkway shall stub out to the property line to allow for a future connection.

Conclusions

Providing small block sizes, minimizing curb cuts, and creating strong pedestrian connections will create the walkable environment envisioned for the City Center along 42nd Avenue W. Private vehicle and pedestrian connections can shorten block sizes, create pedestrian access, and consolidate property access points off of the main roadways.

To: Ngan Ha Yang – City of Lynnwood
 CC: Sessyle Asato - KPG
 From: Kirk Smith, PE
 Date: 8/4/2016
 Re: ***Stormwater Management Technical Memorandum***

Introduction

This memorandum summarizes findings and conclusions resulting from KPG's review of existing stormwater documents, and provides a preliminary assessment of stormwater management requirements and options for the 42nd Avenue W corridor.

Review of Existing Documents

KPG has reviewed several existing documents to gain an understanding of the stormwater analysis and planning work already performed to date for the City Center Sub-Area, and to identify specific stormwater management requirements or concepts relevant to 42nd Avenue W. Following is a list of reviewed documents, including a brief list of initial findings and conclusions regarding how the document applies to the current project.

City Center Sub-Area Plan Final Supplemental Environmental Impact Statement (September 2004)

- Indicates surface water impacts from redevelopment will result in insignificant and/or potentially positive impacts, because the area is already developed with 95% impervious coverage, and redevelopment under any alternative would not increase the amount of impervious surface
- Recommends phasing of stormwater system improvements, with detention and treatment elements constructed as part of initial improvements, followed by collection systems, and that planning would be needed for phased improvements
- Indicates regional detention and treatment are not viable because of the area needed, potential sensitive area impacts, and the need to complete the facilities prior to redevelopment.
- Section G includes a fairly detailed discussion of a system of stormwater vaults sized in accordance with the 2001 Ecology stormwater manual, and refers to Figure U-1 in Appendix B. The figure and Appendix were not included in the version we reviewed.

KPG's Initial Conclusions: This document provides general stormwater management concepts that will require further consideration in developing a stormwater system for

the City Center. KPG will need to review a copy of Appendix B in order to leverage this prior planning efforts for the current project.

City of Lynnwood City Center Sub-Area Plan (September 2007)

- States the City Center Sub-Area will be redeveloped under the City stormwater codes in place at the time of development, for both street and parcel redevelopment.
- Implementation of stormwater management requirements with redevelopment will result in decreased peak runoff rates and improved water quality. Impacts to existing flooding at 44th Avenue W and Interstate 5 will be decreased.

City of Lynnwood 2009 Surface Water Management Comprehensive Plan (Herrera, September 2009)

- This city-wide planning document provides analysis and recommendations for the City's surface water management program to meet regulatory requirements and address drainage and water quality problems.
- From the Drainage System Summary in Appendix A, it can be seen that the entire 42nd Avenue W project is within the Scriber Creek basin. The Scriber Creek basin is the largest drainage basin in the City, with the headwaters in the northern part of Lynnwood. Scriber Creek joins Swamp Creek southeast of the city limits, and continues south to Lake Washington.
- Current flooding problems on Scriber Creek are upstream from where project area runoff contributes to the stream at I-5 and 44th Avenue W. One capital improvement program project is identified downstream from the project area, FL-5, Scriber Creek Culverts at 44th Avenue W, Phase 2.

Notice of Adoption of FSEIS with Addendum (May 2011)

- Addendum acknowledges City adoption of new stormwater ordinances to bring the City into compliance with the current NPDES Phase II Stormwater Permit for Western Washington.

City Center Stormwater Management Initial Options memo (Herrera, May 2011)

- Provides an overview of five stormwater management options for the City Center, as follows:

1. Development of a comprehensive City Center strategy for meeting NPDES Phase II Stormwater Permit requirements. This work would include a refined analysis of the existing and future land use within the City Center, assessment of minimum stormwater management requirements, and development of a plan to construct stormwater control facilities where the environmental and/or physical conditions are most favorable. The memo indicated this stormwater planning work was ongoing.
2. Perform basin planning to identify alternatives to the core NPDES Phase II Stormwater Permit requirements. The NPDES stormwater permit allows permittees to use basin-scale planning to justify alternative stormwater management approaches that achieve equivalent or better outcomes than using the standard stormwater requirements. The discussion indicates that although this approach could lead to cost savings, extensive analysis would be needed, and approval from Ecology could be cumbersome. The memo indicates additional evaluation of this option was ongoing.
3. Construct a high-flow bypass. The memo indicates that SAIC had performed a high-level evaluation of constructing a bypass pipe from the City Center to Lake Washington or Puget Sound, and concluded this approach would have potential cost savings over on-site flow control facilities, some level of detention would still be required and there would be significant hurdles to achieving this approach. The memo indicates no additional evaluation of this option was planned.
4. Evaluate regional stormwater management opportunities. A portion of the City Center's stormwater management requirements could be accomplished by constructing regional stormwater facilities or by expanding existing regional facilities, with potential costs savings as compared to a project-based approach. The memo presents some specific ideas for regional facilities, but indicates additional study of a regional facility option was not planned at that time.
5. Deep infiltration. Although the glacial till soils within the project are not typically conducive to shallow infiltration, there may be potential for deep infiltration if favorable subsurface soil conditions exist. The memo indicates that a Soil Permeability Study is underway by Hart Crowser to evaluate this option.
6. Integration of Multiple Options. This option would utilize elements of all five approaches to form a comprehensive stormwater management strategy.

- The memo also provides a list of initial evaluation criteria recommended for evaluating stormwater management options for the City Center.

KPG's Initial Conclusions: This document introduces a stormwater management planning effort for the entire City Center area. Although it does not appear that in-depth analysis was completed for all of the options presented in the memo, it serves as a starting point for stormwater pre-design for the 42nd Avenue W project.

City Center Soil Permeability Study (Hart Crowser, August 2012)

- The purpose of the study was to evaluate the potential for large-scale stormwater infiltration within the City Center area.
- The study reviewed existing available subsurface data and completed 12 additional explorations to depths ranging from 15 to 53 feet.
- The study concludes that favorable infiltration conditions were not observed within the project area; however low infiltration conditions were observed in the eastern portion of the project area and south of the Convention Center.

KPG's Initial Conclusions: This document indicates that conditions for large-scale stormwater infiltration is most likely not feasible within the City Center area, with the possible exception of an area south of the Convention Center with low infiltration potential. The study did not evaluate or comment on the potential for shallow infiltration needed for currently-required on-site stormwater management, such as pervious pavement or bioretention. Additional project-based infiltration studies will be needed for that purpose.

Stormwater Management Requirements

Design Standards

Lynnwood Municipal Code (LMC) Chapter 13.40, Stormwater Management, does not contain specific technical requirements for stormwater management, rather, it refers to the City of Lynnwood Supplemental Stormwater Guidelines for minimum technical requirements. However, at this time it does not appear that Supplemental Stormwater Guidelines have been adopted.

