



City of Kenmore - 18120 68th Avenue NE - P.O. Box 82607 - Kenmore, WA 98028
Phone: 425-398-8900 - Fax: 425-481-3236 - E-mail: cityhall@kenmorewa.gov

City of Kenmore
City Council Regular Meeting Agenda
7:00 p.m., Monday, October 19, 2015
Kenmore City Hall, Council Chambers
18120 68th Ave. NE, Kenmore, WA 98028

If you have any questions or to confirm agenda items prior to the meeting, or if you require special accommodations, please call the City Clerk at 425-398-8900. You may also stop by City Hall at 18120 68th Avenue NE, Kenmore. Council agendas are also available on our website at www.kenmorewa.gov.

I. CALL MEETING TO ORDER

II. ROLL CALL

III. FLAG SALUTE

IV. AGENDA APPROVAL

V. CITIZEN COMMENTS

- A. This is an opportunity to express your views on issues that are important to you and to the community. Please limit your comments to three (3) minutes.

VI. CONSENT AGENDA

- A. King County LiDAR (Lighting Detection and Ranging) Imagery Project
Interlocal Agreement, Contract No. 15-C1477 - Bryan Hampson, Development
Services Director
[Agenda Bill & Attachment](#)

VII. BUSINESS AGENDA

- A. 2015 State Legislative Session Recap - Nancy Ousley, Assistant City Manager;
46th District Legislators; and Briahna Murray, Gordon Thomas Honeywell
- B. Discussion Regarding NE 182nd Street Pedestrian Improvement Options - Kris
Overleese, Public Works Director/City Engineer, and Brett Schock, Traffic
Engineer
[Agenda Bill & Attachment](#)
[PowerPoint Presentation](#)
- C. Update on City Council Goal No. 1 Progress, Including Target Zero Initiative -
Kris Overleese, Public Works Director/City Engineer; Leslie Harris,

Management Analyst; Brett Schock, Traffic Engineer; and Jenny Pazar,
Communications Intern
[Agenda Bill & Attachment](#)
[PowerPoint Presentation](#)

VIII. STAFF REPORT

A. Puget Sound Energy Franchise Agreement - Rob Karlinsey, City Manager

IX. COUNCILMEMBER REPORTS & COMMENTS

X. COUNCILMEMBER INITIATIVES

XI. ADJOURNMENT

Upcoming Meetings:

Tues., October 20, 2015	7:00 p.m.	Planning Commission Regular Meeting
Mon., October 26, 2015	7:00 p.m.	City Council Special & Regular Meeting and Joint Planning Commission Meeting
Tues., November 3, 2015	7:00 p.m.	Planning Commission Regular Meeting



City Council Business Agenda Item
City of Kenmore, WA

Subject/Topic: 2015 King County-wide LiDAR Project Proposed Council Action/Motion: Authorize City Manager to execute Contract No. 15-C1477, 2015 King County LiDAR Project Funding Agreement	For Council Meeting Agenda of: October 19, 2015 Department: <u>Development Services</u> Prepared by: <u>Bryan Hampson, Director</u> <table style="width: 100%;"> <tr> <td style="width: 70%;"></td> <td style="width: 30%; text-align: center;"><u>Initial & Date</u></td> </tr> <tr> <td>Approved by Department Head:</td> <td style="text-align: center;"><u>BA 10/7/15</u></td> </tr> <tr> <td>Approved by City Attorney:</td> <td style="text-align: center;"><u>✓ R.K. 10/7/15</u></td> </tr> <tr> <td>Approved by Finance Director:</td> <td style="text-align: center;"><u>10/7/15</u></td> </tr> <tr> <td>Approved by City Manager:</td> <td style="text-align: center;"><u>RJK</u></td> </tr> </table> Exhibits/Attachments: Contract No. 15-C1477, 2015 King County LiDAR Project Funding Agreement		<u>Initial & Date</u>	Approved by Department Head:	<u>BA 10/7/15</u>	Approved by City Attorney:	<u>✓ R.K. 10/7/15</u>	Approved by Finance Director:	<u>10/7/15</u>	Approved by City Manager:	<u>RJK</u>
	<u>Initial & Date</u>										
Approved by Department Head:	<u>BA 10/7/15</u>										
Approved by City Attorney:	<u>✓ R.K. 10/7/15</u>										
Approved by Finance Director:	<u>10/7/15</u>										
Approved by City Manager:	<u>RJK</u>										
<table style="width: 100%;"> <tr> <td style="width: 33%;">Expenditure Required \$2,621.11</td> <td style="width: 33%;">Amount Budgeted \$2,621.11 is coming from 2015/16 General Fund, Emergency Management budget.</td> <td style="width: 33%;">Appropriation Required NA</td> </tr> </table>		Expenditure Required \$2,621.11	Amount Budgeted \$2,621.11 is coming from 2015/16 General Fund, Emergency Management budget.	Appropriation Required NA							
Expenditure Required \$2,621.11	Amount Budgeted \$2,621.11 is coming from 2015/16 General Fund, Emergency Management budget.	Appropriation Required NA									
<u>INFORMATION/BACKGROUND:</u> This is an opportunity for Kenmore to join King County and other municipalities in taking advantage of a unique opportunity to economically acquire high-resolution 3D imagery for the entire county. The US Geological Survey is making available a grant to help King County acquire LiDAR (Light Detection and Ranging) data, and by combining together, we can reduce the cost per acre for each team member. Some of the common uses for LiDAR imagery are: • Landslide risk modeling • Geomorphology, including change detection • Terrain modeling • Flood modeling • Building mapping • 3D modeling for urban planning • Canopy and biomass measurement • Infrastructure mapping, especially transportation LiDAR has been in the news since the Oso landslide, and concerns about public safety add urgency to this effort. "Images of the area produced in 2013 using a laser-scanning method called LiDAR show that the North Fork of the Stillaguamish is riddled with the scars of old landslides," the Seattle Times reported on April 9. "At least one of those slides clearly ran out even farther than the Oso slide, according to (UW geomorphologist David) Montgomery. Had the LiDAR images been available sooner, they would have shown that slopes along the river were capable of unleashing slides with a much longer reach than any of those previously recorded — information											

that could have been factored into land-use decisions, he pointed out.”

Kenmore has some areas that this information may be helpful, such as the ravine between 84th AVE NE - 88th AVE NE and the Sammamish River and Simonds Road, the slope along Lake Washington and other areas throughout the city.

Attached is the customized Funding Agreement (Agreement) for the planned 2015 King County area LiDAR project. It describes the relationship between Kenmore and King County and includes the project proposal from Quantum Spatial (QSI), the vendor for this project. Kenmore is one of 28 participants who are designating King County as the fiscal agent, as described in the Agreement. King County, in turn, will enter into an Interlocal Agreement (ILA) with the Kitsap County Department of Emergency Management (KCDEM) on Kenmore’s behalf. Eleven other participants are signing an ILA directly with KCDEM, which is managing this project.

Notice that the Counterparts table does not contain an additional cost for ‘optional deliverables’ at this time. Optional deliverables, if any, have not yet been determined, but will be negotiated with QSI once the project is initiated. A separate Counterparts will be created for those participants who opt for these deliverables. So the absence of this information at this time does not prevent processing of this Agreement.

FISCAL CONSIDERATION:

The overall cost of this county-wide project is \$546,256.62, whereas Kenmore’s portion is \$2,621.11. The costs for Kenmore to conduct this mapping on its own would be substantially more than the current portion.

COUNCIL GOAL/BUDGET OBJECTIVE BEING ADDRESSED:

To continue to implement the Council’s vision of providing a safe and secure community; sustainable, healthy environment; and a desirable place to work and live. A community that is attentive to, and seeks to provide, for the health, safety and welfare of all its citizens.

2015 King County Lidar Project Funding Agreement

City of Kenmore Contract No. 15-C1477

This Funding Agreement (Agreement) is entered into by and among: the City of Algona, the Town of Beaux Arts Village, the City of Burien, the City of Clyde Hill, the City of Des Moines, the City of Enumclaw, Highlands Sewer District, the Town of Hunts Point, the City of Kenmore, the King County Water District 111, the King County Water District 125, King County, the City of Lake Forest Park, the City of Medina, the City of Mercer Island, the City of Milton, the Muckleshoot Tribe, the City of Newcastle, the City of Normandy Park, the City of SeaTac, the Port of Seattle, the City of Shoreline, the Skyway Water and Sewer District, the City of Snoqualmie, the City of Tukwila, the Valley View Sewer District, the Vashon Sewer District, the City of Woodinville, the Town of Yarrow Point, and other cities and governmental service agencies that later join subject to Section VI of this Agreement (hereinafter "Party" or Parties").

RECITALS

WHEREAS, the Parties to this Agreement consist of local governmental entities, including counties, cities, and governmental services agencies; and

WHEREAS, the purpose of this Agreement is to permit the Parties to cooperate on the funding of a 2015 Lidar Acquisition Project (Project); and

WHEREAS, the Project will provide 1) deliverables from Quantum Spatial, Inc. (QSI), the vendor Kitsap County Department of Emergency Management (KCDEM) entered a contract with for the acquisition and processing of high-resolution lidar data; and 2) quality assessment/assurance (QA) of the deliverables by the Puget Sound Lidar Consortium (PSLC); and

WHEREAS, KCDEM will provide among other things, administrative management of the Project; and

WHEREAS, agencies throughout the King County region regularly engage in joint operations and provide mutual assistance through effective interagency cooperation, and

WHEREAS, jointly funding the Project will optimize the agencies' powers and resources, and ensure a standardized product for all Parties; and

WHEREAS, this Agreement will provide substantial benefit to the citizens of the participating governmental agencies;

NOW THEREFORE, it is hereby agreed and covenanted among the undersigned as follows:

I. PROJECT DESCRIPTION

Project details, technical specifications, and deliverable descriptions appear in the Lidar Data Acquisition Cost Schedule developed by QSI, found in Exhibit A. All deliverables will match the best-of-breed data specification as defined for the Puget Sound Lidar Consortium. The area of interest (AOI) for this project includes approximately 1,095 square miles of the western portion of King County and portions of adjacent counties to capture the AOIs for the cities of Auburn, Bothell, Milton, Shoreline, and Woodinville. The Project data will be acquired beginning in October 2015 for the upper elevations and in November/December for the lower elevations during the early leaf-off period of 2015. Delivery of data and products by QSI to the PSLC QA team will be within sixty (60) calendar days of the last date of acquisition for the Project. QA review will be completed within thirty (30) business days of delivery from QSI. Project costs are shared subject to Section V of this Agreement reducing each Party's financial commitment.

II. PROJECT MANAGEMENT

1. KCDEM will manage all components of the Project, including but not limited to contract administration and coordination with QSI and the PSLC. King County shall enter into a separate Interlocal Agreement (ILA) with KCDEM and appoint a Project Manager (KC PM) to coordinate with KCDEM. The KC PM shall report to the Parties on the matters described in Section III.2 below, and shall be readily accessible via phone and e-mail by all Parties. The KC PM shall remain an employee of King County at all times, and King County shall retain the right and duty to supervise the KC PM at all times.
2. The duties of the KC PM shall include:
 - a. Prepare a cost-allocation model and populate the model with required data to provide each Party with an accurate, final cost.
 - b. Provide direction and guidance to KCDEM, as requested by the Parties.
 - c. Report to the Parties on the Project's progress.
 - d. Account for availability and completeness of all Parties deliverables.
 - e. Validate and approve invoices submitted from KCDEM and direct payment to the applicable Party.

III. PROJECT COMMITTEE

1. A Project Committee (Committee) shall be formed and shall consist of one representative from each Party that is a signatory to this Agreement. The KC PM will provide coordination among the Committee and KCDEM. The KC PM will serve as the Chair of the Committee.
2. The Committee shall review and take action on the following specific items:

- a. Review Project reports submitted by KCDEM, QSI, and the PSLC.
 - b. Evaluate and provide direction to KCDEM regarding change order requests whether initiated by QSI or by a member or members of the Committee.
3. Meetings of the Committee shall be held on an as-needed basis. Meetings may be scheduled at the request of the KC PM, or by one of the members of the Committee. The KC PM shall be responsible for the logistics of scheduling meetings. Attendance may be in person or via teleconferencing.

