

Appendix A Sunnybrook Extension
Environmental Impact
Statement and Imagery



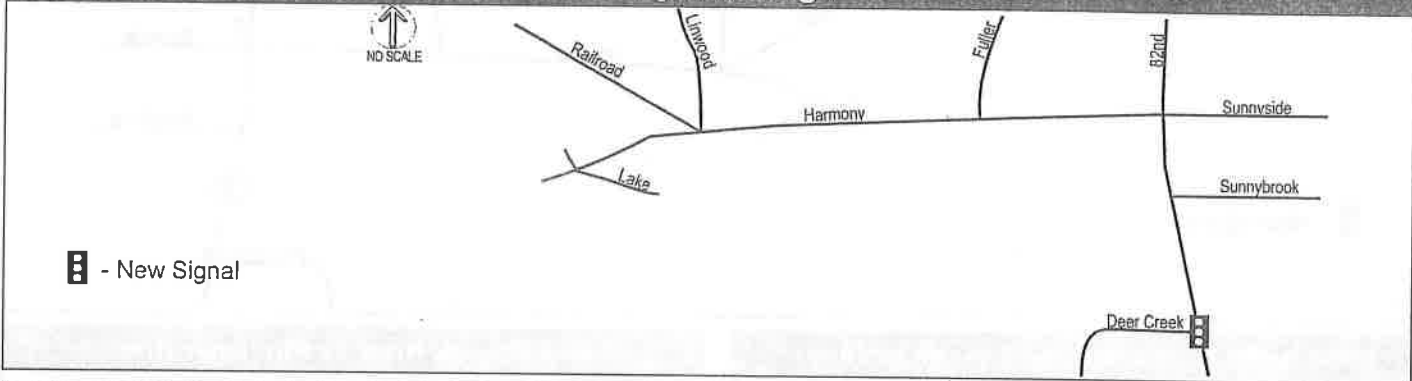
HARMONY ROAD ALTERNATIVES ANALYSIS

**ALTERNATIVE 1
2030 No Build**

Key Findings

- **The Harmony Road/Linwood Avenue/Railroad Avenue intersection would operate with significant vehicle delay and queues.**
- **The Harmony Road corridor would experience vehicle congestion due to numerous access points and future traffic demands.**
- Mitigation would be required at the Sunnyside Road/82nd Avenue intersection.
- A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	20,000
Harmony Road west of Fuller Road	23,000
Harmony Road west of Linwood Avenue	18,000
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	45,000
82 nd Avenue south of Sunnybrook Blvd	57,000
Highway 224 west of Johnson Road	44,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	F E*	1.34 1.00*
Harmony Road/Fuller Road	C	0.90
Sunnybrook Blvd/82 nd Avenue	D	1.00
Harmony Road/Linwood Ave	F	1.19
Hwy 224/Johnson Road	F	1.22
Deer Creek Lane/82 nd Avenue	E C**	1.20 0.93**

* Add 2nd left turn lane to each approach
 ** Add 2nd northbound left turn lane

Assumptions

- Assumes all improvement projects identified for the no build scenario.
- The no build scenario includes a seven lane boulevard cross-section on SE 82nd Avenue from Sunnyside to Sunnybrook.
- The no build scenario includes the Sunrise Corridor from I-205 to SE 122nd Avenue. The Sunrise Corridor project includes the Deer Creek Lane extension as a five lane roadway between Hwy 224 and SE 82nd Avenue and a new traffic signal at the Deer Creek Lane/SE 82nd Avenue intersection.

HARMONY ROAD ALTERNATIVES ANALYSIS

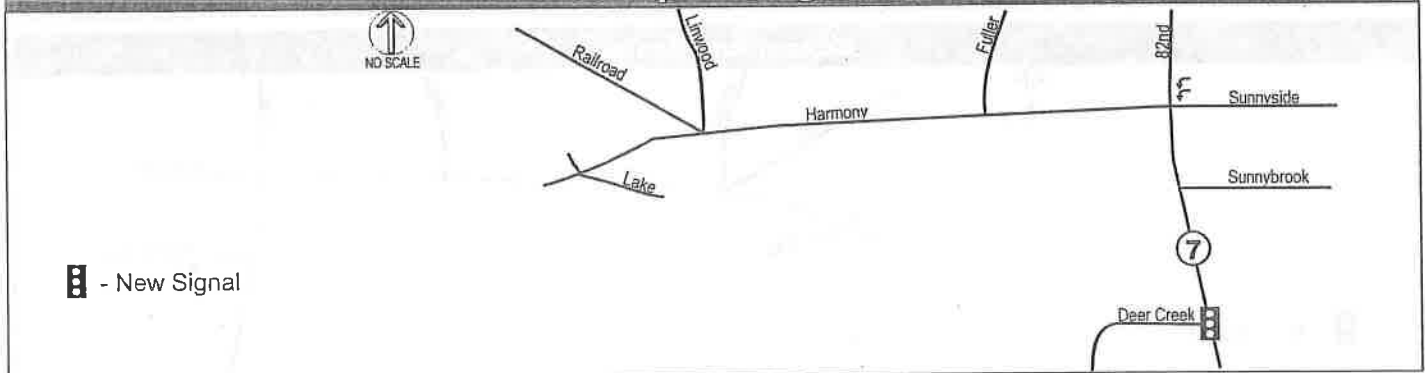
ALTERNATIVE 2

2030 No Build + SE 82nd Avenue With 7 Lanes

Key Findings

- The 7 lane section on 82nd Avenue between Sunnybrook Blvd and Highway 224 and the double westbound left turn lanes at Sunnyside Road/82nd Avenue would not significantly change the travel demand on Harmony Road.
- The Harmony Road/Linwood Avenue/Railroad Avenue intersection would operate with significant vehicle delay and queues.
- The Harmony Road corridor would experience vehicle congestion due to numerous access points and future traffic demands.
- Additional mitigation would be required at the Sunnyside Road/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	20,000
Harmony Road west of Fuller Road	23,000
Harmony Road west of Linwood Avenue	18,000
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	46,000
82 nd Avenue south of Sunnybrook Blvd	60,000
Highway 224 west of Johnson Road	44,500

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	F E*	1.15 1.04*
Harmony Road/Fuller Road	C	0.88
Sunnybrook Blvd/82 nd Avenue	C	0.88
Harmony Road/Linwood Ave	F	1.20
Hwy 224/Johnson Road	E	1.11
Deer Creek Lane/82 nd Avenue	D	1.01

* Add 2nd northbound, southbound and eastbound left turn lanes

Assumptions

- Assumes all improvement projects identified for the no build scenario.
- SE 82nd Avenue would be widened to a seven lane cross-section from Sunnybrook to the Highway 224 interchange.
- At the Sunnyside Road/SE 82nd Avenue intersection, the second westbound thru lane would convert to a second westbound left turn lane.

HARMONY ROAD ALTERNATIVES ANALYSIS

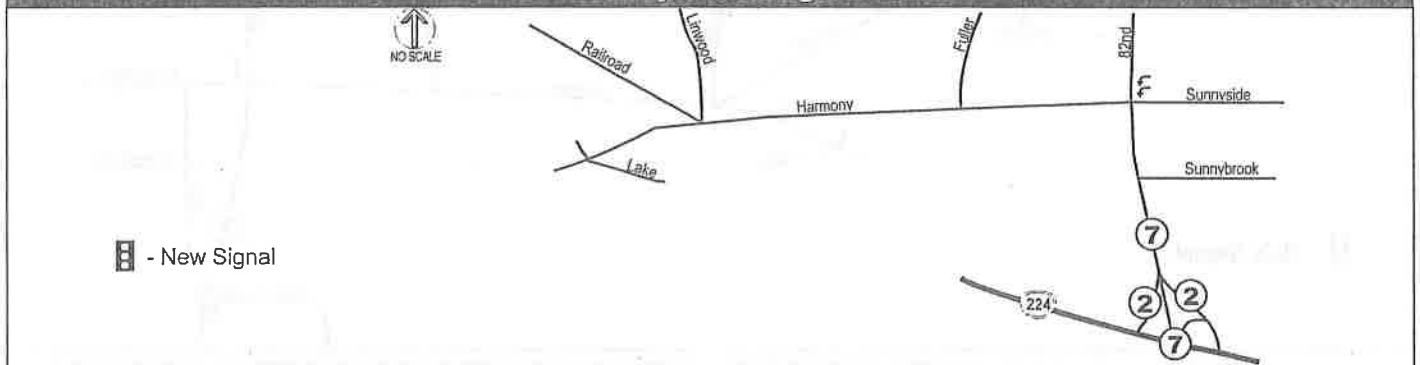
ALTERNATIVE 3

2030 No Build + SE 82nd Avenue With 7 Lanes + Removal of the Sunrise Corridor project+ Improved Connections to Hwy 224

Key Findings

- **The removal of the Sunrise Corridor project would have limited impact on the travel patterns in the study area.**
- **Highway 224 would require a 7 lane section between the between the SE 82nd Avenue ramps.**
- The 7 lane section on 82nd Avenue between Sunnybrook Blvd and Highway 224 and the double westbound left turn lanes at Sunnyside Road/82nd Avenue would not significantly change the travel demand on Harmony Road.
- The Harmony Road/Linwood Avenue/Railroad Avenue intersection would operate with significant vehicle delay and queues.
- The Harmony Road corridor would experience vehicle congestion due to numerous access points and future traffic demands.
- Additional mitigation would be required at the Sunnyside Road/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	20,000
Harmony Road west of Fuller Road	23,500
Harmony Road west of Linwood Avenue	19,500
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	43,500
82 nd Avenue south of Sunnybrook Blvd	50,000
Highway 224 west of Johnson Road	42,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	E D*	1.05 0.95*
Harmony Road/Fuller Road	D	0.92
Sunnybrook Blvd/82 nd Avenue	C	0.77
Harmony Road/Linwood Ave	F	1.20
Hwy 224/Johnson Road	F	1.27
Hwy 224/82 nd Avenue NB Ramp	D	1.02
Hwy 224/82 nd Avenue SB Ramp	C	0.98

* Add 2nd northbound, southbound and eastbound left turn lanes.

Assumptions

- Assumes all improvement projects identified for the no build scenario except the Sunrise Corridor project. The Deer Creek Lane extension and the Deer Creek Lane/SE 82nd Avenue traffic signal are not assumed.
- SE 82nd Avenue would be widened to a seven lane cross-section from Sunnybrook to the southbound off-ramp and northbound on-ramp to Highway 224.
- The improved connections to Hwy 224 would widen the SE 82nd Avenue on-ramp and off-ramp to two lanes. SE 82nd Avenue would transition from seven lane north of the ramps to five lanes south of the ramps by dropping the outside southbound lane at the off-ramp and adding the outside northbound lane at the on-ramp.
- At the Sunnyside /SE 82nd intersection, the second westbound thru lane would convert to a second westbound left turn lane.
- Hwy 224 would widen to a seven lane cross-section between the SE 82nd Avenue ramps. The cross-section would include:
 - two left turn lanes and two through lanes in the eastbound direction
 - one left turn lane and two through lanes in the westbound direction
- No sidewalks would be provided on SE 82nd Avenue south of Sunnybrook Boulevard.

HARMONY ROAD ALTERNATIVES ANALYSIS

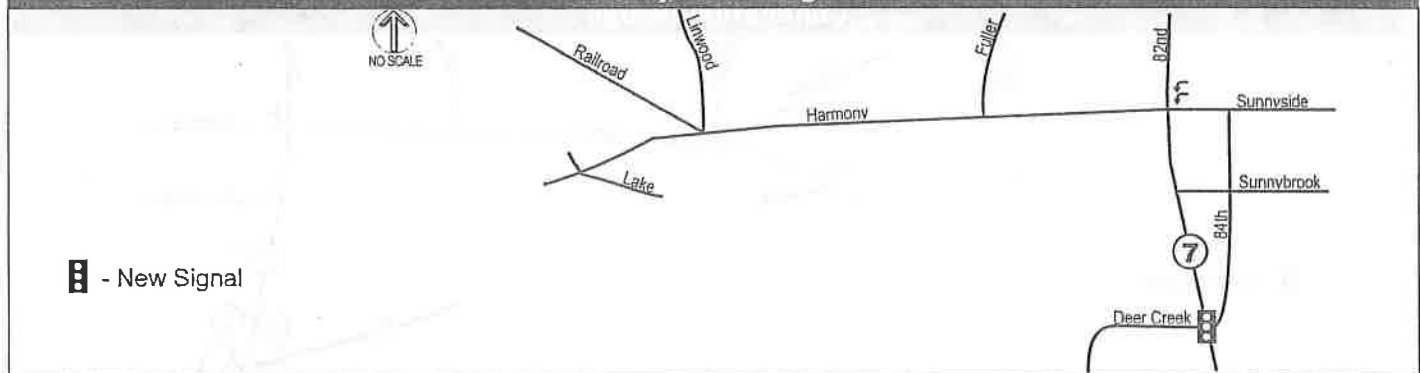
ALTERNATIVE 4

2030 No Build+ SE 82nd Avenue With 7 Lanes + SE 84th Avenue Extension

Key Findings

- The 84th Avenue extension would not significantly change the travel demand on Harmony Road.
- The 84th Avenue extension would have a marginal benefit to traffic operations on 82nd Avenue.
- The 7 lane section on 82nd Avenue between Sunnybrook Blvd and Highway 224 and the double westbound left turn lanes at Sunnyside Road/82nd Avenue would not significantly change the travel demand on Harmony Road.
- The Harmony Road/Linwood Avenue/Railroad Avenue intersection would operate with significant vehicle delay and queues.
- The Harmony Road corridor would experience vehicle congestion due to numerous access points and future traffic demands.
- Additional mitigation would be required at the Sunnyside Road/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	20,000
Harmony Road west of Fuller Road	23,000
Harmony Road west of Linwood Avenue	17,500
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	46,000
82 nd Avenue south of Sunnybrook Blvd	52,000
Highway 224 west of Johnson Road	43,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	F E*	1.17 1.06*
Harmony Road/Fuller Road	C	0.86
Sunnybrook Blvd/82 nd Avenue	B	0.72
Harmony Road/Linwood Ave	F	1.19
Hwy 224/Johnson Road	F	1.22
Deer Creek Lane/82 nd Avenue	C	0.90

* Add 2nd northbound, southbound and eastbound left turn lanes.

Assumptions

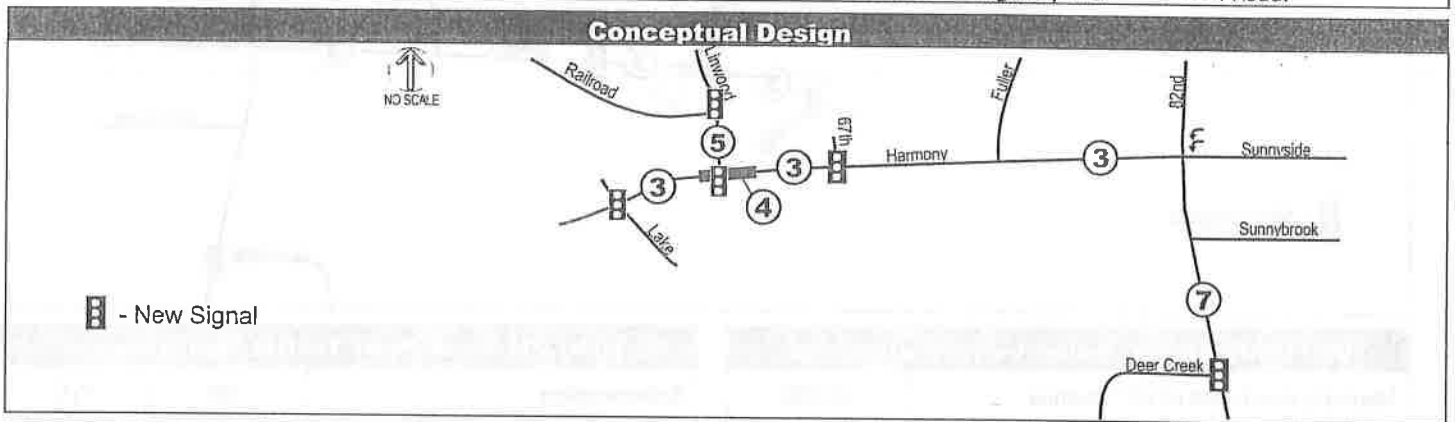
- Assumes all improvement projects identified for the no build scenario.
- SE 82nd Avenue would be widened to a seven lane cross-section from Sunnybrook to the Highway 224 interchange.
- SE 84th Avenue extension would be added. This new roadway would extend from Sunnyside Road to the Deer Creek Lane/SE 82nd Avenue intersection. The SE 84th Avenue extension would be assumed as a three lane collector with a 30 mph speed limit. The alignment of SE 84th Avenue is to be determined.
- Deer Creek Lane would provide a four lane cross-section between SE 82nd Avenue and SE 84th Avenue.
- At the Sunnyside Road/SE 82nd Avenue intersection, the second westbound thru lane would convert to a second westbound left turn lane.

HARMONY ROAD ALTERNATIVES ANALYSIS

ALTERNATIVE 5

2030 No Build + SE 82nd Avenue With 7 Lanes + Harmony Road With 3 Lanes and Grade-Separated Railroad Crossing

- Key Findings**
- **Access management measures (such as driveway closure and consolidation) would be necessary on Harmony Road to maintain acceptable traffic flow. Unsignalized access points would experience difficulties due to limited gaps in the traffic stream.**
 - The 7 lane section on 82nd Avenue between Sunnyside Blvd and Highway 224 and the double westbound left turn lanes at Sunnyside Road/82nd Avenue would not significantly change the travel demand on Harmony Road.
 - Linwood Avenue would require a 5 lane section between Harmony Road and Railroad Avenue. Harmony Road would require a 4 lane section east of Linwood Avenue.
 - Additional mitigation would be required at the Sunnyside Road/82nd Avenue intersection.
 - A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
 - Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.



2030 Daily Traffic Volumes (vehicles/day)	
Harmony Road west of 82 nd Avenue	20,000
Harmony Road west of Fuller Road	23,000
Harmony Road west of Linwood Avenue	20,000
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	46,000
82 nd Avenue south of Sunnybrook Blvd	59,500
Highway 224 west of Johnson Road	43,000

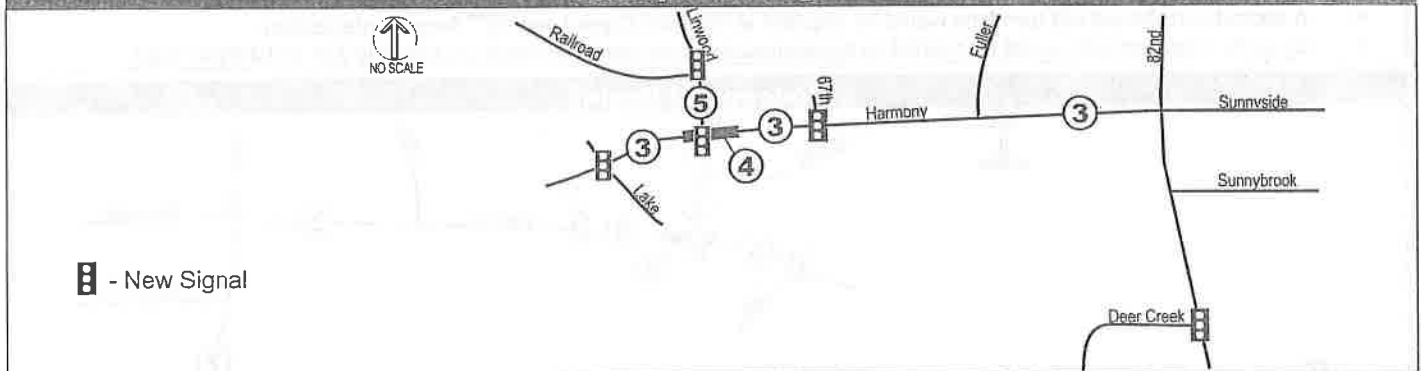
2030 PM Peak Hour Traffic Operations		
Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	F E*	1.16 1.05*
Harmony Road/Fuller Road	C	0.89
Sunnybrook Blvd/82 nd Avenue	C	0.88
Harmony Road/Linwood Ave	E C**	1.04 0.73**
Hwy 224/SE Johnson Road	F	1.22
Deer Creek Lane/82 nd Avenue	C	0.86

* Add 2nd northbound, southbound and eastbound left turn lanes.
 ** Linwood with five lane section from Harmony to Railroad. Harmony with 4 lane section east of Linwood.

- Assumptions**
- Assumes all improvement projects identified for the no build scenario.
 - SE 82nd Avenue would be widened to a seven lane cross-section from Sunnybrook to the Highway 224 interchange.
 - Harmony Road would be widened to a three lane cross-section from Fuller Road to Lake Road/International Way. East of Linwood Avenue, Harmony Road would be four lanes wide to accommodate two southbound left turn lanes from Linwood Avenue.
 - At the Sunnyside Road/SE 82nd Avenue intersection, the second westbound thru lane would convert to a second westbound left turn lane.
 - A grade-separated railroad crossing would be assumed on Harmony Road at the Linwood Avenue/Railroad Road intersection.
 - Linwood Avenue would provide a five lane cross-section between Harmony Road and the realigned Railroad Avenue.
 - The Lake Road/International Way/Harmony Road intersection would be relocated to the east to improve access spacing.
 - Access to Cedar Crest Drive from Harmony Road would be closed.
 - A traffic signal would be provided at the SE 67th Avenue/Harmony Road intersection.

HARMONY ROAD ALTERNATIVES ANALYSIS**ALTERNATIVE 6****2030 No Build + Harmony Road With 3 Lanes and Grade-Separated Railroad Crossing****Key Findings**

- **Access management measures (such as driveway closure and consolidation) would be necessary on Harmony Road to maintain acceptable traffic flow. Unsignalized access points would experience difficulties due to limited gaps in the traffic stream.**
- Linwood Avenue would require a 5 lane section between Harmony Road and Railroad Avenue. Harmony Road would require a 4 lane section east of Linwood Avenue.
- Additional mitigation would be required at the Sunnyside Road/82nd Avenue intersection.
- A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design**2030 Daily Traffic Volumes (vehicles/day)**

Harmony Road west of 82 nd Avenue	20,000
Harmony Road west of Fuller Road	24,000
Harmony Road west of Linwood Avenue	20,000
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	45,000
82 nd Avenue south of Sunnybrook Blvd	57,000
Highway 224 west of Johnson Road	43,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	F D*	1.33 0.95*
Harmony Road/Fuller Road	D	0.93
Sunnybrook Blvd/82 nd Avenue	D	0.99
Harmony Road/Linwood Ave	E C***	1.04 0.74***
Hwy 224/SE Johnson Road	F	1.21
Deer Creek Lane/82 nd Avenue	D C**	1.05 0.94**

* Add 2nd left turn lane to all approaches.** Add 2nd northbound left turn lane.

*** Linwood with five lane section from Harmony to Railroad. Harmony with 4 lane section east of Linwood.

Assumptions

- Assumes all improvement projects identified for the no build scenario.
- Harmony Road would be widened to a three lane cross-section from Fuller Road to Lake Road/International Way. East of Linwood Avenue, Harmony Road would be four lanes wide to accommodate two southbound left turn lanes from Linwood Avenue.
- A grade-separated railroad crossing would be assumed on Harmony Road at the Linwood Avenue/Railroad Road intersection.
- Linwood Avenue would provide a five lane cross-section between Harmony Road and the realigned Railroad Avenue.
- The Lake Road/International Way/Harmony Road intersection would be relocated to the east to improve access spacing.
- Access to Cedar Crest Drive from Harmony Road would be closed.
- A traffic signal would be provided at the SE 67th Avenue/Harmony Road intersection.

HARMONY ROAD ALTERNATIVES ANALYSIS

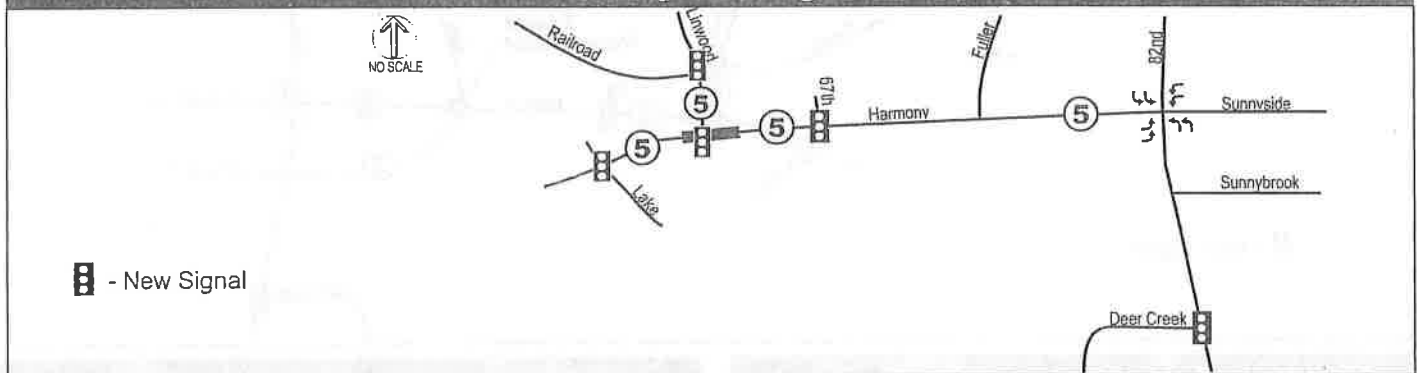
ALTERNATIVE 7

2030 No Build + Harmony Road With 5 Lanes and Grade-Separated Railroad Crossing

Key Findings

- The additional capacity on Harmony Road would increase traffic volumes 2,000 to 3,000 vehicles per day in the year 2030.
- Linwood Avenue would require a 5 lane section between Harmony Road and Railroad Avenue.
- A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	22,000
Harmony Road west of Fuller Road	26,000
Harmony Road west of Linwood Avenue	22,500
Sunnybrook Blvd west of 82 nd Avenue	-
82 nd Avenue south of Sunnyside Road	45,500
82 nd Avenue south of Sunnybrook Blvd	56,000
Highway 224 west of Johnson Road	42,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	E	1.02
Harmony Road/Fuller Road	C	0.71
Sunnybrook Blvd/82 nd Avenue	D	0.98
Harmony Road/Linwood Ave	C**	0.67**
Hwy 224/SE Johnson Road	F	1.21
Deer Creek Lane/82 nd Avenue	D C*	1.05 0.93*

* Add 2nd northbound left turn lane

** Linwood with five lane section from Harmony to Railroad

Assumptions

- Assumes all improvement projects identified for the no build scenario.
- Harmony Road would be widened to a five lane cross-section with access management measures from SE 82nd Avenue to Lake Road/International Way.
- A grade-separated railroad crossing would be assumed on Harmony Road at the Linwood Avenue/Railroad Road intersection.
- Linwood Avenue would provide a five lane cross-section between Harmony Road and the realigned Railroad Avenue.
- The Lake Road/International Way/Harmony Road intersection would be relocated to the east to improve access spacing.
- Access to Cedar Crest Drive from Harmony Road would be closed.
- At the Sunnyside Road/SE 82nd Avenue intersection, all approaches would have double left turn lanes.
- A traffic signal would be provided at the SE 67th Avenue/Harmony Road intersection.

HARMONY ROAD ALTERNATIVES ANALYSIS

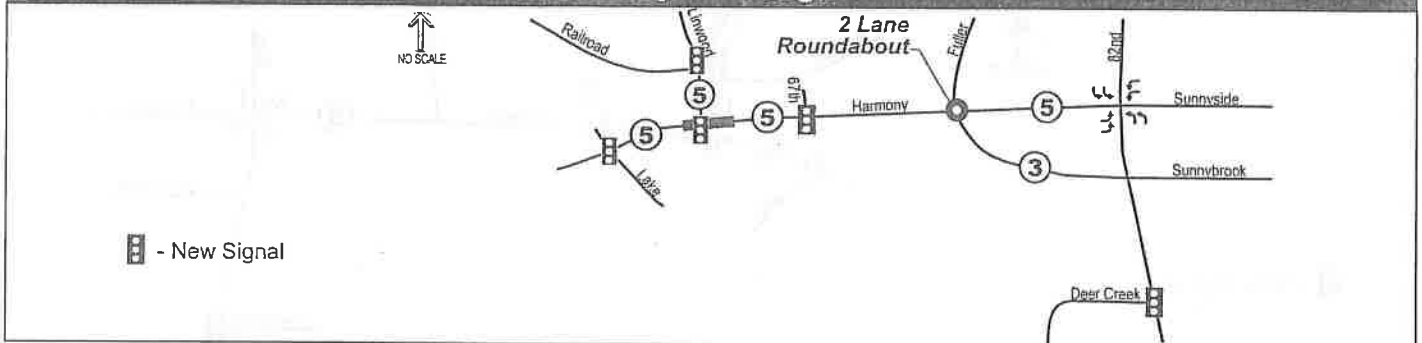
ALTERNATIVE 8

2030 No Build + Harmony Road With 5 Lanes + Sunnybrook Extension With 3 Lanes and Grade-Separated Railroad Crossing

Key Findings

- **Five lane Harmony Road between 82nd Ave and Fuller Rd would not be required with the Sunnybrook extension.**
- The additional capacity on Harmony Road would increase traffic volumes 2,000 to 3,000 vehicles per day in the year 2030.
- Linwood Avenue would require a 5 lane section between Harmony Road and Railroad Avenue.
- Additional analysis or mitigation would be needed at the Sunnybrook Boulevard/82nd Avenue intersection.
- A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	15,000
Harmony Road west of Fuller Road	29,500
Harmony Road west of Linwood Avenue	24,500
Sunnybrook Blvd west of 82 nd Avenue	15,000
82 nd Avenue south of Sunnyside Road	41,000
82 nd Avenue south of Sunnybrook Blvd	56,500
Highway 224 west of Johnson Road	42,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	D	0.94
Harmony Road/Fuller Road	C	-
Sunnybrook Blvd/82 nd Avenue	F E*	1.55 1.10*
Harmony Road/Linwood Ave	C***	0.74***
Hwy 224/SE Johnson Road	F	1.22
Deer Creek Lane/82 nd Avenue	D C**	1.07 0.94**

* Add 2nd eastbound through lane and 2nd westbound left turn lane
 ** Add 2nd northbound left turn lane
 *** Linwood with five lane section from Harmony to Railroad

Assumptions

- Assumes all improvement projects identified for the no build scenario.
- Harmony Road would be widened to a five lane cross-section with access management measures from SE 82nd Avenue to Fuller Road.
- Harmony Road would be widened to a five lane cross-section with access management measures from Fuller Road to Lake Road/International Way.
- A grade-separated railroad crossing would be assumed on Harmony Road at the Linwood Avenue/Railroad Road intersection.
- Linwood Avenue would provide a five lane cross-section between Harmony Road and the realigned Railroad Avenue.
- The Sunnybrook extension would be added from Fuller Road/Harmony Road to Sunnybrook Blvd/SE 82nd Avenue. The Sunnybrook extension would be assumed as a three lane collector with a 35 mph speed limit.
- The Sunnybrook Boulevard/Fuller Road/Harmony Road intersection would be controlled by a two-lane roundabout.
- The Lake Road/International Way/Harmony Road intersection would be relocated to the east to improve access spacing.
- Access to Cedar Crest Drive from Harmony Road would be closed.
- At the Sunnyside Road/SE 82nd Avenue intersection, all approaches would have double left turn lanes.
- A traffic signal would be provided at the SE 67th Avenue/Harmony Road intersection.

HARMONY ROAD ALTERNATIVES ANALYSIS

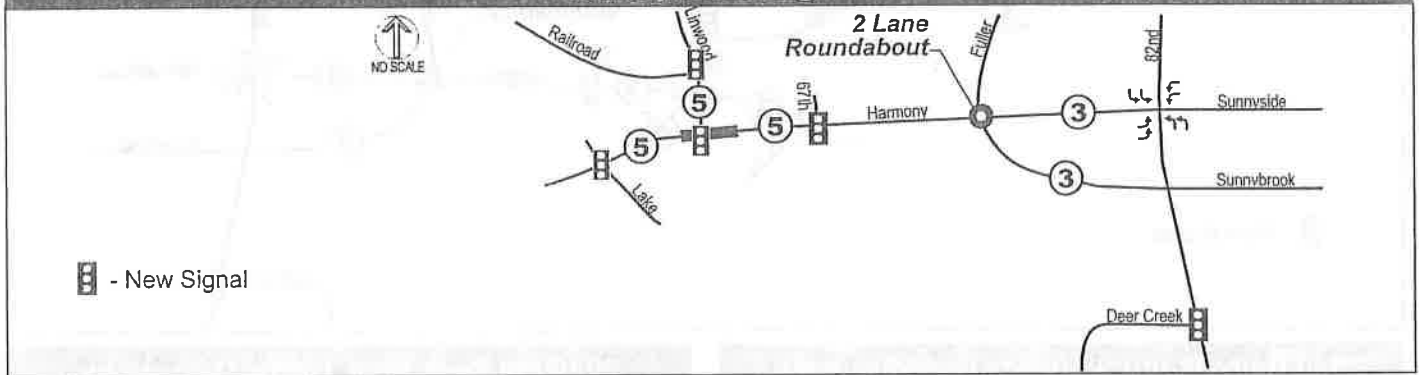
ALTERNATIVE 9

2030 No Build + Harmony Road With 3/5 Lanes + Sunnybrook Extension With 3 Lanes and Grade-Separated Railroad Crossing

Key Findings

- Access management measures (driveway closure/consolidation) would be needed on the Harmony Road 3 lane section to maintain acceptable traffic flow. Unsignalized access points would experience difficulties due to limited gaps in the traffic stream.
- Linwood Avenue would require a 5 lane section between Harmony Road and Railroad Avenue.
- Additional analysis or mitigation would be needed at the Sunnybrook Boulevard/82nd Avenue intersection.
- A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)	
Harmony Road west of 82 nd Avenue	13,000
Harmony Road west of Fuller Road	29,000
Harmony Road west of Linwood Avenue	24,000
Sunnybrook Blvd west of 82 nd Avenue	16,000
82 nd Avenue south of Sunnyside Road	40,000
82 nd Avenue south of Sunnybrook Blvd	56,000
Highway 224 west of Johnson Road	42,000

2030 PM Peak Hour Traffic Operations		
Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	D	0.94
Harmony Road/Fuller Road	C	-
Sunnybrook Blvd/82 nd Avenue	F E*	1.55 1.10*
Harmony Road/Linwood Ave	C***	0.74***
Hwy 224/SE Johnson Road	F	1.22
Deer Creek Lane/82 nd Avenue	D C**	1.07 0.94**

* Add 2nd eastbound through lane and second westbound left turn lane
 ** Add 2nd northbound left turn lane
 *** Linwood with five lane section from Harmony to Railroad

Assumptions

- Assumes all improvement projects identified for the no build scenario.
- Harmony Road would be widened to a three lane cross-section from SE 82nd Avenue to Fuller Road.
- Harmony Road would be widened to a five lane cross-section with access management measures from Fuller Road to Lake Road/International Way.
- A grade-separated railroad crossing would be assumed on Harmony Road at the Linwood Avenue/Railroad Road intersection.
- Linwood Avenue would provide a five lane cross-section between Harmony Road and the realigned Railroad Avenue.
- The Sunnybrook extension would be added from Fuller Road/Harmony Road to Sunnybrook Blvd/SE 82nd Avenue. The Sunnybrook extension would be assumed as a three lane collector with a 35 mph speed limit.
- The Sunnybrook Boulevard/Fuller Road/Harmony Road intersection would be controlled by a two-lane roundabout.
- The Lake Road/International Way/Harmony Road intersection would be relocated to the east to improve access spacing.
- Access to Cedar Crest Drive from Harmony Road would be closed.
- At the Sunnyside Road/SE 82nd Avenue intersection, all approaches would have double left turn lanes.
- A traffic signal would be provided at the SE 67th Avenue/Harmony Road intersection.

HARMONY ROAD ALTERNATIVES ANALYSIS

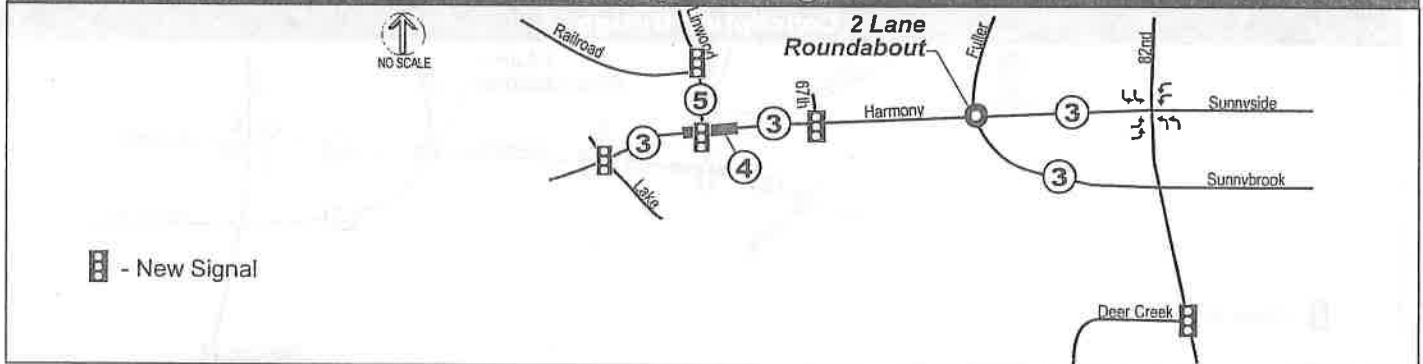
ALTERNATIVE 10

2030 No Build + Harmony Road With 3 Lanes + Sunnybrook Extension With 3 Lanes and Grade-Separated Railroad Crossing

Key Findings

- Access management measures (driveway closure/consolidation) would be necessary on Harmony Road to maintain acceptable traffic flow. Unsignalized access points would experience difficulties due to limited gaps in the traffic stream.
- Linwood Avenue would require a 5 lane section between Harmony Road and Railroad Avenue. Harmony Road would require a 4 lane section east of Linwood Avenue.
- Additional analysis or mitigation would be needed at the Sunnybrook Boulevard/82nd Avenue intersection.
- A second northbound left turn lane would be required at the Deer Creek Lane/82nd Avenue intersection.
- Capacity improvements would be needed to accommodate future traffic demands on Highway 224 at Johnson Road.

Conceptual Design



2030 Daily Traffic Volumes (vehicles/day)

Harmony Road west of 82 nd Avenue	14,500
Harmony Road west of Fuller Road	26,000
Harmony Road west of Linwood Avenue	20,000
Sunnybrook Blvd west of 82 nd Avenue	12,500
82 nd Avenue south of Sunnyside Road	41,000
82 nd Avenue south of Sunnybrook Blvd	57,000
Highway 224 west of Johnson Road	42,000

2030 PM Peak Hour Traffic Operations

Intersection	LOS	V/C
Sunnyside Road/82 nd Avenue	D	0.95
Harmony Road/Fuller Road	C	-
Sunnybrook Blvd/82 nd Avenue	F E*	1.45 1.04*
Harmony Road/Linwood Ave	E C***	1.12 0.74***
Hwy 224/SE Johnson Road	F	1.21
Deer Creek Lane/82 nd Avenue	D C**	1.07 0.95**

* Add 2nd eastbound through lane and second westbound left turn lane
 ** Add 2nd northbound left turn lane
 *** Linwood with five lane section from Harmony to Railroad. Harmony with 4 lane section east of Linwood.

Assumptions

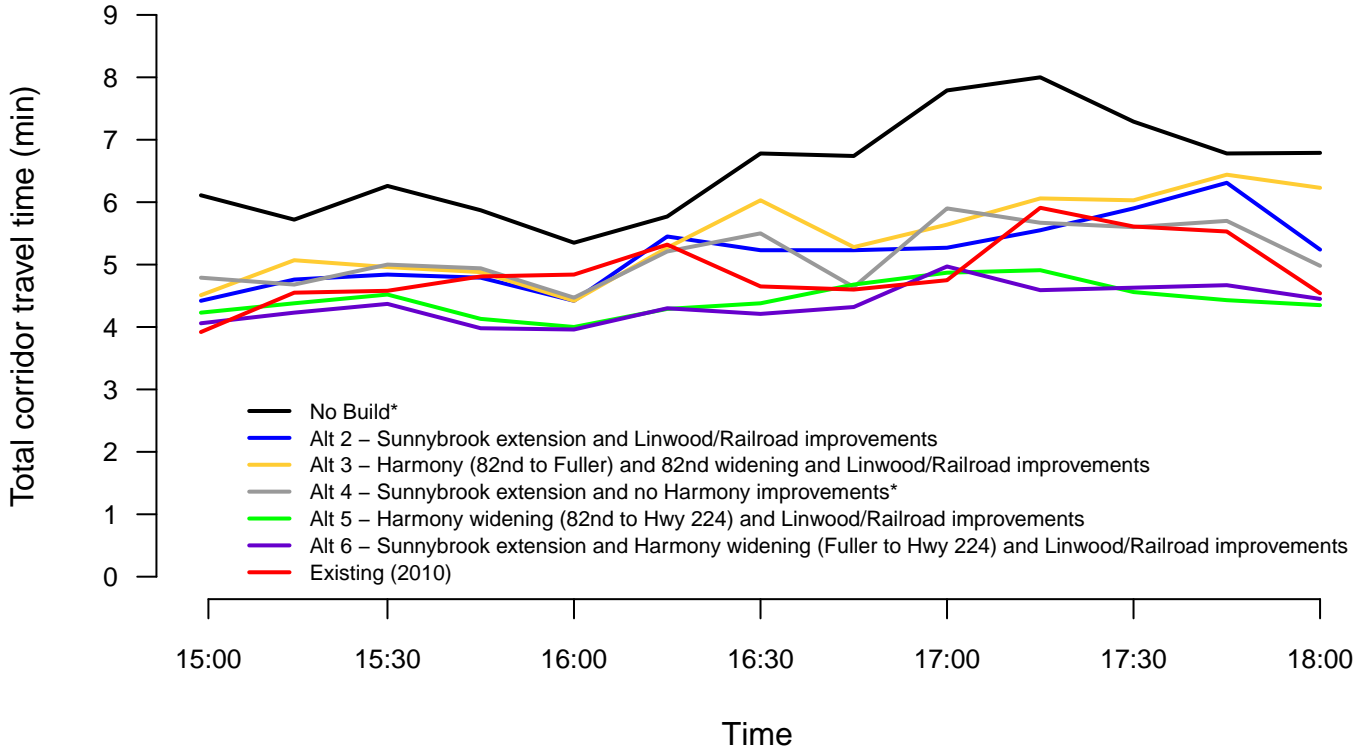
- Assumes all improvement projects identified for the no build scenario.
- Harmony Road would be widened to a three lane cross-section from SE 82nd Avenue to Fuller Road.
- Harmony Road would be widened to a three lane cross-section from Fuller Road to Lake Road/International Way. East of Linwood Avenue, Harmony Road would be four lanes wide to accommodate two southbound left turn lanes from Linwood Ave.
- A grade-separated railroad crossing would be assumed on Harmony Road at the Linwood Avenue/Railroad Road intersection.
- Linwood Avenue would provide a five lane cross-section between Harmony Road and the realigned Railroad Avenue.
- The Sunnybrook extension would be added from Fuller Road/Harmony Road to Sunnybrook Blvd/SE 82nd Avenue. The Sunnybrook extension would be assumed as a three lane collector with a 35 mph speed limit.
- The Sunnybrook Boulevard/Fuller Road/Harmony Road intersection would be controlled by a two-lane roundabout.
- The Lake Road/International Way/Harmony Road intersection would be relocated to the east to improve access spacing.
- Access to Cedar Crest Drive from Harmony Road would be closed.
- At the Sunnyside Road/SE 82nd Avenue intersection, all approaches would have double left turn lanes.
- A traffic signal would be provided at the SE 67th Avenue/Harmony Road intersection.