As a permittee covered by the 2013-2018 Phase II Western Washington Municipal Stormwater Permit, the City of Lynnwood is required to adopt stormwater requirements by December 31, 2016 equivalent to the Minimum Requirements, thresholds, and definition contained in Appendix 1 of the Phase II permit, such as the current Department of Ecology Stormwater Management Manual for Western Washington (SWMMWW). For this reason, stormwater management requirements for this project have been analyzed using the 2014 SWMMWW.

Threshold Discharge Areas

Threshold discharge areas (TDAs) are defined for projects with multiple storm drainage discharge points. A TDA is defined as an onsite area that drains to a single natural discharge location, or multiple natural discharge locations that combine within one-quarter mile downstream (as defined by the shortest flow path). Drainage requirements with thresholds are applied to each TDA separately.

The 42nd Avenue West project spans two TDAs, as shown on the attached drainage basin map (see Figure 1). TDA A is the portion of the project area north of 198th Street SW that drains into the 198th Street SW conveyance system, which flows west, under 44th Avenue W, to a drainage system that flows south through the Lynnwood Square shopping center. TDA B is the area south of 198th Street SW that drains into the 200th Street SW storm drain, which flows west, then south along the east side of 44th Avenue West.

However, since both TDAs are within the Scriber Creek drainage basin and both discharge to the creek near 44th Avenue W, there may be flexibility to adjust the project's TDA boundaries provided it can be shown that downstream pipe conveyance capacity is sufficient and that there would be no adverse impacts to Scriber Creek.

Applicability of the Minimum Requirements

The applicability of the nine Minimum Requirements (MRs) of the 2014 SWMMWW is dependent on the size and type of the project. Since the City Center area is already nearly 95% impervious, all development would be classified as “redevelopment” and Figure 2.4.2 in Volume 1 of the SWMMWW is used to determine stormwater requirements.

Of the nine MRs, only three are significant to analyze at the pre-design stage due to their impacts to project cost and configuration:

- MR #5 (On-site Stormwater Management)
- MR #6 (Runoff Treatment)
- MR #7 (Flow Control).

MR #5, On-site Stormwater Management, is required to be applied to all impervious surfaces, both new and replaced, for projects that add 5,000 square feet or more of new hard surfaces. This requirements is the most significant change between the current SWMMWW and previous versions of the manual, in that it requires a detailed analysis of each impervious surface an implementation of BMPs such as pervious pavement and bioretention, essentially mandating the use of LID techniques for all projects. This is also a requirement that is difficult to achieve using a regional facility—the intent of these requirements is dispersed stormwater management. Evaluating the feasibility of

LID techniques such as pervious pavement or bioretention will require a project-specific geotechnical analysis, because highly dispersed infiltration BMPs such as permeable pavement are often feasible in areas where other types of infiltration facilities are not. Permeable pavement installations that can be shown to infiltrate 100% of the rain that falls on them are classified as “non-effective hard surfaces”, which are excluded flow control calculations, resulting in smaller flow control facilities.

MR #6, Runoff Treatment and MR #7, Flow Control, are applied differently to roadway and parcel-based projects.

For road-related projects that add 5,000 square feet or more of new hard surfaces, but add less than 50% to the existing hard surfaces within the project limits, flow control and runoff treatment requirements apply to new hard surfaces only, not replaced hard surfaces. This is significant because, for a project such as 42nd Avenue W, the amount of new hard surface is anticipated to be small, so the construction of these facilities is not expected to be a significant impact in terms of cost or area required. However, this interpretation should be verified by City of Lynnwood stormwater staff since existing impervious surfaces within the proposed 42nd Avenue W right-of-way are from previous private development, as opposed to an existing public roadway.

For parcel-based projects, such as for redevelopment of properties adjacent to 42nd Avenue W, the flow control and treatment requirements are greater. For projects that add 5,000 square feet or more of new hard surfaces where the value of the proposed improvements (including interior improvements) exceeds 50% of the assessed value, flow control and runoff treatment must be provided for both new and replaced hard surfaces. In the City Center area, it is anticipated that this 50% value increase threshold will be exceeded.

For runoff treatment (MR #6), it will be assumed for planning purposes that runoff treatment will be provided for all pollution-generating surfaces within the new roadway. This assumption is made because, although much of the new roadway is classified as replaced hard surface that would not otherwise require treatment, the new roadway will receive a higher level of use and therefore generate more pollutants than the parking lots and rooftops it will replace.

Preliminary Flow Control Facility Sizing

Based on the interpretation for MR #7 described above, construction of 42nd Avenue W would require providing flow control for new effective hard surfaces only. Based on the conceptual roadway layout, approximately 13,000 square feet of new hard surface would be added in TDA A and 7,000 square feet in TDA B. Since the area of new hard surface in TDA B falls below the 10,000 square foot flow control threshold, flow control would only be required only for the 13,000 square feet added in TDA A. Therefore, at

a minimum, only about 7,000 cubic feet of detention storage will be required for the project.

However, if the interpretation were made that the portion of the roadway within new right-of-way is subject to redevelopment requirements, the project would result in approximately 3.25 acres of new plus replaced hard surfaces, requiring a 60,000 cubic foot flow control facility.

Redevelopment of privately-owned parcels within the City Center is anticipated to trigger requirements for flow control for both new and replaced impervious surfaces. Assuming parcels are developed with 90% impervious coverage, the flow control volume required will be approximately 16,000 cubic feet per acre of redeveloped parcel area.

Stormwater Management Options

Following is a discussion of the options for complying with on-site stormwater management, runoff treatment and flow control requirements for this project.

Options for On-Site Stormwater Management

MR #5 offers two options for complying with the on-site stormwater management requirements: using on-site stormwater management BMPs from List #1 or List #2 (as applicable to the project) or by demonstrating compliance with the LID performance standard. For this purposes of this pre-design analysis, only the list approach has been considered. The performance standard approach offers more flexibility in BMP selection, but may not be possible to achieve in areas where infiltration is not feasible.

For the new street, the hard surfaces to be evaluated are the roadway pavement and sidewalks. Using List #2, which would most likely be applicable to this project, the following BMPs are required to be evaluated in the following order:

1. Full Dispersion
2. Permeable Pavement
3. Bioretention with a surface area equal to 5% of the contributing area
4. Sheet Flow Dispersion or Concentrated Flow Dispersion

Specific “infeasibility criteria” must be evaluated for each BMP before moving down the list to the next.

As a preliminary analysis, it appears Full Dispersion would not be required for either sidewalks or roadway because it would be impossible to achieve the vegetated flowpath requirements in a city center environment.

