Meadow Ridge Elementary Walking Audit

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KENT SCHOOL DISTRICT

BICYCLE ALLIANCE OF WASHINGTON

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Promoting Walkable Communities

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Overview of Program

Communities Putting Prevention to Work: Meadow Ridge, Kent School District

Safe Routes to School (SRTS) is a growing movement to encourage and support active commuting on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture.

In an effort to improve King County children's physical health, academic performance, and personal safety, the Bicycle Alliance of Washington and Feet First are leading SRTS programs at eighteen schools in 2011. Through partnerships with King County school districts and other community organizations, the programs identify safe and unsafe areas for biking and walking, design safety improvements, educate students on safe walking and biking practices, and launch events to encourage children to walk and bike. The project spans the "5 E's" of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

The ultimate goal of this project is to create new or improved systems so that more children will walk and bike to school, thereby helping to combat childhood obesity. Childhood obesity rates have more than tripled in the past thirty years, while the number of children walking and biking to school has declined.

In 2009, less than 13 percent of U.S. students between the ages of five and fourteen walked or biked to school, compared to 48 percent in 1969.[1] Childhood obesity is associated with cardiovascular disease and diabetes.

These three Kent walking audits will be used to identify and prioritize the next steps to acquiring funds for future projects. Additionally, the recommendations can be incorporated into the school district and City of Kent's approach to SRTS programs at other schools in the district.

[1]. 2009 National Household Travel Survey, U.S. Department of Transportation

Methodology

The first step was to gain an understanding of where students live, where they are coming from in the morning, and where they are going to in the afternoons. This information was gathered from the district as well as from teachers and staff at the school. The second step of this program was to meet with community stakeholders including teachers, staff, PTA members, and other community partners, if available.

Each school's neighborhood was visited and "ground-truthed" (map data was compared with in-person observations). Notes and photographs were taken on pedestrian infrastructure-related assets and issues. Based on these observations, points of interest were chosen and maps were prepared for the community walking audits.

Dates were set for the community walking audits based on availability of the Kent School District participants, community partners, and primary school contacts. The Meadow Ridge Elementary audit took place on Tuesday May 10, 2011. The audit began at the end of the school day to observe the dismissal process, and lasted 1.5 hours. Audit participants were given maps, clipboards, and digital cameras. They recorded their observations directly onto the maps, and took photographs to go along with their written observations. Their comments and the cameras were collected after the audit, and these records were integrated into the final reports.

Community Participation

In order to gather participants for the community walking audits, Principal Bonnie Wong worked diligently with faculty and staff at Meadow Ridge Elementary to gather parents, neighbors, and concerned citizens together for the walking audit. John Vander Sluis of The Bicycle Alliance of Washington contacted Kent city planners, engineers, transportation specialists, and police officials to participate.

Participation for the Meadow Ridge walking audit was impressive. A dedicated group of individuals representing the city, school district, and community turned out to join on the walk, discuss their concerns and work together to improve the safety and well-being of the Meadow Ridge students. It was clear from the group that much work has already been done to address the specific concerns of the 108th Ave SE overpass, and that there is support to continue working to improve the pedestrian environment.

Meadow Ridge Elementary Community Walking Audit participants included:
Meadow Ridge Principal – Bonnie Wong
Parent – Donna Hsu
Parent – Laurie Gowin
Parent – Gina Sims
Parent – Jeff East
Parent – Susan East
Kent School District Transportation Department, CPPW Lead – Becky Benedict
Kent School District Transportation Department – Doreen Stewart
Kent School District Transportation Department – Don Walkup
City of Kent, Public Works Department – Steve Mullen
City of Kent, Public Works Department – Cathy Mooney
City of Kent, Police Department – Debra Leroy
City of Kent, Police Department – Cesi Velez
Meadow Ridge Teacher – Chris Gonzales
King County Public Health – Donna Oberg

Approximately eighteen students, many of whom often walk home daily joined the walk.

