

SAFE ROUTES TO SCHOOL

FUENTE NUEVA ELEMENTARY

Dan Burden And Josh Meyer
April, 2025



WHY SRTS and this project



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This Phase 1 Safe Routes to School (SRTS) report summarizes and documents the collaborative efforts of the project team — including the City of Arcata, Humboldt County Association of Governments, and Blue Zones — and Fuente Nueva Charter Elementary School to identify challenges and opportunities for the Safe Routes to School Project. It builds a case for SRTS and presents findings from the team visit to the school area on January 20-22, 2024. Activities included:

- On-site walking audits with staff and stakeholders
- Observations of student drop-off and pick-up at the school parking lot
- Walking audits of neighboring roadways
- A study session with students
- An interview with school staff
- A public workshop with the project team, stakeholders, and the school community

INTRODUCTION

Safe Routes to School (SRTS) refers to a variety of programs aimed at increasing the number of students walking and bicycling to and from school. As recently as the 70's 60% of students walked to school. Today the national figure is down to 12%. SRTS programs typically involve partnerships between municipalities, school districts, community members, parents, volunteers, students and law enforcement agencies.

Why is this important? Today's children may be the first generation to have a shorter life expectancy than their parents due to lifestyle choices. Active transportation is a great way of ensuring that children are getting the recommended 60 minutes of physical activity daily. Let's work together to make our streets and neighborhoods safe, comfortable, welcoming places.



"The definitive factors in determining whether someone is in good health extend significantly beyond access to care and include the conditions in their life and the conditions of their neighborhoods and communities."

- John Auerbach, Associate Director for Policy,
Centers for Disease Control and Prevention

HOW FAR HAVE WE FALLEN?

THERE IS TOO MUCH TRAFFIC
FOR BILLY TO WALK TO SCHOOL;
SO WE DRIVE HIM.



Obesity-related health spending in the U.S. reached \$147 billion in 2009 and accounts for 91% of all medical spending (U.S. Department of Health and Human Services Secretary Kathleen Sebelius, 2009).

Parents respond that the primary reason they do not allow their children to walk to school is the distance they live from school, or traffic-related dangers. Although distance to school is the most commonly reported barrier to walking and bicycling, half of the trips to school by private vehicles are a distance of one-quarter to one-half a mile—a distance easily covered on foot or by bike.

WHY Now?



Up to 20% of rush hour traffic is now school related. School bussing of just one child costs communities over \$600 per year. Near schools, many parents often fail to yield to children attempting to walk, after the child has often made part of their trip walking, often without the aid of sidewalks or adequate crossings. We must do better.



WHERE DID WE GO WRONG?



In the past, we tasked our transportation planners and engineers to build for speed and efficiency. *Today we are tasking the same planners and engineers to build for safety, people and place.*

The good news, there is often sufficient right of way to apply new features, add green and medians, narrow lanes and make walking and bicycling more comfortable, inviting and safe.

UNDERSTANDING THE NEED



The function of the Regional SR2S Prioritization Tool is to collect objective information that illustrates each school's need, resources, and readiness for engaging in a project or program for Safe Routes to School.



HCAOG
Humboldt County Association of Governments
Regional Transportation Planning Agency

Find this report online at www.humboldtsaferoutes.org

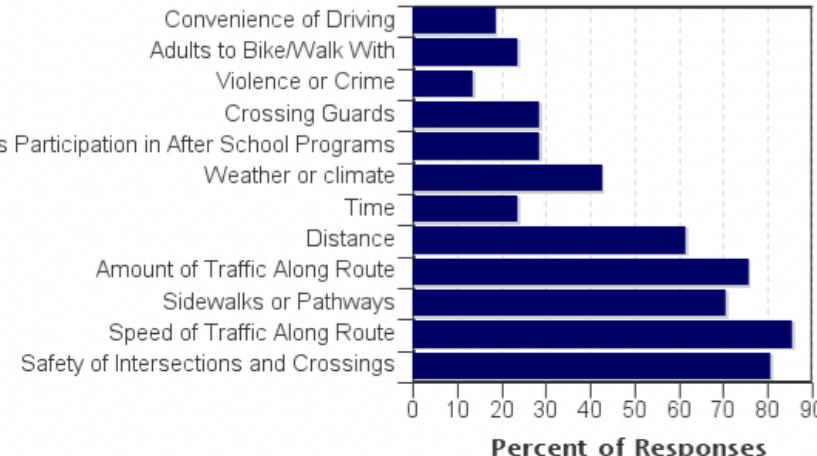
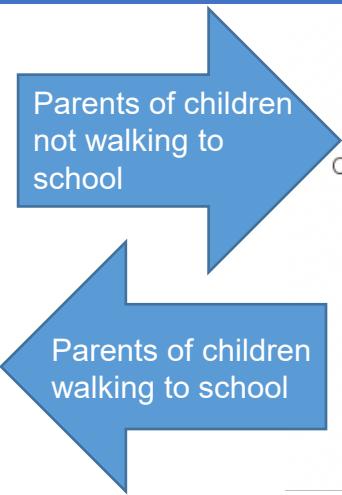
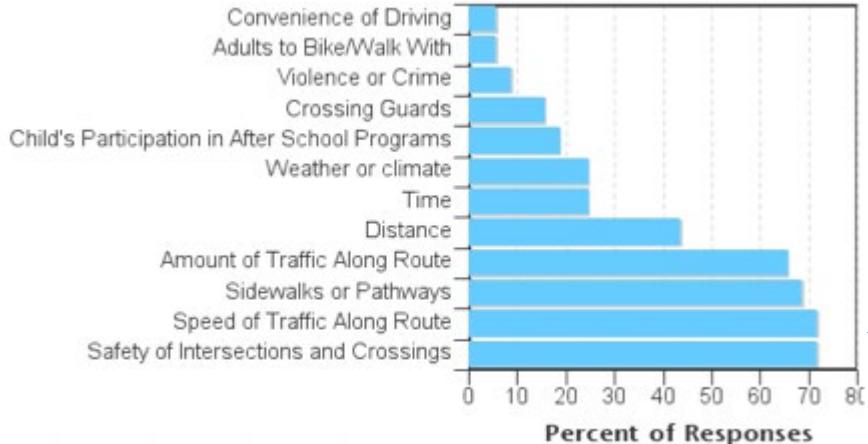


WALKING/BICYCLING SURVEY – COMBINED SCHOOLS, OREGON

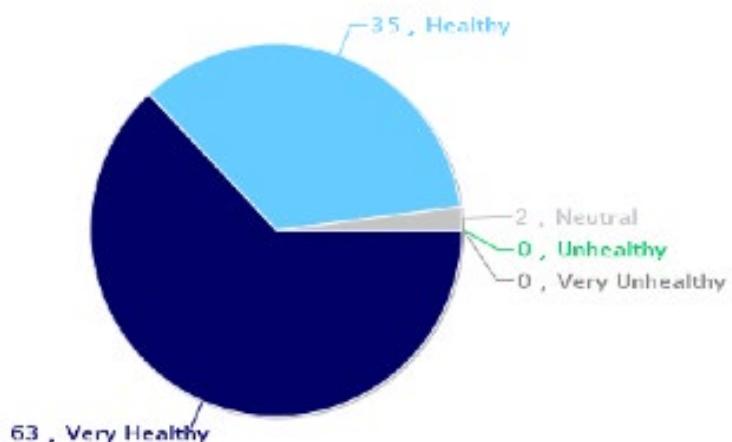


Graphs below: Both parents who do not allow their child to walk/bike, and those who do, have similar concerns.

Students want to walk and bike to school. In an Oregon survey, from 75% to 95% of students requested permission to walk or bike to school, based on distance, even for trips up to 2 miles. Meanwhile, parents seek better conditions. The below chart captures the greatest concerns. The #1-#2 concerns are for the safety of intersections and crossings (76%-80%) and speed of traffic. Both can be corrected using techniques presented in this report.



WALKING/BICYCLING SURVEYS – COMBINED SCHOOLS, OREGON



98-100% of parents feel that walking and biking to school is good for their child's health.

80% of parents feel that walking and biking to school would be fun for their child.

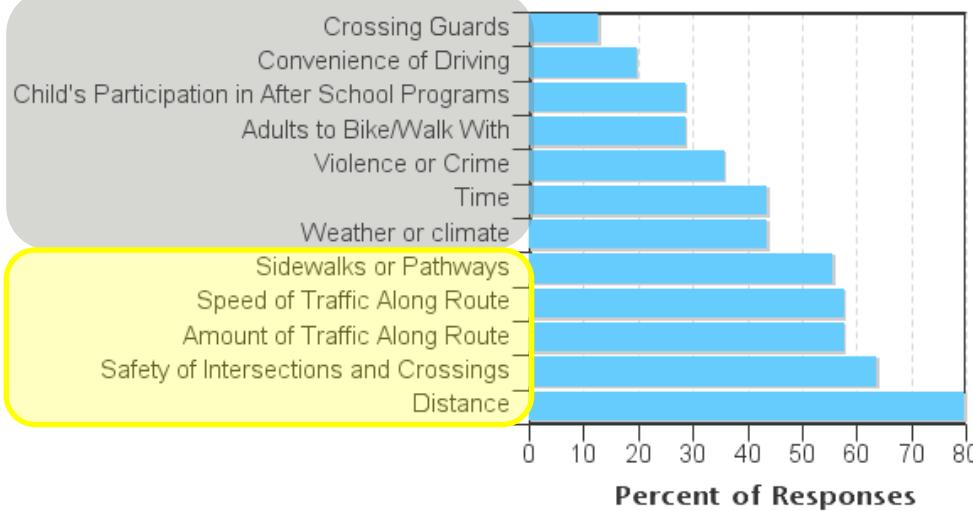


2017 Fuente Neuve Parent Survey (72 responses)

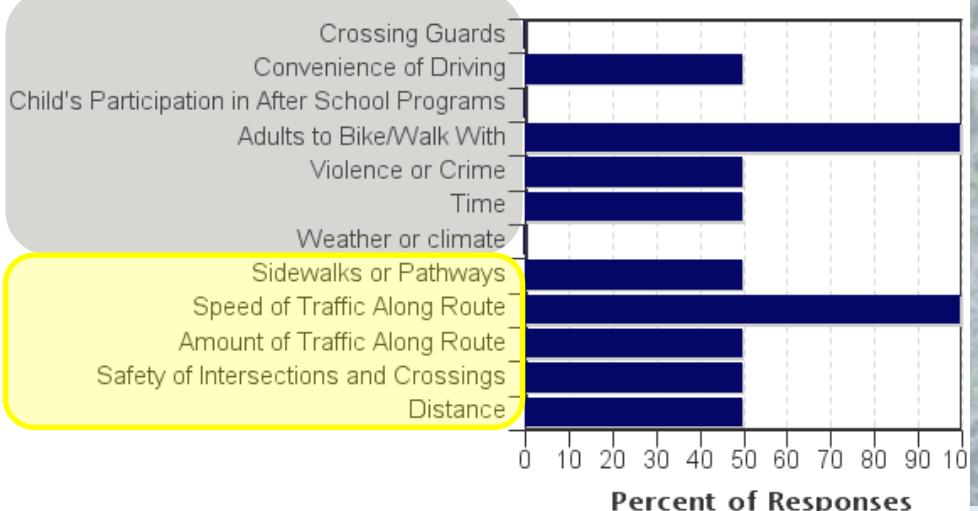
concerns for child walking or biking to school



Parents not allowing student to walk or bike



Parents allowing student to walk or bike

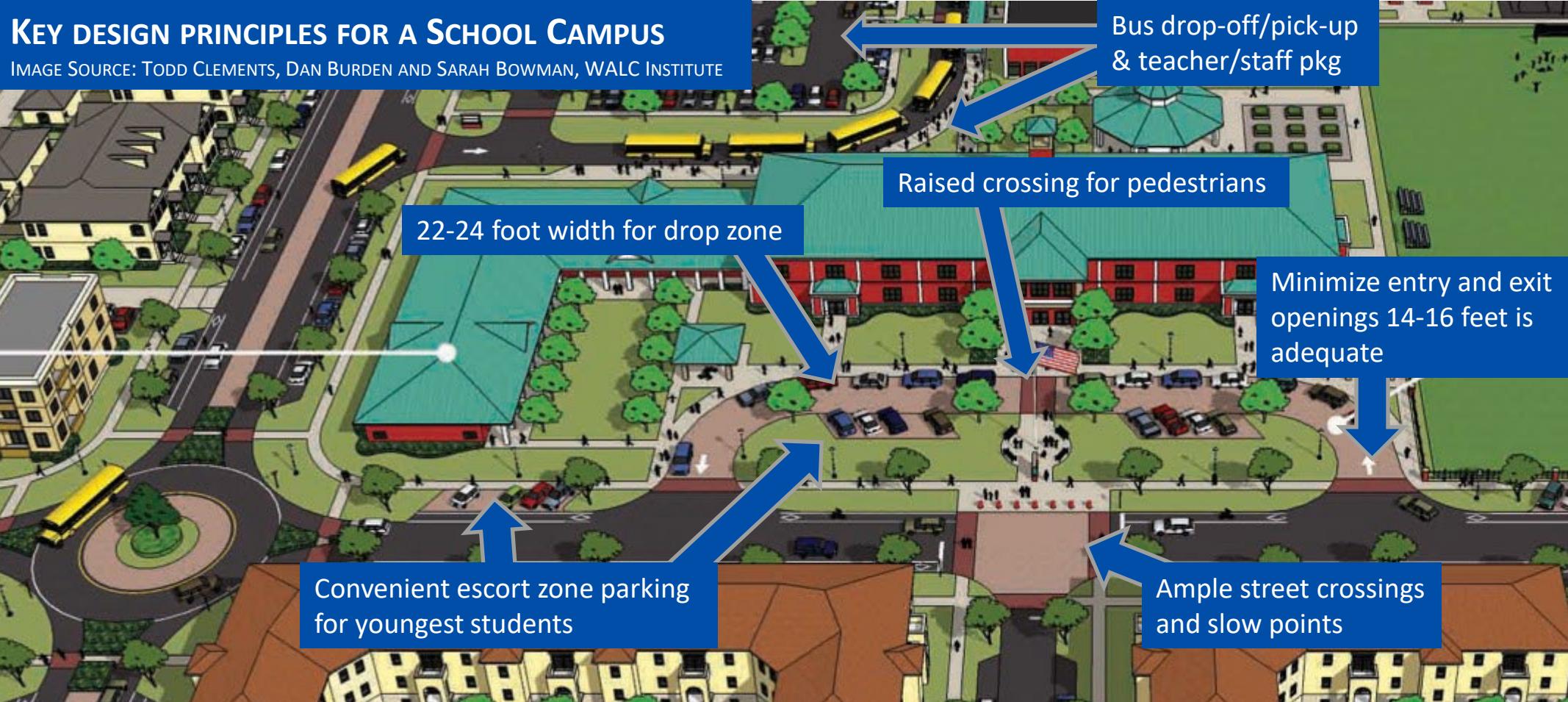


PRINCIPLES



KEY DESIGN PRINCIPLES FOR A SCHOOL CAMPUS

IMAGE SOURCE: TODD CLEMENTS, DAN BURDEN AND SARAH BOWMAN, WALC INSTITUTE



Operations/Design: Maintain low (15-20 mph) speed, keep intersections compact, separate modes (bus, car, walk/bike), receive students at earliest campus entry, provide “eyes” on the street using campus and housing design, provide ample sidewalks (6' or more) with setbacks on approaches to school, provide adequate lighting, especially at crossings, design campus as community center, maximize on-street parking, green the streets for added climate moderation and speed reductions

OPPORTUNITY: ADDRESS DROP OFF & PICK UP MANAGEMENT



The following program suggestions used at other schools should be considered:

- Allow a 5-minute early release for those walking and bicycling.
- Provide volunteer greeters to greet parents and students
- Encourage parents to park in other locations near the school and then walk children to school.
- Require parents to pull to the top of the queue for dropping off their child (adult volunteer supervision may be required to ensure compliance).
- Provide a remote drop-off/pickup location for a walking school bus operation.

