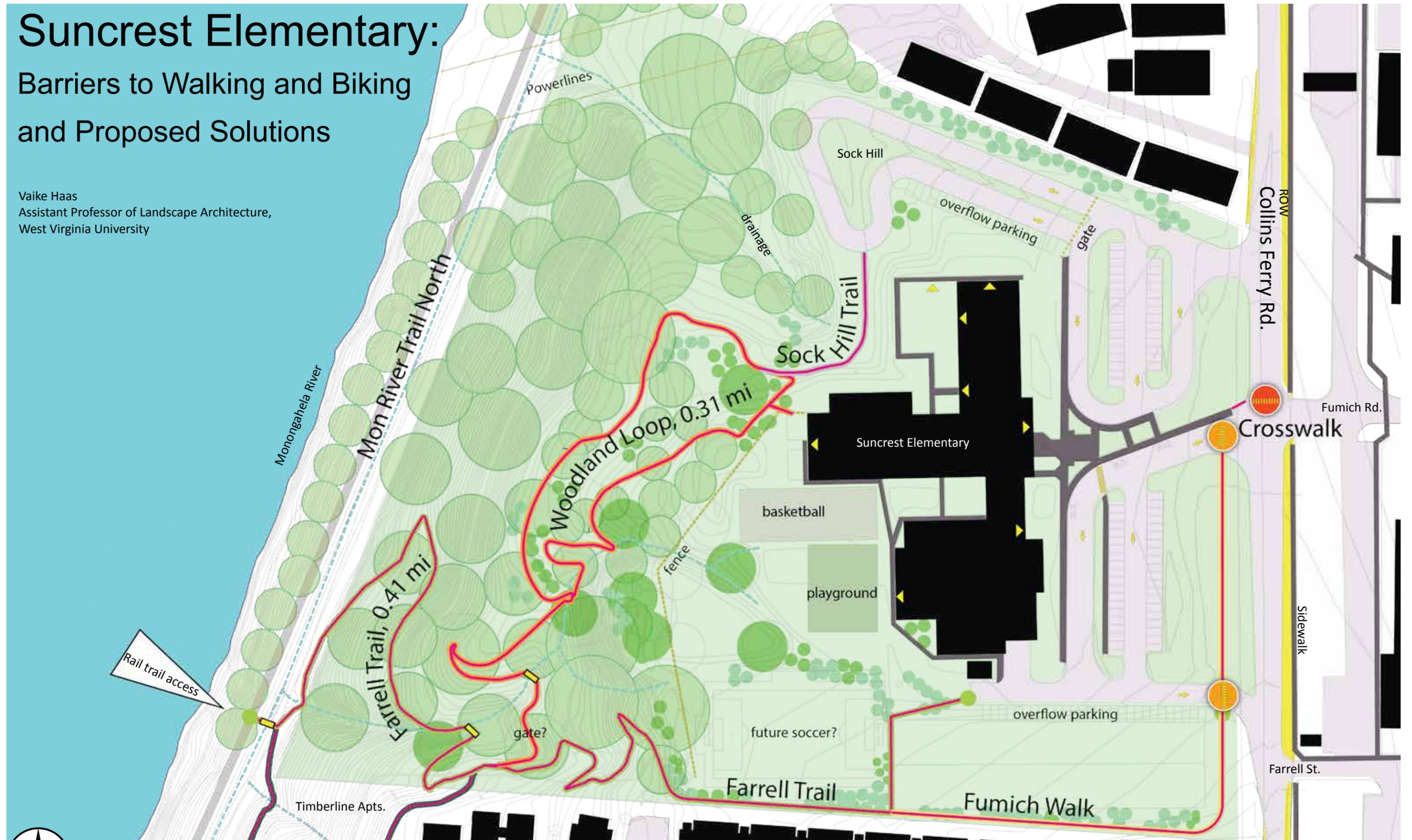


Suncrest Elementary: Barriers to Walking and Biking and Proposed Solutions

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View of Monongahela River from behind Suncrest Elementary, early Spring 2017

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Key stakeholders that consulted during design process,
which took **98 hours** (not including student's work)

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Key Contacts



This report outlines barriers to walking/biking and proposes solutions to make walking to Suncrest Elementary safer and faster.

Why pursue better options for biking / walking?

- Kids who walk/bike to school are better able to concentrate!
- Parents contribute more than 80% of traffic during peak rush hour on Collins Ferry Road.
- Trucks on Mylan and school buses passing pedestrians on sidewalk from behind is a safety concern.
- Collins Ferry is uncomfortably busy for pedestrians during morning rush hour.



Narrow space for pedestrians on sidewalk with buses and trucks approaching from behind.



Steep cross slope gives large vehicles an alarming lean toward the sidewalk.



Trash cans Friday morning (9/15/17) block more than half of an already narrow and uncomfortable sidewalk.

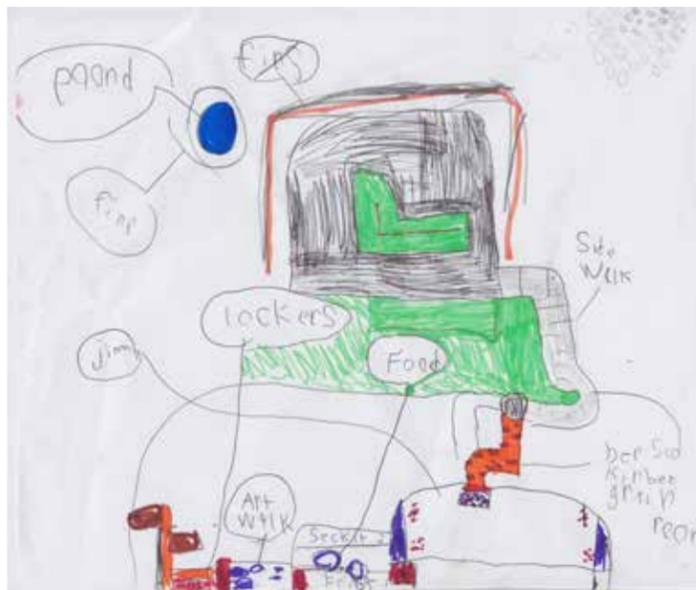
- MMPO plans Collins Ferry expansion and connection to I-79 in next 5 years, but the right of way on Collins Ferry ranges from 30-50 ft wide.

At the old Suncrest Primary school, Principal Joanne Hines estimates between 40-60 children were walkers (personal communication, September 2017). At the new Suncrest Primary, only 2-9 walkers have been observed (on 5/23/17, 9/13/17, and 9/15/17).

The following analysis of existing conditions guided recommendations for crosswalk locations and additional pedestrian connections between Suncrest Elementary and nearby residential neighborhoods.

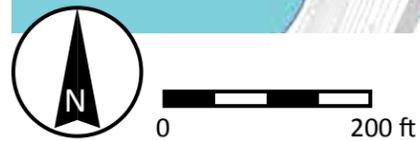
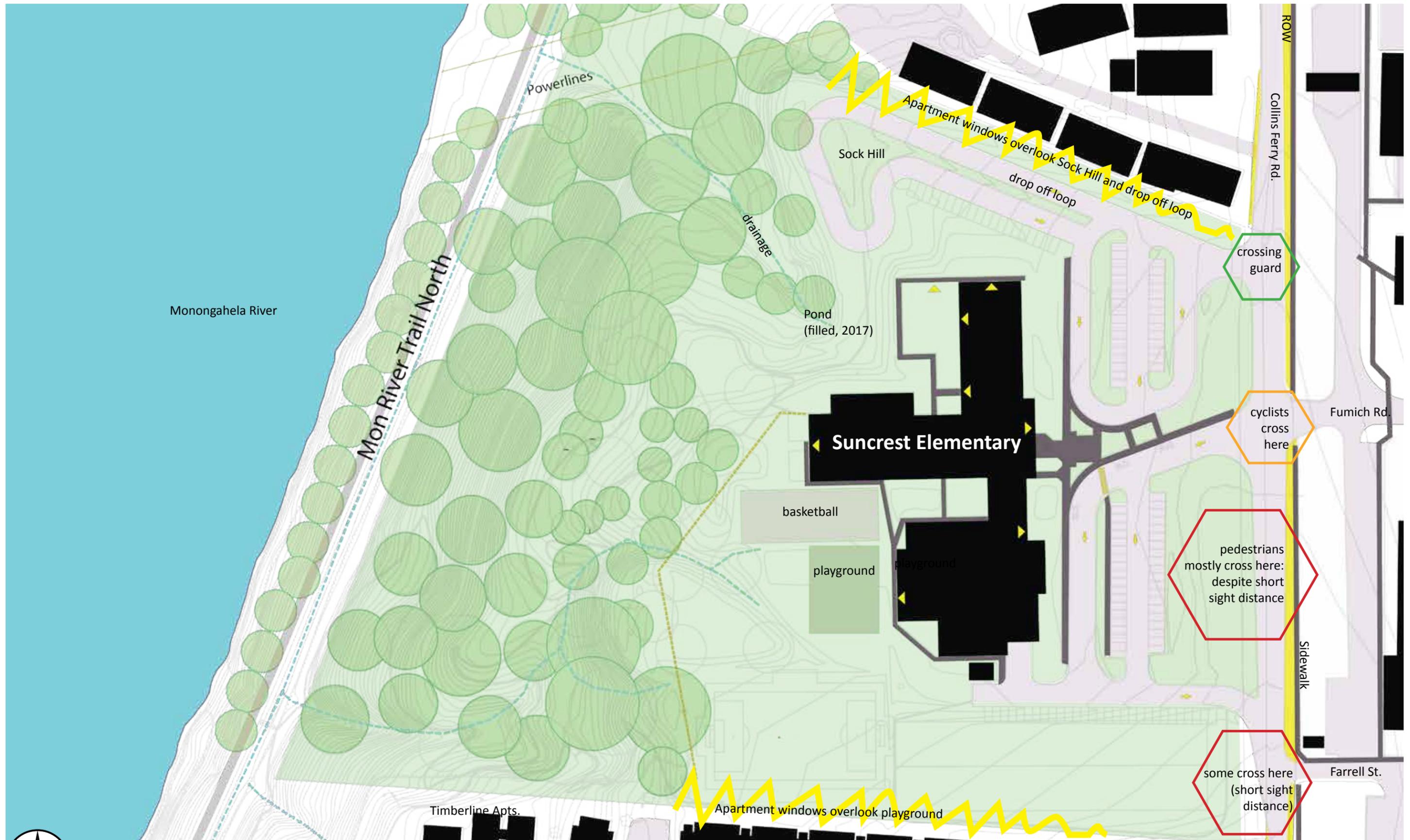
Design considerations:

- First grade uses the drop off loop, or 'Sock Hill,' for recreation during the school day (see drawing, lower left)
- Architect's plan included sport fields behind the school
- More event parking is needed (for example for basketball tournaments)
- Access from Rail Trail is key for pedestrian access
- School Board does not want stairs on any trails (per Ella Belling, personal communication Summer 2017).



One student of Mrs. Klemkowsky's first grade class (2016)'s explanation of Sock Hill importance as recreational space, during the school day (at left), when it's not used for drop off/pick up queue for parent's vehicles.