Appendix B Travel Times on all Study
Corridors

SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

Change in total travel time through corridor from 15:00 to 18:00

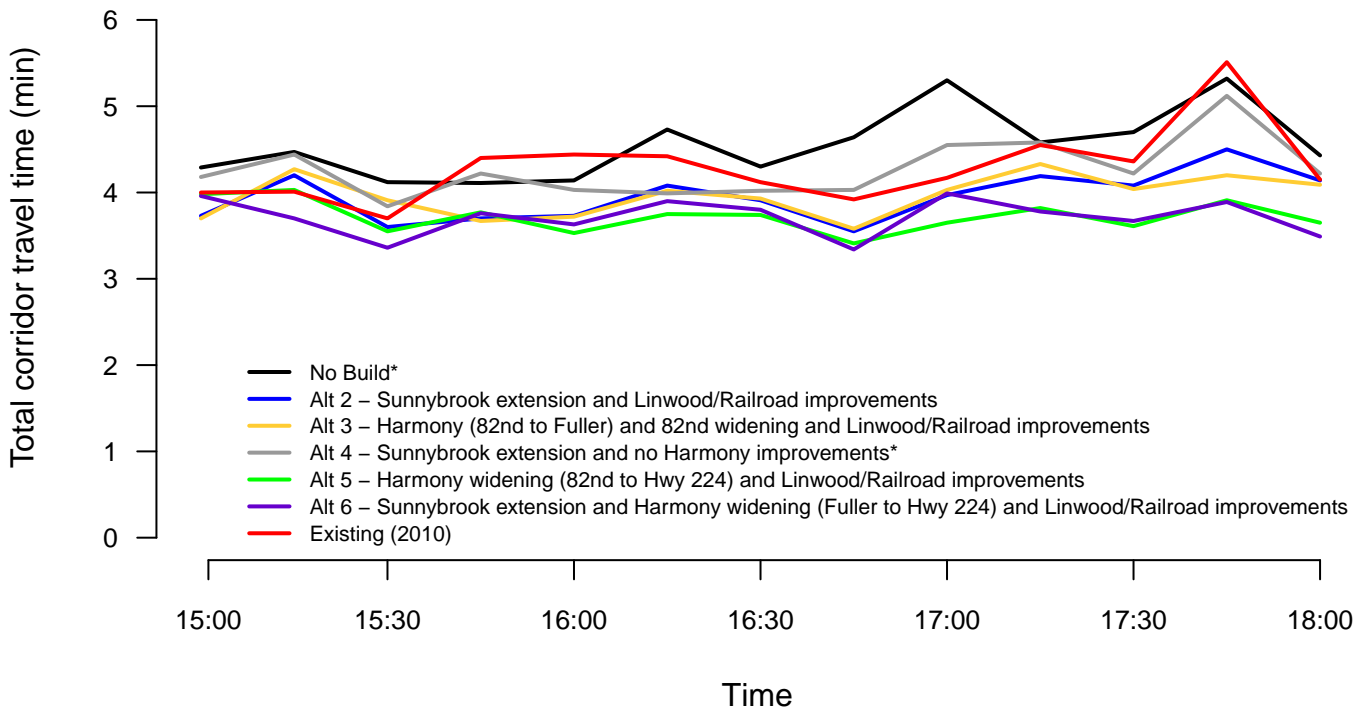
Based on average of 20 simulated days of travel time



SE Harmony Rd WB : SE 82nd Ave and Hwy 224

Change in total travel time through corridor from 15:00 to 18:00

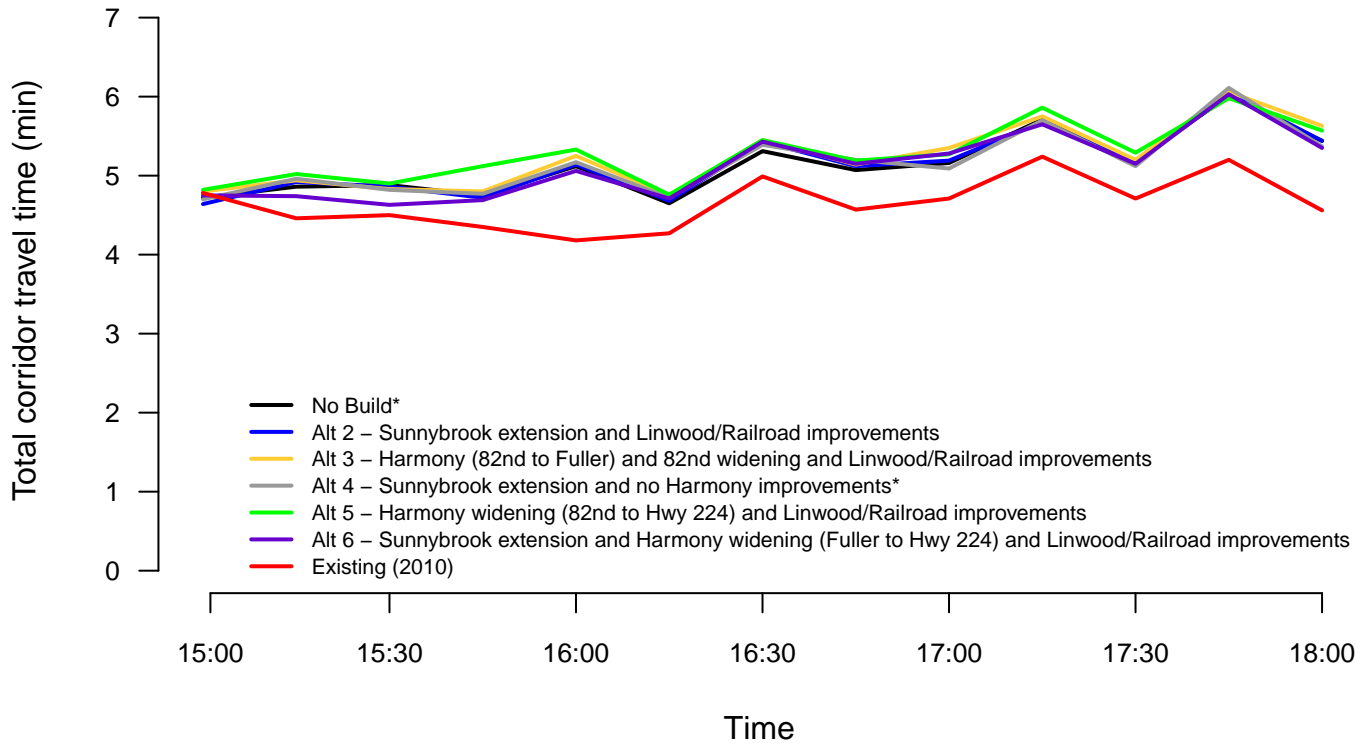
Based on average of 20 simulated days of travel time



SE Sunnyside Rd EB : SE 82nd Ave and SE Sunnybrook Blvd

Change in total travel time through corridor from 15:00 to 18:00

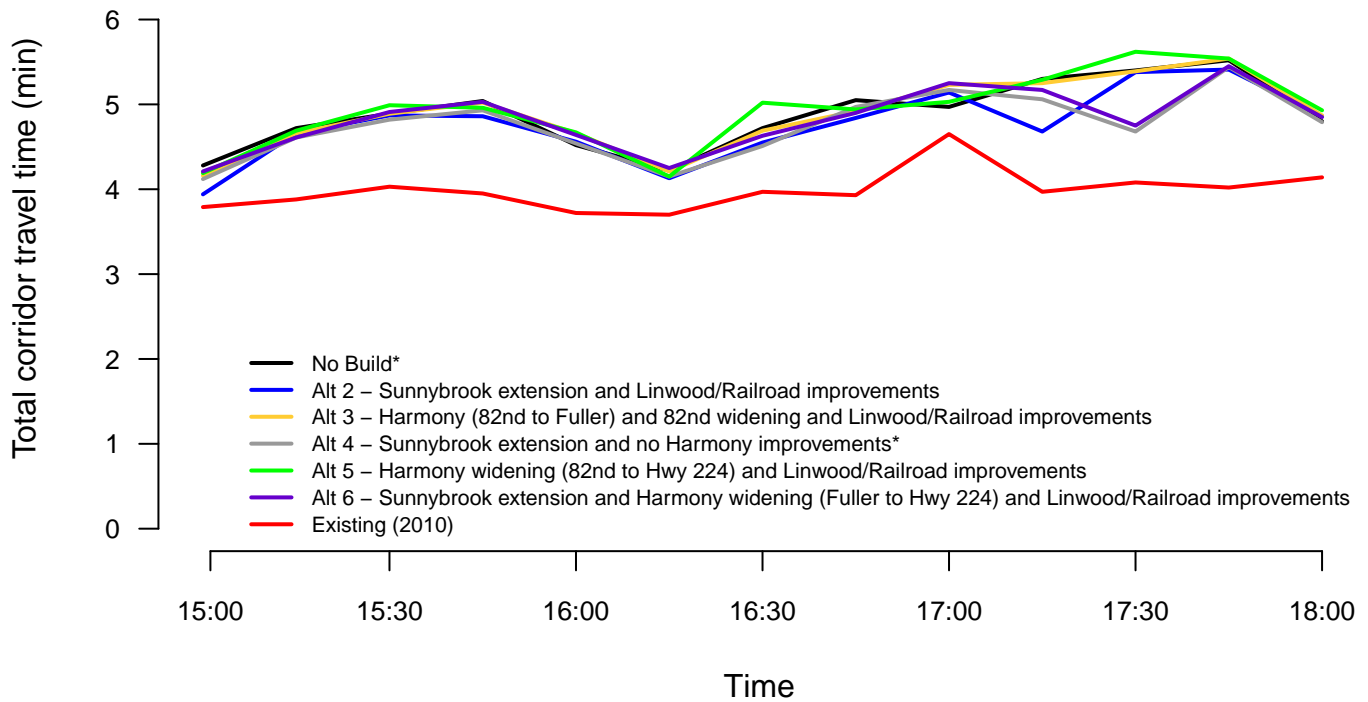
Based on average of 20 simulated days of travel time



SE Sunnyside Rd WB : SE Sunnybrook Blvd and SE 82nd Ave

Change in total travel time through corridor from 15:00 to 18:00

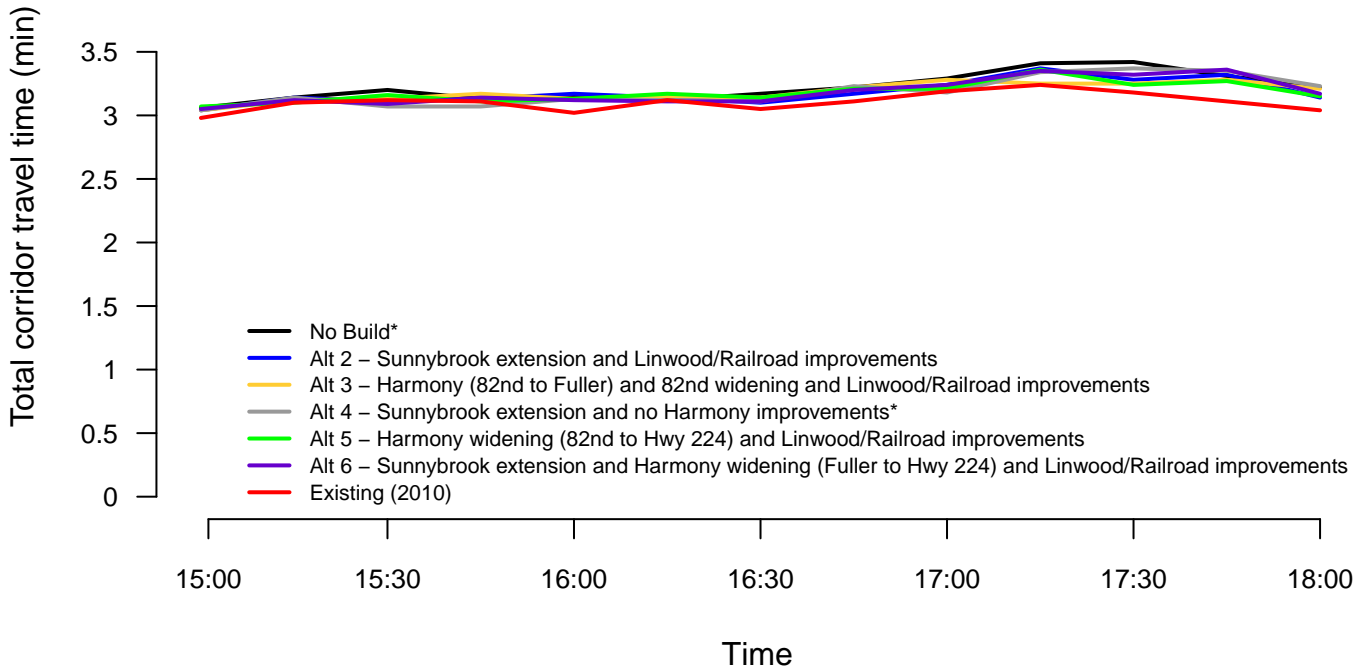
Based on average of 20 simulated days of travel time



SE Fuller Rd NB : SE Harmony Rd and SE King Rd

Change in total travel time through corridor from 15:00 to 18:00

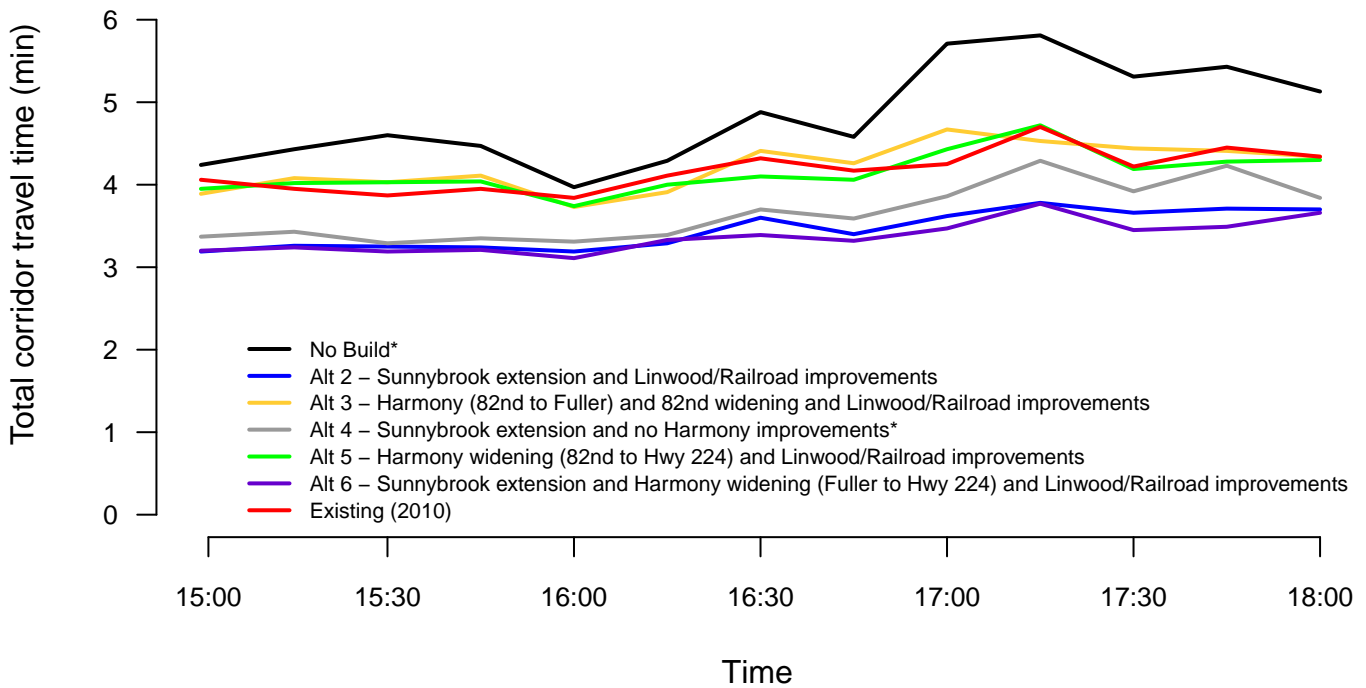
Based on average of 20 simulated days of travel time



SE Fuller Rd SB : SE King Rd and SE Harmony Rd

Change in total travel time through corridor from 15:00 to 18:00

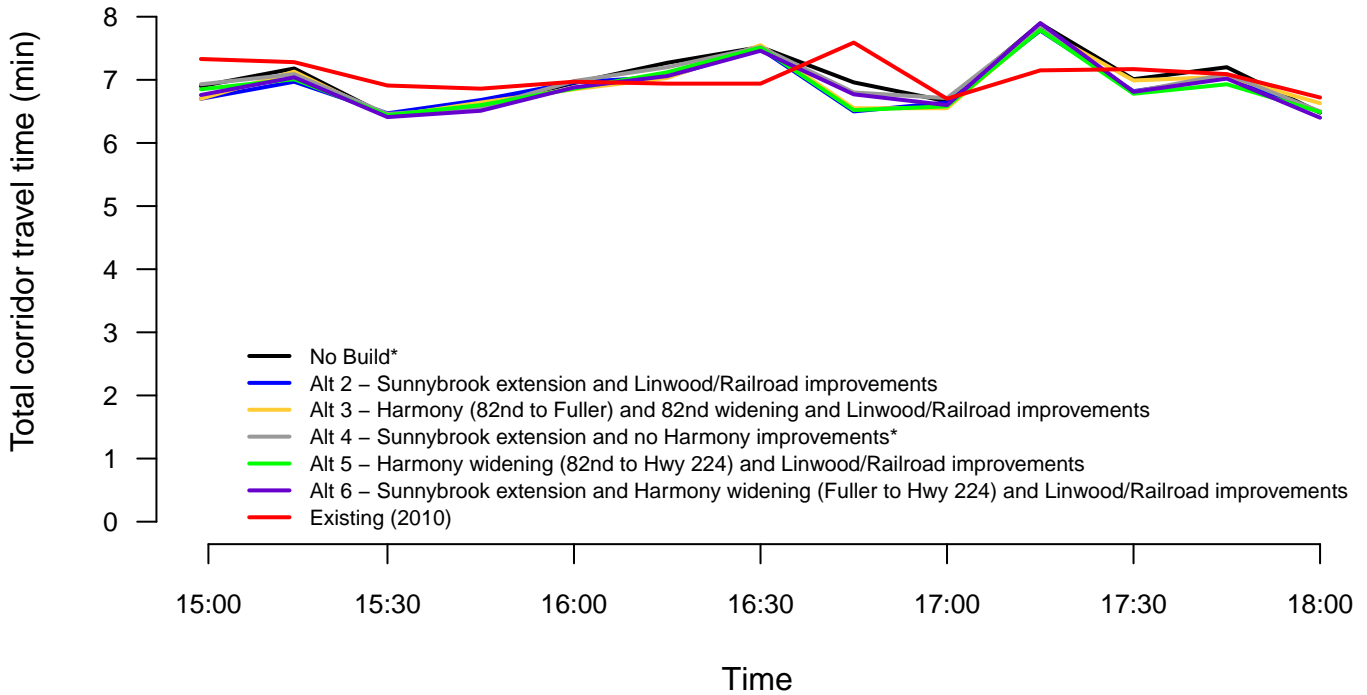
Based on average of 20 simulated days of travel time



SE Johnson Creek Blvd EB : SE 45th PI and I-205

Change in total travel time through corridor from 15:00 to 18:00

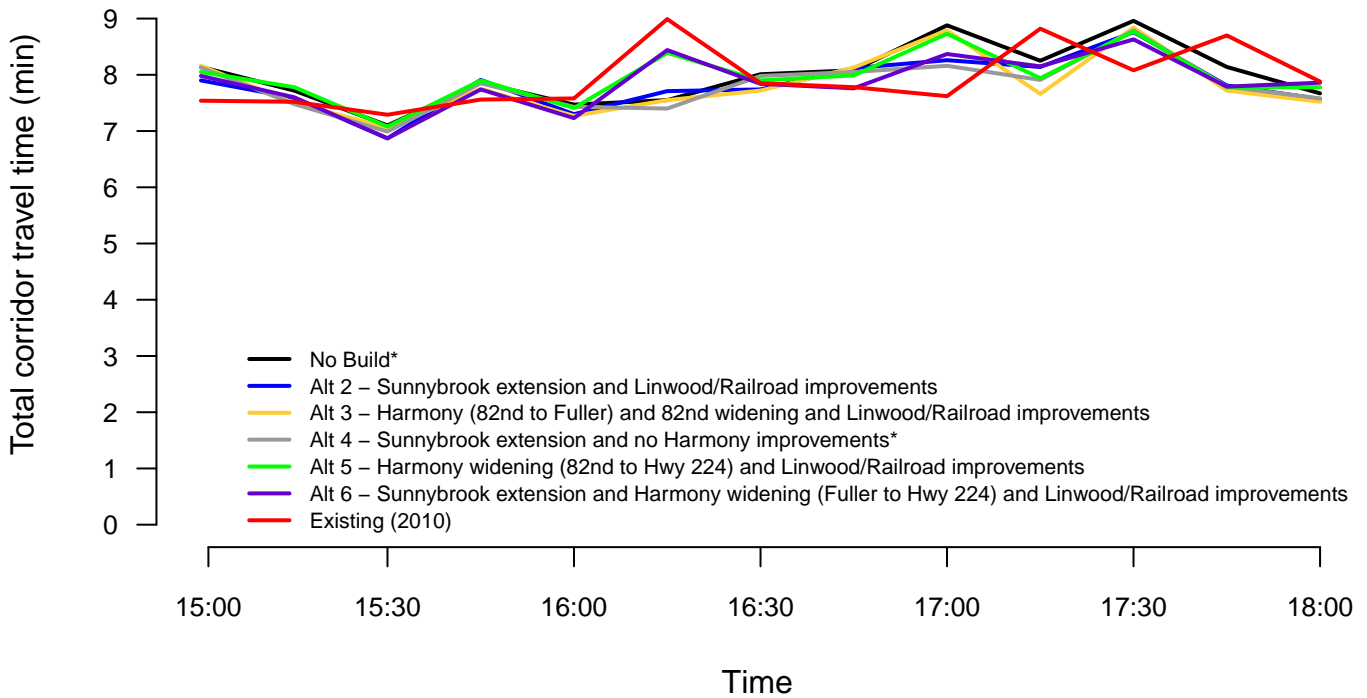
Based on average of 20 simulated days of travel time



SE Johnson Creek Blvd WB : I-205 and SE 45th PI

Change in total travel time through corridor from 15:00 to 18:00

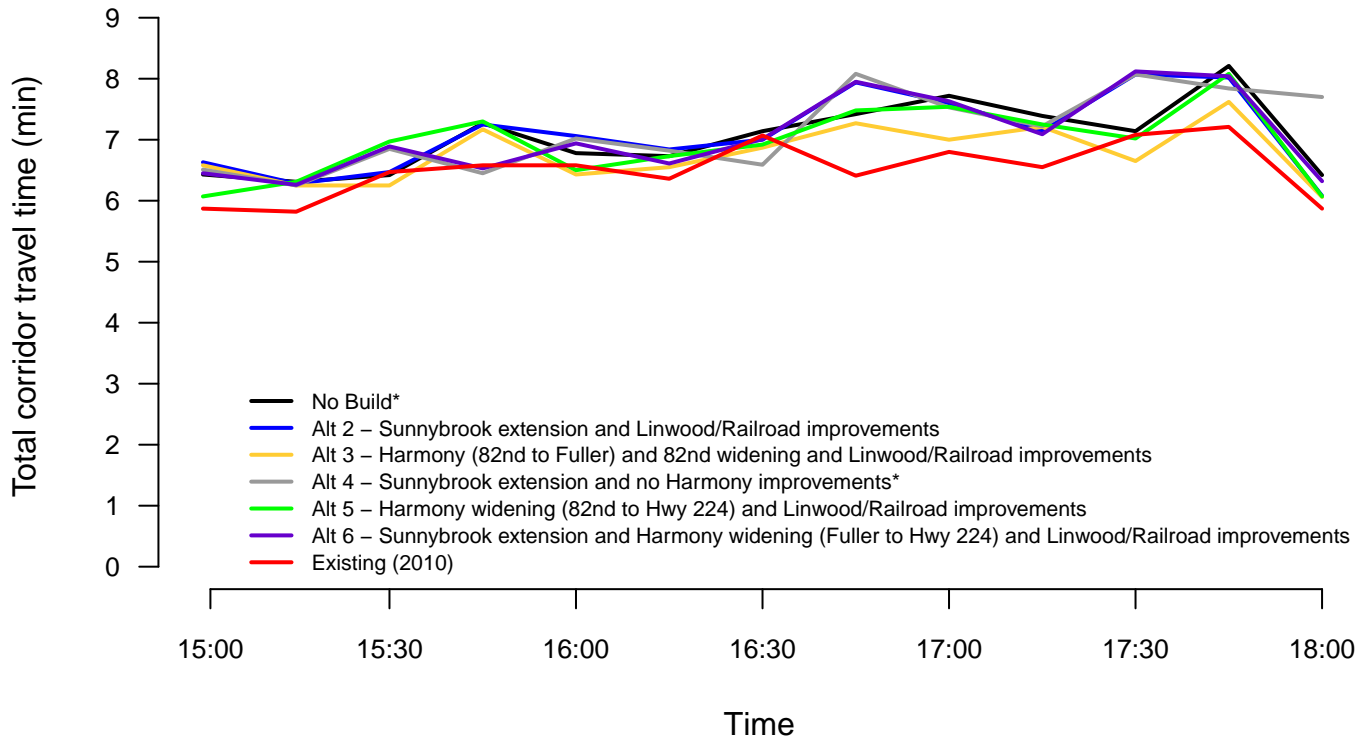
Based on average of 20 simulated days of travel time



SE 82nd Ave NB : Hwy 224 and SE Johnson Creek Blvd

Change in total travel time through corridor from 15:00 to 18:00

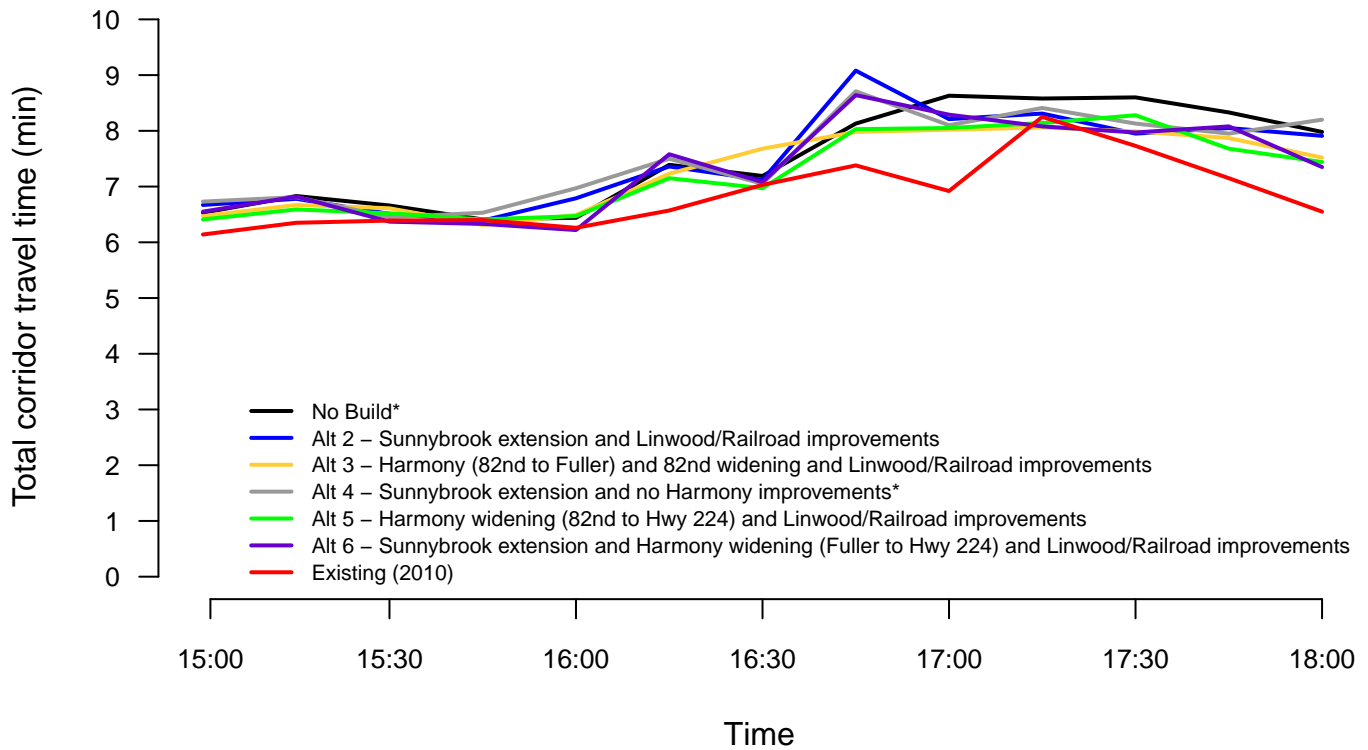
Based on average of 20 simulated days of travel time



SE 82nd Ave SB : SE Johnson Creek Blvd and Hwy 224

Change in total travel time through corridor from 15:00 to 18:00

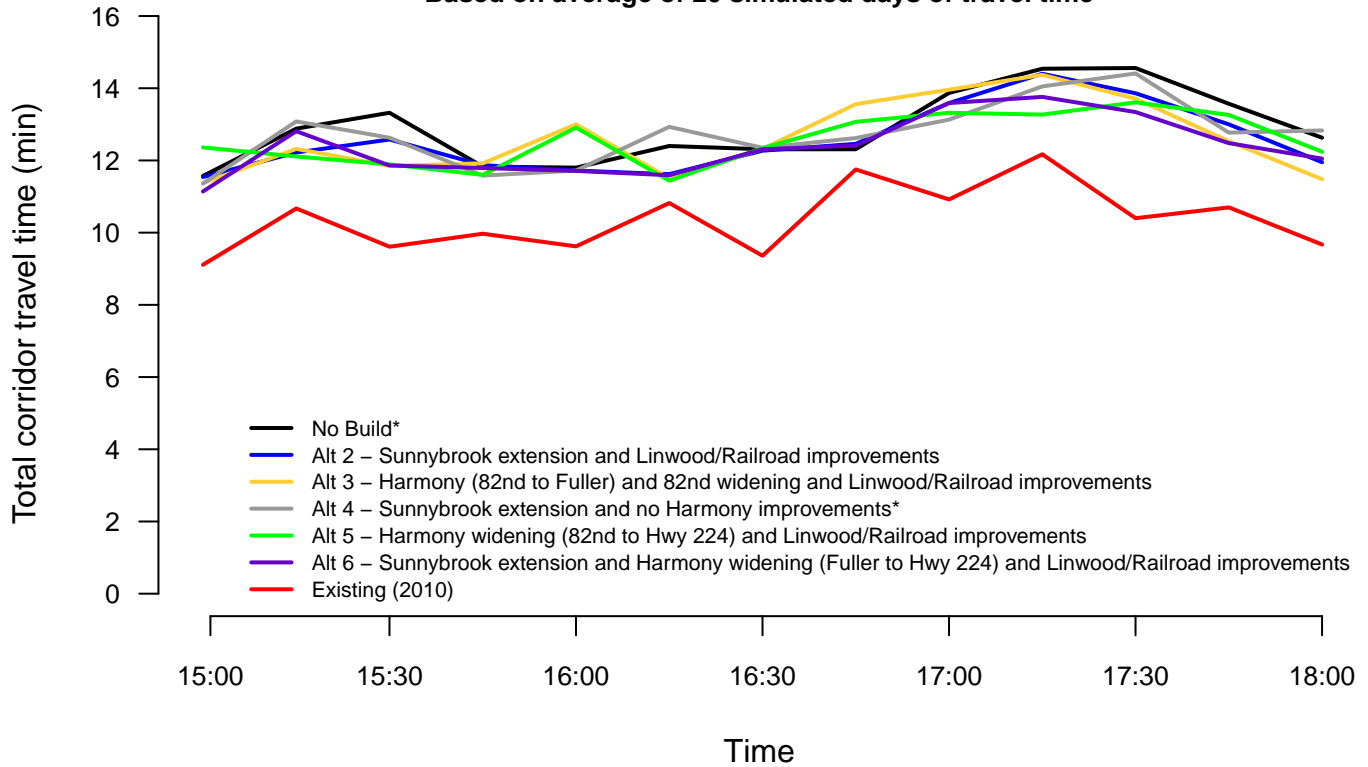
Based on average of 20 simulated days of travel time



Hwy 224 EB : Hwy 99E and I-205

Change in total travel time through corridor from 15:00 to 18:00

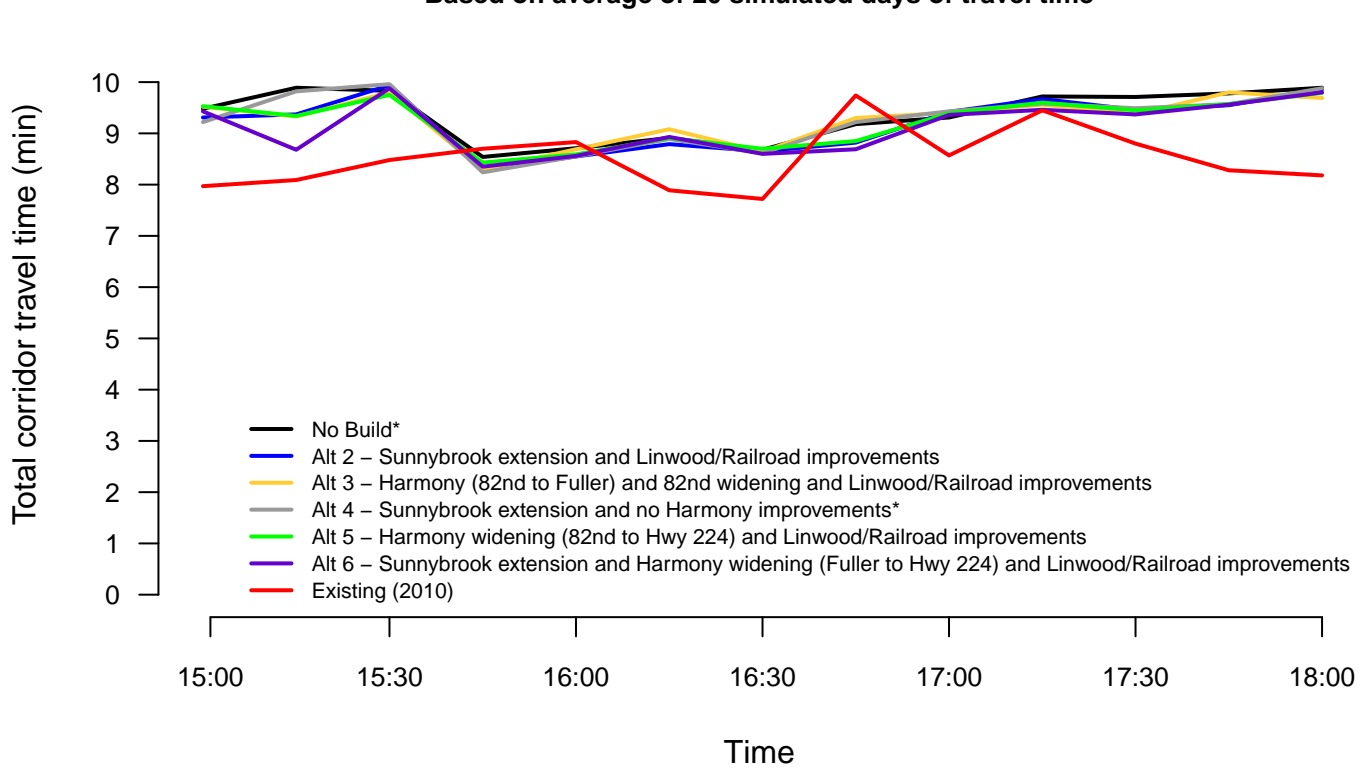
Based on average of 20 simulated days of travel time



Hwy 224 WB : I-205 and Hwy 99E

Change in total travel time through corridor from 15:00 to 18:00

Based on average of 20 simulated days of travel time

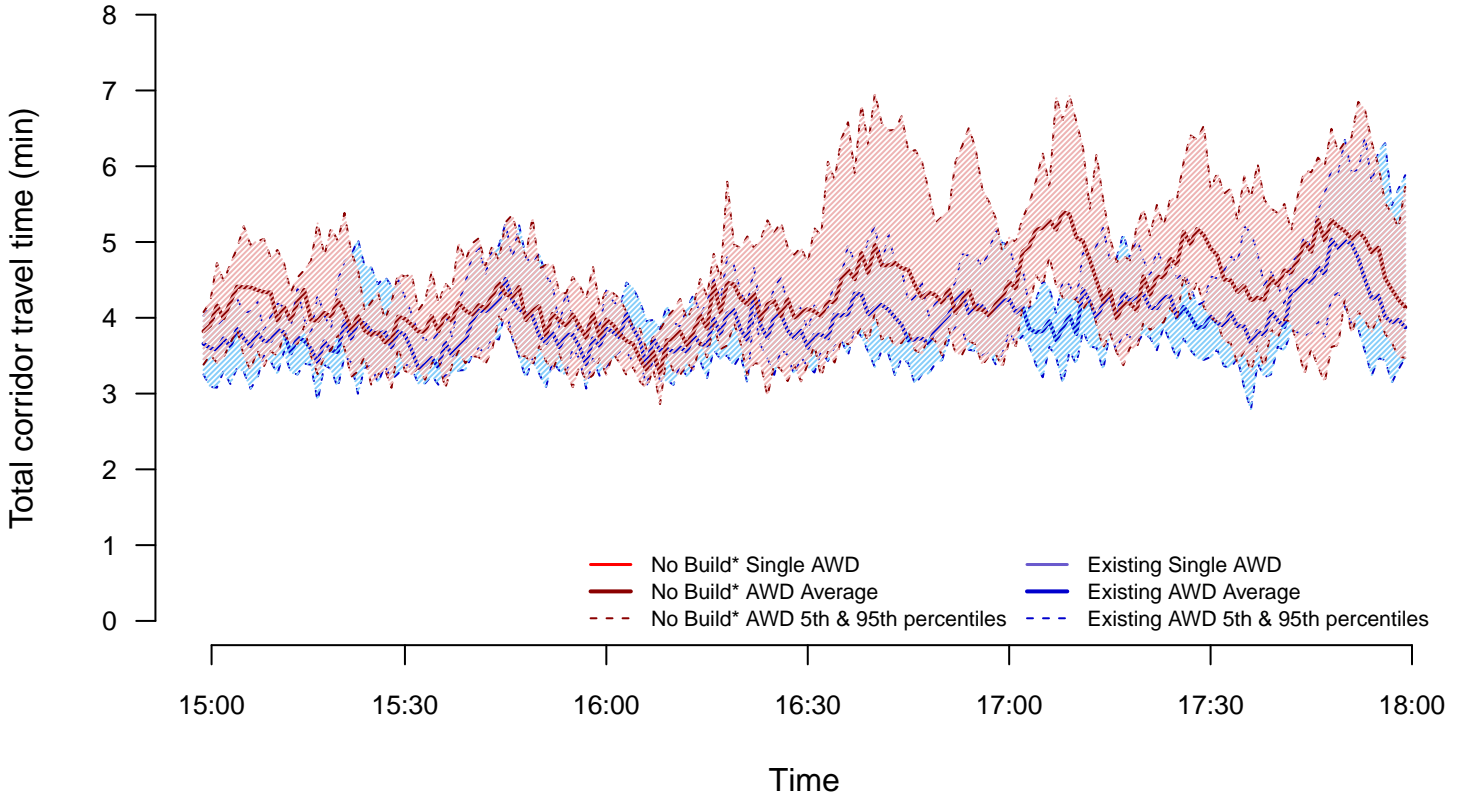


Appendix C Travel Time Reliability Plots for
All Alternatives

SE Harmony Rd WB : SE 82nd Ave and Hwy 224

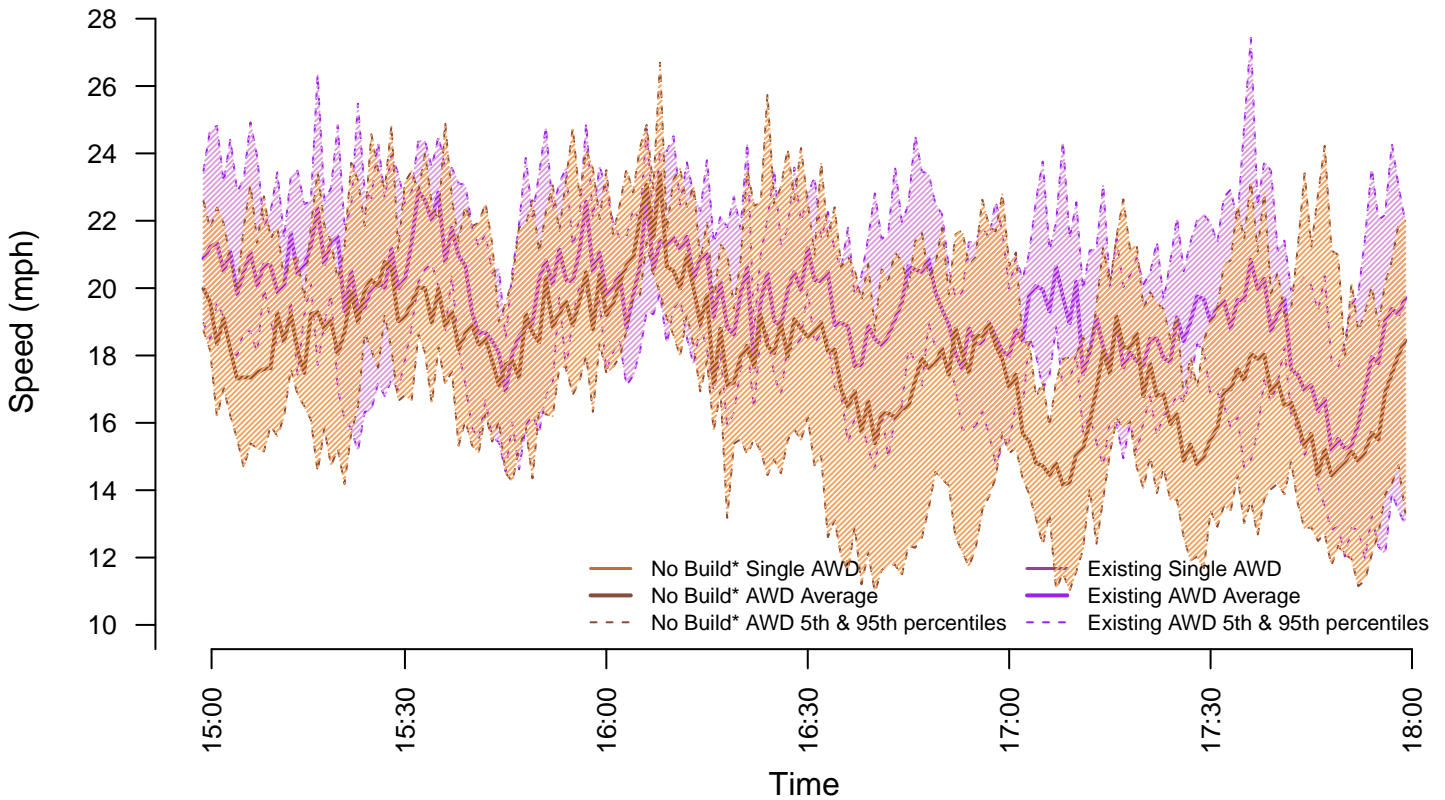
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

