Today’s Meeting

- **Presentation:** ITS and Safety: A Perfect Partnership - Brian Chandler, DKS
- **Discussion:** Review Preliminary Results of Regional ITS Inventory Survey
ITS and Safety: A Perfect Partnership
Brian Chandler, DKS
Review Preliminary Results of ITS Inventory Survey
Survey Responses

• Current Status as of 3/6/19:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Submitted:</td>
<td>46</td>
</tr>
<tr>
<td>No Response Needed:</td>
<td>29</td>
</tr>
<tr>
<td><strong>Outstanding:</strong></td>
<td><strong>13</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>

• Responses have generally been in the correct format, although there are missing data points in some mandatory fields

• Follow-up effort has been required for some jurisdictions

• Today’s analysis only includes responses up to 2/28
Survey Responses

- Waiting on the following jurisdictions as of 3/6/19:

<table>
<thead>
<tr>
<th>King</th>
<th>Pierce</th>
<th>Snohomish</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Burien</td>
<td>· Fife</td>
<td>· Mill Creek</td>
</tr>
<tr>
<td>· Issaquah</td>
<td>· Milton</td>
<td>· Mountlake Terrace</td>
</tr>
<tr>
<td>· Normandy Park</td>
<td>· Sumner</td>
<td></td>
</tr>
<tr>
<td>· Pacific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Redmond</td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Renton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Sammamish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Seattle</td>
<td></td>
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</tr>
</tbody>
</table>

* Bolded cities have a population of greater than 25,000
Map of survey responses received as of 3/6/19
• Reminder: Limited to signals along the National Highway System (NHS)

• Total number of signals by category:

<table>
<thead>
<tr>
<th>Counties</th>
<th>City Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>King 640</td>
<td>Metropolitan 523</td>
</tr>
<tr>
<td>Kitsap 108</td>
<td>Core/Larger 735</td>
</tr>
<tr>
<td>Pierce 566</td>
<td>Smaller 93</td>
</tr>
<tr>
<td>Snohomish 332</td>
<td>Unincorp. Counties 295</td>
</tr>
<tr>
<td>Region 1,646</td>
<td>Region 1,646</td>
</tr>
</tbody>
</table>
Overview of City Typology

<table>
<thead>
<tr>
<th>Metropolitan</th>
<th>Core/Larger</th>
<th>Smaller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bellevue</td>
<td>Bainbridge Island</td>
<td>All other cities</td>
</tr>
<tr>
<td>Bremerton</td>
<td>Des Moines</td>
<td></td>
</tr>
<tr>
<td>Everett</td>
<td>Edmonds</td>
<td></td>
</tr>
<tr>
<td>Seattle</td>
<td>Issaquah</td>
<td></td>
</tr>
<tr>
<td>Tacoma</td>
<td>Kent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kirkland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lakewood</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lynnwood</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Puyallup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Redmond</td>
<td></td>
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<tr>
<td></td>
<td>Renton</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SeaTac</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tukwila</td>
<td></td>
</tr>
</tbody>
</table>

- Jurisdictions highlighted in red have not yet submitted
- When reviewing results, please note that missing jurisdictions skew breakdowns by city typology and by county
NUMBERS PRESENTED ON THESE SLIDES ARE PRELIMINARY ESTIMATES – FOR DISCUSSION PURPOSES ONLY
Preliminary Results:
% Coordinated Signals

% Coordinated Signals by County

73% 39% 46% 58%
King Kitsap Pierce Snohomish Region

% Coordinated Signals by Jurisdiction Type

62% 65% 43% 62% 40% 58%
Metropolitan Cities Core/Larger Cities Smaller Cities All Cities Uninc. Counties Region

Notes for both charts:

- # of Signals with Coordinated Signal Data Provided: 1,600
- Charts are based on where data is available. There are some missing data points among the datasets received.
- In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.
Preliminary Results: % Actuated Signals

Notes for both charts:

• # of Signals with Actuated Signal Data Provided: 1,639

• Charts are based on where data is available. There are some missing data points among the datasets received.

• In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.

PRELIMINARY DRAFT: Includes Signal Data Received as of 2/28/2019
Preliminary Results: % Pretimed Signals

Notes for both charts:

• # of Signals with Pretimed Signal Data Provided: 1,643

• Charts are based on where data is available. There are some missing data points among the datasets received.

• In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.
Preliminary Results:
% Adaptive Signal Control Signals

Notes for both charts:
- # of Signals with Adaptive Signal Control Data Provided: 1,642
- Charts are based on where data is available. There are some missing data points among the datasets received.
- In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.
Notes for both charts:

- # of Signals with Transit Signal Priority Data Provided: 1,641
- Charts are based on where data is available. There are some missing data points among the datasets received.
- In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.
Preliminary Results: % Signals Meeting Accessible Pedestrian Standards

Notes for both charts:

- # of Signals with Pedestrian Signal Provided: 1,369
- Charts are based on where data is available. There are some missing data points among the datasets received.
- In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.

PRELIMINARY DRAFT: Includes Signal Data Received as of 2/28/2019
Preliminary Results:
% Signals with Emergency Vehicle Preemption

Notes for both charts:
• # of Signals with EVP Data Provided: 1,646
• Charts are based on where data is available. There are some missing data points among the datasets received.
• In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.
Preliminary Results:  
% Providing Automatic Traffic Signal Performance Measures

Notes for both charts:
• # of Signals with Coordinated Signal Data Provided: 1,641
• Charts are based on where data is available. There are some missing data points among the datasets received.
• In addition, data has not been provided by and this analysis excludes signals from: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.
Preliminary Results:
Raw Data Output for Technical Fields

Note: The dataset for this analysis excludes signals from the following jurisdictions: Burien, Issaquah, Normandy Park, Pacific, Redmond, Renton, Sammamish, Seattle, Dupont, Fife, Milton, Ruston, Sumner, Lake Stevens, Mill Creek, and Mountlake Terrace.

Showing top 5 answers for technical fields by count

Will require additional work and technical expertise to process and organize data
• 13 jurisdictions have said they have Traffic Management Centers that include a dedicated room with an operator workstation and video wall.

• Nine jurisdictions have said they are connected to WSDOT’s Traffic Busters network.

• Sparse data received on Active Traffic Management corridors and permanent data collection tools thus far
Additional Analysis/Visualizations

- Percentage of NHS intersections that are signalized
- Number of jurisdictions that don’t have principal arterials aside from state routes
- Interactive Web Map allowing users to filter out signals based on various attributes and click on signal data points to obtain specific data
- Heat maps or other map display showing concentration of ITS features discussed in previous slides
- Corridor maps showing Transit Signal Priority and Adaptive Signal Control
- Map showing Traffic Management Center locations
- Map showing permanent data collection devices (that we have data for)
Next Steps

- Work with jurisdictions to develop a **regional inventory** of existing/on the ground ITS deployments

- Conduct **supporting analyses** to identify issues, hotspots and better understand system performance

Regional ITS needs and gaps analysis

Develop **policy recommendations** for the next long range plan update
Questions

• What are your initial thoughts on the approach to the analysis?

• Is there any additional analysis you’d like to see us do with this data that would be beneficial for a needs and gaps assessment?

• Do you have any suggestions or thoughts on effective ways to present on and discuss this with a non-technical audience?