Bicycle Alliance of Washington, Safe Routes to School Program Manager – John Vander Sluis

Feet First Active Communities Mapping Specialist – Gia Clark

Overview of School

Meadow Ridge Elementary serves approximately 500 kindergarten through fifth-grade students from southern Kent. The school has a rich cultural diversity; the student body is a nearly equal mix of African-American, Asian, Hispanic, and the White students. Many are members of refugee or immigrant families. Students and school staff face particular socioeconomic challenges: nearly 75% qualify for free or subsidized school lunches, and a third are English language learners. The school is located at 27710 108th Avenue SE, Kent WA.

School drop-off and pick-up areas often pose particular difficulty for SRTS. The combination of high numbers of family vehicles, yellow bus service, pedestrians, and bicycles can make the final approach to the school difficult for students and adults alike.

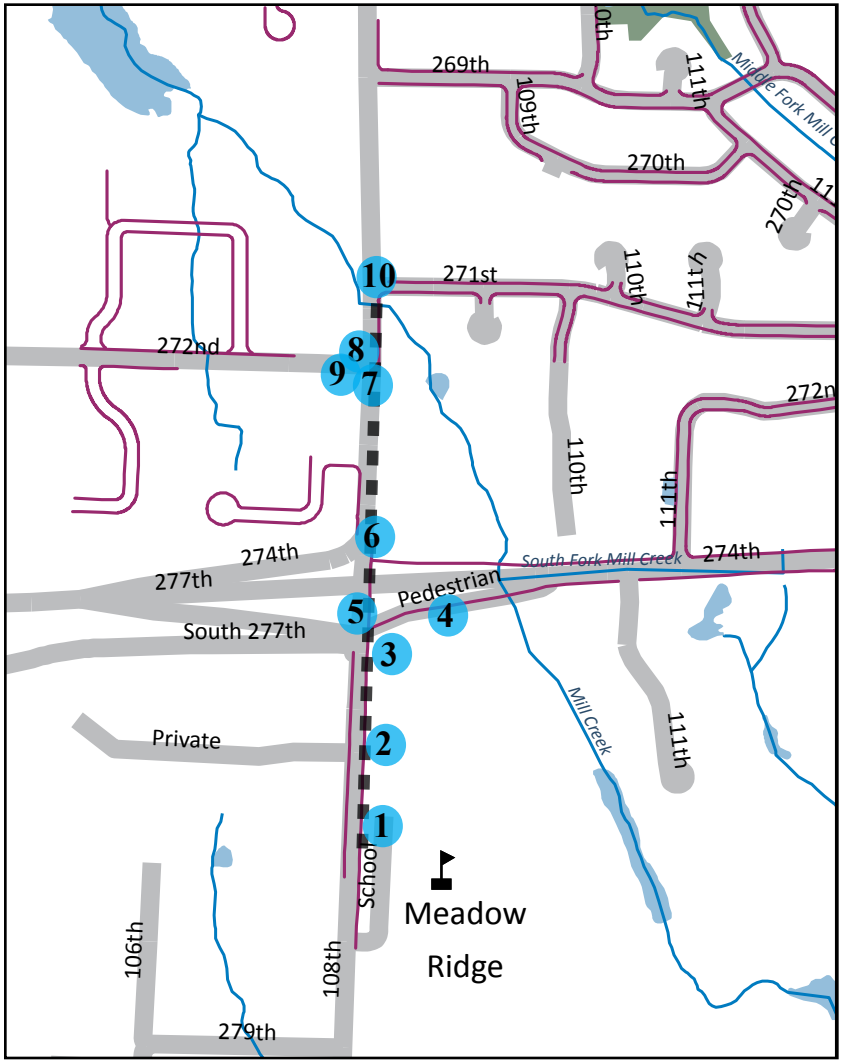
A general rule of thumb is to clearly separate different travel modes by dedicating discreet areas to bus loading, family vehicles, and bicycle/ pedestrian access. Signage and curb striping should be unambiguous, schools should distribute information that clearly states the school procedures, and adequate staffing should be provided to supervise each area.

Meadow Ridge has made many strides in this direction. The safety patrol is closely supervised by an adult. In the car pick-up area, an adult directs drivers to available curb space along pick-up area. A second adult watches the students waiting there and ensures they wait off of the sidewalk and away from traffic. Drivers seem to respect the safety patrol and the staff support. The safety patrol is outfitted with vests and flags, but could also add high-visibility hats to their uniform. All adults appeared to be in walkie-talkie contact.