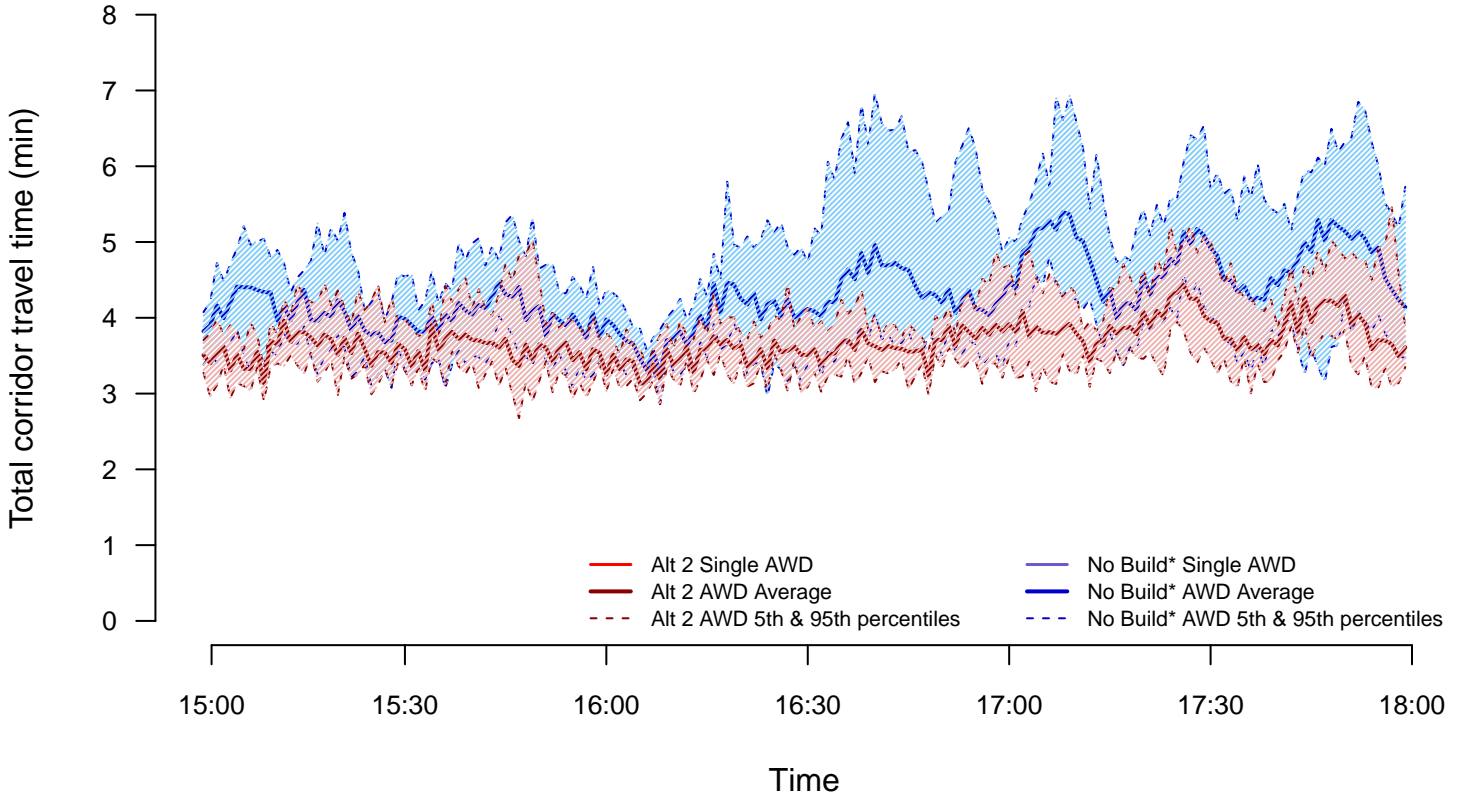
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd WB : SE 82nd Ave and Hwy 224

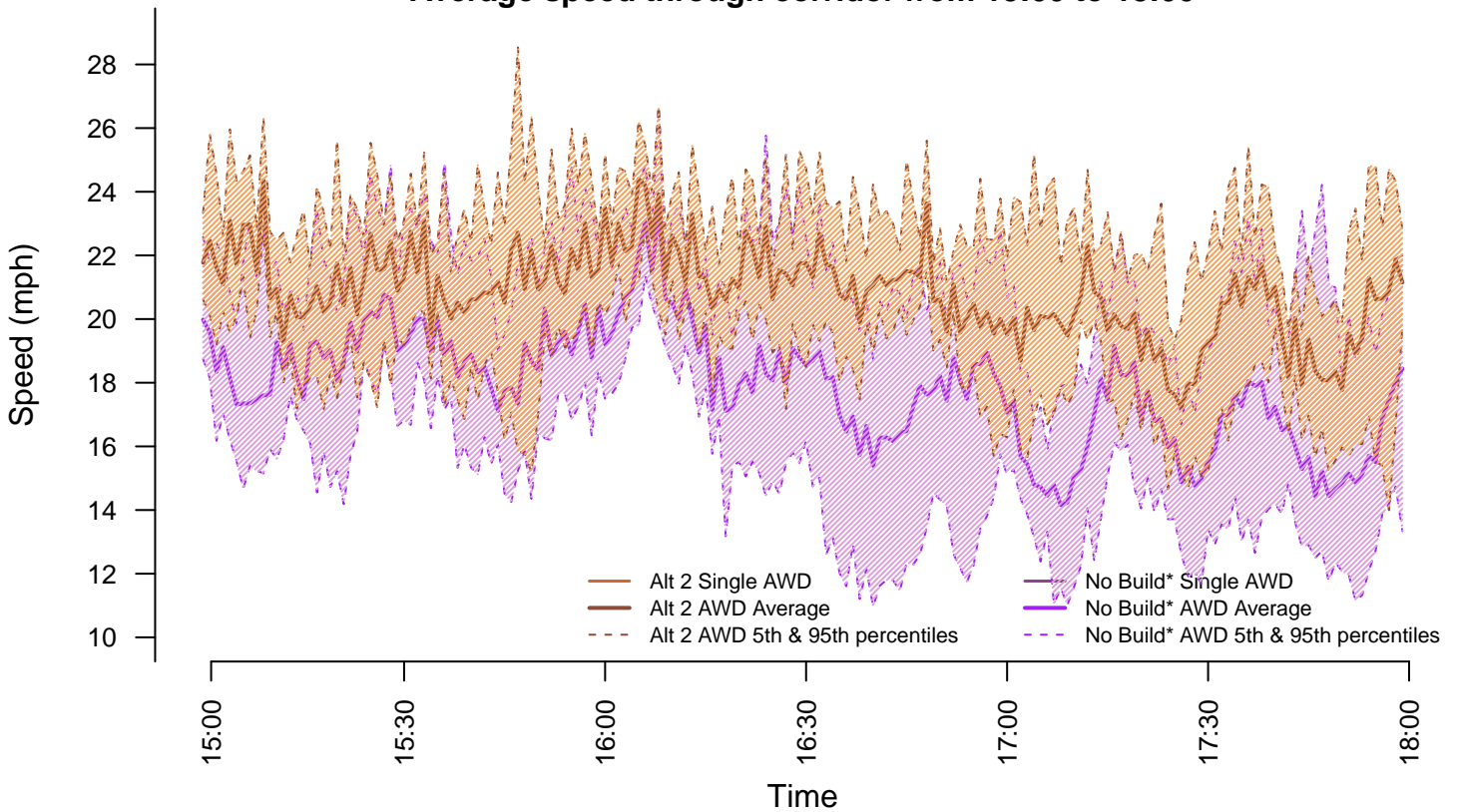
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

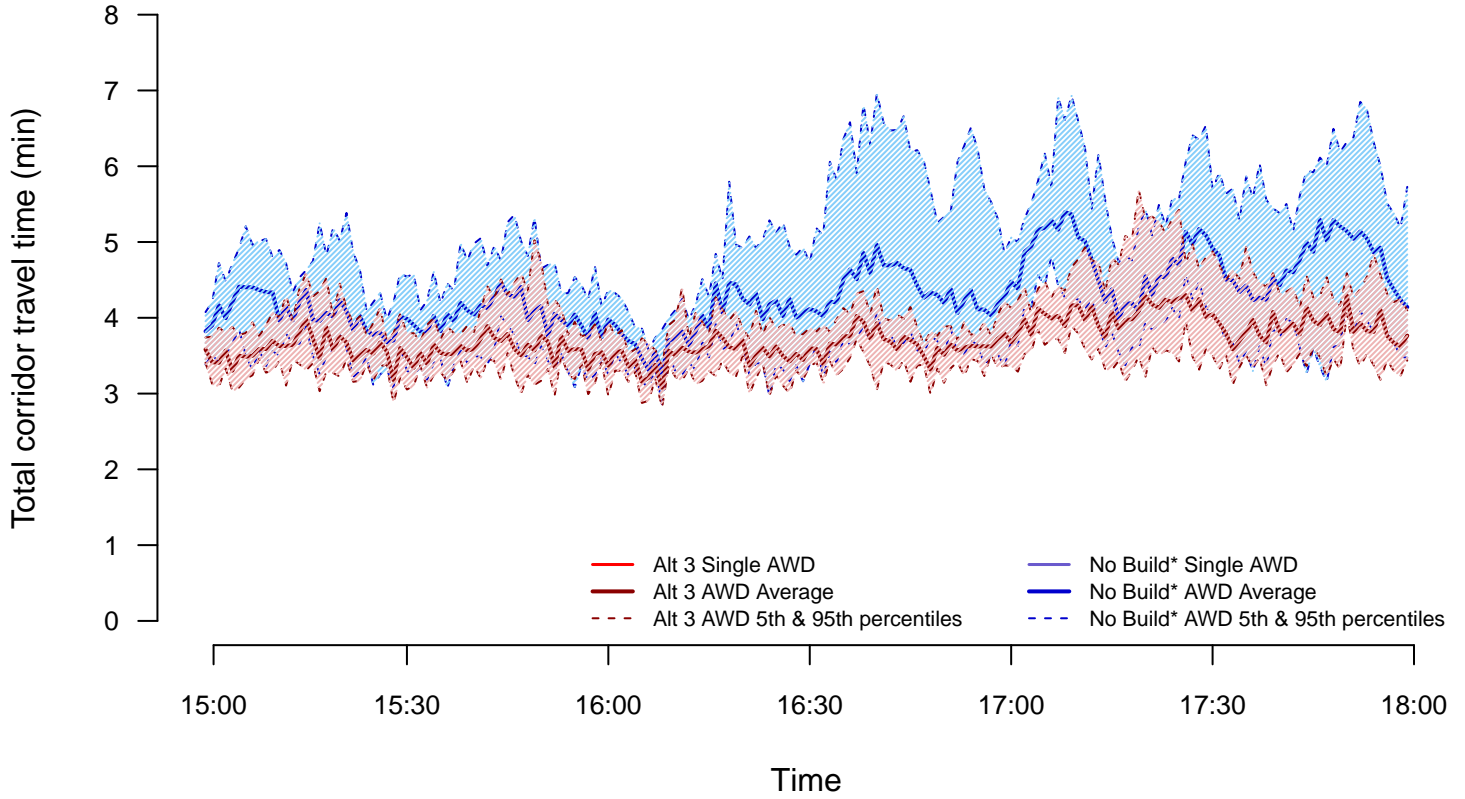
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd WB : SE 82nd Ave and Hwy 224

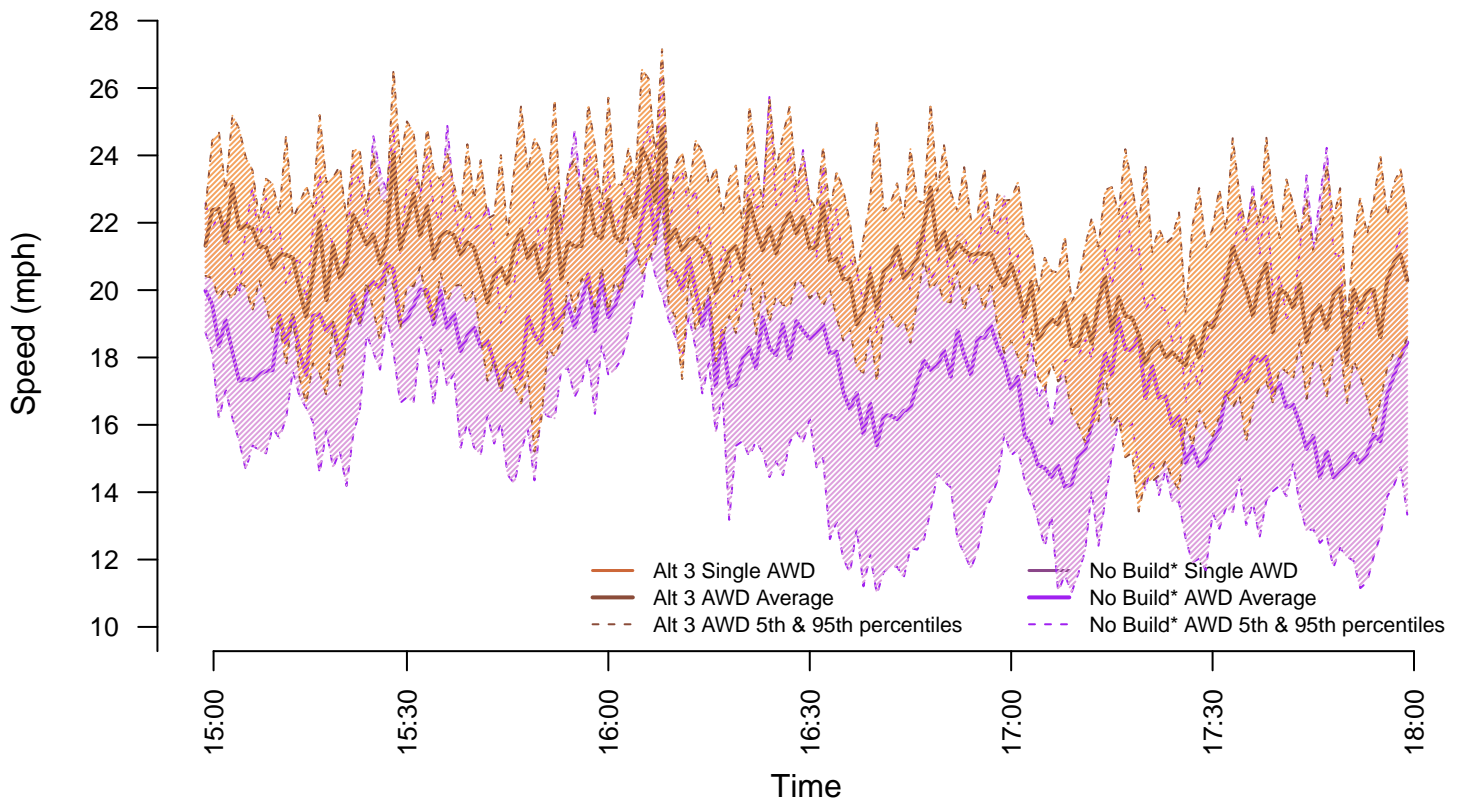
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

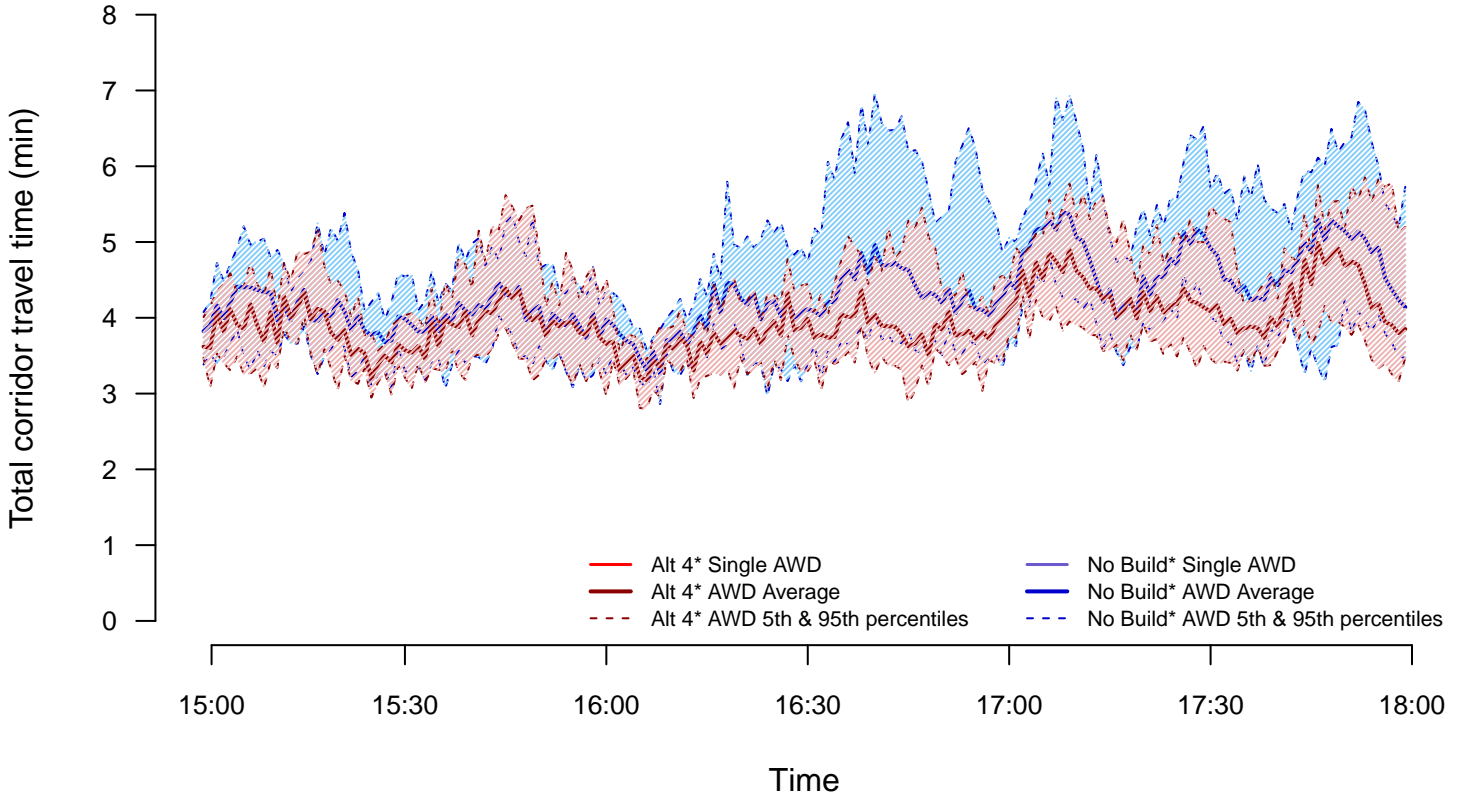
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd WB : SE 82nd Ave and Hwy 224

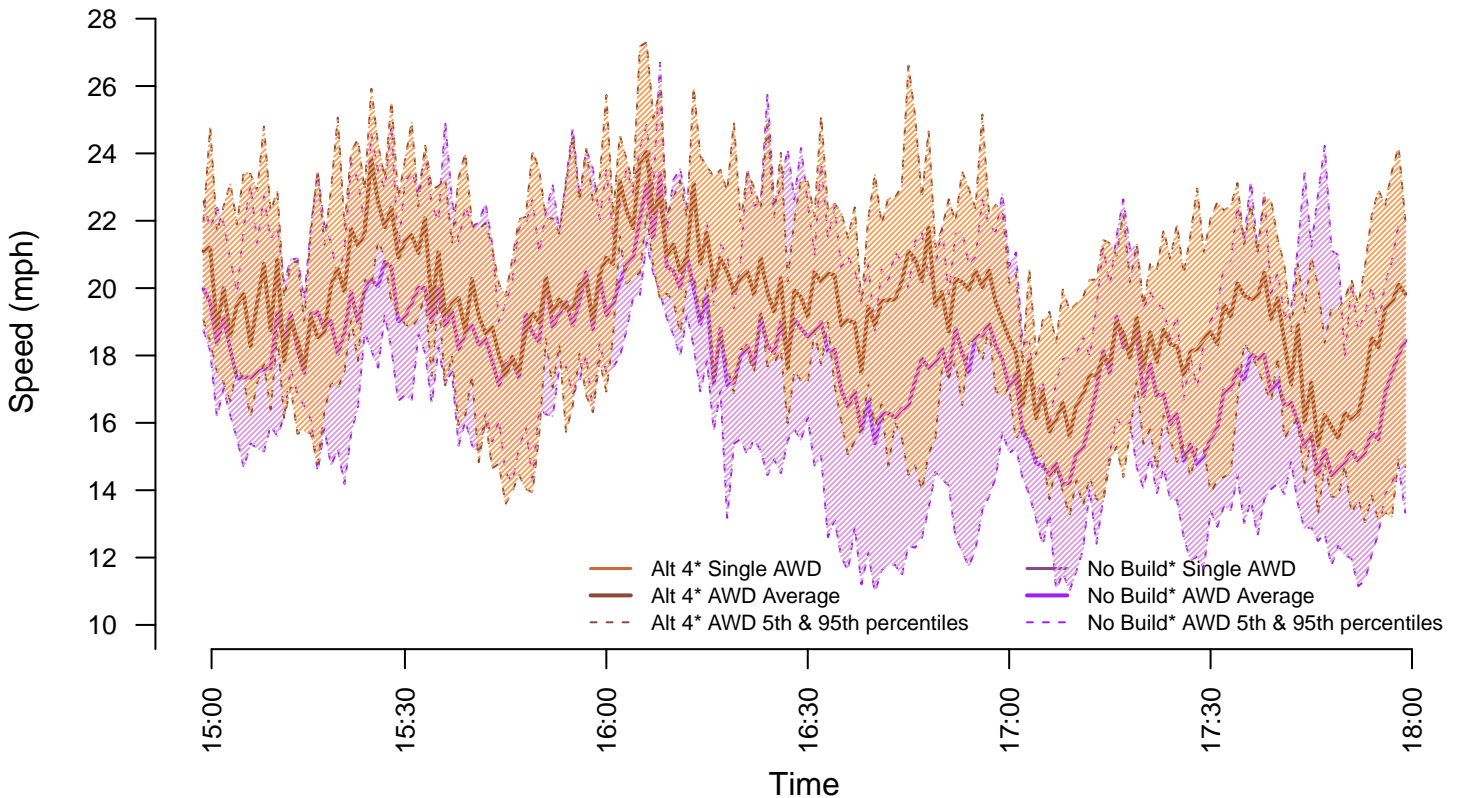
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

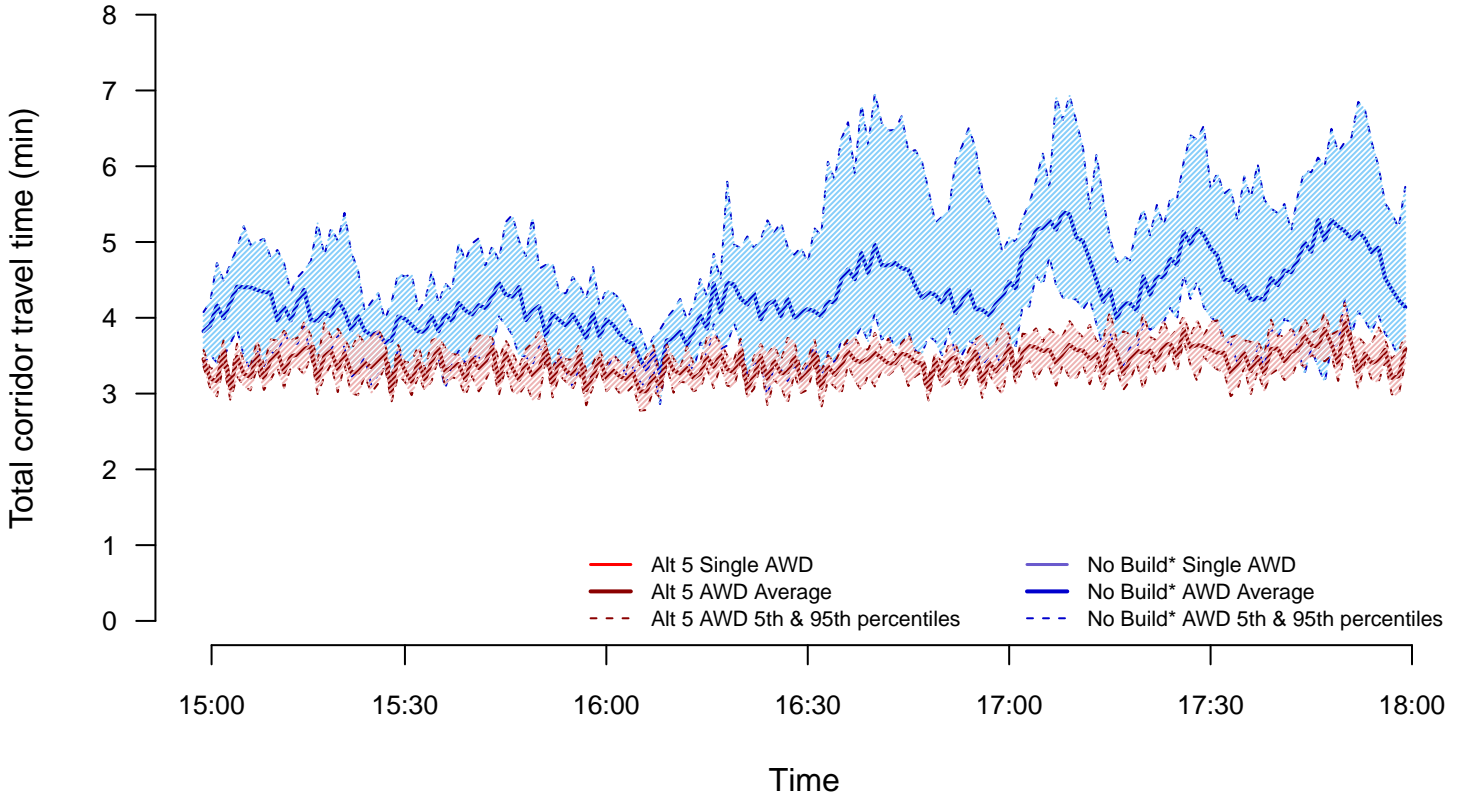
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd WB : SE 82nd Ave and Hwy 224

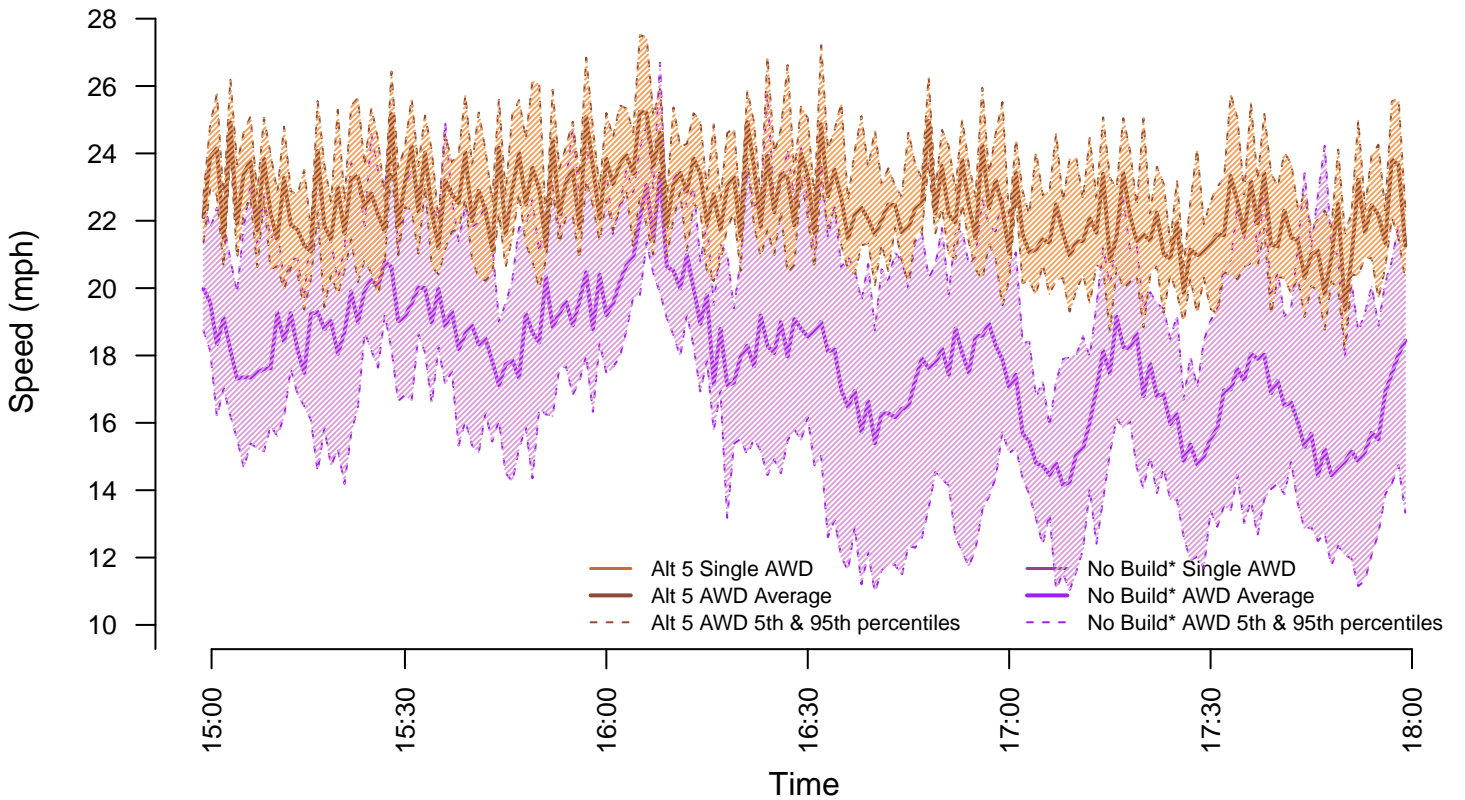
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

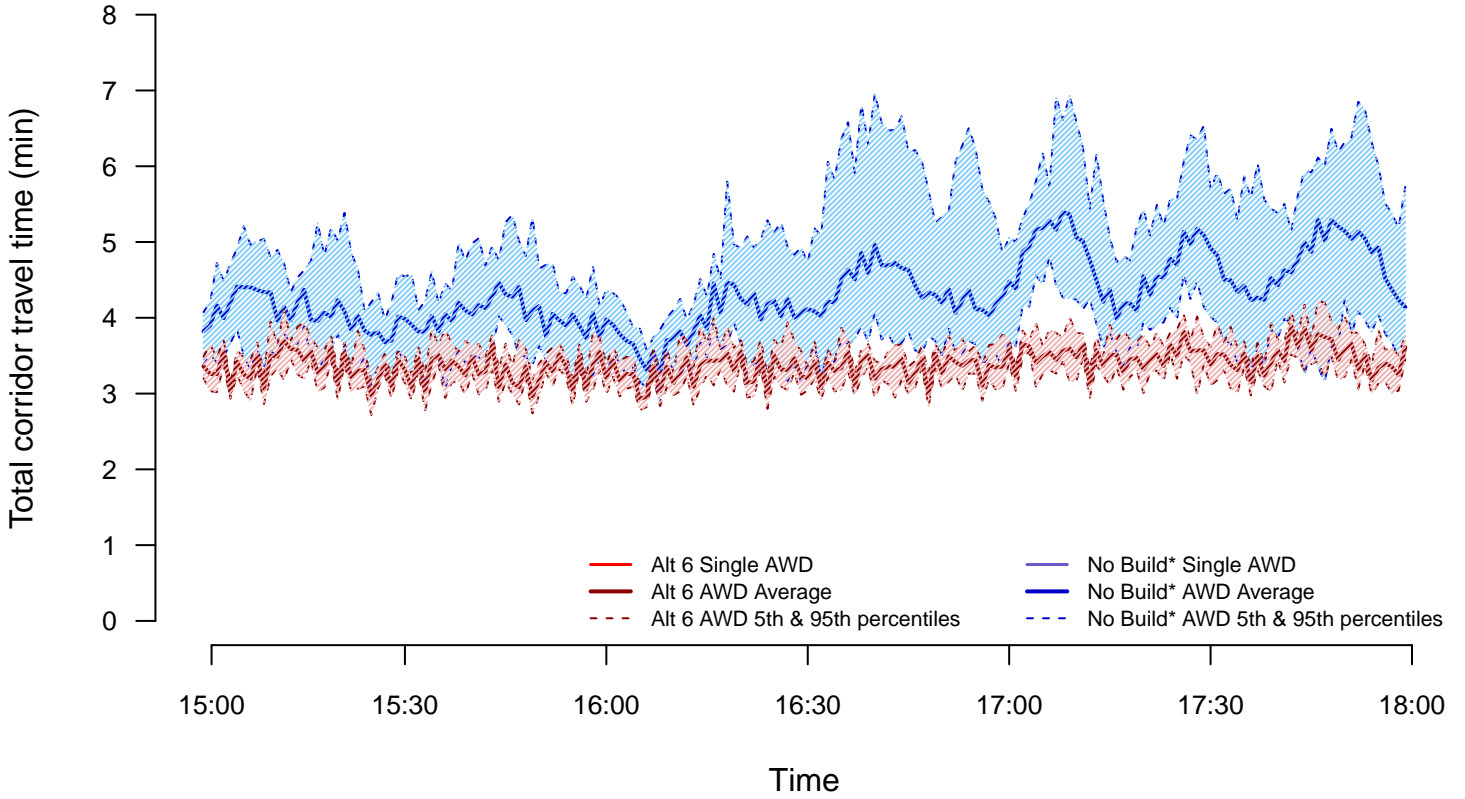
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd WB : SE 82nd Ave and Hwy 224

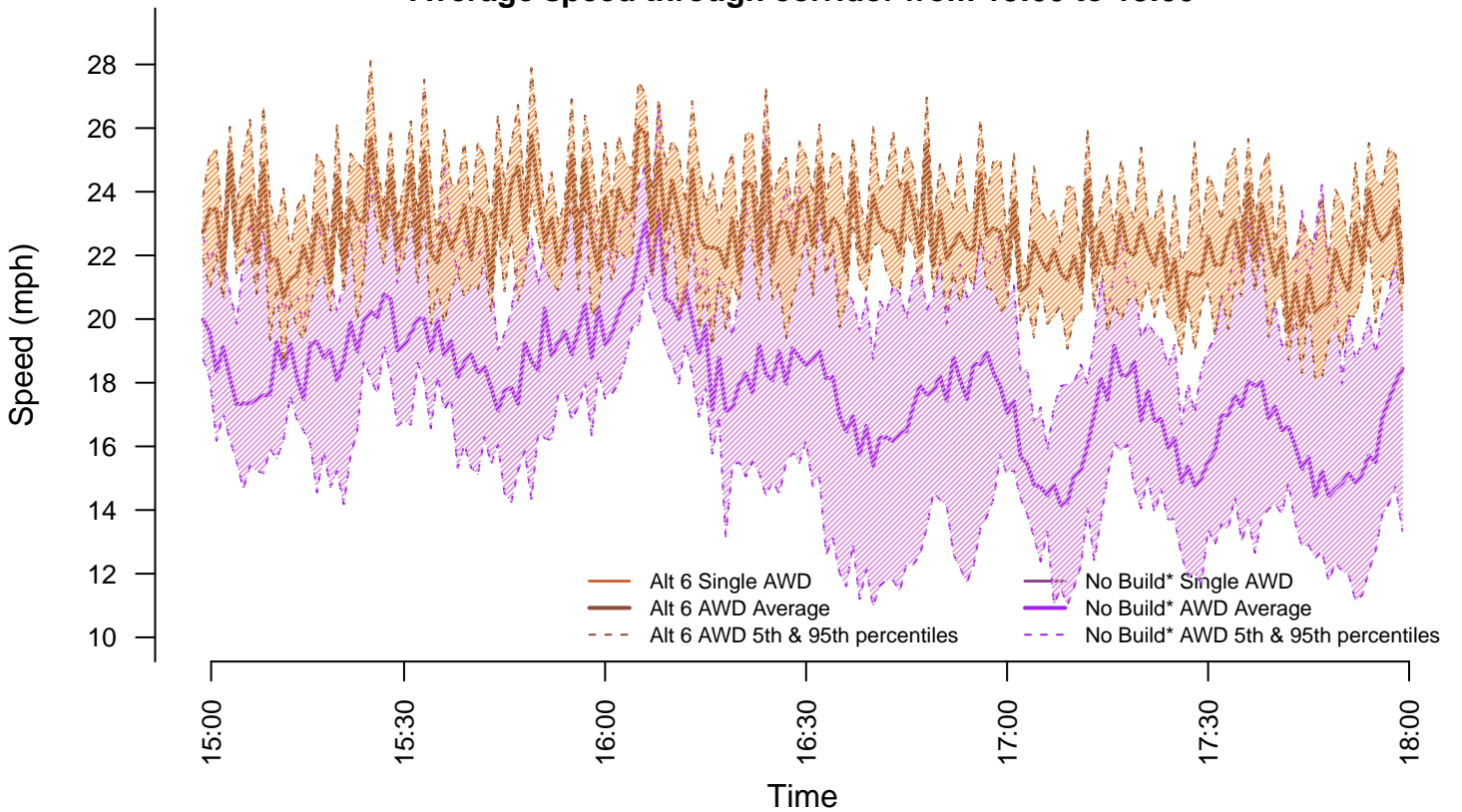
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

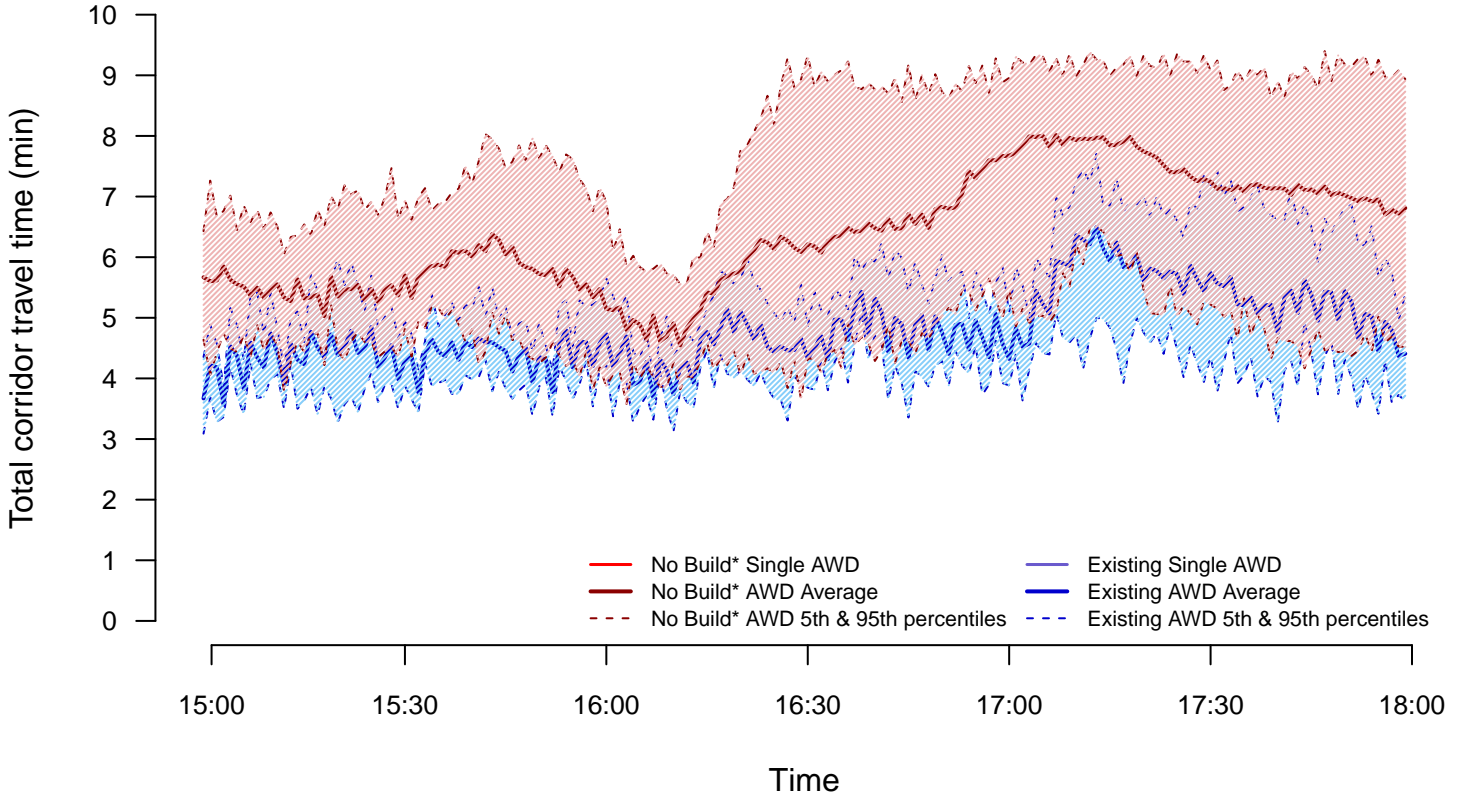
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

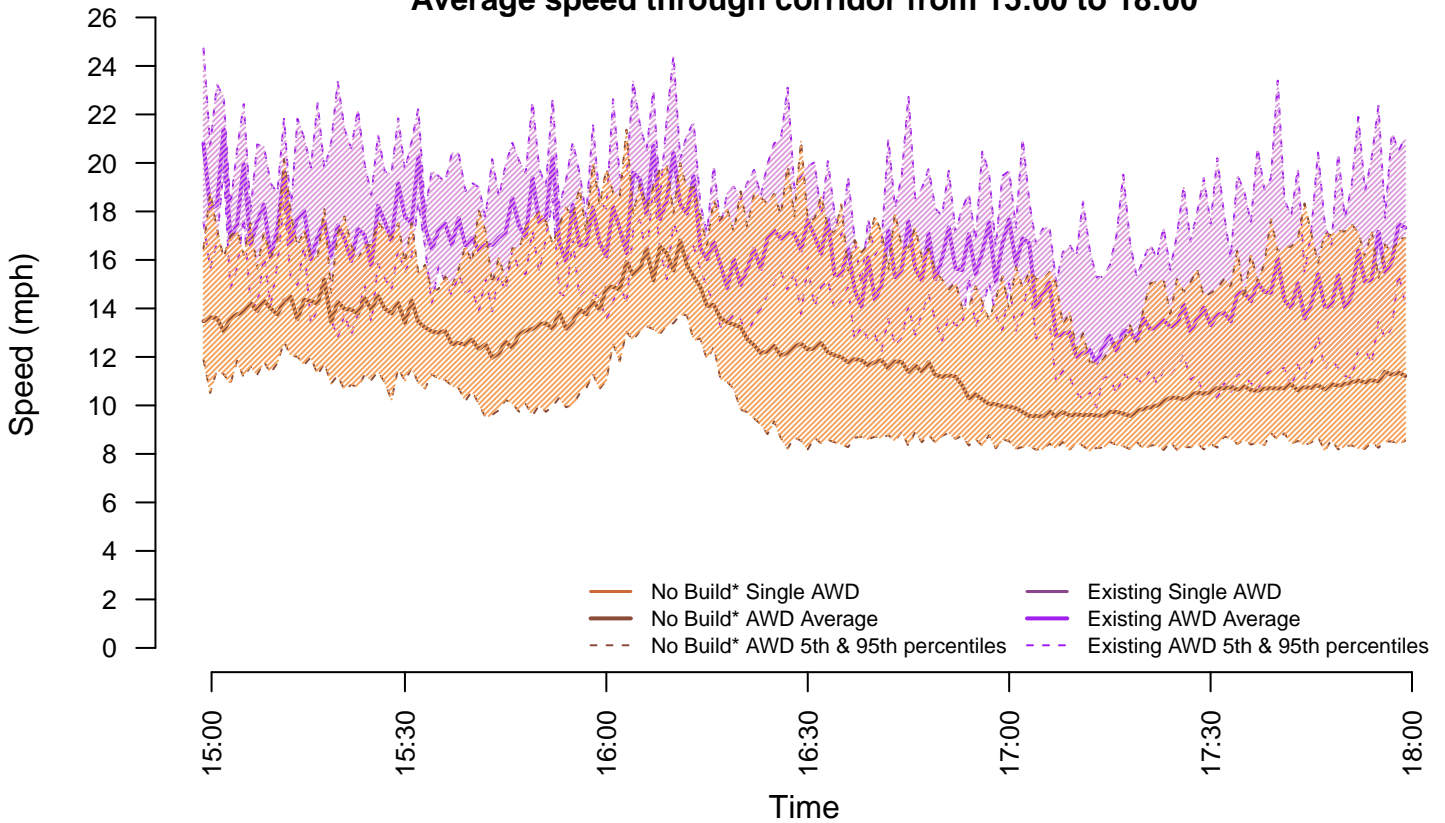
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