Programs can also be introduced to promote walking and bicycling safety.

USE 15-20 MPH TARGET SPEEDS IN SCHOOL ZONES AND NEIGHBORHOODS



HIT BY A VEHICLE
TRAVELING AT:

20
MPH



9 out of 10 pedestrians survive

HIT BY A VEHICLE
TRAVELING AT:

30
MPH



5 out of 10 pedestrians survive

HIT BY A VEHICLE
TRAVELING AT:

40
MPH



Only 1 out of 10 pedestrians survives

Higher speeds increase the likelihood and severity of crashes while lower speeds improve safety and comfort for everyone, especially people walking and cycling. Survival for pedestrians and bicyclists is directly tied to vehicular speed. Why would we want motorists to put themselves and others in danger when we know the impacts of inducing higher speeds through outdated design practices?



As speeds increase, motorists see less:

20 mph
30 mph
40 mph

Your brain processes visual information 25 percent faster when that information is coming from the periphery. In other words, you can REACT to what you SEE faster, when you see it with your peripheral vision.

SRTS: Best Practice

- Maintain low vehicular speeds of 15-20 mph speeds, 24/7;
- Separate all modes (bus, parents, staff, walking, cycling);
- Receive students at the earliest campus entry;
- Keep all crossings as short and pronounced as possible;
- Keep all intersections compact and low speed;
- Increase speeding fines in school zones; and
- Consider a 5-minute early release for students walking and cycling.



1**2****3**

Arcata is already a leader in traffic calming, having implemented several measures throughout the city. Examples include multiple raised crosswalks, bulb-outs, a few neighborhood mini-circles, several short medians and six roundabouts. Each of these tools could be considered to enhance safety and provide more comfortable walking and bicycling trips to Fuente Nueva Charter School as a part of this SRTS project.

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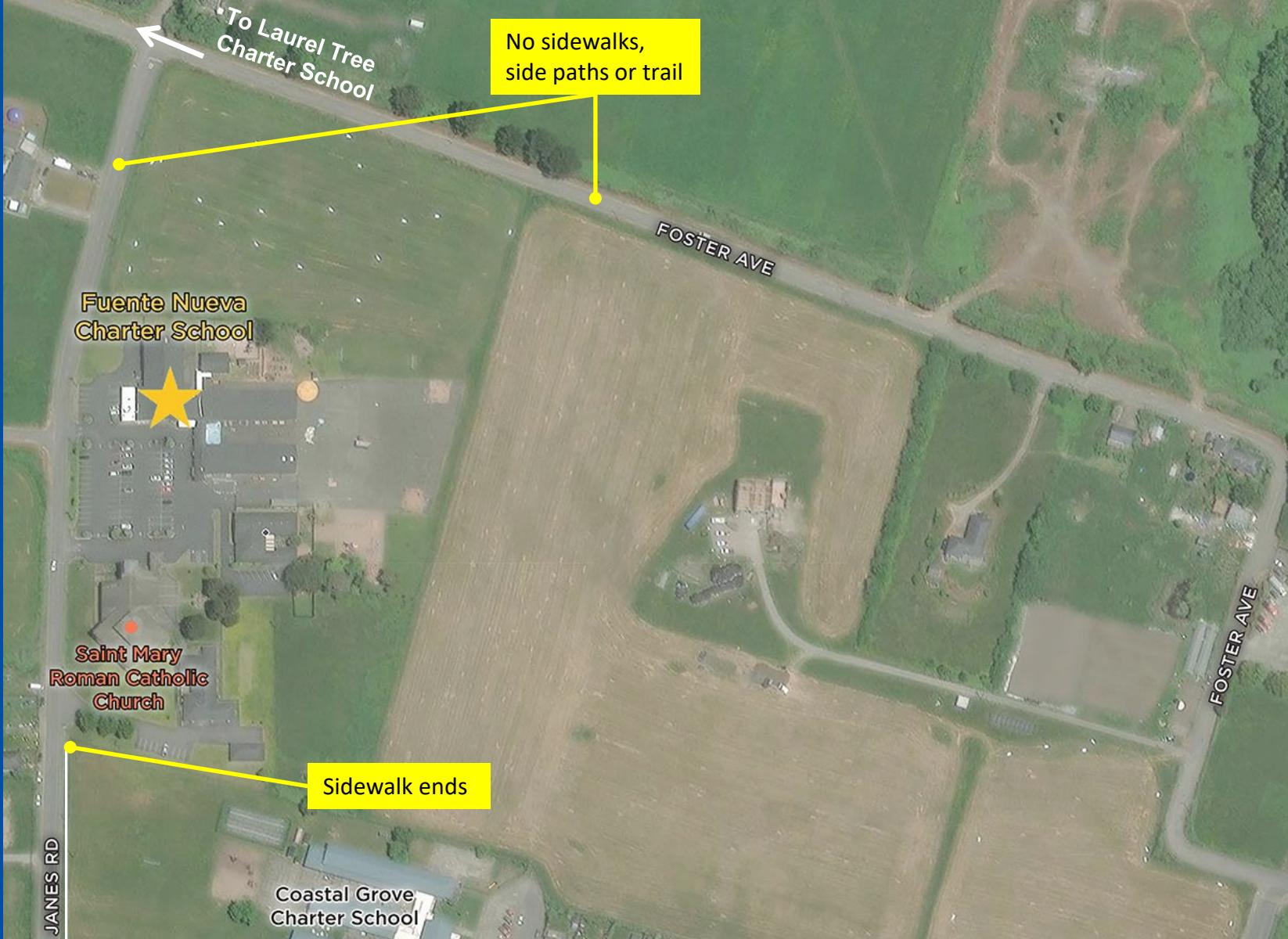


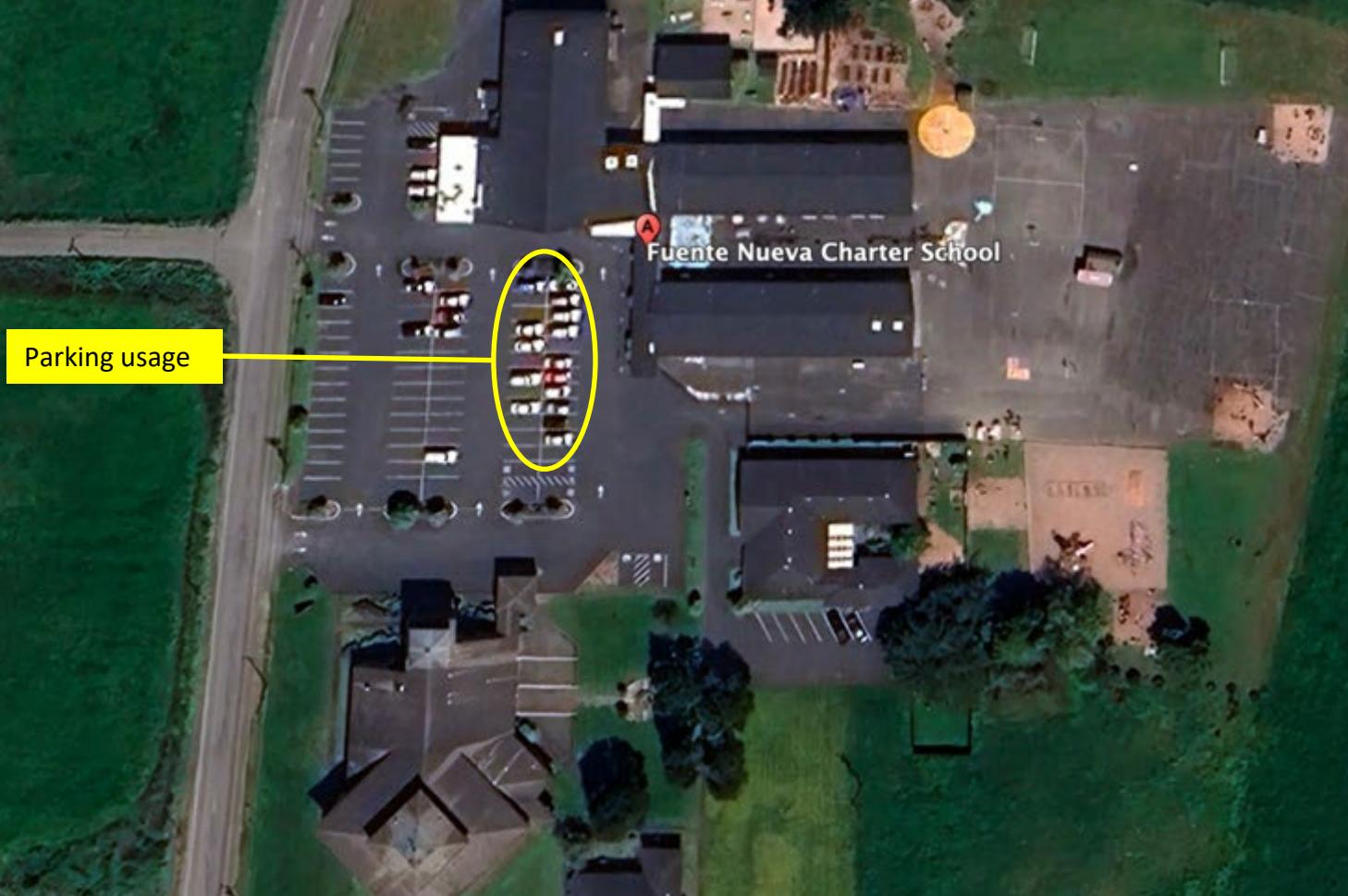


EXISTING CONDITIONS



The Fuente Nueva Charter School campus has limited walking and bicycling access from the core city to the school. While our project team observed an orderly drop-off and pick-up operation within the school parking lot, the availability of dedicated and accessible pedestrian and bicycle pathways remains insufficient.





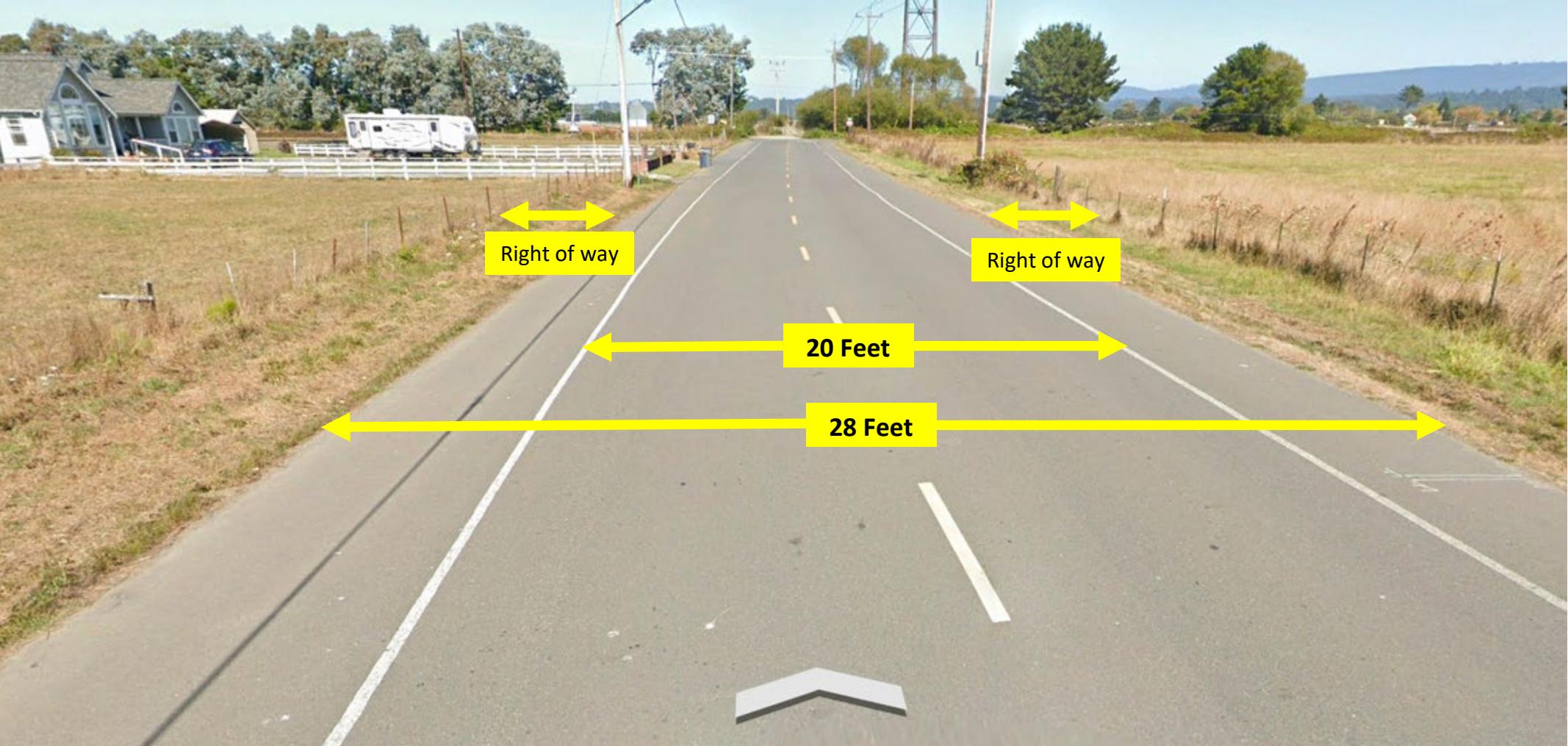
While there is ample parking available, staff members appear to occupy the closest spaces to the entrance. This contributes to added congestion and complications during parent drop-off and pick-up times. An improved and more efficient approach would involve relocating all staff parking to outer areas, keeping the spaces near the entrance available for short-term use.