Introduction



Existing Conditions

Traffic Counts: Wednesday 9/13/17

Traffic observation window: 7:55 am - 8:36 am, 40 minutes

Weather: Sunny, mild

545 Cars: 206 northbound, 107 southbound*

111 Drivers noticing the observer (waved, made eye contact, or turned head): 97 northbound, 14 southbound; 2 waved

21 Conspicuously speeding cars: 19 northbound, 2 southbound, 2 parents

22 Buses: 11 northbound, 11 southbound

Trucks observed: 4 (3 northbound, 1 southbound)

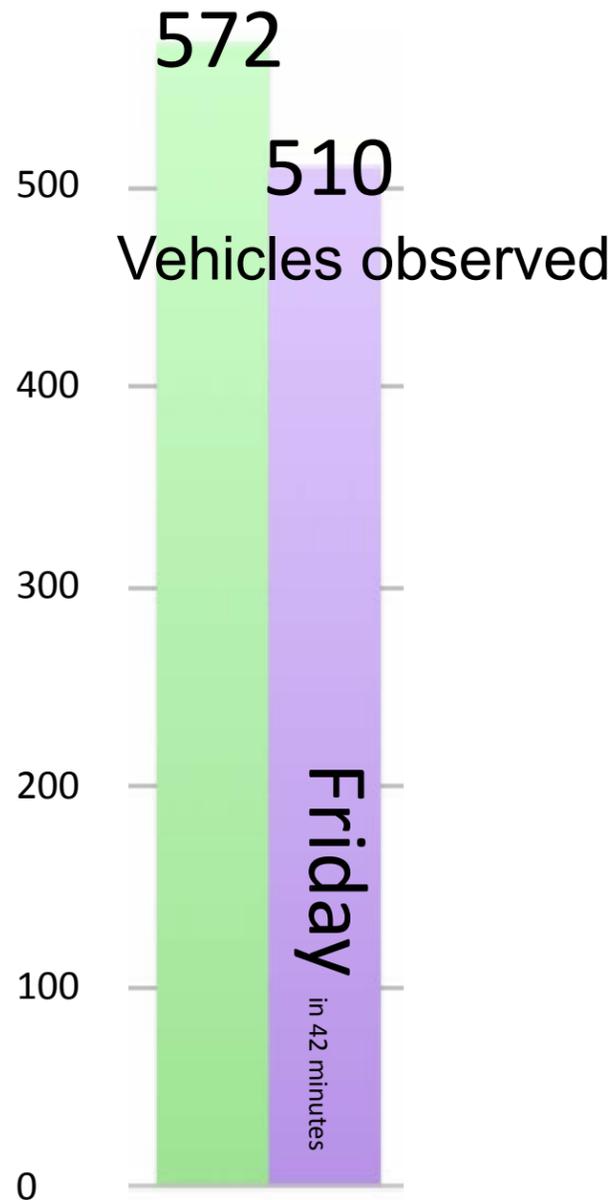
Directionality of traffic: northbound 66% (206), southbound 107 (34%)

Pedestrian/cyclist observation window: 7:45 - 8:36 (51 minutes)

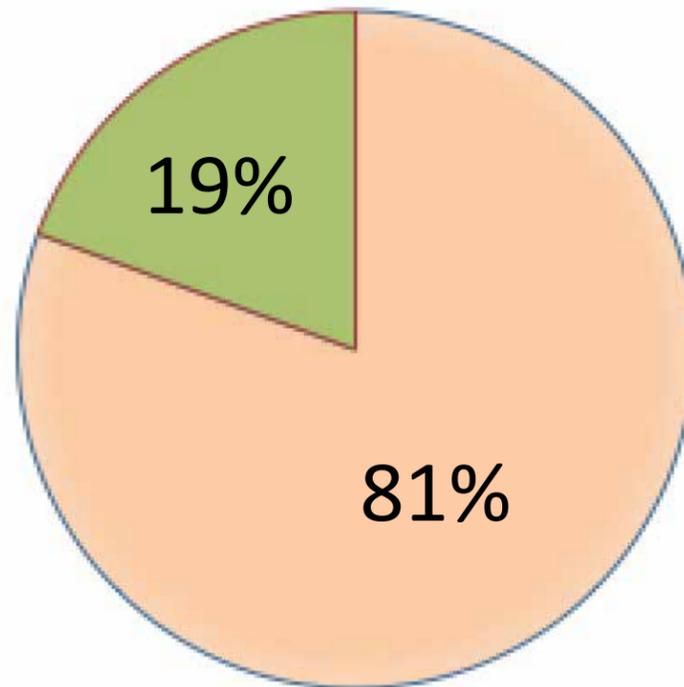
10 Pedestrians observed: 8 northbound, 1 southbound, 1 city bus passenger

4 Cyclists observed: 3 northbound, 1 southbound

* Note: Directionality was not observed from 7:56-8:06 and from 8:10-8:17 on 9/13



Driver awareness



Legend for Driver awareness:

- Noticed observer 9/13/17
- Did not notice observer 9/13/17

Traffic Counts: Friday 9/15/17

Traffic observation window: 7:53 am - 8:35 am, Friday, 9/15/17 (42 minutes)

Weather: Cloudy, mild

478 Cars observed: 325 northbound, 154 southbound

Drivers noticing the observer: 6 waved, 2 spoke

Note: due to cloudy weather, could not observe drivers for eye contact through glare on windshields

8 Conspicuously speeding cars observed: all northbound, usually after bus

22 Buses observed: 11 northbound, 11 southbound

8 Trucks observed: 6 northbound, 2 southbound

Directionality of vehicular traffic: 67% northbound (343), 33% southbound (167)

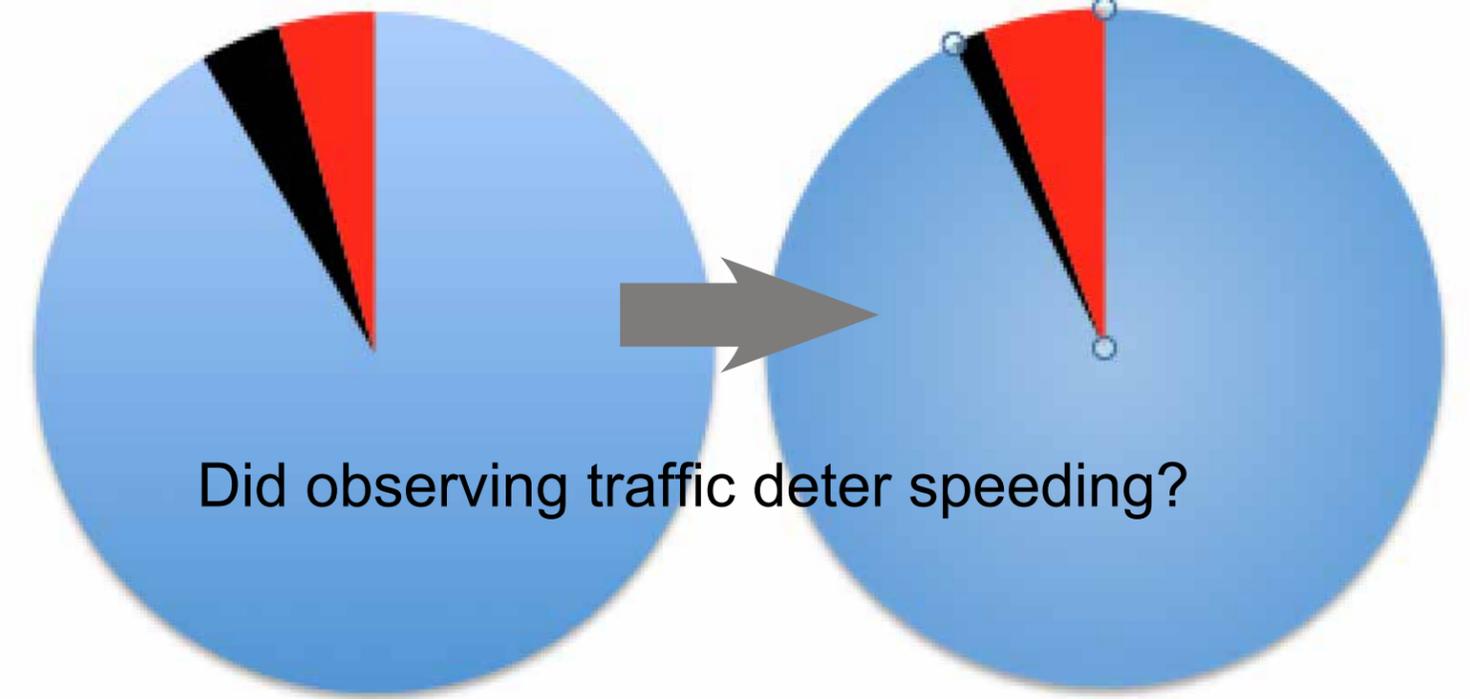
Pedestrian/cyclist observation window: 7:42-8:42 (1 hour)

9 Pedestrians observed: 7 northbound, 1 southbound, 1 city bus passenger

5 Cyclists observed: 4 northbound, 1 southbound

On both dates, observer was located across street from school at bus lane entrance.

Driver responsibility



Legend for Driver responsibility:

- 524 Responsible car drivers 9/13/17
- 21 Conspicuously speeding cars 9/13/17
- 26 Trucks and buses 9/13/17
- 471 Responsible car drivers 9/15/17
- 8 Conspicuously speeding cars 9/15/17
- 30 Trucks and buses 9/15/17

Efficacy of Pedestrian Crosswalks for Stopping Cars



Without a crosswalk at Suncrest Elementary, walkers can expect as many as 38 vehicles to pass before meeting a gap in traffic -- or a sympathetic driver.

The efficacy of various alternatives is considered below.

Per City Lab, stop signs are only 64% effective; that is, 36% of drivers will not stop at a stop sign. An unmarked crosswalk (shown at left: Farrell Street) is only 5% effective for stopping drivers. A crosswalk with flashing lights is the recommended solution, and can be expected to be 61% effective at stopping drivers (below right).

“The compliance rate plummeted to almost 5 percent at unmarked crosswalks. Under the law, a crosswalk is present whenever a sidewalk leads into the street, regardless of any markings present.”

- Chicago Tribune
<http://www.chicagotribune.com/news/hilkevitch/ct-crosswalk-survey-getting-around-met-0908-20140907-column.html>



www.vox.com

“A National Safe Kids study on driver behavior at intersections in school zones and residential neighborhoods found that 45 percent of drivers failed to completely stop at the intersection even though a stop sign was present, and of these, 7 percent did not even slow down for the sign. Although the study found that drivers were more likely to stop when a pedestrian was present compared to not present, 36 percent of drivers violated the stop signs when pedestrians were waiting at the curb to cross and 24 percent of drivers did not come to a complete stop at the intersection while pedestrians were crossing.”

- Safe Routes to School Guide
http://guide.saferoutesinfo.org/education/all_drivers_near_the_school.cfm



http://c8.alamy.com/comp/EBPAMH/salt-lake-city-utah-crosswalk-safety-flags-at-a-pedestrian-street-EBPAMH.jpg

“Berkeley and Seattle both tried the flags... before giving them up as a waste of resources. According to Berkeley’s study of the program, ‘the use of the flags did not have a noticeable effect upon driver behavior,’ and many flags were stolen, leading to high replacement costs.”

- City Lab
<https://www.citylab.com/transportation/2014/09/will-waving-the-orange-flag-make-pedestrians-safer/379878/>



ja.wikipedia.org

“According to an observational study conducted by the advocacy group Active Transportation Alliance, only 18 percent of drivers on average stopped for people on foot in a marked crosswalk.”

- City Lab
<https://www.citylab.com/transportation/2014/09/will-waving-the-orange-flag-make-pedestrians-safer/379878/>



“At crosswalks with flashing lights, brick or stone crosswalks, signs, or raised crosswalks, the rate went up to 61 percent.”

- City Lab
<https://www.citylab.com/transportation/2014/09/will-waving-the-orange-flag-make-pedestrians-safer/379878/>

Excerpts from West Virginia Code: Pedestrian Rights & Duties

§17C-10-2. Pedestrians' right-of-way in crosswalks.

(a) When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger, but no pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield. This provision shall not apply under the conditions stated in section three paragraph (b) of this article.

(b) Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.

§17C-10-3. Crossing at other than crosswalks.

(a) Every pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway.