IV. FISCAL AGENT

1. King County, acting as Fiscal Agent for the Project, shall:
 - a. Enter into an ILA with KCDEM.
 - b. Validate the cost for each Party.
 - c. Invoice each Party in accordance with this Agreement.
 - d. Maintain Project funds in the King County Imagery Reserve, a separate, non-interest-bearing fund managed by the King County GIS Center, to be disbursed as provided in this Agreement.
 - e. Pay invoices submitted by the PM from KCDEM.
 - f. Refund excess funds, if necessary and if greater than \$10.00.
2. King County shall perform and maintain an accounting of payments received from all Parties including: billings received, payments made, and unspent funds. King County shall provide a statement of this accounting to all Parties upon written (including e-mail) request.
3. Upon receipt of a notice of any record keeping dispute, King County shall notify all Parties and meet jointly with all interested Parties within two (2) weeks to resolve any record keeping dispute.

V. CONTRIBUTIONS BY PARTIES

1. By executing Counterparts, Section XVI of this Agreement, each Party agrees to pay its required monetary contribution, as stated on the signature page, for Project deliverables, KCDEM project management and QA services, for its AOI.
2. The contribution by each Party shall be calculated using the cost allocation model as set forth here.
 - a. The square miles of the corporate or otherwise defined AOI times 1.5, defined to two decimal point precision.
 - b. Value from (a) above, multiplied by the unit cost (cost per sq. mile) of the standard deliverables (\$569.09) and multiplied by 0.5. The unit cost for the standard deliverables includes a 7% surcharge for KCDEM Project

Management and a 7% surcharge for PSLC QA Services. This is the final cost for the Party.

3. **Optional deliverables are not included in the initial project proposal**, but may be negotiated and included later, executed under a separate counterpart, and paid at a mutually agreed date.
4. By signing this Agreement, each Party commits to paying its full contribution to the King County Imagery Reserve Fund by January 31, 2016. A Party may contribute its share from its budget from either FY 2015 or FY 2016.
5. All payments to the King County Imagery Reserve Fund shall be made by check payable to: **King County Finance**, and sent to **King County GIS Center, 201 South Jackson Street, Suite 706, Seattle, WA 98104, Attn: Katy Cressey**.
6. All funds collected by King County shall be used solely to pay all responsible Parties for work accepted under the QSI contract. King County shall not collect, receive or retain any of these funds for project management, administrative fees, or other actions it performs under this Agreement.

VI. ADDITION OF PARTIES

1. An entity may be added to this Agreement as long as the entity signs this Agreement and its AOI is wholly included within the project boundary defined in Exhibit A.
2. A Party added to this Agreement shall make full payment to the King County Imagery Reserve Fund by January 31, 2016. A Party may contribute its share from its budget for either FY 2015 or FY 2016.

VII. INDEPENDENT CONTRACTOR

The services provided by King County under this Agreement are those of an independent contractor. Employees of King County are and will remain employees of King County. Employees of the other Parties are and will remain employees of their respective Parties. Nothing in this Agreement shall be construed to render the Parties partners or joint venturers.

VIII. INDEMNIFICATION

Each Party shall defend, protect and hold harmless the other Parties from and against all claims, suits and/or other actions arising from any negligent or intentional act or omission of that Party's employees, agents and/or authorized subcontractor(s) while performing this Agreement.

IX. AMENDMENT

The Parties may amend this Agreement. Such amendments shall not be binding unless in writing and signed by personnel authorized to bind each of the Parties.

X. CHOICE OF LAW AND VENUE

This Agreement shall be governed by the laws of the State of Washington, both as to interpretation and performance. Any action at law, suit in equity or other judicial proceeding for the enforcement of this Agreement shall be instituted only in a court of competent jurisdiction in King County.

XI. INTEGRATION CLAUSE

This instrument embodies the entire agreement of the Parties with respect to funding of the contract. There are no promises, terms, conditions or obligations other than those contained in this Agreement. This Agreement supersedes all previous communications, representations or agreements, either oral or written, between any Party and King County.

XII. TERMINATION CLAUSE

In the event that King County decides not to enter into an ILA with KCDEM, this Agreement will terminate and all Parties will receive a full refund of their contributed funds.

XIII. NO ASSIGNMENT

The Parties shall not subcontract, assign, or delegate any of their rights, duties or obligations under this Agreement without the express prior written approval of King County.

XIV. DISPUTES

In the event that a dispute arises under this Agreement, the Parties shall endeavor to resolve the dispute in an amicable manner by direct discussions. If not resolved by mutual agreement, then the Parties may engage in alternative dispute resolution by mutual agreement. No party waives its rights to seek legal remedy in the jurisdiction and venue stated in Section X.

XV. EFFECTIVE DATE; TERM

Notwithstanding when this Agreement is signed, this Agreement shall take effect following its execution by each Party and shall expire at the end of 2016 unless terminated sooner.

XVI. COUNTERPARTS

Comment: Each Party will be provided with its unique COUNTERPARTS page. Besides the signature block this page will contain:

- a. Cost generated by the cost allocation model for standard deliverables and optional deliverables.*
- b. Specific terms of payment for those Parties with requirements for meeting its financial contribution in a different manner than stated in the main body of the Agreement.*

1.Name of Party	2.AOI times 1.5	3. Unit Cost for standard deliverables	4. Cost for standard deliverables	5. Cost for optional deliverables
City of Kenmore	9.21 sq. mi.	\$569.09	\$2,621.11	<Enter the cost of optional deliverables such as contours, etc.>

This Agreement may be signed in several counterparts, each of which shall be an original, but all of which together shall constitute the same instrument.

King County Lidar Project – Party Agreement Acceptance

(Note: Executing this section commits Party to acceptance and conditions within this Agreement.)

Party Organization	
Party Address	
Party Signature	Date
Party Print Name	
Party Title	

Optional – Approved as to Form Only

(Note: this section is **optional** and is provided for each Party should the Party require it. Completion of this section is NOT necessary for the purposes of formally committing to this Agreement. It is provided for those entities needing the Agreement to contain relevant internal approval process tracking information.)

Approval Organization	
Approval Address	
Approval Signature	Date
Approval Print Name	
Approval Title	

Optional – King County Agreement Acceptance

(**Note:** this section is **optional** and is provided for each Party should the Party require a counter signature to this agreement by King County. Completion of this section is NOT necessary for the purposes of formally committing to this agreement.)

King County Department

King County Address

King County Signature

Date

Print Name

Title

Exhibit A

LiDAR Data Acquisition Cost Proposal – King County LiDAR Project

September 9, 2015

Michael Gordon

Kitsap County Department of Emergency Management

911 Carver St

Bremerton, WA 98312

360-307-5872

mgordon@co.kitsap.wa.us

RE: LiDAR Data Acquisition Cost Proposal – King County 2015 Project Area, WA

Quantum Spatial, Inc. appreciates the opportunity to present to the **Puget Sound LiDAR Consortium (PSLC)** a cost proposal for acquiring and processing high-resolution (> 8 pulses/m²) LiDAR data for the project area of interest to King County, WA. Our cost for LiDAR acquisition and processing abides by our negotiated cost structure with the PSLC, assuming that a contract for standard deliverables will be administered through Kitsap County, WA.

LiDAR point cloud colored by NAIP imagery of downtown Redmond, Washington.



Services

Airborne LiDAR

QSI will collect LiDAR data using a Leica LiDAR system to produce a highly accurate, high resolution (≥ 8 pulses/m²) LiDAR dataset with no gaps and ample buffers (at least 100m) around project boundaries. Data will be collected at a $\leq 30^\circ$ field of view ($\pm 15^\circ$ from nadir), with at least 50% overlap among swaths to minimize gaps and laser shadowing. The LiDAR system records up to four range measurements (returns) per pulse (first, second, third, and last). All overlapping flight lines will be flown in opposing directions to maximize detection of swath to swath inconsistencies used to resolve system misalignments. Our GPS receivers and LiDAR systems are GNSS-capable ensuring low PDOP values and adequate satellite constellations throughout the mission. GPS quality is predicted before the flight and checked during post processing to ensure that positional accuracy exceeds specifications.

Using a combination of automated and manual techniques that are tailored to the particular land cover and terrain of the study area, LiDAR processing will include kinematic corrections, calculation of laser point position, relative accuracy testing and calibrations, classification of ground and non-ground points, assessments of statistical absolute accuracy, and creation of ground surface models.

2015 King County Lidar Project Funding Agreement

Absolute accuracy assessments will compare known RTK ground survey points to derived LiDAR points. Accuracies

LiDAR Specifications Summary	
Multi-Swath Pulse Density	≥ 8 pulses/m ²
Scan Angle	$\leq 30^\circ$ (+/-15° from Nadir)
Returns Collected Per Laser Pulse	Up to 4
Intensity Range	1-255
Swath Overlap	50% side-lap (100% overlap)
GPS PDOP During Acquisition	≤ 3.0
GPS Satellite Constellation	≥ 6
Maximum GPS Baseline	13 nautical miles
Accuracy _z (1.96 σ), slope <20°	≤ 20 cm
Vertical Accuracy (σ), slope <20°	≤ 15 cm
Horizontal Accuracy (σ)	≤ 30 cm

are described as the mean and standard deviation (σ) of divergence from RTK ground survey point coordinates. All accuracy statistics (RMSE_z, Accuracy_z - 1.96 σ , skewness/distribution, and percentile deviations) will be reported in the final report. Statements of statistical accuracy will apply to fixed terrestrial surfaces only.

Survey Control

Simultaneous to the LiDAR data collection mission, QSI will conduct a static (1 Hz recording frequency) survey of the horizontal and vertical positions of two or more survey control dual-frequency DGPS base stations established at monuments with known coordinates. Maximum baseline lengths between control points and the aircraft GPS do not exceed 24 kilometers (13 nautical miles). After the static GPS data have been collected, the files will be processed using the Online Positioning User Service (OPUS). Multiple sessions will be processed over the same monument to confirm antenna height measurements and reported OPUS position accuracy. Control monument locations will be certified by a QSI Washington PLS.

Quality control real-time kinematic (RTK) ground check survey data will be collected within the project area, with an established Root Mean Square Error (RMSE) of less than 2 cm. Absolute laser spot accuracies will be statistically analyzed based upon an adequate sample (500 per 50,000 acres, depending on access and GPS conditions within study area) of well-distributed RTK ground survey points on open, bare earth surfaces with level slope.



Deliverables

Deliverables will match standard for Puget Sound LiDAR Consortium:

LiDAR	
Report of Survey	Text report that describes survey methods; results; vendor's accuracy assessments, including internal consistency and absolute accuracy; and metadata <i>.pdf, .doc, or .odt format</i>
Aircraft trajectories (SBET files)	Aircraft position (easting, northing, elevation) and attitude (heading, pitch, roll) and GPS time recorded at regular intervals of 1 second or less. May include additional attributes. <i>ASCII text format</i>
All-return point cloud	List of all valid returns. For each return: GPS week, GPS second, easting, northing, elevation, intensity, return#, return classification. May include additional attributes. No duplicate entries. <i>ASCII text and LAS version 1.2 format</i> <i>1/100th USGS 7.5-minute quadrangle (0.75 minute by 0.75 minute) tiles</i>
Ground point list	List of X,Y,Z coordinates of all identified ground points. <i>ASCII text.</i> <i>1/100th USGS 7.5-minute quadrangle (0.75 minute by 0.75 minute) tiles</i>
Ground surface model	Raster of ground surface, interpolated via triangulated irregular network from identified ground points. No unavoidable point misclassification <i>ESRI floating point grid, 3 ft cell size, snapped to (0,0), 1/4th USGS 7.5-minute quadrangle (3.75 minute by 3.75 minute) tiles</i>
First-return (highest-hit) surface model	Raster of first-return surface, cell heights are highest recorded value within that cell, voids may be filled with ground surface model <i>ESRI floating point grid, 3 ft cell size, snapped to (0,0), 1/4th USGS 7.5-minute quadrangle (3.75 minute by 3.75 minute) tiles</i>
Intensity image	<i>GeoTIFF, 1.5. ft pixel size, 1/4th USGS 7.5-minute quadrangle (3.75 minute by 3.75 minute) tiles</i>
Files shall conform to a consistent naming scheme. Files shall have consistent internal formats. Surface models shall have no tiling artifacts and no gaps at tile boundaries. Areas outside survey boundary shall be coded as NoData. Internal voids (e.g., open water areas, shadowed areas in first-return surface) may be coded as NoData.	

