Welcome!

CITY OF BELLEVUE
NEIGHBORHOOD SAFETY, CONNECTIVITY & CONGESTION LEVY

CITY OF BELLEVUE WASHINGTON

ReidMiddleton

OPEN HOUSE
Intersection Study on SE 8th Street & Lake Hills Connector

March 26, 2019 | 5:30–7:30pm
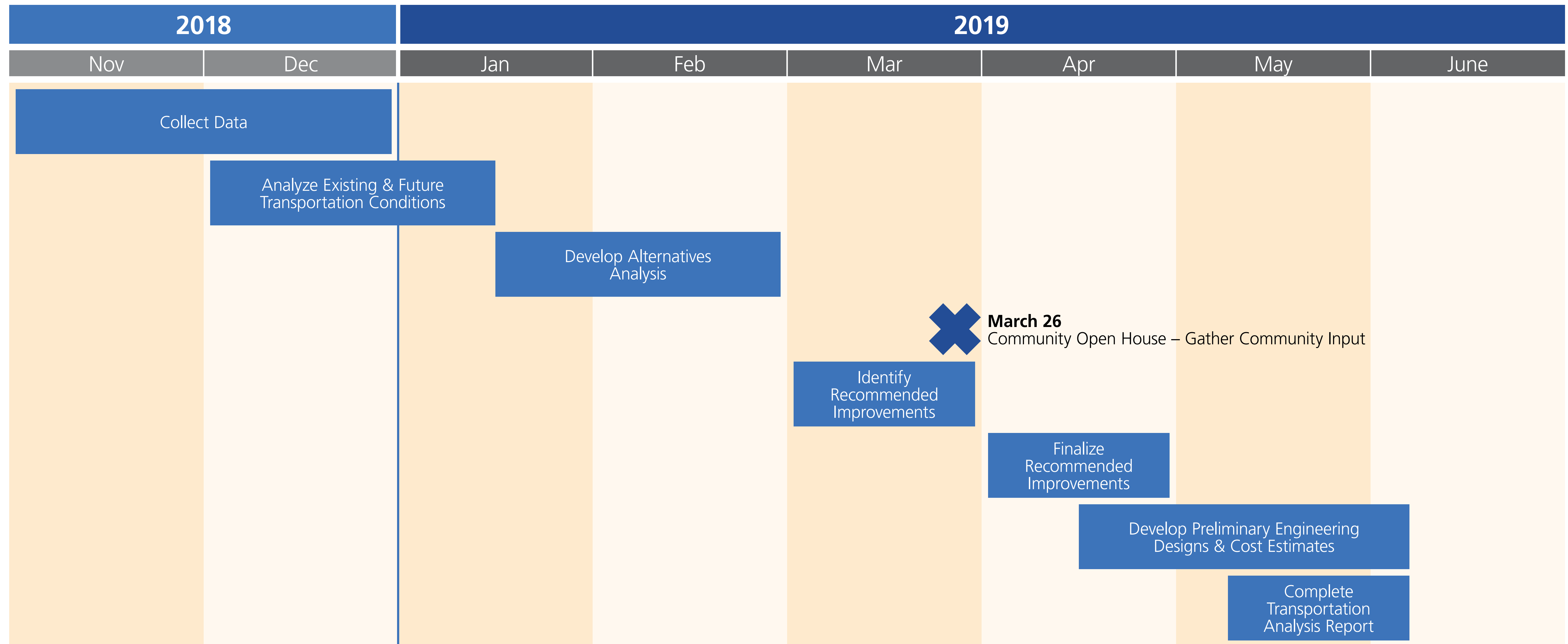*Bellevue Botanical Garden Educational Center*

Purpose

Identify improvements at the three intersections to address safety, traffic flow, & non-motorized mobility while considering cost, property, & environmental impacts