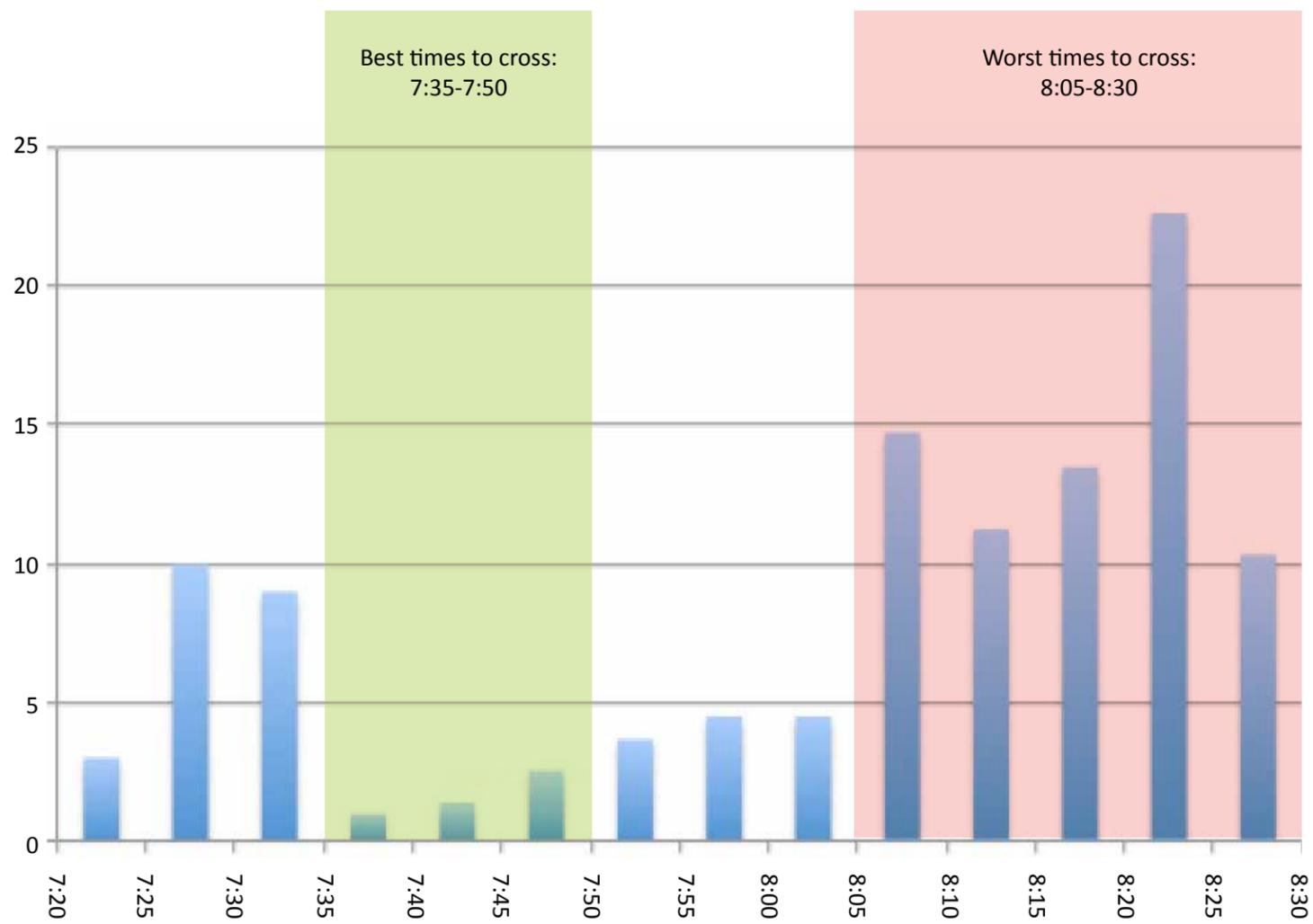
-- West Virginia Code, Chapter 17c, Article 10 (2016)
accessed at: from: <http://www.legis.state.wv.us/wvcode/Code.cfm?chap=17c&art=10>



Suggestions for Promoting Driver Awareness

1. Work with Monongalia County Sheriff to enforce newly posted 15 mph speed limit along Collins Ferry Road. Request police presence by calling Monongalia County Sheriff, at 304 291 7291; ask for Captain Wilson or one of the deputies. (Called 9/13.)
2. Install radar feedback speed limit signs on Collins Ferry Road just before hills that limit sight distance at Greendale-Hillview and near Timberline Road. Ensure these signs are in place to offer drivers feedback especially during the 7:25-8:35 am and 3:15-5:35 pm rush hours, when children are most likely to be present. Cost of each Radar Speed Control Dolly is \$3895 from Traffic Safety Warehouse (at left).
3. Remind school bus drivers of 15 mph limit. A speeding (empty) schoolbus (#239) was observed 9/15/17.
4. Continue to work with Mylan Pharmaceuticals to request delivery trucks arrive after 8:30 am to reduce large vehicle traffic that imposes on Collins Ferry Road sidewalk. Contact Hollie Howes at Mylan Pharmaceuticals, 304-599-2595, extension 6081. (Called 9/13.)
5. Alert City Council to unsafe pedestrian conditions on Collins Ferry. Petition City Council to adopt Collins Ferry within Morgantown city limits, then work to improve crosswalks at Suncrest Elementary, Timberline, Lawnview, and Hillview-Greendale. At present, on a sunny day, only 19% of drivers notice a person standing at across Collins Ferry Road from Suncrest Elementary.
6. Ask the City Council to fund crossing guards for Lawnview, Hillview-Greendale and Suncrest crosswalks during peak school hours.
7. Reinstate crosswalk striping at Junior and University: signs exist but striping was covered over with new pavement. Add a 'yield to pedestrian' sign to encourage drivers to pause at the crosswalk.

avg # passing cars
before pedestrian can cross



Time when pedestrian arrived at crossing

Time	Avg # cars
7:21 - 7:25	3.0
7:26 - 7:30	10.0
7:31 - 7:35	9.0
7:36 - 7:40	1.0
7:41 - 7:45	1.4
7:46 - 7:50	2.6
7:51 - 7:55	3.7
7:56 - 8:00	4.5
8:01 - 8:05	4.5
8:06 - 8:10	14.8
8:11 - 8:15	11.3
8:16 - 8:20	13.5
8:21 - 8:25	22.7
8:26 - 8:30	10.3

On average, between 1.2 and 22.7 cars pass before pedestrians walking to school are able to cross Collins Ferry Road. Cars were counted during students' regular walks and bike rides to school, with families crossing at Hillview-Greendale, Lawnview and Suncrest Elementary bus lane (both entrance and exit).

Based on traffic observations at the school (9/13 and 9/15), a 13-second or longer natural gap in traffic occurs on average every 5 minutes between 8:10 and 8:30. It takes 13 seconds for a child to cross Collins Ferry Road at ordinary walking pace: in practice, however, families sprint.

The closer to 8:30 it is, the more difficult it is for a pedestrian to cross Collins Ferry due to increased south-bound traffic from parents who have finished dropping off children at school.

It's helpful for families walking to school when considerate drivers stop to help them cross Collins Ferry Road.

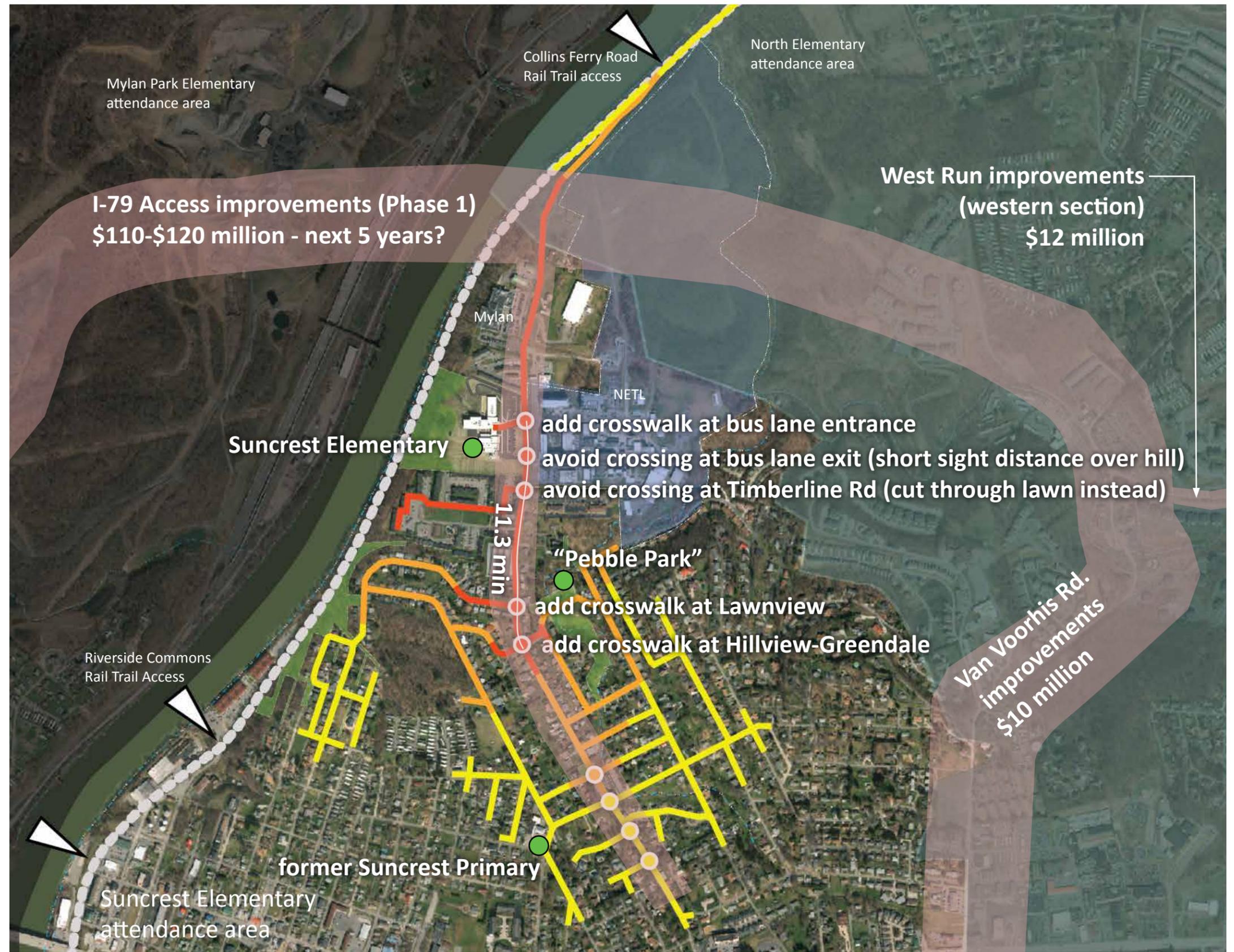
Suggestion for Walkers

Walkers should wear bright colors and wait for a considerate driver or 13-second+ gap in traffic: from the bus entrance lane at Suncrest, no cars visible on the hill. The bus exit lane is not recommended for crossing due to the short sight distance for drivers.

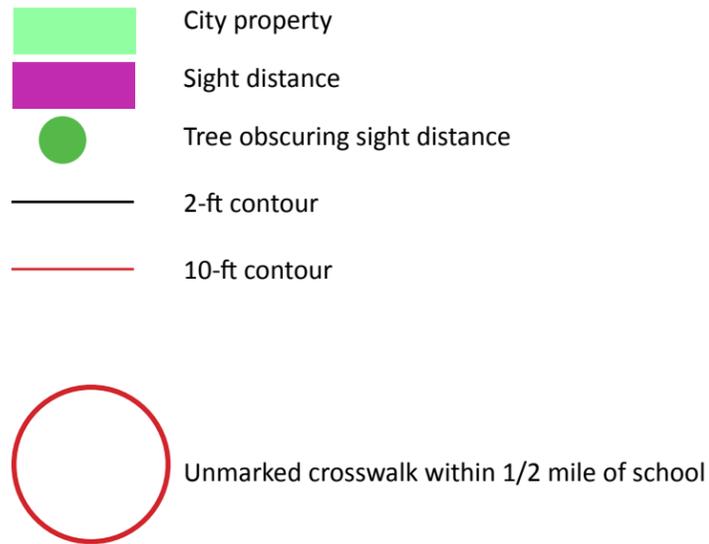
Walkers should plan to arrive at school early. Suncrest Elementary staff could encourage walkers not enrolled in Kidematics by opening the Library to walkers only from 8:00-8:10, similar to the afternoon dismissal policy of keeping walkers inside until bus riders and car riders have been dismissed.

- Within 1 mile walking distance
- Unmarked crosswalk within 1 mile
- Within 3/4 mi walking distance
- Unmarked crosswalk within 3/4 mile
- Within 1/2 mi walking distance
- Unmarked crosswalk within 1/2 mile
- Rail trail
- Rail trail access point
- City / School Board property
- US DOE property (NETL)
- North Elementary attendance
- Skyview / Mylan Park attendance
- Proposed road improvements (MMPO, 2016)
- Playground, existing

The highlighted streets (red, orange and yellow) fall within 1 mile walking distance of school, and represent the existing catchment area for potential walkers.



Possible Crosswalk Locations



The wider radius at the intersection of Lawnview and Collins Ferry Road makes it difficult as a pedestrian to find a safe place to wait to cross.