It appears likely that permeable pavement will not be required for the roadway (since traffic will exceed 400 ADT), but would be required for the sidewalks. To determine the requirement for using permeable pavement for sidewalks, a site-specific evaluation would be needed for the following potential infeasibility criteria:

- Geotechnical evaluation expressing reasonable concerns about erosion, slope failure, or down gradient flooding
- Any known soil or ground water contamination
- Seasonal high ground water within one foot of the bottom of the gravel base course
- Underlying soils unsuitable for supporting traffic loads when saturated
- Where native soils saturated, short-term hydraulic conductivity is less than 0.3 inches per hour

If permeable pavement is not feasible for the roadway or sidewalks, bioretention would need to be evaluated for either hard surface. Potential “infeasibility criteria” that would need a site-specific evaluation include:

- Geotechnical evaluation expressing reasonable concerns about erosion, slope failure, or down gradient flooding
- Seasonal high ground water between one and three feet of the bottom of the facility (requirement depends on contributing area)
- Where native soils saturated, short-term hydraulic conductivity is less than 0.3 inches per hour

It does not appear that the last option, Sheet Flow Dispersion or Concentrated Flow Dispersion, could be used for this project due to the lack of a 50-foot flowpath.

It is possible that permeable pavement will be considered feasible for sidewalks and bioretention planters for the roadway, however additional site-specific geotechnical investigation/evaluation will be needed as the design progresses. It may also be possible to construct a portion of the required bioretention facility within the proposed park.

Options for Runoff Treatment

The most appropriate option for runoff treatment for 42nd Avenue W will depend on the approach taken to comply with requirements for on-site stormwater management and flow control. For example, if bioretention is used to comply with the on-site stormwater management requirement for the roadway, no additional runoff treatment is required because bioretention satisfies the requirement for Enhanced treatment.

If a flow control facility is used to provide the required flow control for the roadway, the most cost effective treatment approach may be to install proprietary media filters downstream from the facility.

Options for Flow Control

As discussed in Section 3.4, it appears that only about 7,000 cubic feet of detention storage will be required in TDA A, because the 42nd Avenue W project area is already primarily impervious. This amount of storage could be easily accommodated within an underground concrete vault constructed beneath the roadway. However, as an incentive to redevelopment of adjacent City Center parcels, the City could consider constructing additional flow control volume within the 42nd Avenue W right-of-way or beneath the proposed park adjacent to 42nd Avenue W.

Fully evaluating flow control alternatives will require a thorough study of stormwater management within the entire City Center redevelopment area. However, for the purposes of considering City Center flow control that could be implemented in conjunction with the 42nd Avenue W project, three flow control alternative concepts have been considered:

Alternative Concept 1 would construct a 7,000 cubic foot concrete vault beneath the roadway to satisfy the 42nd Avenue W project's flow control requirement. The planning-level cost estimate for this facility is \$150,000, not including conveyance or treatment improvements. This alternative is shown graphically on the attached Figure 2.

Alternative Concept 2 would construct several flow control vaults beneath the roadway, to satisfy the flow control requirements for the roadway project as well as for 10.2 acres of privately-owned parcels likely to redevelop on both sides of the roadway. This concept is also illustrated on Figure 2 and has rough order of magnitude construction cost of \$3.5 million, not including conveyance or treatment improvements. A more detailed analysis of the roadway cross-section, including space for other utilities, will be needed to assess the feasibility of this concept.

Alternative Concept 3 would construct a regional flow control facility beneath the proposed park. The facility could be phased with the property acquisitions and development of the park. This concept is illustrated on the attached Figure 3, which shows a facility that could provide flow control for up to 12.5 acres of redevelopment within the City Center area. A rough, order of magnitude cost of this facility is \$4.2 million, not including conveyance or treatment improvements.

Preliminary Conclusions and Recommendations

Based on this analysis, it appears that MR #5, On-Site Stormwater Management, will

be the most challenging of the stormwater management requirements to apply to the 42nd Avenue W project. Based on our initial analysis, constructing the sidewalks of permeable materials (e.g. pervious concrete or pavers) and constructing bioretention planters sized at 5% of the new roadway area would satisfy this requirement. However, an additional project-specific geotechnical analysis will be needed to determine BMP feasibility and to fully evaluate this requirement.

To satisfy MR #6, Runoff Treatment, facilities will most likely be needed to provide treatment for the entire roadway. This could be achieved using bioretention, if implemented to satisfy MR #5, or with proprietary treatment facilities such as Filterra or Modular Wetland units. The approach taken to satisfy this requirement will depend on how On-Site Stormwater Management and Flow Control requirements are met and will be evaluated in more detail during the preliminary design phase.

Since the 42nd Avenue W project site is mostly impervious in its existing condition, and because this is a road-related project, it appears that the flow control required by MR #7 for the new roadway will be limited to a 7,000 cubic foot facility. Flow control requirements will apply more heavily to parcel redevelopment, which could be achieved either through on-site or regional flow control facilities. The alternative flow control concepts identified in Section 4.3 and shown on the attached figures are intended to identify potential flow control facilities that could be implemented as part of the 42nd Avenue W and park projects. A more thorough stormwater planning effort will be needed to guide stormwater management and conveyance improvements for the entire City Center redevelopment area.

Figures

- Stormwater Requirements Flowchart (see page 32)
- Figure 1 – Drainage Basin Map (see page 33)
- Figure 2 – Alternative Flow Control Concepts #1 and #2 (see page 34)
- Figure 3 – Alternative Flow Control Concept #3 (see page 35)