While the parking lot is not designed around pedestrians, the school uses cones to effectively narrow the lane and slow drivers' speed. However, the ADA tactile strips need to be replaced on all the curb ramps.

It is outside of the scope of this walking audit to do an in-depth analysis of student drop-off and pick-up procedures for each school. However, some general observations about the school ground and drop-off/pick-up routines are noted in this report.

Field Observation Points - The numbers on the map below correspond to the field observations made by participants on the walking audit route. See the Walking Audit Field Notes (page 6) for detailed information about each location point.



Meadow Ridge Elementary Walking Audit

Walking Audit Route

The walking route examined the challenges along 108th Ave SE that students face during their walk to and from school. This route was chosen because this section of road is the direct walking option for almost all students that live north of the school. Additionally, observations and recommendations for this route can be applied to other areas with similar infrastructure barriers, as well as serve as an example of how to conduct a walking audit for other areas within the school boundary.

Walking Audit Top Observations

There was significant representation from City of Kent officials and Kent School District representatives on not only the Meadow Ridge walking audit but the other two walking audits conducted in the district. This continued commitment from multiple departments from the city and school district demonstrates institutional support to improve and create safe walking options for elementary school students and should be acknowledged as a critical component to the success of this and future projects.

The walking area immediately north of Meadow Ridge Elementary is currently unsafe for walking and biking. The primary concern is the stretch of 108th Ave SE beginning at the overpass and extending north to SE 269th St. The 108th Ave SE bridge that crosses SE 277th St was completed approximately a decade ago. However, the section of 108th Ave SE north of this bridge is a much older facility and lacks adequate pedestrian facilities. Many of the students that live in the neighborhoods north of SE 277th St have no other direct route to school other than 108th Ave SE.

While city and school district officials continue to address the concerns for pedestrian safety at the overpass and along 108th Ave SE, retrofitting this section of road with a safe walkway is not a simple matter. The city is working to improve the pedestrian environment where the overpass and access roads intersect. Current proposals include adding a crosswalk and pedestrian crossing signal on the north side of the bridge. These improvements will create a designated walking area for pedestrians as well as inform drivers that pedestrians use this location to cross. However, it is unclear that the area north of the bridge will be improved.

Walking Audit Top Recommendations

Policy - According to the City of Kent Draft Environmental Impact Statement (October, 2010), Kent is planning for an increase of an additional 25,773 households and 35,183 jobs between the 2006 base year and the 2031 planning horizon year.[2] This kind of growth provides a great opportunity to incorporate development policies that rigorously support walking and biking through complete street designs and other smart growth practices. The City of Kent's Transportation Master Plan requires new construction to accommodate pedestrians though the installation of sidewalks and lighting, and prioritizes providing pedestrian improvements around schools. Feet First recommends that pedestrian improvements leading to Meadow Ridge Elementary rank high on the city's priority list.

Walk Route Map - The current school walk route map for Meadow Ridge Elementary identifies 108th Ave SE as a route option. However, based on the walking audit, Feet First does not believe the route is safe for elementary students. We therefore recommend for the school district to remove this road from the walk route maps until a safe walkway is built here. Feet First will provide the district with an amended walk route map that uses alternative walking routes.

While Feet First aims to encourage walking whenever possible, it is also our responsibility to objectively evaluate walking conditions and note when these conditions are unsafe. We hope that through support of city and school district officials, changes can be made to improve safety for walkers along 108th Ave SE. Until these changes are made, however, Feet First does not recommend that individuals, particularly the elementary students at Meadow Ridge Elementary walk along 108th Ave SE north of the intersection with SE 274th St.

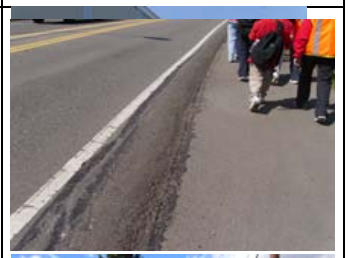
Pedestrian Safety Education –It is vitally important to teach students pedestrian safety rules and practices. Meadow Ridge Elementary physical education teacher Chris Gonzales recently went through a pedestrian and bicycle safety training. She would be an excellent resource to share her knowledge not only with the students but also with the parents/guardians and school staff.