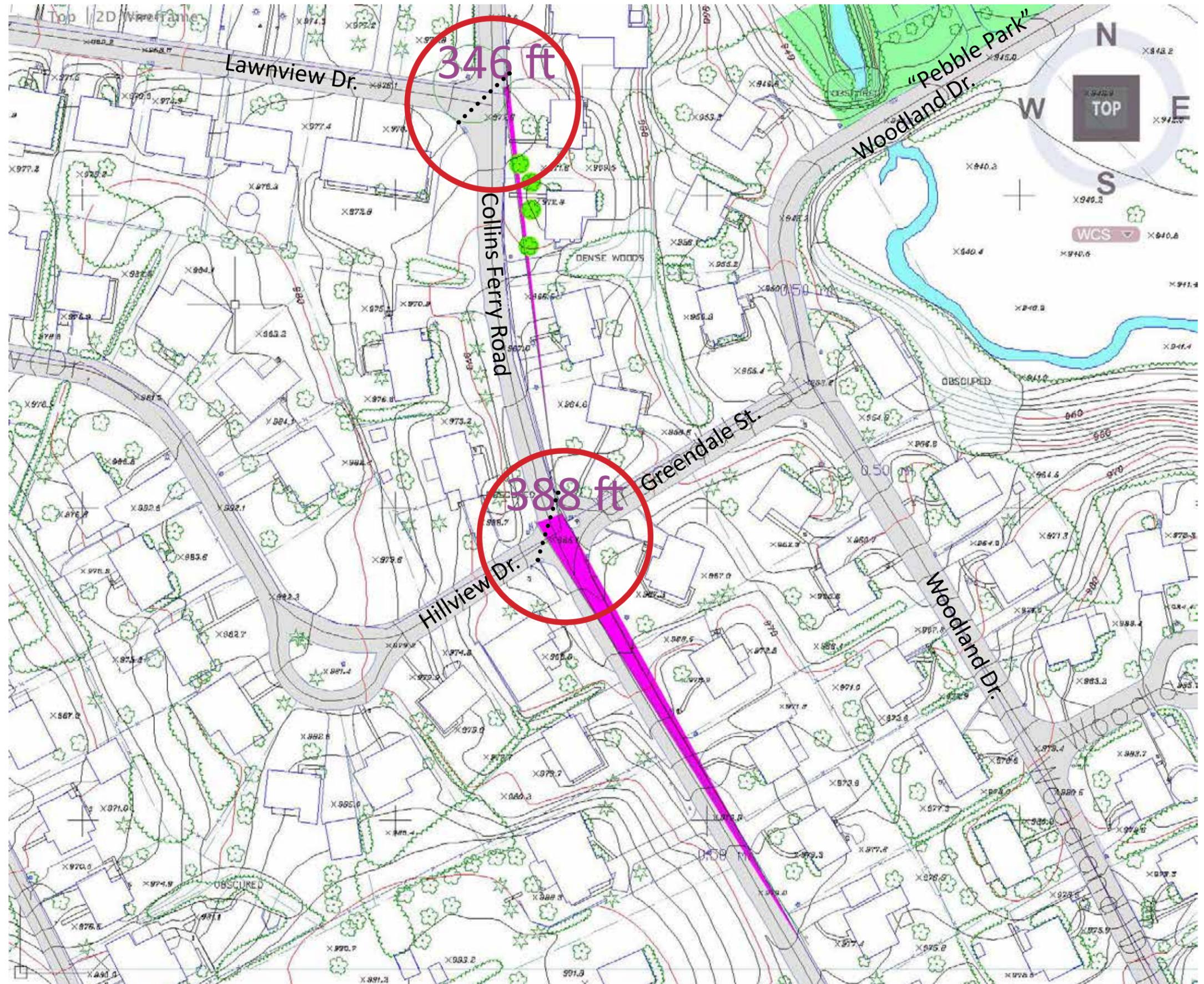
Walking at child's speed of 3.0 ft/sec, families need 18.6 seconds to cross Collins Ferry Road at Hillview Greendale (56 ft) or 17.3 seconds to cross at Lawnview (52 ft).

The limited sight distances at both locations mean that a car traveling at 30 mph can cover 44 feet per second, or the length of these sight triangles in 7.8 - 8.8 seconds. A speeding car at 40 mph can cover the sight triangle distance in 5.9 to 6.6 seconds.

The following table summarizes stopping distance - but depends on a 1.5 second reaction time. A distracted driver (coffee, kids in back seat, late for work) poses additional hazards.

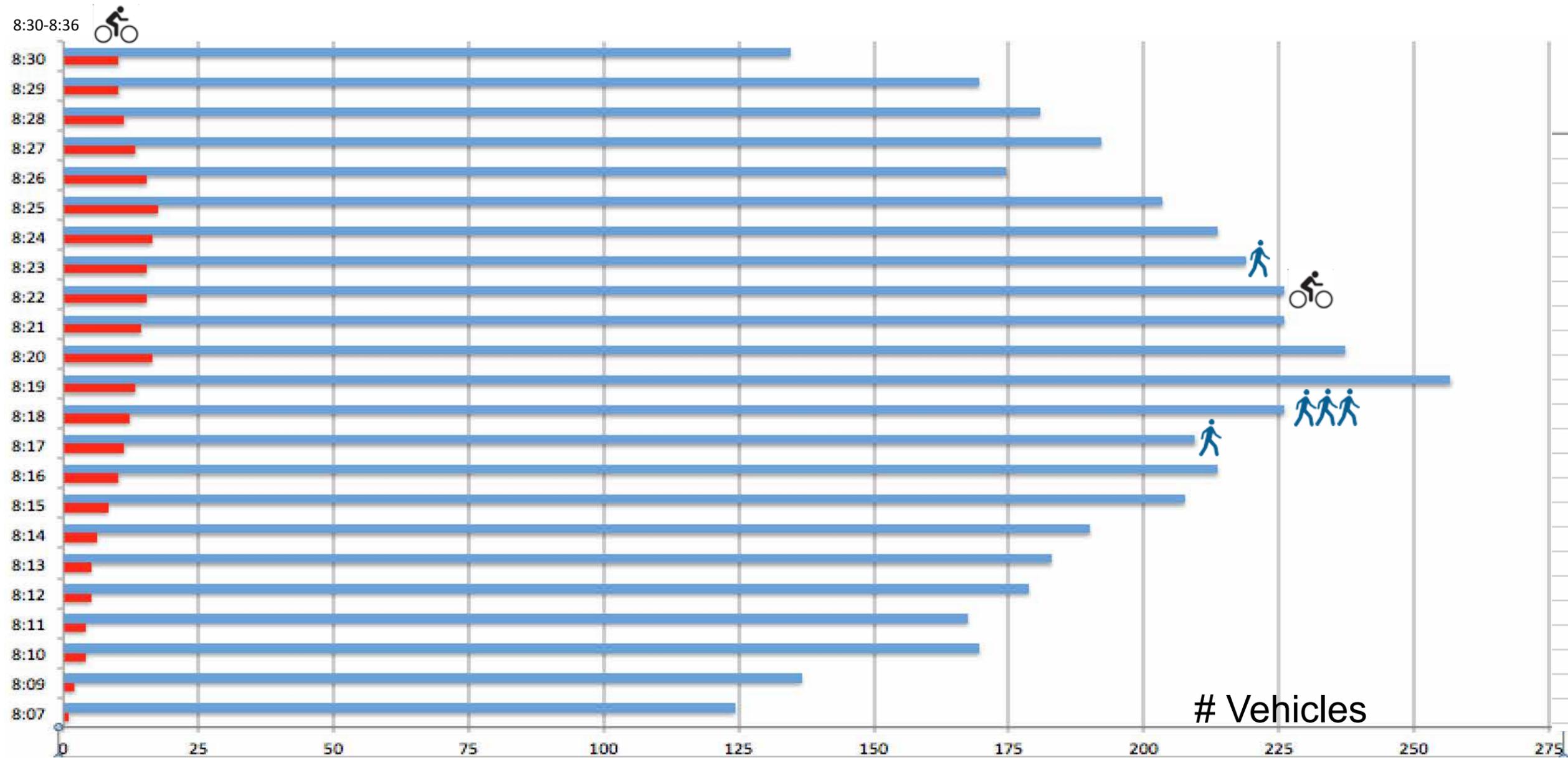
speed		stopping distance
20 mph	= 29.3 ft/sec	63 ft
25 mph	= 36 ft/sec	85 ft
30 mph	= 44 ft/sec	109 ft
35 mph	= 51.3 ft/sec	136 ft
40 mph	= 58.7 ft/sec	164 ft
45 mph	= 66 ft/sec	196 ft

It is unreasonable to expect a child to travel at an adults average jogging speed (5-6 mph) to cross a busy road on the way to school. Families must trot at 8.5 ft/second or 5.8 mph to be able to cross at Hillview-Greendale "while the coast is clear". At Lawnview, families must travel even faster, at 6.0 mph or 8.8 ft/sec to cross safely.



*https://nacto.org/docs/usdg/vehicle_stopping_distance_and_time_upenn.pdf

Arrival time at Suncrest Elementary



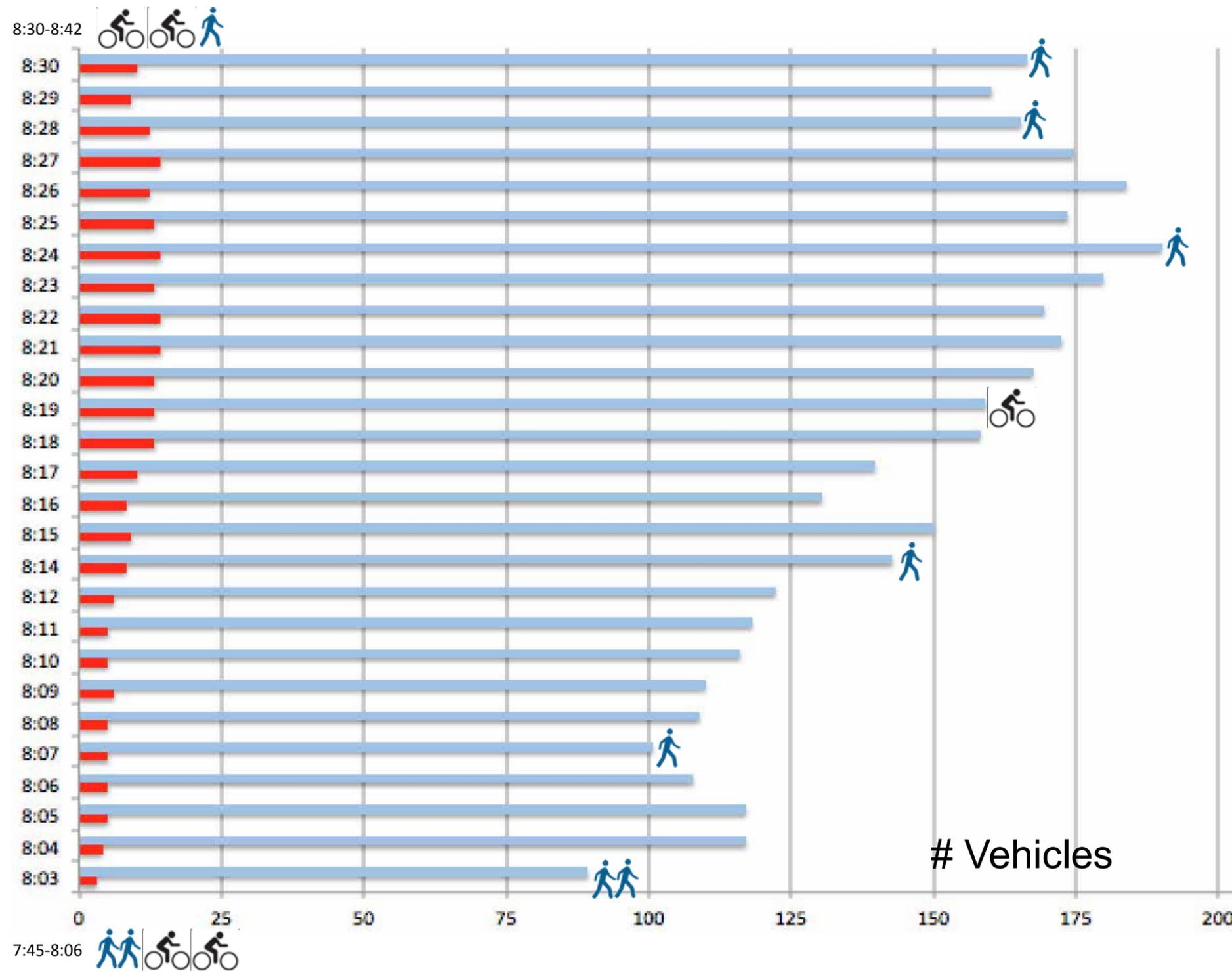
7:45-8:06  

Summary of how many cars / trucks pass a walker during 11.3 minutes on Collins Ferry, adjusted for a range of arrival times. Arriving at 8:07, 124 cars and one large truck pass a walker. Arriving at 8:19, however, 257 cars and 14 large trucks/buses pass a walker during the time it takes to walk 11.3 minutes on Collins Ferry.