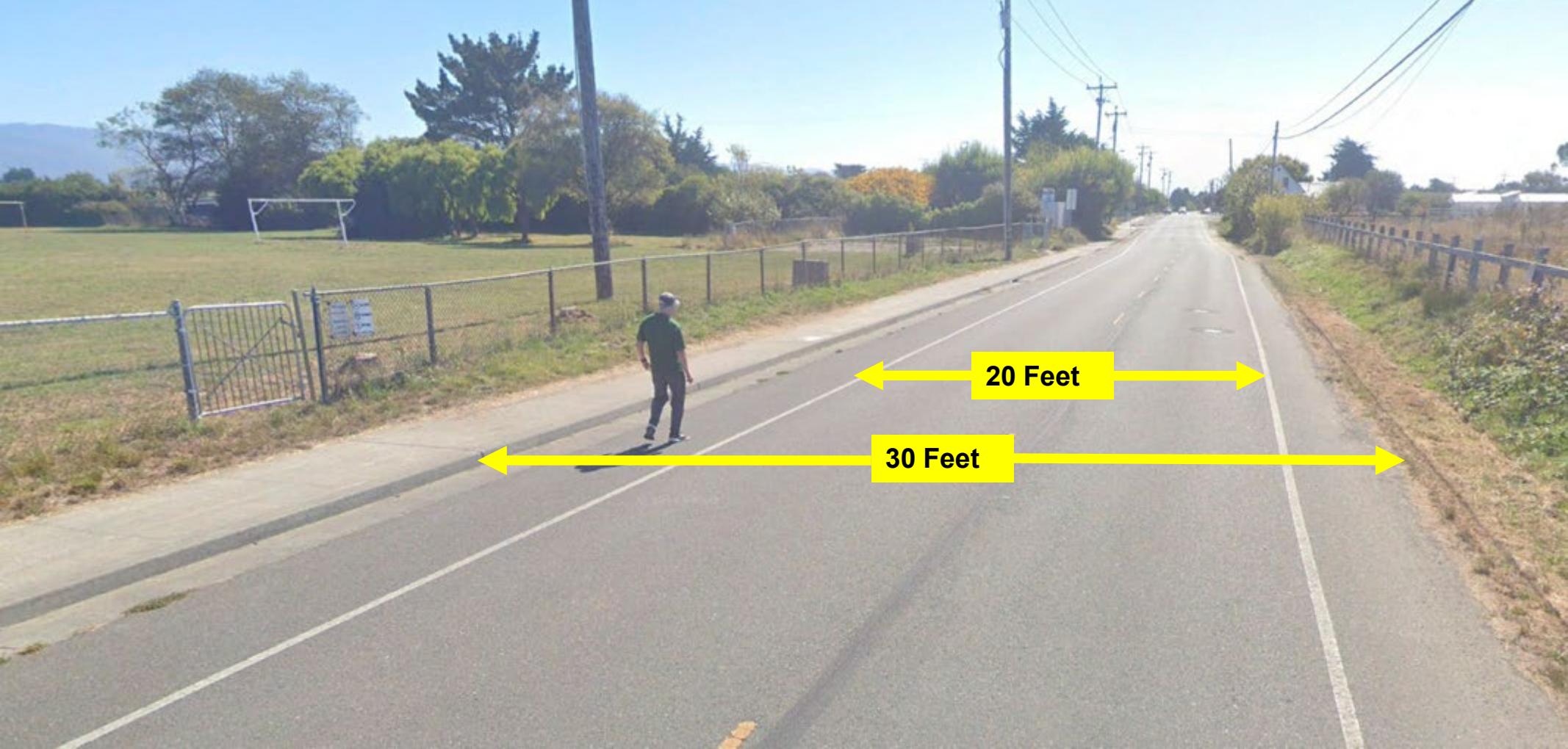
Though several neighborhoods are located within school walking distance, the area lacks connectivity and sufficient pedestrian and bicycle infrastructure for school-age children. As illustrated on the following pages, many streets



Janes Road lacks crosswalks and sidewalks for long sections.



Janes Road looking north. The utility poles and fences indicate the right-of way edges. Many options for walking and bicycling are possible within the existing right of way.



Janes Road facing south. The sidewalk terminates at the St. Mary Church south parking lot. Janes Road has sufficient traffic volume and speed to warrant a continuous walkway that extends northward to Foster Avenue and facilities to accommodate bicyclists.



Before the most recent repaving a crosswalk had been placed in front of the school (Janes Road and Bay School Road).



Looking south on Janes Road, a sidewalk and paved shoulder are provided. The sidewalk ends at the St. Mary Catholic Church driveway, leaving a 500-foot gap to the school campus.



Looking south on Janes Road, stored cars spill out into the county right-of-way and block the shoulder. This creates a safety problem for people bicycling in this area.



The school and church campus portion of Janes Road lacks a sidewalk. Other portions of Janes Road have a sidewalk on the east side. The lack of well marked, well designed crossings reduces safe access to the campus.





The sidewalk on Janes Road next to the Coastal Grove Charter School property provides some connectivity. However, motorist speeds on Janes Road remain higher than the posted speed, making it a good candidate for traffic calming.



The driveways at Fuente Nueva Charter School are wider than necessary, and the parking lot lacks walkways.



Foster Avenue, between Janes Road and Q Street, is approximately 20-22 feet wide with no shoulders and poor pavement conditions. While traffic volumes are generally light, they increase significantly during school pick-up and drop-off times. Additionally, the road serves as a truck route to farmland to the west.



An unpaved trail link near the northeast bend of Foster Avenue is slated to be paved, which will connect the east and west sections of Foster Avenue. A lengthy driveway to a farm, with a willing property owner, would also provide a direct link to the campus.



Walkability Audits Discoveries

School Evaluation Team



Dan Burden

Oona Smith

Josh Meyer

Netra Khatri



Encounters on the street



Morning walking group



The afternoon walking group discussed safety and connectivity challenges on Foster Avenue.



Motorists were observed exceeding the posted 15 mph limit on Janes Road.



The group checked and experienced the street and walkway dimensions.



Numerous hazards were encountered. West side neighborhood crossings are overly wide, inviting high speed turns and exposing pedestrians to unsafe conditions. This crossing above is 94 feet wide and lacks ADA ramps. Below, short driveways do not contain larger vehicles, forcing people into the street.





The group formed a temporary curb extension to shorten the crosswalk and slow cars down.



The group formed a temporary curb extension to shorten the crosswalk and slow cars down.



Following the walk audit, each participant shared their observations.



Netra Khatri, Arcata City Engineer (right), shared a review of next steps to be taken, and promoted the evening public meeting.

Student Input





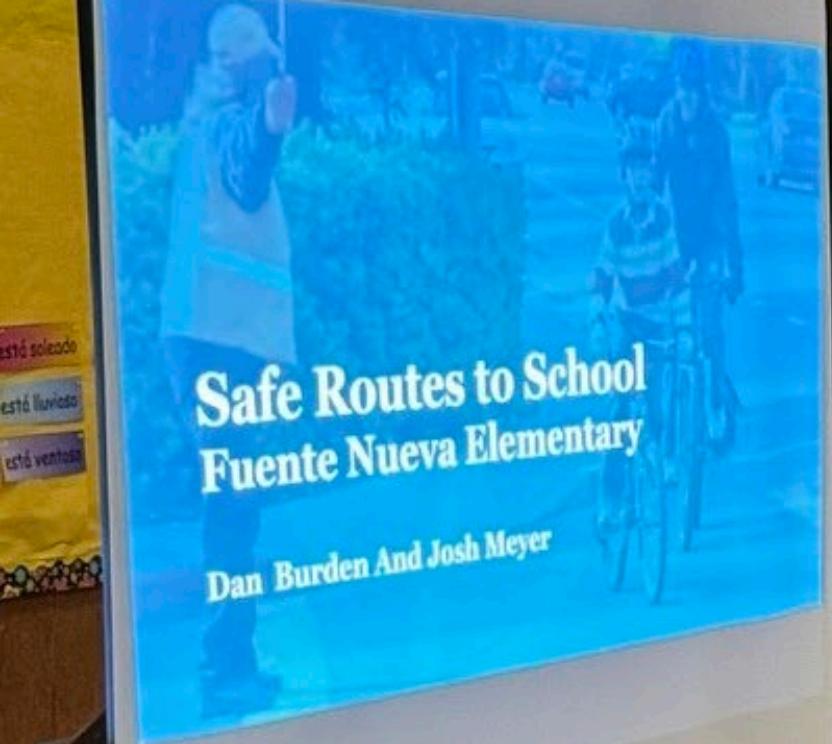
5th graders identified the routes that they would like to take.



Netra Khatri shared with the 5th grade class some of the potential trail and street opportunities.

Community Forum





Safe Routes to School
Fuente Nueva Elementary

Dan Burden And Josh Meyer



Following the day's activities: Evening Workshop at Fuente Nueva Charter School

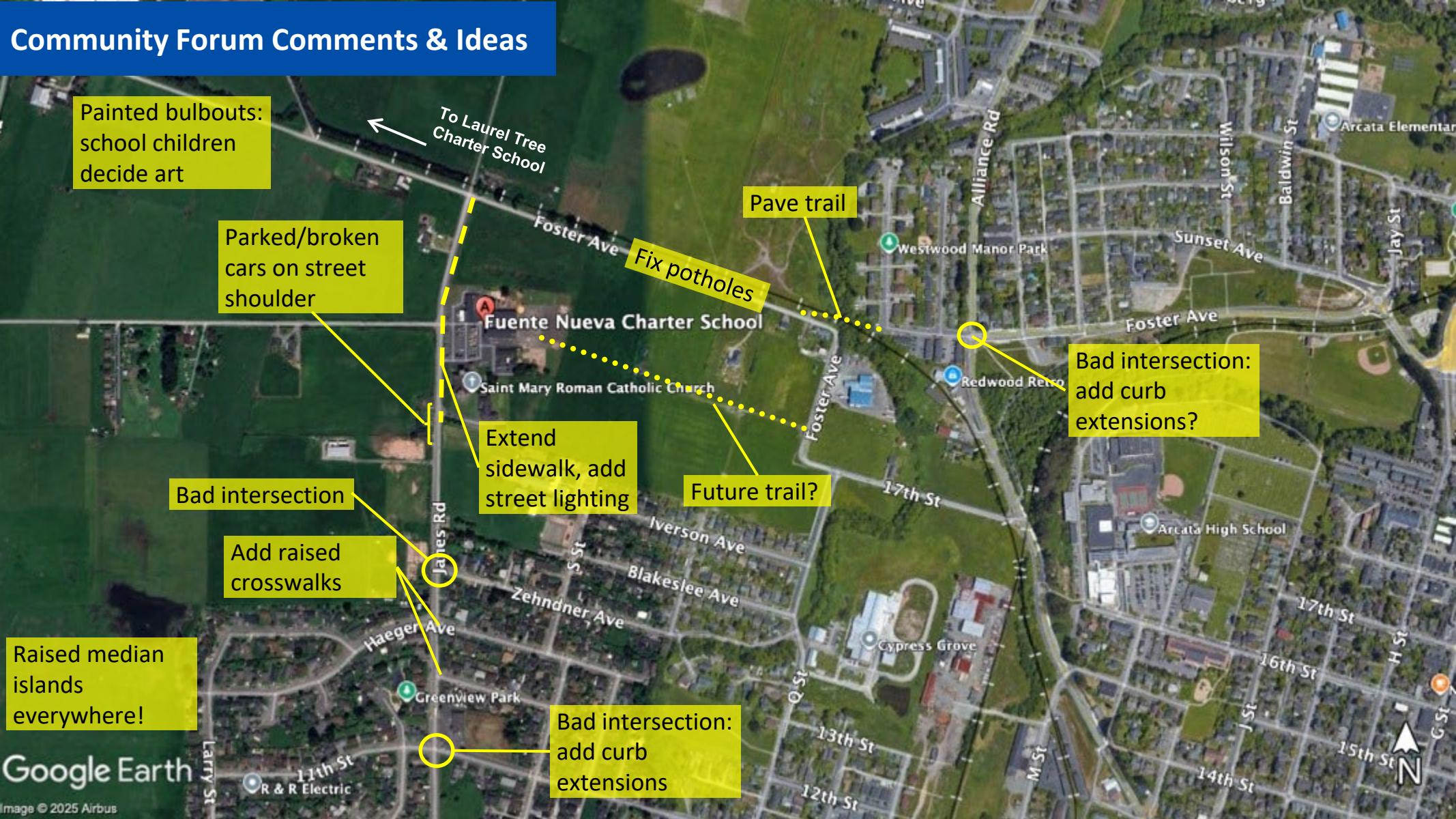


Parents, children and adults discussed challenges and marked locations with ideas for change.



And reported out their findings, as captured on the following slides.