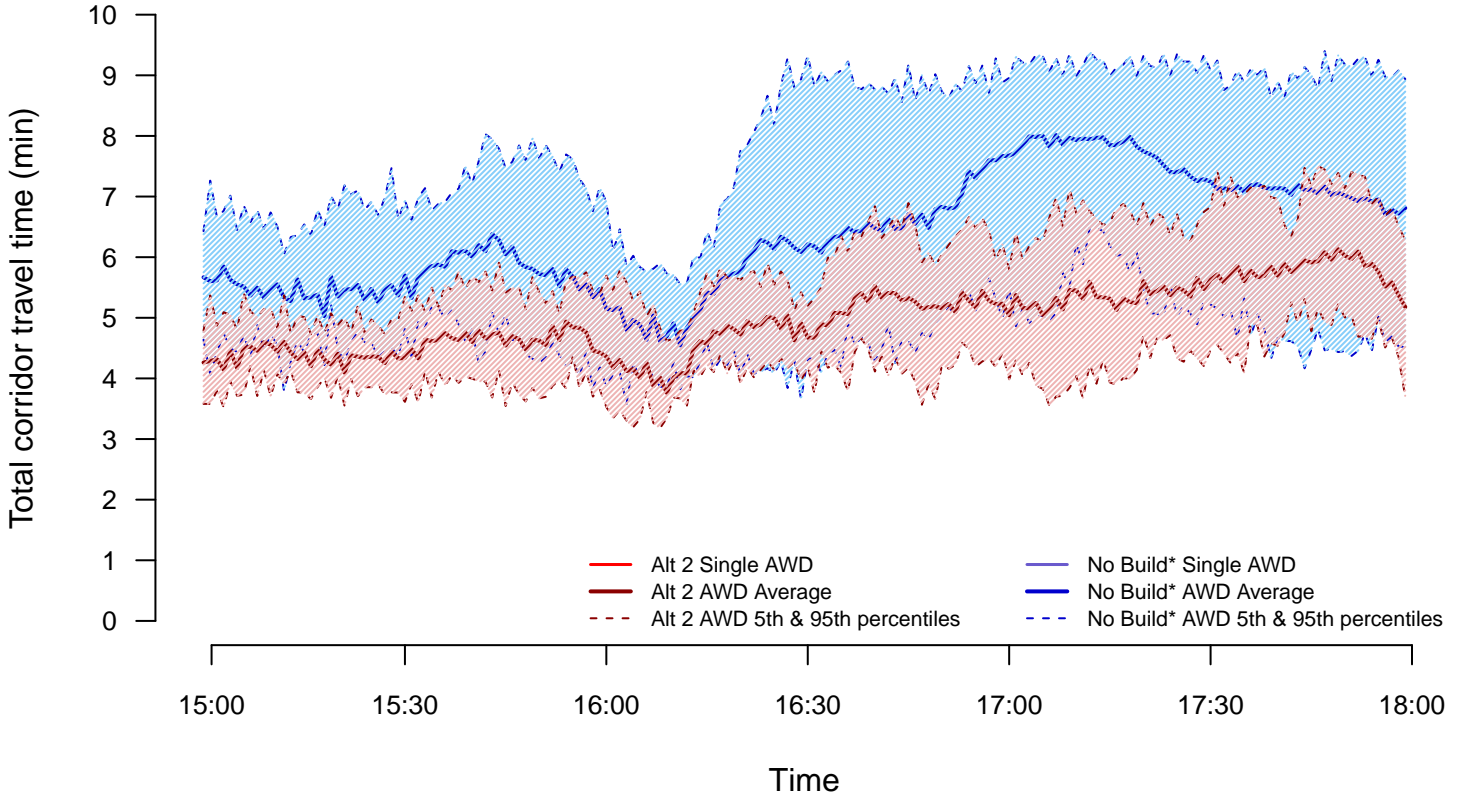
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

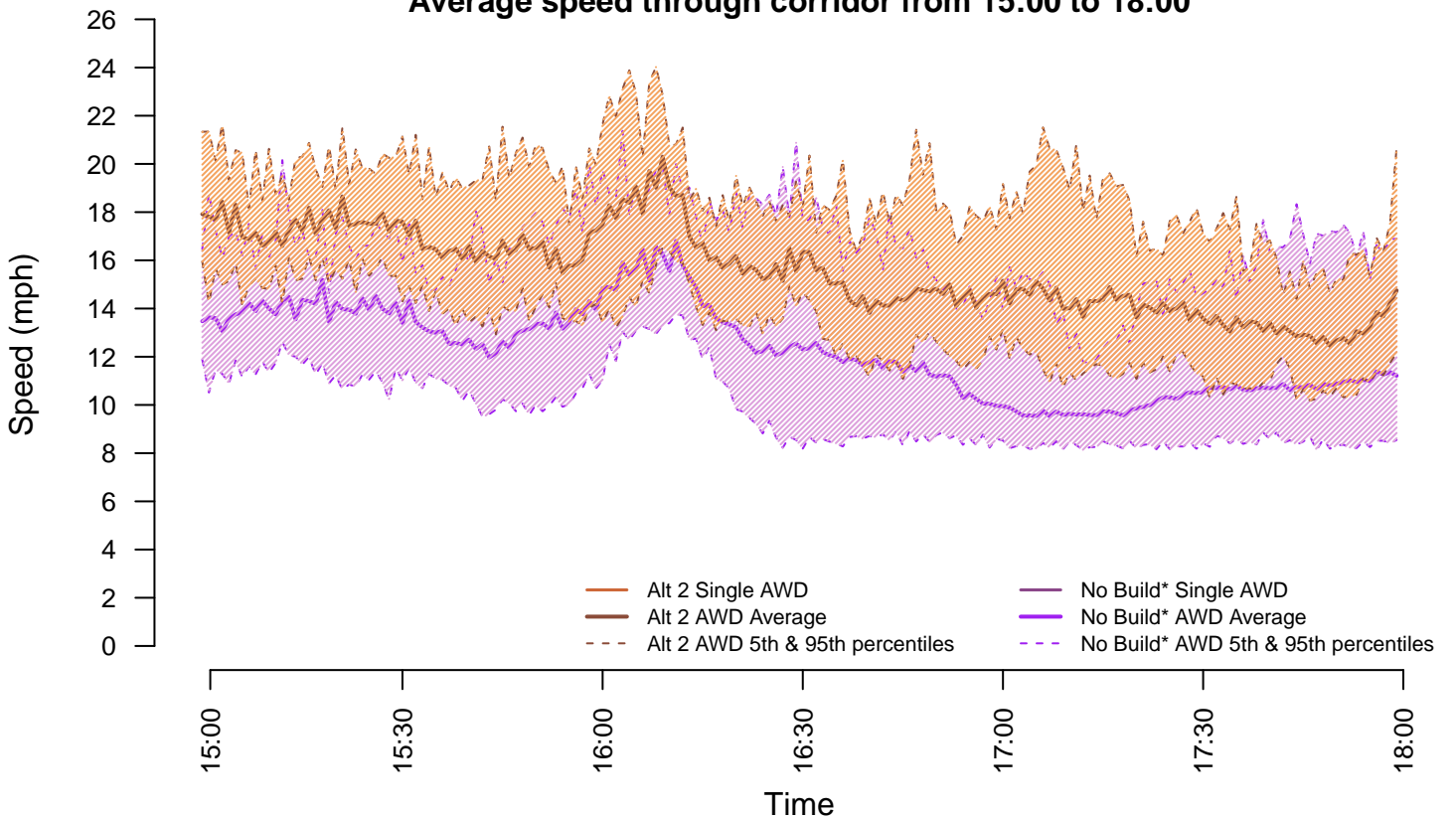
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

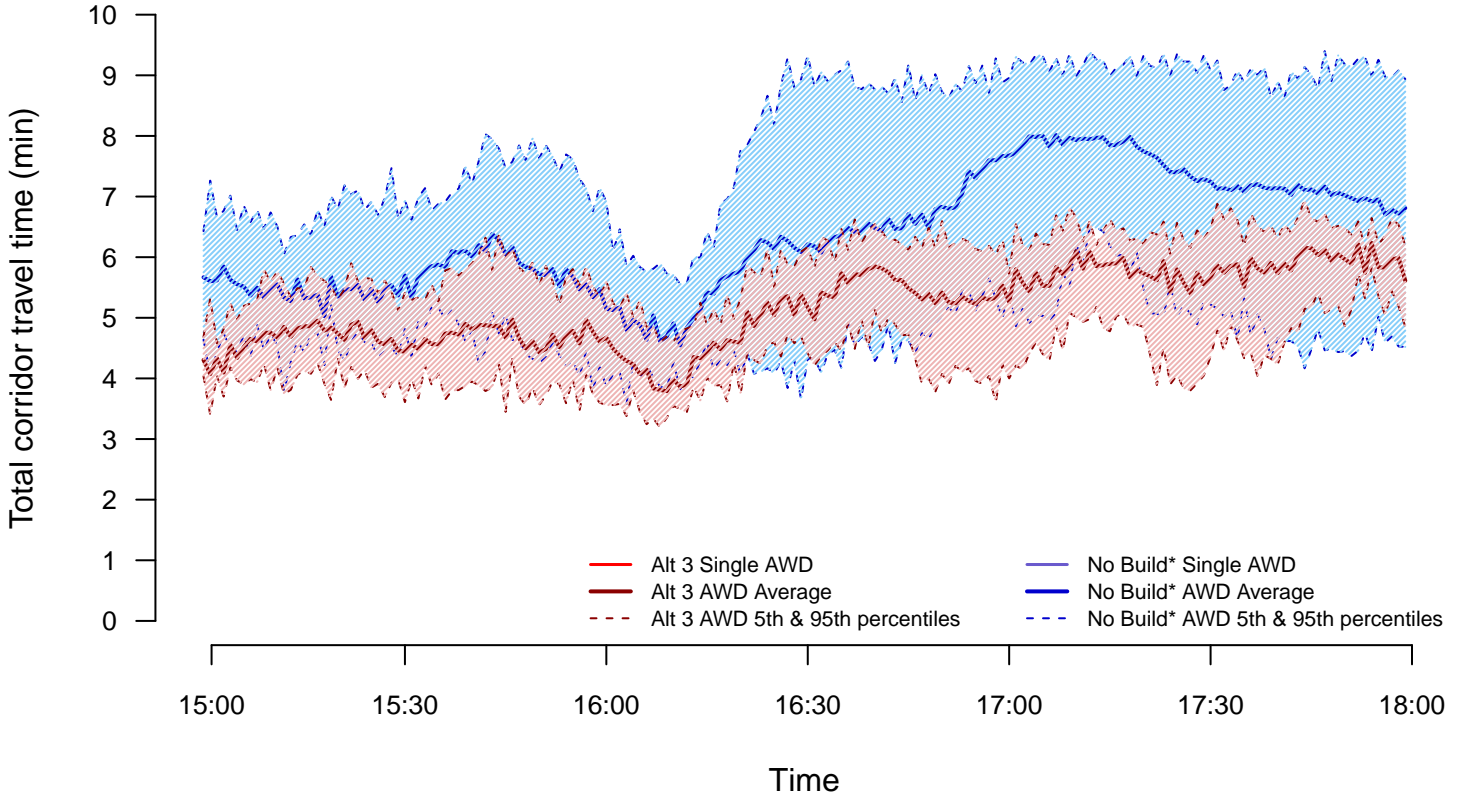
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

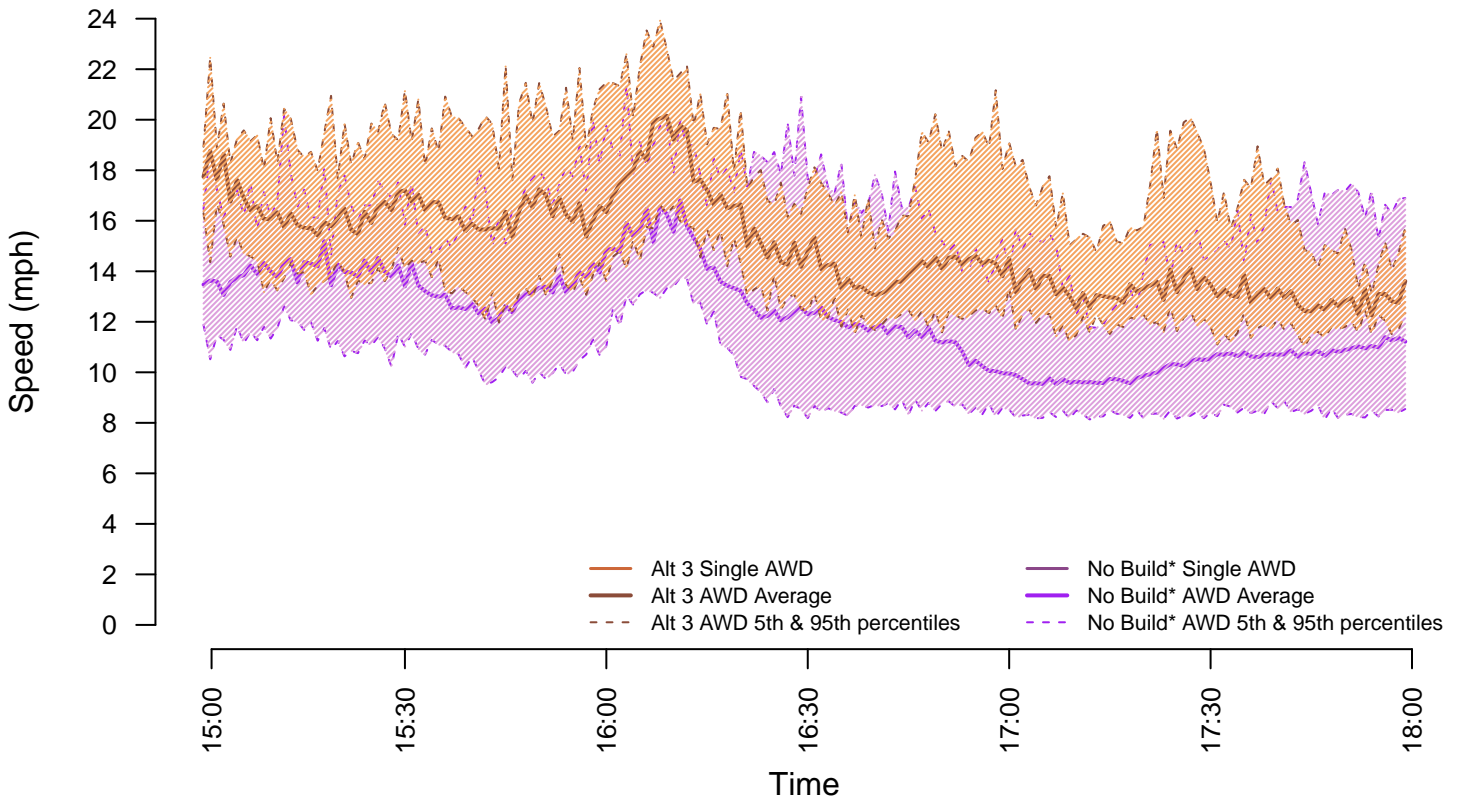
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

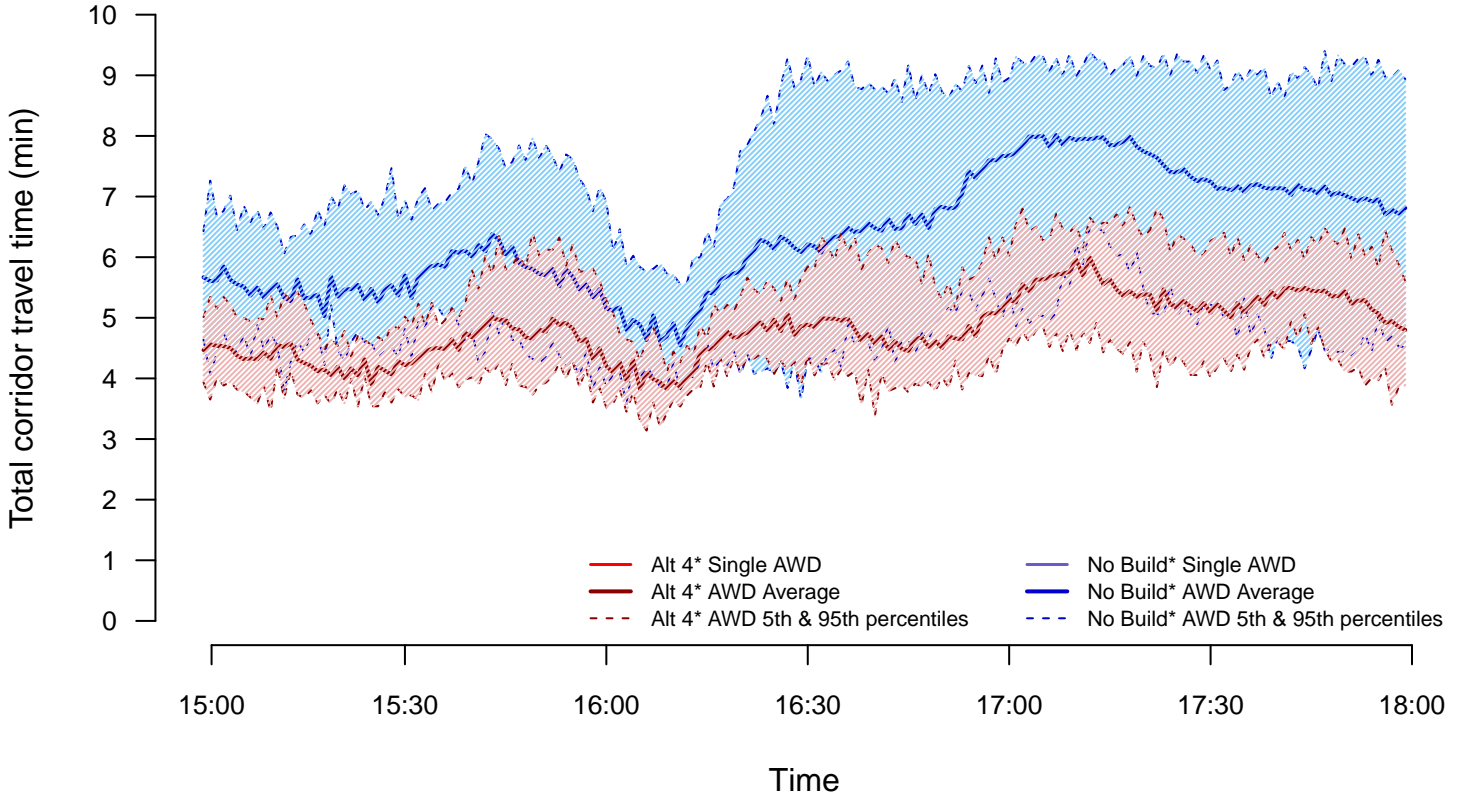
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

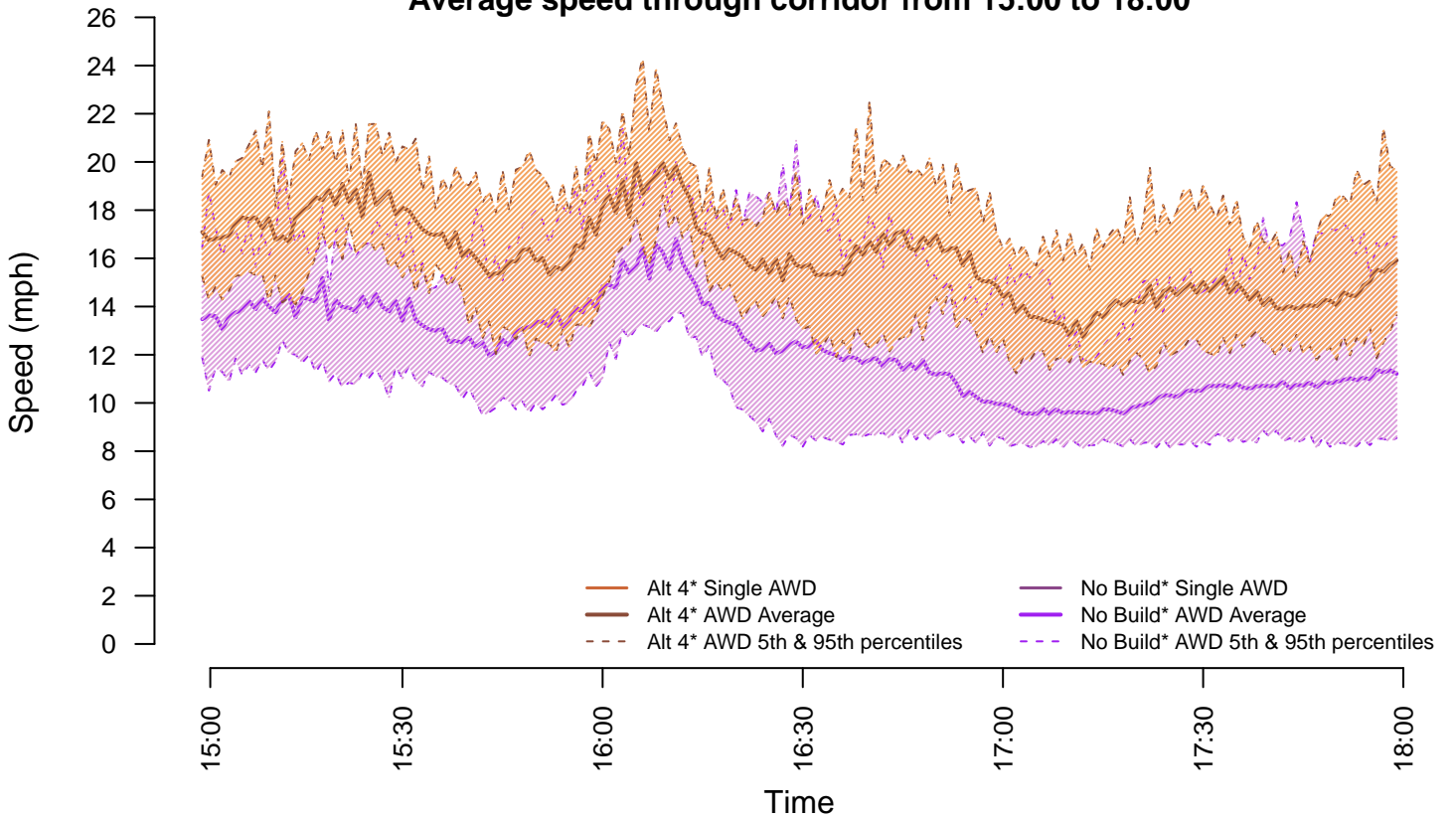
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

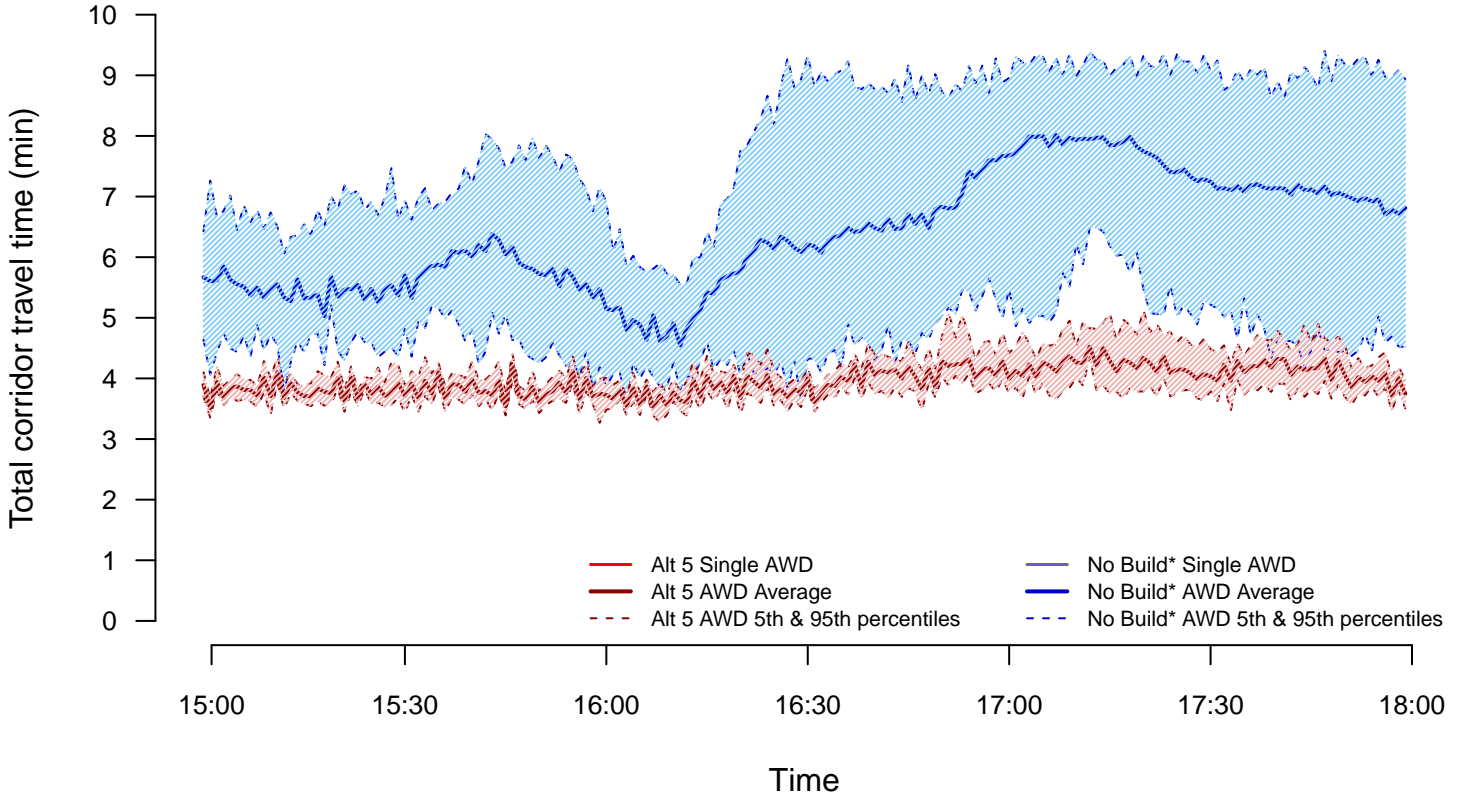
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

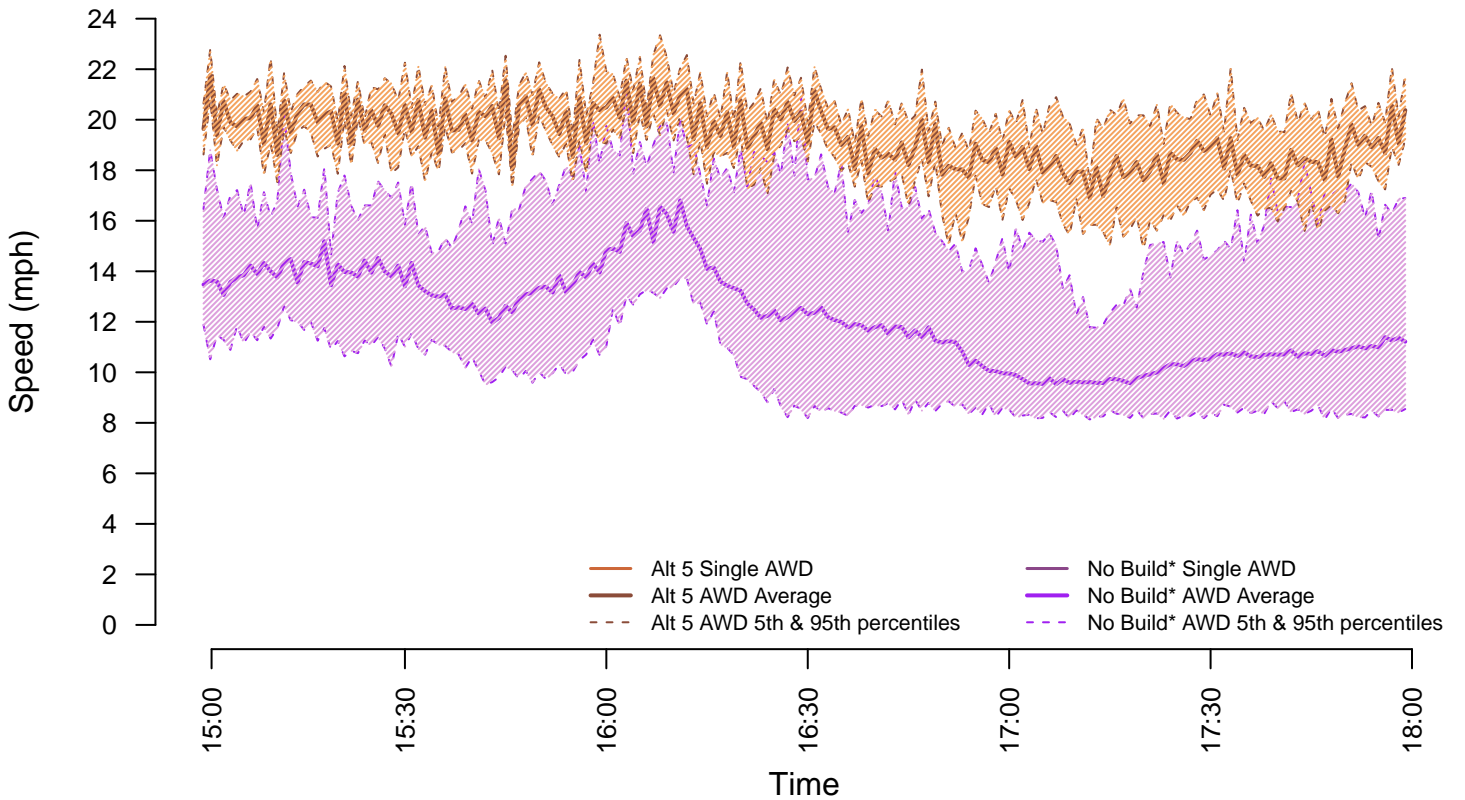
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

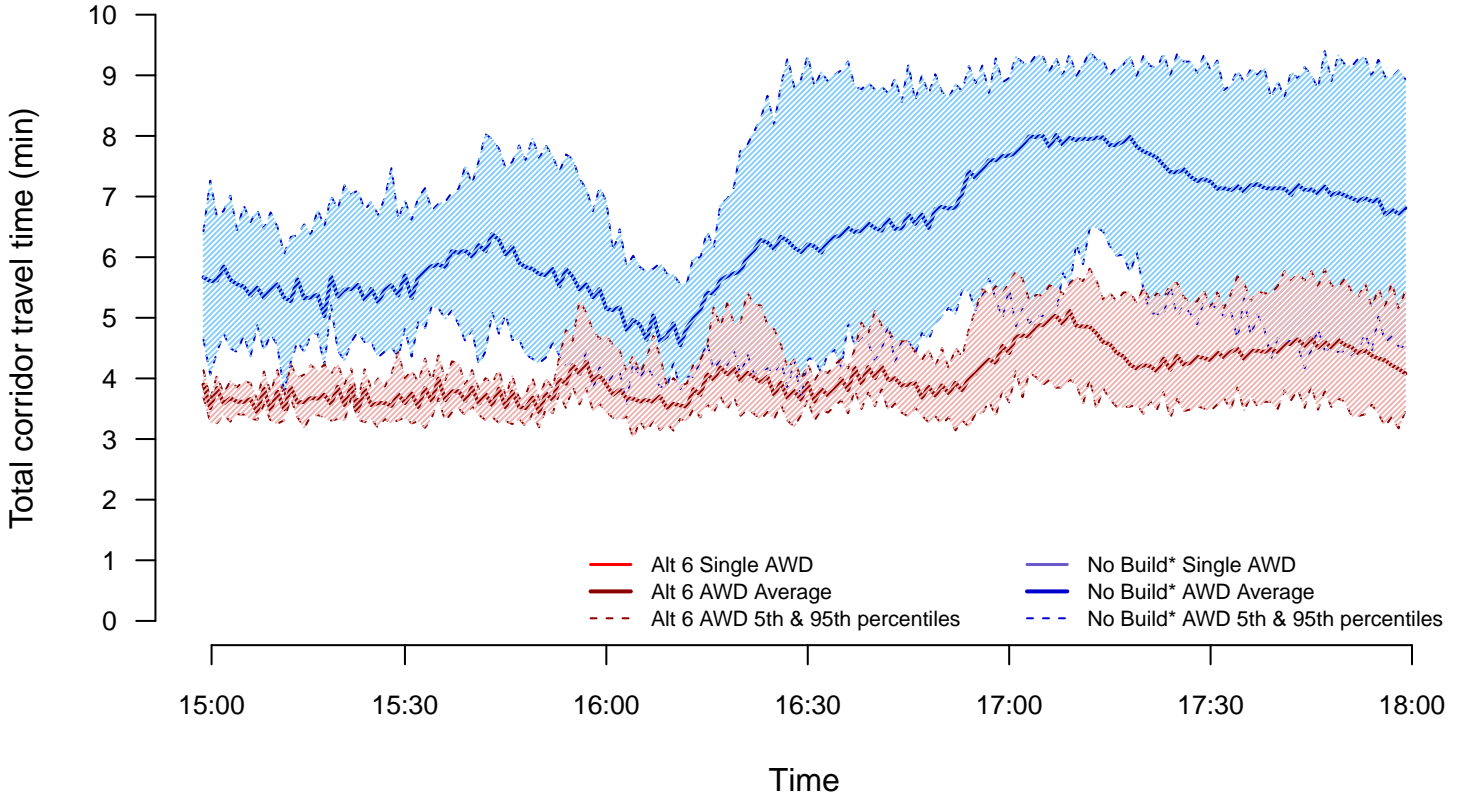
Average speed through corridor from 15:00 to 18:00



SE Harmony Rd EB : Hwy 224 and SE 82nd Ave

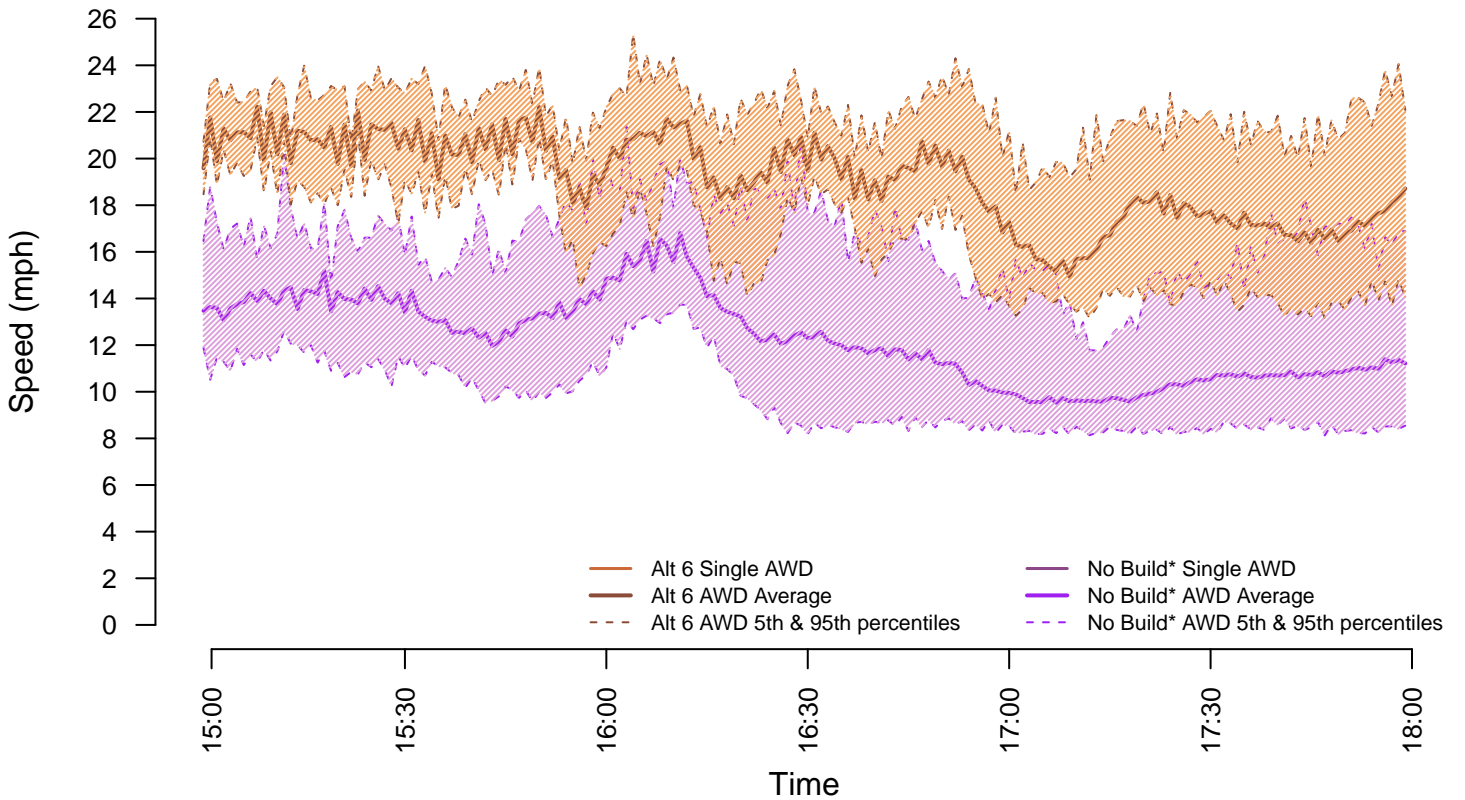
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.27 mi

Average speed through corridor from 15:00 to 18:00

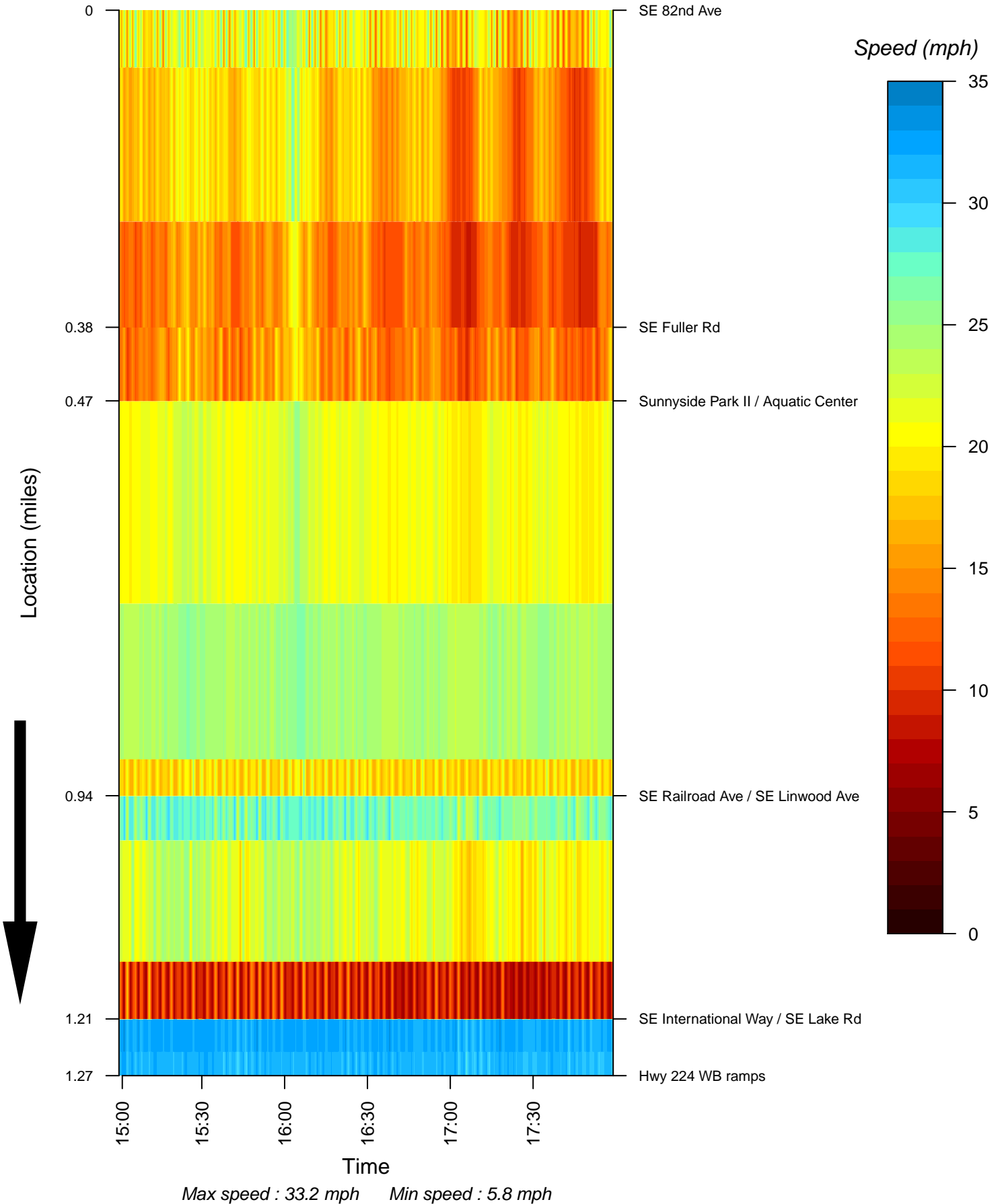


Appendix D Speed Plots for All Alternatives

No Build*

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

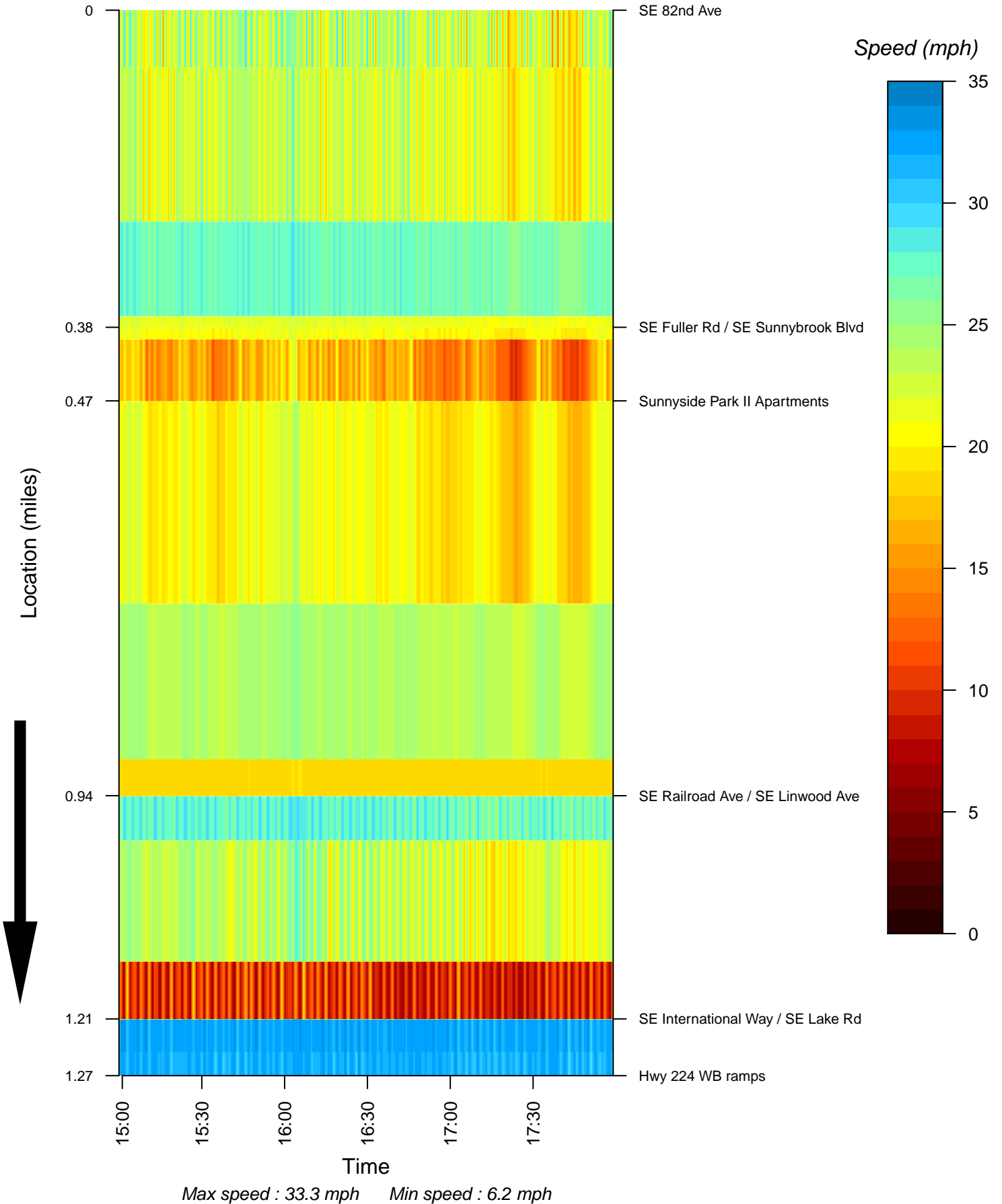
Space-time diagram of speed from 15:00 to 18:00



