



DPW & YOU

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Linthicum Elementary School Safe Routes to School Accessibility Study: Existing Conditions and Recommendations

October 3, 2023

Introductions

The screenshot shows the Anne Arundel County website. At the top, there is a navigation bar with links for News, Events, Jobs, Maps, OpenArundel, and Translate. Below this is the county logo and a search bar. The main content area is titled 'Capital Projects' and includes a sub-header 'Safe Routes to Schools'. A 'Project Documents / Videos' section is highlighted, listing various accessibility study reports and virtual public meetings. An orange arrow points from this section to a black square containing the Anne Arundel County logo.

News Events Jobs Maps OpenArundel Translate

ANNE ARUNDEL COUNTY MARYLAND

Services Government Departments Search

Home > Public Works > Bureau of Engineering

Capital Projects

Explore projects that are funded through the budget process and being implemented around the County to improve the quality of life for our citizens.

← BACK TO PROJECT LIST

Safe Routes to Schools

PROJECT NUMBER: H539616

Project Class
Roads & Bridges (H1)

Project Phase
Planning

Project Description
This contract will study existing conditions and prioritizing infrastructure improvements and meetings will occur for each of the 17 schools. 510-957-30457, PIN 7291 676 738#????? Brooklyn McKinsey ES: 10/4/23, 6:00-7:00pm -- meet.google.com/ghr-gcsa-yfd; dial-in -- 563-4...

Project Documents / Videos

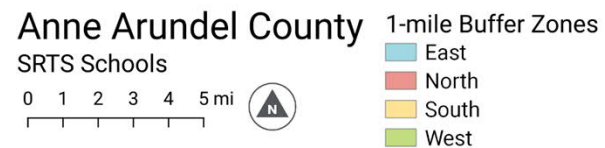
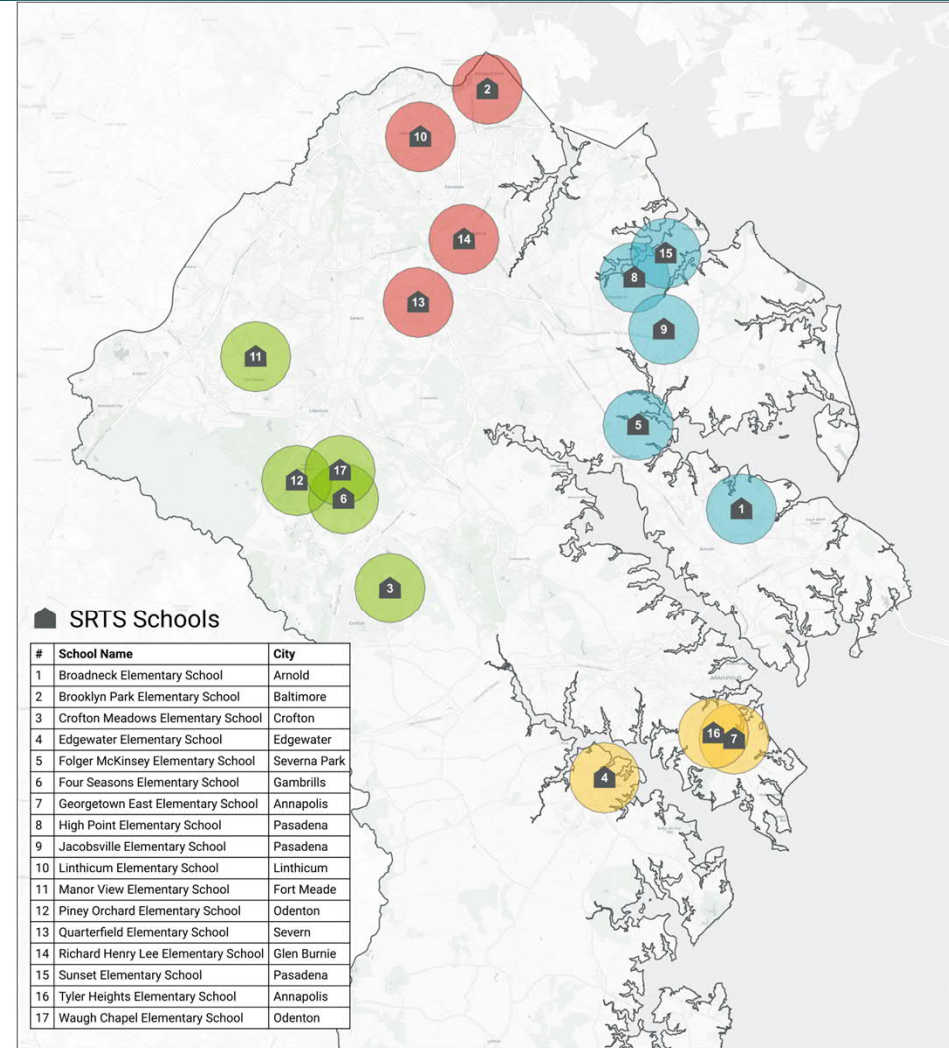
- SRTS Virtual Public Meetings - Schedule and Links.pdf
- Accessibility Study Report - Waugh Chapel ES.pdf
- Accessibility Study Report - Tyler Highes ES.pdf
- Accessibility Study Report - Sunset ES.pdf
- Accessibility Study Report - Richard Henry Lee ES.pdf
- Accessibility Study Report - Quarterfield ES.pdf
- Accessibility Study Report - Pinney Orchard ES.pdf
- Accessibility Study Report - Manor View ES.pdf
- Accessibility Study Report - Linthicum ES.pdf
- Accessibility Study Report - Jacobsville ES.pdf
- Accessibility Study Report - High Point ES.pdf
- Accessibility Study Report - Georgetown East ES.pdf
- Accessibility Study Report - Four Seasons ES.pdf
- Accessibility Study Report - Folger McKinsey ES.pdf
- Accessibility Study Report - Edgewater ES.pdf
- Accessibility Study Report - Crofton Meadows ES.pdf
- Accessibility Study Report - Brooklyn Park ES.pdf
- Accessibility Study Report - Broadneck ES.pdf