Walking School Bus Campaign – Even though walking along 108th Ave SE is unsafe, there are opportunities to encourage students to walk to school using alternative routes. While the city works to improve the walking environment in the Meadow Ridge area, the school staff, transportation officials, and community members can begin a Walking School Bus Campaign for the students within the walk route boundary (see the proposed Walking Route Map p. 11). Walking school buses allow students to walk together between their homes and school accompanied by adults, often parent volunteers. While there may still be barriers to walking in the neighborhood, this will continue to allow walking to school while long-term infrastructure changes occur on 108th Ave SE.

[2] Draft Environmental Impact Statement, Comprehensive Plan Review and Midway Subarea Planned Action Environmental Impact Statement, City of Kent October 2010.

Meadow Ridge Elementary Walking Audit Field Notes

Field Observation Pt.	Intersection	Community Asset	Engineering	Enforcement	Education	Encouragement	Policy	Field Observations	Recommendation	Image
1	108th Ave SE (E side of street from school to bridge)			x	x			The property immediately north of the school grounds has many overgrown bushes that are blocking the sidewalk.	Work with the property owner to cut back overgrown shrubs to improve pedestrian visibility and experience. This is a simple and affordable way to improve pedestrian safety and the walking experience.	
2	108th Ave SE (E side of street from school to bridge)		x		x			The sidewalk along 108th Ave SE extends north until SE 274th Way. While the sidewalk is new there is no buffer between the sidewalk and the fast moving traffic along 108th Ave SE. Traffic gets particularly busy at the intersection of SE 274th Way on and off ramps.	Work with city officials and traffic engineers to design and dedicate a pedestrian walking area that has a physical buffer area between vehicle traffic and pedestrians. Buffer options may include planting strips, bicycle lanes, etc. School staff, parents and guardians can begin an encouragement campaign or walking school bus to walk with students to school on other routes that avoid the majority of 108th Ave SE. Additionally, it is highly recommended to supply brightly colored vests, bags, and umbrellas to students to improve visibility.	
3	108th Ave SE & south off ramp from SE 274th Way		x					There is significant traffic volume exiting from the 274th Way off-ramp. Drivers turning left off of the exit ramp to travel north on 108th Ave SE often become impatient to turn, squeezing into traffic at high speeds. Turning visibility is limited due to the traffic that backs up from cars turning left onto the 274th Way on-ramp.	Work with city officials and traffic engineers to address the feasibility of improving the exit ramp from SE 274th. This location should be addressed in conjunction with engineering and traffic changes all along 108th Ave SE	
4	Pedestrian Access from SE 274th Way		x		x			The area provides pedestrian access to a handful of houses in the adjacent neighborhood but there is not a pedestrian crossing to get across SE 274th Way. Grass and shrubs along the path are often overgrown.	Install a sign to notify pedestrians that there is no connectivity across SE 274th Way. Work with city to ensure that regular maintenance of this area occurs. Contact _____ At the City of Kent department of _____.	

Field Observation Pt.	Intersection	Community Asset	Engineering	Enforcement	Education	Encouragement	Policy	Field Observations	Recommendation	Image
5	108th Ave SE & on ramp to 274th		x					The on-ramp to 274th is a busy intersection. South bound traffic turning right onto the on-ramp travel at high speeds and do not slow down to take the right hand turn. Due to the position of this lane at the top of a hill, sight lines are limited for north bound traffic turning left onto the on-ramp. Drivers can often not see approaching cars.	The city is working to address the many concerns of this location, possible solutions include: -Extend the corner curb and reduce the turning radius for cars turning right from 108th Ave SE onto 274th Way. -Work with city officials to determine the appropriate location for a crosswalk. The crosswalk must be well marked. Ideally there would be not only advance warning signs in both directions for drivers, but also an overhead lighting system that will alert drivers from further away.	 
6	108th Ave SE (E side of street from bridge to 272nd)		x					The sidewalk on 108th Ave SE turns into a paved shoulder immediately after the bridge. The area between the pedestrian and the vehicle traffic narrows compromising pedestrian safety.	Work with city and traffic engineers to install both physical and visual barriers which would delineate a more safe walking area for pedestrians. Short term solutions include the addition of turtles and other reflective cones along the edge of the paved shoulder. Long term solutions will be to install a raised sidewalk with planting strip thus separating pedestrians and traffic by at least 3 feet.	 