Coordinate System*	
Projection	Washington State Plane North
Horizontal Datum	NAD83 (CORS96)
Vertical Datum	NAVD88 (GEOID03)
Units	U.S. Survey Feet
Delineations	USGS Quadrangle tiling scheme
*To match with existing data. The data will be created in NAD83 (CORS96), but for GIS purposes will be defined as NAD83 (HARN).	

Area of Interest – King County, WA

The area of interest (AOI) for this cost proposal includes 700,329 acres spread through King County, WA (Figure 1). Previous LiDAR collections for the PSLC and Pierce County are shown in grey. Overlap between collections will facilitate data matching. The AOI will be buffered by 100 meters to ensure complete coverage and adequate point densities around study area boundaries.

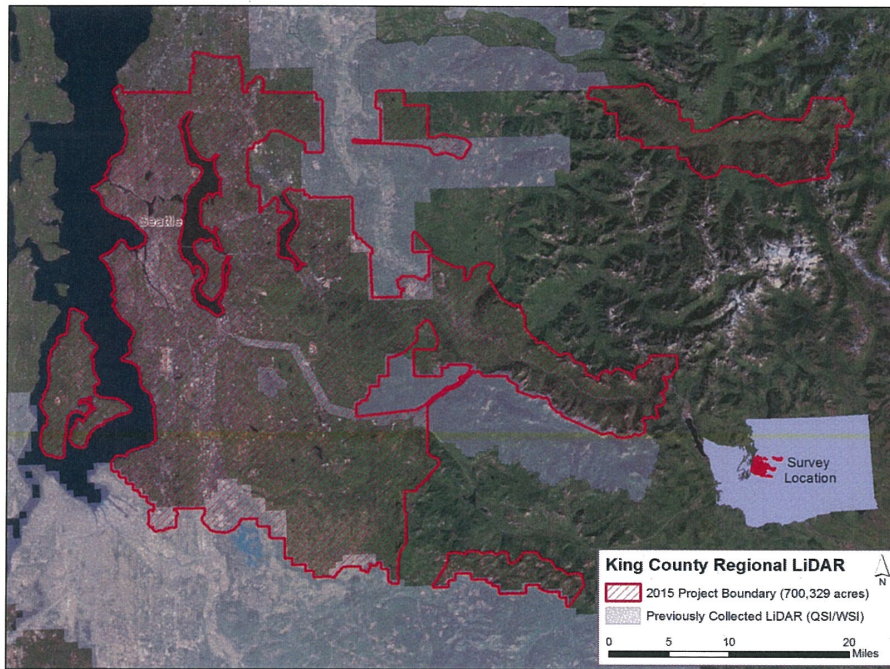


Figure 1. Area of interest for LiDAR acquisition in King County, WA.

Schedule

QSI will work with PSLC and King County to coordinate timing of data collection during fall 2015 as best meets the needs of the project. All data are delivered to PSLC within 60 days of acquisition.

Cost Proposal

The following table presents LiDAR acquisition and processing costs for the project area portrayed in Figure 1, assuming above specifications and deliverables. Costs for acquisition and base level processing are in accordance with QSI's negotiated area-weighted rate structure with the Puget Sound LiDAR Consortium.

King County, WA Regional LiDAR 2015 (700,329 acres)	Total Cost	Per Acre Cost
LiDAR Acquisition and Base Processing	\$546,256.62	\$0.78

* Budget does not include 14% PSLC administrative fee.



City Council Business Agenda Item
City of Kenmore, WA

Subject/Topic: Rechannelization of NE 182nd Street between 68th Avenue NE and 73rd Avenue NE Proposed Council Action/Motion: Discuss street channelization alternatives to address concerns with pedestrian safety and vehicle speeds on NE 182nd Street	For Council Meeting Agenda of: October 19, 2015 Department: Public Works Prepared by: Brett Schock, PE <table style="width: 100%;"> <tr> <td style="width: 70%;">Approved by Department Head:</td> <td style="width: 30%; text-align: right;"><u>Initial & Date</u> KMD 10/7/15</td> </tr> <tr> <td>Approved by City Attorney:</td> <td style="text-align: right;">NA</td> </tr> <tr> <td>Approved by Finance Director:</td> <td style="text-align: right;">Jmg 10/7/15</td> </tr> <tr> <td>Approved by City Manager:</td> <td style="text-align: right;">[Signature]</td> </tr> </table> Exhibits/Attachments: Attachment A: NE 182nd Street Technical Memo	Approved by Department Head:	<u>Initial & Date</u> KMD 10/7/15	Approved by City Attorney:	NA	Approved by Finance Director:	Jmg 10/7/15	Approved by City Manager:	[Signature]
Approved by Department Head:	<u>Initial & Date</u> KMD 10/7/15								
Approved by City Attorney:	NA								
Approved by Finance Director:	Jmg 10/7/15								
Approved by City Manager:	[Signature]								
Expenditure Required \$2,000	Amount Budgeted \$100,000	Appropriation Required NA							
<u>INFORMATION/BACKGROUND:</u> The purpose of this Council Report is to provide information on alternatives to address concerns with pedestrian safety, availability of sufficient walkways, vehicle speeds, and parking availability on NE 182nd Street between 68th Avenue NE and 73rd Avenue NE. As part of Target Zero, and Council Goal #1, the city is interested in opportunities to increase the number and safety of pedestrian facilities. NE 182nd Street currently lacks adequate pedestrian facilities between City Hall and 70th Place NE. Despite the lack of facilities, there are a high number of pedestrians on this street. To address this pedestrian safety issue, in compliance with our Target Zero initiative, four alternatives are presented for consideration by the Council. Technical information including plan views, conceptual layouts, roadway sections, and details of each alternative is provided in Attachment A. <u>Alternative A</u> would change operation of NE 182nd Street to one way from the City Hall driveway (just east of 68th Avenue NE) to 70th Place NE. The one-way operation would be eastbound in the northern lane. The south lane would be converted to an 8' wide parking lane, and the remaining pavement would be separated to delineate a pedestrian walkway. This walkway would connect existing sidewalks on the south side between 70th Place and City Hall. Signage would be installed at 73rd Avenue NE indicating the no-outlet condition. These changes could be "temporary" in nature, allowing two-way operation to be restored following any future development which would improve NE 182nd Street to install sidewalks. Traffic data from 2014 and 2015 indicates that even if all vehicles in the westbound direction were to use NE 181st Street due to the one-way operation, the signals on 181st at 73rd and 68th would not be overwhelmed. There may be an increase in delay at peak hours with the higher volumes. <u>Alternative B</u> is similar to Alternative A, but would use westbound one-way operation in the northern lane. The parking lane and walkway would be the same as described in Alternative A.									

Alternative C retains two-way operation between 68th Avenue NE and 73rd Avenue NE, but adds two chicane elements between City Hall and 70th Lane NE. These chicane elements would require vehicles to yield, as they would only be wide enough for one vehicle to pass at a time. No additional parking would be provided in this alternative. No improvements to pedestrian facilities would be provided in this alternative.

Alternative D is a No Action alternative. Two way operation would be maintained on NE 182nd Street and no improvements to the pedestrian facilities or available parking would be provided. Vehicle speeds could be addressed through enforcement and the traffic calming program.

Our police, fire department and school district were consulted about Alternatives A and B. They all indicated that they would have no negative impacts from the changes. Both the fire department and school district preferred the one-way eastbound, Alternative A. The fire department cited the potential need for assistance from other departments west of Kenmore. The school district currently runs buses eastbound on NE 182nd Street.

The staff recommended alternative is Alternative A. This recommendation is based on the improvement to pedestrian safety, the preferences of the fire and school districts, and the increase in available parking. Following approval of an alternative by Council, a public outreach meeting will be held, prior to implementation.

FISCAL CONSIDERATION:

The installation of the required signing, striping and in-road devices to provide for one-way or chicane operations on NE 182nd Street could be accomplished within Operations existing budget.

COUNCIL GOAL/BUDGET OBJECTIVE BEING ADDRESSED:

- I. To focus on and emphasize multimodal transportation safety in the City of Kenmore with a specific focus on pedestrian, bicycle and other means of travel.



NE 182nd Street Improvements

As part of Target Zero, and Council Goal #1, the city is interested in opportunities to increase the number and safety of pedestrian facilities. NE 182nd Street currently lacks adequate pedestrian facilities between City Hall and 70th Place NE. Despite the lack of facilities, there are a high number of pedestrians on this street. To address this pedestrian safety issue, in compliance with our Target Zero initiative, four alternatives are presented to improve NE 182nd Street.

The city has received a number of citizen action requests from residents along NE 182nd Street to address pedestrian safety, traffic speeds and parking availability. Public comments were made in the July 13, 2015 City Council meeting expressing the same concerns. Northshore school district staff has also commented on these issues on NE 182nd Street.

The focus of this technical memorandum is to address the less-than-adequate pedestrian facilities and speed concerns on NE 182nd Street. Opportunities to add to the available parking are a secondary focus. Four alternatives have been developed to address these concerns. Two are based on an operational change in section 2 to create a one-way zone, and a third involves the use of chicanes. The fourth is a no rechannelization alternative.

Existing conditions

The existing NE 182nd Street has three distinct segments with varying characteristics of pedestrian facilities and parking.

1. Between 68th Avenue and the driveway for City Hall which faces NE 182nd Street, there are sidewalks on the south side of 182nd, parking on an unpaved shoulder on the north side and two lanes of approximately 12 foot width.
2. Between the City Hall driveway and 70th Place NE, 182nd consists of two 10 foot lanes. Parking is available in some sections of the unpaved shoulder on the north, with a few driveways on the east end of this section. There are a number of driveways on the south side of 182nd in this section. Parking is not allowed on the south side, and a variable width of 2 to 4 feet of paved surface is available as a pedestrian walkway.
3. Between 70th Place NE and 73rd Avenue NE, 182nd consists of two lanes available width for on street parking. Both sides of the street are curbed with sidewalks in this section. There are painted curbs in this section indicating some restricted parking areas.

The right of way along NE 182nd Street is limited which makes it difficult to address citizen concerns over pedestrian space and parking availability (especially west of 70th Lane NE). Residential developments both west and east of NE 182nd Street are likely to increase traffic volumes and may increase these problems. Sidewalk improvements on NE 182nd Street are

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov
www.kenmorewa.gov



NE 182nd Street Improvements

unlikely to be completed in the near future. An overlay is planned for NE 182nd Street, but this has not been scheduled. All of the alternatives presented in this report are easily modified.