To view full report and provide input,
please visit
<https://tinyurl.com/srtsaaccounty>

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Anne Arundel Safe Routes to School Accessibility Study

- Partnership between County and AACPS
- 17 schools, per *Move Anne Arundel!* – County Transportation Functional Master Plan.
- Oversight by County, State, and AACPS representatives.
- Focus: infrastructure within school walk zone, also assessed opportunities to expand active transportation to school
- Goal: improve safety and transportation choices for all school families



Linthicum Elementary Accessibility Study

Report findings are derived from:

School site visits	<ul style="list-style-type: none">• Observed school arrival and dismissal – December 6, 2022• Assessed pedestrian and bicycle infrastructure within school walk zone and roads immediately adjacent (as connectivity allows) – December 6, 2022
Parent Survey	<ul style="list-style-type: none">• January 26 - February 19, 2023• Available online: English, Spanish, Chinese, and Korean• Survey link was provided via email

Report Content

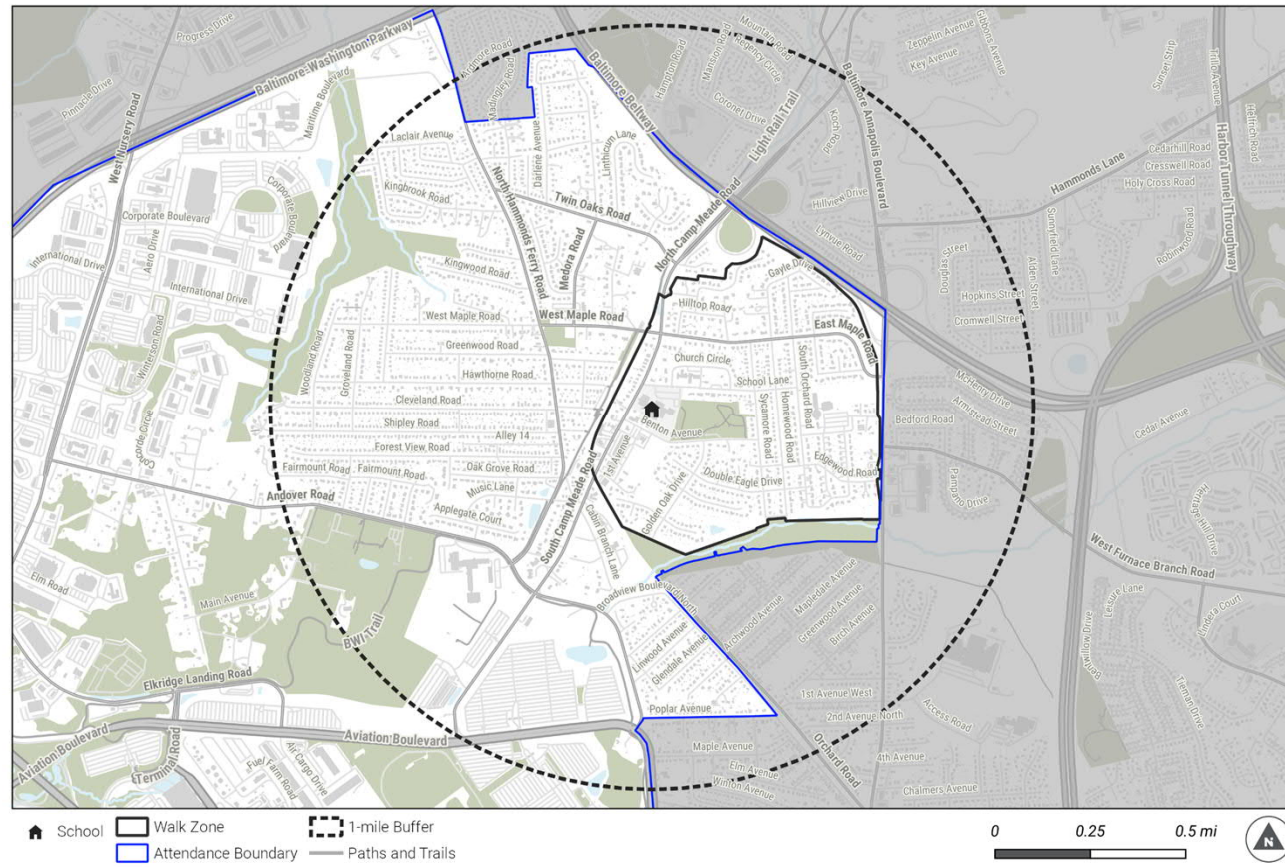
1. School overview
2. Parent-reported student travel modes and barriers
3. Arrival and dismissal observations
4. Existing infrastructure conditions
5. Crash data
6. Infrastructure recommendations
7. Programmatic recommendations
8. Appendix: Infrastructure recommendation photos

To view full report and provide input,
please visit
<https://tinyurl.com/srtsaacounty>

School Overview Section

- Study area
- School attendance and enrollment
- School location and layout
- School access

Linthicum Elementary School - 1-mile Radius



Parent-Reported Student Travel Modes and Barriers Section

- Distance from home to school
- School bus eligibility and use
- Most common travel mode to school
- Ideal travel mode to school
- Barriers to walking or biking to school
- Streets used to walk or bike to school

Reported Distance from Home to School	
Distance	Number of Respondents
< ¼ mile	5
¼ mile – ½ mile	4
½ mile – 1 mile	11
1 mile – 1 ½ miles	8
>1 ½ miles	5

Linthicum Elementary - 33 total survey responses received

Arrival and Dismissal Observations Section

- Overview of operations
- General observations
- Arrival and dismissal observations by travel mode (walk, bike, school bus, parent drop-off)



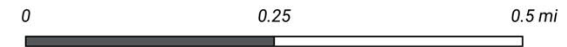
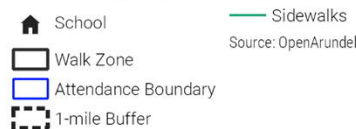
School Lane during school arrival.