-  Passing cars in 11.3 min 9/13/17
-  Passing trucks and buses in 11.3 min 9/13/17
-  Pedestrians observed 9/13/17
-  Cyclists observed 9/13/17

Wednesday walk to school: Vehicles passing on Collins Ferry Road

Arrival time at Suncrest Elementary



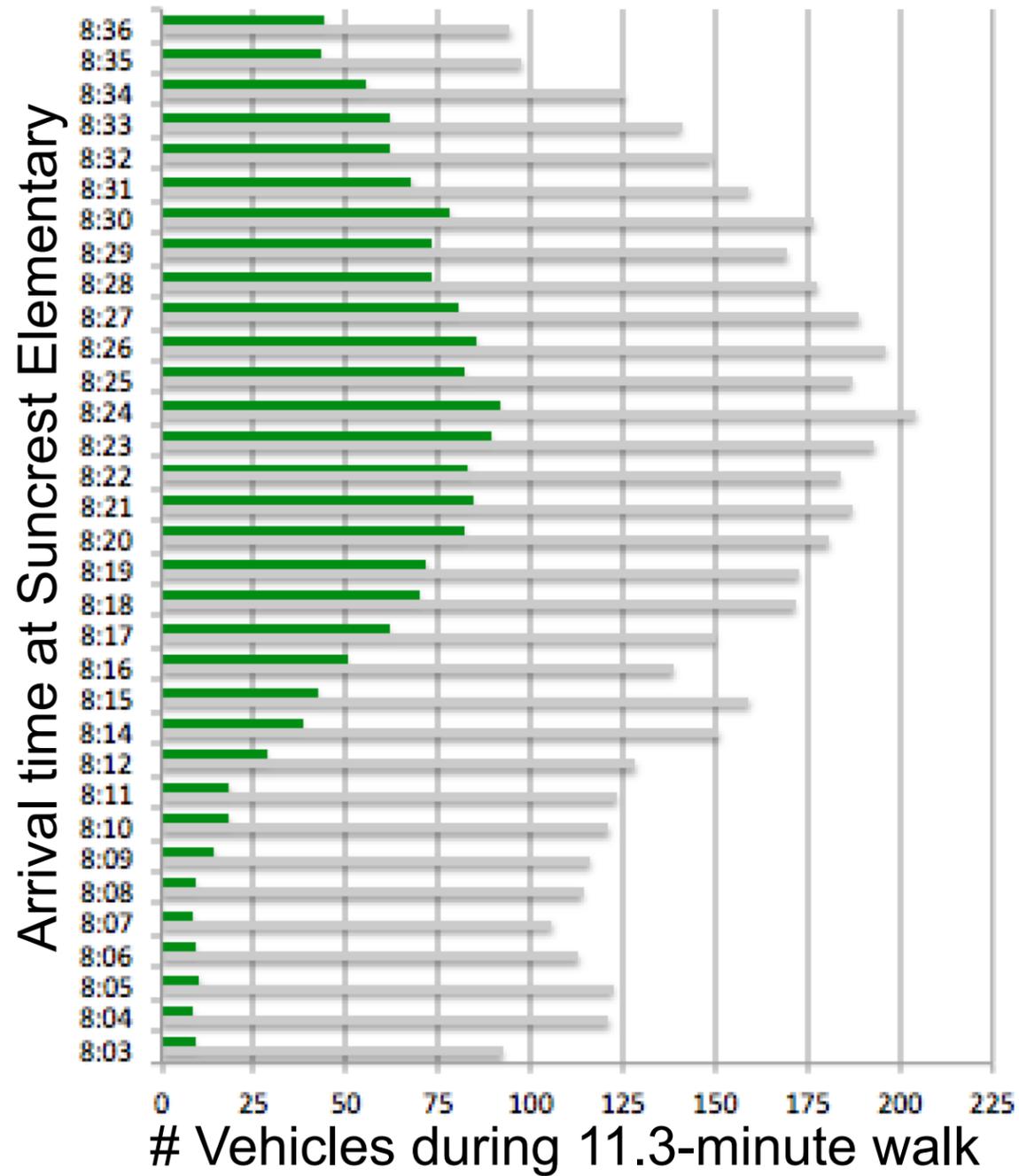
Arrival time	11.3-minutes large vehicles	11.3-minutes cars
8:03	3	89
8:04	4	117
8:05	5	117
8:06	5	108
8:07	5	101
8:08	5	109
8:09	6	110
8:10	5	116
8:11	5	118
8:12	6	122
8:14	8	143
8:15	9	150
8:16	8	130
8:17	10	140
8:18	13	158
8:19	13	159
8:20	13	167
8:21	14	173
8:22	14	170
8:23	13	180
8:24	14	190
8:25	13	174
8:26	12	184
8:27	14	175
8:28	12	165
8:29	9	160
8:30	10	166
8:31	9	150
8:32	8	141
8:33	9	131
8:34	9	116
8:35	7	90
8:36	6	88

- █ Passing cars in 11.3 min 9/13/17
- █ Passing trucks and buses in 11.3 min 9/13/17
- Pedestrians observed 9/13/17
- Cyclists observed 9/13/17

Vehicular traffic is lighter on Fridays. At 8:07, 101 cars and 5 trucks/buses pass a walker on Collins Ferry; at traffic peak, 190 cars and 14 trucks/buses pass, which is 19-26% less traffic than measured on a Wednesday.

Suggestion: Encourage families new to walking or biking to first try it early on Friday mornings; schedule group walks and bike rides for 7:45-8:00 am.

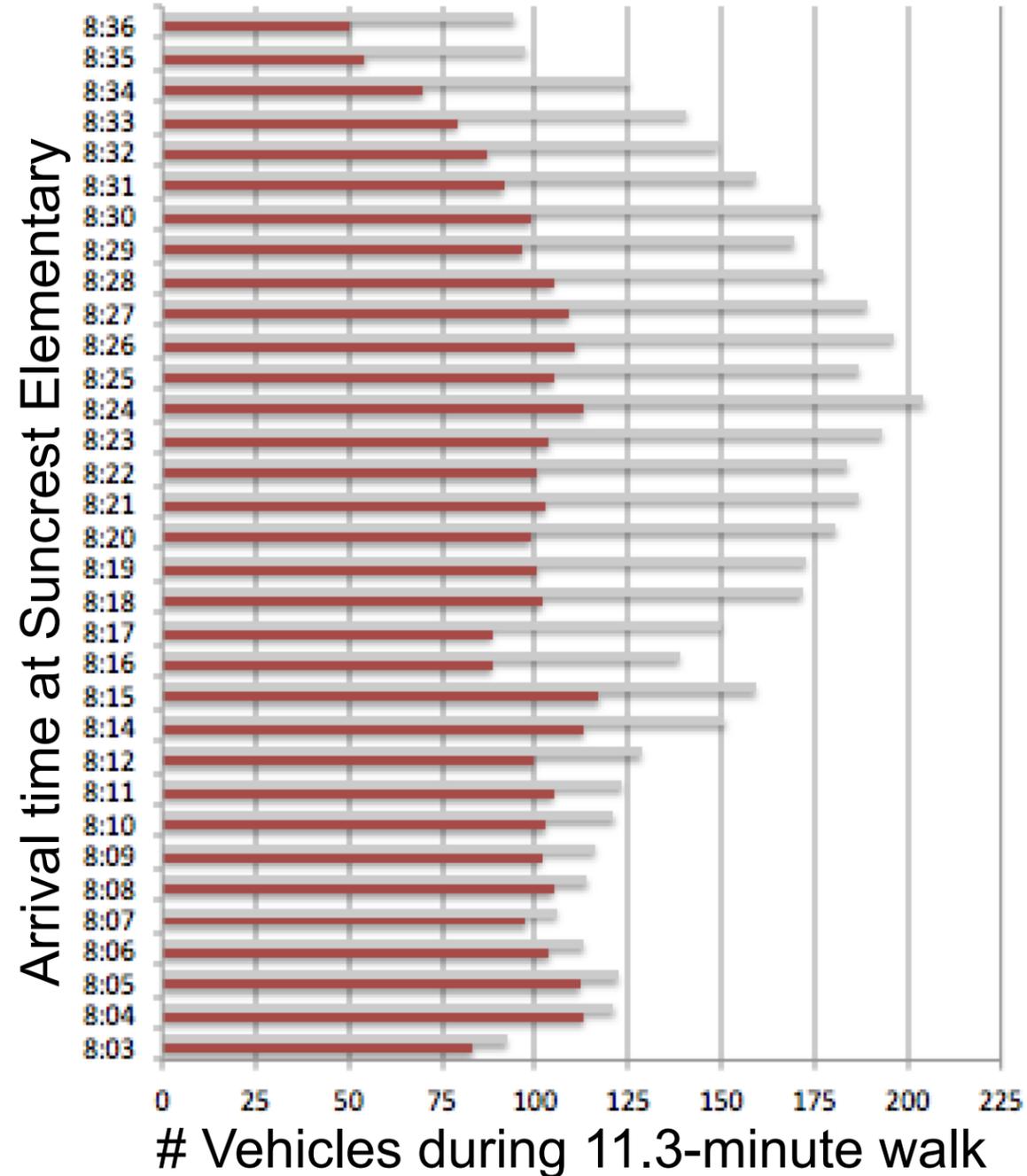
Friday walk to school: Vehicles passing on Collins Ferry Road



South-bound vehicles 9/15/17*

Total vehicles 9/15/17

*after 8:09 am, south bound vehicles are almost all parents; only 2 non-parent south bound cars and 2 south bound trucks were noted (approaching school from Mylan / NETL) on 9/15/17.



North-bound vehicles 9/15/17

Total vehicles 9/15/17

Arrival Time	Total vehicles	South Bound vehicles	North bound
8:03	92	9	83
8:04	121	8	113
8:05	122	10	112
8:06	113	9	104
8:07	106	8	98
8:08	114	9	105
8:09	116	14	102
8:10	121	18	103
8:11	123	18	105
8:12	128	29	100
8:14	151	38	113
8:15	159	42	117
8:16	139	50	88
8:17	150	62	88
8:18	172	70	102
8:19	173	72	101
8:20	181	82	99
8:21	187	84	103
8:22	184	83	101
8:23	193	89	104
8:24	204	91	113
8:25	187	82	105
8:26	196	85	111
8:27	189	80	109
8:28	178	73	105
8:29	170	73	97
8:30	177	78	99
8:31	159	68	91
8:32	149	62	87
8:33	141	62	79
8:34	125	55	70
8:35	98	43	54
8:36	95	44	50
avg	149	52	97