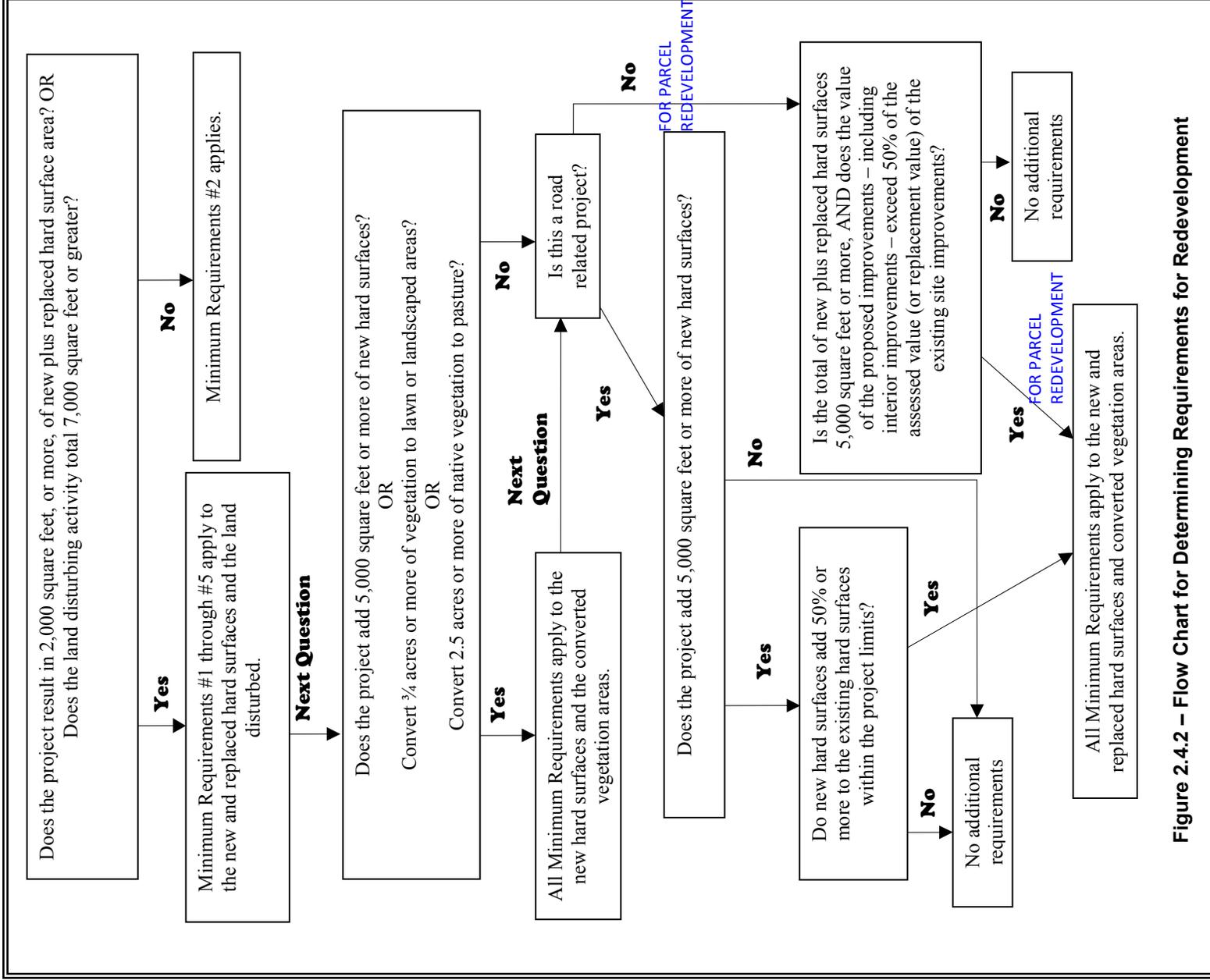


Figure 2.4.2 – Flow Chart for Determining Requirements for Redevelopment

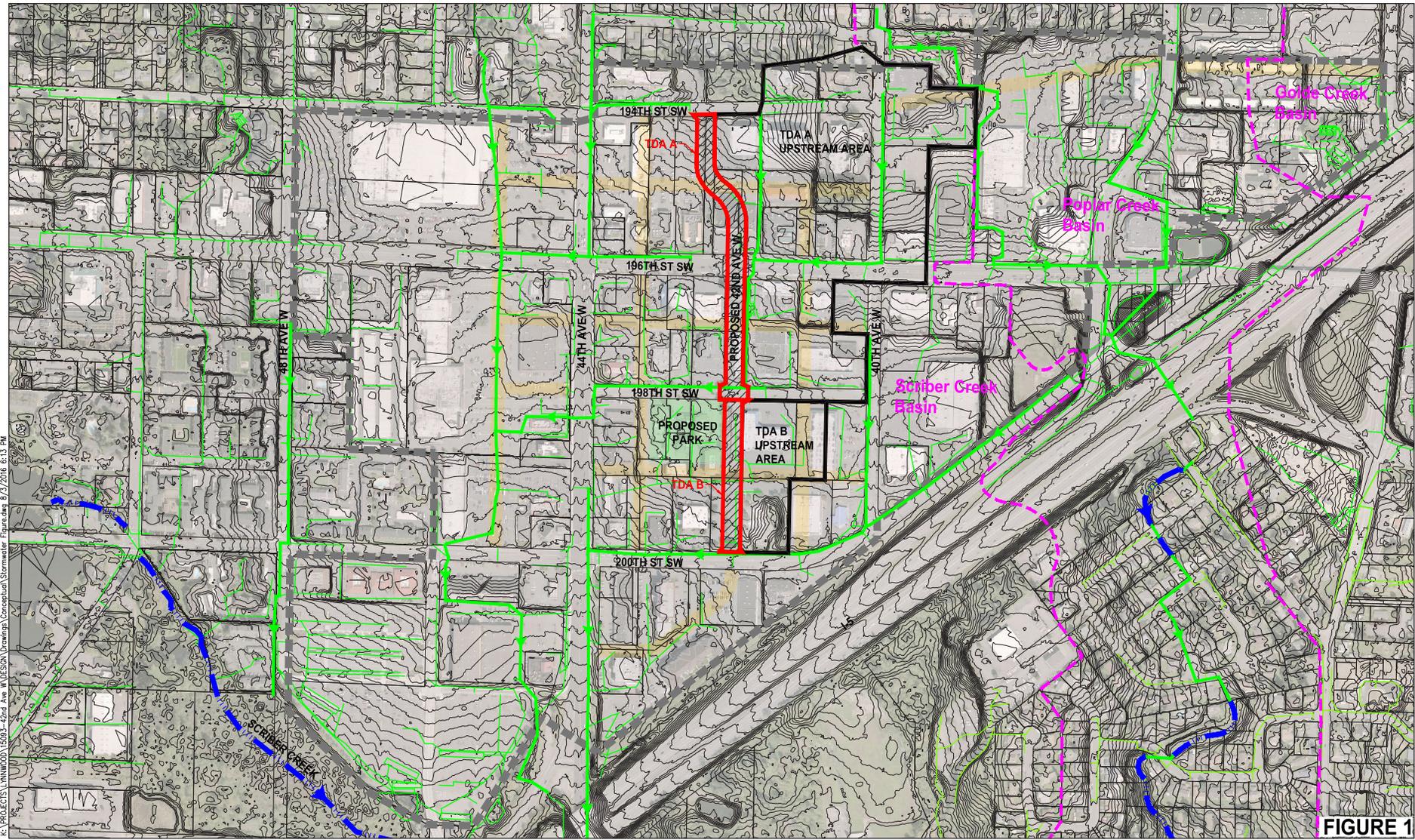


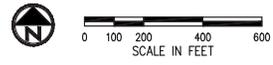
FIGURE 1

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LEGEND	
	EXISTING STORM DRAINS
	POTENTIAL FUTURE STREETS
	PROJECT / THRESHOLD DISCHARGE AREAS
	CITY CENTER REDEVELOPMENT AREA
	BASIN DIVIDE