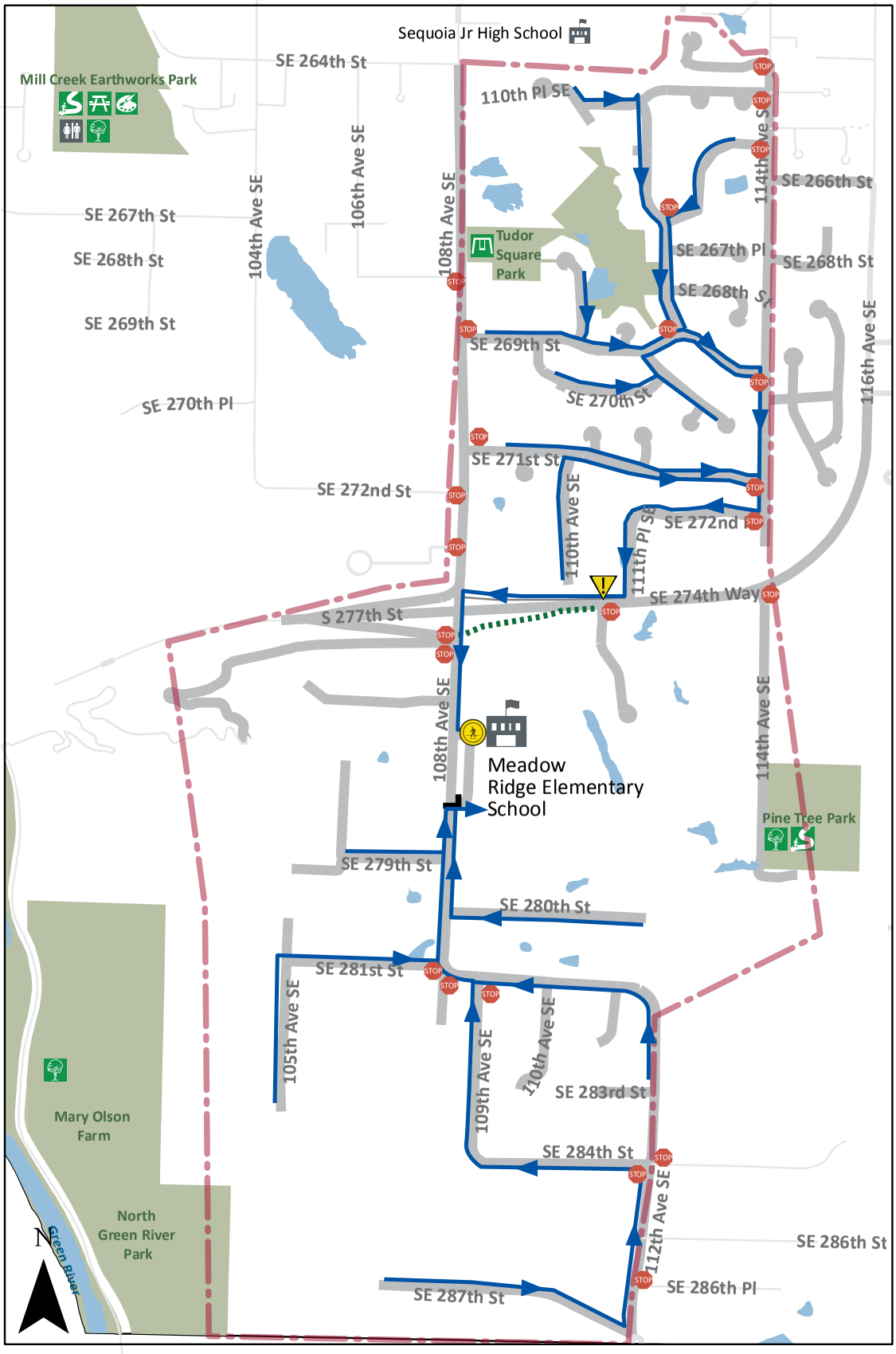
Field Observation Pt.	Intersection	Community Asset	Engineering	Enforcement	Education	Encouragement	Policy	Field Observations	Recommendation	Image
6	108th Ave SE (E side of street from bridge to 272nd)							Due to truck height and the average height of elementary students, truck drivers have a difficult time seeing students. This makes it all the more important to create clear physical and visual divisions between vehicle traffic and pedestrian traffic along 108th Ave SE.		
7	108th Ave SE 272nd							This intersection is very unsafe for pedestrians to cross. Cars traveling north pick up speed as they go down the hill and have little time to react to cars turning left onto 272nd Street. The fence on the right side of the street has been hit repeatedly as cars swerve to avoid hitting the cars turning left. Pedestrians have no protection from vehicles nor is there a safe way to cross 108th Ave SE to access the neighborhood to the NW.	Work with city and traffic engineers to determine both short term and long term improvements to this intersection. Some suggestions are to install an overhead flashing light to notify drivers that there is an intersection at this location. Signs could be installed prior to reaching the intersection to warn drivers. Install rumble strips on 108th Ave SE in both directions of this intersection to alert drivers that there is a change in traffic pattern approaching. If rumble strips are added however, it is critical that a clearly delineated smooth passage is maintained for people on bikes.	
8	108th & 272nd St SE		x					Hill sightlines are bad and many students will cross to 272nd St SE at this point, not because it is a good location, but rather because it is seemingly a better location than anywhere else on this stretch of road.	When city engineers, traffic officials and planners are retrofitting 108th Ave SE this intersection should also be improved so that there is a safe crossing for pedestrians across 108th Ave SE.	
9	108th Ave SE & 272nd St SE							Hill sightlines are bad and there are no sidewalks on either side of the street. The north side of 272nd has a gully instead of a shoulder to walk along.	As this area continues to develop, prioritize sidewalk connectivity.	