Figure 1: NE 182nd Street Existing Conditions (Looking East)



Alternative A

Alternative A proposes an operational change to NE 182nd to make it a one-way street eastbound between the City Hall driveway and 70th Lane NE. This alternative creates a pedestrian walkway, reduces vehicle speeds and adds parking availability. Two-way operation will remain between 70th Lane NE and 73rd Avenue NE and from 68th Avenue NE to the City Hall driveway. The limits of the changes were determined based on;

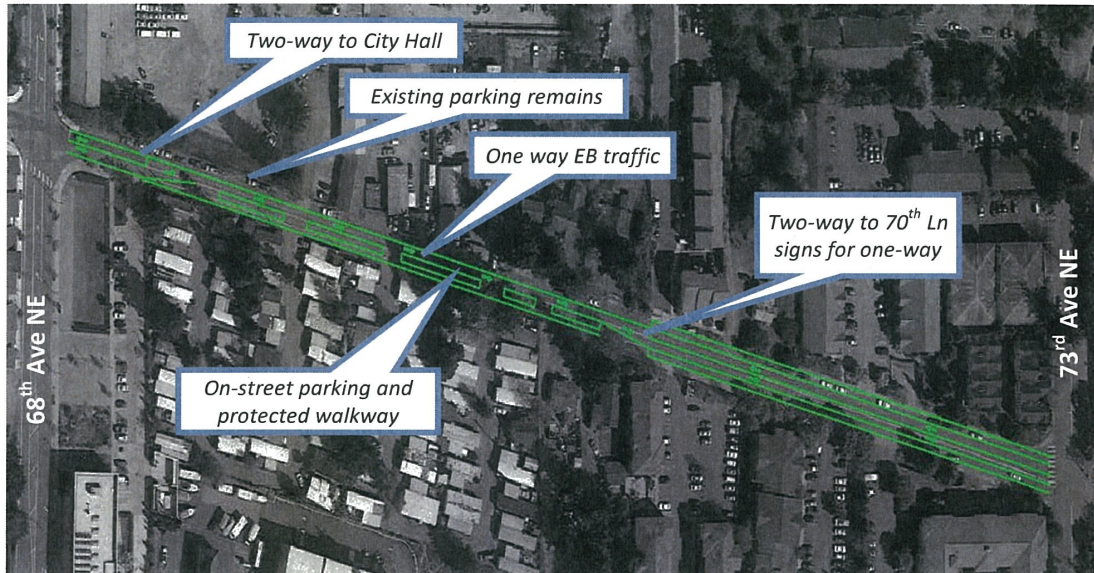
1. Existing sidewalk infrastructure on both sides of NE 182nd Street between 70th Place NE and 73rd Avenue NE, as well as near City Hall, and
2. The presence of multi-unit housing on both sides of the street between these limits.

Most access off of 182nd between 68th and 70th is to the south.



NE 182nd Street Improvements

Figure 2: NE 182nd Street One-Way Operation, Alternative A
(figure is skewed for visibility)



The elimination of a drive lane between 68th and 70th will allow the creation of additional parallel parking spaces in this lane, with striping indicating no parking zones at the driveways to the south side of 182nd. The available parking lengths created through this restriping would open up approximately 19 additional parking spaces along 182nd between 68th and 70th. Existing parking on the north side of NE 182nd Street would not be affected. A walkway can be delineated on the south side of 182nd with protection for pedestrians from the parked vehicles. The available walkway width would be approximately 6 feet of paved surface along most of the one-way length. See Figure 3 for an example of this cross-section configuration.



NE 182nd Street Improvements

Figure 3: NE 182nd Street Existing and Proposed Cross Sections, Alternative A



Alternative A Summary	
Benefits	Drawbacks
✓ Wider pedestrian walkway on south side between City Hall and 70th Place NE ✓ Protected walkway from on-street parking ✓ Additional on-street parking ✓ Likely traffic calming effect from parking “friction” on both sides ✓ Likely traffic calming effect by lowering volumes ✓ School district in favor of walkability improvements ✓ School district in favor of eastbound operation due to existing bus routes ✓ Fire district in favor of eastbound operation for multi-family property access from other departments west of Kenmore	• Slight increase to emergency response time for western half of NE 182nd Street • Initial confusion among drivers and need for adjustment period • Additional volume at signals on 181st

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov
www.kenmorewa.gov

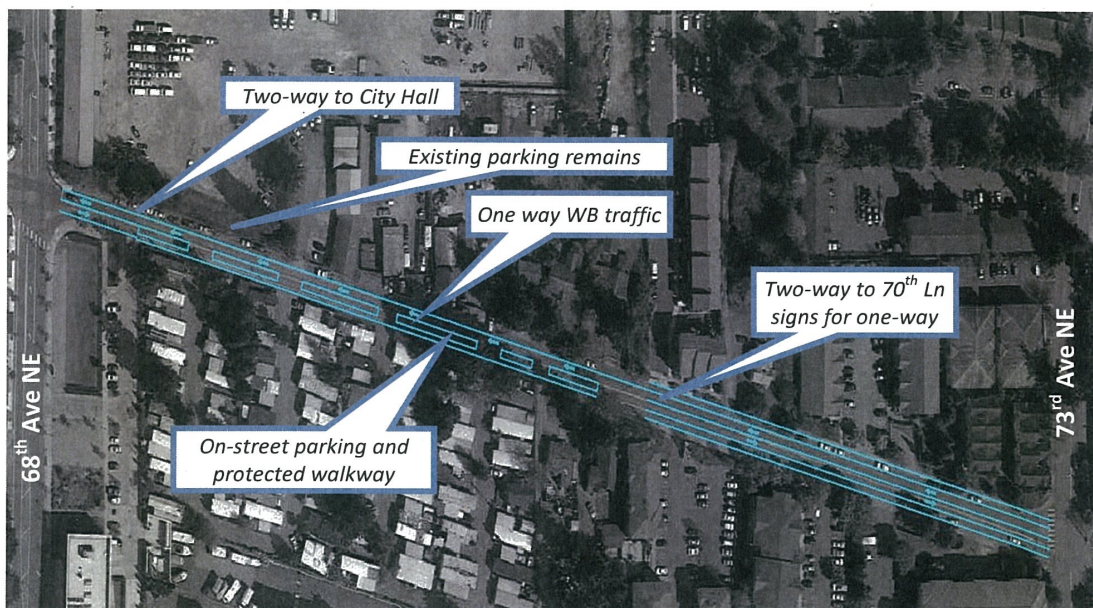


NE 182nd Street Improvements

Alternative B

The basic layout of Alternative B matches that of Alternative A, with the creation of an improved pedestrian walkway on the south side of NE 182nd Street, and additional on-street parking. In this configuration, the one-way would be set as westbound. This would eliminate the need for a shift by traffic at the limits of the one-way section. An additional 3 parking spaces would be created on the west side of the one-way zone due to the elimination of this shift area near the City Hall driveway. Figures 4 and 5 show the layout and cross sections of this alternative layout.

Figure 4: NE 182nd Street One Way Alternative B
(figure is skewed for visibility)



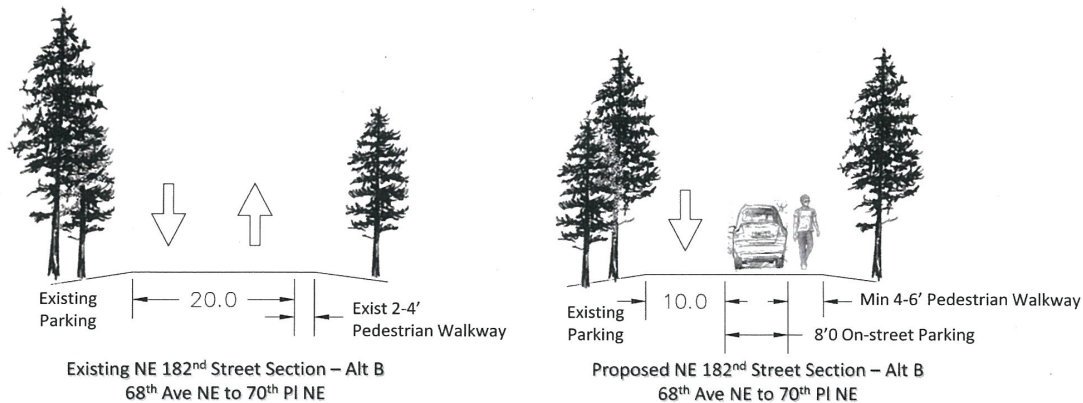
18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov
www.kenmorewa.gov



NE 182nd Street Improvements

Figure 5: NE 182nd Street Existing and Proposed Cross Sections, Alternative B



Alternative B Summary	
Benefits	Drawbacks
✓ Wider pedestrian walkway on south side between City Hall and 70th Place NE ✓ Protected walkway from on-street parking ✓ Additional on-street parking ✓ Likely traffic calming effect from parking "friction" on both sides ✓ Likely traffic calming effect by lowering volumes ✓ School district in favor of walkability improvements	• Initial confusion among drivers and need for adjustment period • Additional volume at signals on 181st • School district prefers eastbound operation for existing bus routes • Fire district prefers eastbound operation for mutli-family property access from other departments west of Kenmore

Alternative C

Alternative C was created as an alternative means of addressing traffic speed concerns on NE 182nd Street. This alternative uses two chicanes within the zone described for the one way operation in Alternatives A and B to slow traffic. Alternative C does not provide additional facilities for pedestrians and does not provide additional on-street parking. Depending on the placement of the chicane, some on-street parking on the north side of NE 182nd Street could be eliminated. Each chicane would create a one-way yield situation for oncoming traffic. The chicanes would be located in the area of existing luminaries on NE 182nd Street to ensure high visibility of the physical devices and the need to yield to oncoming traffic. A sample layout of these chicanes is shown in Figure 6. A section at one of the chicanes is shown in Figure 7.

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov
www.kenmorewa.gov



NE 182nd Street Improvements

Figure 6: NE 182nd Street Chicane Alternative C
(figure is skewed for visibility)

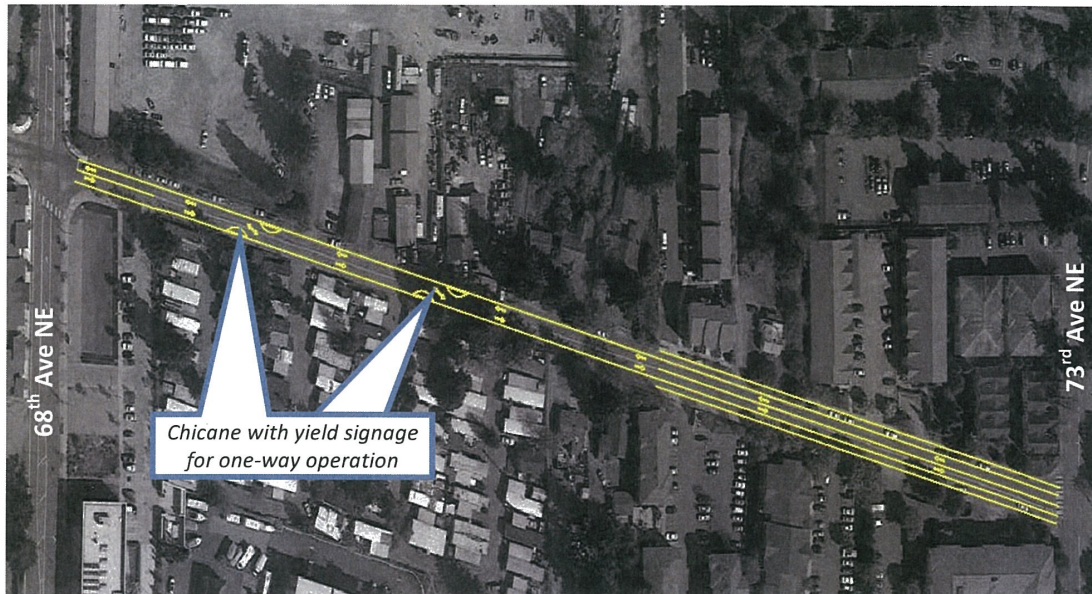
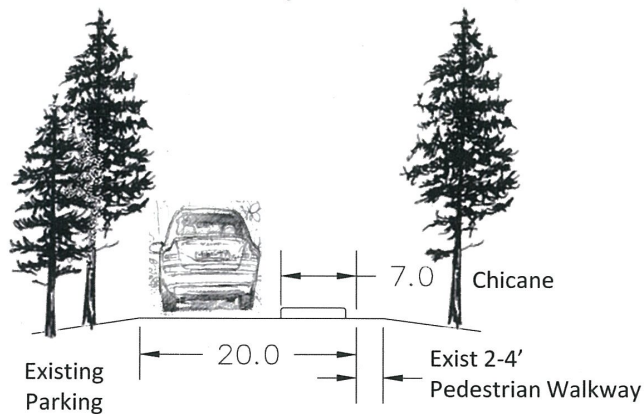


Figure 7: NE 182nd Street Proposed Cross Section, Alternative C



Proposed NE 182nd Street Section – Alt C
68th Ave NE to 70th PI NE

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028
Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov
www.kenmorewa.gov



NE 182nd Street Improvements

Alternative C Summary	
Benefits	Drawbacks
✓ Likely traffic calming effect from chicanes for speeds and volumes ✓ Lower speeds could increase pedestrian safety	• Emergency response must navigate chicanes • No physical improvements to pedestrian safety or walkway facilities • No additional on-street parking • Potential reduction in available parking

Alternative D

Alternative D is a no rechannelization alternative. No changes would be made to NE 182nd Street. The existing pedestrian facilities would remain in place with no improvements for safety. No changes to parking would occur, and parking would remain available in sections on the north side of the street in segments 1 and 2. Concerns with traffic calming would be addressed through the city's traffic calming program.