Possible Future Steps

· Secure funding
· Complete design
· Construct improvements

Planning Process & Schedule

2018		2019					
Nov	Dec	Jan	Feb	Mar	Apr	May	June

Collect Data

Analyze Existing & Future Transportation Conditions

Develop Alternatives Analysis

March 26
Community Open House – Gather Community Input

Identify Recommended Improvements

Finalize Recommended Improvements

Develop Preliminary Engineering Designs & Cost Estimates

Complete Transportation Analysis Report

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Lake Hills Connector

SE 8th Street

I-405

121st Ave SE

SE 7th Pl

Lake Hills Connector

Richards Rd

The SE 8th St/Lake Hills Connector Corridor is a major arterial that provides access to residential neighborhoods, schools, parks, and employment centers, and travels between I-405 and Lake Hills. The three existing signalized intersections that are being evaluated for this study include:
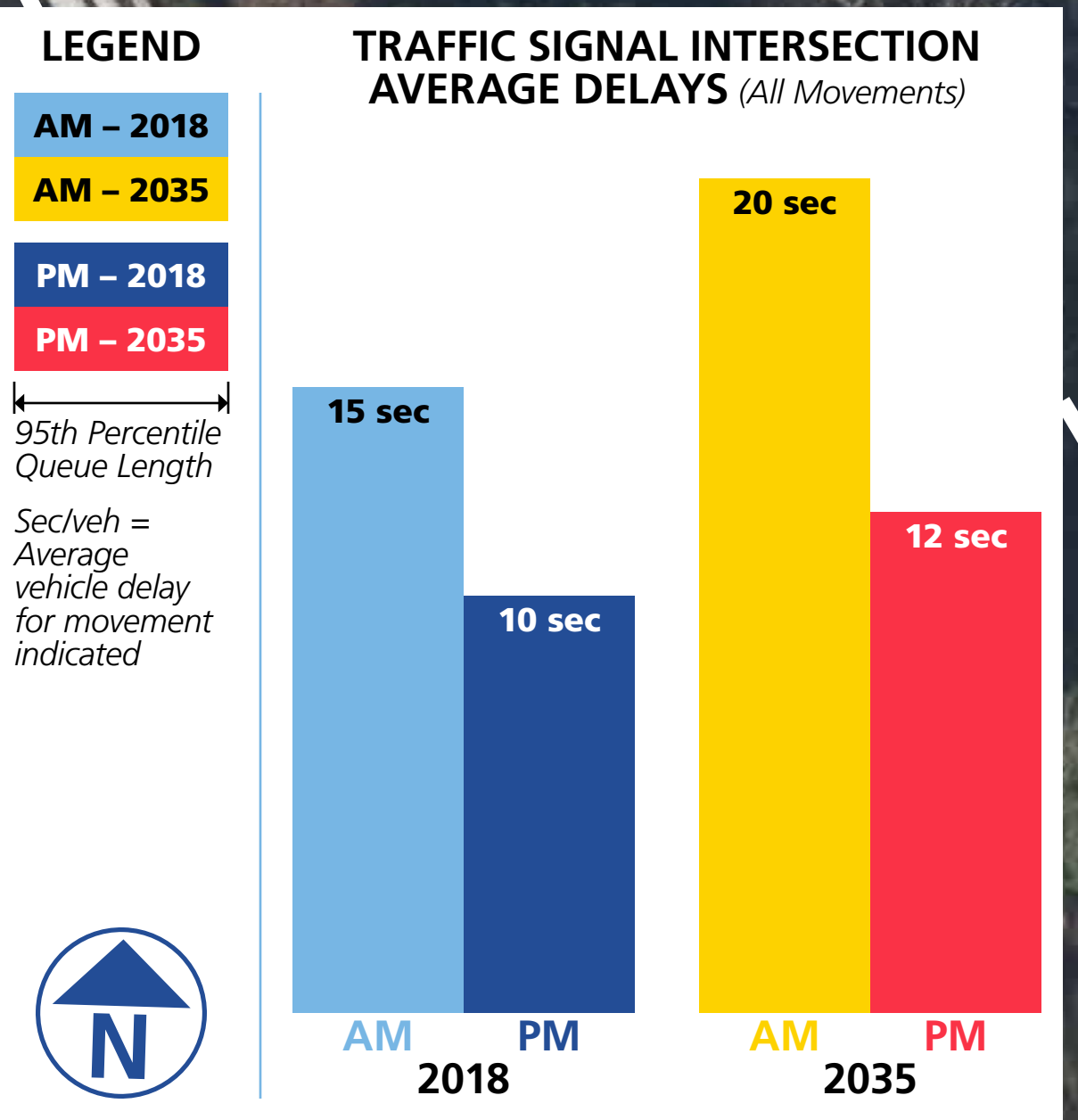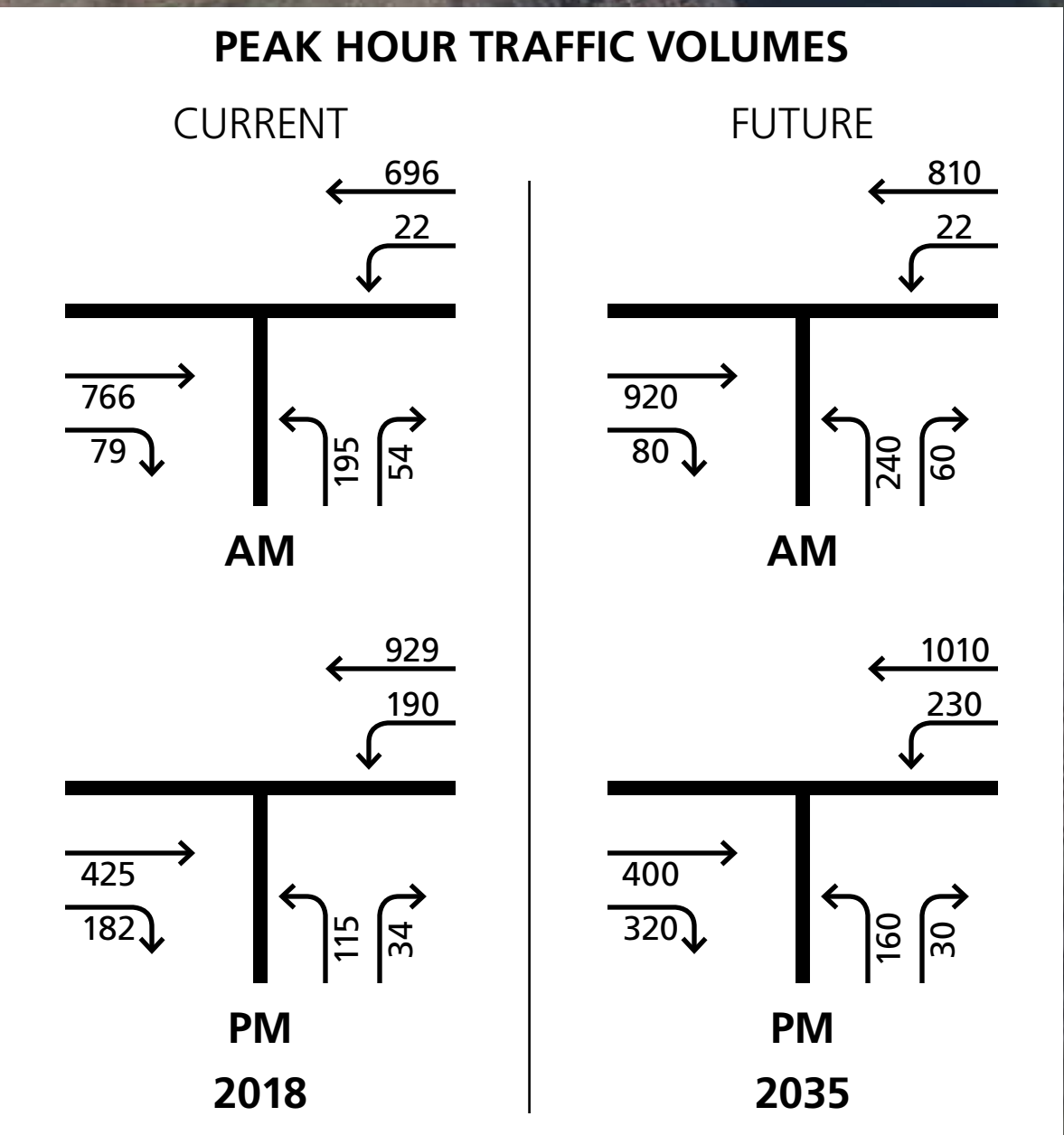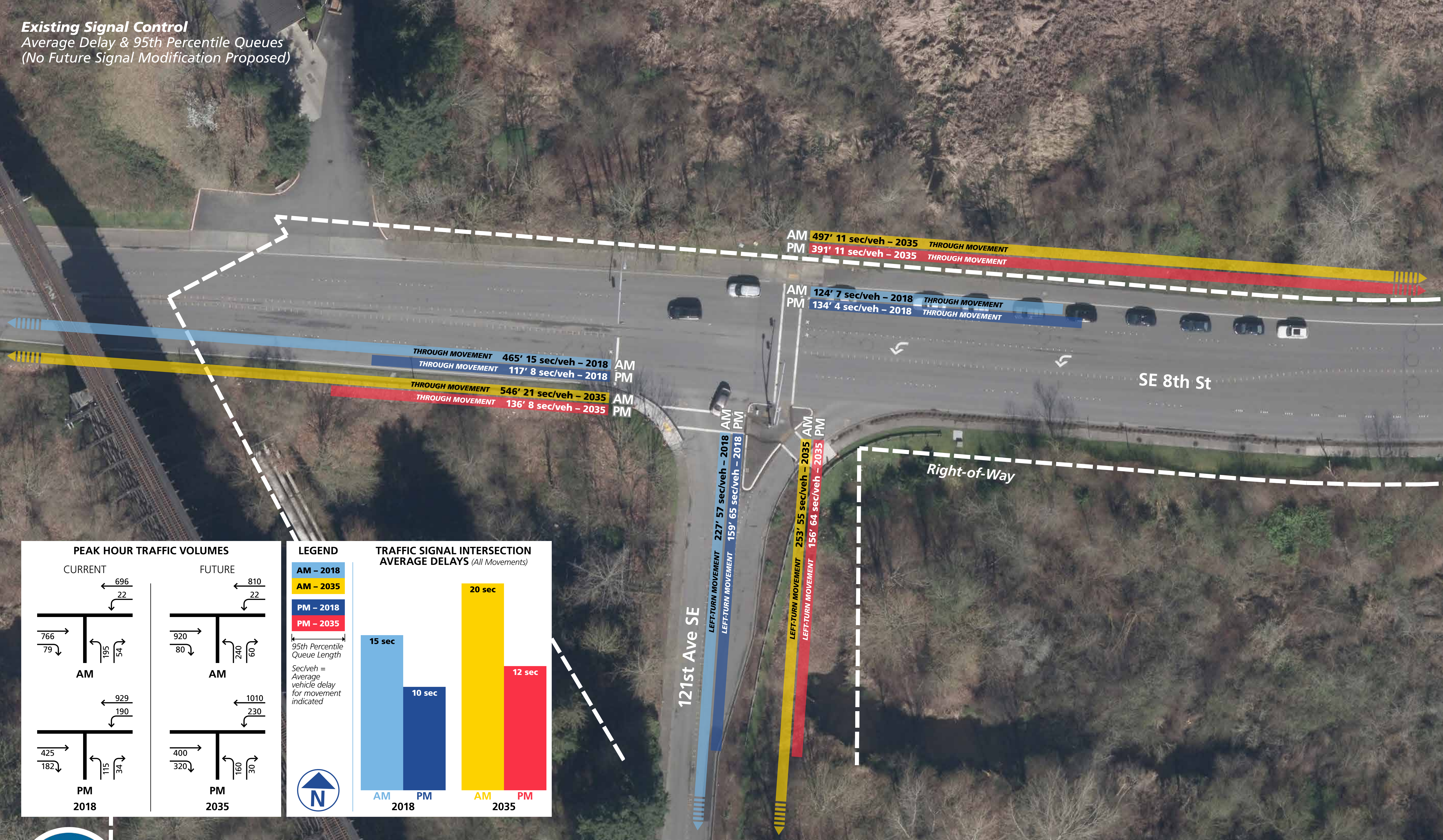- SE 8th Street / 121st Avenue SE
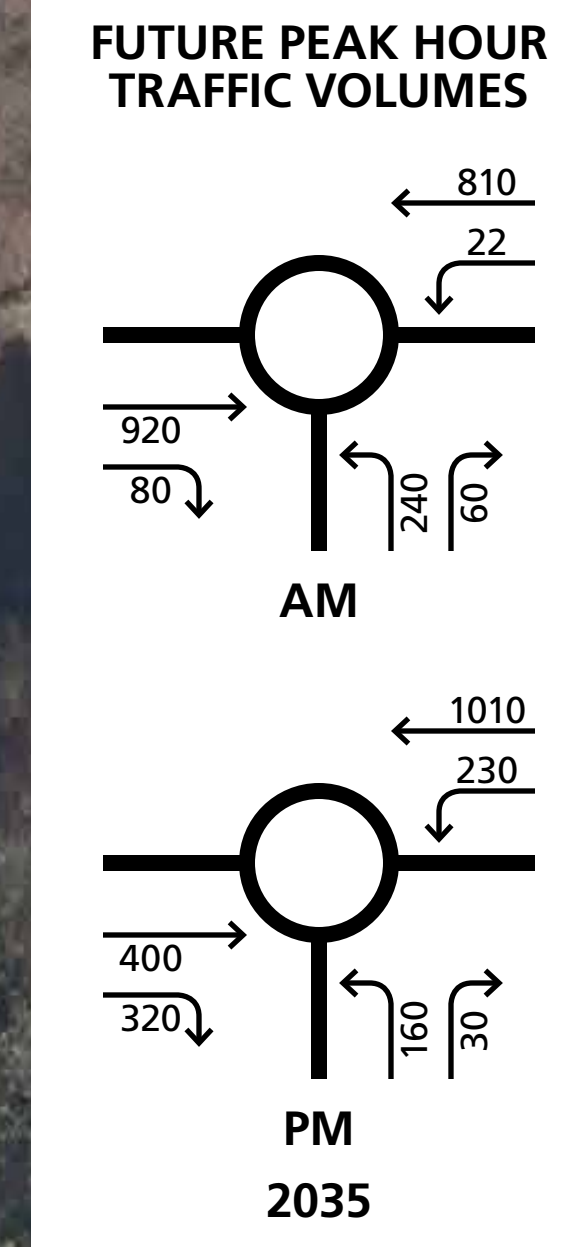- SE 8th Street / Lake Hills Connector
- Lake Hills Connector / Richards Road