Alt 2 – Sunnybrook extend / RR improve

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

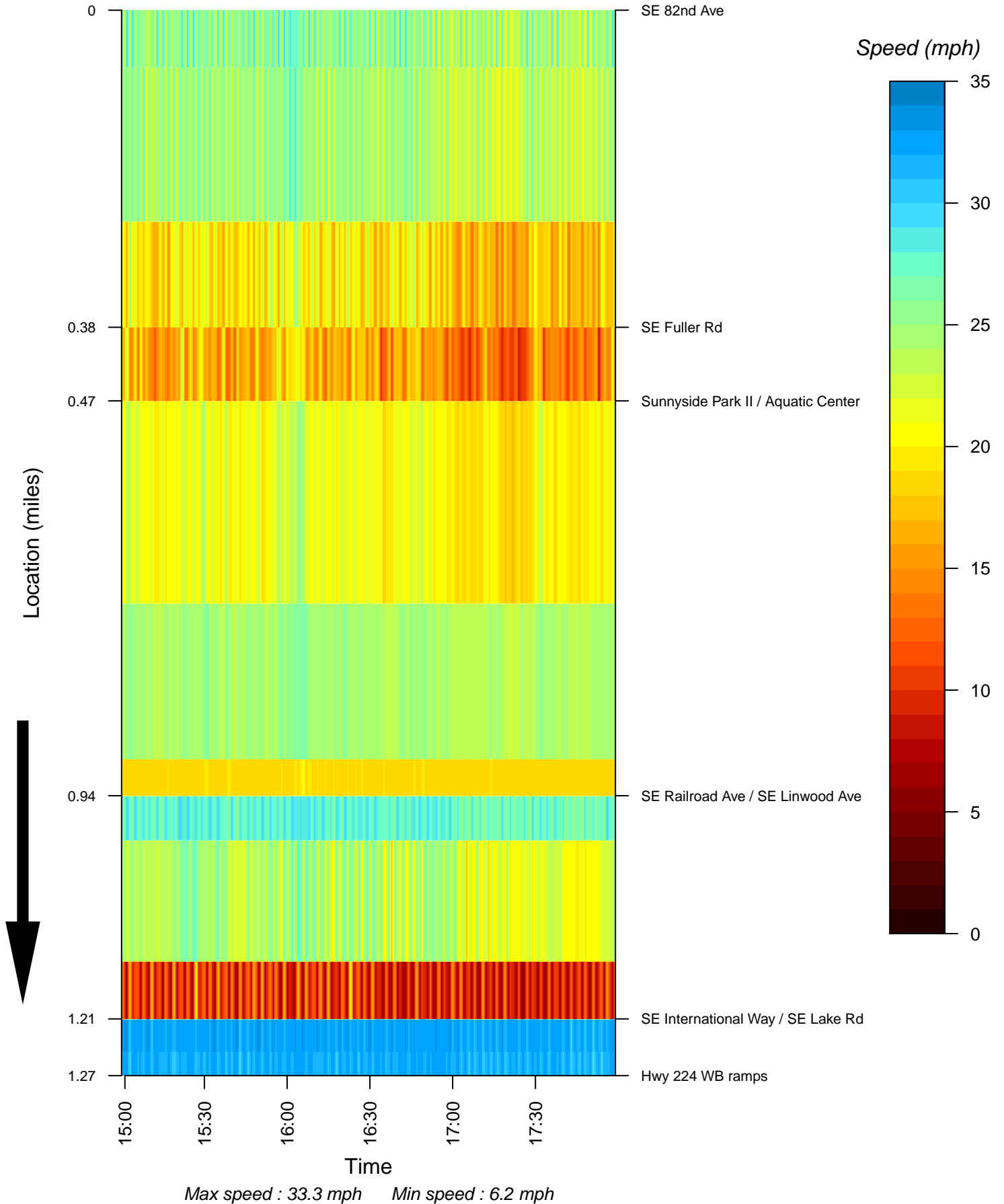
Space-time diagram of speed from 15:00 to 18:00



Alt 3 – Harmony (82nd–Fuller) and 82nd widen / RR improve

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

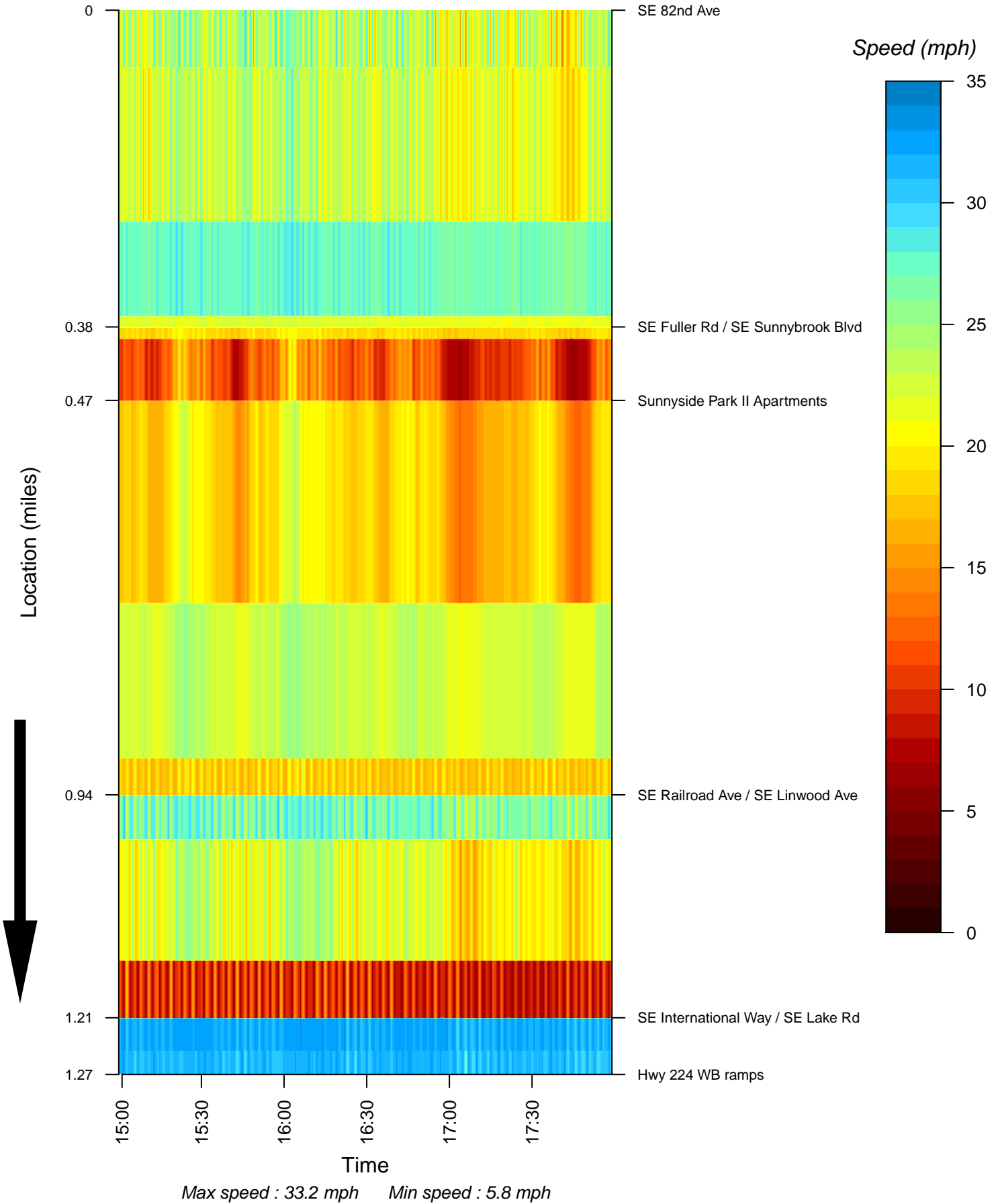
Space-time diagram of speed from 15:00 to 18:00



Alt 4 – Sunnybrook extend and no Harmony widen*

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

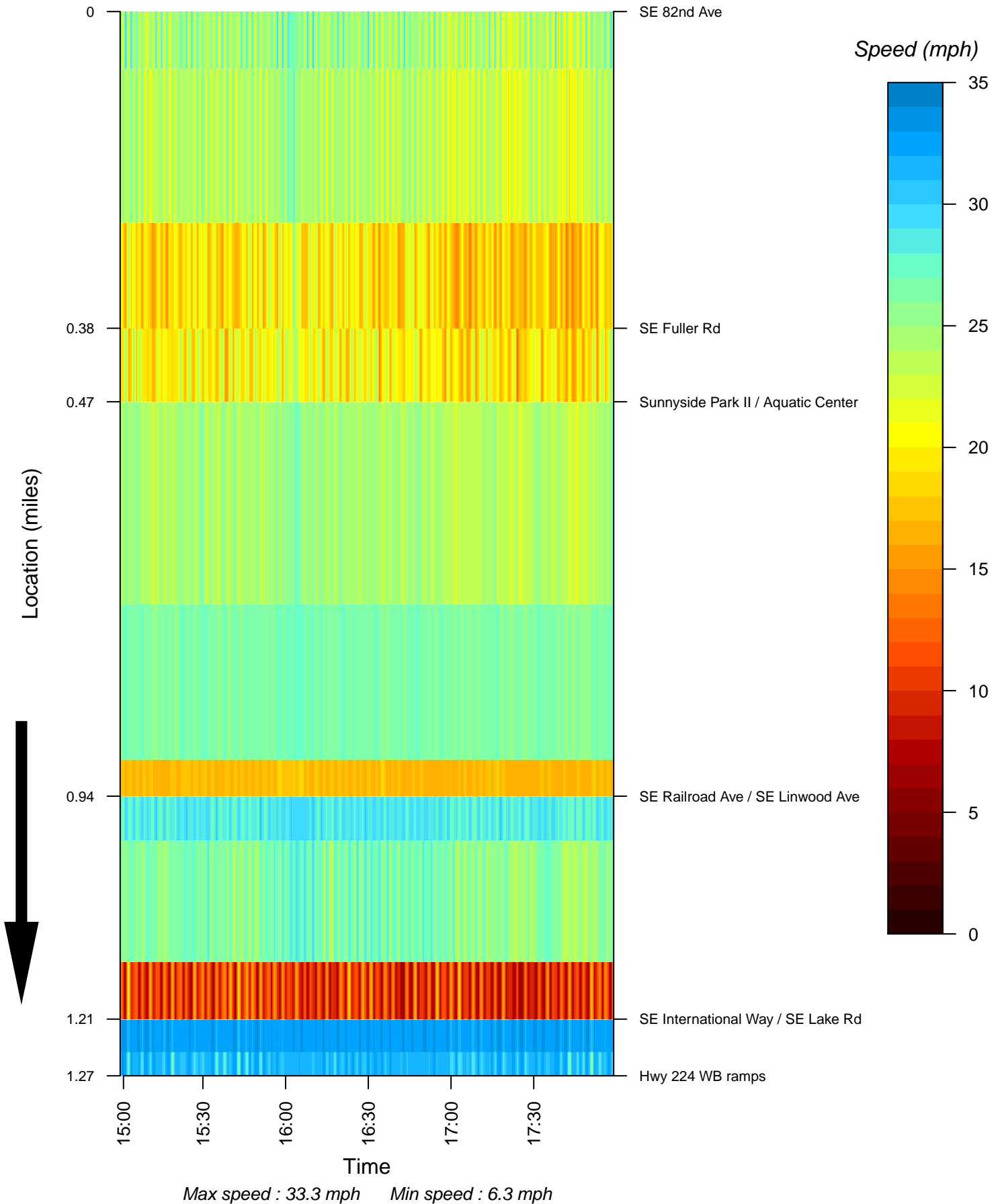
Space-time diagram of speed from 15:00 to 18:00



Alt 5 – Harmony widen (82nd–Hwy 224) / RR improve

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

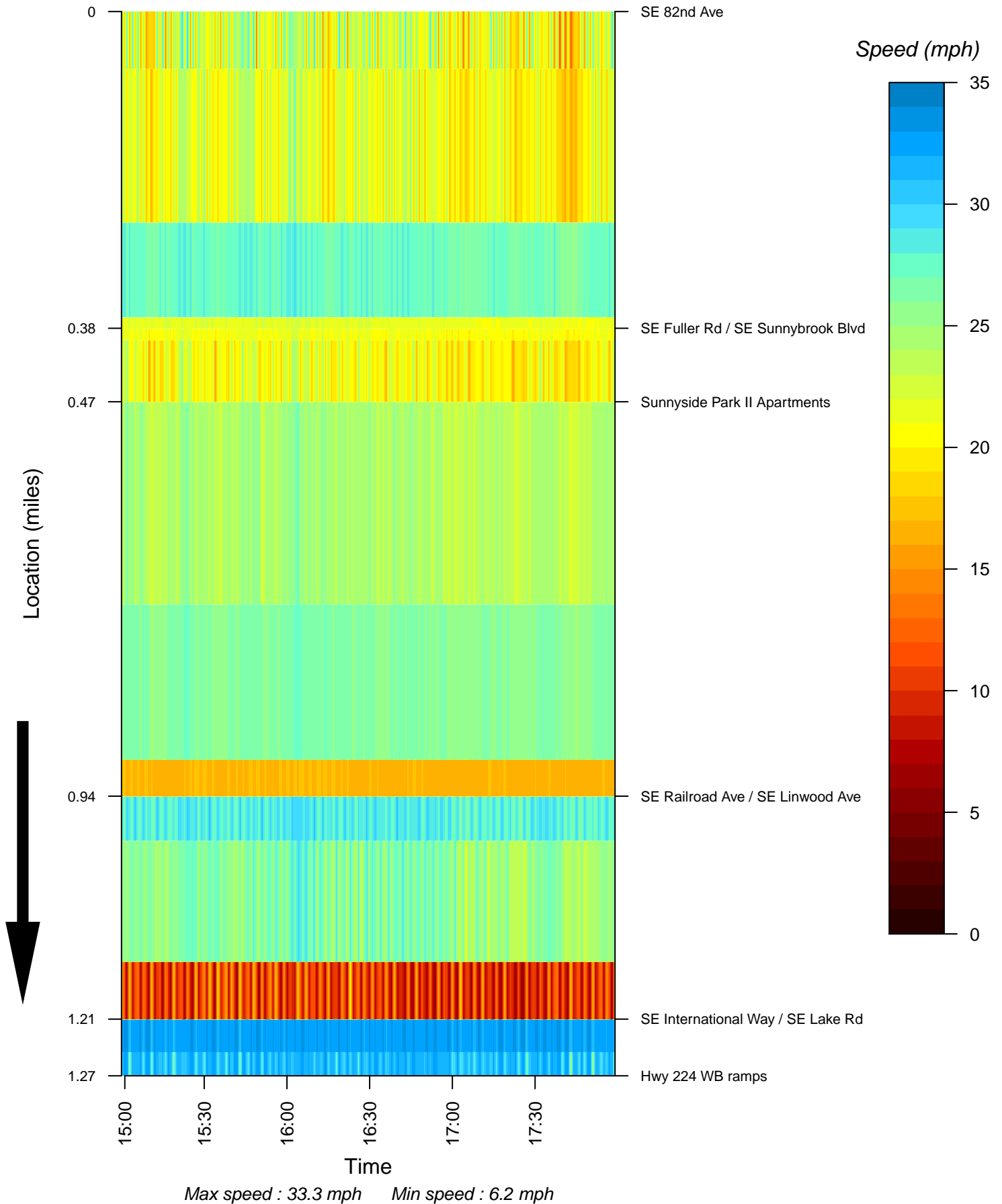
Space–time diagram of speed from 15:00 to 18:00



Alt 6 – Sunnybrook ext / Harmony widen (Fuller–224) / RR

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

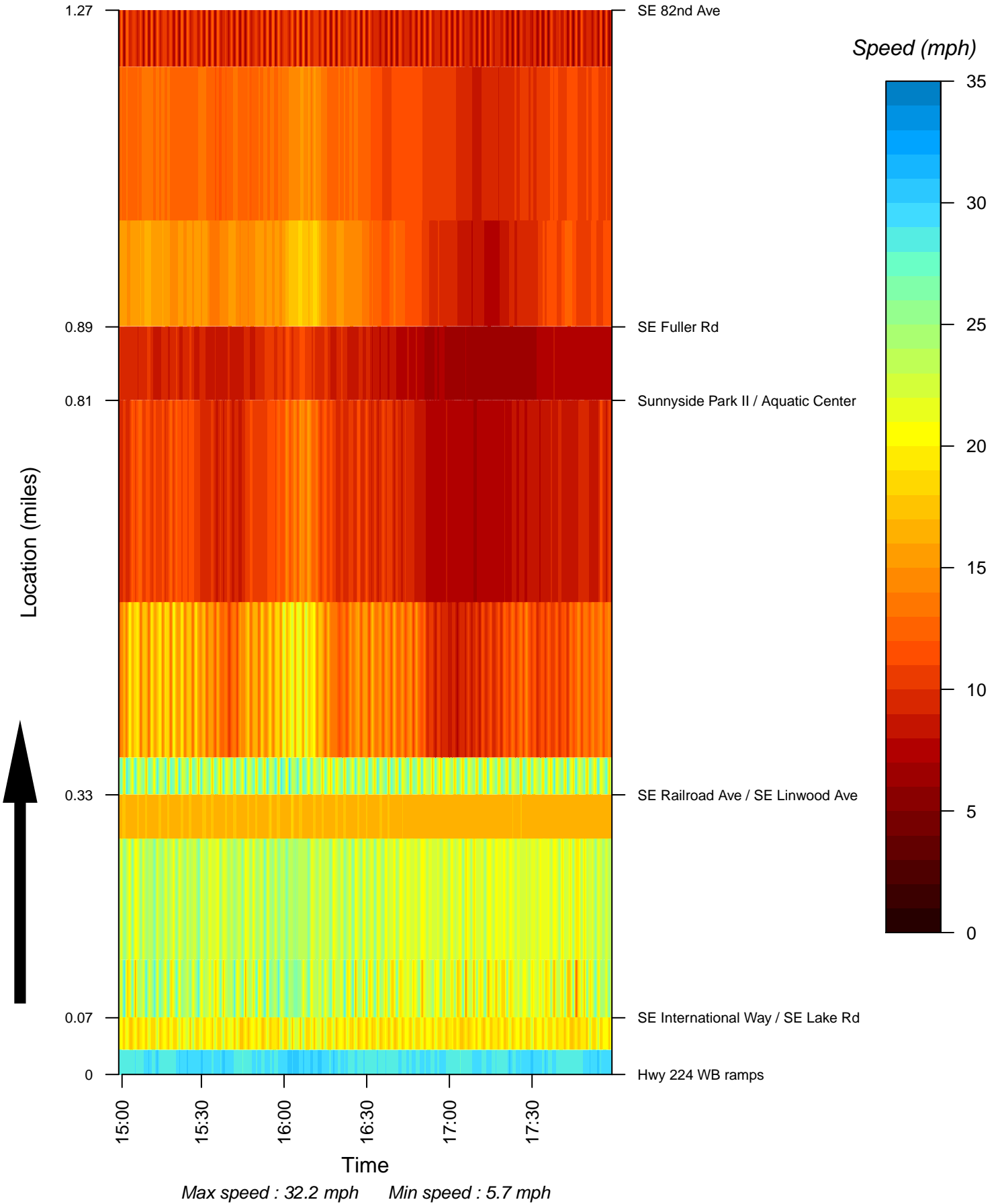
Space–time diagram of speed from 15:00 to 18:00



No Build*

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

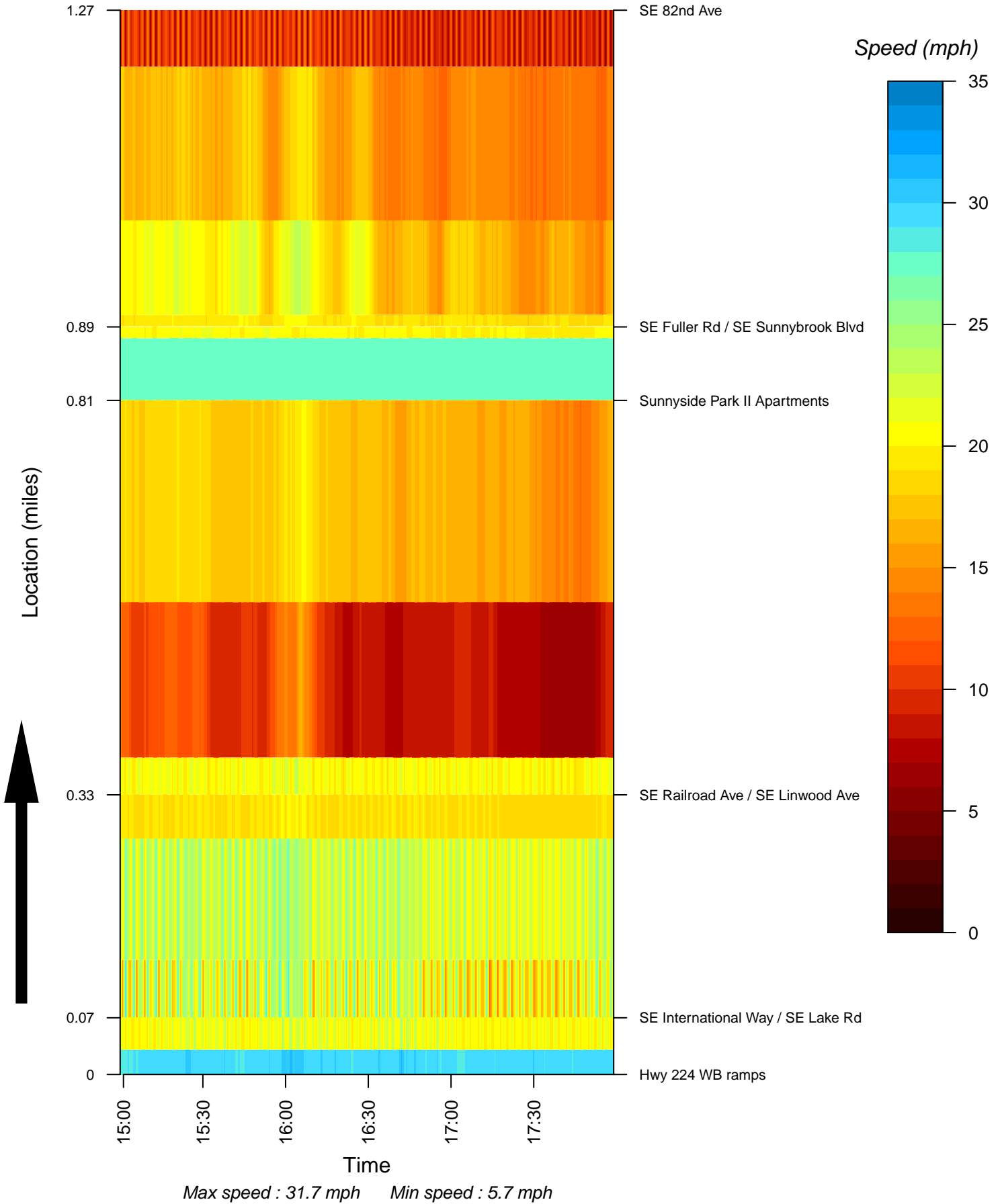
Space-time diagram of speed from 15:00 to 18:00



Alt 2 – Sunnybrook extend / RR improve

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

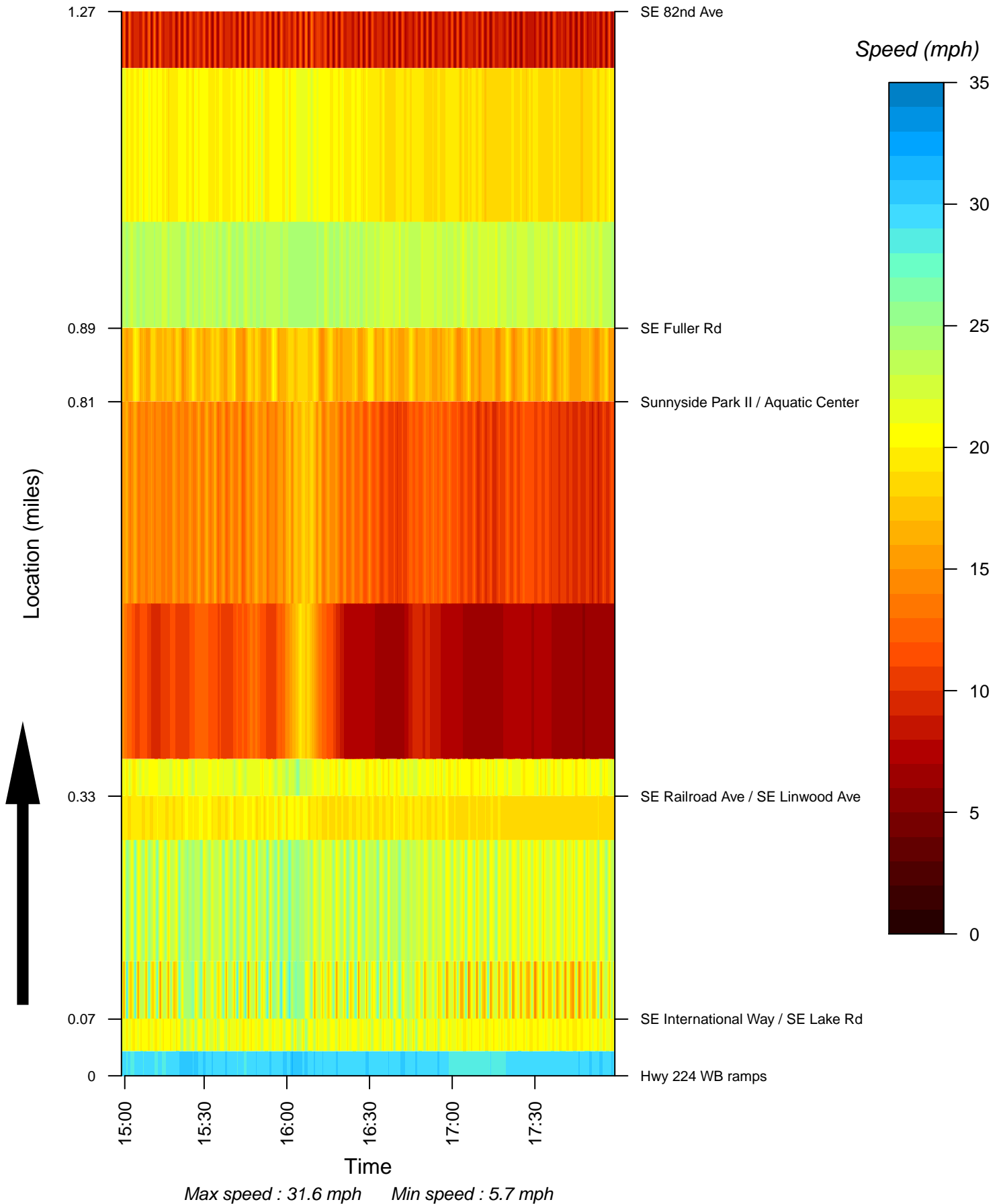
Space-time diagram of speed from 15:00 to 18:00



Alt 3 – Harmony (82nd–Fuller) and 82nd widen / RR improve

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

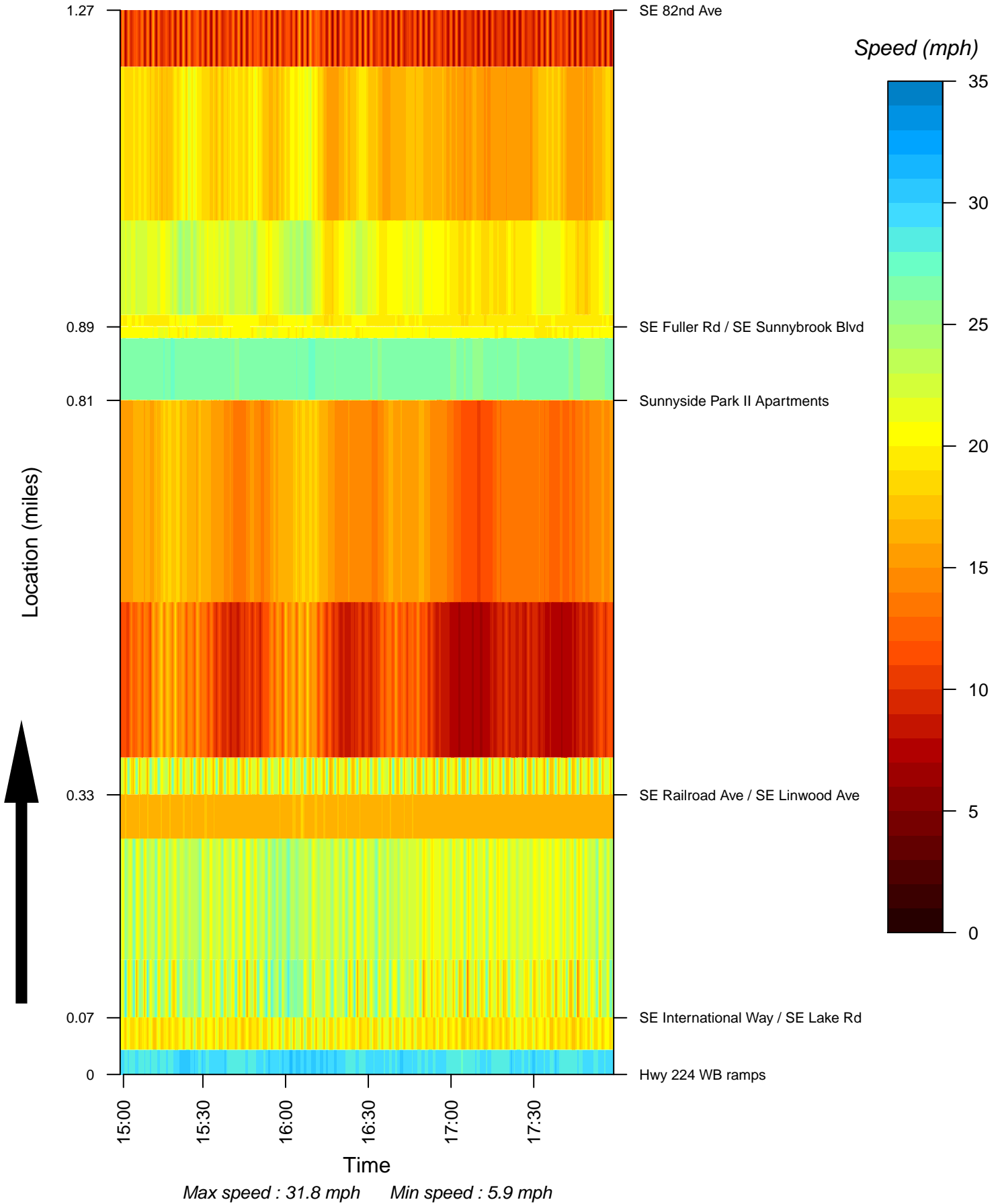
Space-time diagram of speed from 15:00 to 18:00



Alt 4 – Sunnybrook extend and no Harmony widen*

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

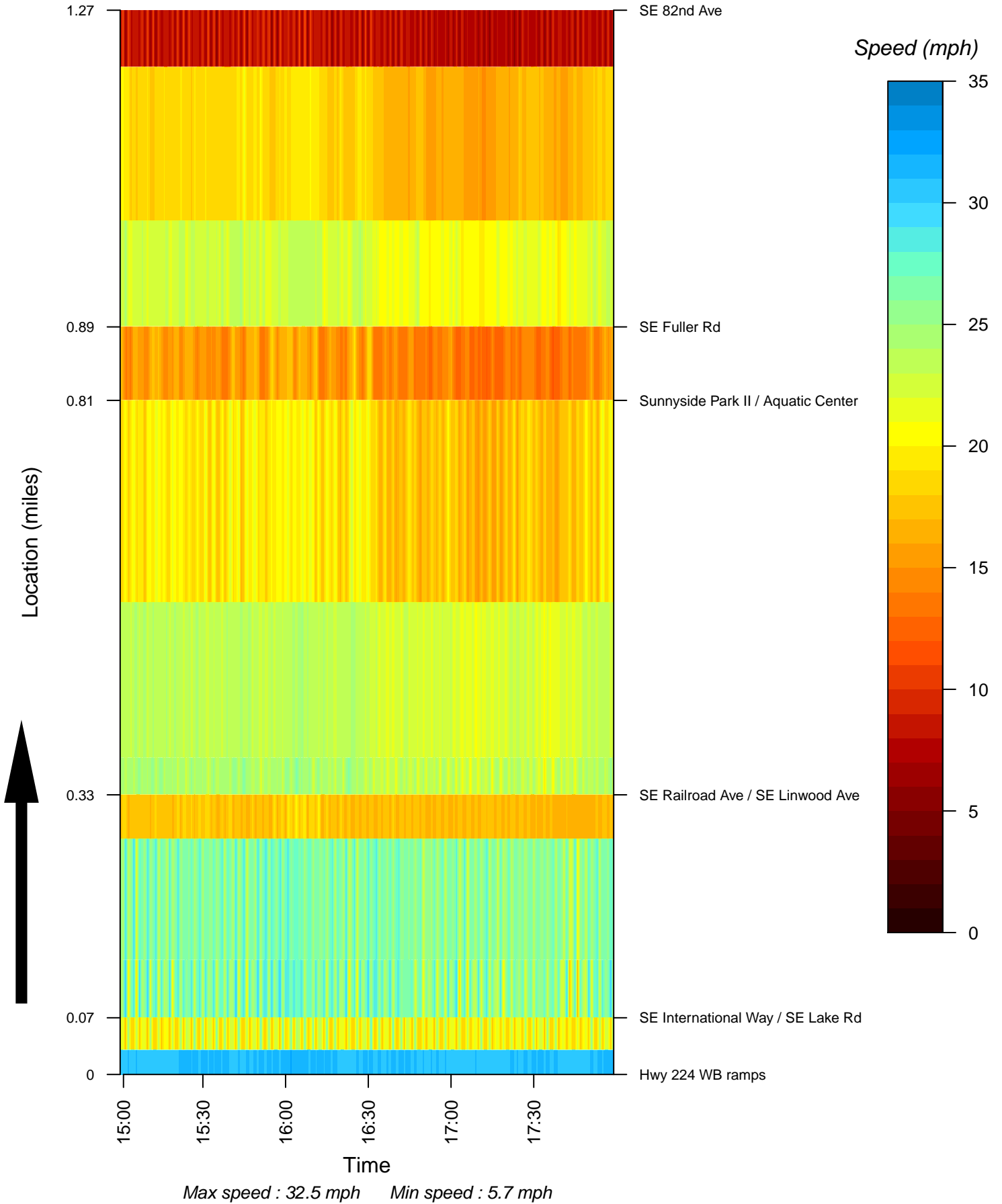
Space-time diagram of speed from 15:00 to 18:00



Alt 5 – Harmony widen (82nd–Hwy 224) / RR improve

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

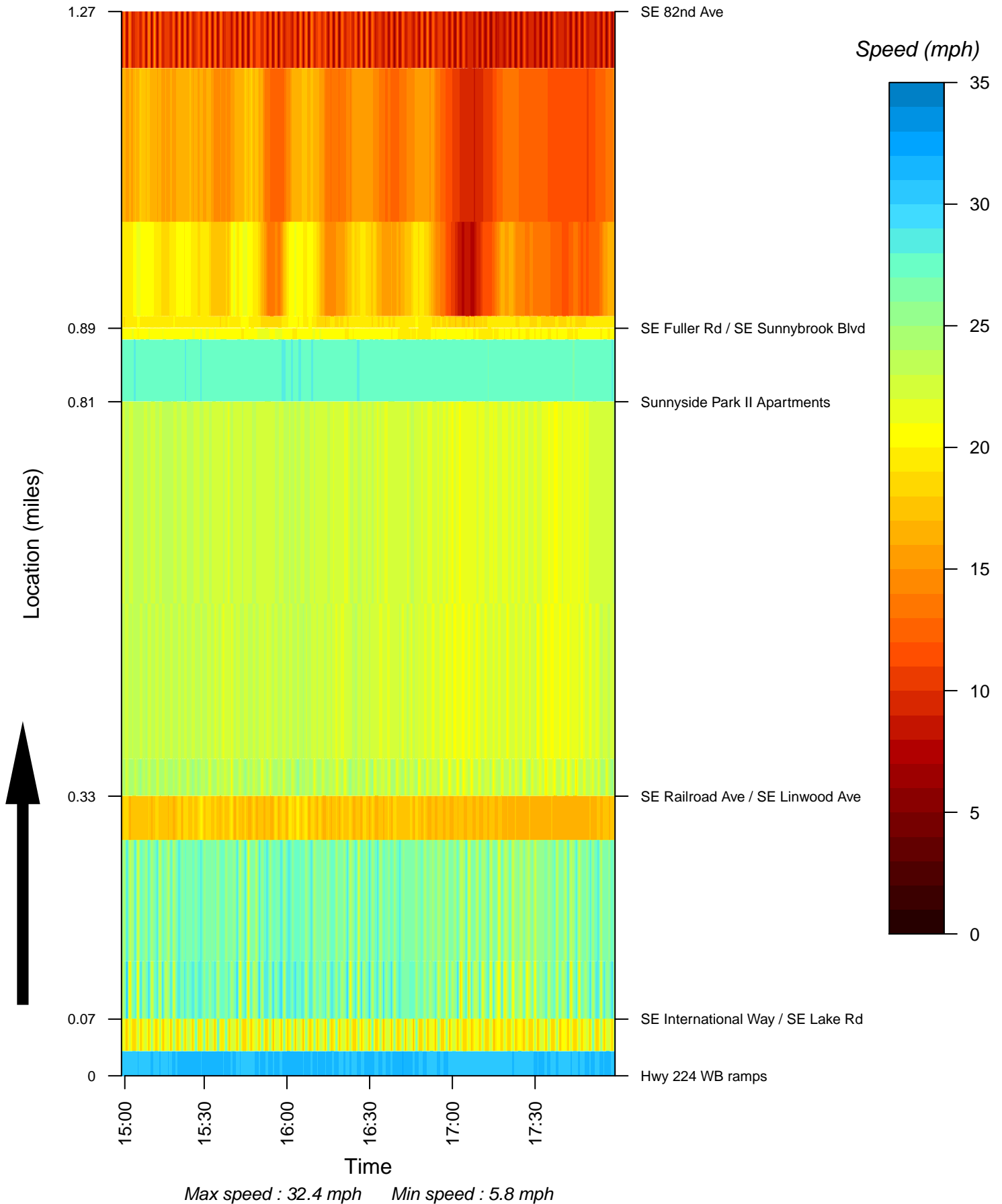
Space–time diagram of speed from 15:00 to 18:00



Alt 6 – Sunnybrook ext / Harmony widen (Fuller–224) / RR

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space–time diagram of speed from 15:00 to 18:00

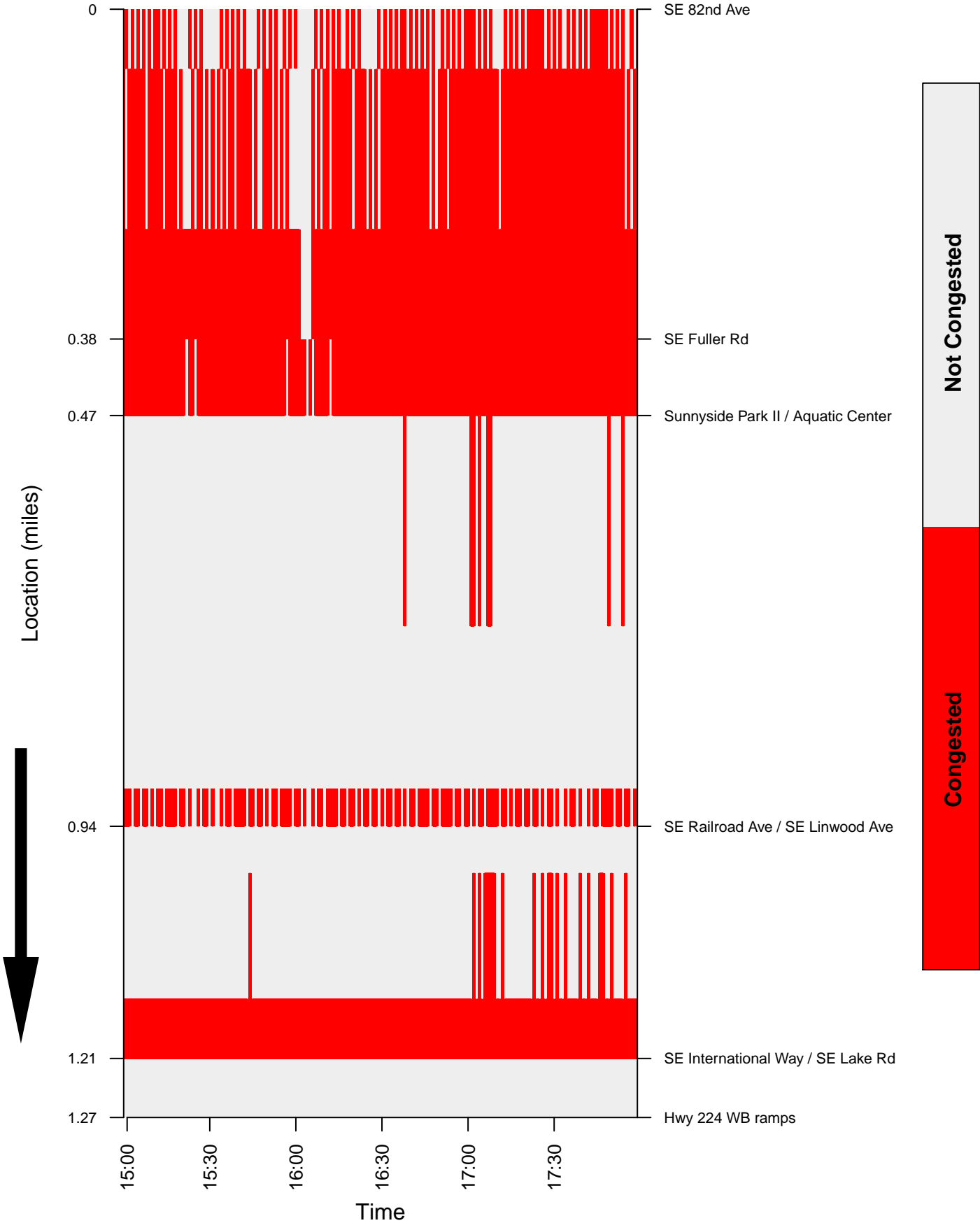


Appendix E Congestion Plots for All
Alternatives

No Build*

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 47.4

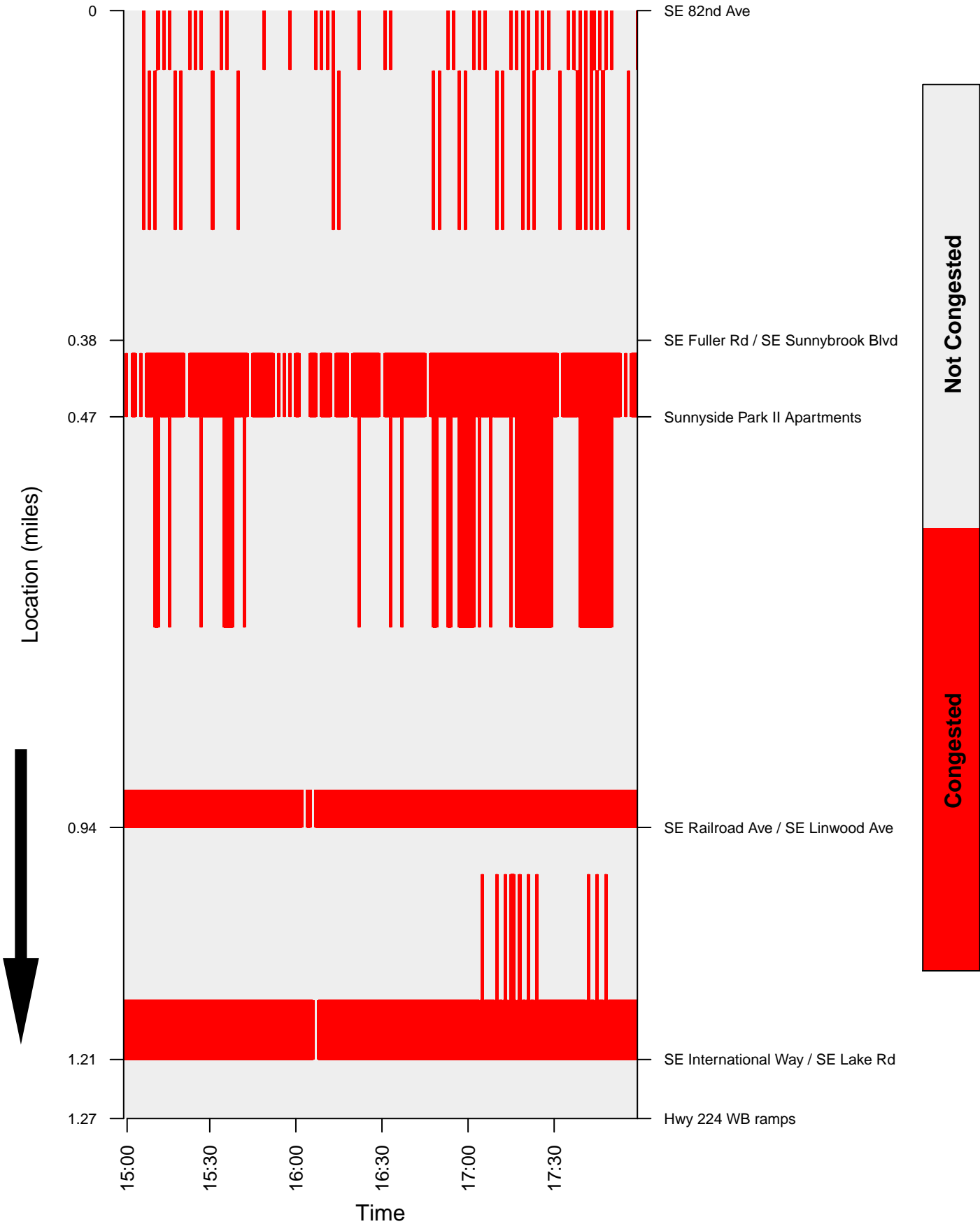
Total corridor congested lane mile hours: 1.6, representing 34.2% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 2 – Sunnybrook extend / RR improve