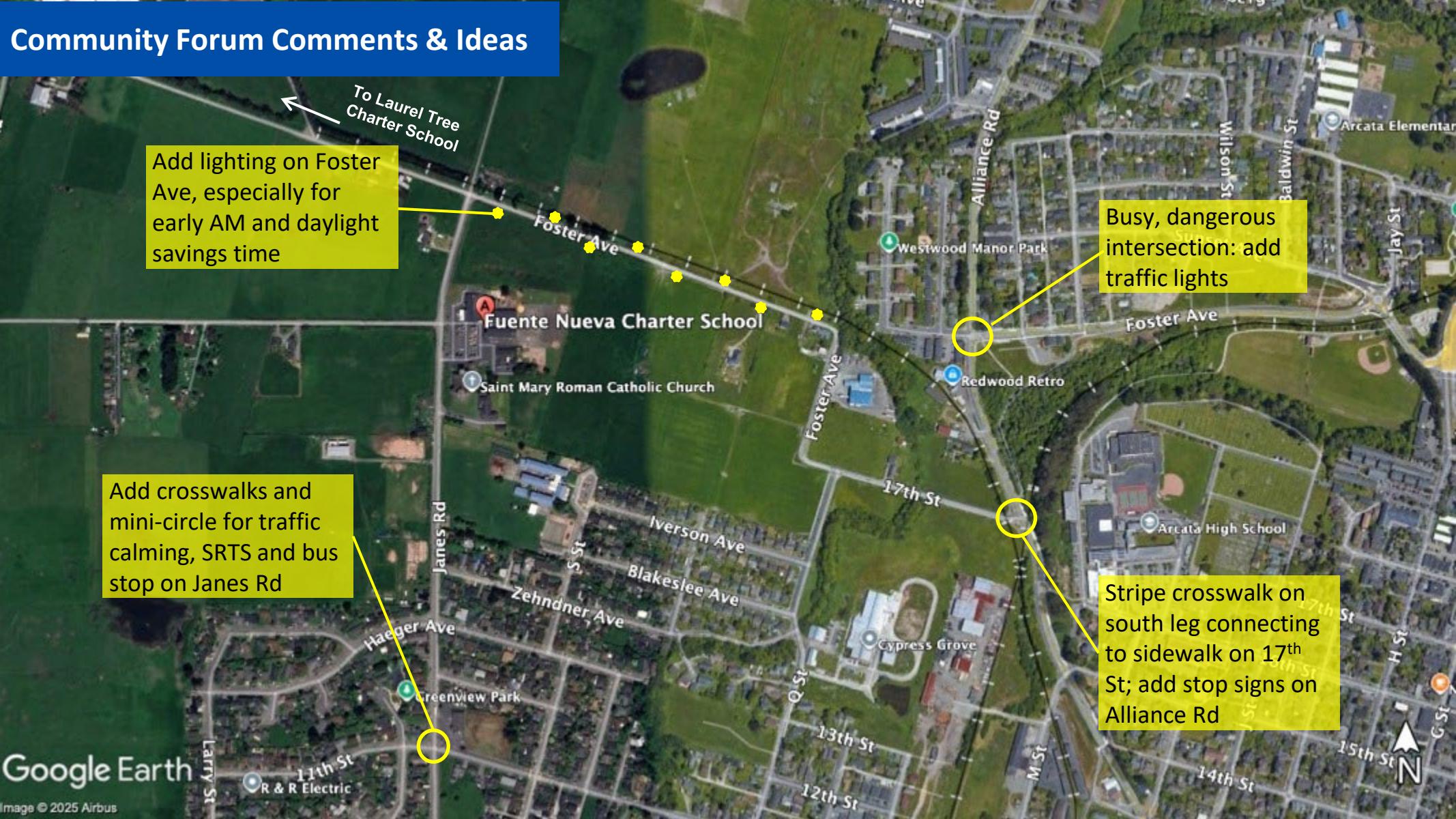
Community Forum Comments & Ideas



Community Forum Comments & Ideas



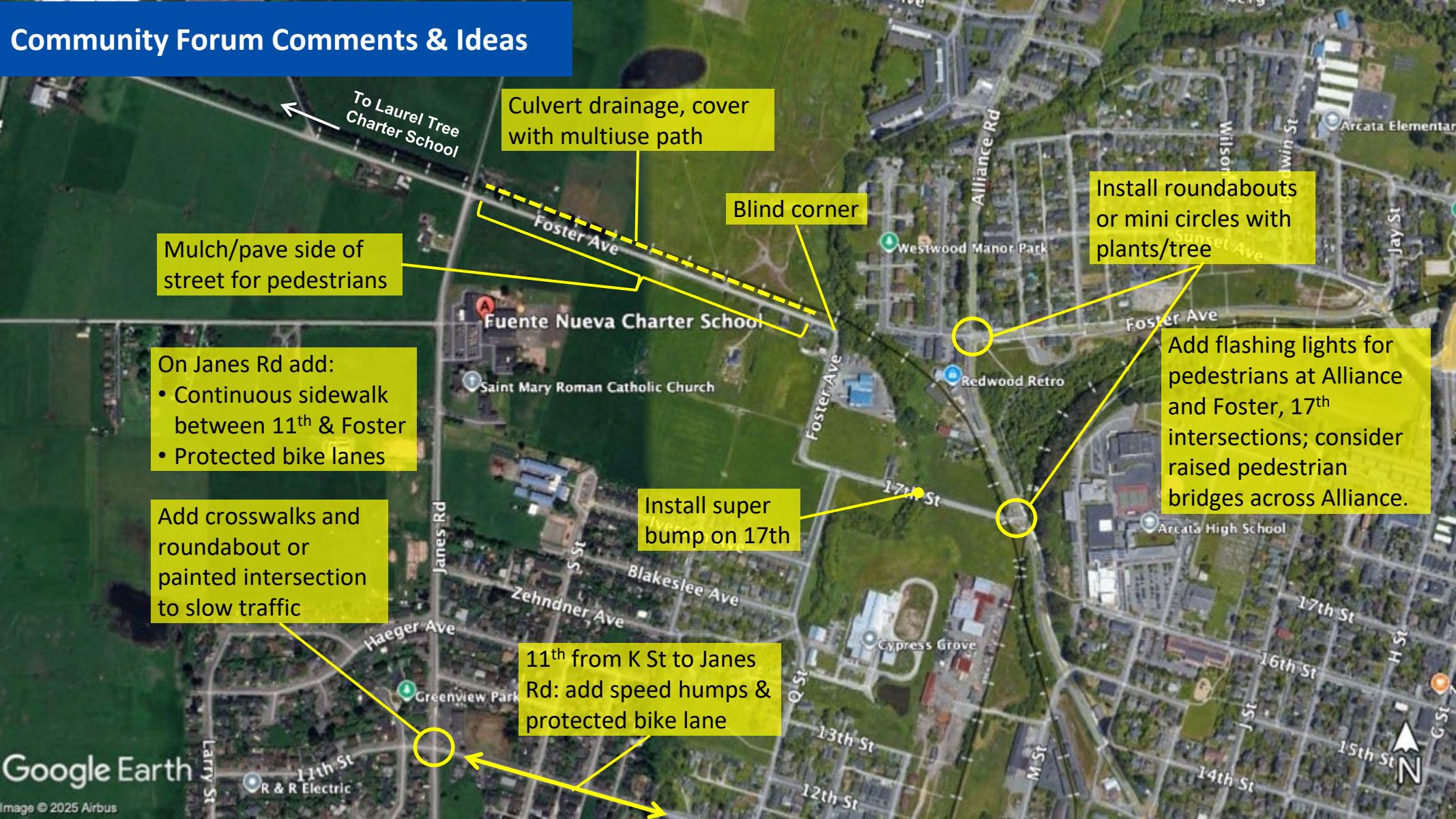
Community Forum Comments & Ideas



A composite image. On the left, a person wearing a high-visibility vest and a cap stands on a sidewalk, pointing towards the right. On the right, a woman and a young boy are riding a bicycle on a street. The woman is in the background, and the boy is in the foreground, both wearing helmets. The background shows a residential street with parked cars.

APRIL VISIT

Community Forum Comments & Ideas





ST. MARY'S CATHOLIC
PARISH



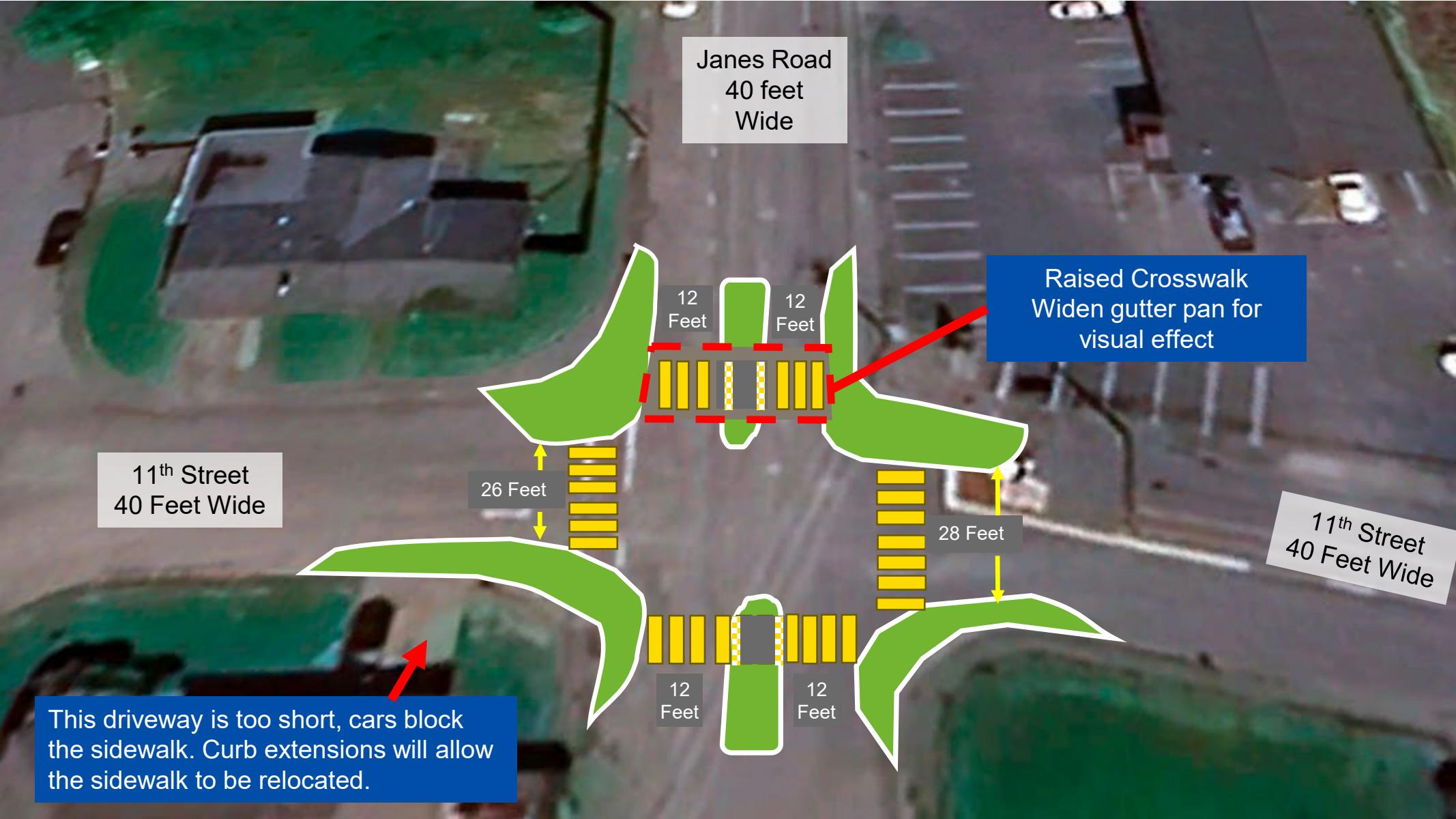
DRIVE
PLATE
SEE
UP











Janes Road
40 feet
Wide

Raised Crosswalk
Widen gutter pan for
visual effect

11th Street
40 Feet Wide

This driveway is too short, cars block
the sidewalk. Curb extensions will allow
the sidewalk to be relocated.

11th Street
40 Feet Wide













Janes
Rd







OPEN 7 DAYS



EARTH DAY – WORLD RECORD





RECOMMENDATIONS



RECOMMENDATIONS

Janes Road School Zone – 20 mph target speed

- Complete sidewalk
- Add bold edge stripe
- Provide bike lanes and buffer
- Narrow church driveways

School Campus – 5 mph target speed

- Locate staff parking at west stalls and north of exit driveway
- Widen drop-off zone
- Add wayfinding

Foster Avenue – 20 mph target speed

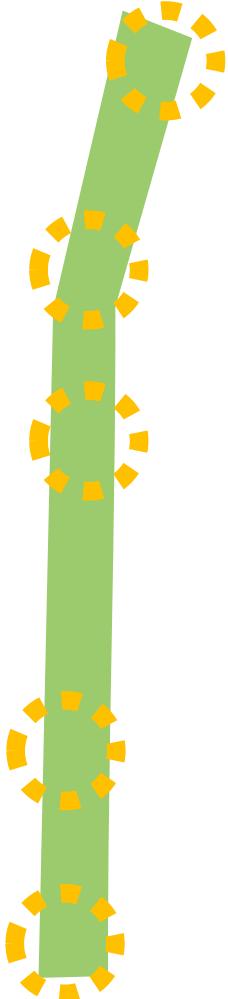
- Build multiuse path (north side)
- Connect east and west sides of Foster across Slough

Zehndner – 20 mph target speed

- Stripe as edge lane road

Janes Road Intersections – 11th Street to Zehnder Av

- Add high visibility crosswalks
- Add Curb extensions
- Consider crossing islands: 11th, Daniels and Haeger
- Consider traffic calming circles



Janes Road speeds are too high for comfortable and safe walking or bicycling.