N

Existing Signal Control
Average Delay & 95th Percentile Queues
(No Future Signal Modification Proposed)

AM **497' 11 sec/veh – 2035** *THROUGH MOVEMENT*
PM **391' 11 sec/veh – 2035** *THROUGH MOVEMENT*

AM **124' 7 sec/veh – 2018** *THROUGH MOVEMENT*
PM **134' 4 sec/veh – 2018** *THROUGH MOVEMENT*

THROUGH MOVEMENT **465' 15 sec/veh – 2018** AM
THROUGH MOVEMENT **117' 8 sec/veh – 2018** PM

THROUGH MOVEMENT **546' 21 sec/veh – 2035** AM
THROUGH MOVEMENT **136' 8 sec/veh – 2035** PM

LEFT-TURN MOVEMENT **227' 57 sec/veh – 2018** AM
LEFT-TURN MOVEMENT **159' 65 sec/veh – 2018** PM

LEFT-TURN MOVEMENT **253' 55 sec/veh – 2035** AM
LEFT-TURN MOVEMENT **156' 64 sec/veh – 2035** PM

SE 8th St

121st Ave SE

Right-of-Way

PEAK HOUR TRAFFIC VOLUMES

CURRENT | FUTURE

CURRENT – AM 2018
← 696
22
766
79
195 | 54

FUTURE – AM 2035
← 810
22
920
80
240 | 60

CURRENT – PM 2018
← 929
190
425
182
115 | 34

FUTURE – PM 2035
← 1010
230
400
320
160 | 30

LEGEND

- AM – 2018
- AM – 2035
- PM – 2018
- PM – 2035

95th Percentile Queue Length

Sec/veh = Average vehicle delay for movement indicated

N

TRAFFIC SIGNAL INTERSECTION AVERAGE DELAYS *(All Movements)*

2018
- AM: 15 sec
- PM: 10 sec

2035
- AM: 20 sec
- PM: 12 sec

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SE 8th Street/121st Avenue SE – Existing Condition (2018) & No Build (2035)
OPEN HOUSE – Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue

Roundabout Control
Average Delay & 95th Percentile Queues

AM 58' 4.6 sec/veh – 2035
PM 88' 5.2 sec/veh – 2035

64' 3.5 sec/veh – 2035
48' 4.5 sec/veh – 2035 AM
PM

SE 8th St

Right-of-Way

56' 8.9 sec/veh – 2035 AM
PM

28' 6.6 sec/veh – 2035

121st Ave SE

FUTURE PEAK HOUR TRAFFIC VOLUMES

AM

810
22
920
80
240
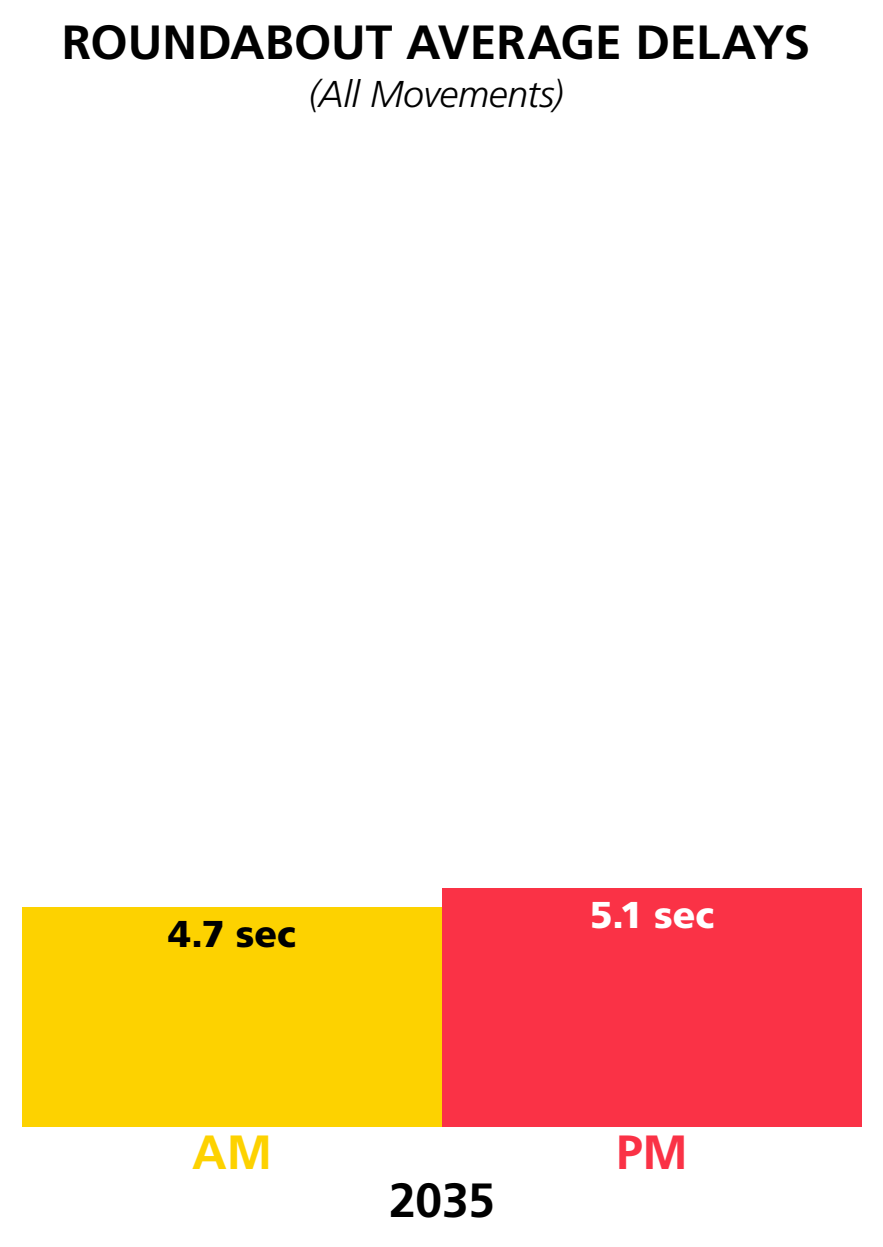60

PM

1010
230
400
320
160
30

2035

LEGEND

AM – 2035
PM – 2035

95th Percentile Queue Length

Sec/veh = Average vehicle delay for movement indicated

ROUNDABOUT AVERAGE DELAYS
(All Movements)

4.7 sec
AM

5.1 sec
PM

2035

N

SE 8th Street/121st Avenue SE – Roundabout (2035)
OPEN HOUSE – Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue

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Existing Signal Control
Average Delay & 95th Percentile Queues

SE 7th Pl

Lake Hills Connector

Lake Hills Connector

THROUGH/LEFT-TURN MOVEMENT
THROUGH/LEFT-TURN MOVEMENT
THROUGH/LEFT-TURN MOVEMENT

270' 62 sec/veh – 2035
645' 142 sec/veh – 2035
284' 69 sec/veh – 2018
364' 68 sec/veh – 2018

AM
PM
AM
PM

LEFT-TURN MOVEMENT
1028' 119 sec/veh – 2035
491' 47 sec/veh – 2035
LEFT-TURN MOVEMENT

AM
PM

LEFT-TURN MOVEMENT
823' 106 sec/veh – 2018
578' 49 sec/veh – 2018
LEFT-TURN MOVEMENT

THROUGH MOVEMENT 200' 46 sec/veh – 2018 AM
THROUGH MOVEMENT 1072' 215 sec/veh – 2018 PM

THROUGH MOVEMENT 241' 48 sec/veh – 2035 AM
THROUGH MOVEMENT 1056' 298 sec/veh – 2035 PM

AM
PM

AM
PM

THROUGH MOVEMENT 176' 64 sec/veh – 2018
THROUGH MOVEMENT 77' 62 sec/veh – 2035
THROUGH MOVEMENT 238' 73 sec/veh – 2035
THROUGH MOVEMENT 78' 60 sec/veh – 2035