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 25.7

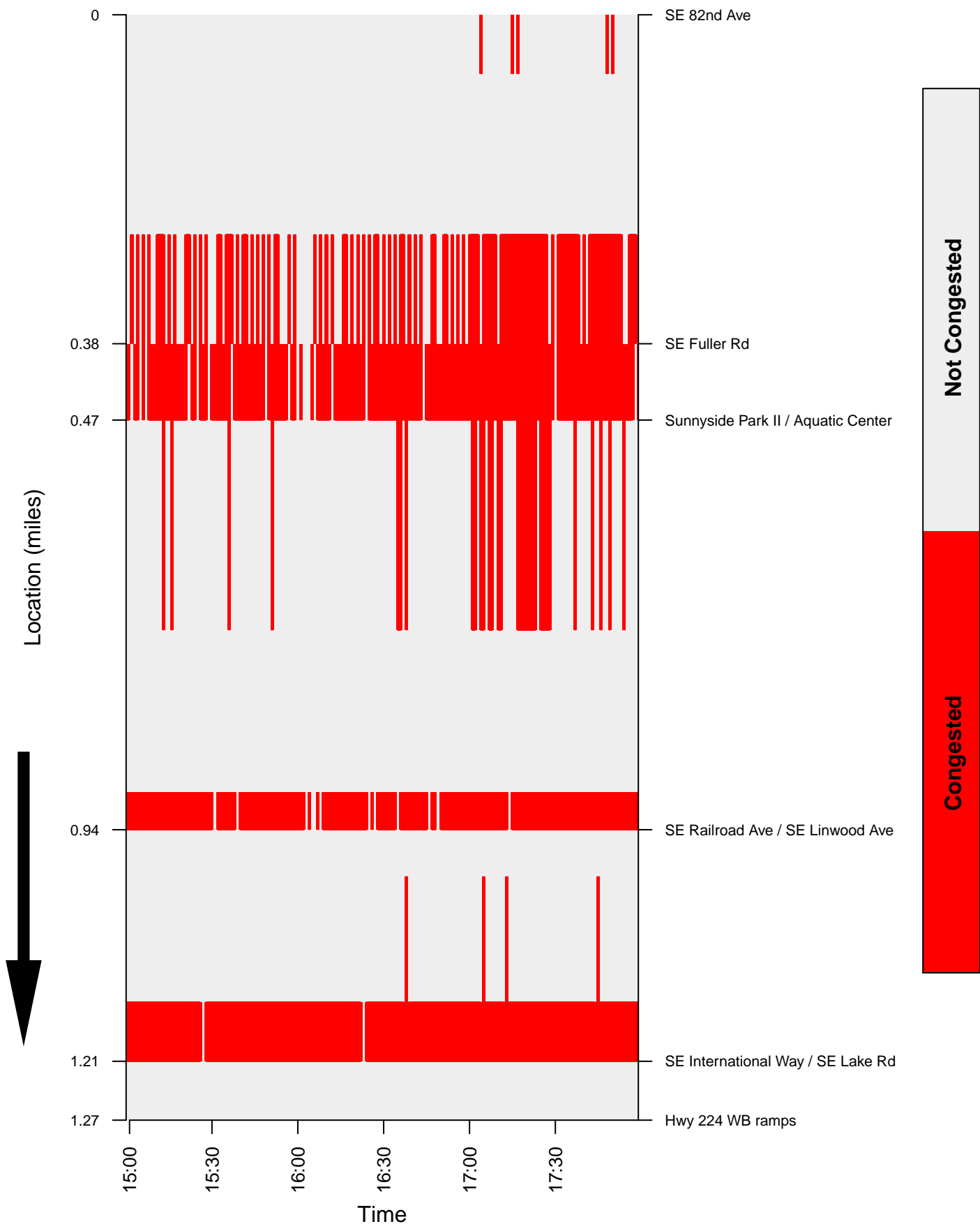
Total corridor congested lane mile hours: 1.1, representing 22.5% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 3 – Harmony (82nd–Fuller) and 82nd widen / RR improve

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 27.9

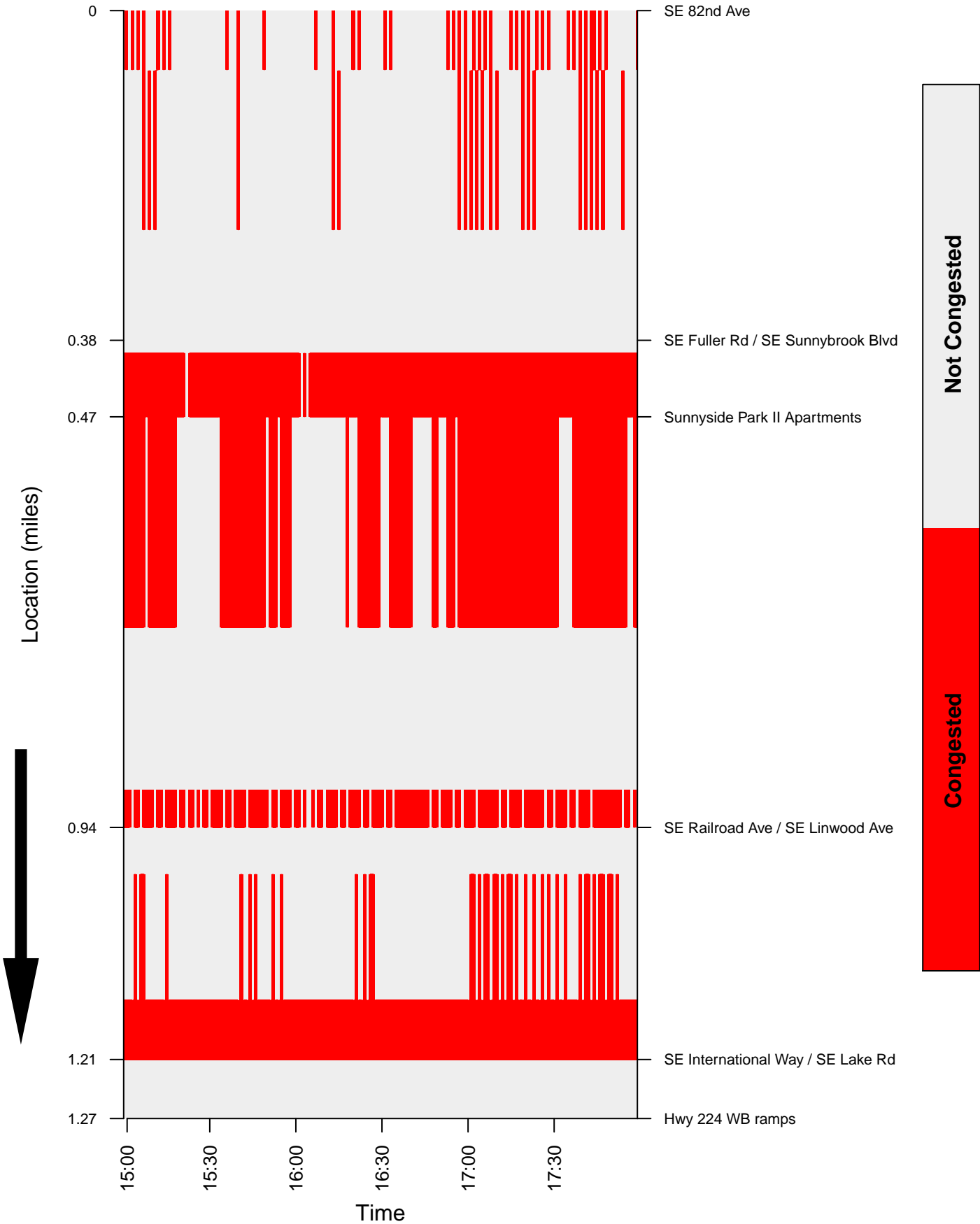
Total corridor congested lane mile hours: 1.4, representing 23.8% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 4 – Sunnybrook extend and no Harmony widen*

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 39

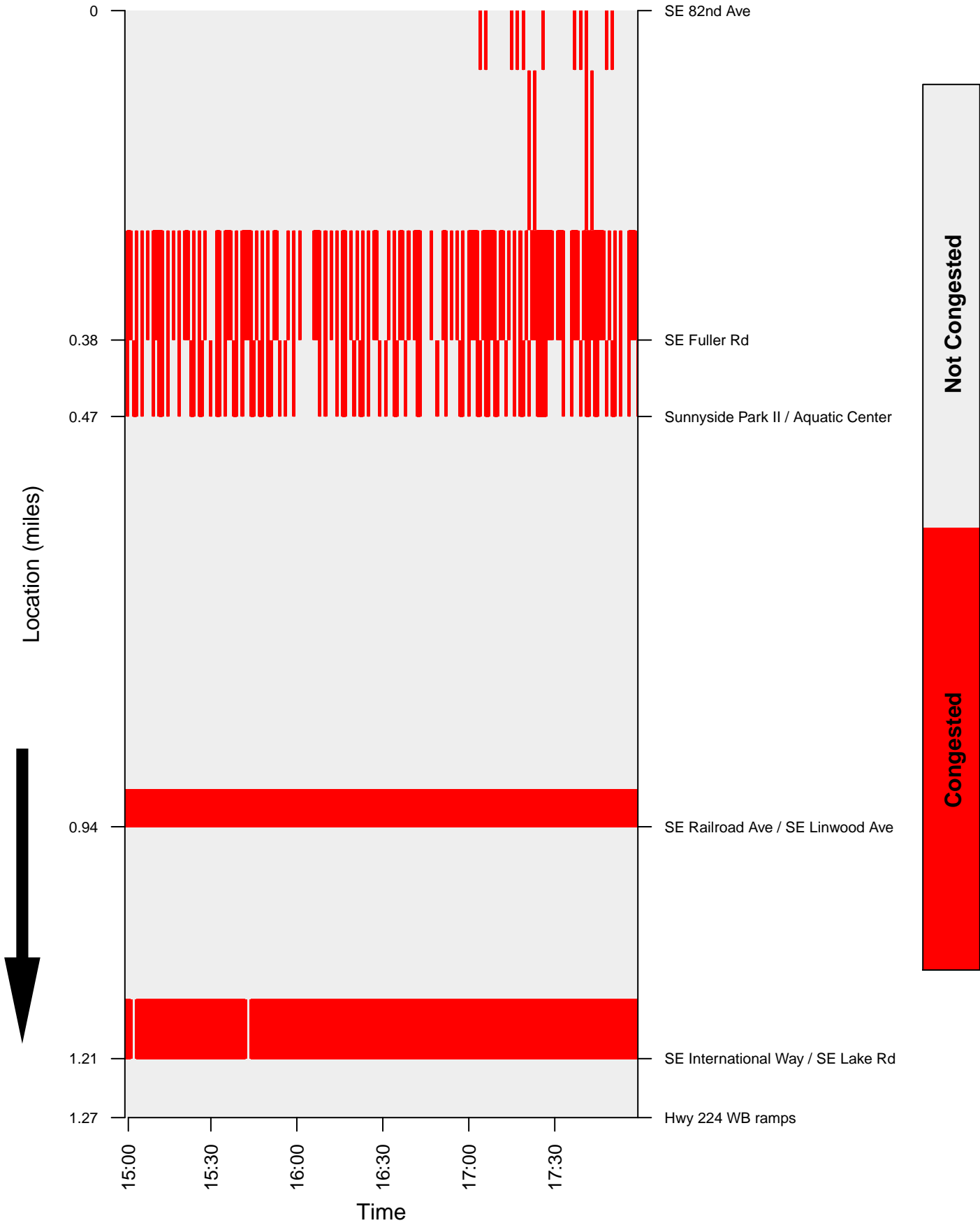
Total corridor congested lane mile hours: 1.3, representing 26.1% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 5 – Harmony widen (82nd–Hwy 224) / RR improve

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 22.2

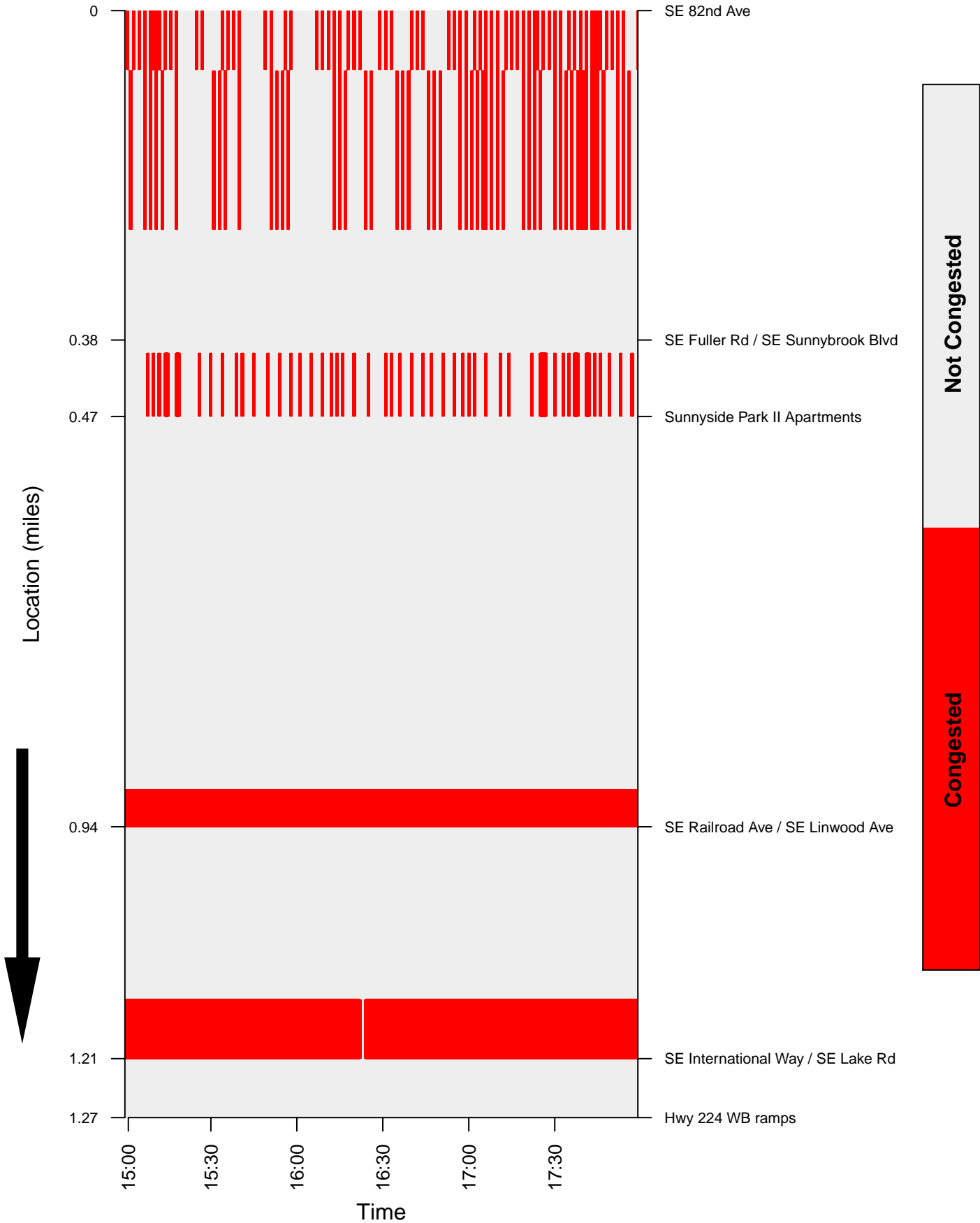
Total corridor congested lane mile hours: 1.4, representing 16.9% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 6 – Sunnybrook ext / Harmony widen (Fuller–224) / RR

SE Harmony Rd WB between SE 82nd Ave and Hwy 224

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 19.4

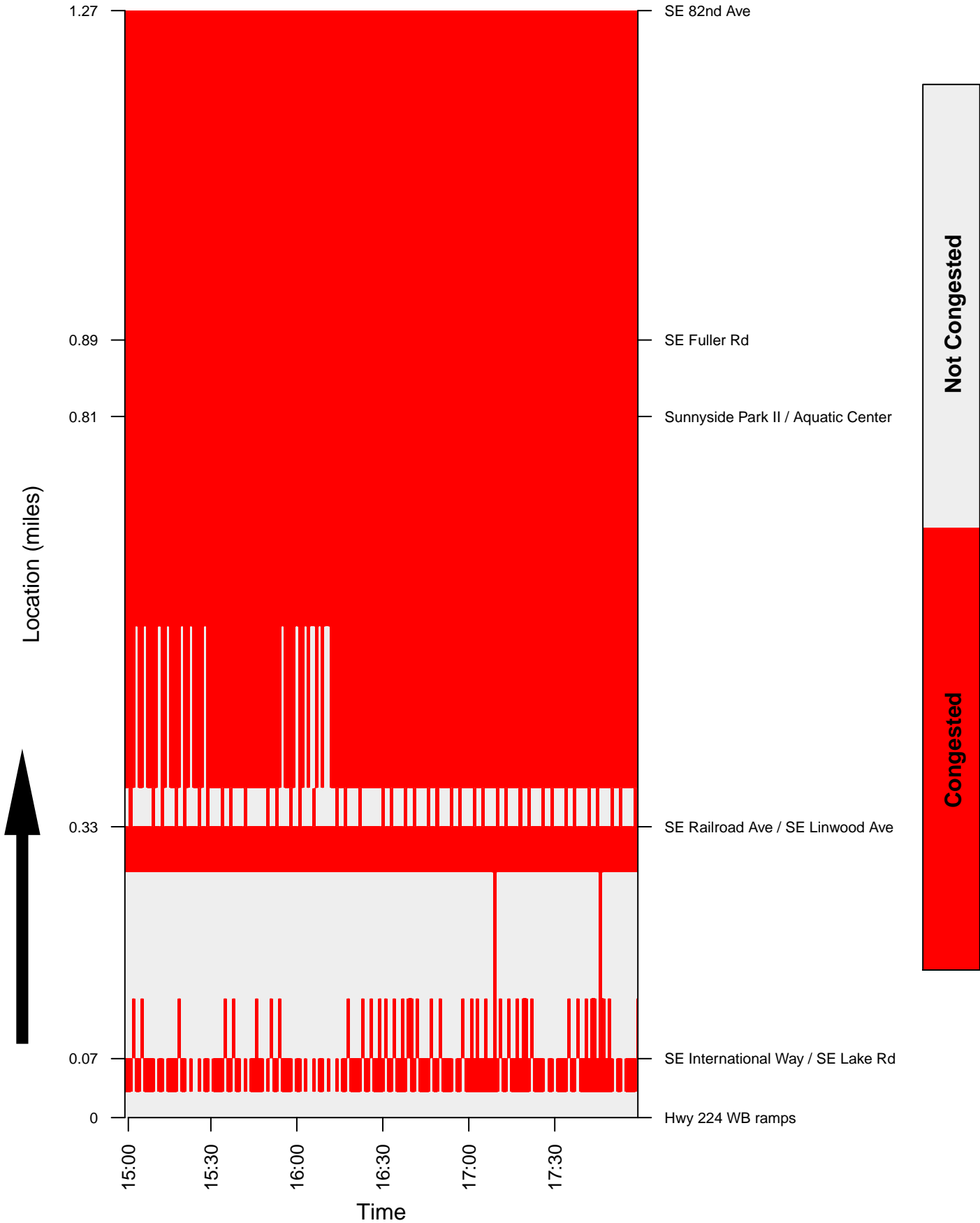
Total corridor congested lane mile hours: 1.1, representing 15% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

No Build*

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 148.6

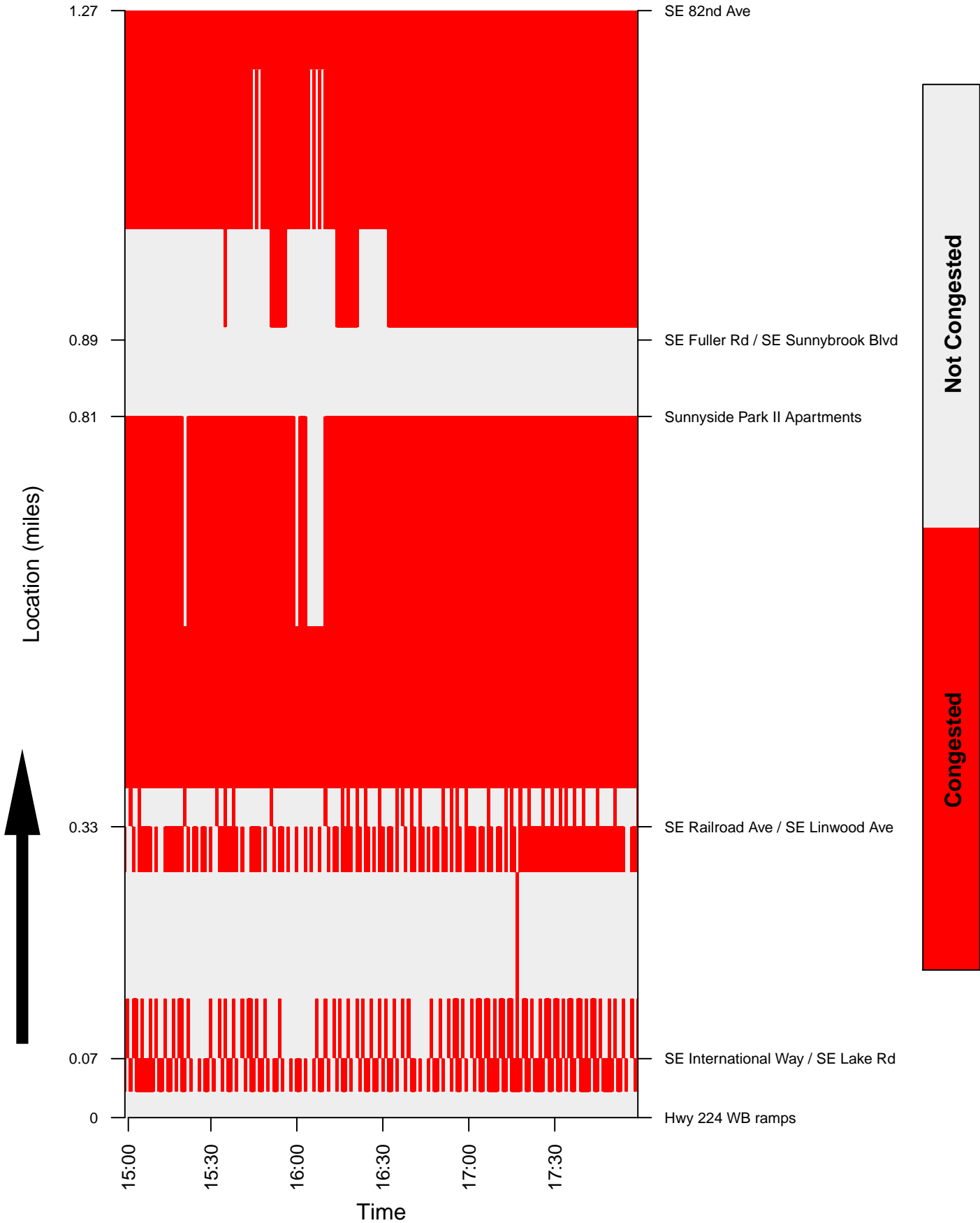
Total corridor congested lane mile hours: 3, representing 59.5% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 2 – Sunnybrook extend / RR improve

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 113.1

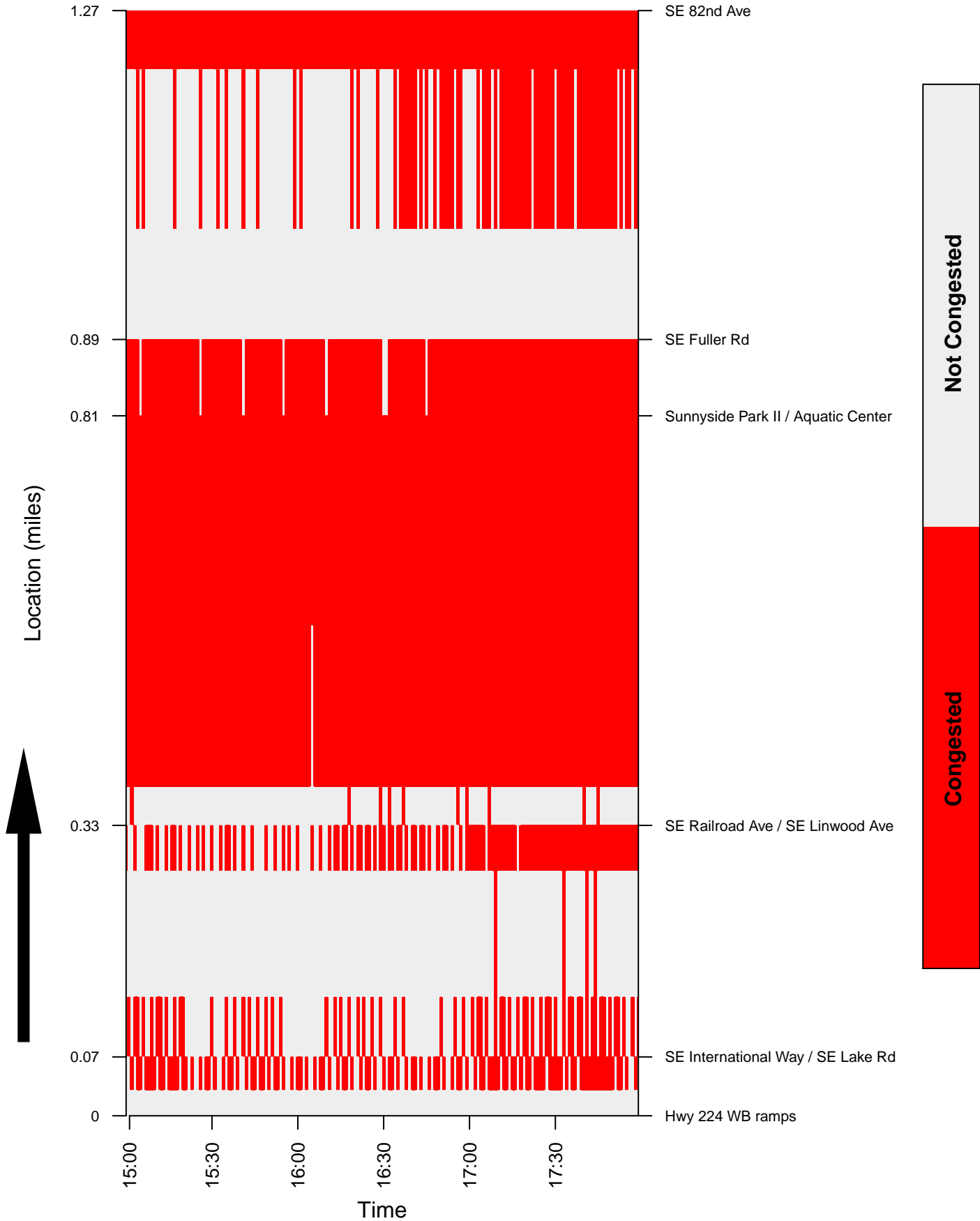
Total corridor congested lane mile hours: 2.5, representing 46.9% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 3 – Harmony (82nd–Fuller) and 82nd widen / RR improve

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 133.3

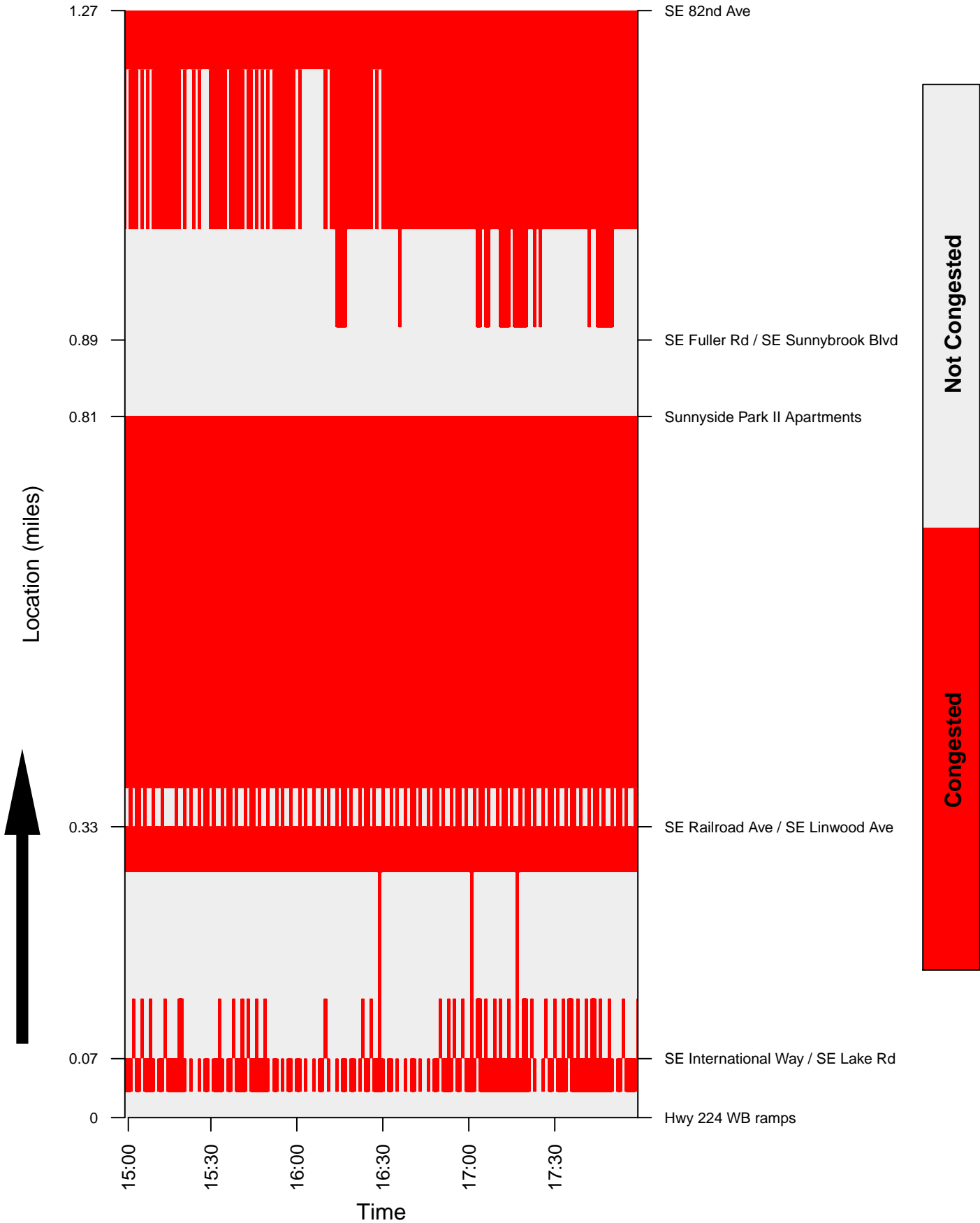
Total corridor congested lane mile hours: 3, representing 46.7% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 4 – Sunnybrook extend and no Harmony widen*

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 91.9

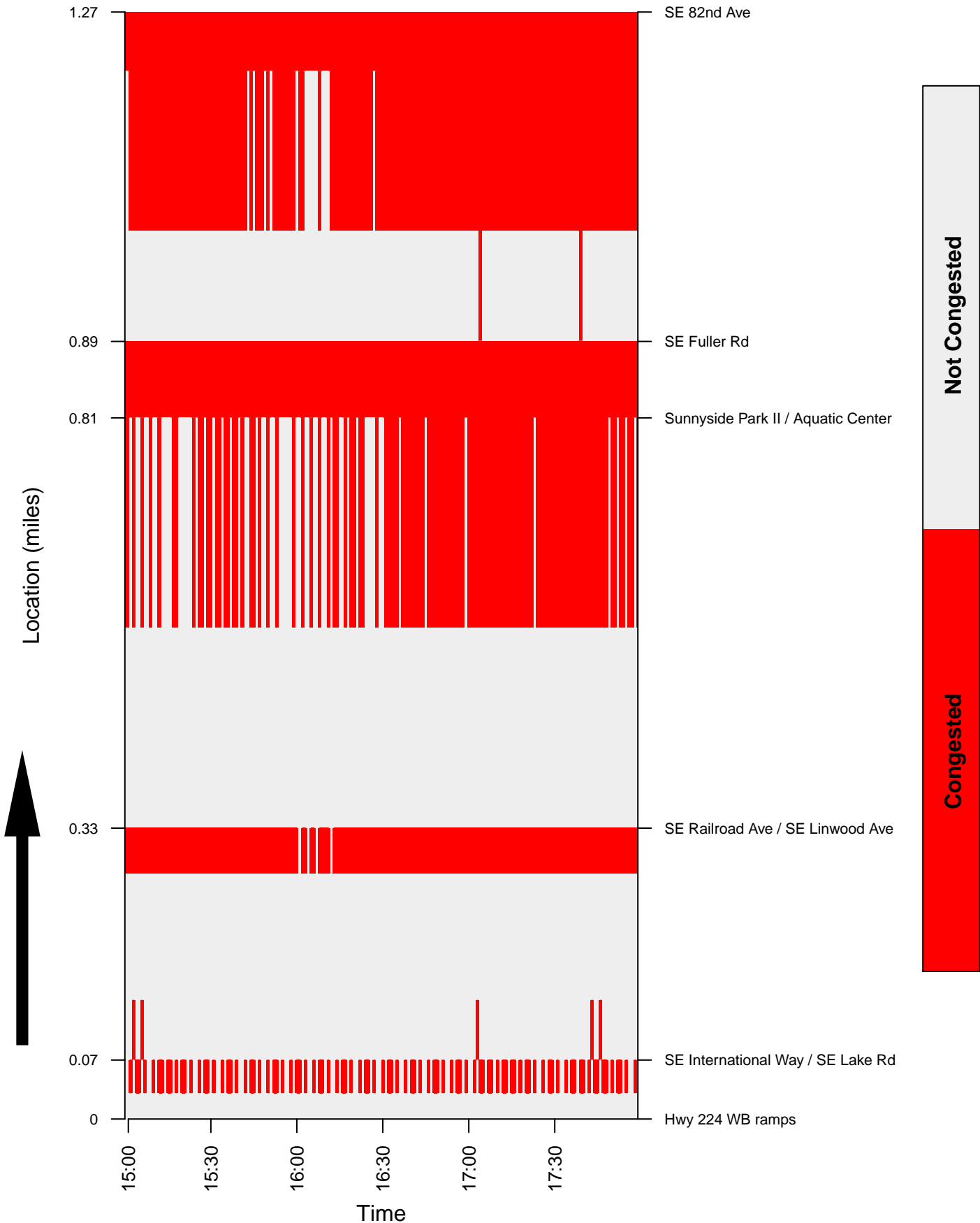
Total corridor congested lane mile hours: 2.4, representing 46.7% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 5 – Harmony widen (82nd–Hwy 224) / RR improve

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 84.5

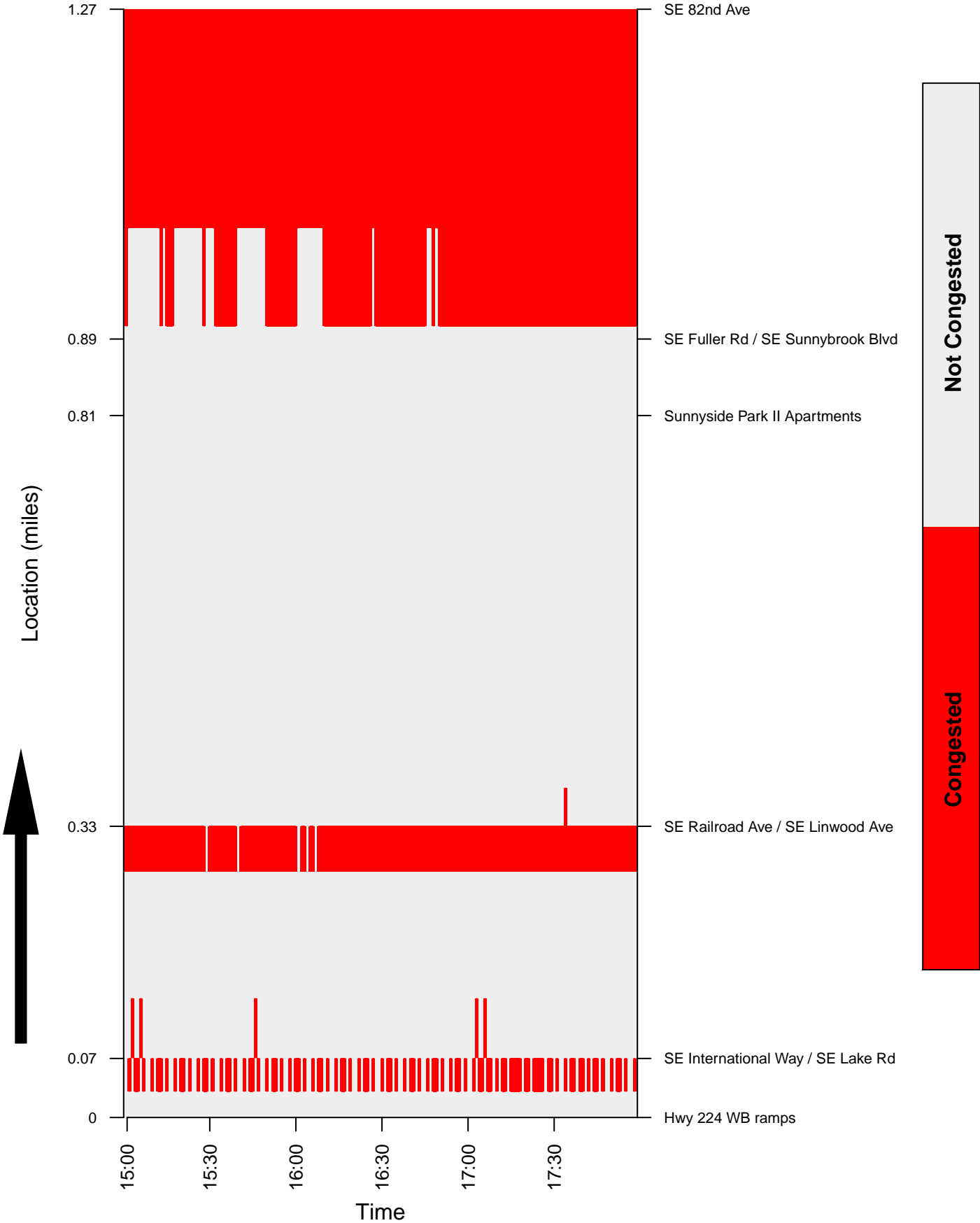
Total corridor congested lane mile hours: 3.5, representing 39.9% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 6 – Sunnybrook ext / Harmony widen (Fuller–224) / RR

SE Harmony Rd EB between Hwy 224 and SE 82nd Ave

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 44.6

Total corridor congested lane mile hours: 1.5, representing 18.7% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Appendix F Fuller Road Findings

Average 5pm-6pm Travel Times (minutes) along Fuller (King to Harmony)

Alternative	Northbound			Southbound		
	5 th Percentile	Average	95 th Percentile	5 th Percentile	Average	95 th Percentile
Existing*	3.5	3.2	2.8	6.6	4.4	3.5
NoBuild*	4.1	3.4	2.9	8.9	5.6	3.8
2	3.7	3.3	2.9	5.5	3.7	2.9
3	3.7	3.3	2.8	6.3	4.5	3.5
4*	3.7	3.3	2.8	5.8	4.1	3.2
5	3.7	3.3	2.8	5.9	4.4	3.5
6	3.8	3.3	2.9	4.3	3.5	2.9

* indicates at-grade railroad crossing (not modeled)

Average 5pm-6pm Speed (mph) along Fuller (King to Harmony)

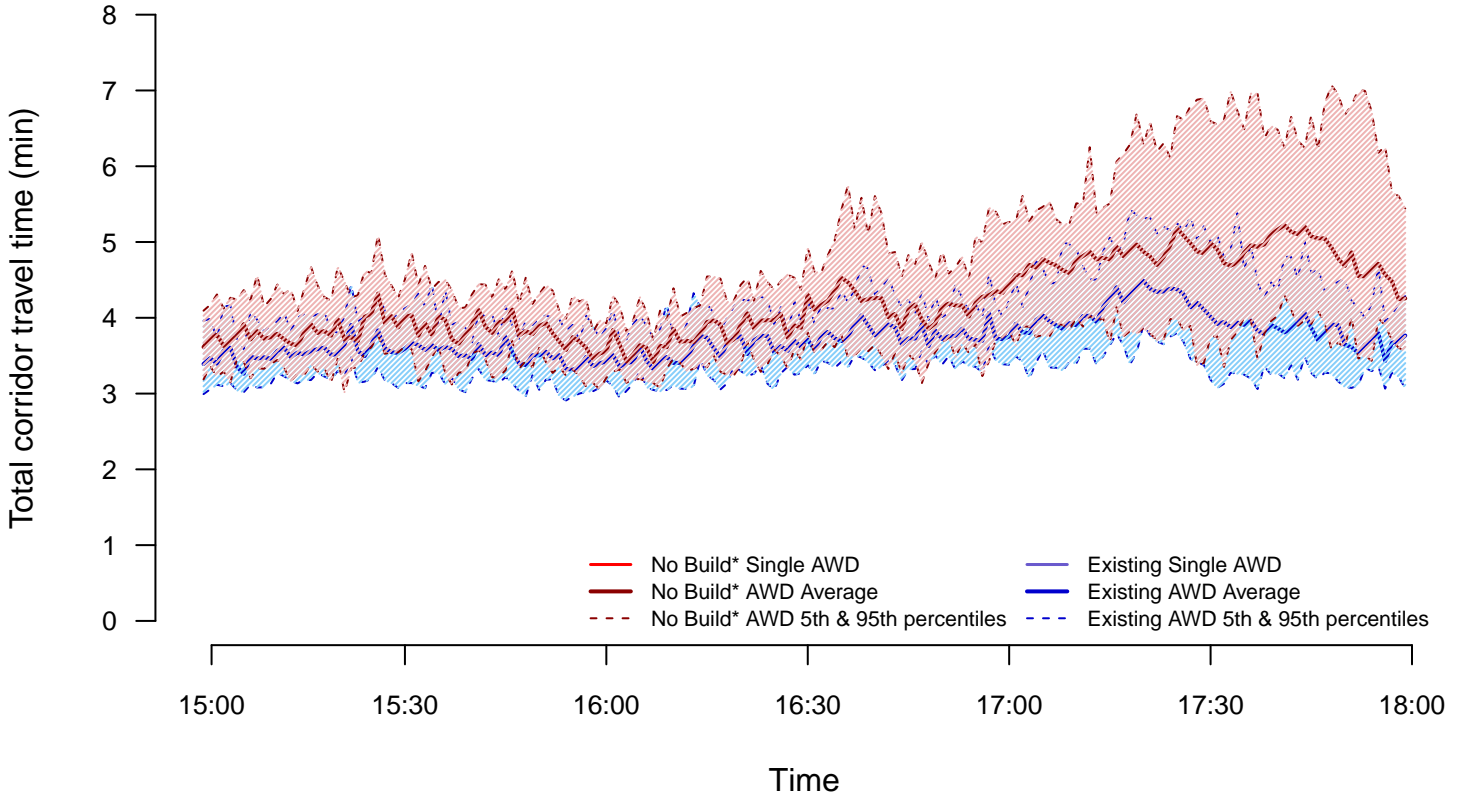
Alternative	Northbound			Southbound		
	5 th Percentile	Average	95 th Percentile	5 th Percentile	Average	95 th Percentile
Existing*	21.7	24.0	27.4	11.6	17.3	22.0
NoBuild*	18.8	22.7	26.6	8.5	13.7	19.9
2	20.8	23.1	26.6	14.0	20.6	26.0
3	20.8	23.3	26.8	12.1	16.9	21.6
4*	20.5	23.0	26.8	13.2	18.7	24.0
5	20.8	23.3	26.8	12.9	17.3	22.0
6	19.9	23.0	26.6	17.5	21.5	26.1