Public Service Providers Comments

City staff reached out to the public service providers for this project to determine any potential impact to police and fire response times, or school bus routing due to the one-way operation proposed in Alternatives A and B.

Public service providers were not contacted about Alternatives C or D. The turns around the chicanes would be designed to accommodate the turning radius of emergency vehicles and school busses if Alternative C is selected. Alternative D does not make any changes from the existing operation of the road.

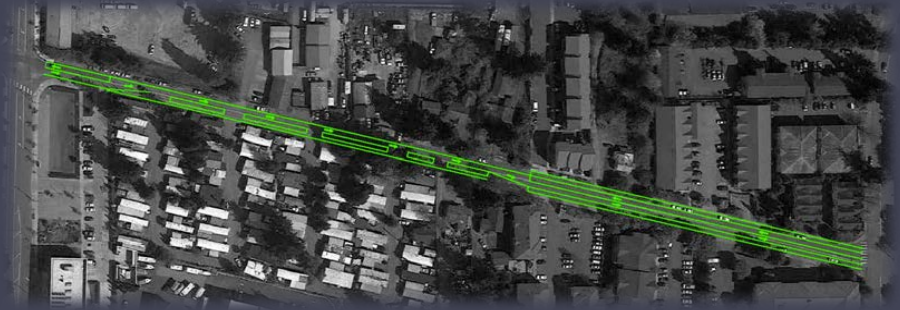
Recommended Alternative

The City staff recommendation is **Alternative A**, a one-way eastbound operation between the City Hall driveway and 70th Place NE. This recommendation is based on;

- ✓ Increased safety and facilities for pedestrians
- ✓ Preference of the fire and school districts
- ✓ Added benefit of additional on-street parking

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov
www.kenmorewa.gov



NE 182nd Street

NE 68th Ave to NE 73rd Ave

Brett Schock, PE
Traffic Engineer

October 19, 2015



Discussion Outline

- Study objectives
- Existing conditions
- Identified alternatives
- Next steps and recommendations

Study Objectives

- Increase pedestrian safety
- Address concerns with vehicle speeds

Existing Conditions

- No existing pedestrian facility between City Hall parking lot and 70th Lane NE
- High volume of pedestrians
 - School bus stops
- Constrained right-of-way



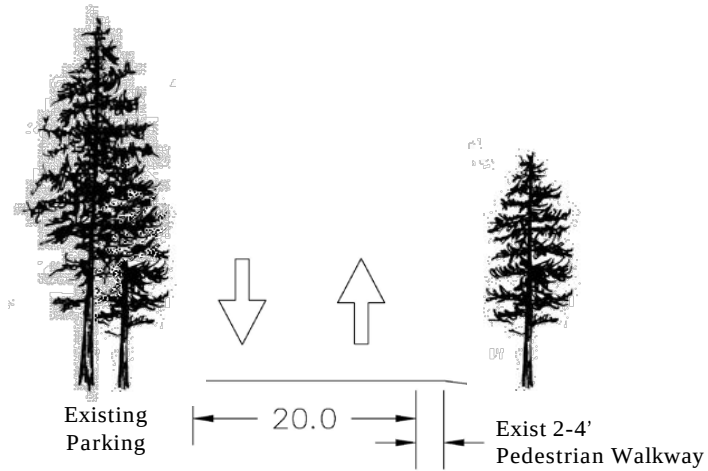
Alternative A

- One-way eastbound operation between City Hall parking lot and 70th Place NE
- Provides 4-6' pedestrian walkway where none currently exists
 - Protected by parked vehicles and 8' offset
- Provides new on-street parking

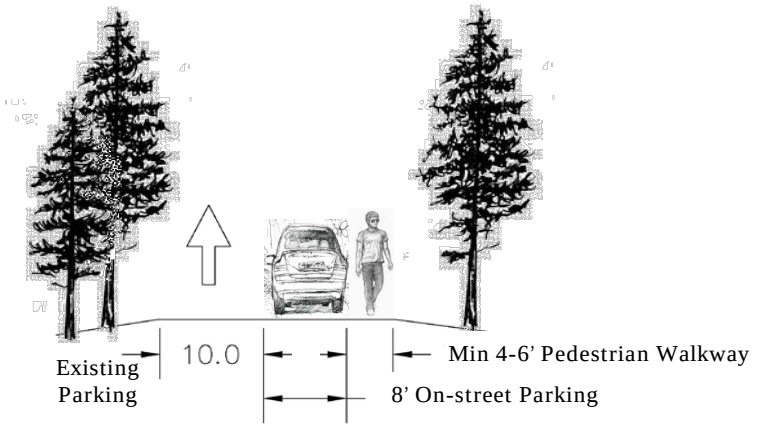
Alternative A



Alternative A



Existing NE 182nd Street Section – Alt A
68th Ave NE to 70th Ln NE



Proposed NE 182nd Street Section – Alt A
68th Ave NE to 70th Ln NE

Alternative A - Operations

- Existing north side parking not affected
- Two-way to City Hall driveway
- East turn-around at apartment lots on 70th Lane
 - Drivers will typically only get confused once
 - Signed at 73rd Ave
 - Temporary signage at implementation



Alternative A

Benefits

- Wider, protected pedestrian walkway, meeting Target Zero and Council Goal #1 objectives
- Additional on-street parking
- Likely traffic calming effect due to increased “friction”
- School and fire district prefer eastbound operation

Drawbacks

- Initial confusion among drivers and need for adjustment period
- Additional volume at signals on 181st Street

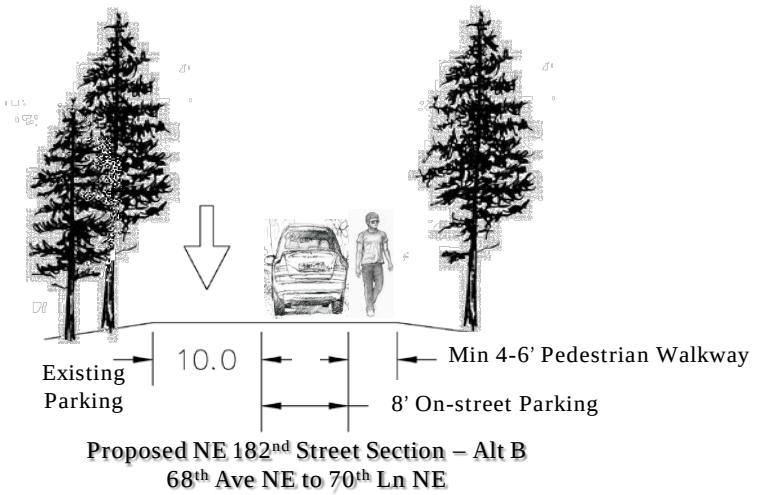
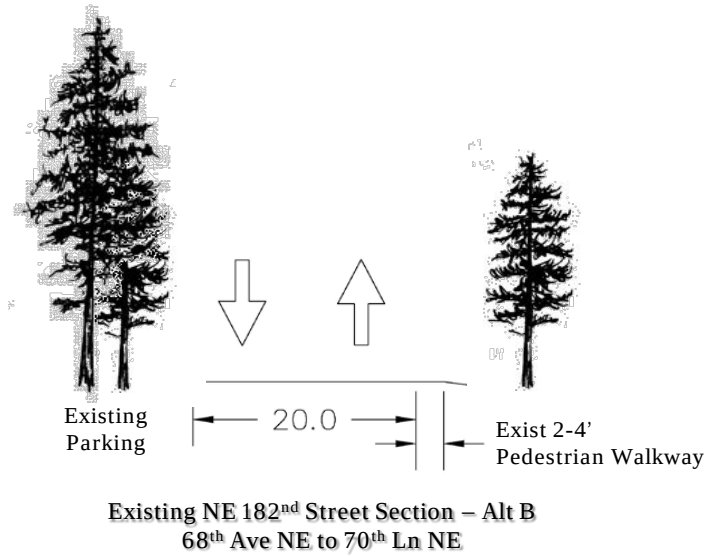
Alternative B

- One-way westbound operation between City Hall parking lot and 70th Place NE
- Provides 4-6' pedestrian walkway where none currently exists
 - Protected by parked vehicles and 8' offset
- Provides new on-street parking

Alternative B



Alternative B



Alternative B - Operations

- Existing north side parking not affected
- Two-way from 73rd Ave NE to apartment parking lots at 70th Lane NE
- West turn-around at City Hall parking lot

Alternative B

Benefits

- Wider, protected pedestrian walkway, meeting Target Zero and Council Goal #1 objectives
- Additional on-street parking, more than Alternative A
- Likely traffic calming effect due to increased “friction”

Drawbacks

- Initial confusion among drivers and need for adjustment period
- Additional volume at signals on 181st Street
- School and fire district prefers eastbound operation

One-Way Alternatives Comparison

Alternative A

- New 4-6' protected pedestrian walkway created
- Traffic calming effect due to increased "friction"
- Creates on-street parking
- Westbound flow
- Preferred by school and fire districts

Alternative B

- New 4-6' protected pedestrian walkway created
- Traffic calming effect due to increased "friction"
- Creates more on-street parking
- Eastbound flow

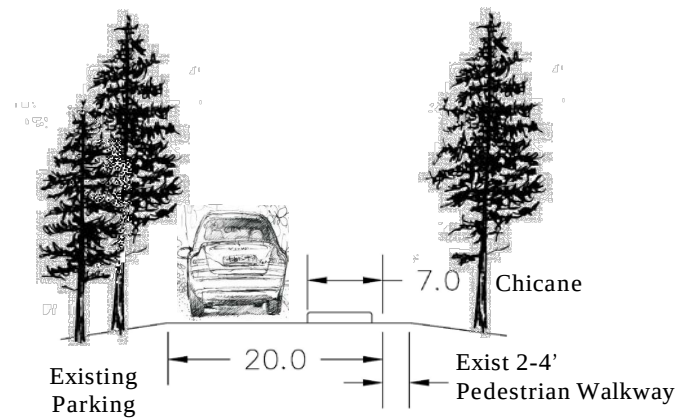
Alternative C

- Provide chicanes between City Hall lot and 70th Lane NE
- No pedestrian safety or facility improvements
- No added parking
 - Some existing north side parking will likely be eliminated

Alternative C



Alternative C



Proposed NE 182nd Street Section – Alt C
68th Ave NE to 70th Ln NE

Alternative C

Benefits

- Traffic calming effect
- Lower vehicle speeds increase pedestrian safety

Drawbacks

- Emergency response must navigate chicanes
- No physical improvements to pedestrian safety or walkway facilities
- No additional on-street parking
- Potential reduction in available parking

Alternative D

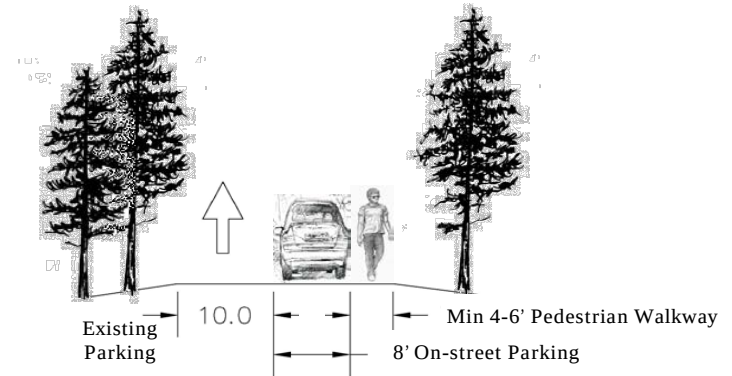
- No rechannelization
- Address traffic speed issues through city's Calming Policy or NTPP

Next Steps

- Discussion with Council and selection of preferred alternative
- Public notification and feedback
 - Identification of unintended consequences
- Council loop-back
- Implementation
 - Complete by end of 2015

Staff Recommendation

Alternative A: One-way eastbound operation



Questions?