SE 8th St

Right-Of-Way

PEAK HOUR TRAFFIC VOLUMES

CURRENT

AM
59
92
96
109
867
532
19
344
103
77 111 642

PM
14
102
93
35
627
443
11
1368
562
59 19 384

2018

FUTURE

AM
50
90
90
160
988
630
30
420
120
90 160 750

PM
30
170
150
70
790
430
20
1470
620
70 30 330

2035

LEGEND

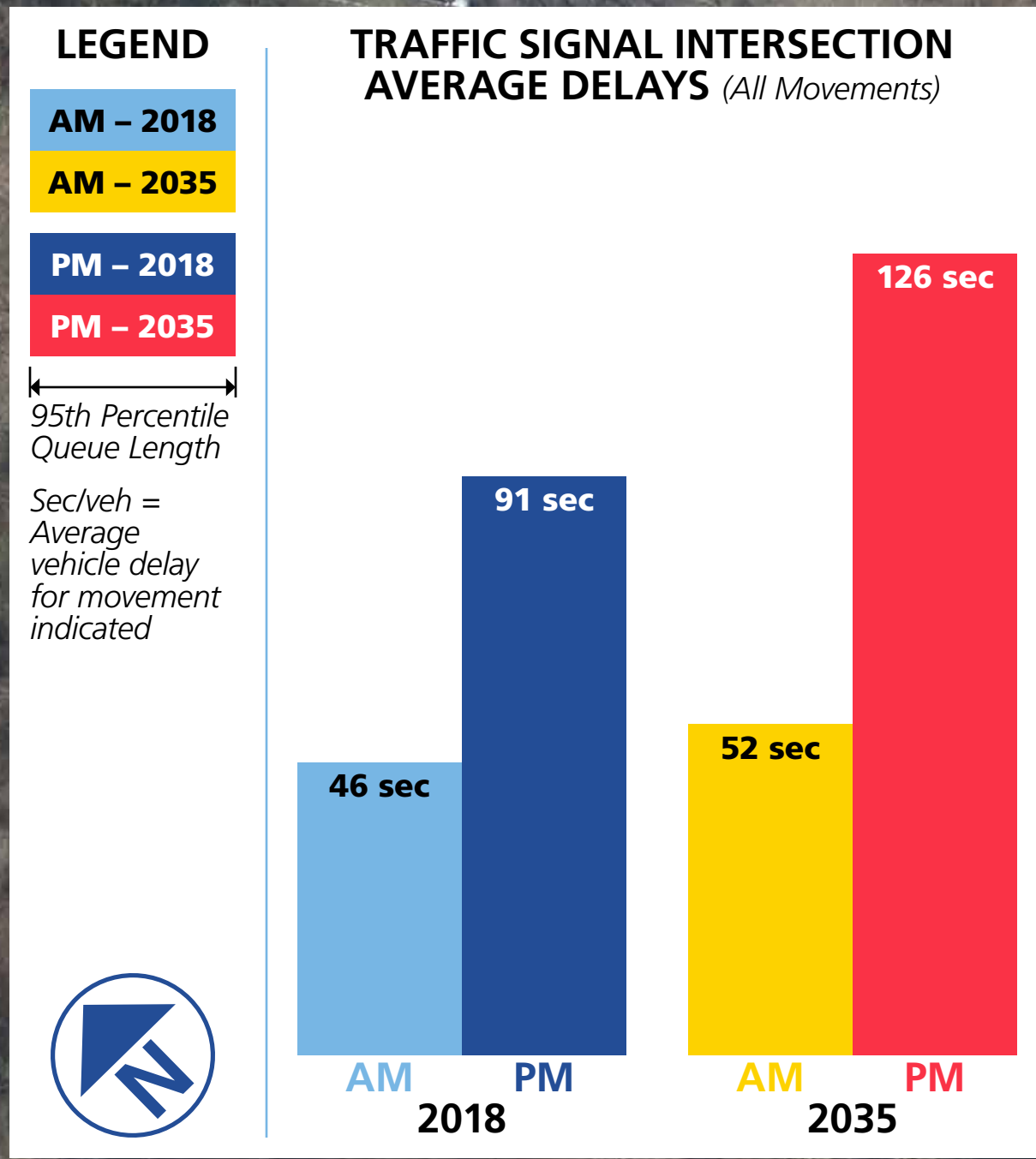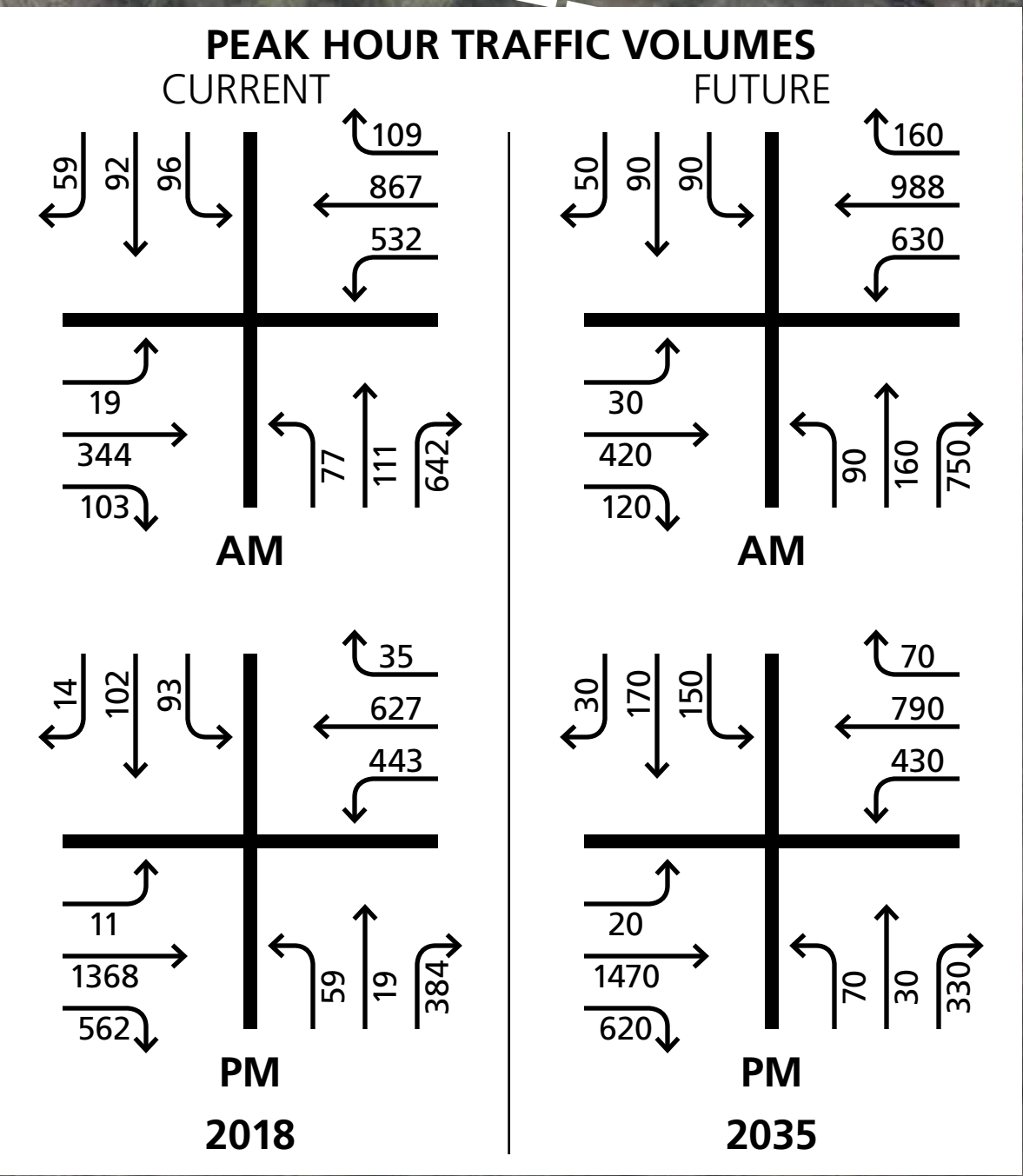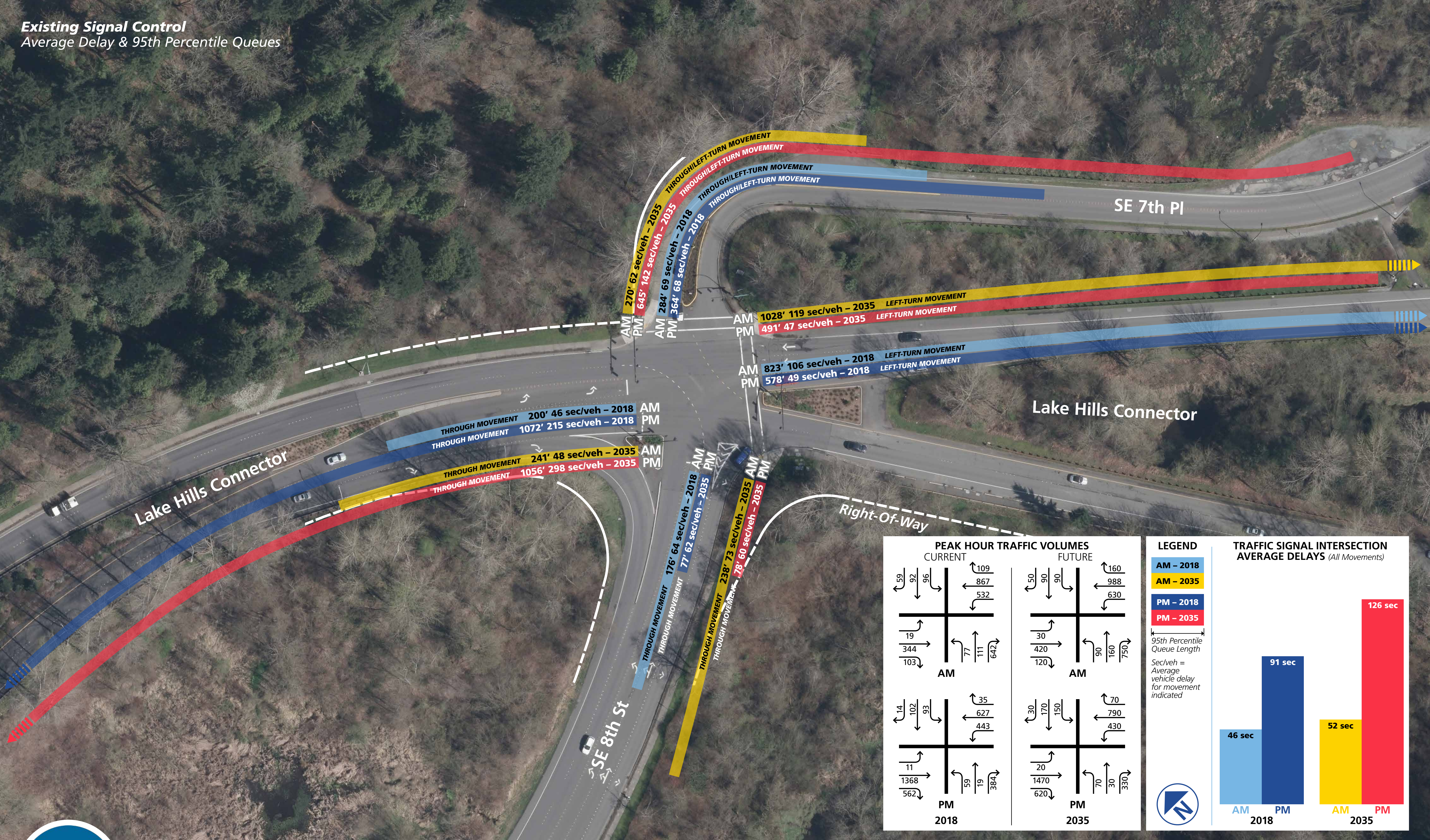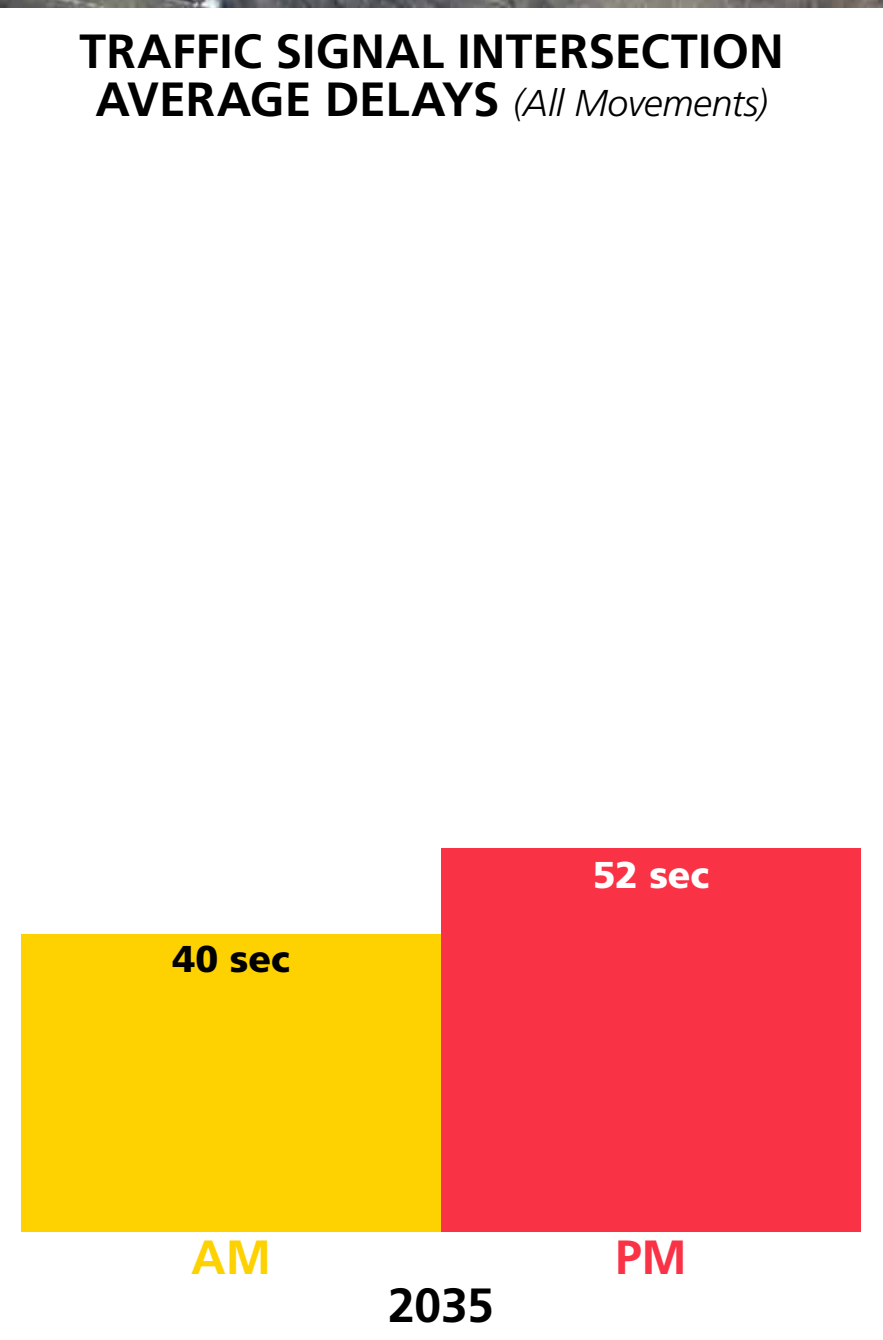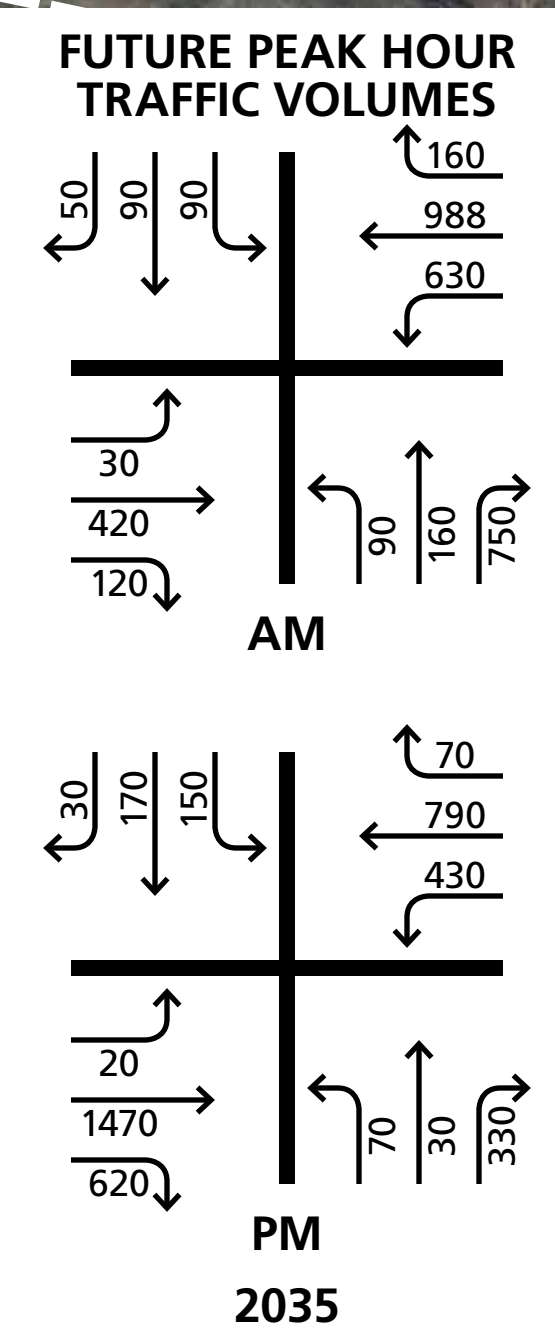AM – 2018
AM – 2035
PM – 2018
PM – 2035