DRAINAGE BASIN MAP
LYNNWOOD CITY CENTER - 42ND AVE W



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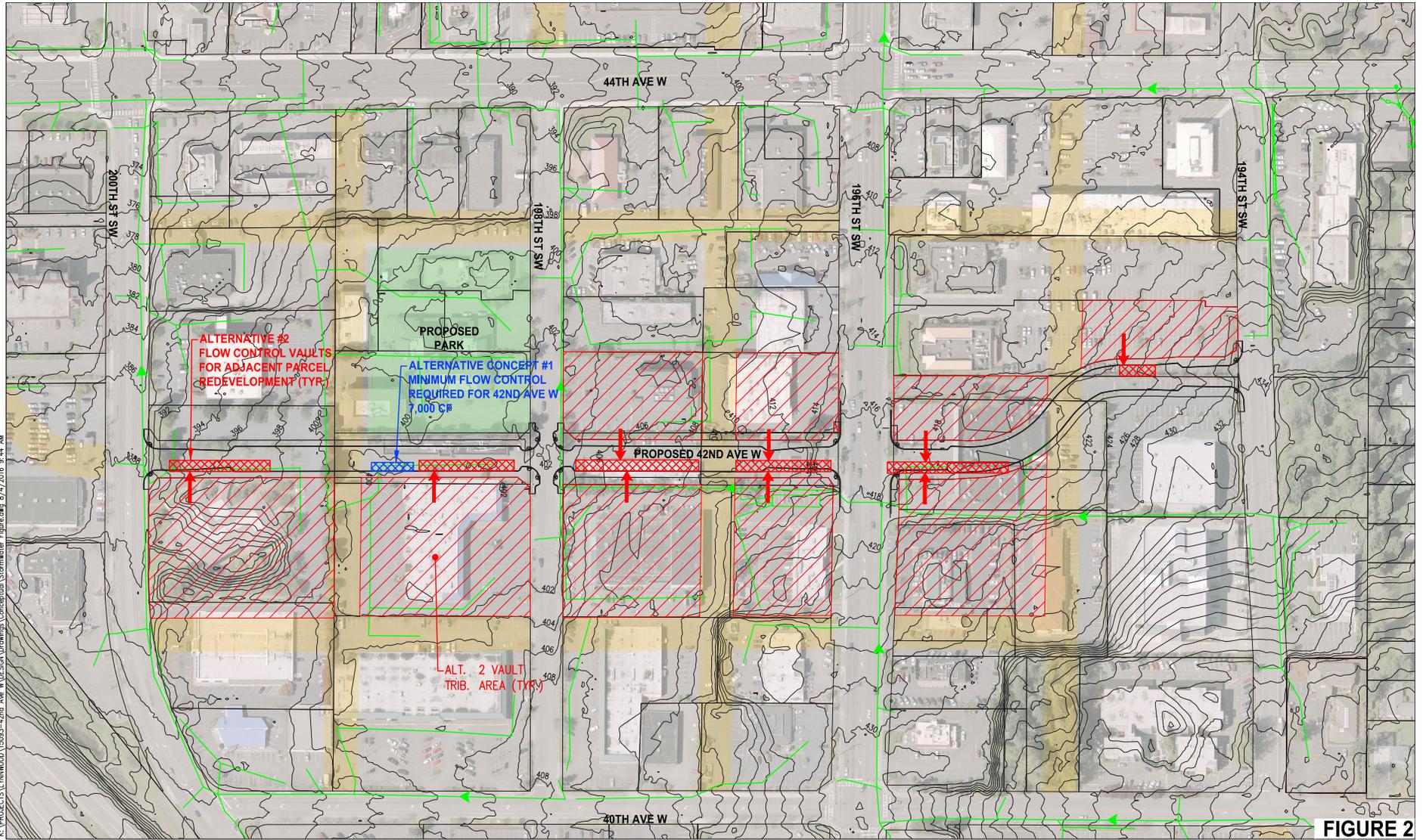
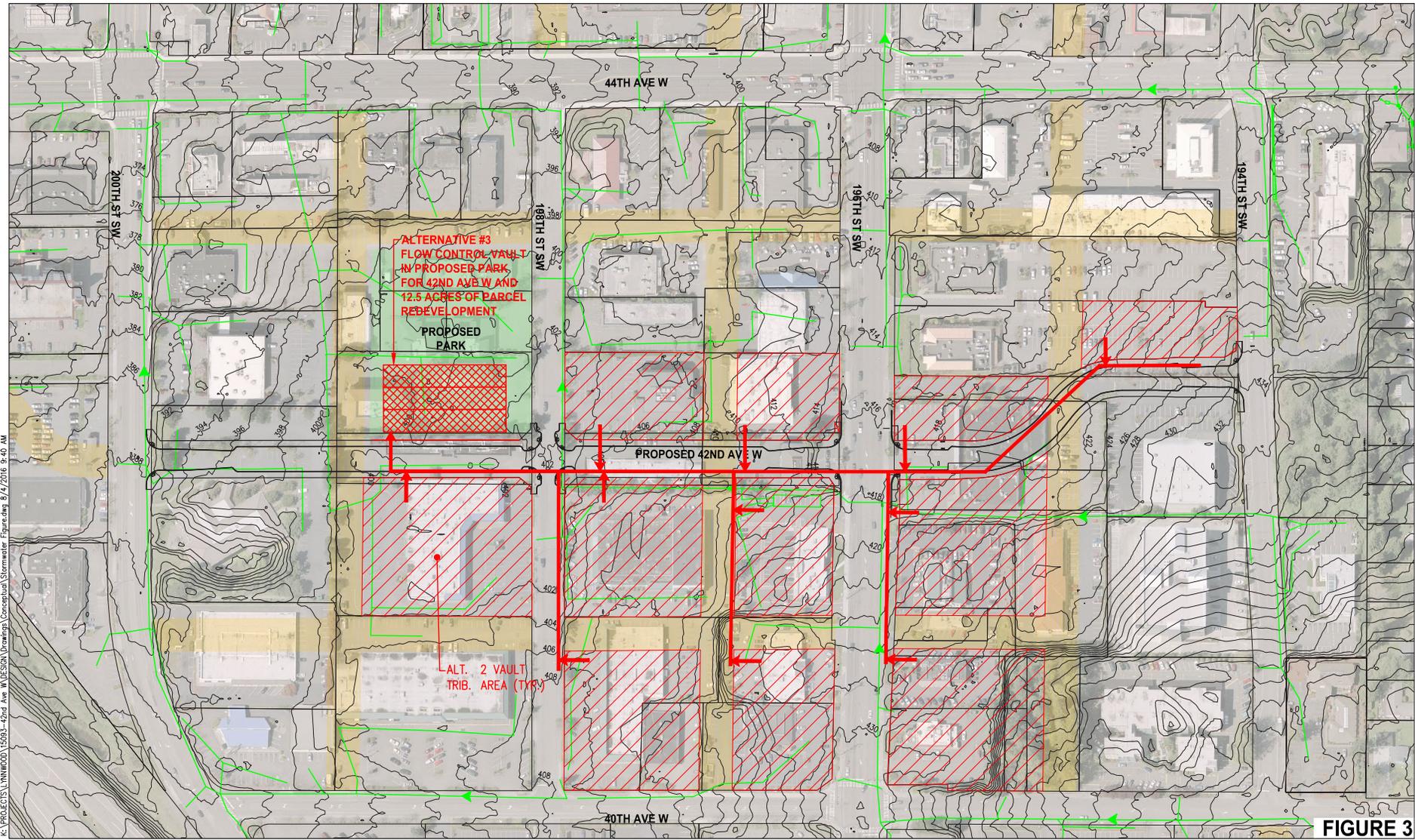


FIGURE 2



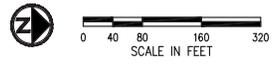
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FIGURE 3



LEGEND	
	EXISTING STORM DRAINS
	POTENTIAL FUTURE STREETS
	FLOW CONTROL VAULT
	ALT #3 VAULT TRIB. AREAS

ALT. FLOW CONTROL CONCEPT #3
LYNNWOOD CITY CENTER - 42ND AVE W



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To: City of Lynnwood
 CC: Sessyle Asato - KPG, Faith Roland - Roland Resources
 From: Bryce Corrigan, KPG
 Date: 8/29/2016
 Re: ***Right-of-Way Analysis Technical Memorandum***

Introduction

This memorandum summarizes findings and conclusions resulting from KPG's discussion with the City of Lynnwood and Roland Resources on August 29, 2016. The purpose of this meeting was to discuss ROW alternatives to be included in the Pre-Design Report; property acquisition strategies and language; coordination with other CIP projects, and potential funding sources for 42nd Ave W.