Recommended treatments:

- ❖ 8" Bold edge stripes
- ❖ 20 mph target speed
- ❖ Intersection and crossing modifications: Foster Ave, Bay School Rd, campus driveways, Zehnder Ave, Haeger Ave, 11th St



Zehnder & Haeger have narrow or missing sidewalks

Recommended treatments:

- ❖ Curb extensions
- ❖ Edge Lane Roads



Zehndner Avenue

(facing eastward)

Conditions:

- 40 foot curb-to-curb width
- No sidewalks
- No street trees
- Block lengths vary (250 to 550 feet)
- Potential 650-foot connector to 13th

Recommendations:

- Edge Lane Road
- Curb extensions



Haeger Avenue

(facing eastward)

Existing Conditions:

40 Feet curb-to-curb width

4 to 5 foot attached sidewalks

No street trees

Block lengths vary (250 to 550 feet)

Potential 650-foot connector to 13th

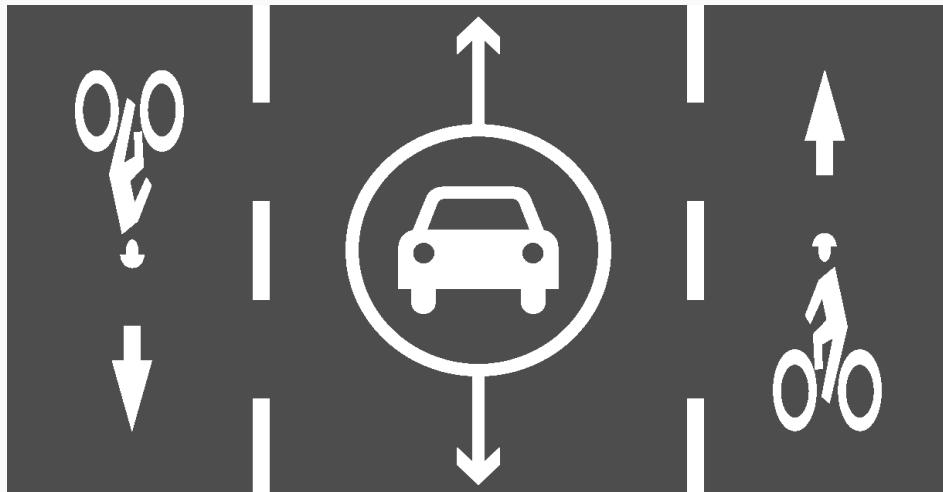
Recommendations:

Edge Lane Road

Curb extensions

WHAT IS AN EDGE LANE ROAD?

An ELR is a roadway that supports two-way motor vehicle traffic in a single center lane and vulnerable road users in the edge lanes on either side. To bypass approaching motor vehicles drivers merge into the edge lanes, after yielding to any VRUs there. No centerline!



Edge
Lane

Center
Lane

Edge
Lane



ELR Design Guide, courtesy of
www.edgelaneroads.com



An example Edge Lane Road (Port Townsend, WA). Two-way Edge Lane Roads typically bring down speeds 2-7 mph, and increase safety for driving, walking and bicycling. Centerlines are removed or allowed to wear out.

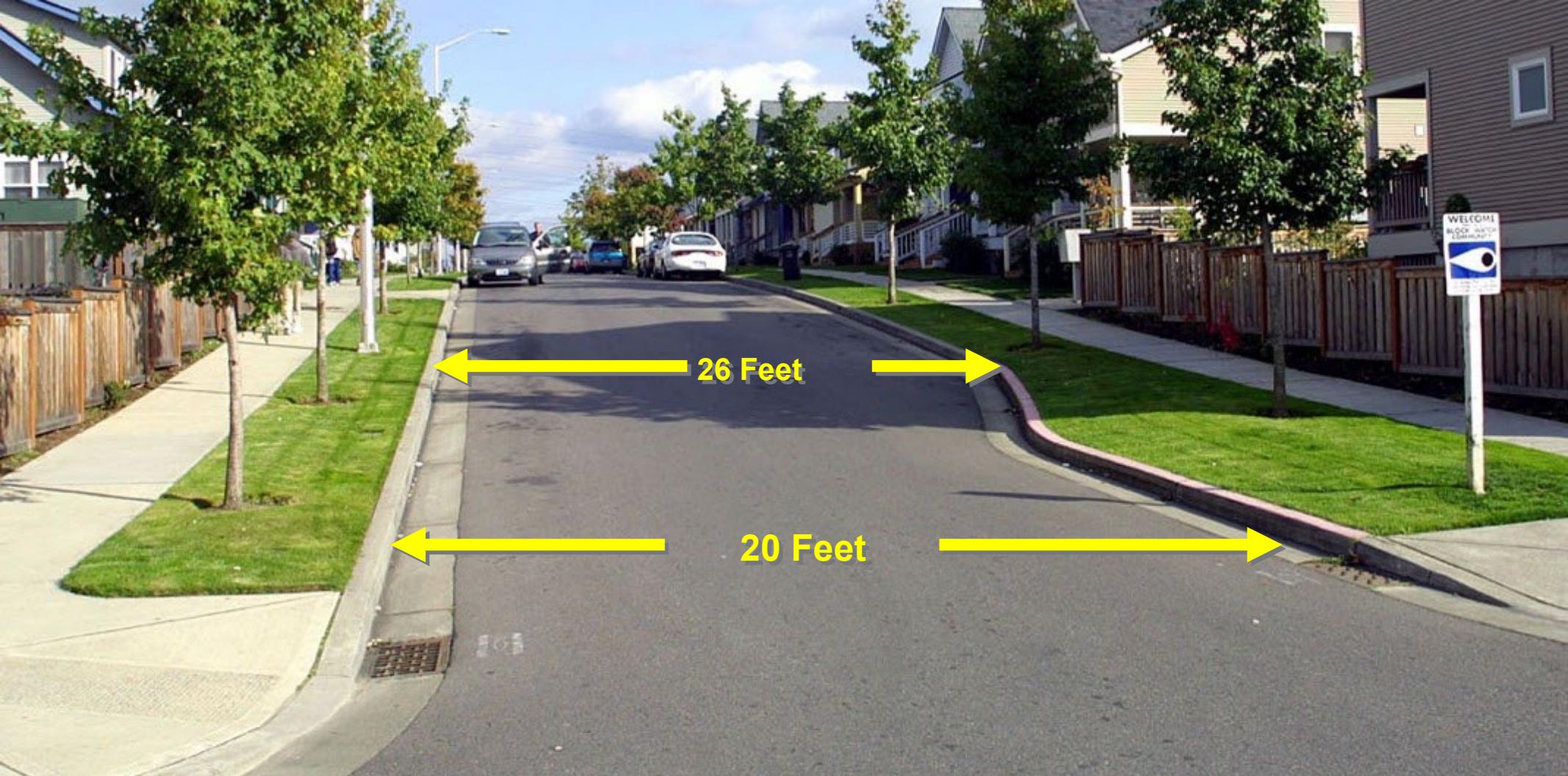


An example Edge Lane Road (Port Townsend, WA) Two-way Edge Lane Roads typically bring down speeds 2-7 mph, and increase safety for driving, walking and bicycling. Note with ELRs sight lines are improved for intersections and driveways.

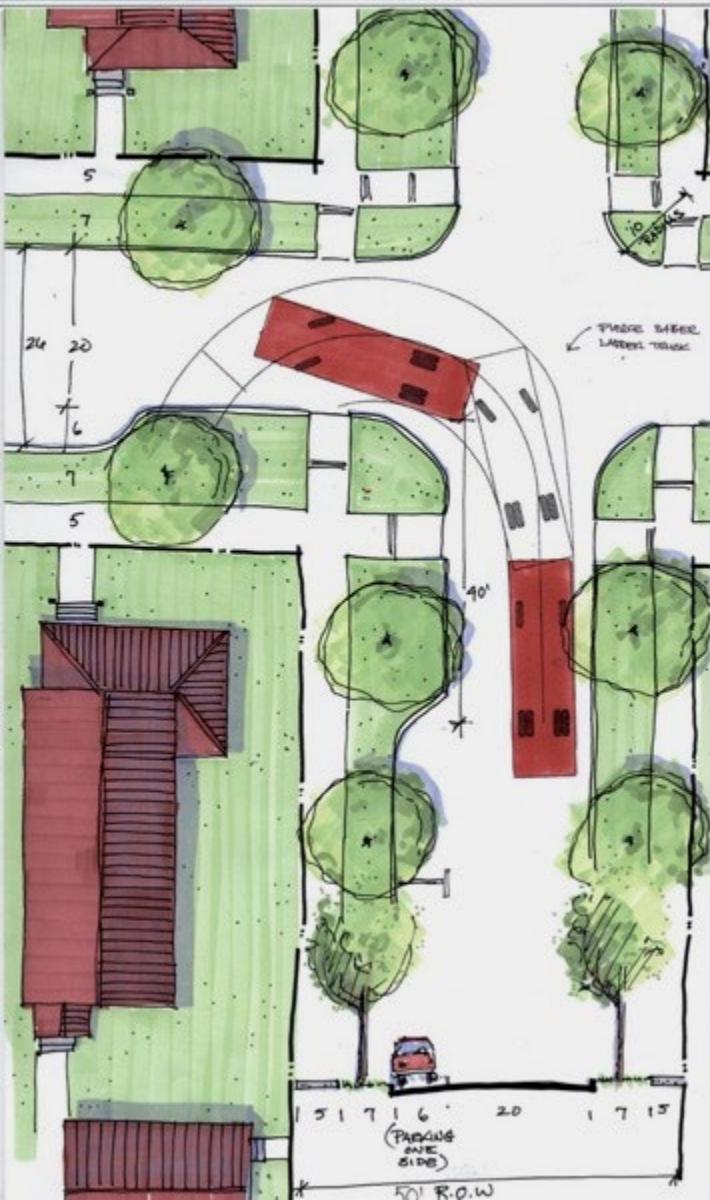


Edge Lane Roads see speed reductions of 7 mph, even more if intersections are treated.

Keep speeds low by sharing spaces and uses



This is a proper minimum width local street entry for low-volume 2-way streets, as practiced in Seattle. Local streets are for access, not speed.



Curb Extensions Protect Access

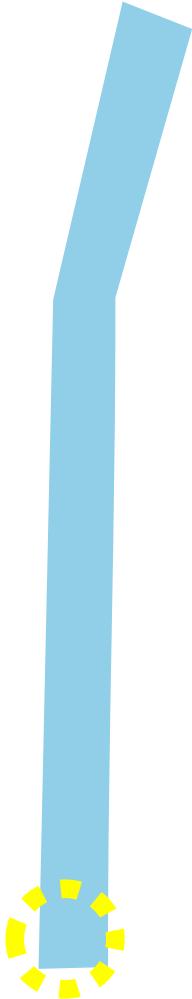
Emergency responders need access to local streets. By building curb extensions on entries motorists are discouraged from either parking or stopping in entry locations thus protecting access.





BENEFITS

- Keeps sight lines open
- Eliminates parking where motorists would block sight lines
- Shortens crossing times and exposure
- Keeps lanes and streets narrow
- Reduces speeding



Janes Road & 11th Street speeds are too high and crossings too long for comfortable and safe walking or bicycling.

Recommended treatments:

- ❖ Curb extensions
- ❖ High visibility crosswalks
- ❖ Raised crossing islands



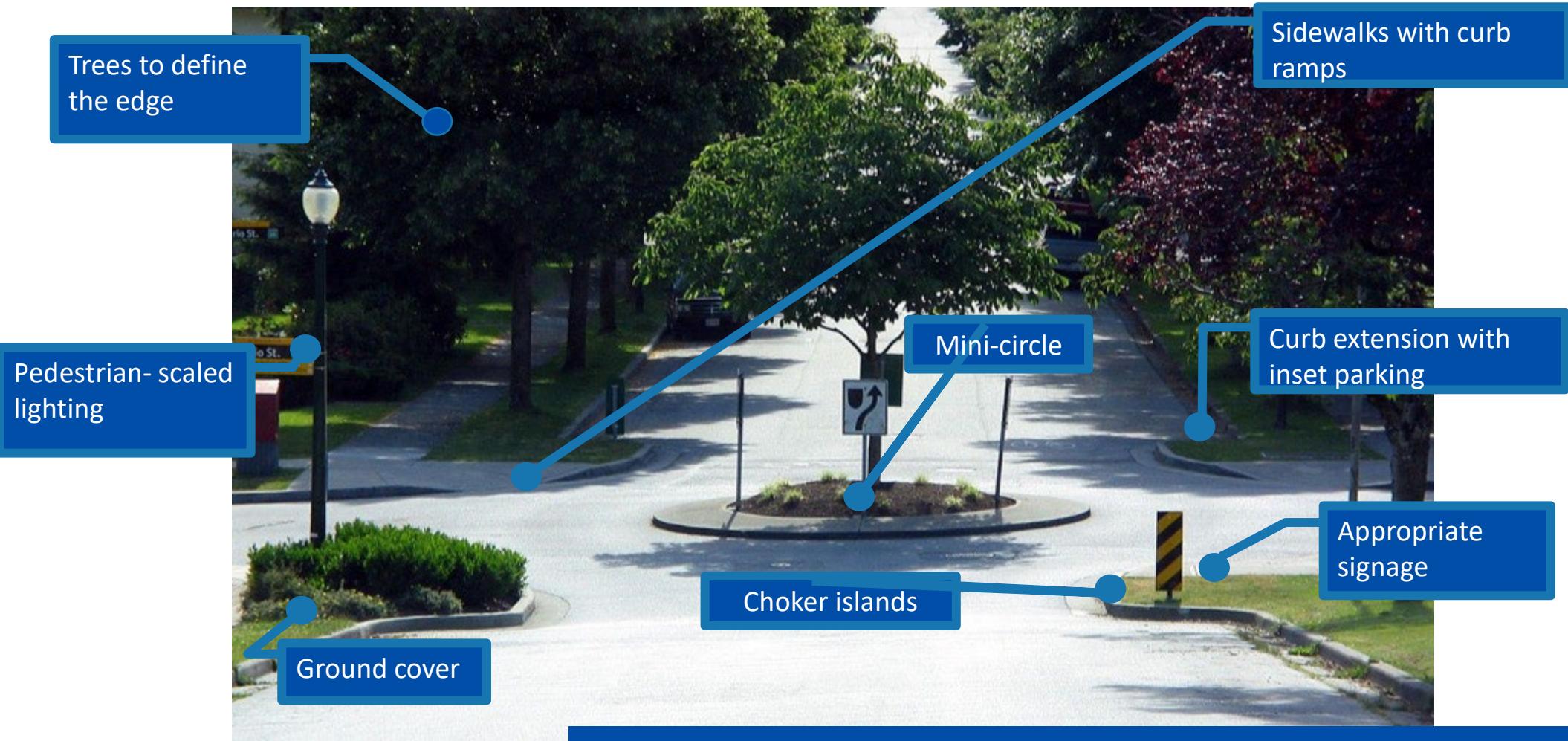
Raised crossings are becoming one of the most widely used traffic calming tools. They can be built out of asphalt or a contrasting concrete material. They are also often built with raised crossing islands. Typically, they are designed for 15-18 mph travel speeds. Their advantages include reduced speeds, increased safety and much higher rates of yielding.