95th Percentile
Queue Length

Sec/veh =
Average
vehicle delay
for movement
indicated

TRAFFIC SIGNAL INTERSECTION AVERAGE DELAYS *(All Movements)*

46 sec — AM 2018
91 sec — PM 2018
52 sec — AM 2035
126 sec — PM 2035

SE 8th Street/Lake Hills Connector – Existing Condition (2018) & No Build (2035)

OPEN HOUSE – Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue

Modified Signal Control
Average Delay & 95th Percentile Queues

SE 7th Pl

THROUGH/LEFT-TURN MOVEMENT

THROUGH/LEFT-TURN MOVEMENT

270' 63 sec/veh – 2035   AM
608' 201 sec/veh – 2035   PM

265' 62 sec/veh – 2035   LEFT-TURN MOVEMENT   AM
334' 37 sec/veh – 2035   LEFT-TURN MOVEMENT   PM

Lake Hills Connector

Lake Hills Connector

THROUGH MOVEMENT   249' 52 sec/veh – 2035   AM
THROUGH MOVEMENT   898' 64 sec/veh – 2035   PM

338' 114 sec/veh – 2035   AM
140 62 sec/veh – 2035   PM

THROUGH MOVEMENT

Right-Of-Way

SE 8th St

FUTURE PEAK HOUR TRAFFIC VOLUMES

AM
↖50 ↑90 ↗90   ↑160
                    ←988
                    ←630
↑30
→420
↓120
        ↑90 ↑160 ↑750
AM

PM
↖30 ↑170 ↗150   ↑70
                    ←790
                    ←430
↑20
→1470
↓620
        ↑70 ↑30 ↑330
PM

2035

LEGEND
AM – 2035
PM – 2035

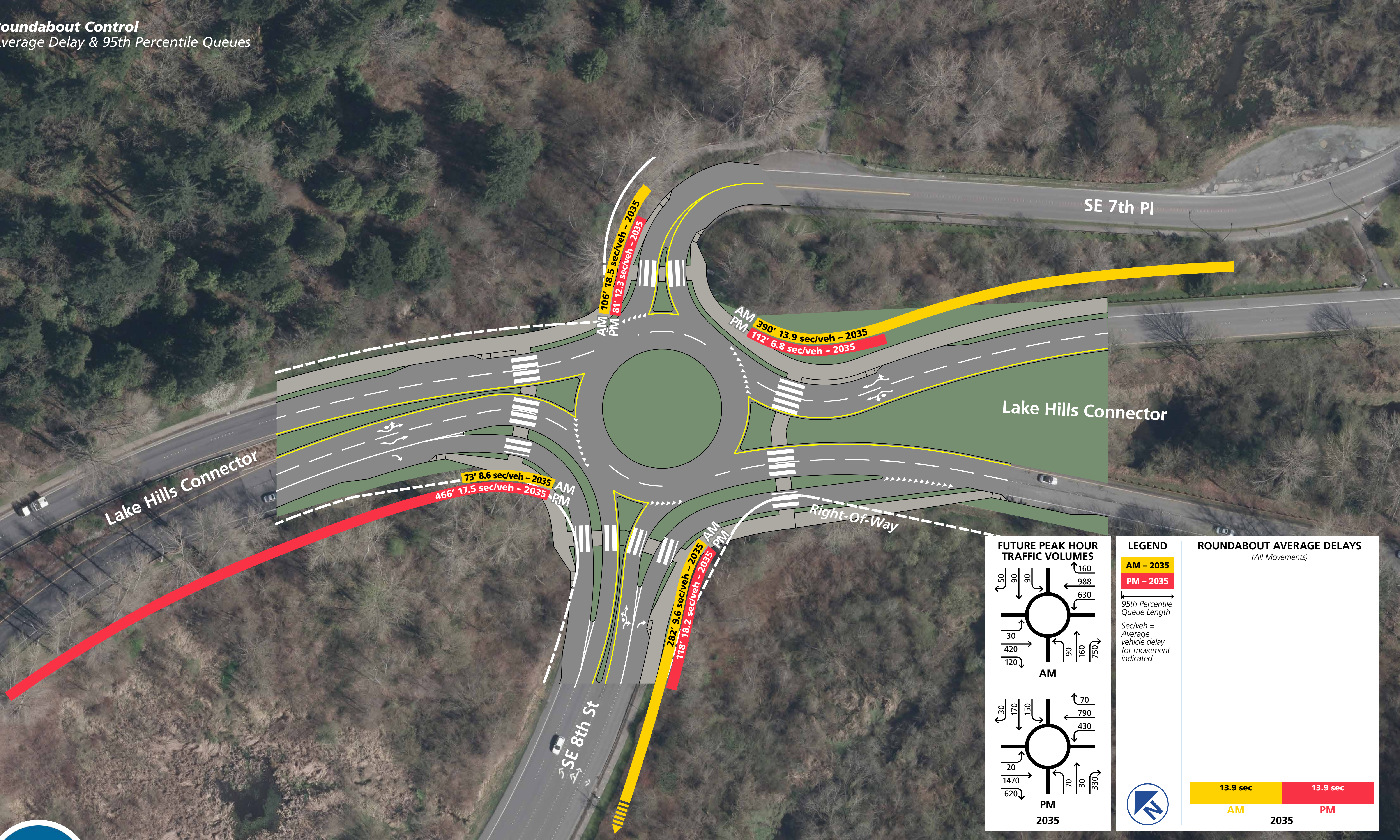*95th Percentile Queue Length*

Sec/veh = Average vehicle delay for movement indicated

TRAFFIC SIGNAL INTERSECTION AVERAGE DELAYS *(All Movements)*

AM	PM
40 sec	52 sec

2035

SE 8th Street/Lake Hills Connector – Modified Signal (2035)
OPEN HOUSE – Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue

Roundabout Control
Average Delay & 95th Percentile Queues

SE 7th Pl

AM 106' 18.5 sec/veh – 2035
PM 81' 12.3 sec/veh – 2035

AM 390' 13.9 sec/veh – 2035
PM 112' 6.8 sec/veh – 2035

Lake Hills Connector

Lake Hills Connector

AM 73' 8.6 sec/veh – 2035
PM 466' 17.5 sec/veh – 2035

Right-Of-Way

AM 282' 9.6 sec/veh – 2035
PM 118' 18.2 sec/veh – 2035

SE 8th St

FUTURE PEAK HOUR TRAFFIC VOLUMES

AM
50, 90, 90 ↖
160 ↑ 988 → 630 →
30 ↓
420 ←
120 ↓
90, 160, 750 ↑
AM

PM
30, 170, 150 ↖
70 ↑ 790 → 430 →
20 ↓
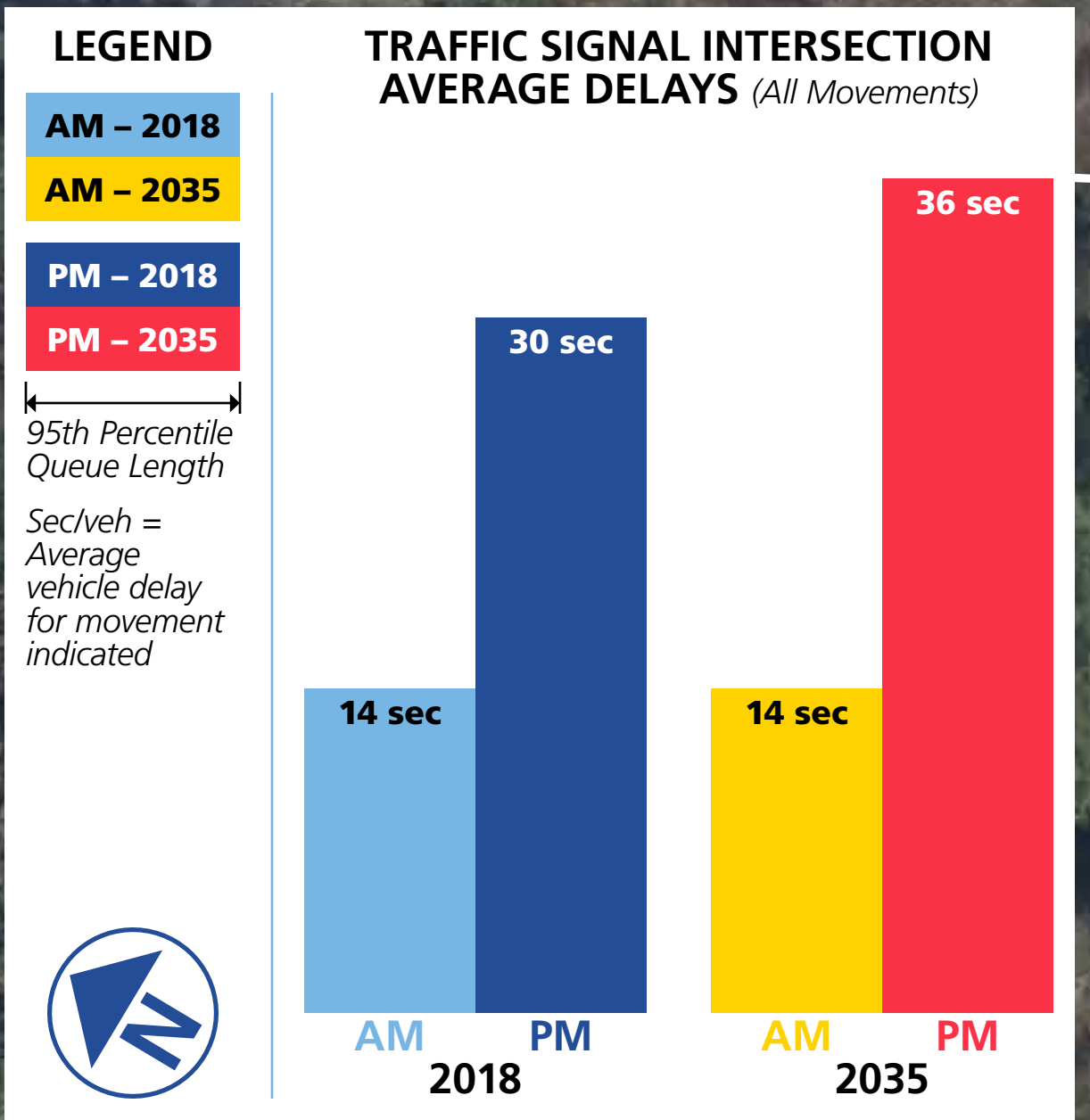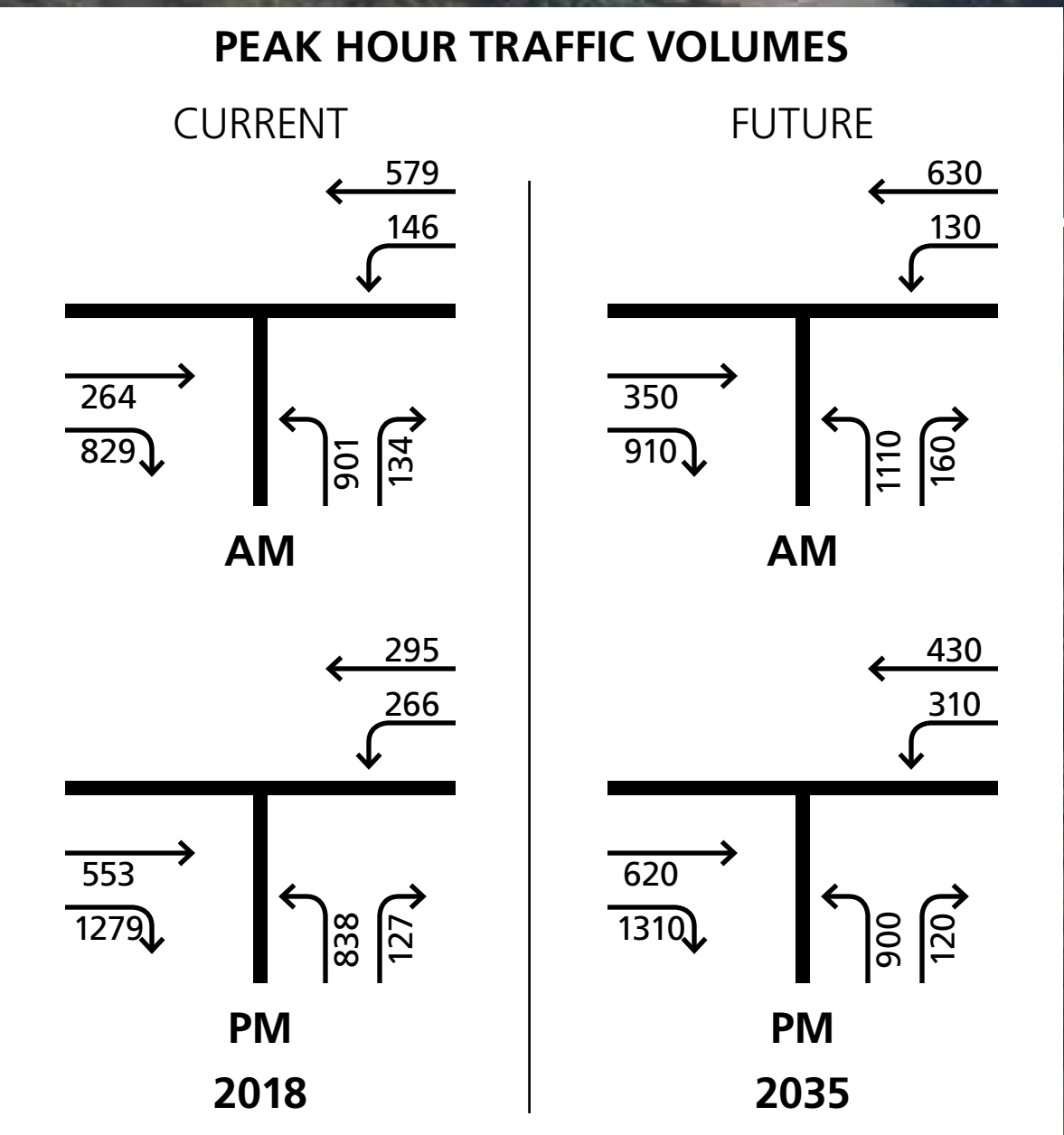1470 ←
620 ↓
70, 30, 330 ↑
PM