Background

ROW alternatives were analyzed to determine the most cost effective alternative for retaining the land required to build 42nd Ave W. Parcel acquisitions should take into account both 42nd Ave W as well as other Capital Improvement Projects (CIP) projects to maximize the value and benefit of the purchased property. The parcel acquisition mechanism is the same for all alternatives, however the different strategies for land retainage offer opportunities for the City to realize cost recovery.

The City initially sought cost savings through partial parcel acquisition (strip take). Further coordination with the ROW consultant, Roland Resources, determined that the City cannot limit its acquisition to the footprint of the roadway, as this would leave property owners with uneconomic remnants. Therefore, the City will be required to purchase the full parcels where applicable. The three retainage strategies discussed below have the same initial acquisition cost, but offer differing levels of cost recovery. All acquisition strategies require that the City provide just compensation to the land owner.

ROW Alternatives

The three ROW alternatives discussed at this meeting were Alternative 1: Sidewalks Retained as Easements, Alternative 2: Sidewalks Retained in Fee, Alternative 3: Other (roadway easements, utility easements, etc).

For **Alternative 1, Sidewalks Retained as Easements**, the City would sell some or all of the sidewalk area back to adjacent property owners and retain an easement on that property dedicated specifically to sidewalk improvements, underground infrastructure, streetscape elements, etc. The property owner may, as part of the easement agreement, retain the right to install private infrastructure beneath their portion of the sidewalk, such as a parking garage, and the square footage of the easement could apply toward a

development's zoning requirements/FAR and property value. The ROW would be set at the property line, between the back of curb and the back of sidewalk.

With **Alternative 2, Sidewalks Retained in Fee**, the City retains ownership of the sidewalk area, both above and below ground, which does not provide for any cost recovery. This alternative gives the City control over the building-sidewalk interface, the streetscape elements, underground infrastructure, etc. and would establish the ROW at the back of sidewalk.

Alternative 3 is a combination of retaining portions of the sidewalk and roadway as easements and in fee. It provides flexibility for the City to sell a greater area of land back to adjacent property and retain control over the roadway, sidewalk, utilities, etc through dedicated and clearly defined easements. This alternative may provide greater cost recovery but could result in inconsistent development. There would be no specific ROW line but a series of easements establishing ownership of land along the corridor.

If the City elects to sell their property and retain easements, the easement designation must be made clear to the property owner to protect the City's infrastructure.

Property Negotiations

The appraisal process was discussed in general and then specifically as it relates to the 42nd Ave W project. An appraiser will value a property based on the highest of three value calculations: Highest and best use land value, comparable sales and surrounding rent values, and land and building values. Underutilization of property is not evaluated during an appraisal. In order for the City to purchase an entire parcel, the City must demonstrate that the land is absolutely needed as part of a CIP project. However, the roadway only requires a limited amount of area within the larger parcel, thus an argument can be made that an easement may be granted with the owner retaining the rights to the remaining land area.

The proposed alignment of 42nd Ave W will require the outright purchase of five (5) parcels and at least partial purchase of three (3) others.

Damages

42nd Ave W will require the City to purchase partial areas of land on certain properties. In addition, damages due to loss parking, impacts to access, building damage, etc. must

be compensated to the property owner. Compensation for damages are in addition to land value compensation. Should a tenant or owner occupant be displaced as a result of this project, the City must pay for all relocation expenses, per the Uniform Act requirements. Occupant can be permitted to lease back the property prior to possession for the 42nd Ave W construction.

Condemnation

Condemnation is the acquisition of private land by a public agency for public improvements, through the power of eminent domain and it is used as a last resort when City and property owner cannot reach an agreement on compensation. Should the acquisition through condemnation also involve a displaced person or business, they will be given a minimum of 90 days to give possession of the property. The cost of relocation to the project can be an additional 20% of the project acquisition costs on average.

For full parcel acquisitions, the area outside of the 42nd Ave W corridor can be sold back to the developer to increase their Floor Area Ratio (FAR). Furthermore, the proposed sidewalk area can be sold to developers but retained as a designated sidewalk corridor, or easement. Roland Resources informed the group that comparable land prices are as high as \$98/sqft. By selling the excess property and retaining easements the City can potentially recover 15%-25% of their purchase costs.

Uneconomic Remnants

An uneconomic remnant is described in the Revised Code of Washington as “a parcel of real property in which the owner is left with an interest after the partial acquisition of the owner’s property and that the head of the agency concerned has determined has little or no value or utility.”

The proposed alignment of 42nd Ave W cuts through eight (8) parcels which require varying amounts of land acquisition. The typical roadway section will not utilize the entire parcel width, and several parcels will be left with uneconomic remnants. The City must offer to purchase these remnants, but the owner is not obligated to accept the offer. For three (3) properties along the alignment, it would benefit the City to purchase the full parcel and recover some of the purchasing costs by selling the uneconomic remnant land area to future developers.

In the case of 4111 Alderwood Mall Blvd (SW 200th St), the alignment cuts through the parcel, leaving two remnants. The western remnant could be described as uneconomic as it is separated from the remaining parcel. The City can purchase the strip of land required to serve the roadway AND the western remnant, or solely purchase the land required by the roadway (strip take). If the City elects to utilize the strip take approach an offer must be made by the City to purchase the western remnant from the owner. The owner does not have to sell the remnant but the City is required to make an offer.

ROW Funding Options

Funding options were briefly discussed. There are a couple of funding options for a project of this magnitude. First, the City can elect to front the entire purchase of the parcels required for 42nd Ave W and apply for federal funds, with the intent to receive reimbursement once grant funding is obtained. Second, the City can vote on a bond measure of \$20-\$30 million value to fund the purchase of the parcels needed for the roadway. Lastly, the City can partner with Developers and have the Developer contribute easements for the frontage improvements.

During meetings with the City, cost recovery for the purchased land and remnants was discussed. The potential cost recovery of the purchased land is dependent on the demand of adjacent developers to redevelop the land. Easement dedication does not occur until the project is under construction. A 20% contingency for inflation and increasing market values is recommended when budgeting for future ROW purchases.