**City Council Business Agenda Item
City of Kenmore, WA**

Subject/Topic: Update on Council Goal #1:
To focus on and emphasize multimodal transportation safety in the City of Kenmore with a specific focus on pedestrian, bicycle, and other means of travel

For Council Meeting Agenda of: October 19, 2015

Department: Public Works, Police & City Manager's Office

Prepared by: Brett Schock, PE, Leslie Harris, Kris Overleese, PE, Police Chief Cliff Sether, Jenny Pazar

Initial & Date

Approved by Department Head: KMD 10/8/15

Approved by City Attorney:

Approved by Finance Director: [Signature] 10/8/15

Approved by City Manager: P&K

Proposed Council Action/Motion:
Receive and file

Exhibits/Attachments:

Attachment A – details of projects and initiatives

Expenditure Required

N/A

Amount Budgeted

N/A

Appropriation Required

N/A

INFORMATION/BACKGROUND:

The City of Kenmore has created a number of programs, policies, and implemented projects in support of City Council Goal #1, to focus on and emphasize multimodal transportation safety in the City of Kenmore with a specific focus on pedestrian, bicyclist and other means of travel. These programs, policies and improvements generally fall into the three categories of engineering, education, and enforcement. These "Three Es" make up the foundation of the City's approach to transportation concerns and solutions. These programs, policies and improvements have been initiated in the last 18 months and some are in the early stages of design and will continue into 2016.

The following list is a summary of the City's significant efforts in education, enforcement, and engineering to support Council Goal #1 over the last 18 months. Detailed information on each of these programs, projects and initiatives is included in Attachment A.

Engineering

- Sidewalk Projects in Design (62nd Avenue NE, NE 181st St, and NE 202nd Street)
- Sidewalk Gaps Project Completed
- Hiring of a City Traffic Engineer
- Neighborhood Transportation Plans
- Pedestrian Signal Phasing (68th Avenue NE and NE 181st Street)
- Pedestrian Signal Phasing (Juanita Drive and Arrowhead Drive/NE 153rd Place)
- Reduced Speed Limit on NE 175th Street
- SR 522 West A (61st to 65th Avenues NE) Construction: New Sidewalks
- Tolt Trail Design
- Arterial Crosswalk Rapid Flashing Beacons
- 61st Avenue Rechannelization

- Juanita Drive Walkway Improvements
- 68th Avenue Walkway Improvements (NE 182nd Street to NE 185th Street)
- Implementation of CityWorks and Expanded use of Citizen Action Request System (CARS)
- Roadway Standards Update
- Design of West Sammamish River Bridge Replacement: New Pedestrian/Bicycle Facility

Education

- Adoption of Target Zero Policy
- City Staff Target Zero Training
- Pedestrian and Bicycle Safety Ad-Hoc Committee
- Community Outreach
- Bicycle Helmet Sales
- City of Kenmore Roadway Standards Update
- Transportation Element Update

Enforcement

- Detection and Enforcement of Traffic Laws Relating to Safety of all Road Users
- Evaluation of Automated School Zone Speed Camera System
- Reward Program for Children
- 6th Grade Classroom Visits

Future projects and programs will continue to focus on multimodal user safety as a priority. City Council Goal #1 has been an important statement to help guide the efforts of City staff in selecting projects that benefit all users of the public right of way. Target Zero is the ultimate goal in Kenmore, a benchmark to strive for through the effective use of engineering, education, and enforcement working together to create a safe transportation environment for all users of the public right of way.

FISCAL CONSIDERATION:

None.

COUNCIL GOAL/BUDGET OBJECTIVE BEING ADDRESSED:

- I. To focus on and emphasize multimodal transportation safety in the City of Kenmore with a specific focus on pedestrian, bicycle and other means of travel.



Council Goal #1 Update

Attachment A

The City of Kenmore has created a number of programs, policies, and implemented projects in support of City Council Goal #1, *to focus on and emphasize multimodal transportation safety in the City of Kenmore with a specific focus on pedestrian, bicyclist and other means of travel*. These programs, policies and improvements generally fall into the three categories of engineering, education, and enforcement. These “Three Es” make up the foundation of the City’s approach to transportation concerns and solutions. These programs, policies and improvements have been initiated in the last 18 months and some are in the early stages of design and will continue into 2016.

Engineering

Engineering solutions can compliment education and enforcement to enhance the safety of the city’s transportation facilities. The City of Kenmore has policies in place to react to citizen concerns and evolving issues from new development and changing regional traffic patterns. The City has also recently taken a more proactive approach to transportation and is looking to address potential motorized and non-motorized transportation issues before they become a problem. By expanding city staff, upgrading systems to record and address citizen concerns, and updating planning and design standards and documentation, the City’s engineering approach to transportation has been strongly guided by Council Goal #1.

Sidewalk Project In Design (62nd Avenue NE)

The City successfully secured an \$828,000 grant to install sidewalks on 62nd Avenue NE from NE 181st Street to NE 187th Street. The 62nd Avenue NE project includes sidewalks on one side of the street and traffic circles to address vehicle speeds, in addition to improving the available pedestrian facilities. This project is in design phase and is expected to go to construction in 2017.

Sidewalk Project In Design (NE 181st Street)

The City successfully secured grants totaling \$874,830 to install sidewalks on the north and south side of NE 181st Street from 68th Ave NE to 73rd Ave NE. The sidewalks on NE 181st Street will add to the safety of pedestrian facilities to downtown Kenmore and major services. These projects are in design phase and are expected to go to construction in 2016 and 2017.

Sidewalk Project In Design (NE 202nd Street)

The City successfully secured a \$1,017,570 grant to install sidewalks on NE 202nd Street from 68th Ave NE to Kenmore Junior High. The sidewalks on NE 202nd Street will add to the safety of pedestrian facilities accessing Kenmore Junior High school and connect to the walkway improvements on 68th Avenue NE. The project is in design phase and is expected to go to construction in 2017.

Sidewalk Gaps Projects Completed

In 2015, the city’s sidewalk gap project completed three sections of sidewalk connecting other continuous walkways and improving pedestrian access to schools, school bus stops, and public facilities. 57 feet of sidewalk was completed along 68th Avenue NE near the Washington Department of Fish & Wildlife boat launch driveway, completing the pedestrian walkway along 68th Ave NE and improving access to the city’s waterfront properties. 110 feet of sidewalk was completed on 72nd Avenue NE, connecting to continuous sidewalks along NE 170th Street near a school bus stop. 111 feet of sidewalk was completed on NE 155th Street connecting continuous sidewalks along Simonds Rd and an improved crosswalk over Simonds for Inglesmoor High

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov · www.kenmorewa.gov



Council Goal #1 Update

Attachment A

School students. Each of these projects improved connections and mobility for pedestrians and furthered Council Goal #1.

Hiring of a City Traffic Engineer

Historically, the City of Kenmore had used King County for traffic engineering services. To improve on response times and allow additional focus on the multi-modal transportation in the City, a traffic engineer was hired in May of 2015. As a City staff member, the traffic engineer is able to respond directly to concerns raised by citizens, Council and staff, and administer programs to reach out to the community and provide proactive improvements.

Neighborhood Transportation Plans

Addressing the Ad Hoc committee recommendation #6, the City Council authorized funding for a Neighborhood Transportation Plan program in the current biennial budget. This program is administered by the City traffic engineer. As of this report, five neighborhoods have met to begin proactively addressing traffic, mobility and connectivity issues in their neighborhoods. Other neighborhoods will be meeting through the rest of 2015 and into early 2016. Citizens are encouraged at these meetings to identify concerns on residential streets, especially those that make walking and cycling more difficult. Citizens then work with city staff to identify appropriate tools and are beginning the process of prioritizing improvements. At the end of a series of three meetings, each neighborhood will have produced a prioritized map of projects which the City will implement with available funding.

Pedestrian Signal Phasing – 68th Avenue NE and NE 181st Street

The signal, managed by WSDOT, at the intersection of 68th Avenue NE and NE 181st Street, had pedestrian “lead time” incorporated. This provides three seconds of pedestrian walk signal in the east-west direction prior to the signal turning green for vehicles. The three seconds allows time for pedestrians to enter the crosswalk and be more visible to traffic at this busy intersection.

Pedestrian Signal Phasing – Juanita Drive and Arrowhead Drive/NE 153rd Place

For the 2015-16 school year, the signal at the intersection of Juanita Drive and Arrowhead Drive/NE 153rd Place has been modified to include a new pedestrian-only phase. This ensures that as students are crossing Juanita Drive to walk to Arrowhead Elementary, no vehicles have a green light. A “no turn on red” restriction for Arrowhead Drive only during this pedestrian phase will be in place in the fall of 2015. Additional bright, reflective signage for use by the school crossing guard has also been provided to increase the visibility of this heavily used school crossing.

Reduced Speed Limit on NE 175th Street

Reducing speed limits without accompanying engineering changes or additional enforcement has shown, through research and practical experience on 80th Avenue NE in Kenmore, to have little effect on overall vehicle speed. King County traffic engineers performed an analysis of NE 175th Street, which was reviewed by the city traffic engineer, and confirmed that the physical characteristics of NE 175th Street accommodated a 30 mph speed limit. This reduction from 35 mph to 30 mph on this street which parallels the Burke Gillman trail was approved by City Council on September 19, 2015 and work is underway to modify the signage on the street indicating the change.

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov · www.kenmorewa.gov



Council Goal #1 Update

Attachment A

SR 522 West A: New Sidewalks

As part of the construction on SR 522, new sidewalks are being completed between 61st and 65th Avenues NE. These sidewalks connect the Kenmore downtown with the Burke Gillman trail, bus stops on 522, and existing infrastructure east of 65th Avenue. Construction on the project is ongoing.

Tolt Trail Design

The Tolt Trail is scheduled for construction in summer of 2016 and will provide approximately 1500 feet of paved multi-use trail within the Tolt pipeline right-of-way. This right-of-way is in line with NE 185th St, between 68th Ave NE and 73rd Ave NE. The project will pave an existing dirt footpath in the undeveloped right of way which is subject to seasonal flooding. The project includes drainage improvements which will allow for continual use of the trail throughout the year, in all seasons.

Arterial Crosswalk Rapid Flashing Beacons

In June 2014, the City of Kenmore installed rapid-flash rectangular beacon (RRFB) and enhanced signage at 11 crosswalks in the city. The crosswalks selected for RRFB enhancement were those at unsignalized locations on arterials and collectors, especially those near schools. Following citizen requests and an evaluation by the City traffic engineer, a 12th RRFB was installed in 2015 at the entrance to Swamp Creek Park, crossing 68th Avenue NE at NE 195th Street. This location provides access to Kenmore Elementary school. Additional RRFB installations are under consideration for locations which meet the original criteria and may be installed in 2016, or as part of the neighborhood transportation plans.

61st Avenue Rechannalization

61st Avenue NE in Kenmore was rechannalized in June 2014. This changed the road to one lane in each direction with a center left turn lane and shoulder bicycle lanes. This change occurred between NE 193rd Street and the approximate location of NE 185th Street. City staff are planning to evaluate expanding these bicycle lane markings and signage following completion of a project to address voids under the sidewalks on 61st Avenue NE in the early part of 2016.