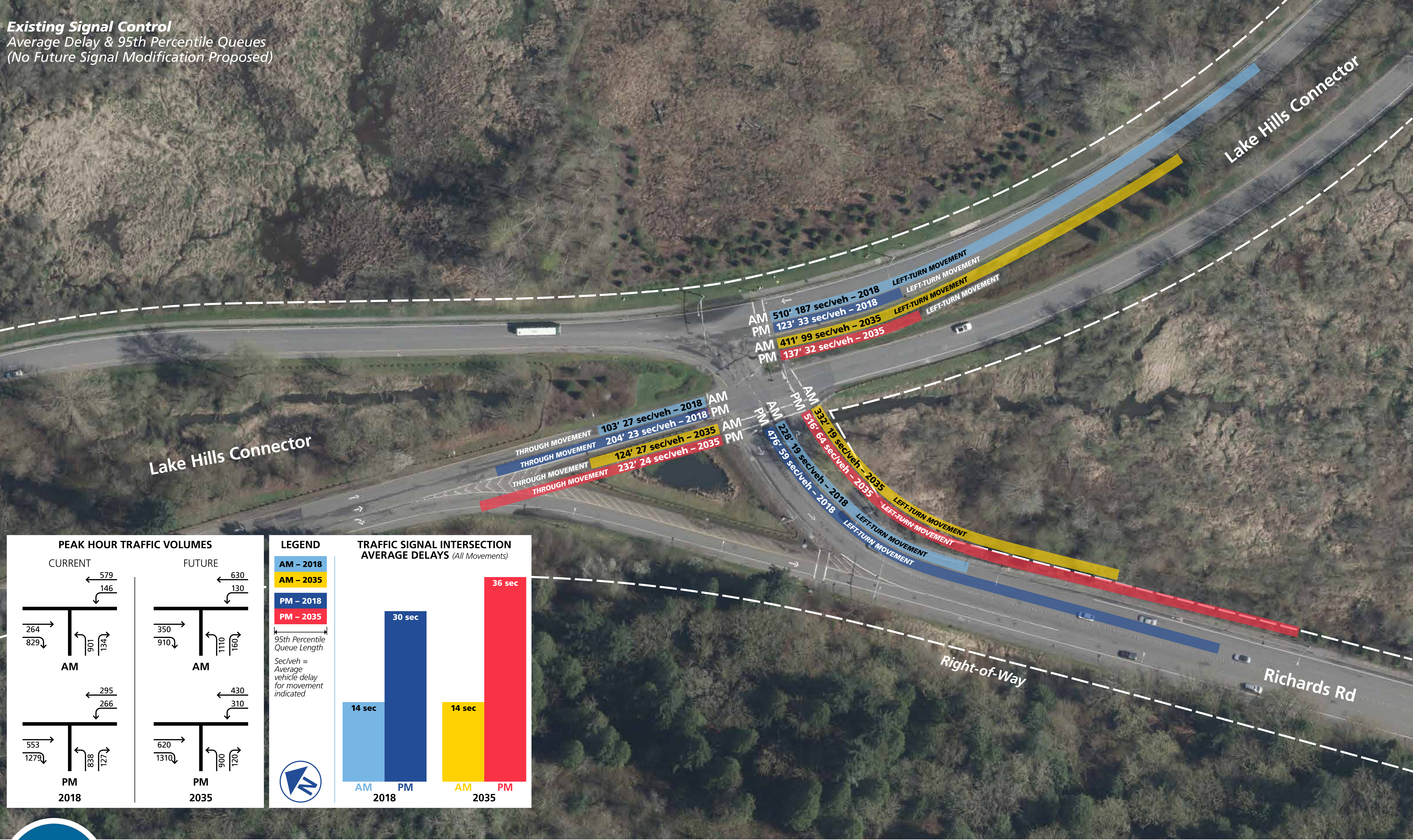**2035**

LEGEND

AM – 2035
PM – 2035

95th Percentile Queue Length

Sec/veh = Average vehicle delay for movement indicated

ROUNDABOUT AVERAGE DELAYS
(All Movements)

13.9 sec	13.9 sec
AM	**PM**

2035

SE 8th Street/Lake Hills Connector – Roundabout (2035)
OPEN HOUSE – *Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue*

Existing Signal Control
Average Delay & 95th Percentile Queues
(No Future Signal Modification Proposed)

Lake Hills Connector

Lake Hills Connector

LEFT-TURN MOVEMENT
LEFT-TURN MOVEMENT
LEFT-TURN MOVEMENT
LEFT-TURN MOVEMENT

AM 510' 187 sec/veh – 2018
PM 123' 33 sec/veh – 2018
AM 411' 99 sec/veh – 2035
PM 137' 32 sec/veh – 2035

THROUGH MOVEMENT
THROUGH MOVEMENT
THROUGH MOVEMENT
THROUGH MOVEMENT

AM 103' 27 sec/veh – 2018
PM 204' 23 sec/veh – 2018
AM 124' 27 sec/veh – 2035
PM 232' 24 sec/veh – 2035

AM
PM
AM
PM

332' 19 sec/veh – 2035
516' 19 sec/veh – 2018
228' 64 sec/veh – 2035
476' 59 sec/veh – 2018

LEFT-TURN MOVEMENT
LEFT-TURN MOVEMENT
LEFT-TURN MOVEMENT

Right-of-Way

Richards Rd

PEAK HOUR TRAFFIC VOLUMES

CURRENT

AM
579 ←
146 →
264 →
829 ↓
901 ↑
134 →

PM
295 ←
266 →
553 →
1279 ↓
838 ↑
127 →

2018

FUTURE

AM
630 ←
130 →
350 →
910 ↓
1110 ↑
160 →

PM
430 ←
310 →
620 →
1310 ↓
900 ↑
120 →

2035

LEGEND

- AM – 2018 (light blue)
- AM – 2035 (yellow)
- PM – 2018 (dark blue)
- PM – 2035 (red)