Field Observation Pt.	Intersection	Community Asset	Engineering	Enforcement	Education	Encouragement	Policy	Field Observations	Recommendation	Image
10	108th Ave SE & 271st St SE							Students who live north of the school walk along 108th Ave SE		

Meadow Ridge Elementary Walking Audit Field Notes - School Grounds

Field Observation Pt.	Intersection	Community Asset	Engineering	Enforcement	Education	Encouragement	Policy	Field Observations	Recommendation	Image
	School Grounds - parent pickup area		x		x			The pick up area quickly gets congested. When parents come in and out of the parking area they do so quickly.		
	School Grounds - parent pickup area		x		x			While most of the pick-up/drop-off is well organized, students being picked up by parents will sometimes walk through the parking lot to reach the parent car instead of remaining on the official walk ways.		
	School grounds - bus loading area	x						Faculty and staff have created a number and sign system to identify the bus numbers. Students can easily identify which bus they ride. This approach has been very successful. Bus loading order differs between bus routes. Some load in the order the students will be dropped off.	One participant suggested having the students design the signs for the bus routes to help further identify their route.	
	School grounds - bus loading area	x						The bus load area is very well organized. Students must stand in line behind the painted feet.		
	School grounds - north side of property		x				x	Bushes on the north side of the school parking lot exit need to be trimmed back to allow students to walk on the sidewalk and not have to walk in the exit lane.	School maintenance should include regular trimming of these bushes so that there is always clear passage for pedestrians.	

Meadow Ridge Elementary - Walk to School Route Options



Meadow Ridge Elementary Walk Route Map - DRAFT

APPROVED
BY
KENT SCHOOL DISTRICT

Made possible by funding from the Department of Health and Human Services and Public Health - Seattle & King County

Produced by Feet First for the Bicycle Alliance of Washington's Communities Putting Prevention to Work safe routes to school program.

RECOMMENDED ROUTES ARE MARKED WITH ARROWS:
This maps shows the preferred routes for walking to school safely. Please show your child the safest routes and teach them good safety habits, such as:
1. to stop at every corner and look all ways for oncoming vehicles before crossing;
2. to walk quickly, but don't run when crossing streets;
3. to use crosswalks, stop signs, traffic signals, school patrols, and adult crossing guards;
4. where no walkways are provided, walk on the left side of the roadway as far off the travelled part of the roadway as possible, facing approaching traffic.
5. to wear bright clothing.