Coordination with other CIP Projects

Due to the high cost of the required ROW acquisition for 42nd Ave W, it is important the City evaluate future CIP projects to determine where cost sharing is feasible. Transparency between the City and property owners is important for legal and fair parcel acquisition.

Conclusion

At this time, The City is still exploring ROW and property acquisition options.

Exhibit A: Sections 1 and 2 of Ordinance 2937

103 WHEREAS, based on these findings, it is appropriate to amend the City of Lynnwood zoning
 104 code, City Center Design Guidelines, and Ordinance No. 2627; and,
 105
 106 WHEREAS, the City Council finds that it is in the interest of the public health, safety and welfare
 107 to adopt this ordinance, now therefore,

108 THE CITY COUNCIL OF THE CITY OF LYNNWOOD, WASHINGTON, DO ORDAIN AS
 109 FOLLOWS:

110 **Section 1.** Section 1 of Ordinance No. 2627 adopted by the Lynnwood City Council on July 10, 2006, is
 111 hereby amended as follows:

112 “Section 1. The following new streets shall be located in the City Center Sub-Area:

113
 114 The proposed new streets in the City Center would follow centerlines defined
 115 approximately as follows. Such streets may deviate pursuant to the determination of the
 116 Public Works Director from the centerlines described below, to take best advantage of
 117 physical conditions in the field and to coordinate with legal parcel boundaries.
 118
 119
 120

121 **42nd Avenue W** would run generally in a straight line aligned parallel to existing 44th
 122 Avenue W, from existing 200th Street SW to existing 194th Place SW. The centerline
 123 would cross existing 194th Street SW approximately 680 feet east of the centerline of
 124 existing 44th Avenue W.
 125

126
 127 **194th Street SW Extension** would follow a meandering line proceeding from a point of
 128 beginning located on the centerline of existing 194th Street SW approximately 140 feet
 129 west of the centerline of existing 40th Avenue W, then bearing generally east-
 130 northeasterly to existing 36th Avenue W, crossing existing 36th Avenue W approximately
 131 220 feet north of the point of beginning. From the centerline of 36th Avenue W the route
 132 would continue east-southeasterly approximately 78 feet, then east approximately 956
 133 feet to the centerline of existing 33rd Avenue W, meeting existing 33rd Avenue W
 134 approximately 220 feet north of the point of beginning.
 135
 136

137 **Section 2.** Section 2 of Ordinance No. 2627 adopted by the Lynnwood City Council on July 10, 2006, is
 138 hereby amended as follows

139 “Section 2. All development shall dedicate right of way for streets designated herein, and
 140 shall be a width in accordance with the adopted City Center Sub-Area plan or as approved by
 141 the Public Works Director. The Public Works Director may make a determination to waive or
 142 modify the extent of the dedication to ensure that the extent of the dedication, if any, is
 143 roughly proportional to the project impacts. The Public Works Director shall also have the
 144 authority to waive the requirement for right of way dedication for the streets designated
 145 herein and/or approve modified alignments if the Public Works Director finds that such
 146 waiver or modification does not impact the functions for those streets including fire lane
 147 standards. For purposes of this ordinance, the term "development" shall include subdivisions,
 148 short subdivisions, planned unit developments, binding site plans and design review
 149 approvals. Appeals of the Public Works Director's decision shall be processed as a Process II
 150 application (LMC 1.35.200).”
 151
 152

153 **Section 3.** LMC Section 21.02.715 is hereby amended as follows,

154 **21.02.715 Sign, roof.**
 155

Exhibit C:
Legal Description of DREAL 2004's Property

(Grantor's Property)

The southerly 616.20 feet of Lot 8, Alderwood Manor, according to the plat thereof recorded in Volume 9 of Plats, page 71, records of Snohomish County, Washington;

EXCEPT the south 400 feet of the east 210 feet; and,

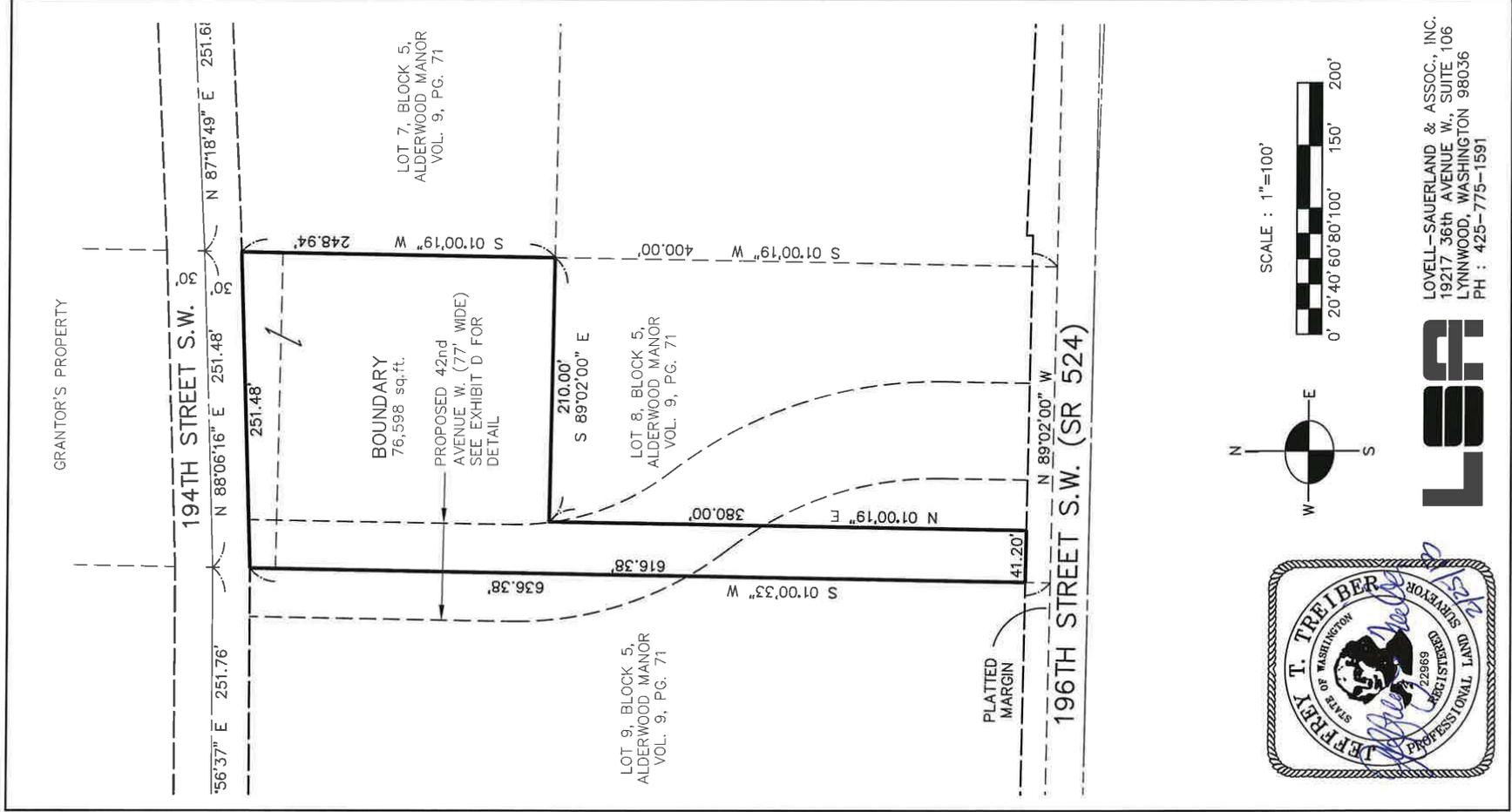
EXCEPT portion lying within Secondary State Highway No. 1-W (SR-524), acquired by Decree of Appropriation entered in Snohomish County Superior Cause No. 87248.