95th Percentile Queue Length

Sec/veh = Average vehicle delay for movement indicated

TRAFFIC SIGNAL INTERSECTION AVERAGE DELAYS *(All Movements)*

2018: AM 14 sec, PM 30 sec
2035: AM 14 sec, PM 36 sec
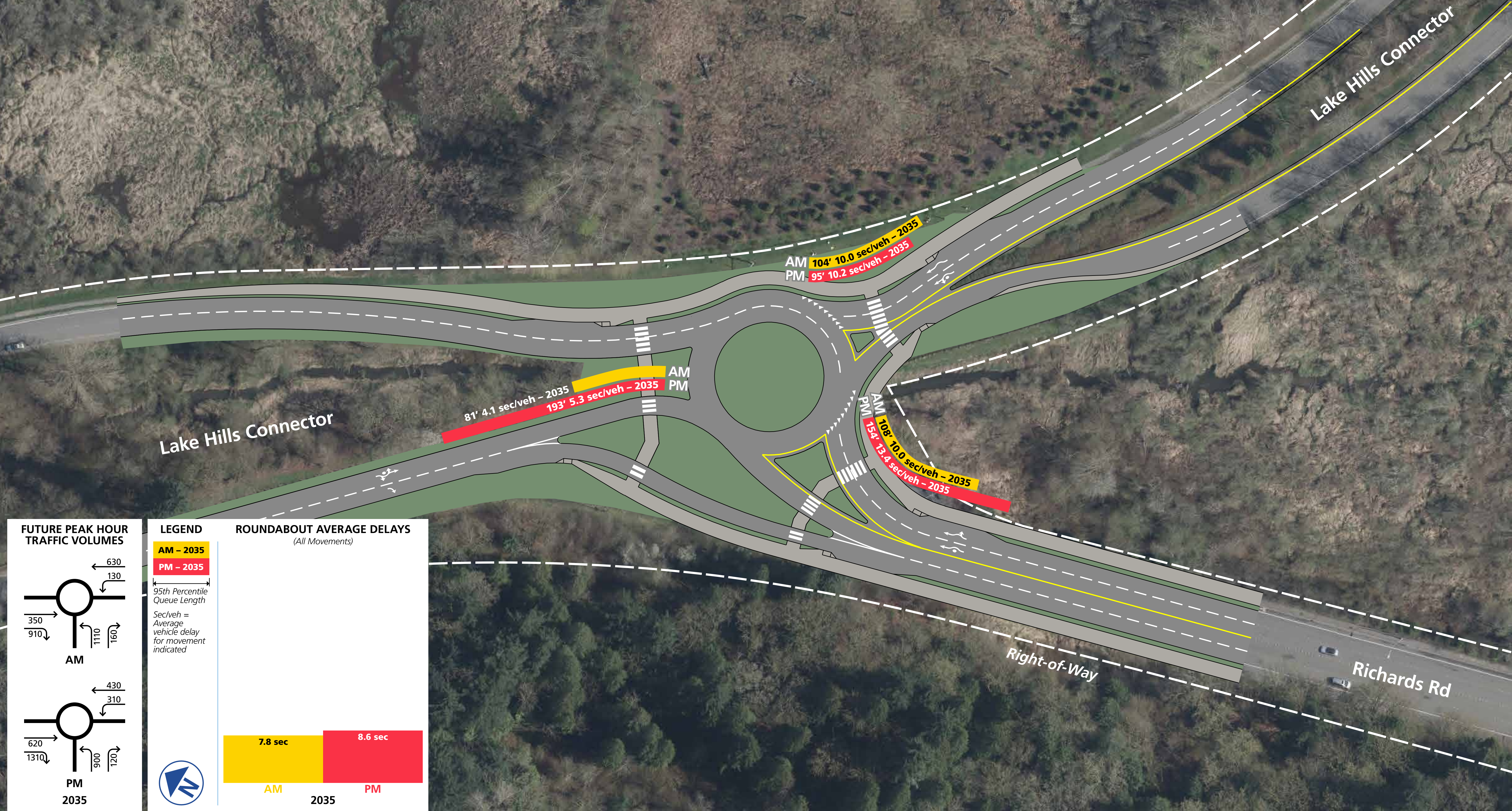
Lake Hills Connector/Richards Road – Existing Condition (2018) & No Build (2035)
OPEN HOUSE – Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue

Lake Hills Connector

AM 104' 10.0 sec/veh – 2035
PM 95' 10.2 sec/veh – 2035

AM 81' 4.1 sec/veh – 2035
PM 193' 5.3 sec/veh – 2035

Lake Hills Connector

AM 108' 10.0 sec/veh – 2035
PM 154' 13.4 sec/veh – 2035

Right-of-Way

Richards Rd

FUTURE PEAK HOUR TRAFFIC VOLUMES

AM
630
130
350
910
1110
160
AM

430
310
620
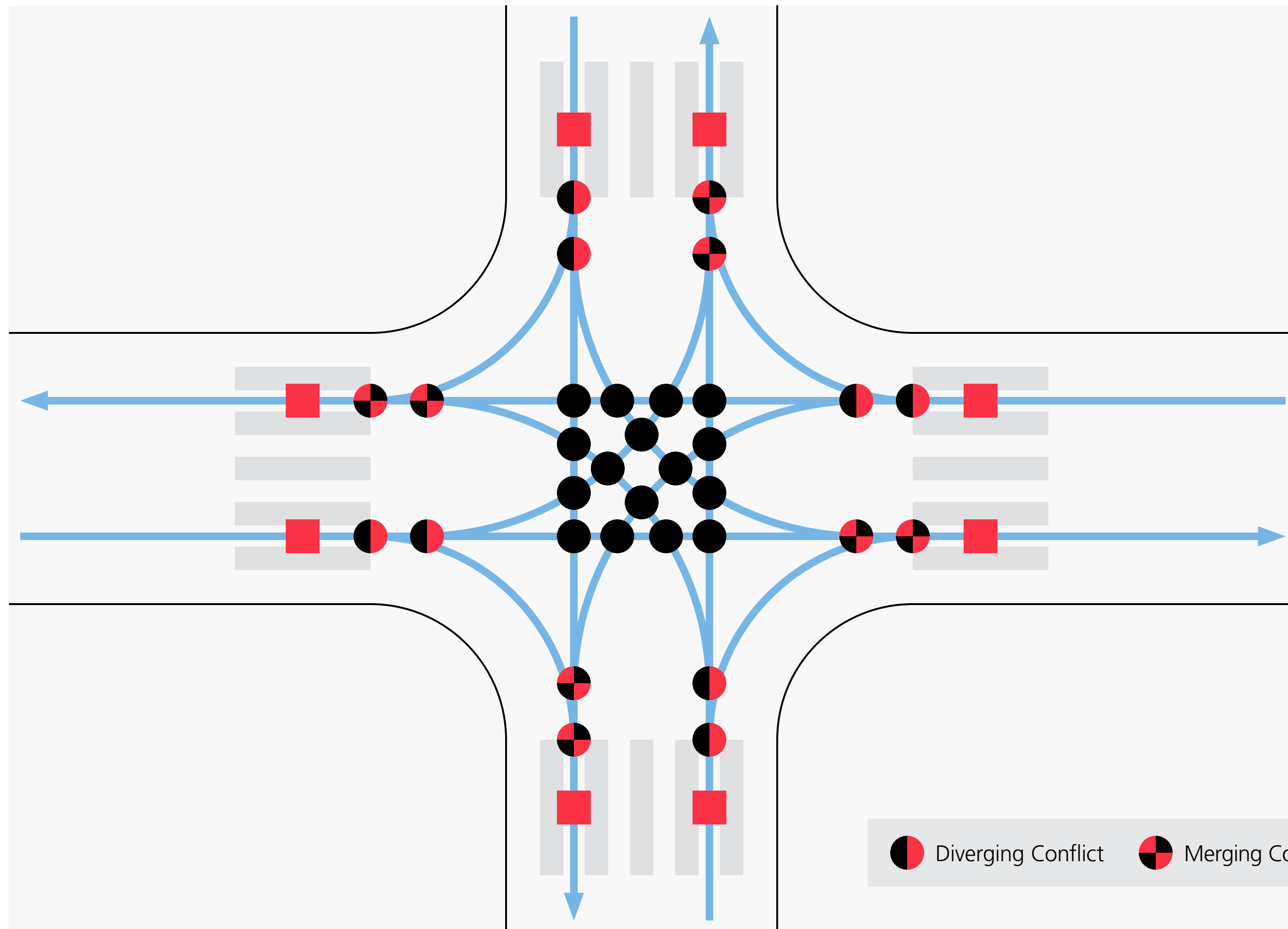1310
900
120
PM

2035

LEGEND

AM – 2035
PM – 2035

95th Percentile Queue Length

Sec/veh = Average vehicle delay for movement indicated

ROUNDABOUT AVERAGE DELAYS
(All Movements)

7.8 sec **AM**
8.6 sec **PM**

2035

Lake Hills Connector/Richards Road – Roundabout (2035)
OPEN HOUSE – Intersection Study on SE 8th Street & Lake Hills Connector – City of Bellevue

Traffic Signal

Roundabout

● Diverging Conflict　 ◑ Merging Conflict　 ● Crossing Conflict　 ■ Pedestrian Conflict

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