Juanita Drive Walkway Improvements

The lane widths on Juanita Drive were reduced from NE 170th Street to the Kenmore/Kirkland border to provide additional walkway width on the west, southbound side. The northbound shoulder of Juanita Drive is of variable width and at some points drops to less than 2 feet, even with reduced vehicle lane widths. Because of this, the northbound lane of Juanita Drive has been marked with “sharrow” bicyclist markings. These markings indicate for cyclists where to be in the lane and advise drivers that bicyclists may be using the lane. Additional signage warns drivers of the presence of cyclists northbound. In the southbound direction, a much wider shoulder allowed designation of the shoulder of Juanita Drive as a shared use walkway. On-road symbols designating the shoulder as a bicycle and pedestrian facility have been placed along the length of Juanita Drive in Kenmore. Additional measures, such as raised pavement markers, wide edge strips and “candlestick” vertical markers have been placed along the southbound shoulder to increase safety. A project to replace the existing extruded curb at the curve near NE

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov · www.kenmorewa.gov



Council Goal #1 Update

Attachment A

155th Street is currently being advertised and will replace this curbing with full-height “Jersey”-style barrier set back from the edge line.

68th Avenue Walkway Improvements (NE 182nd Street to NE 189th Street)

Following the programmed overlay of 68th Avenue NE from NE 182nd Street to near NE 198th Street, the existing lane width on 68th Avenue NE was reduced to match that on Juanita Drive. The use of a double-width line and raised pavement markers, along with the wider available shoulder, helps to provide a safer pedestrian facility. The sidewalk project on NE 202nd Street will help to connect this widened and improved shoulder to Kenmore Junior High School.

Implementation of CityWorks

The Pedestrian and Bicycle Ad Hoc committee recommendation #11 was for expanded use of the existing Citizen Action Request System (CARS). CARS allows citizens to electronically inform the city of concerns and requests through a web form. In 2015, the City implemented a software package called CityWorks. This software collects the CARS, plots them on an interactive map, attaches citizen contact information, and dispatches the request to the appropriate City staff. City staff has a goal of responding to citizens within one week to discuss concerns and any actions that can be undertaken. A number of improvements to vehicular, pedestrian and cyclist safety have been implemented in direct response to issues raised through CARS. Temporary signage, data collection efforts, use of the city’s Traffic Calming policy, and signing and striping changes have all resulted from responding to these requests.

City of Kenmore Roadway Standards Update

City staff has been, throughout 2015, updating the City of Kenmore roadway standards. The current standards follow the King County 2007 standards. The updated Kenmore standards include significantly expanded provisions for pedestrian and cyclist facilities on city roadways, both residential and arterial. A minimum requirement for sidewalks, reduced lane widths, and encouragement of traffic calming devices as part of future developments will all provide for an evolving environment of improved pedestrian and cyclist facilities. The roadway standards will be applied to private and City developed projects.

West Sammamish River Bridge Replacement: New Sidewalks

The design phase for the West Sammamish River Bridge will be starting at the end of 2015 and into 2016. As part of this design, a new pedestrian and bicycle facility will be constructed adjacent to the vehicle travel lanes on the new structure. This facility will connect to existing facilities on 68th Avenue NE and Juanita Drive. The separated facility will be wide enough to accommodate bi-directional non-motorized traffic. Upon completion, the facility will form a critical link in Kenmore’s bicycle and pedestrian priority routes.

Education

Education programs seek to educate both the public inside and outside of Kenmore, and city staff on the importance of focusing on the safety of multimodal transportation. These programs have increased the public visibility of the City’s commitment to this goal, and established Kenmore as a regional leader in multimodal transportation safety. Education initiatives are in place to guide current and future engineering improvements and development in Kenmore to be in line with Council Goal #1.

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov · www.kenmorewa.gov



Council Goal #1 Update

Attachment A

Adoption of Target Zero

The Kenmore City Council adopted Target Zero as a city policy on April 28, 2014. Target Zero states that it is the goal by 2025 to have no pedestrian or bicycle deaths or series injuries as the result of a collision with a motorized vehicle. This policy has become a guiding principal for all transportation related projects in Kenmore, and city staff make an effort to publically promote the Target Zero initiative.

Target Zero, which is similar to Vision Zero language in use in other regional cities, is a current trend among cities in the Puget Sound region and across the country. Kenmore is one of the first cities in the Puget Sound region to formally adopt this policy, and is recognized for being a leader in addressing pedestrian and cyclist safety issues.

City Staff Target Zero Training

As part of the process of implementing Target Zero, city staff, including city management, has attended training sessions on Vision Zero objectives and principals, best practices for pedestrian and cyclist accommodations through NACTO and ITE standards, and viewed webinars by worldwide leaders in Vision Zero design.

Pedestrian and Bicycle Safety Ad-Hoc Committee

In 2014, an ad hoc committee of citizens and City staff was assembled to address concerns with bicyclist and pedestrian safety in Kenmore. This committee met a number of times and produced a report outlining 14 key recommendations, many of which have been addressed by other programs and projects described below.

Community Outreach

The Target Zero outreach team has prioritized attending community events and promoting the educational component of the Initiative. City staff strives to reach a wide variety of audiences and in 2015 to date we have had a presence at events including the Northshore Fire District Pancake Breakfast, Bastyr Herb and Food Fair, Bike to Work Day, Kenmore Summer Concert Series, Kenmore Play Day, National Night Out, Northshore School District Back to School Fair, Arrowhead Elementary PTA Welcome Back Event, and Walk to School Day. The City helps educate kids and adults alike through the popular Target Zero spin-wheel, an interactive game that gives participants the opportunity to land on bike, walk, or drive and answer a corresponding safety related question, and with a large Target Zero safety education display board. The City's outreach efforts have increased Target Zero's visibility within the Kenmore community.

New this year, the City was able to expand our outreach efforts with the help of volunteers. The trained volunteers assisted with outreach at city and community events, including when city staff were not available to attend such as the Arrowhead Elementary PTA Welcome Back Event.

The City has also organized "Pop Up Parties" to promote the Target Zero Initiative. These include giving the public a few days notice through social media channels and then setting up the Target Zero tent either along the Burke-Gilman Trail or in a local park. Our three pop-up parties have targeted afternoon trail users, morning bike commuters, and children/families. The City received positive feedback on the events and they have helped strengthen relationships between

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov · www.kenmorewa.gov



Council Goal #1 Update

Attachment A

the City and the public. This fall, we are planning to host a Pop Up Party at the Park & Ride to remind bus commuters of simple tips to be seen better while walking to and from their destination.

Safety tips have also been shared through the City's publications, school publications, local newspaper, and social media.

Bicycle Helmet Sales

The City of Kenmore has offered low cost bike helmets to adults and children since July 2014. This program has provided around 100 helmets to help all Kenmore cyclists stay safe. Safety among cyclists, independent of concerns related to vehicles, was identified as one of the barriers by the ad hoc committee.

City of Kenmore Roadway Standards Update

A 2015 update of the City of Kenmore roadway standards includes significantly expanded provisions for pedestrian and cyclist facilities on city roadways, both residential and arterial. These standards are used to educate developers and the public on the requirements for improvements to the transportation network. More detail on the roadway standards update is included in the engineering section, below.

Transportation element update

The City's comprehensive plan update in 2015 includes an update of the Transportation Element. The Transportation Element, which guides the capital improvement projects of the city for the next six years, includes three sections which directly address Council Goal #1. The inclusion of bicycle priority routes, pedestrian priority routes and identification of a layered network concept for Kenmore roads all directly address a multimodal approach to transportation safety. The layered network concept builds on the Complete Streets concept by providing pedestrian and cyclist facilities where appropriate and effective, not just in all locations. The use of a layered network acknowledges that some roads are better suited to vehicle or freight usage, while many others need to safely accommodate cyclists and pedestrians. This creates a wider roadway network that is overall safer for all motorized and non-motorized users. Identification of bicycle and pedestrian priority routes ensures that future development and projects enhances these routes. This will lead to continuous non-motorized access across Kenmore in an organized network.

Enforcement

Enforcement of traffic laws, for motorized and non-motorized users, is a critical component of keeping all users safe. The Kenmore police department has always had a strong commitment to keeping Kenmore as one of the safest places to live in the state of Washington. Council Goal #1 has reinforced the police department's commitment to enforcing existing laws and ensuring compliance with changes made by engineering projects.

Kenmore Police Chief Statement

Since the date of incorporation the top priority of the Kenmore Police Department (KPD) has always been to make the City of Kenmore the safest place to live in this State. KPD continues to enforce all laws, traffic and criminal, to achieve our goal.

18120 68th Ave NE · PO Box 82607 · Kenmore, WA 98028

Office: (425) 398-8900 · Fax: (425) 481-3236 · cityhall@kenmorewa.gov · www.kenmorewa.gov



Council Goal #1 Update

Attachment A

KPD is placing a special focus on the detection and enforcement of traffic laws relating to the safety of all road users. We will continue issuing notice of infractions (tickets) to motorists who fail to yield to pedestrians and distracted driving violations; to pedestrians who fail to follow the laws relating to crossing roadways; and to bicyclist who fail to obey the rules of the road and safety equipment violations. This emphasis is in support of the adoption of Kenmore's Target Zero initiative.

Evaluation of Automated School Zone Speed Camera System

The Ad Hoc committee's recommendation #2 was for the implementation of school zone camera systems. These systems automatically ticket vehicles exceeding the speed limit in school zones. City Staff have been evaluating the use of these cameras prior to proceeding with installation in any of Kenmore's school zones. Data on vehicle speeds was collected at the end of the previous school year. Data is being collected and analyzed at the beginning of the current school year to verify and compliment results obtained in the first measurements. City staff met with representatives of the third party vendors of the automated camera systems to gather information. A final report and recommendation on school zone cameras is expected to be presented to City Council for consideration by the end of 2015.

Reward Program for Children

The Target Zero Reward Program, held during the spring and summer months, strived to encourage children and teens under the age of 18 to be safer bicyclists and pedestrians. While out on patrol, KPD "cited" children and teens for displaying good traffic safety behavior such as wearing protective and reflective gear, signaling turns while riding a bike, using yellow crossing flags at crosswalks, and many other positive safety actions. These coupons were good for free small snacks courtesy of McDonalds and Kidd Valley in Kenmore.

6th Grade Classroom Visits

The KPD makes special presentations to 6th grade classrooms at Moorlands Elementary in the fall and Kenmore Elementary in spring. The presentation includes information on personal safety, including walking and biking safely to and from school.



**City of Kenmore
Update on City Council Goal #1
October 19, 2015**

Outline of Presentation



1. City Council Goal #1
2. Target Zero Initiative
 - a) Engineering
 - b) Education
 - c) Enforcement

City Council Goal #1



Focus on and emphasize multimodal transportation safety in the City of Kenmore with a specific focus on pedestrian, bicyclist and other means of travel.

Target Zero Initiative



Adopted by the Kenmore City Council in April of 2014 with the goal of achieving zero pedestrian and bicyclist fatalities and serious injuries in Kenmore by 2025 by increasing awareness of pedestrian, bicyclist and driver safety issues.

ENGINEERING

Sidewalk Projects In Design Map



Sidewalk Projects - In Design



62nd Avenue NE;
\$828,000 Grant



NE 181st St;
\$874,830 Grant



NE 202nd Street;
\$1,017,570 Grant

Sidewalk Gaps Projects Completed



72nd Ave NE



68th Avenue NE
near Boat Launch



NE 155th Street
near Inglesmoor



Operational Changes



- Signal Phasing for Pedestrians
 - o 68th Avenue NE and NE 181st Street
 - o Juanita Drive and Arrowhead Drive/NE 153rd Place
- Reduced Speed Limit on NE 175th Street

SR 522 West A: New Sidewalks



Tolt Trail Design



Rectangular Rapid Flashing Beacons



61st Avenue Rechannelization



Juanita Drive Walkway Improvements



68th Ave Shoulder Widening



NE 182nd Street to
NE 189th Street

Implementation of CityWorks



The screenshot displays the Cityworks application interface. On the left, there are two tables listing service requests.