* indicates at-grade railroad crossing (not modeled)

SE Fuller Rd SB : SE King Rd and SE Harmony Rd

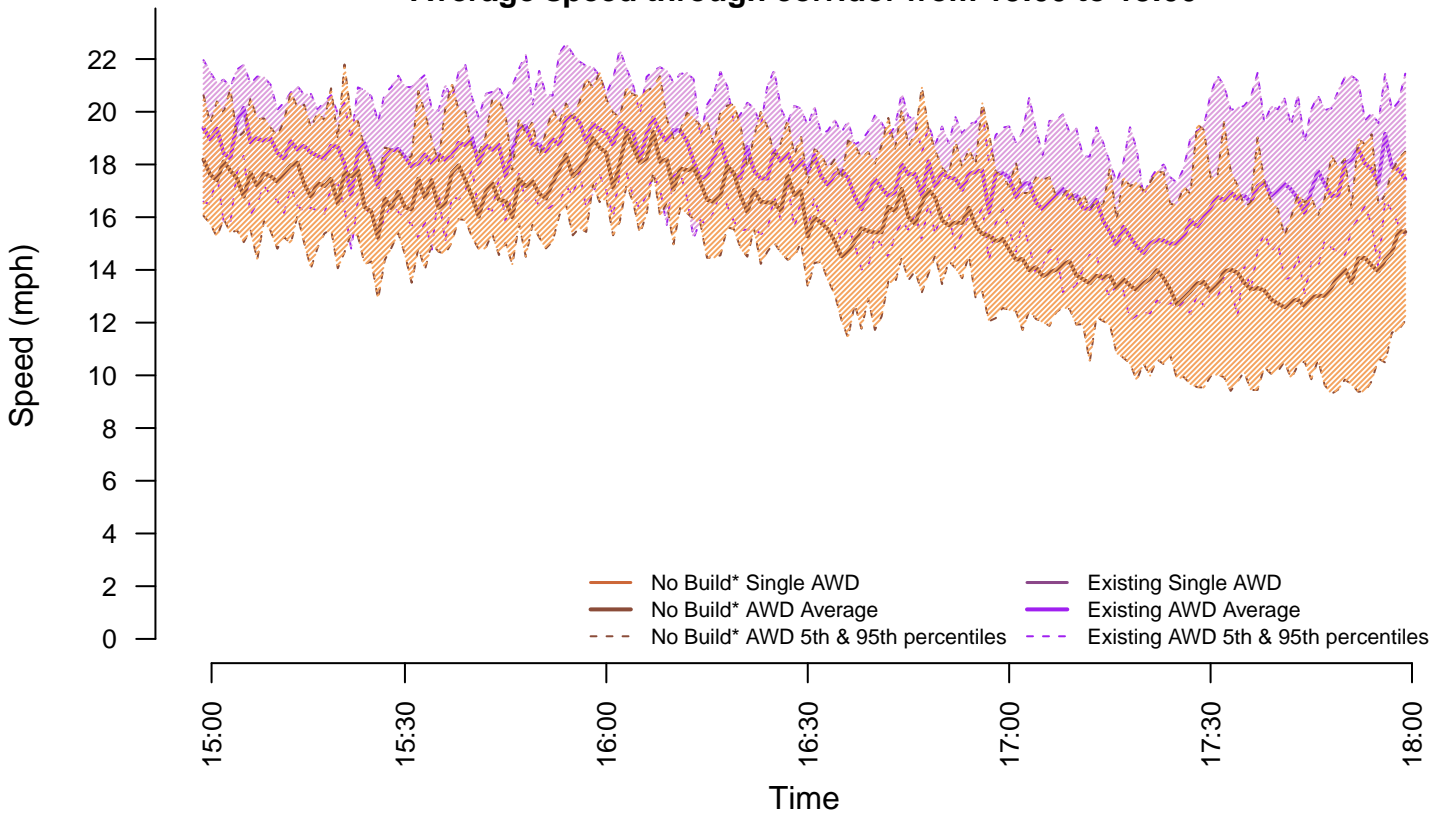
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



Dynust corridor length: 1.1 mi

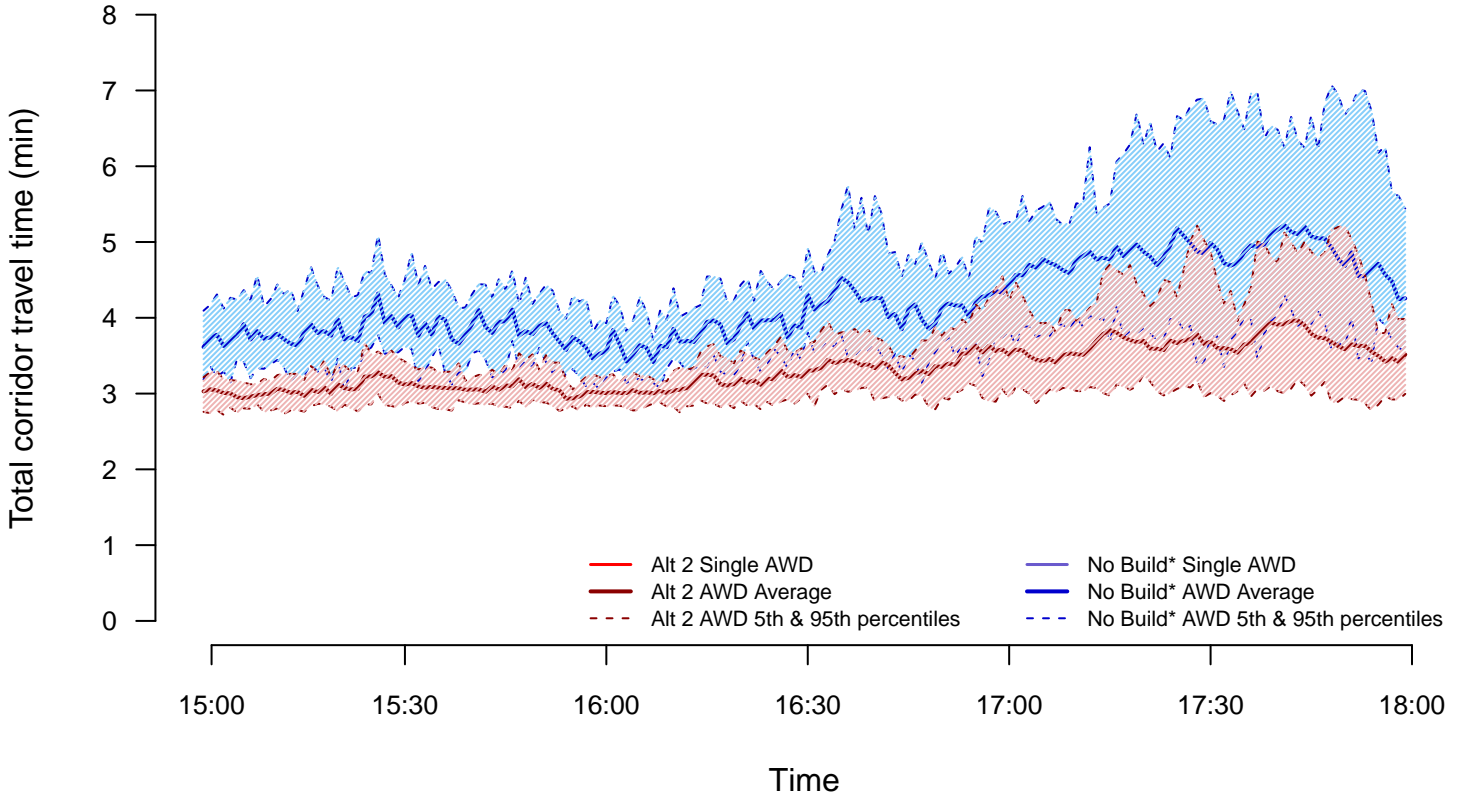
Average speed through corridor from 15:00 to 18:00



SE Fuller Rd SB : SE King Rd and SE Harmony Rd

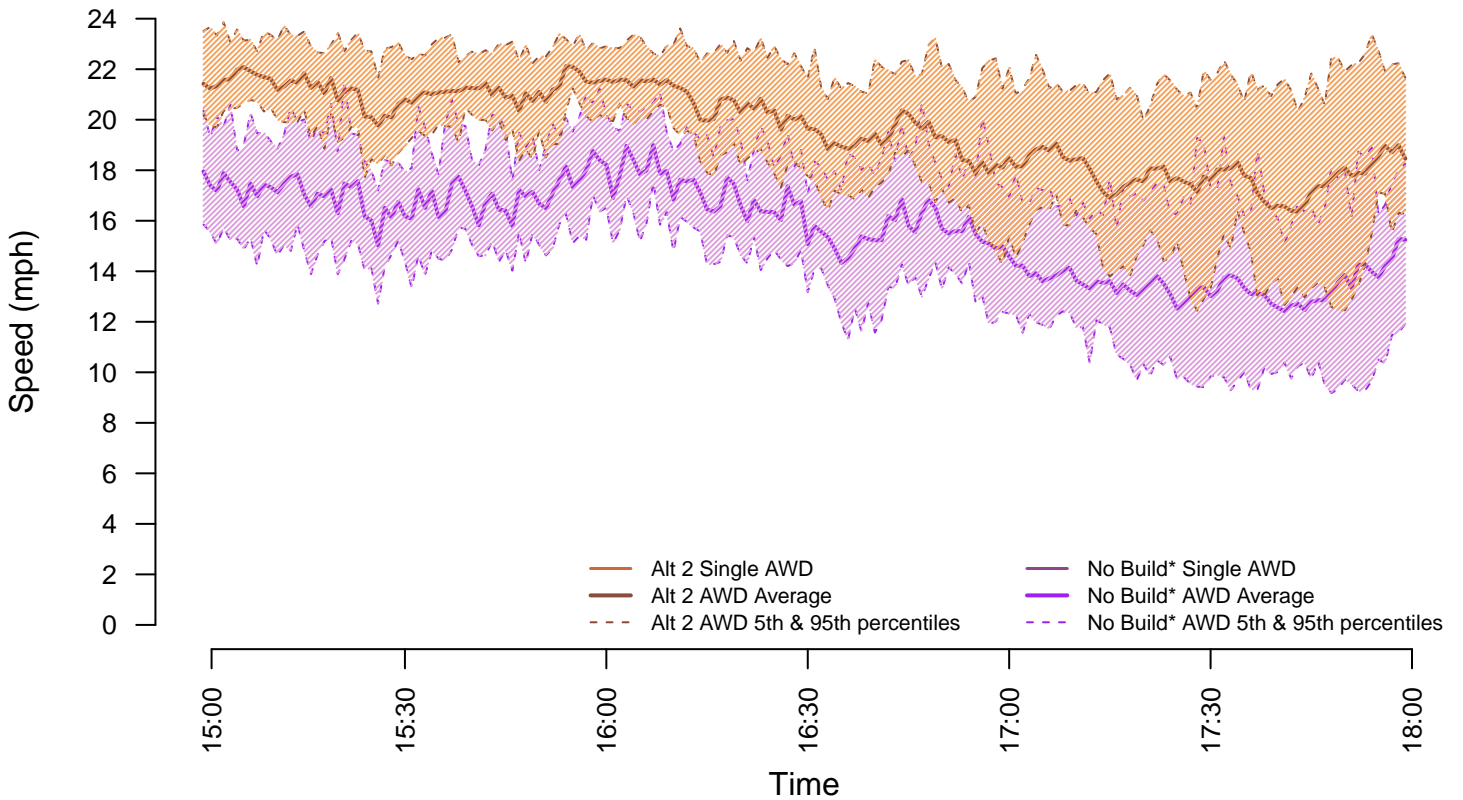
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.08 mi

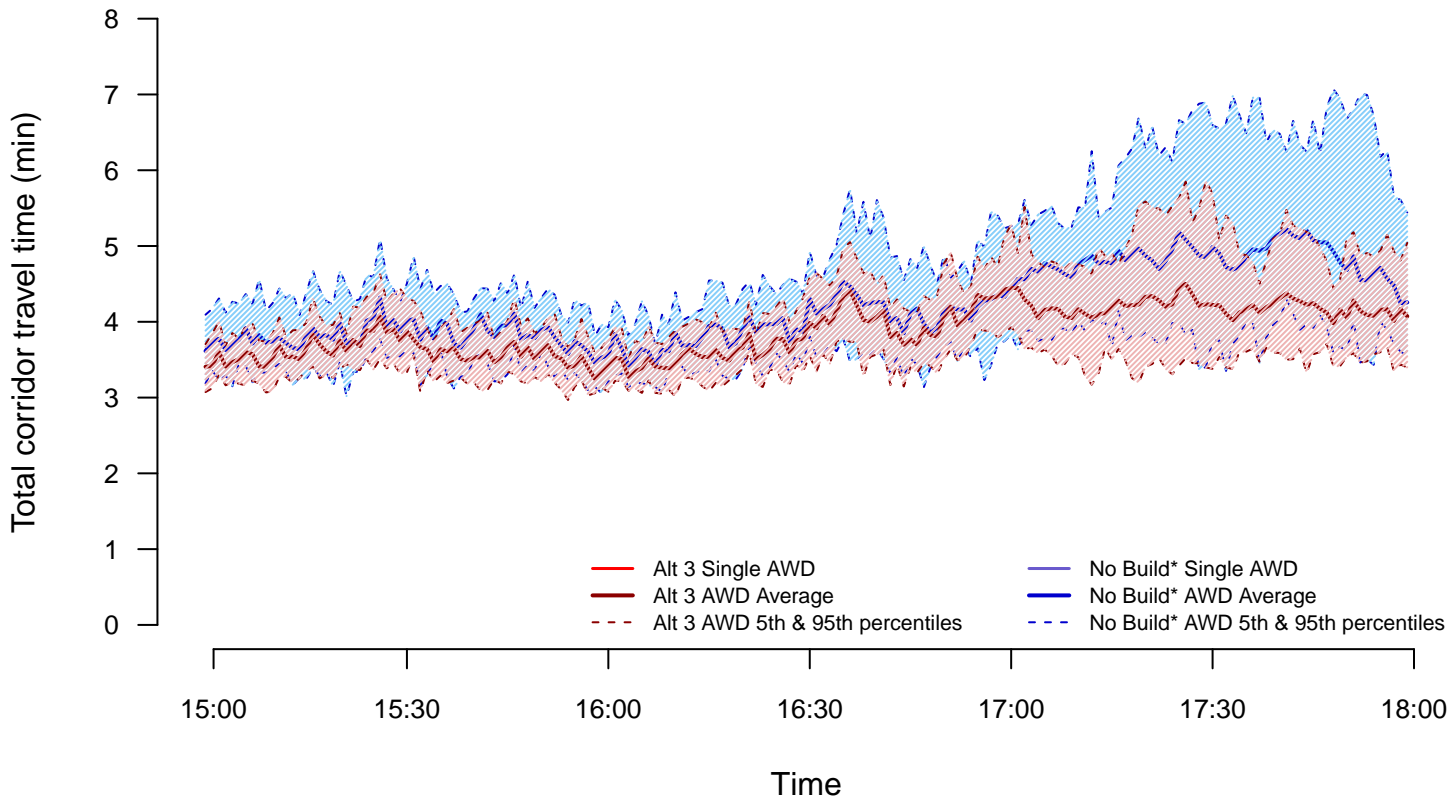
Average speed through corridor from 15:00 to 18:00



SE Fuller Rd SB : SE King Rd and SE Harmony Rd

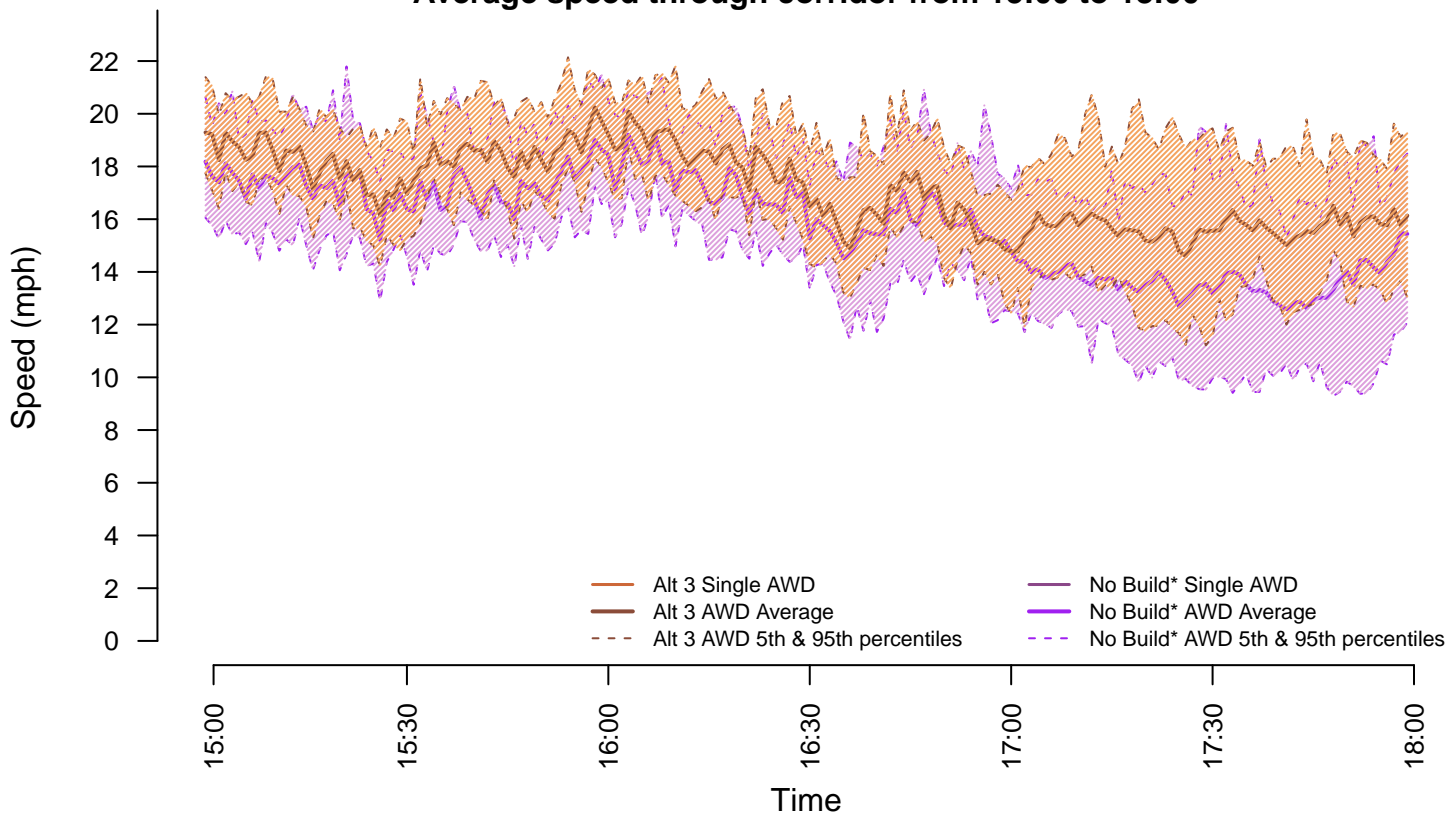
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



Dynust corridor length: 1.1 mi

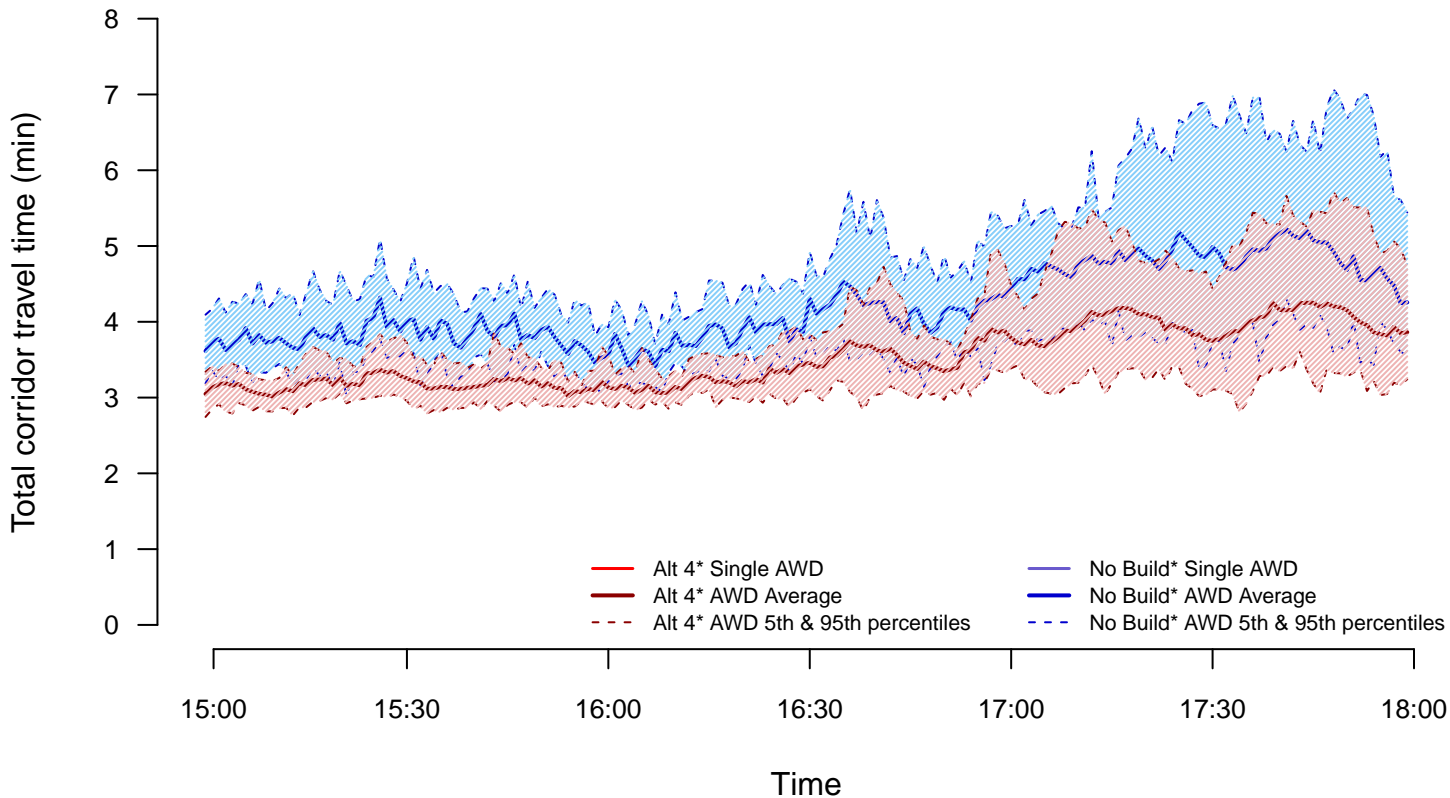
Average speed through corridor from 15:00 to 18:00



SE Fuller Rd SB : SE King Rd and SE Harmony Rd

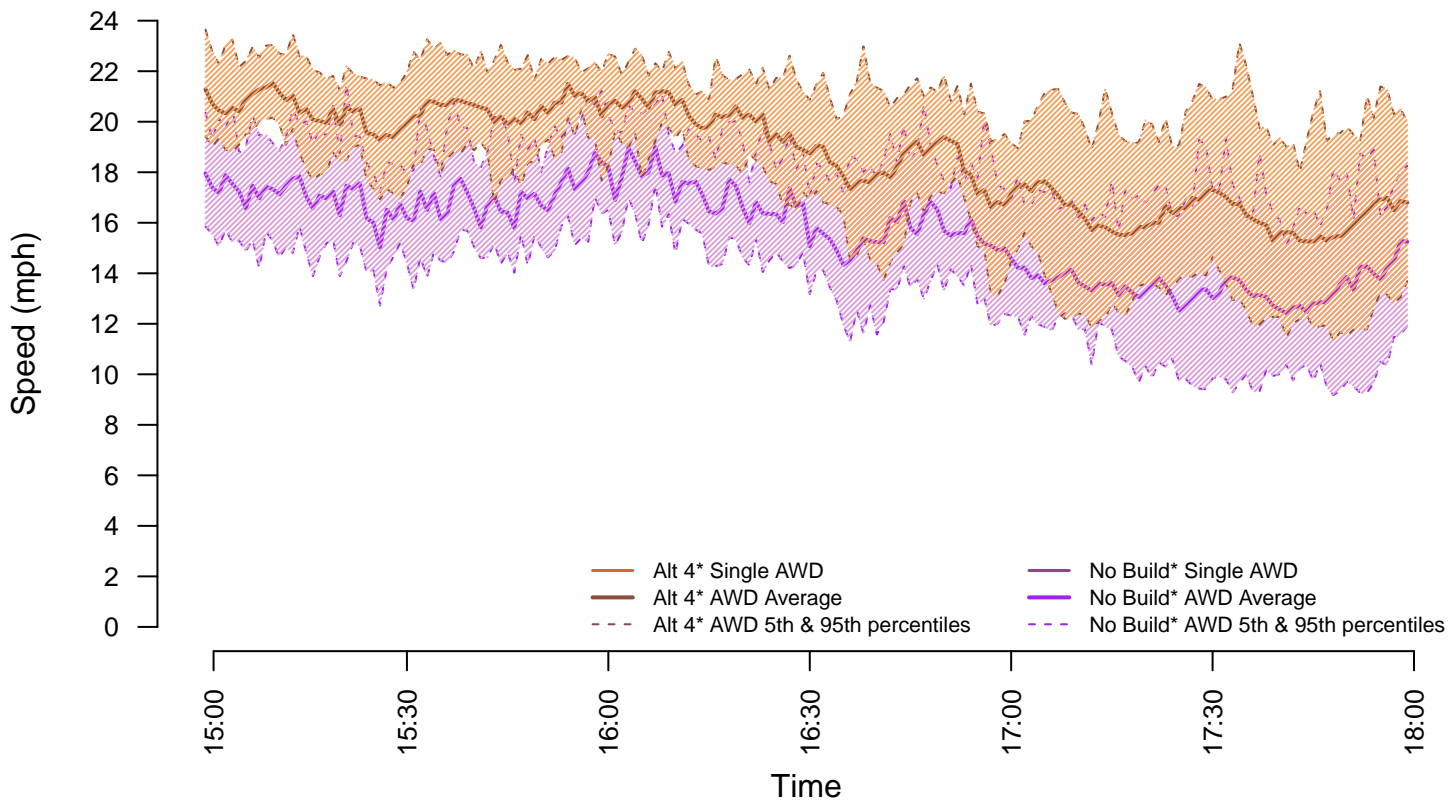
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.08 mi

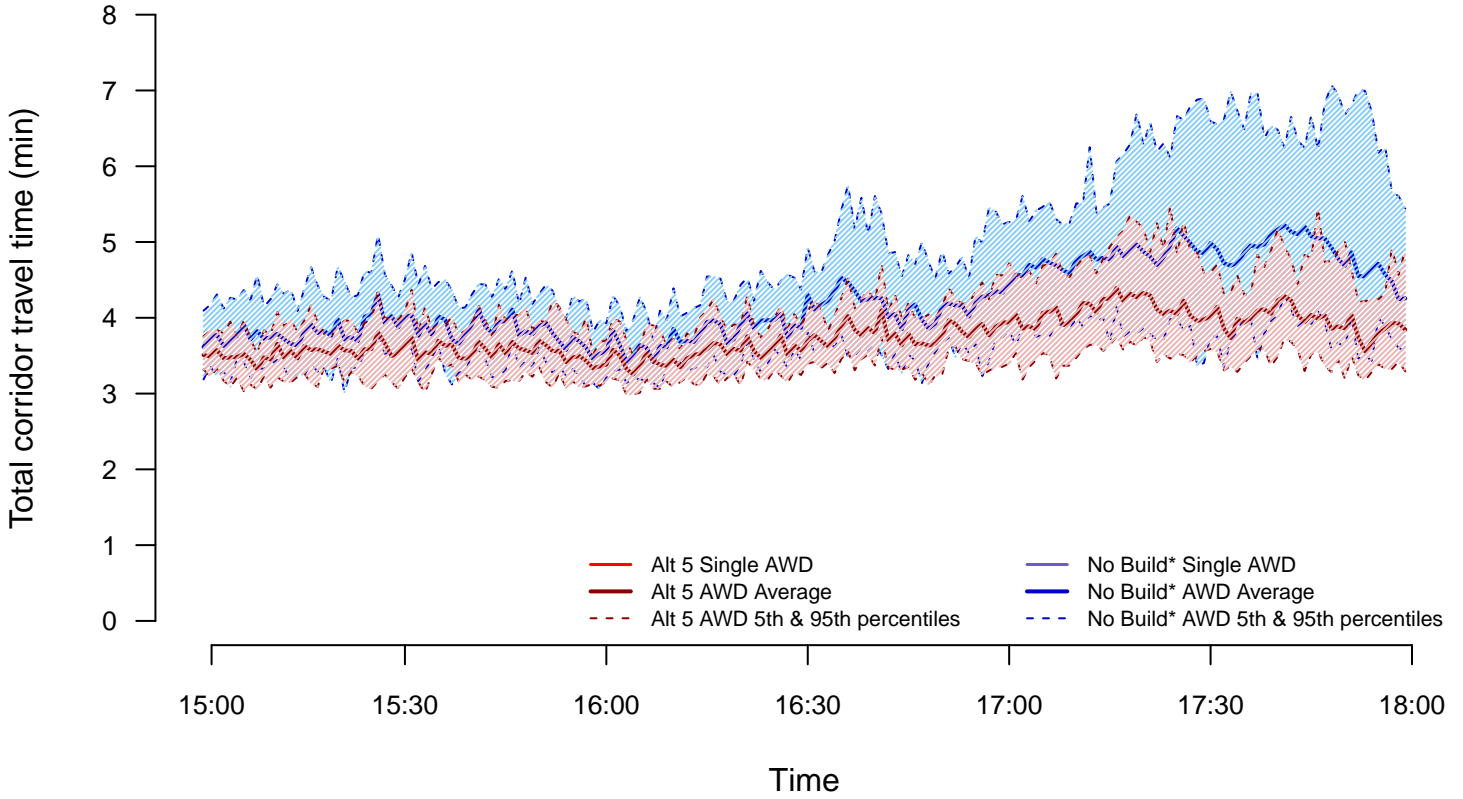
Average speed through corridor from 15:00 to 18:00



SE Fuller Rd SB : SE King Rd and SE Harmony Rd

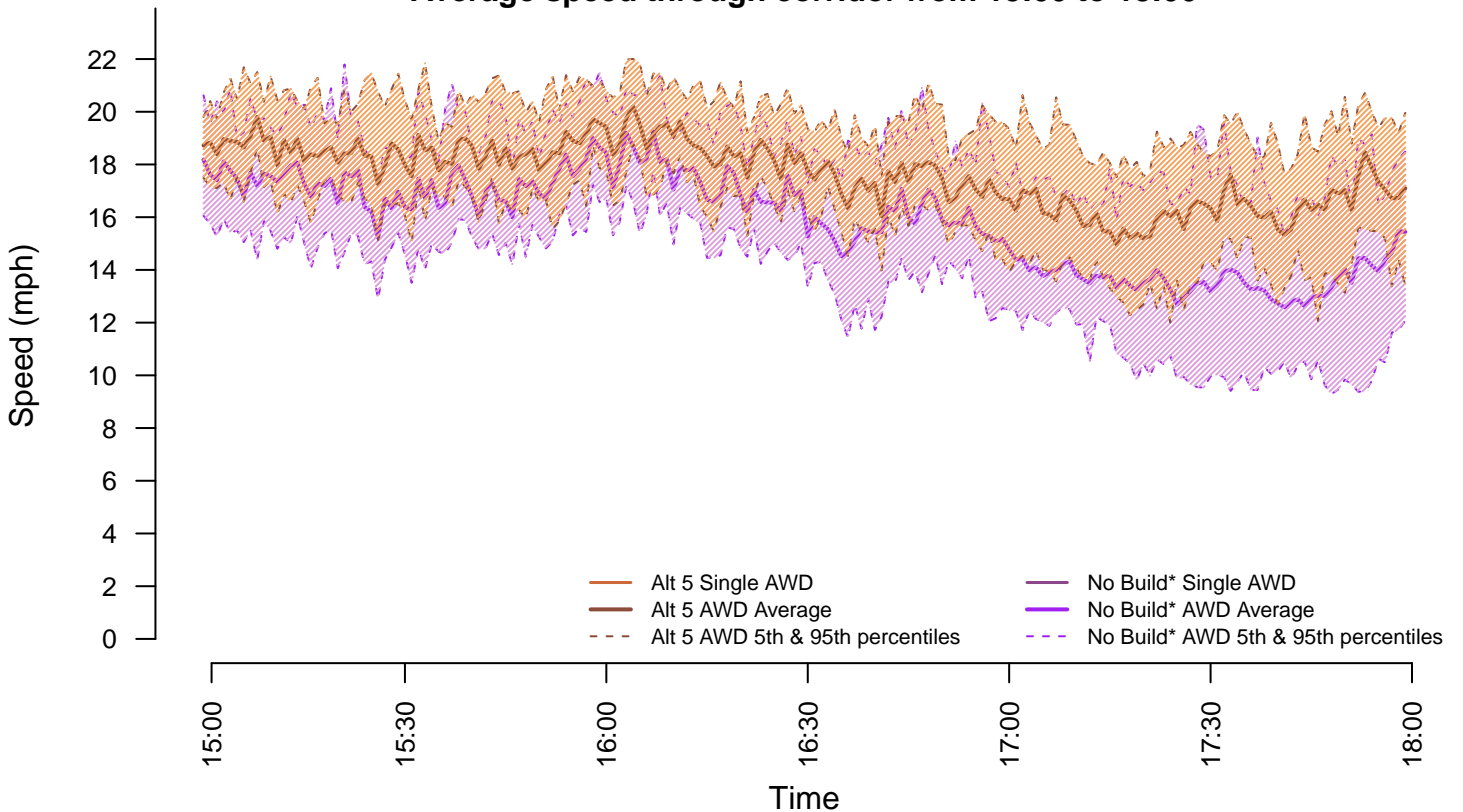
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.1 mi

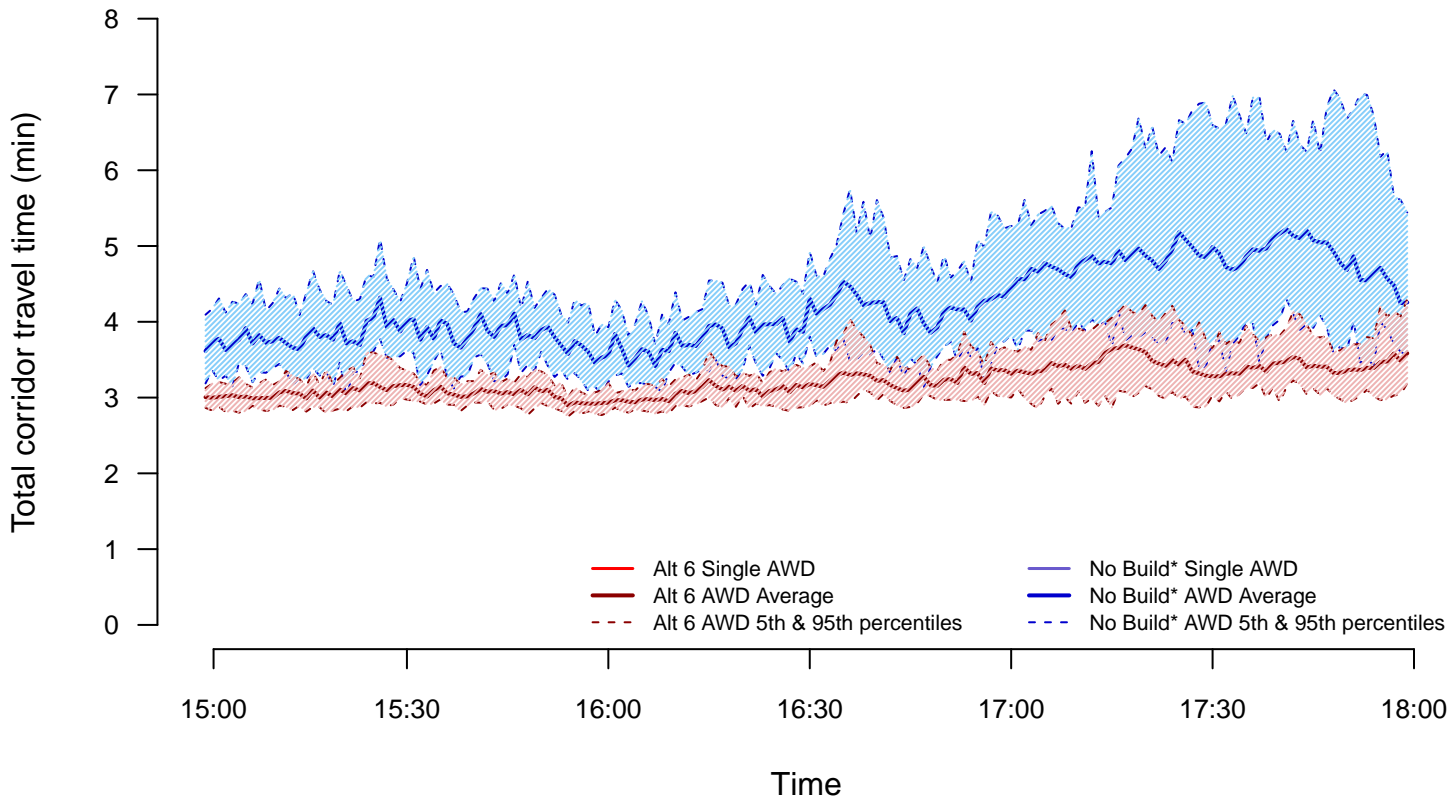
Average speed through corridor from 15:00 to 18:00



SE Fuller Rd SB : SE King Rd and SE Harmony Rd

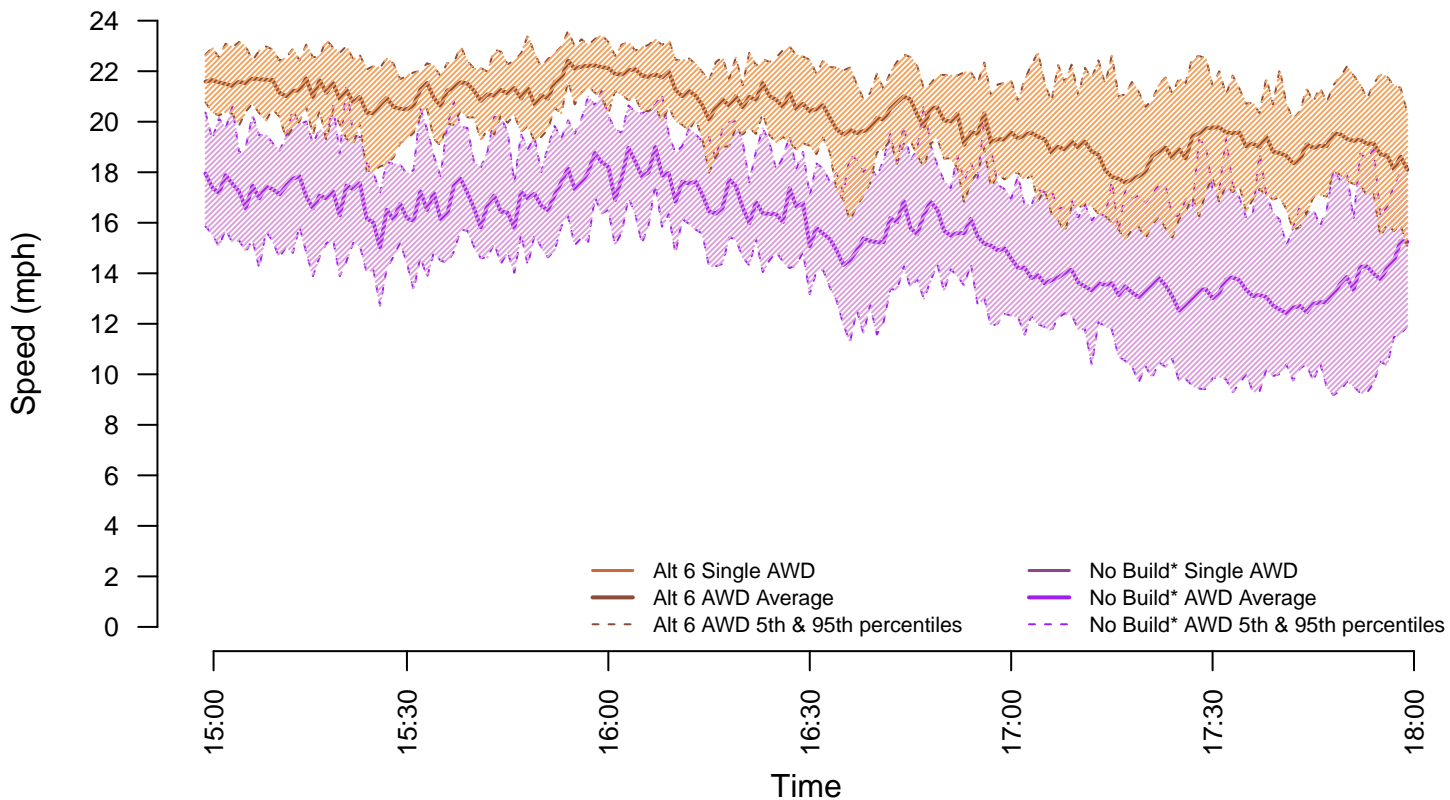
Corridor travel profiles for one month of Average Weekdays (20 days)

Change in total travel time through corridor from 15:00 to 18:00



DynusT corridor length: 1.08 mi

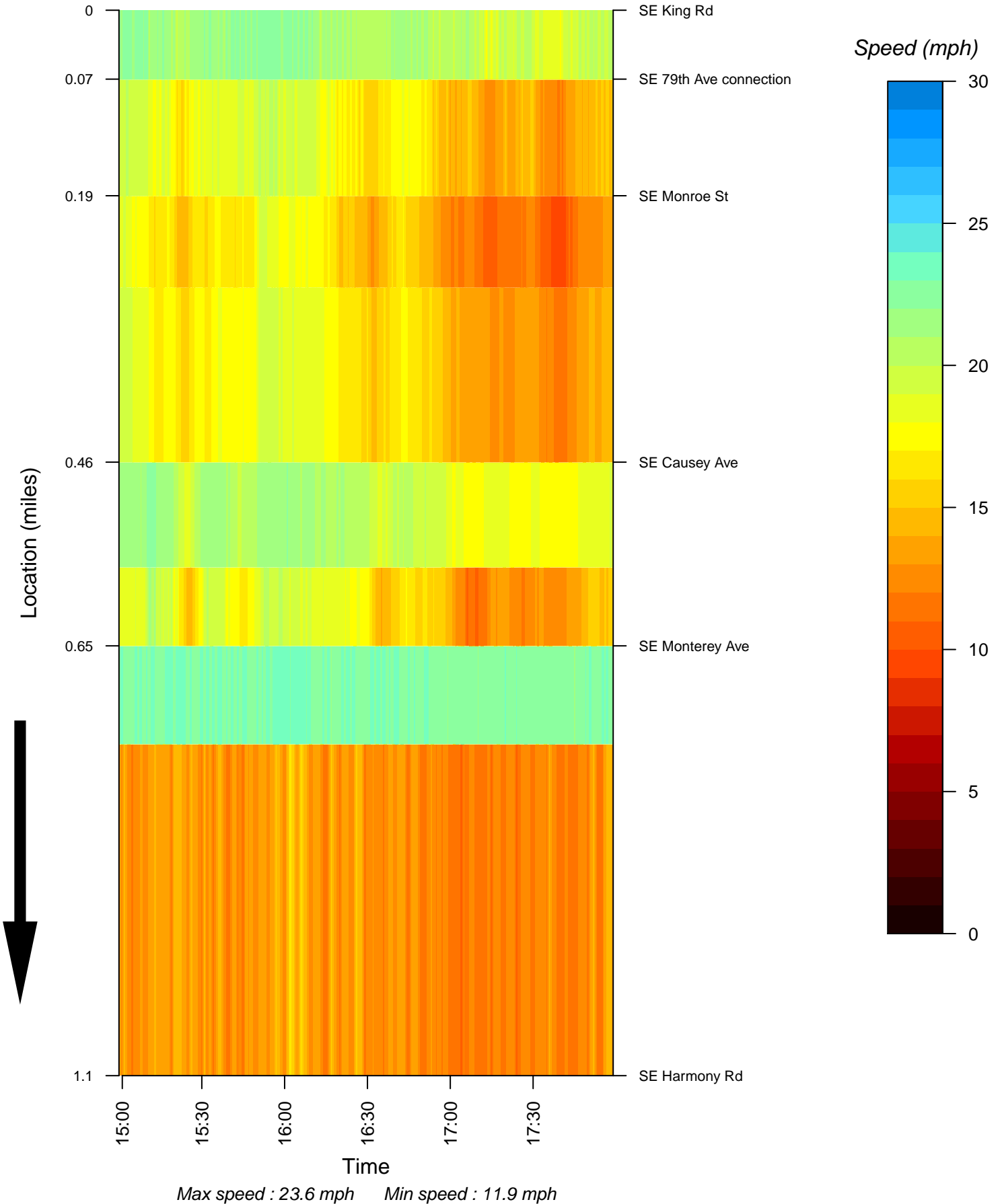
Average speed through corridor from 15:00 to 18:00