Existing Infrastructure Conditions Section

- Sidewalks
- Marked crosswalks
- Curb ramps
- On-road bike facilities*
- Regional trails, park trails, and paths*

*Existing, planned, or programmed

Linthicum Elementary School - Existing Sidewalk Network



Crash Data (2017 – 2021)

Crashes within 1-mile radius of school*:

- 1,126 total crashes – 3 fatal
- 21 pedestrian-involved – 19 resulting in injury, 1 fatal
- 7 bicyclist-involved – all resulting in injury

**Includes interstate crashes*

Pedestrian and bicyclist crashes within walk zone:

- 3 pedestrian-involved
- 1 bicyclist-involved

Linthicum Elementary School - Pedestrian and Bicycle Crashes



Infrastructure Recommendations Section

Linthicum Elementary School - Recommendations



- School
- Walk Zone
- Attendance Boundary
- 1-mile Buffer
- Paths and Trails

- Spot Recommendations**
- Access Management
 - Bicycle Rack
 - Intersection or Crossing
 - School Zone Signs and Pavement Markings

- Sidewalk
- Speed Management
- Other Recommendations

- Segment Recommendations**
- Bicycle Facility
 - Corridor Intersection Upgrades
 - School Zone Signs and Pavement Markings
 - Speed Management
 - Sidewalk

Infrastructure Recommendations within the School Walk Zone

Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, cost opinions, and commentary contained herein are based on limited data and information and on existing conditions that are subject to change. Further analysis and engineering design are necessary prior to implementing any of the recommendations contained herein.

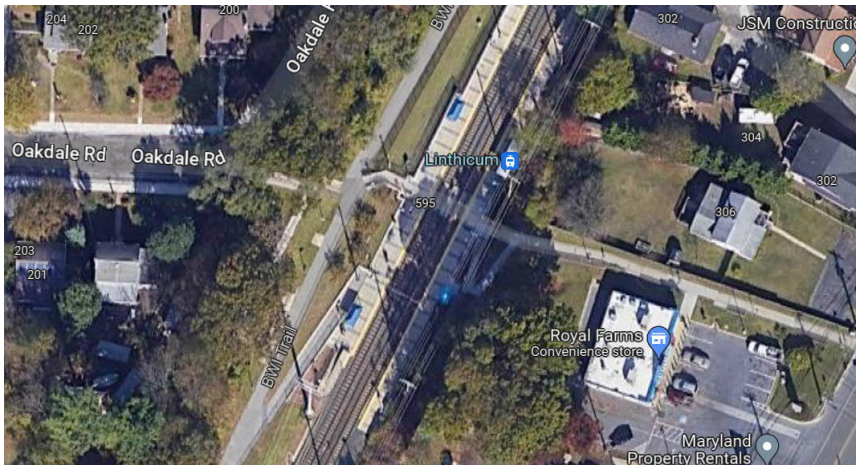
Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
1	Hilltop Rd (Arundel Rd to E Maple Rd)	Sidewalk	Missing sidewalk/gaps in existing sidewalk (both sides)	Install new sidewalk.**	\$61,592	Long
2	E/W Maple Rd & N/S Camp Meade Rd (Inside school zone, Along key student walking route)	Crosswalk	North, south, and west crosswalk markings not high visibility	Remark existing crosswalks with high-visibility markings (east leg is already high visibility).	\$2,400	Short
3	Orchard Rd & E Maple Rd	3a. Crosswalk	North crosswalk markings faded	Remark existing crosswalk with existing marking style (high visibility)	\$800	Short
			South crossing is unmarked	Install new standard crosswalk	\$400	
		3b. Curb ramp	North ramps lack detectable warning surfaces	Reconstruct or repair existing ramps	\$8,000	Medium
			South ramps missing	Install new ramps	\$8,000	
4	E Maple Rd (Catalpa Rd to Baltimore-Annapolis Blvd)	Sidewalk	Missing sidewalk on north side	Install new sidewalk**	\$127,911	Long
5	Homewood Rd & E Maple Rd	5a. Crosswalk	North, South crossing is unmarked Stop bars missing	Install new standard crosswalks Mark new stop bars	\$1,000	Short
		5b. Curb ramps	Northeast, Northwest ramps missing	Install new ramps	\$8,000	Medium