BRETT - All time requests

	Date Initiated	Description	Category	Dispatch To	Address
10789	7/20/2015 10:41 AM	ST TRAFFIC CALMINC	STREETS	SCHOCK, BRETT	20320 66TH AVE NE
10813	7/23/2015 10:20 AM	ST ROADWAY	STREETS	SCHOCK, BRETT	NE 155TH & JUANITA
10912	8/14/2015 4:00 PM	ST TRAFFIC	STREETS	SCHOCK, BRETT	7301 NE 175TH ST
10960	8/31/2015 9:28 AM	ST TRAFFIC	STREETS	SCHOCK, BRETT	SIMMONS NE & NE 15
10998	9/3/2015 9:51 AM	ST TRAFFIC	STREETS	SCHOCK, BRETT	NE 145TH & 84TH NE
11068	9/18/2015 10:18 AM	ST TRAFFIC CALMINC	STREETS	SCHOCK, BRETT	7410 NE 163RD ST
11082	9/22/2015 9:37 AM	ST PARKING	STREETS	SCHOCK, BRETT	15448 85TH AVE NE
11090	9/23/2015 4:32 PM	ST TRAFFIC CALMINC	STREETS	SCHOCK, BRETT	18226 68TH AVE NE
11104	9/29/2015 11:57 AM	ST TRAFFIC	STREETS	SCHOCK, BRETT	NE 157TH & 88TH NE
11115	9/30/2015 2:30 PM	ST TRAFFIC CALMINC	STREETS	SCHOCK, BRETT	NE 182ND & 73RD NE
11117	9/30/2015 3:54 PM	ST PARKING	STREETS	SCHOCK, BRETT	6700 NE 182ND ST
11128	10/2/2015 1:58 PM	ST ROADWAY	STREETS	SCHOCK, BRETT	16114 JUANITA DR NE
11140	10/5/2015 4:05 PM	ST PARKING	STREETS	SCHOCK, BRETT	6700 NE 182ND ST
11142	10/6/2015 9:28 AM	ST TRAFFIC	STREETS	SCHOCK, BRETT	JUANITA NE & NE 146
11147	10/7/2015 9:39 AM	ST PARKING	STREETS	SCHOCK, BRETT	18725 68TH AVE NE
11151	10/8/2015 9:24 AM	ST PARKING	STREETS	SCHOCK, BRETT	73rd & 181st
11162	10/9/2015 10:24 AM	ST TRAFFIC	STREETS	SCHOCK, BRETT	71st & 185th
11166	10/9/2015 1:57 PM	ST TRAFFIC	STREETS	SCHOCK, BRETT	6810 NE 153RD PL

Brett - All Time

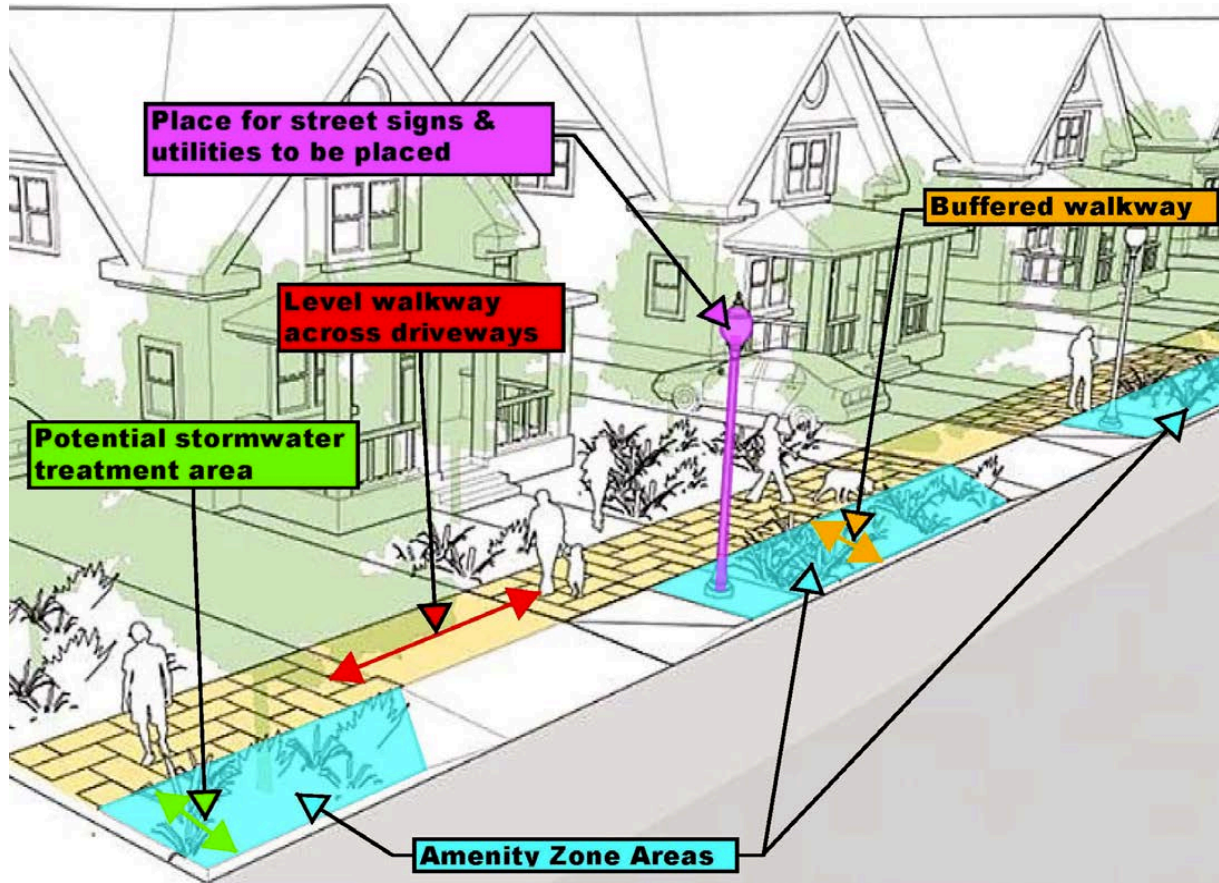
	Date Initiated	Description	Priority	Category	Submit To	Dispatch To	Addr
500	5/22/2014 2:25 PM	A ST TRAFFIC	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	68TH
789	7/29/2014 10:21 A	A ST ROADWAY	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	7201 L
830	8/7/2014 9:03 AM	A ST TRAFFIC CALM	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	NE 46
983	9/15/2014 3:08 PM	A ST TRAFFIC CALM	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	NE 20
1145	11/6/2014 9:47 AM	A ST TRAFFIC	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	73RD
9208	3/3/2015 11:22 AM	A ST TRAFFIC CALM	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	6501 L
9534	3/5/2015 2:10 PM	A ST SIGNS	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	84TH
10296	3/23/2015 10:33 A	A ST TRAFFIC CALM	3	STREETS	OVERLEESE, KRIST	SCHOCK, BRETT	6500 L

On the right side of the interface is a map view showing the geographic locations of the requests. The map includes street names such as NE 186th St, NE 187th St, NE 185th St, NE 184th St, NE 183rd St, NE 182nd St, NE 181st St, NE 177th St, NE 175th St, 65th Ave NE, 66th Ave NE, 67th Ave NE, 68th Ave NE, 70th Ln NE, 72nd Ave NE, 73rd Ave NE, and various private roads. Requests are indicated by colored dots (orange, pink, purple) on the map, corresponding to the entries in the tables above. The bottom status bar shows coordinates X: 1290469.62126 Y: 280184.05561.



TARGET
ZERO
A SAFER KENMORE

Roadway Standards Update



West Sammamish River Bridge Replacement



EDUCATION / OUTREACH

Pedestrian & Bicycle Safety Ad-Hoc Committee



Community Events



Bastyr Herb & Food Fair

City Events



Kenmore Play Day



Summer Concerts



National Night Out

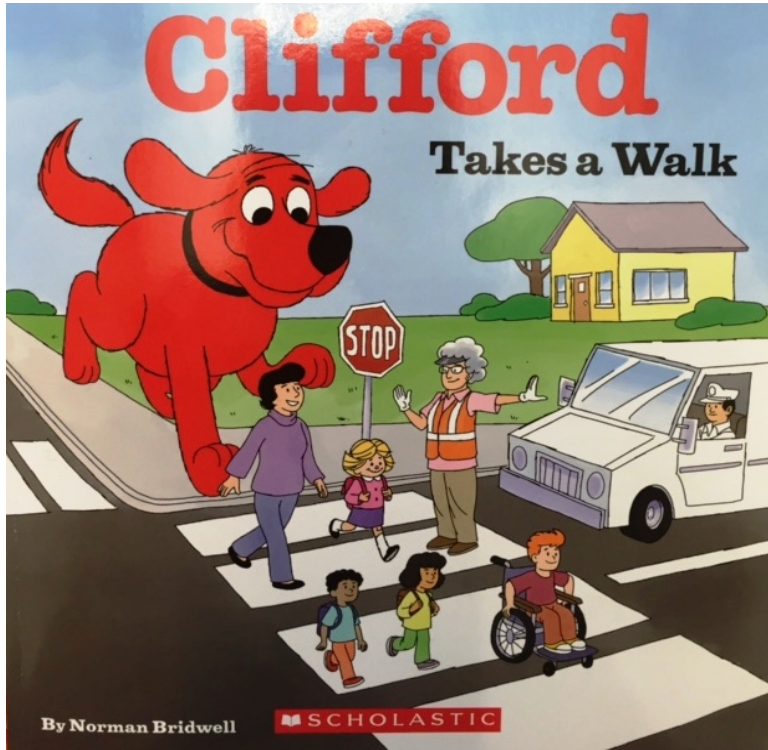
Bike to Work Day



Pop-Up Parties



Walk to School Day



Helmet Sales (~100 sold)



City Staff Target Zero Training



Transportation Element Update

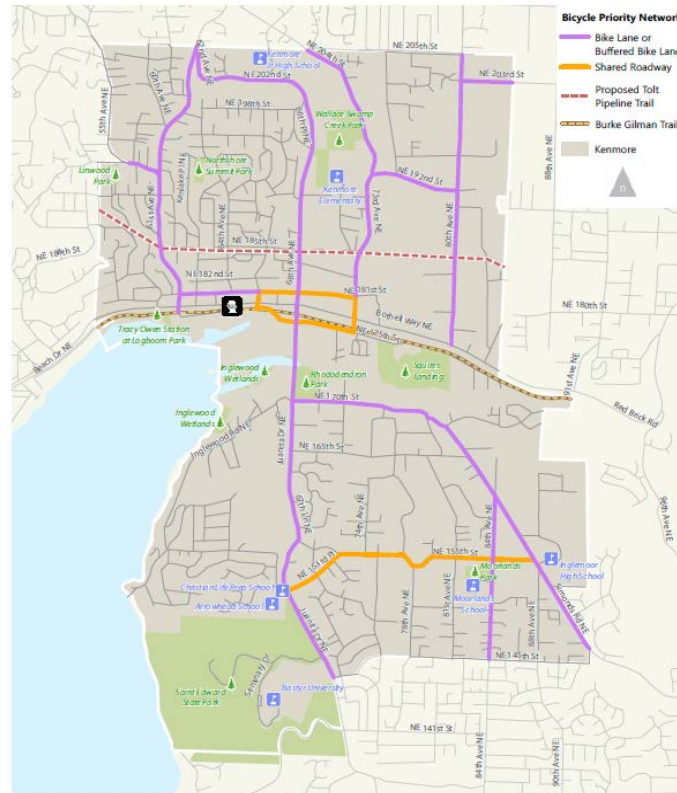


Figure 22.

Bicycle Priority Network - Yellow Standard

Document Path: I:\pse03\pse2\data\2013\Projects\SE13-0301.04_Kenmore_TE_TO4\Graphics\MXD\fig22_bicycleYellowStandard.mxd



ENFORCEMENT

ENFORCEMENT



Kenmore PD is Enforcing a Zero Tolerance Policy for All Road Users

- **Extra** traffic safety motorcycle officer
- **Enforcing pedestrian violations:** midblock crossing when crosswalk available
- **Enforcing bicyclist violations:** failure to stop at stop sign or red light
- **Enforcing motorist violations:** failure to yield to pedestrians at crosswalk

Burke-Gilman Trail Patrol



Reward Program for Children



6th Grade Classroom Visits



School Zone Enforcement



Automated School Zone Speed Camera System



- Ongoing data collection effort
- Analysis to be presented to Council later this year

Moving Forward Together For A Safer Kenmore

www.kenmorewa.gov/targetzero