Key

- Walk Area
- Crosswalk
- Walk Routes
- Trail
- Adult Crossing Guard
- Student Patrol
- Pedestrians Use Caution
- Traffic Signal
- Stop Sign
- School
- Playground
- Trails
- Picnic Area
- Natural Area
- Public Art
- Restroom

Guidelines for Bicycle Parking at Schools

Providing good quality bicycle parking for students and staff can encourage biking by decreasing the risk of conflict, theft, and damage.

Bicycle parking must be:

- visible
- accessible
- secure
- easy to use
- convenient
- plentiful

Bicycle parking should be: covered, well lit, and in plain view without being in the way of pedestrians.

Good bike rack designs.

Theft is a serious concern for bicyclists. Nearly 1.5 million bikes are stolen in the U.S. each year. Safe and convenient parking is as critical to bicyclists as it is for motorists. Racks should:

- Be placed in areas with high pedestrian activity and "eyes-on-the-street"
- Be more visible to staff and students than passersby
- Allow the frame and one wheel to be locked to the rack when both wheels are left on the bike
- Allow the frame and both wheels to be locked to the rack if the front wheel is removed
- Allow the use of either a cable or U-shaped lock
- Be securely anchored.

In areas with high crime concerns, schools should consider placing racks in rooms or cages that can be locked during the school day.

Location: Racks need to be sited and installed appropriately for them to be well used:

- Racks that are placed less than 2'-3' from a wall or less than 30" from another rack will end up sitting empty.
- Racks need to be clearly visible and accessible, within 50' of the building's main entrance or at several commonly used entrances.

Design Standards: Racks should:

- Support the bicycle frame, not just one wheel
- Resist cutting, rusting, bending and deformation
- Be usable by bikes with no kickstand and bikes with water bottle cages

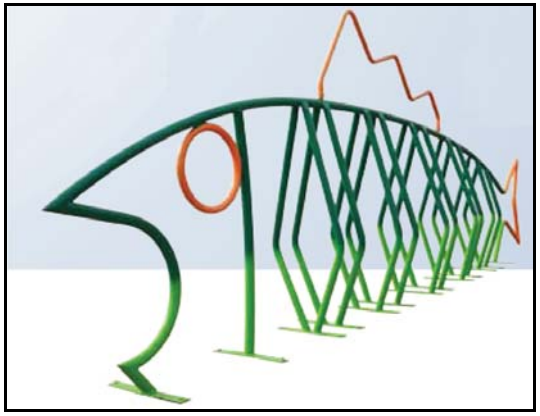
- Be usable by a wide variety of sizes and types of bicycle
- Be promoted with bike parking directional signs
- Have roofs or be located under awnings - to provide riders with rain protection while locking their bikes *and* to prolong the life of the bikes' metal and rubber components– an important issue for low-income riders.

"Wheel-bender" racks (above) can damage wheels and don't allow frames to be locked to the rack.

Costs: The cost to purchase and install bike rack varies, but is almost always cheaper and more efficient than providing car parking:

- A bike rack that parks two bikes costs $150 to $300.
- A locker that holds two bikes costs between $1,000 and $4,000 to purchase and install.
- The cost to provide two car parking spaces is $4,400 on a surface lot and $25,000 in a garage.
- Parking for 10-12 bikes can fit in the same space required for a single car.

Customized Designs: As long as they meet the guidelines discussed above, bicycle racks can serve a dual purpose by promoting a school's name, mascot, or values (see below).



More Information: To learn more about how to choose a rack that is good for your school, please consult these resources:

- The Association of Pedestrian and Bicycle Professionals (APBP) http://www.apbp.org/?page=Publications.
- The Pedestrian and Bicycle Information Center: http://www.bicyclinginfo.org/engineering/parking.cfm.
- Madison, WI bike parking guidelines: http://www.cityofmadison.com/trafficEngineering/documents/MadisonBikeParking20100715.pdf
- John Vander Sluis, The Bicycle Alliance of Washington, JohnV@bicyclealliance.org