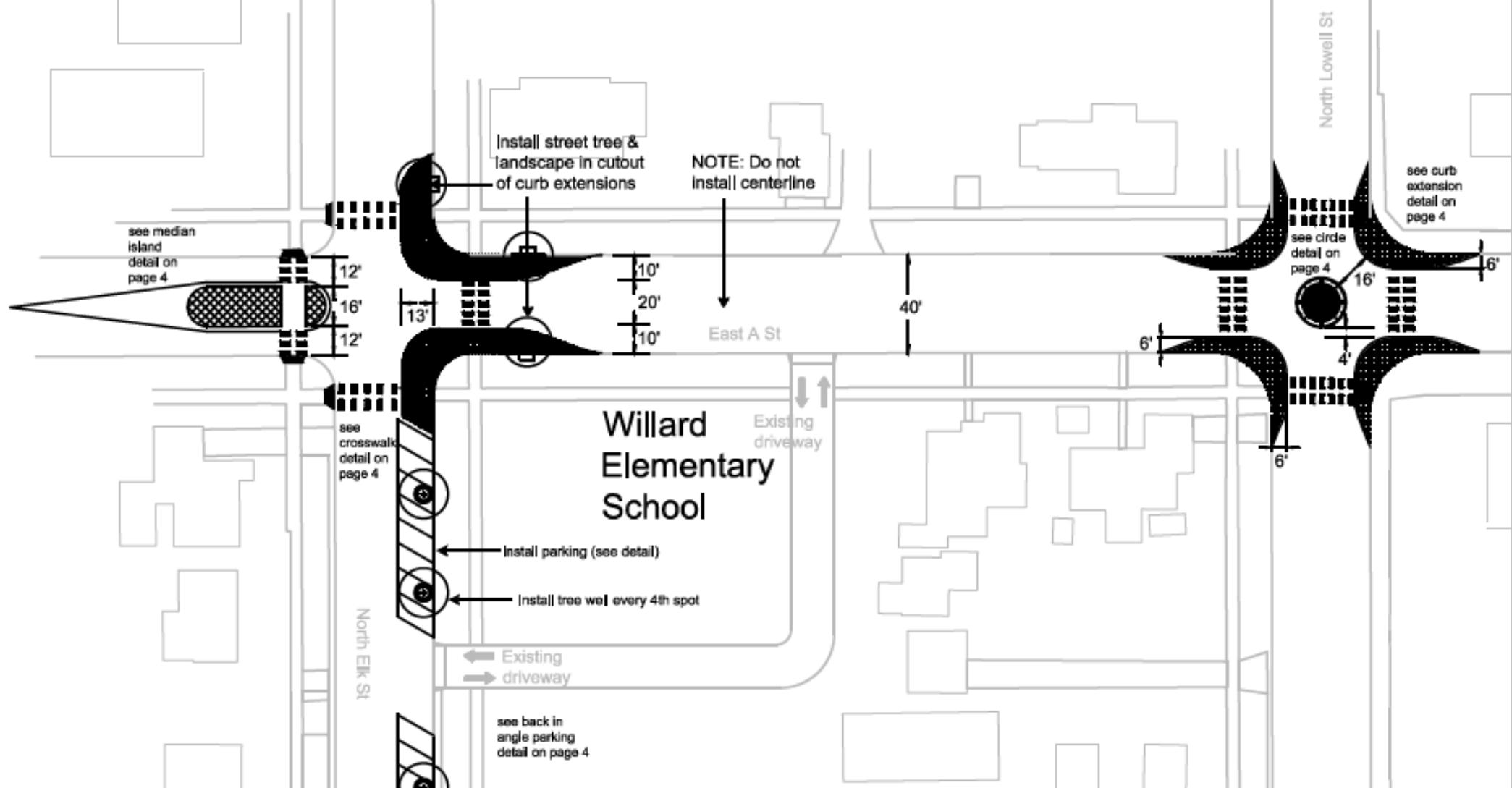


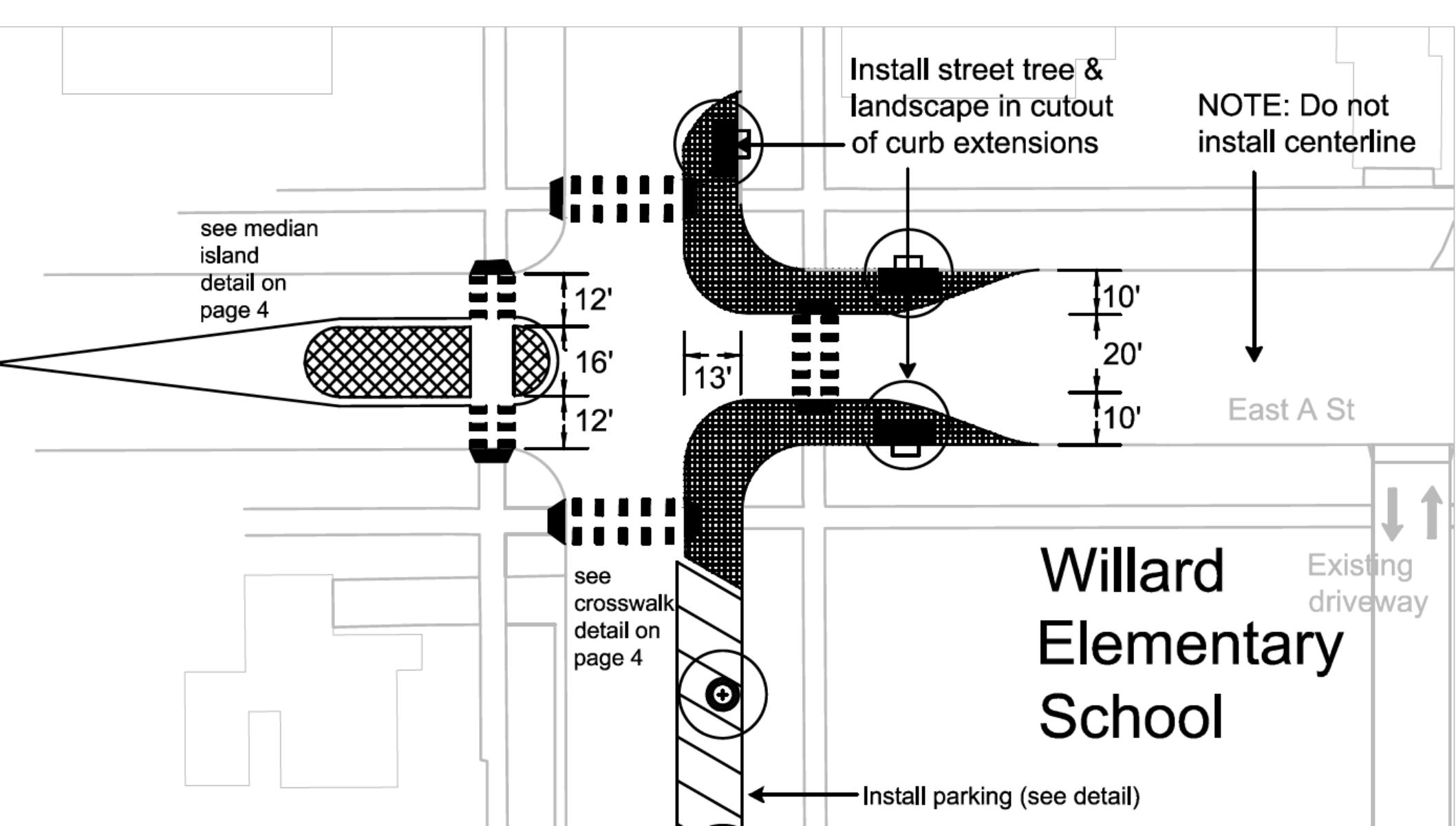


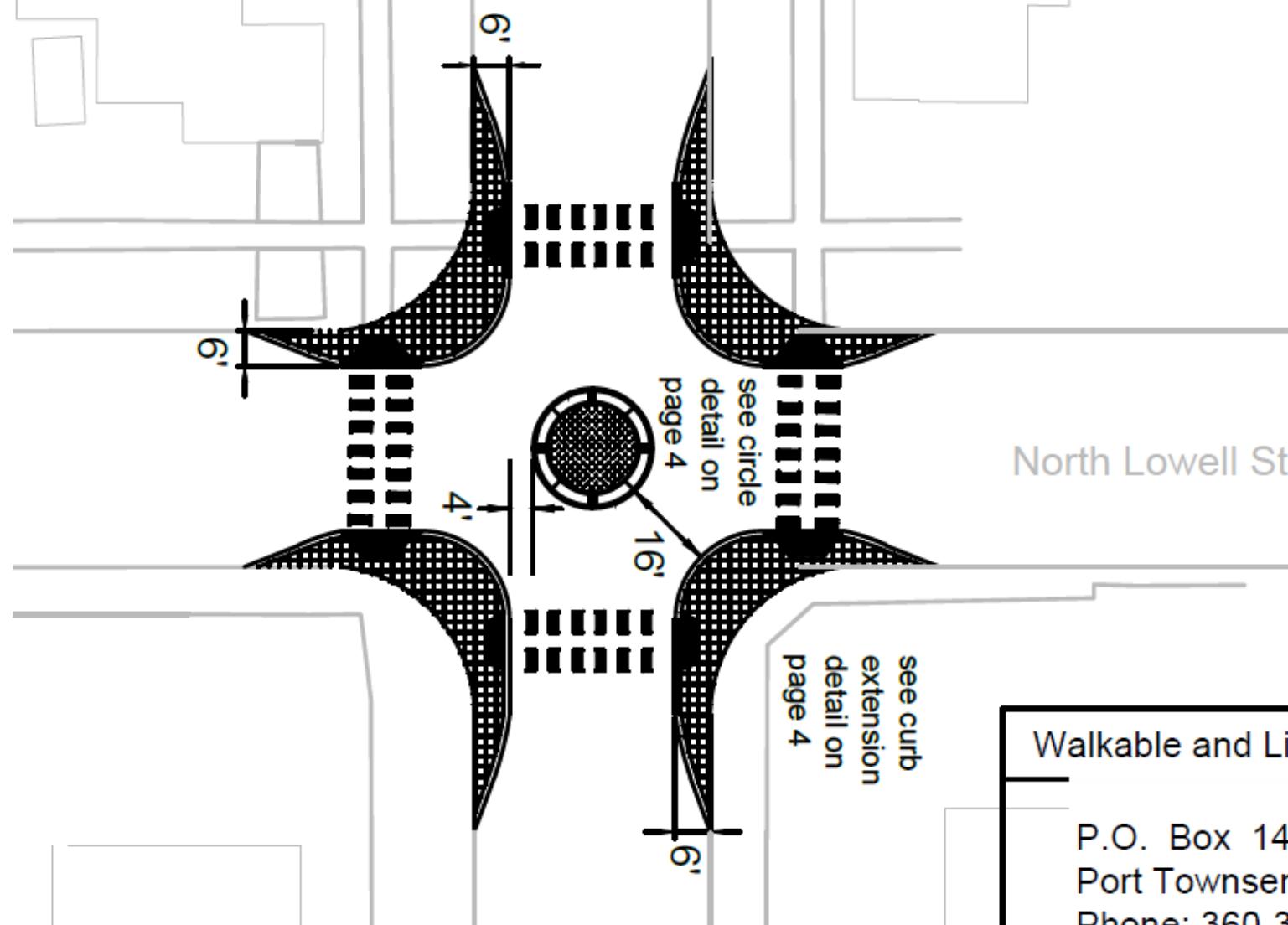
Raised Table Crossing with Refuge
Island, Honolulu, HI

Mini-Circles









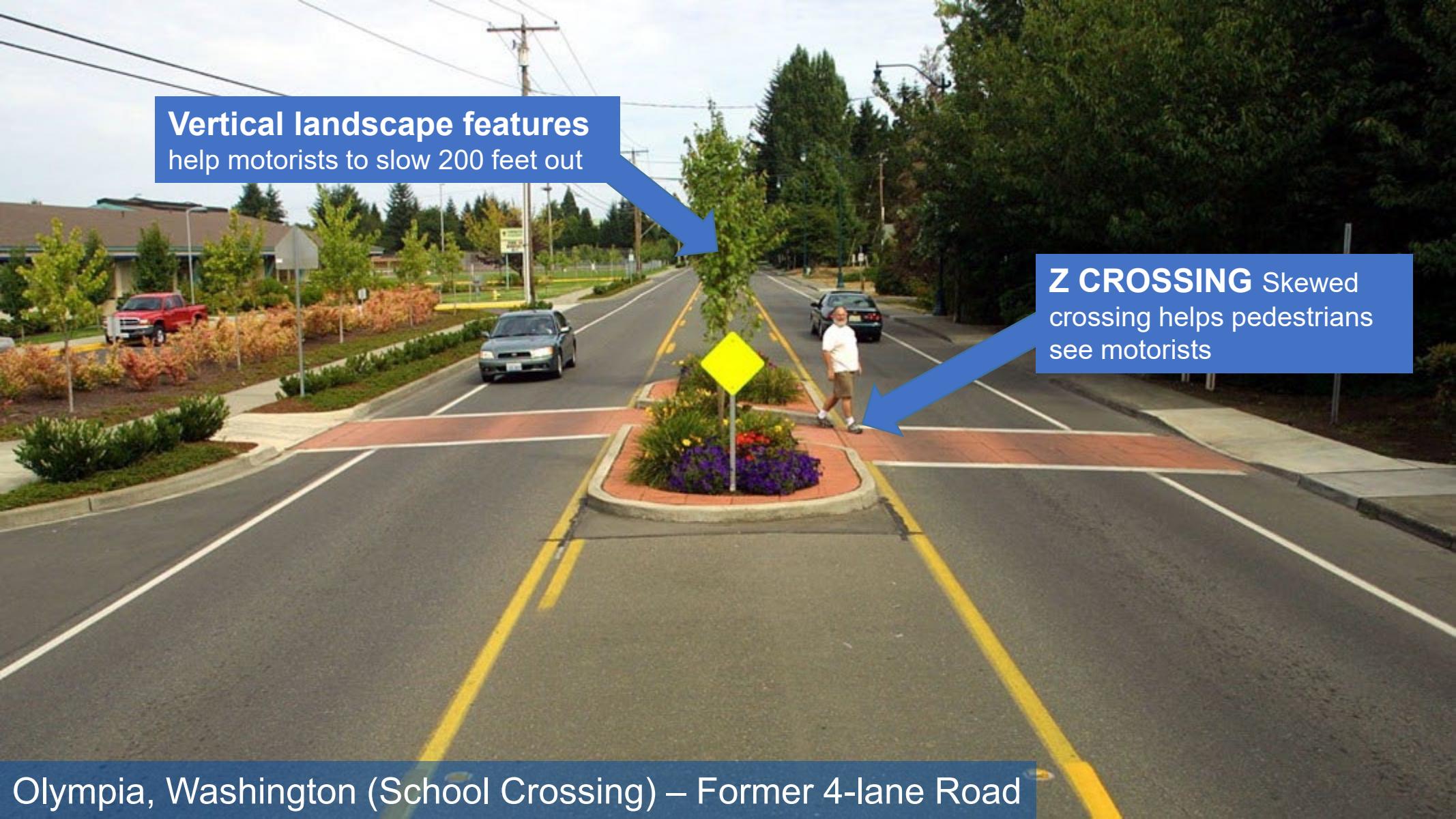
Walkable and Li

P.O. Box 141
Port Townsend
Phone: 360-3
Web: www.wa

Crossing Island



Crossing Elements: curb extensions, high emphasis markings, low-speed street (under 20 mph) and well lit.