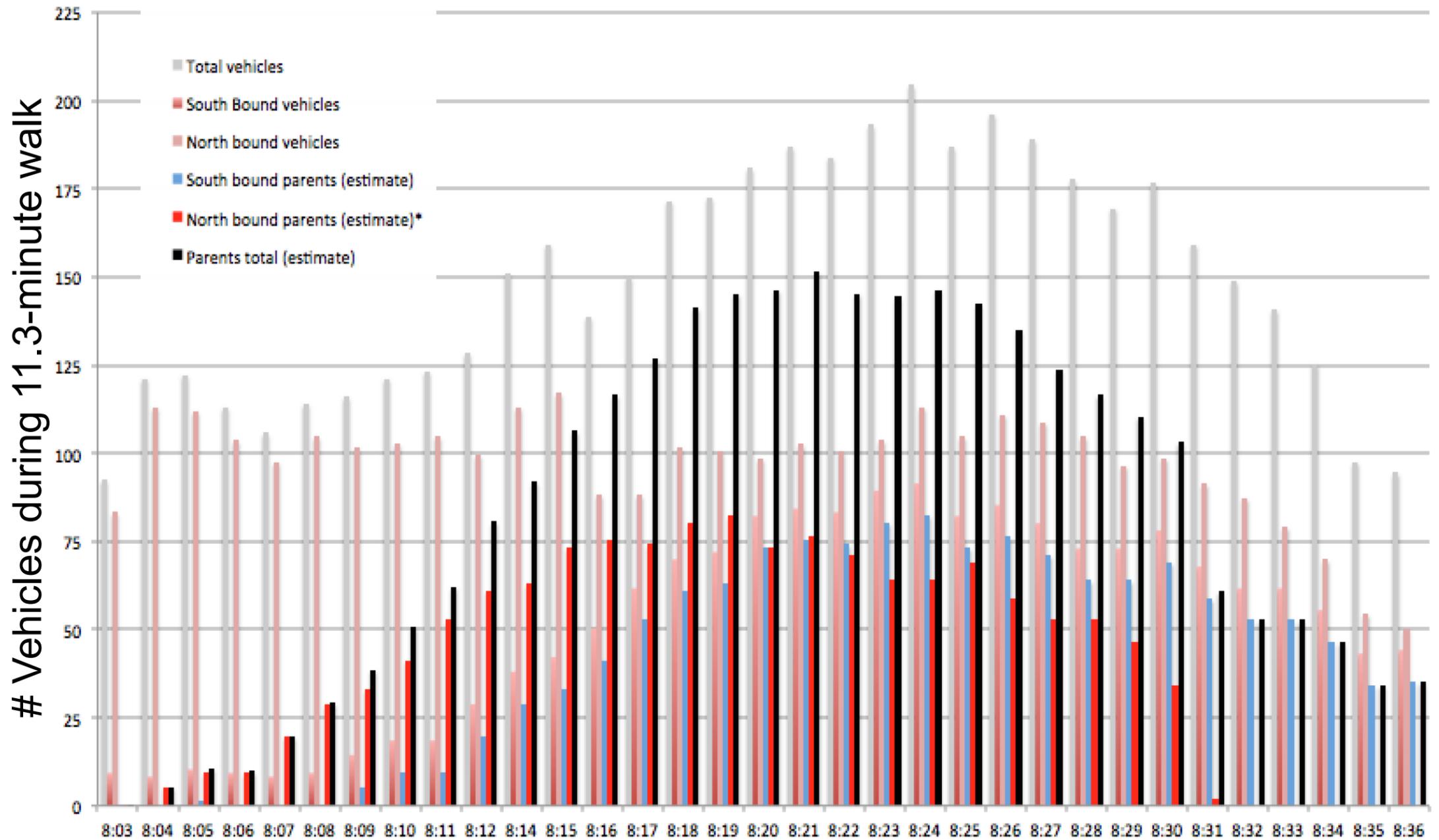
Most of the traffic along Collins Ferry during morning rush hour is northbound (red). Walkers arriving at Suncrest Elementary between 8:03-8:36 should expect an average of 97 northbound vehicles to pass them *from behind* on the Collins Ferry Road sidewalk.

Directionality of traffic during 11.3 minutes on Collins Ferry

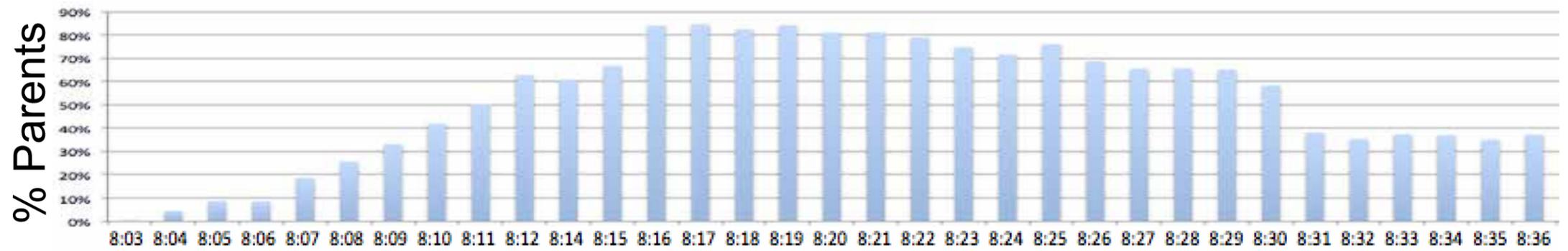
Arrival Time	Total vehicles	South Bound vehicles	North bound vehicles	South bound parents (estimate)	North bound parents (estimate)*	Parents total (estimate)	Parents as % of total (estimate)
8:03	92	9	83	0	0	0	1%
8:04	121	8	113	0	5	5	4%
8:05	122	10	112	1	9	11	9%
8:06	113	9	104	0	9	10	9%
8:07	106	8	98	0	20	20	19%
8:08	114	9	105	0	29	29	26%
8:09	116	14	102	5	33	39	33%
8:10	121	18	103	9	41	51	42%
8:11	123	18	105	9	53	62	50%
8:12	128	29	100	20	61	81	63%
8:14	151	38	113	29	63	92	61%
8:15	159	42	117	33	73	106	67%
8:16	139	50	88	41	75	117	84%
8:17	150	62	88	53	74	127	85%
8:18	172	70	102	61	80	141	82%
8:19	173	72	101	63	82	145	84%
8:20	181	82	99	73	73	146	81%
8:21	187	84	103	75	76	152	81%
8:22	184	83	101	74	71	145	79%
8:23	193	89	104	80	64	144	75%
8:24	204	91	113	82	64	146	72%
8:25	187	82	105	73	69	142	76%
8:26	196	85	111	76	59	135	69%
8:27	189	80	109	71	53	124	65%
8:28	178	73	105	64	53	117	66%
8:29	170	73	97	64	46	110	65%
8:30	177	78	99	69	34	103	58%
8:31	159	68	91	59	2	61	38%
8:32	149	62	87	53	0	53	35%
8:33	141	62	79	53	0	53	37%
8:34	125	55	70	46	0	46	37%
8:35	98	43	54	34	0	34	35%
8:36	95	44	50	35	0	35	37%

8:03-8:10	113	11	102	2	18	21	18%
8:11-8:15	140	32	109	23	62	85	60%
8:16-8:22	169	72	97	63	76	139	82%
8:23-8:30	187	82	105	73	55	128	68%
8:31-8:36	128	56	72	47	0	47	37%
avg	149	52	97	43	42	84	52%

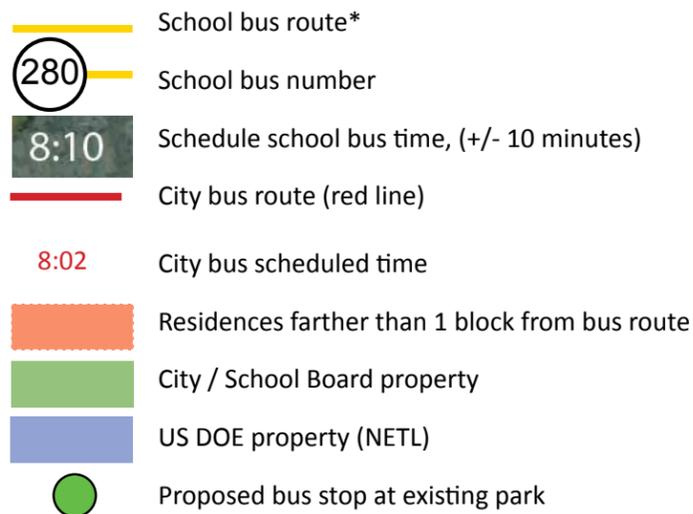
* Observed very little south-bound traffic from 8:09-3:30 that was not parents; assumed the 8:03-8:09 south bound levels represent traffic from Mylan/NETL throughout the morning rush hour. Also assumed a 5-minute drop off time for parents, to estimate north bound parent traffic, and estimated 2 north-bound parents arrived after the school bell rang at 8:30. During peak rush hour 8:16-8:22, 79%-85% of total traffic on Collins Ferry is from parents.



Arrival time at Suncrest Elementary



Parents Comprise up to **79-85%** of Rush-Hour Traffic on Collins Ferry Road



*per <http://boe.mono.k12.wv.us/cms/one.aspx?portalId=109692&pageId=758046>

Suggestions to increase bus ridership:

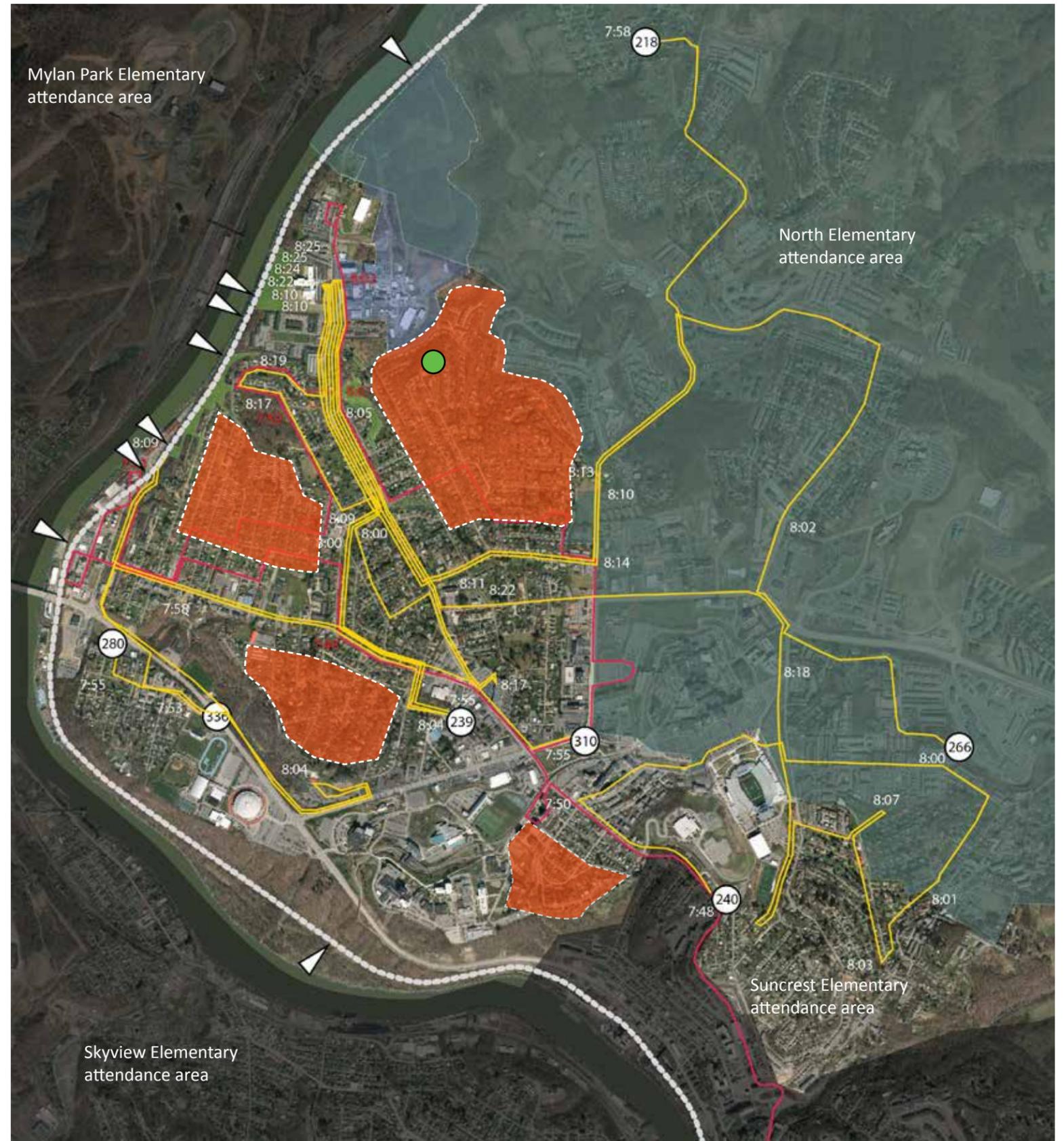
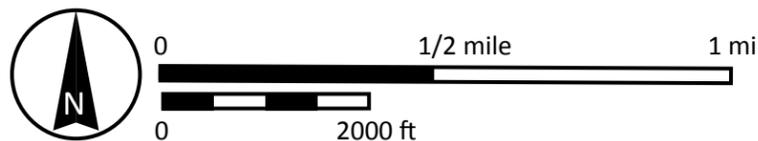
- For Fall 2018, adjust bus routes to include the neighborhoods (orange) not within a block of existing routes. It may be stops on busy streets that deter families from using the bus.

- For Fall 2018, advocate for a bus stop at municipally owned "Pebble Park" on Woodland Drive (green dot) to encourage neighborhood gathering at the playground while waiting for the bus, like at the former Suncrest Primary bus stop.

- Promote awareness among parents that much of rush hour traffic along Collins Ferry Road is due to parents picking up and dropping off children at school, and reducing traffic will make the road safer for everyone.

- Distribute map of bus routes and times to promote ridership. Encourage stay-at-home parents in particular to consider sending their child on the bus or walking, to make it safer for all families to walk.

- People will take the bus or walk when it's cheaper and faster than driving.