ALSO,

That portion of Lot 8, Alderwood Manor, according to the plat thereof recorded in Volume 9 of Plats, page 71, records of Snohomish County, Washington, lying southerly of the southerly right of way of 194TH Street S.W., as conveyed to the City of Lynnwood by deed recorded under Auditor's File Number 7807110228, records of Snohomish County, Washington and northerly of the north line of the southerly 616.20 feet of said Lot 8.

All subject to easements, restrictions and reservations of record.

Exhibit D:
Map of DREAL 2004's Property



LOVELL-SAUERLAND & ASSOC., INC.
19217 36th AVENUE W., SUITE 106
LYNNWOOD, WASHINGTON 98036
PH : 425-775-1591

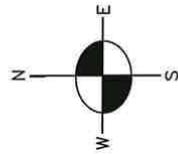


Exhibit E:
Legal Description of DREAL 2004's Property to be Dedicated

(Conveyance)

That portion of Lot 8, Alderwood Manor, according to the plat thereof recorded in Volume 9 of Plats, page 71, records of Snohomish County, Washington, described as follows:

Beginning at the southwest corner of said Lot 8; thence North 1°00'33" East, along the west line of said Lot 8, a distance of 636.38 feet to the southerly margin of 194TH Street S.W., as conveyed to the City of Lynnwood by deed recorded under Auditor's File Number 7807110228, records of Snohomish County, Washington and the True Point of Beginning; thence South 1°00'33" West, along said west line, a distance of 348.10 feet to an intersection with a curve to the left having a radius of 277.54 feet; thence southerly, along the arc of said curve and consuming a central angle of 8°04'20", an arc distance of 39.10 feet to the point of reverse curvature; thence southerly along the arc of a curve having a radius of 270.44 feet and consuming a central angle of 7°00'31", an arc distance of 33.08 feet to the west line of the east 210 feet of said Lot 8; thence North 1°00'19" East, along said east line, a distance of 167.63 feet to an intersection with a curve to the right having a radius of 200.54 feet and from which intersection point the center of said curve bears North 81°39'12" East; thence northerly, along the arc of said curve and consuming a central angle of 9°21'21", an arc distance of 32.75 feet to the point of tangency on the east line of the west 38.50 feet of said Lot 8; thence North 1°00'33" East, along said east line, a distance of 209.03 feet to said southerly margin of 194TH Street S.W.; thence South 88°06'16" West, along said southerly margin, a distance of 38.55 feet to the True Point Beginning.



21.60.500 Street types.
Notwithstanding LMC Title 19 and other adopted street standards, development and redevelopment of streets in the city center shall comply with Table 21.60.4: Street Standards.

Table 21.60.4: Street Standards

Design Standards	Boulevard	Collector Arterial	Grid Street	Promenade Street
Streets	44th Ave. W., 200th St. S.W./AMB, 196th St. S.W., 36th Ave. W.	194th St. S.W., 40th Ave. W.	42nd Ave. W.	198th St. S.W. (see definition for Promenade Street)
Right-of-way width	200th: 5 lanes: 99 feet 200th: 6 lanes: 110 feet 200th: 7 lanes: 121 feet 196th: 7 lanes: 111 feet 44th: 7 lanes: 111 feet 44th: 8 lanes: 122 feet 36th: 6 lanes: 97 feet 36th: 5 lanes: 85 feet	194th: 2 lanes with on-street parking: 73 feet 40th: 3 lanes without on-street parking: 76 feet	2 lanes with on-street parking: 77 feet	2 lanes with on-street parking: 73 feet
Parking lane	No parking	194th St. S.W.: Both sides, 8 feet wide 40th Ave. W.: No parking	Both sides; 8 feet wide	Both sides; 7 feet wide
Sidewalks	Both sides, 12 feet wide, including 5-foot-wide zone for tree wells along the curb (plus 6" curb)	Both sides, 194th St. S.W.: 12 feet wide, including 5-foot- wide zone for tree wells along the curb (plus 6" curb) 40th Ave. W.: 16 feet wide, including 5-foot- wide zone for tree wells along the curb (plus 6" curb)	Both sides, 16 feet wide, including 5-foot-wide zone for tree wells along the curb (plus 6" curb)	Both sides, 16 feet wide, including 5-foot-wide zone for tree wells along the curb (plus 6" curb)
Curb and gutter	Both sides; 6" raised	Both sides; 6" raised	Both sides; 6" raised	Both sides; 6" raised (or rolled with decorative bollards for pedestrian safety)
Travel lanes and turning lanes (maximum #)	5 – 8	194th St. S.W.: 2 40th Ave. W.: 3	2	2
Travel lane width	11 – 12 feet	11 feet	14 feet	13 feet
Bicycle travel lane	44th Ave. W., 196th St. S.W., and 36th Ave. W.: No bicycle travel lane 200th St. S.W.: 5-foot on-street bicycle lanes (both sides)	5-foot on-street bicycle lanes (both sides)	No separate on-street bike lane. Incorporate sharrows in traffic lane of street section	No separate on-street bike lane. Incorporate sharrows in traffic lane of street section
Intersection curb	35-foot radius with no curb bulb extension along boulevard	35-foot radius at boulevard; 25-foot radius at all other with 6-foot curb bulb extension	35-foot radius at boulevard; 25-foot radius at all other with 6-foot curb bulb extension	35-foot radius at boulevard; 25-foot radius at all other with 6-foot curb bulb extension
Raised landscape median (width)	6 feet in left turn pocket areas; 18 feet at all other areas	None	None	None

Notes:

- a. Refer to city center design guidelines for access requirements.
- b. The public works director may, with the concurrence of the fire marshal, modify the street standards in Table 21.60.4 if the modification does not impact the function for those streets. Appeals of the public works director's decision shall be processed as a Process II application (LMC 1.35.200) (Ord. 2937 § 10, 2012; Ord. 2554 § 8, 2005)

The Lynnwood Municipal Code is current through Ordinance 3251, passed March 13, 2017.