No Build*

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

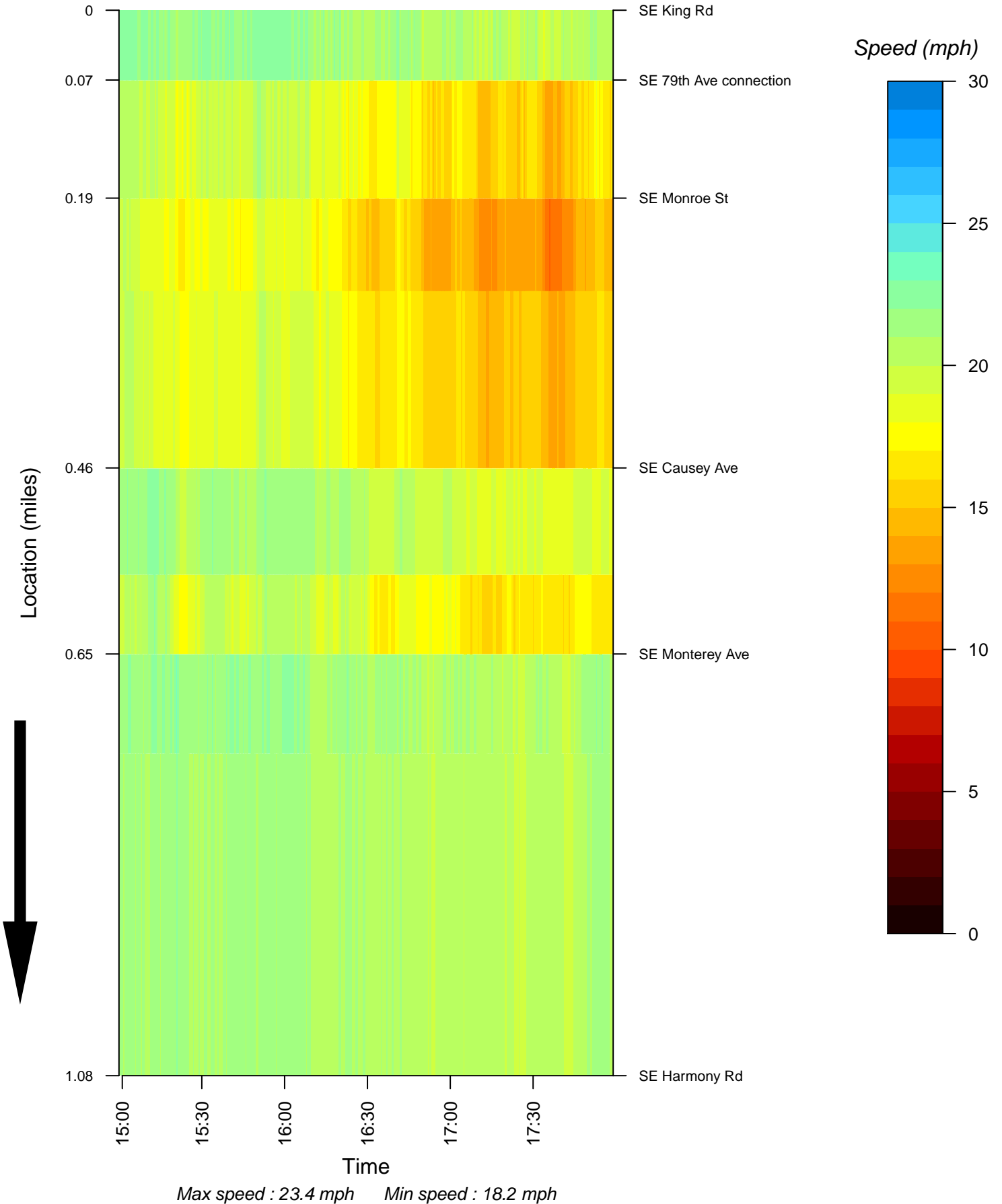
Space-time diagram of speed from 15:00 to 18:00



Alt 2 – Sunnybrook extend / RR improve

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space-time diagram of speed from 15:00 to 18:00

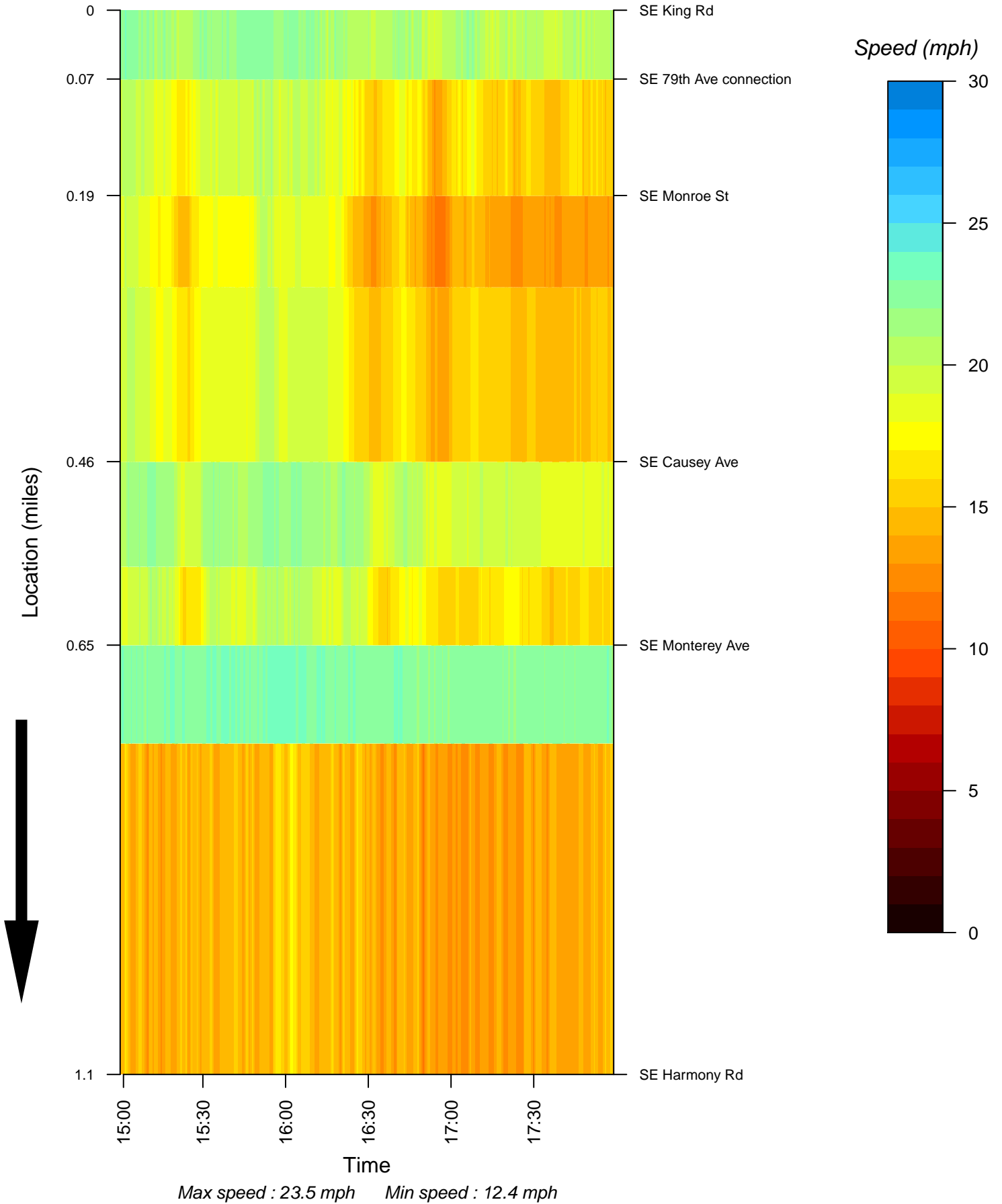


Max speed : 23.4 mph Min speed : 18.2 mph

Alt 3 – Harmony (82nd–Fuller) and 82nd widen / RR improve

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

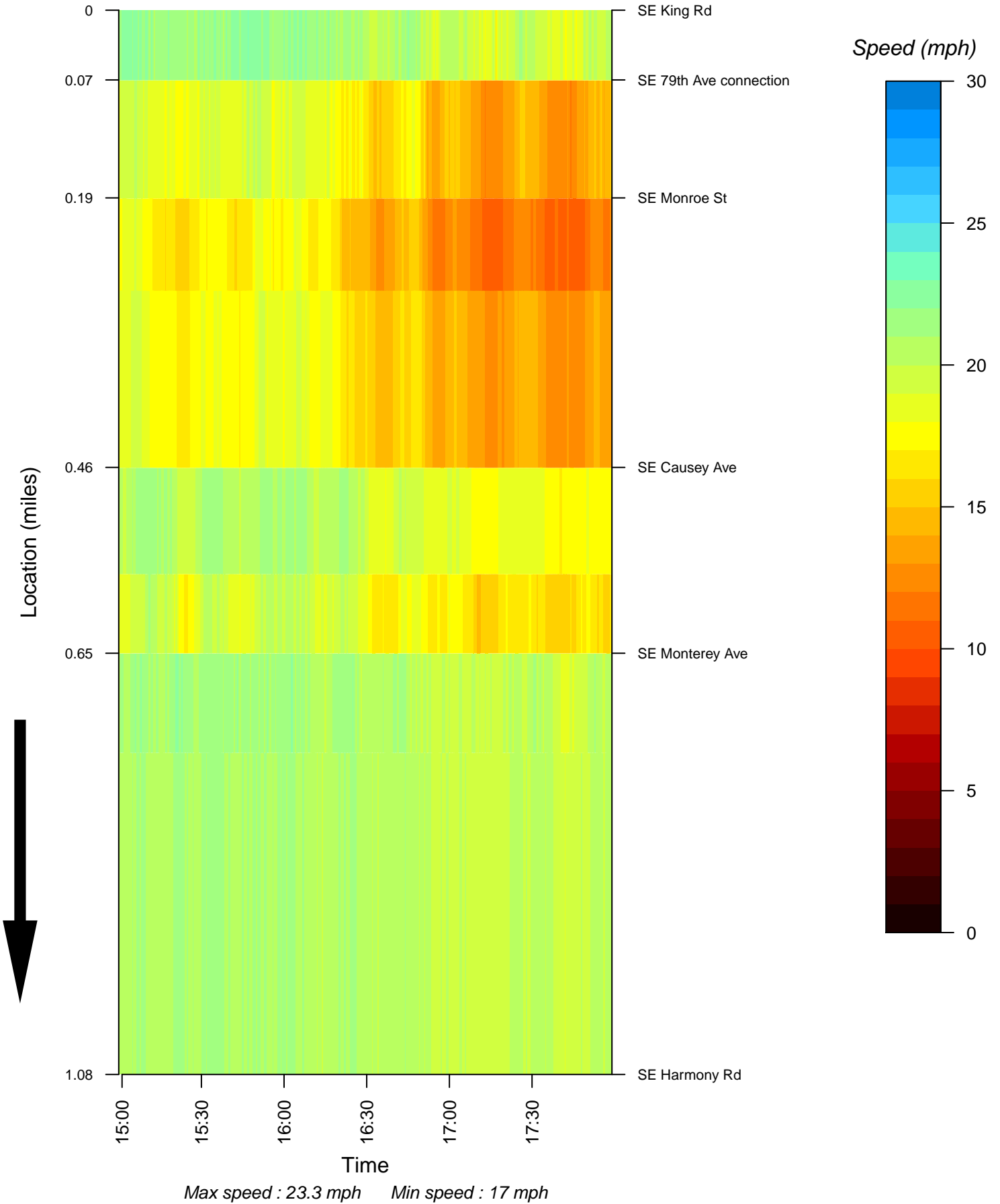
Space–time diagram of speed from 15:00 to 18:00



Alt 4 – Sunnybrook extend and no Harmony widen*

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

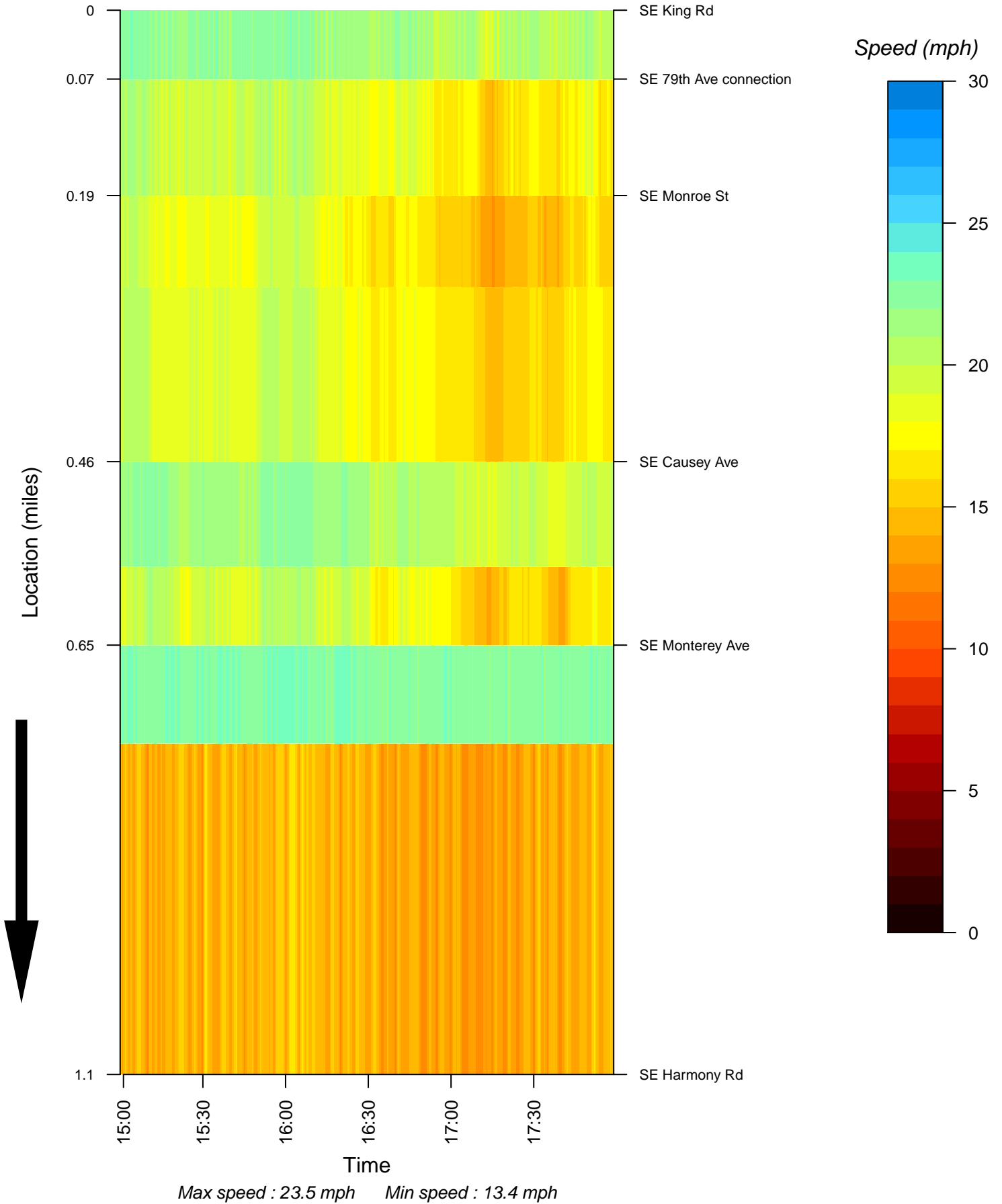
Space-time diagram of speed from 15:00 to 18:00



Alt 5 – Harmony widen (82nd–Hwy 224) / RR improve

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

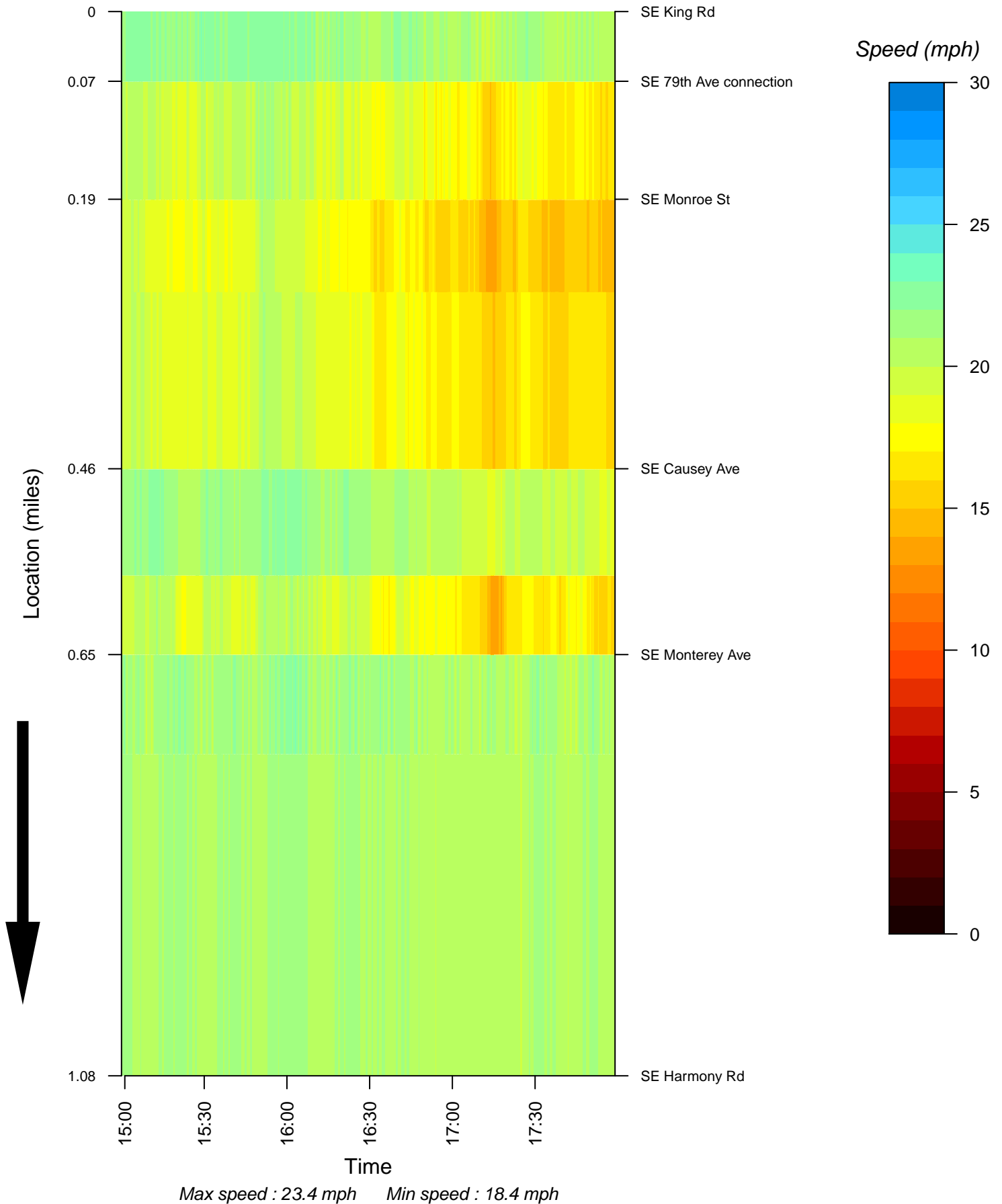
Space–time diagram of speed from 15:00 to 18:00



Alt 6 – Sunnybrook ext / Harmony widen (Fuller–224) / RR

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space–time diagram of speed from 15:00 to 18:00

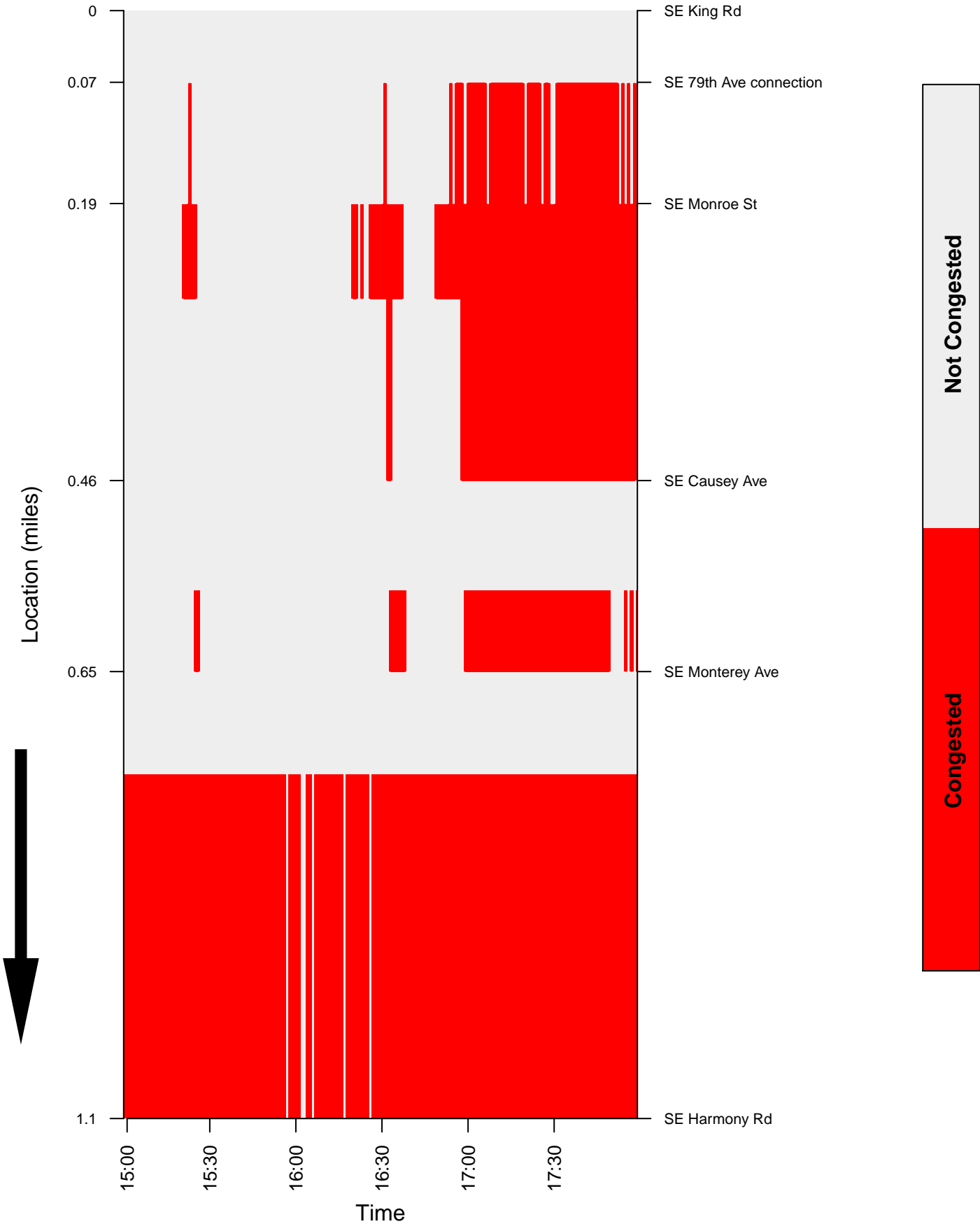


Max speed : 23.4 mph Min speed : 18.4 mph

No Build*

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 42.7

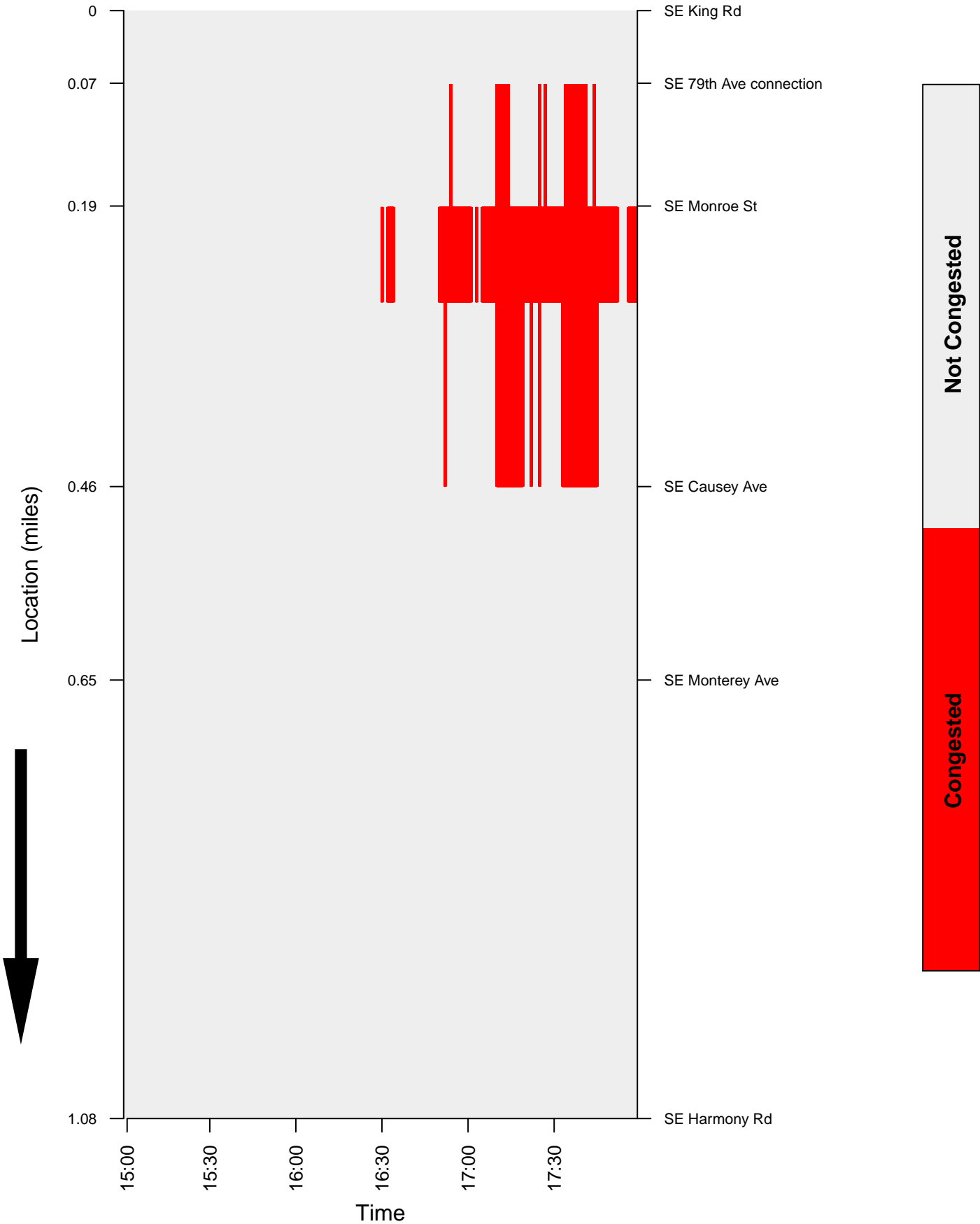
Total corridor congested lane mile hours: 1.9, representing 52.2% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 2 – Sunnybrook extend / RR improve

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 5.3

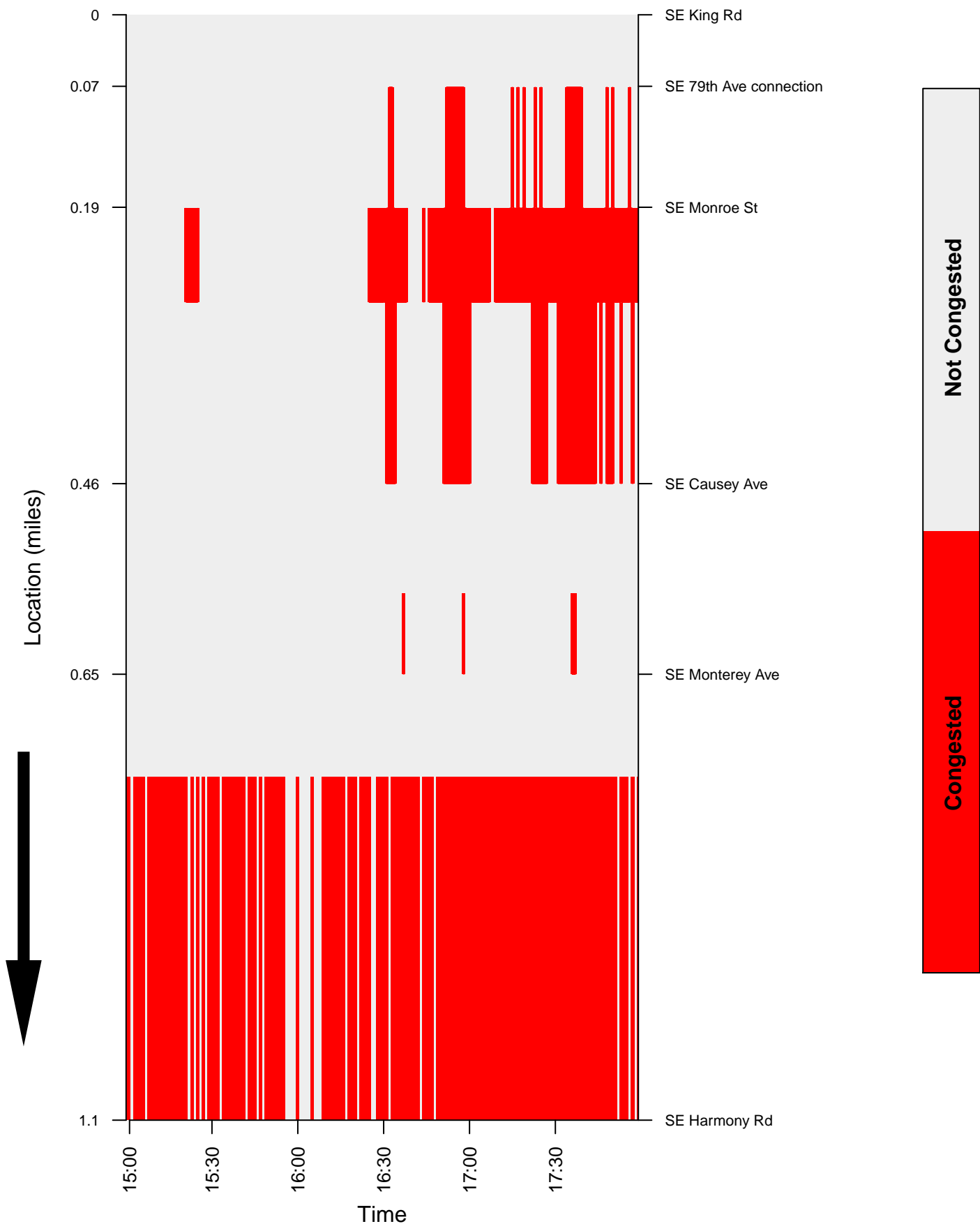
Total corridor congested lane mile hours: 0.2, representing 6.7% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 3 – Harmony (82nd–Fuller) and 82nd widen / RR improve

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 16.2

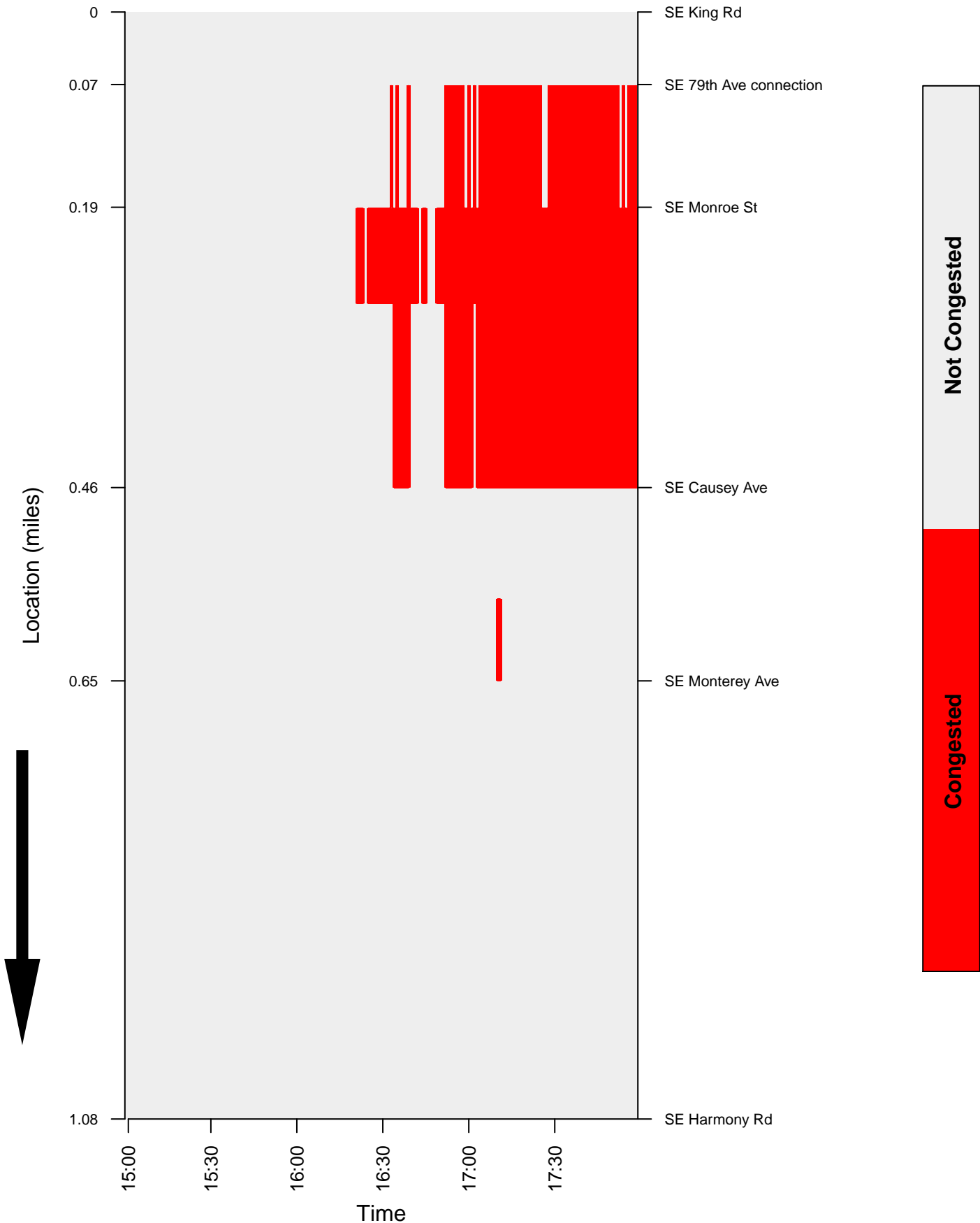
Total corridor congested lane mile hours: 1.2, representing 28.9% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 4 – Sunnybrook extend and no Harmony widen*

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 13.5

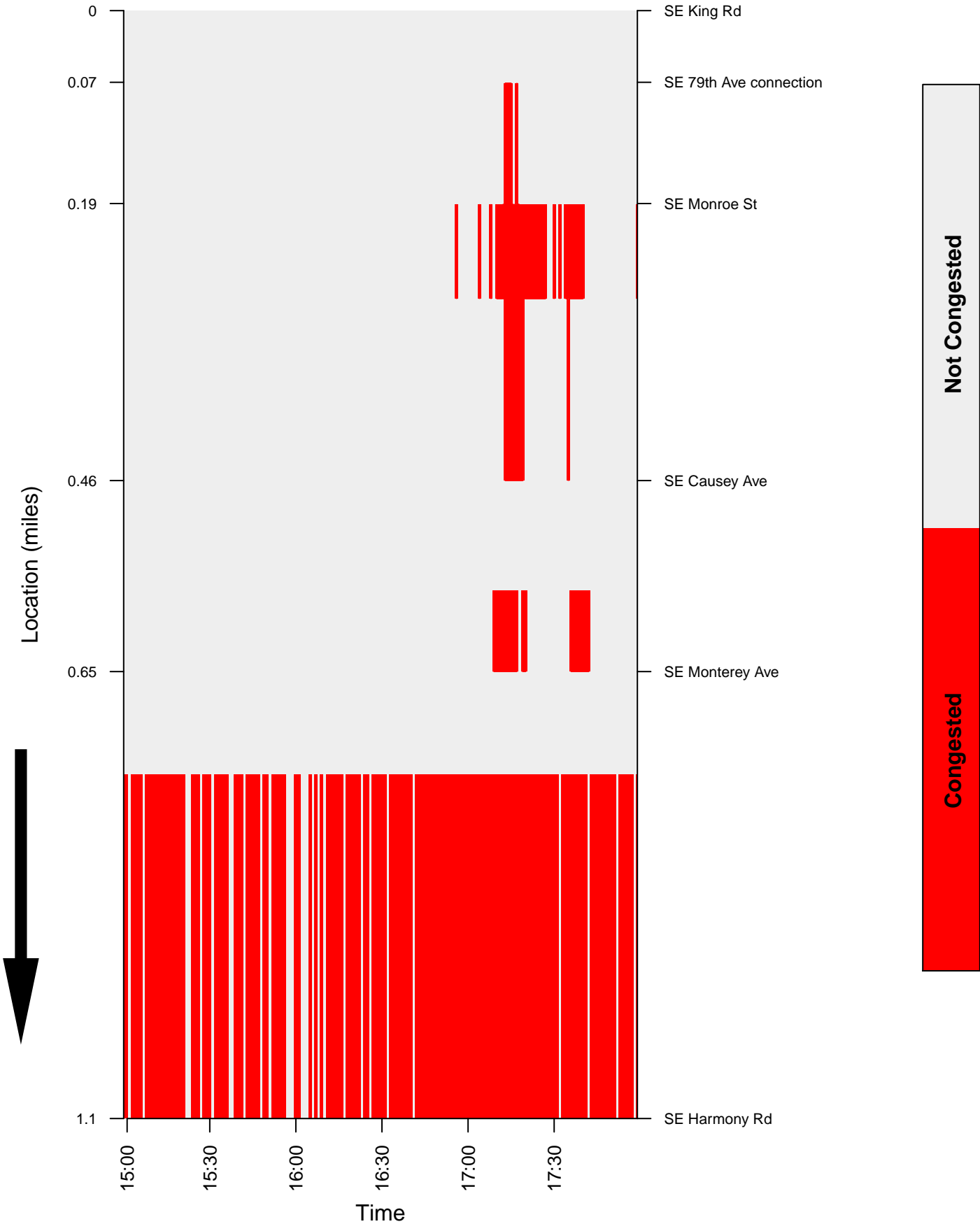
Total corridor congested lane mile hours: 0.5, representing 15.1% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 5 – Harmony widen (82nd–Hwy 224) / RR improve

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space-time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 10.8

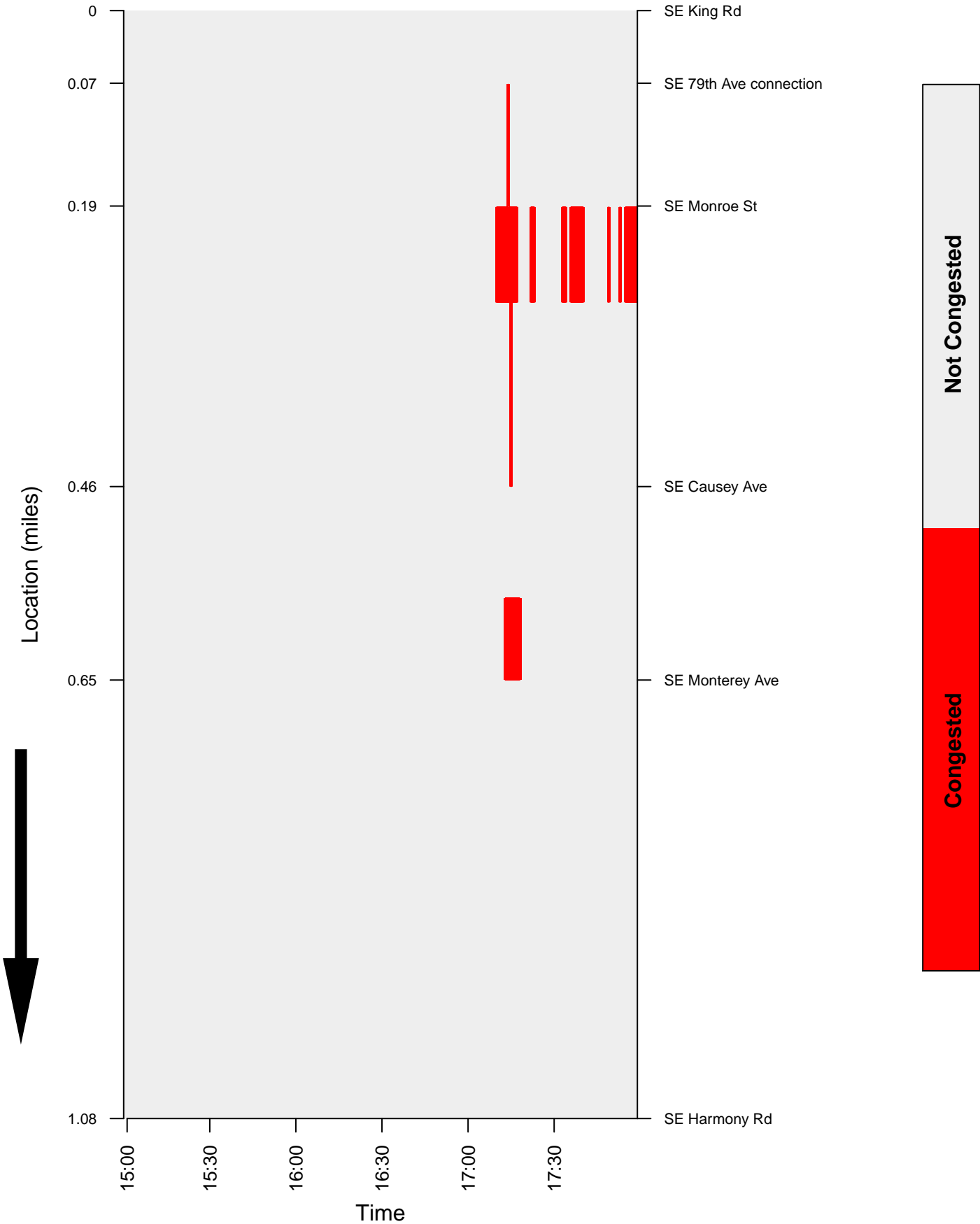
Total corridor congested lane mile hours: 1, representing 24.1% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed

Alt 6 – Sunnybrook ext / Harmony widen (Fuller–224) / RR

SE Fuller Rd SB between SE King Rd and SE Harmony Rd

Space–time diagram of congestion from 15:00 to 18:00



Total corridor vehicle hours of delay related to congestion: 1.2

Total corridor congested lane mile hours: 0.1, representing 1.6% of total lane mile hours

Congestion defined as actual speed \leq 60% of free flow speed