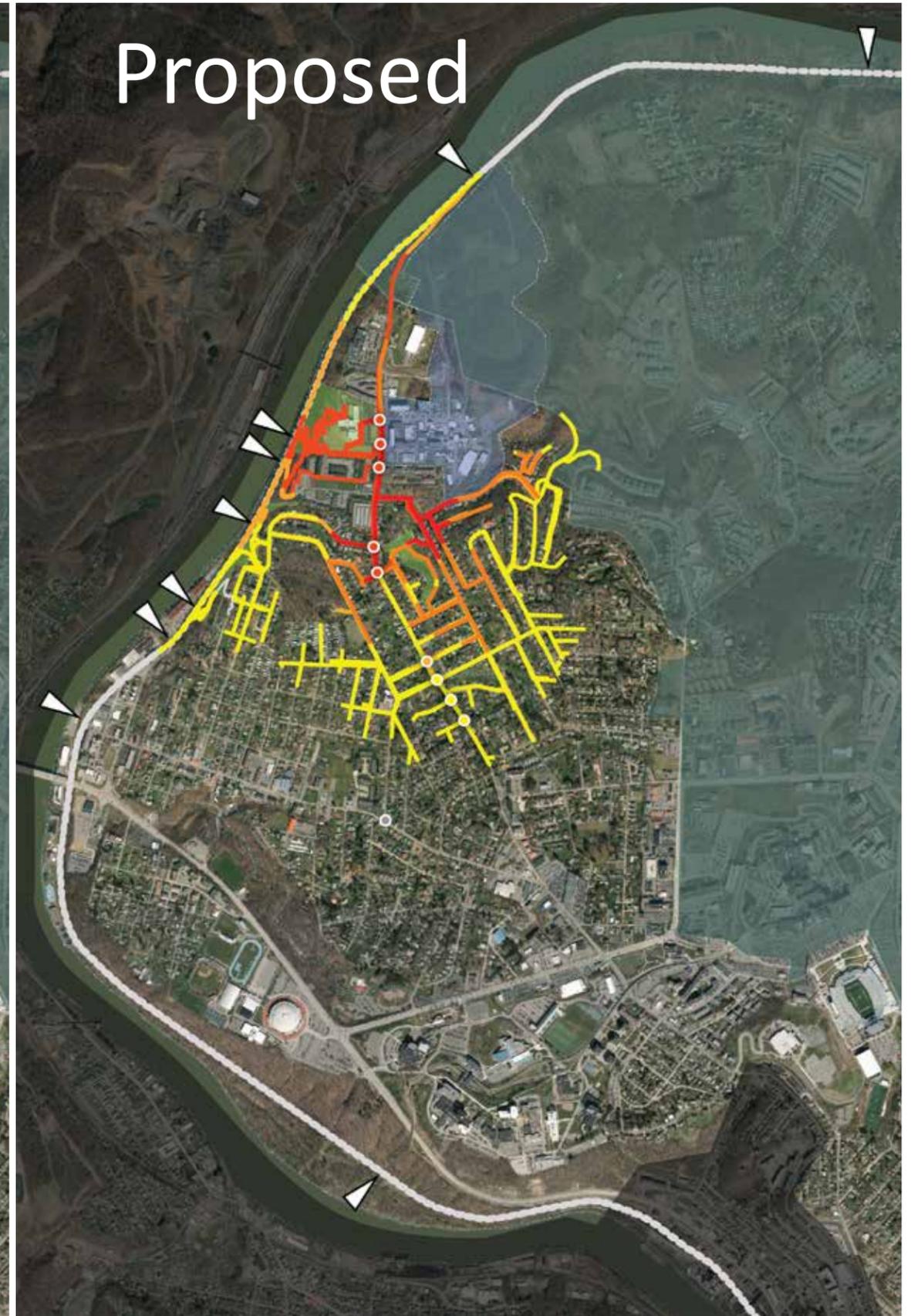
School Bus and City Bus Routes: Gaps in Service

- Within 1 mile walking distance
- Unmarked crosswalk within 1 mile
- Within 3/4 mi walking distance
- Unmarked crosswalk within 3/4 mile
- Within 1/2 mi walking distance
- Unmarked crosswalk within 1/2 mile
- Rail trail
- Rail trail access point
- City / School Board property
- US DOE property (NETL)
- North Elementary attendance
- Skyview / Mylan Park attendance

Existing



Proposed

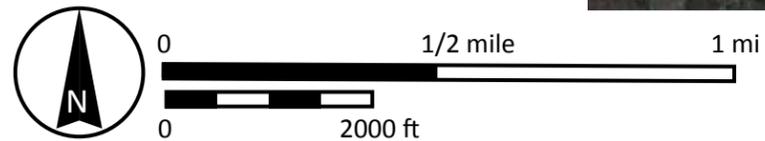


Suggestion to encourage walking to school:

- Add hiking trails and additional neighborhood access points to rail trail as shown, working within City and School Board property, to provide walkers and cyclists with alternate connections that avoid busy Collins Ferry Road.

The current gap between rail trail access points at Collins Ferry Road and Riverside Commons is 1.38 miles.

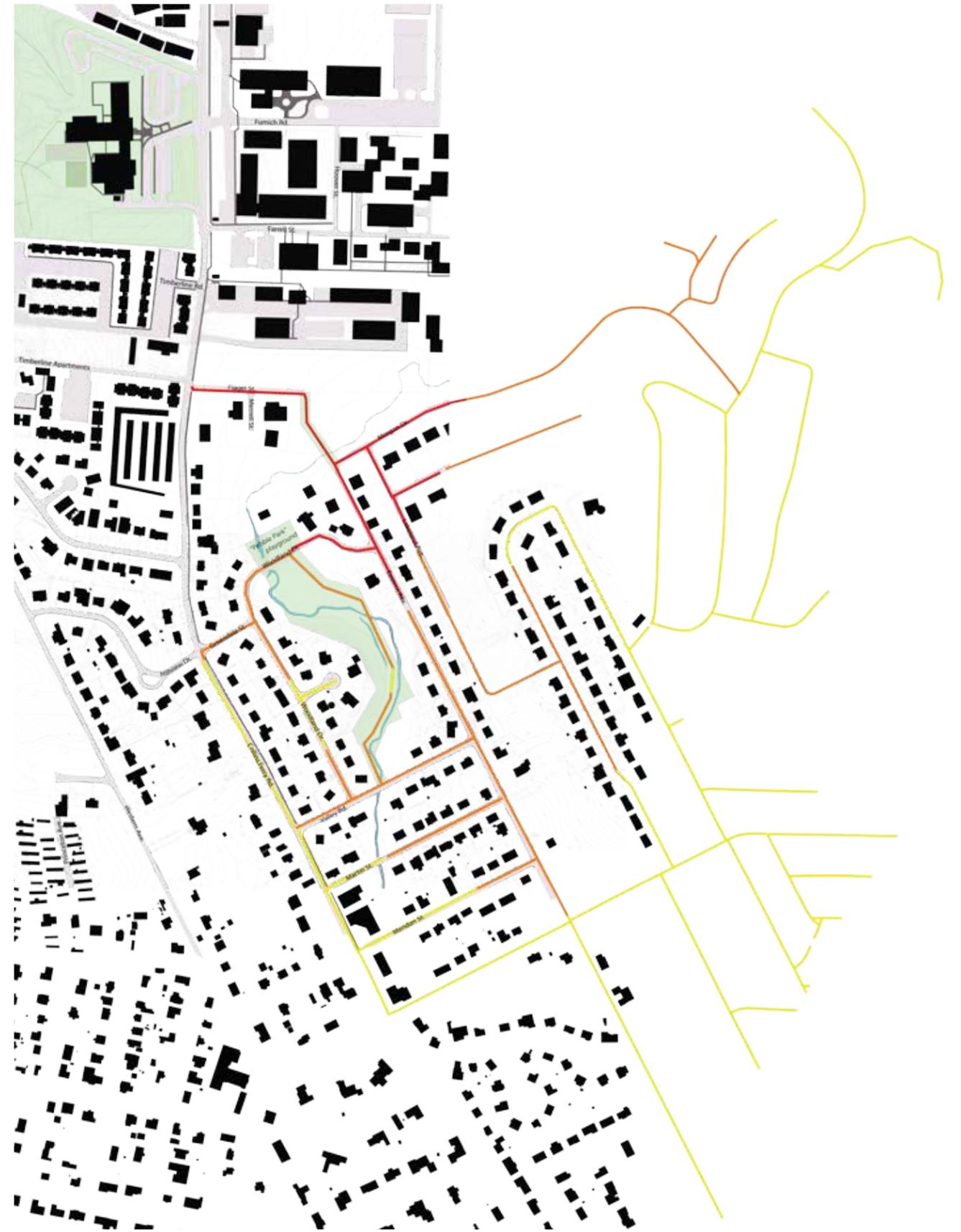
Proposed trails - all on civic property - make the walk to school safer, and increase the catchment area for 1-mile walking distance.



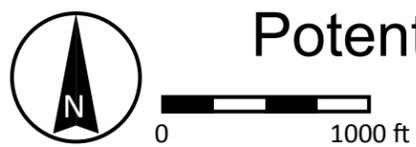
Walking and biking distance from school



Potential impact: Suncrest rail trail connections



Potential impact: Eastern Trail



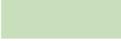


Potential impact: Crosswalks



Potential private property connections

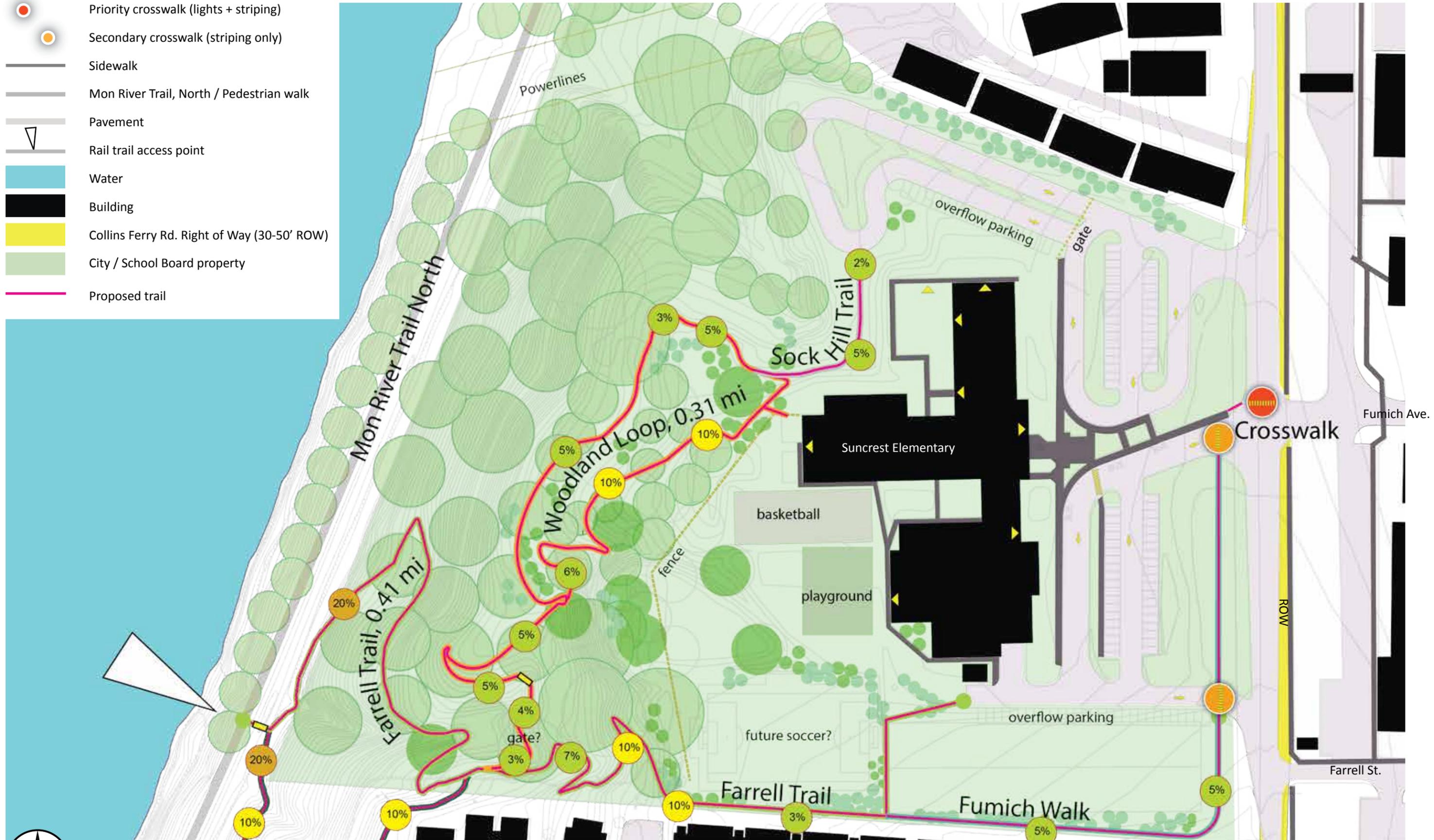


-  Priority crosswalk (lights + striping)
-  Secondary crosswalk (striping only)
-  Sidewalk
-  Mon River Trail, North / Pedestrian walk
-  Pavement
-  Rail trail access point
-  Water
-  Building
-  Collins Ferry Rd. Right of Way (30-50' ROW)
-  City / School Board property
-  Proposed trail