Vertical landscape features
help motorists to slow 200 feet out

Z CROSSING Skewed crossing helps pedestrians see motorists



Wide gutter pan visually narrows the travel way, encouraging slow speed



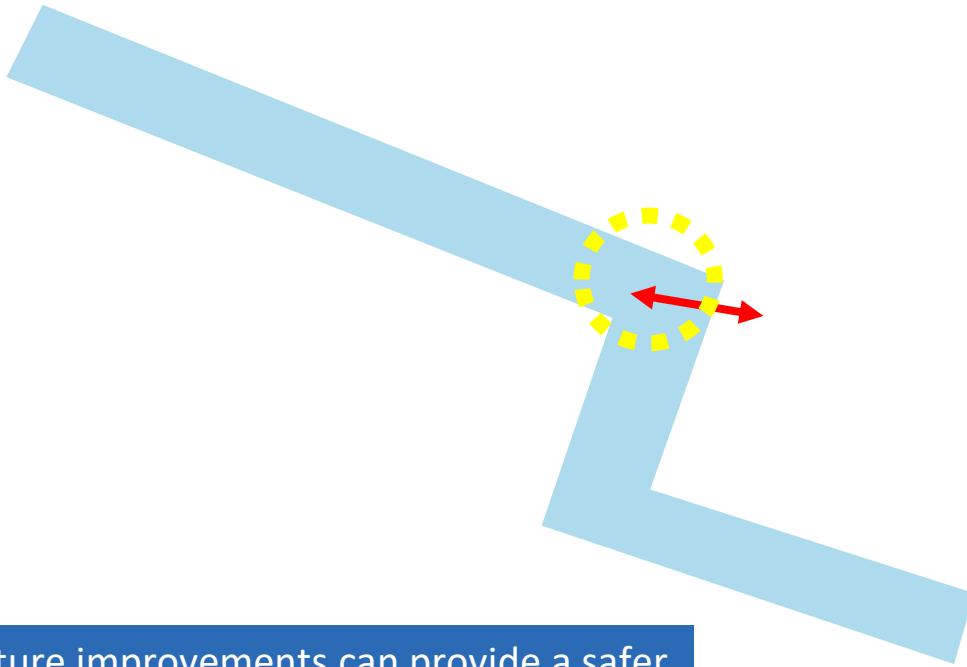
Columbus, OH





Vancouver, B.C.





Foster Avenue infrastructure improvements can provide a safer direct connection to neighborhoods northeast of the school.

Recommended treatments:

- ❖ Design for 20 mph target speed
- ❖ Edge Lane Road with dedicated walking/biking lane
- ❖ Build Class 1 Multiuse Trail that connects to Foster Ave on east side of slough
- ❖ Connect west and east sides of the road across slough



Foster Avenue, facing eastward

Foster Avenue Traffic Calming

Conditions:

- Low traffic volume
- 22 foot paved width
- No sidewalks or shoulders
- No street trees

Recommended:

- Edge Lane Road: 11 foot lane for cars and agriculture vehicles
- 11 foot lane for walking/bicycling



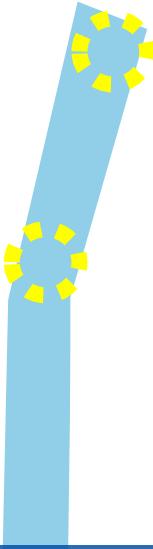
Example on-street walk/bike path



Striped walk and bikeway in Detroit, Oregon



Striped walk & bikeway with curb protection under construction in Portland, Oregon



Foster Avenue and Janes Road, and Foster Road and Bay School Road Intersections

These two intersections require upgrades. Due to large agricultural vehicle use, raised dome mini-circles may be the most accessible solutions to keep speeds low and provide direct connections to both the Fuente Nueva and Laurel Tree Charter Schools.

Recommended treatments:

- ❖ Target speed 20 mph
- ❖ Raised dome or mountable mini-circle
- ❖ Trail connection



Providence, RI

ADOPT A 20 MPH IS PLENTY
POLICY



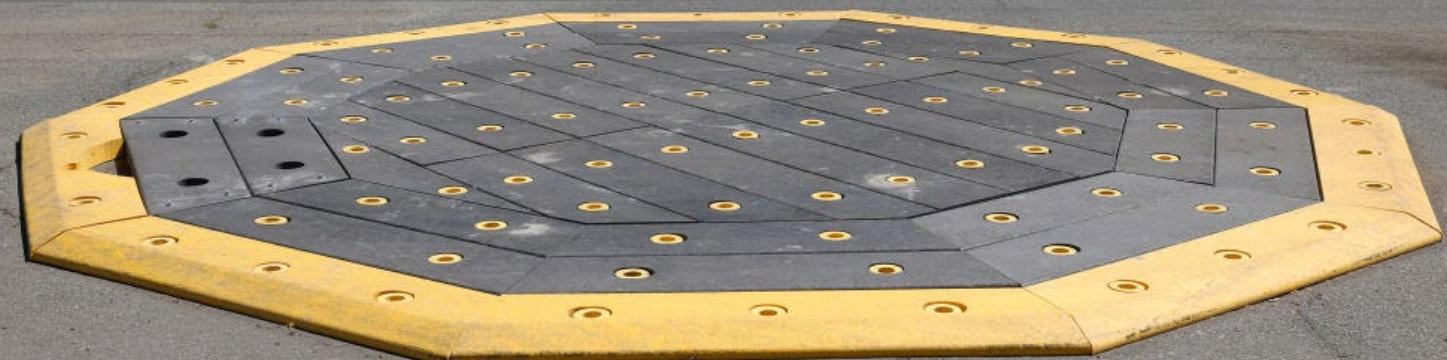
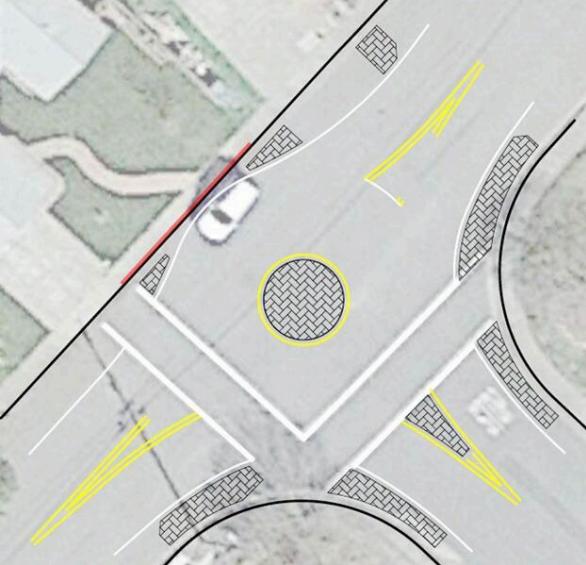
LONDON, ENGLAND



JACKSONVILLE, BEACH, FL

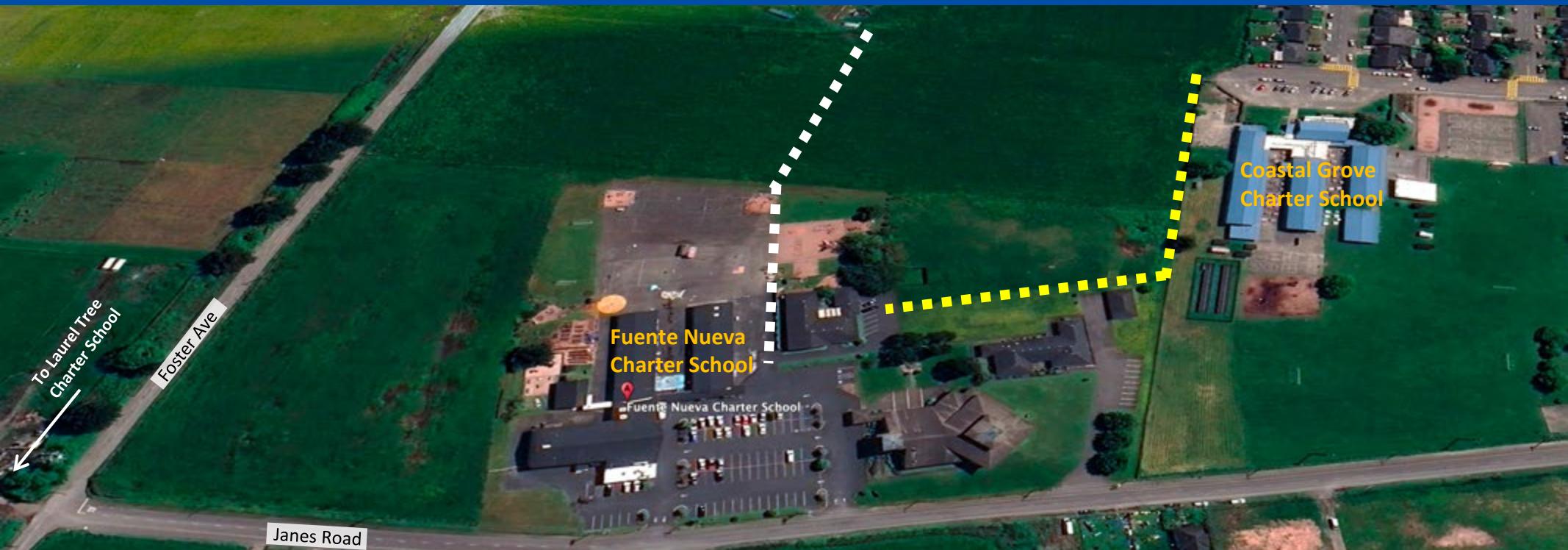


Example of quick-build and mountable small roundabout that could be appropriate at the intersection of Foster Avenue and Janes Road



The example above is a SRTS quick-build roundabout installed at the intersection of Arlen Drive and Almond Street in Rohnert Park (2024). Quick build roundabouts cost about 1/4th of a regular roundabout. Installation can take 1 week, compared with 1 year. They are built with cost-effective, prefabricated materials and can be tested, modified or removed and replaced with more permanent, long-term solutions.

Other possible links



In yellow, students from the Coastal Grove Charter School Elementary School would like to walk to Fuente Nueva for their after school programs. This link would also help connect to many neighborhood streets. The white line could be a direct connection through private property to the east.

NEXT STEPS





**SHORT TERM
(QUICK BUILD)**

What is Quick-Build Infrastructure?

- ❖ Uses materials which can be designed and installed in a matter of hours or days – such as paint, barriers, signs, planters, and delineators.
- ❖ Less permanent than concrete, but is low-cost and immediately effective.
- ❖ Can more easily be changed to adapt to local and emerging needs, or make tweaks based on usage patterns.

Credit: Strong SacTown

<https://www.strongsactown.org/2025/03/22/quick-builds-mar25/>

How does **Quick-Build** work?

Quick-build means low-cost, but immediately effective. It is meant to last years, not decades, and can be changed to adapt to local needs.





Quick-Build projects (paint and soft posts or street furniture) can be completed for under \$5,000. These solutions can be placed and evaluated either short term, or for multiple years, until permanent funds are budgeted.