*Short (1 year), medium (2-3 years) or long term (3+ years)

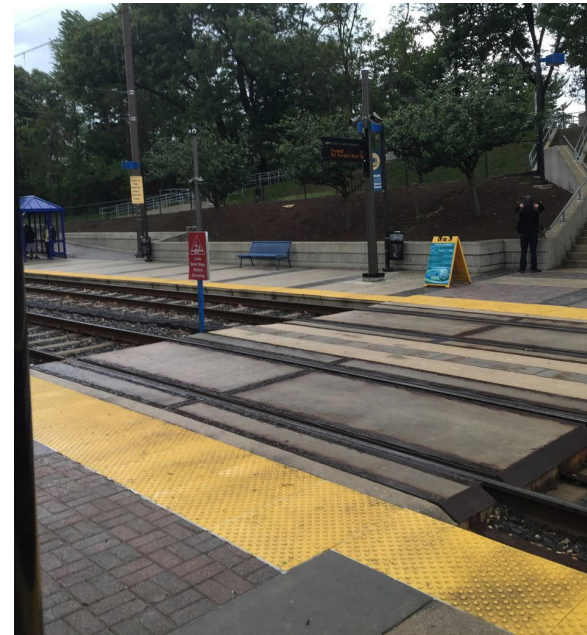
**Note that at locations where installation of new sidewalks is recommended, high-visibility crosswalks, ADA compliant curb ramps, and stop bars should be installed at intersecting streets to facilitate crossings and encourage motor vehicle yielding.

Additional Considerations

A light-rail line runs parallel to South Camp Meade Road, creating a significant barrier to expanding the walk zone to the west. Although a connection/pedestrian crossing exists at Linthicum Station near Benton Avenue, it requires an unsupervised, non-stop controlled crossing of the tracks. For long-term planning, the County could explore building a pedestrian bridge over the tracks to connect Benton Avenue and Oakdale road and provide a safe connection for Linthicum students and residents of both neighborhoods.



Aerial view of Linthicum Station using Google Maps



View of pedestrian crossing of rail tracks
Source: foursquare.com

Safe Routes to School (SRTS) Program Recommendations

SRTS education can foster life-long skills for safe walking and bicycling. Education messages directed at the broader school community can help create safety role models and encourage safe driving.

Recommendations

Provide pedestrian and bicycle safety education to students. Conduct age-appropriate education regularly (e.g., annually). Provides opportunities for skills practice. This works best integrated into PE or Health curriculum.

Conduct a bicycle rodeo. Teach children skills related to walking and bicycling safely, which can increase student and parent confidence.

Conduct parent and staff safety education campaign. Distribute information packets to parents and school staff at the beginning of the school year with arrival/dismissal maps, rules and procedures for arrival/dismissal, and general safety info. Emphasize driving safely, being alert for pedestrians and bicyclists, and respecting school crossing guards.

Provide walking and bicycling maps. Show locations of pedestrian/bicycle infrastructure and estimated walk/bike times.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



South Camp Meade Road between E/W Maple Road and School Lane



South Camp Meade Road between School Lane and Benton Avenue

Next Steps



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- County will finalize prioritized list of recommendations.
- Implementation timeline and funding source will be based on the type of recommendation.
- Schedule yet to be determined.

To view full report and provide input,
please visit
<https://tinyurl.com/srtsaacounty>

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QUESTIONS OR COMMENTS?

SUBMIT USING