Civic Property & Proposed Trails

-  Priority crosswalk (lights + striping)
-  Secondary crosswalk (striping only)
-  Sidewalk
-  Mon River Trail, North / Pedestrian walk
-  Pavement
-  Rail trail access point
-  Water
-  Building
-  Collins Ferry Rd. Right of Way (30-50' ROW)
-  City / School Board property
-  Proposed trail



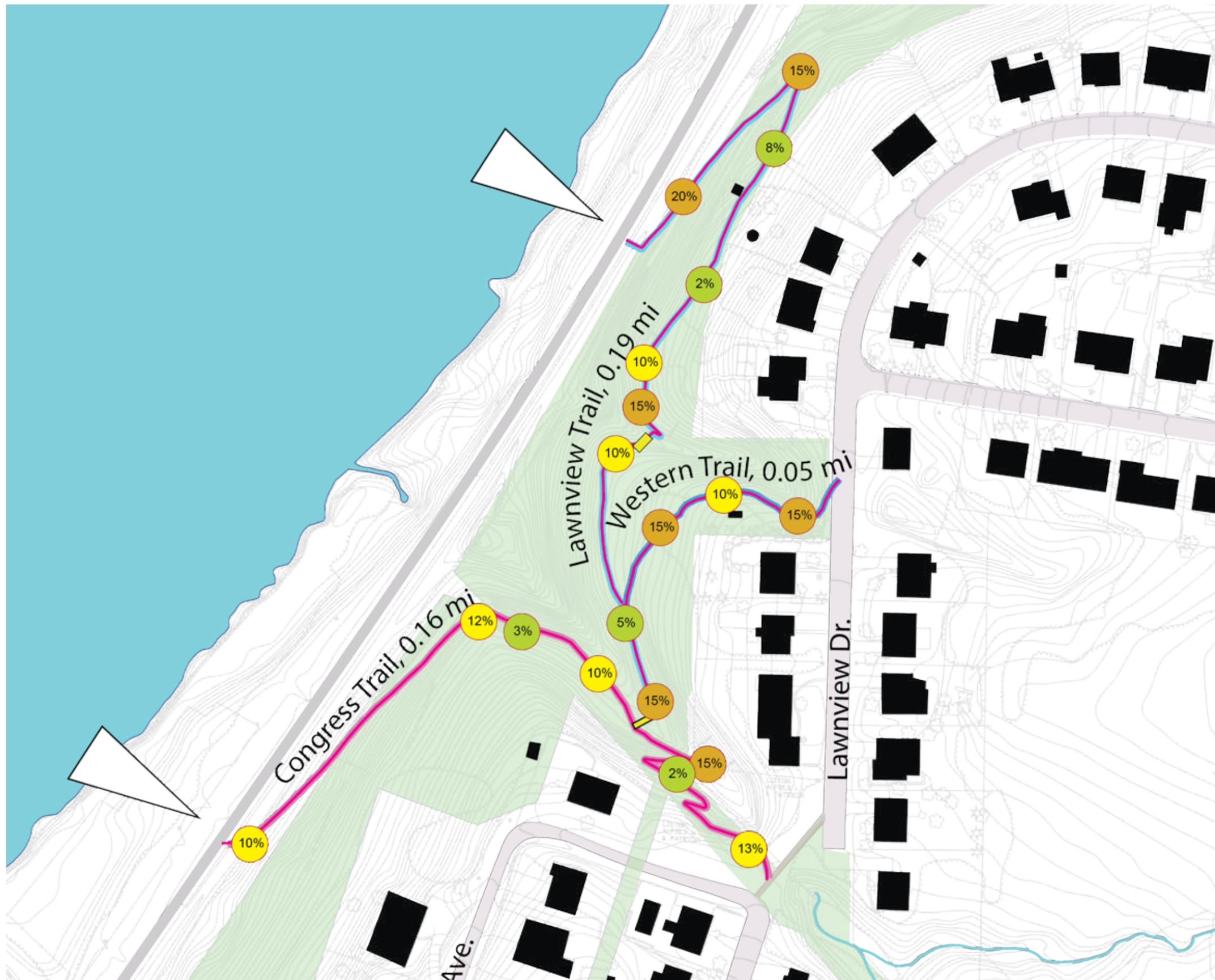
Proposed Suncrest Elementary Trails: Slope

-  Sidewalk
-  Mon River Trail, North / Pedestrian walk
-  Pavement
-  Rail trail access point
-  Water
-  Building
-  City / School Board property
-  Proposed trail

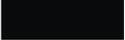
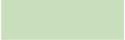


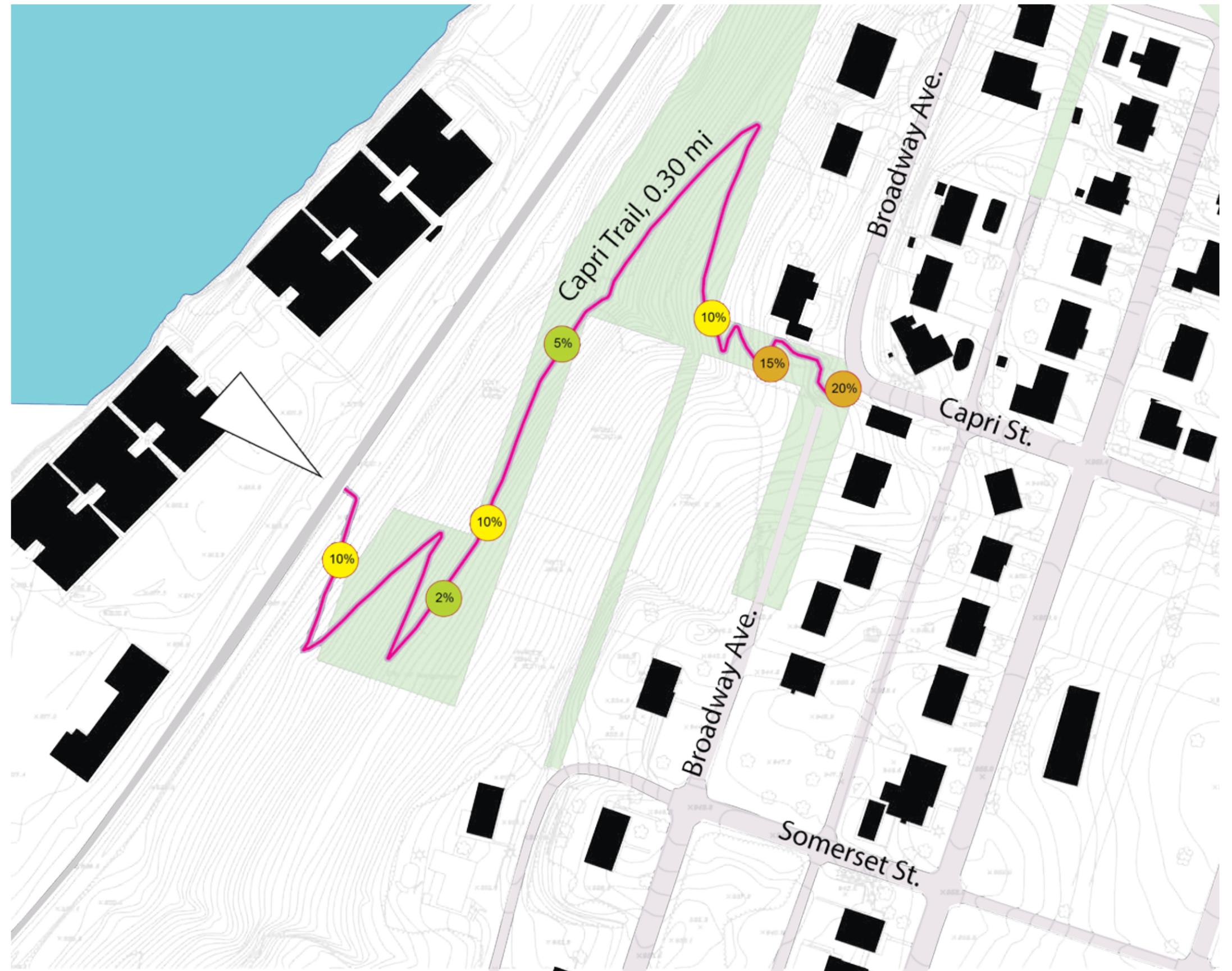
Proposed Timberline Trail: Slope

-  Mon River Trail, North / Pedestrian walk
-  Pavement
-  Rail trail access point
-  Water
-  Building
-  City / School Board property
-  Proposed trail



Proposed Congress, Lawnview & Western Trails: Slope

-  Mon River Trail, North / Pedestrian walk
-  Pavement
-  Rail trail access point
-  Water
-  Building
-  City / School Board property
-  Proposed trail



Proposed Capri Trail: Slope

	Length (linear feet)	Length (miles)	drop (feet)	Average slope	Maximum slope
Sock Hill Trail	228.86 LF	0.04 mi	6.25 FT	3%	5%
Woodland Loop	1569.00 LF	0.30 mi	99.00 FT	6%	10%
Boardwalk over intermittent drainage	16.00 LF				
Consider gate at entrance to Woodland Loop					
Fumich Walk	788.00 LF	0.15 mi	19.00 FT	2%	5%
Farrell Trail	1684.10 LF	0.32 mi	142.00 FT	8%	10%
Boardwalk over intermittent drainage	16 LF				
Boardwalk over ditch next to rail trail	16 LF				
Timberline Trail (propose to private property owner)	1430.10 LF	0.27 mi	88.00 FT	6%	20%
Lawnview Trail	991.70 LF	0.19 mi	94.00 FT	9%	20%
Bridge, Lawnview drainage: 4 ft ht	16.00 LF				
Bridge, Selwin drainage: 3 ft ht	16.00 LF				
Boardwalk over ditch next to rail trail	16.00 LF				
Western Trail	282.30 LF	0.05 mi	39.00 FT	14%	15%
Congress Trail	855.60 LF	0.16 mi	144.00 FT	17%	20%
Boardwalk over ditch next to rail trail	16.00 LF				
Capri Trail	1574.80 LF	0.30 mi	138.00 FT	9%	20%
Boardwalk over ditch next to rail trail	16 LF				
Eastern Trail	302.50 LF	0.06 mi	3.00 FT	1%	2%
Bridge over tributary of West Run, height TBD					

Totals: **7344.16** **1.44 mi** **772 FT** **11%** **20%**

Total Proposed Trail Distances, Average and Maximum Slopes

School Board

- Request permission to flag the proposed trails behind Suncrest Elementary school for further consideration: seeing how they fit on the slope will help decision-makers visualize feasibility of this proposal.

- Students in Fall course, LARC 360 Natural Systems Design, could help identify existing vegetation behind Suncrest Elementary School - especially in area of Woodland Loop.

- Students in Spring course, LARC 331 Landscape Architectural Construction II can flag and refine trail design.

- Trail construction can be by volunteers. In the first twelve months at Falling Run Greenspace, 1243 mostly student volunteers dedicated 3984 hours to construct three miles of trail.

Pedestrian Safety

- Continue to advocate for crosswalks on Collins Ferry Road at Fumich Avenue and Hillcrest Avenue / Greendale Road.

- Can sidewalk improvements for Collins Ferry Road be part of proposed \$200 million transportation bond? Or will the proposed I-79 bypass not connect to Collins Ferry Road?

City Council

- Request permission to flag the proposed trails in Suncrest neighborhoods on city property for further consideration.

- Request that Suncrest Elementary be annexed into city limits so that crosswalk, crossing guard, police presence for speeding can be considered at the municipal rather than county level.

Traffic Calming

- Students of LARC 331, Landscape Architectural Construction II, can provide design ideas for what crosswalks could look like, including traffic-calming measures such as pedestrian islands, bulbouts.

Next Steps