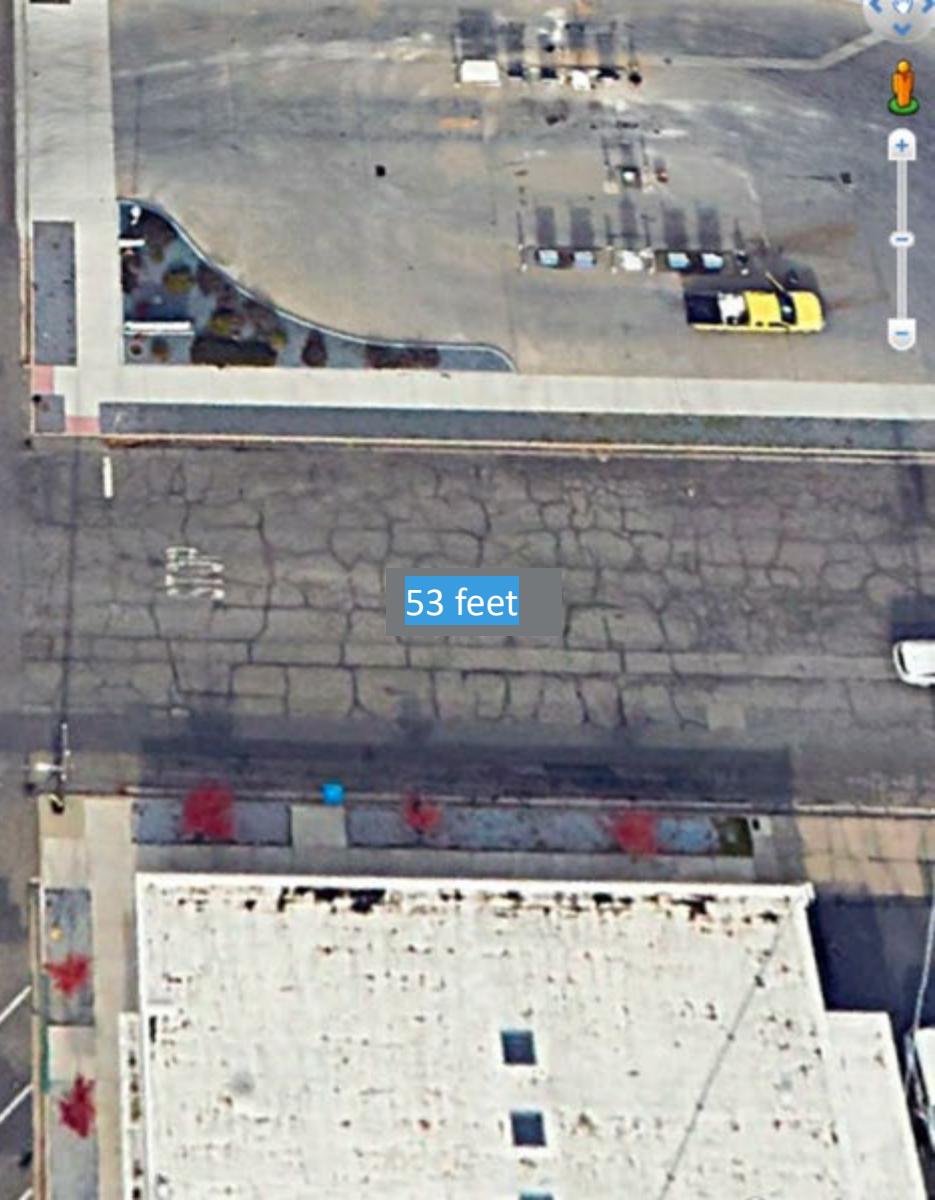


Quick-Build projects (paint and soft posts or street furniture) can be completed for under \$5,000. These solutions can be placed



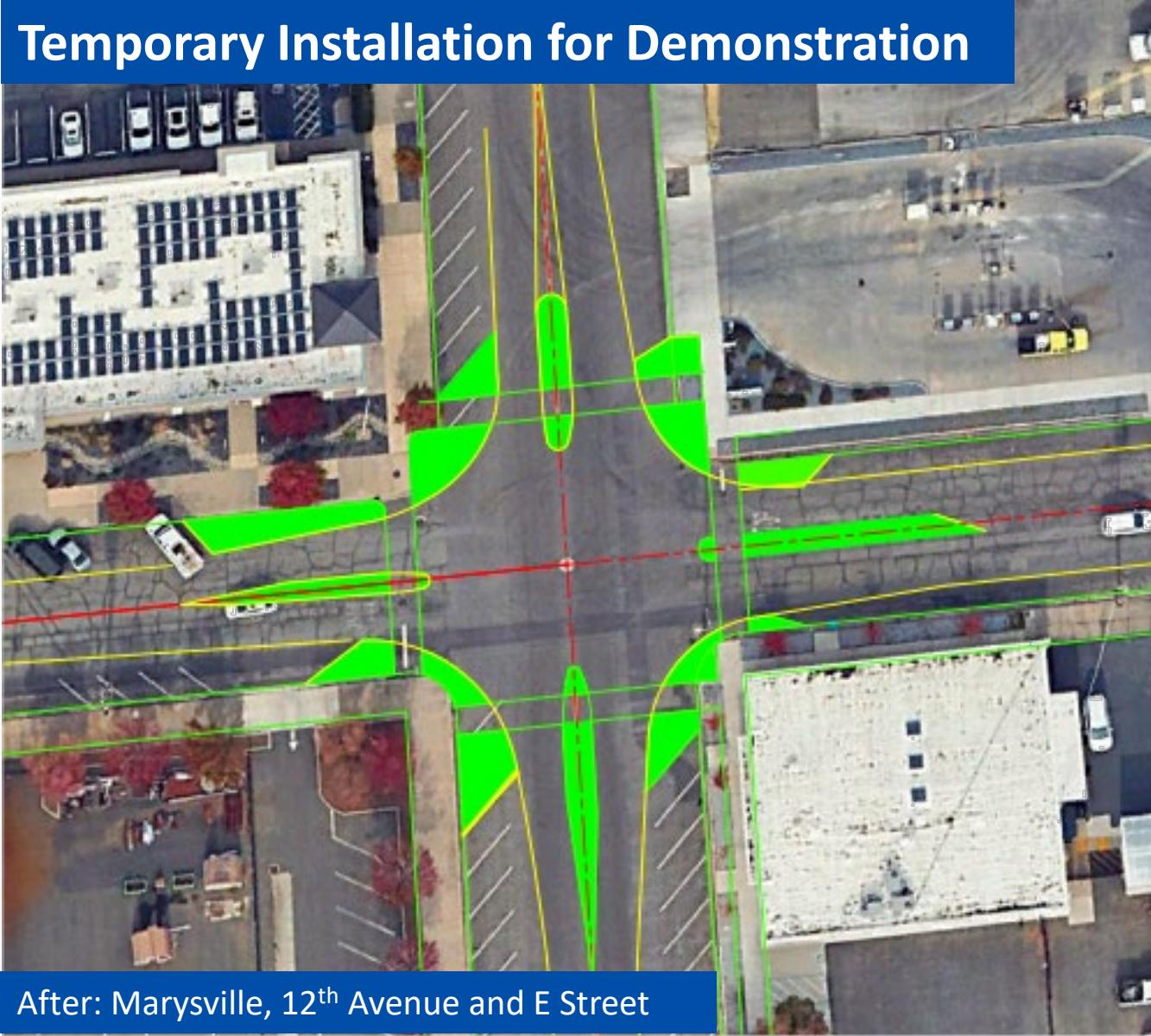
Quick-Build projects (paint and soft posts or street furniture) can be completed for under \$5,000. These solutions can be placed and evaluated either short term, or for multiple years, until permanent funds are budgeted.

Temporary Installation for Demonstration



Before: Marysville, 12th Avenue and E Street

Temporary Installation for Demonstration



After: Marysville, 12th Avenue and E Street

Engineering for a Safety-First Approach

This view shows recommended locations of curb extensions, median, median noses and parking.

Back-in angle parking was visualized at tested.

The recommended design shows two ramps per corner, crossing islands and crosswalks at each corner.

Temporary Installation



Aerial view of the proposed design with chalk and cones to simulate curb extensions, medians and crossings.



Quick-build raised crosswalk and roundabout with modular rubber components in Urangan, Australia.

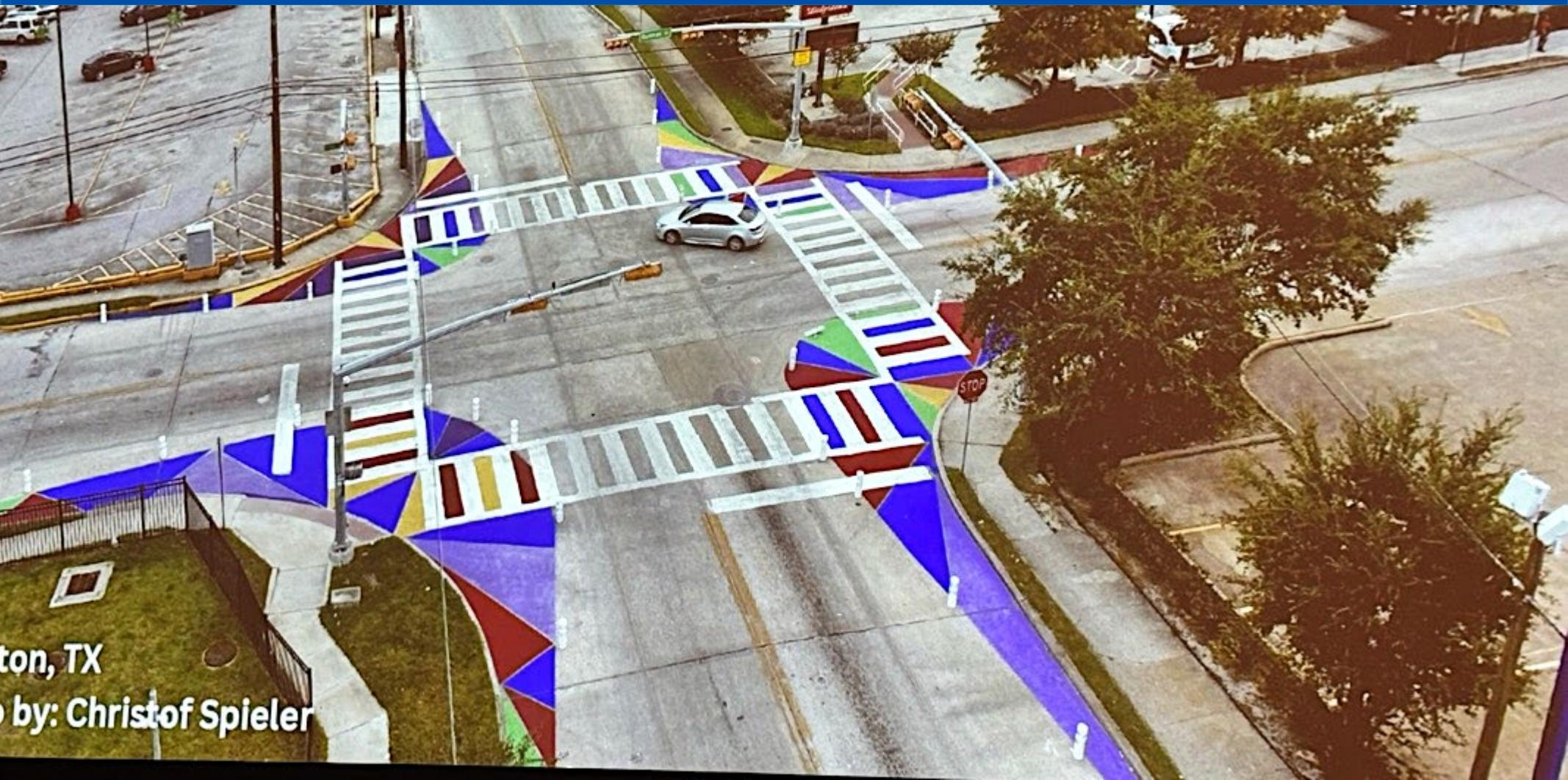


Rohnert Park's quick build SRTS
mini roundabout



Quick-build roundabout installation in progress, Encinitas, CA.

How It Works: Trial Painted Intersections



ton, TX
by: Christof Spieler

How It Works: Trial Painted Intersections



In select locations, neighbors can design, permit and paint attractive intersections. This can become a model school project to advance community pride.

Testing a temporary application allows the community to monitor the results. Did the treatment slow traffic, increase yielding to pedestrians, reduce noise and danger, increase place-making or otherwise create greater livability?

This recommendation generally requires a City resolution or guidelines.

RESOURCE:

https://www.tampagov.net/sites/default/files/transportation/files/paint_the_intersection_complete.pdf

Crossings



Elements: Quick Build curb extensions, high emphasis markings, low-speed street (under 20 mph) and well lit.

CONTACTS

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A composite image. On the left, a person wearing a high-visibility vest and a cap is pointing towards a road. On the right, a woman and a child are riding a bicycle on a street. The woman is wearing a helmet and a dark jacket, and the child is wearing a helmet and a striped shirt.

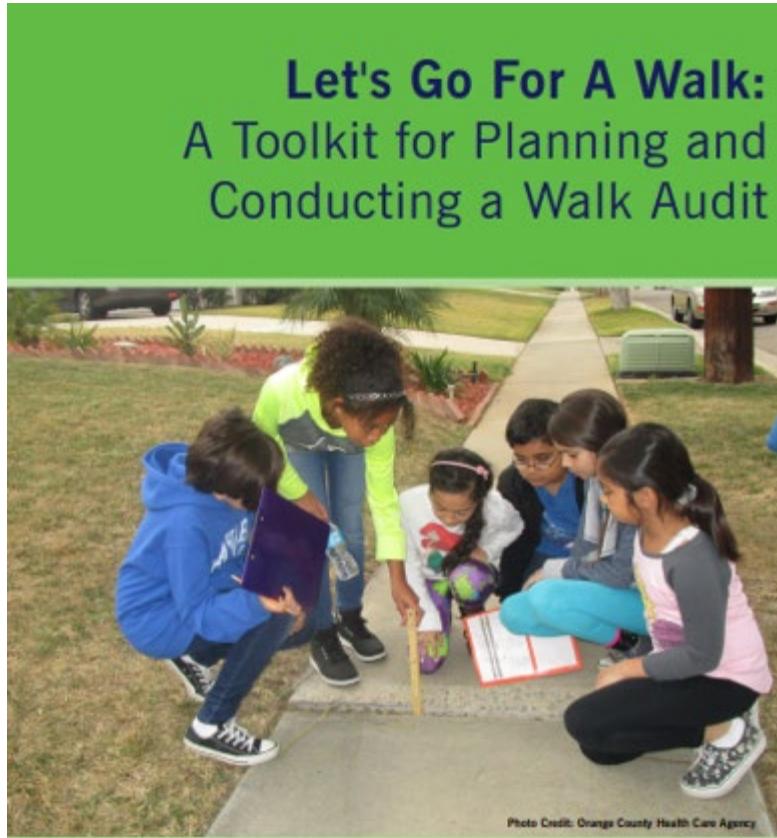
APPENDIX

(pending)



OTHER OPPORTUNITIES

OPPORTUNITY: CONTINUE SRTS WALKING AUDITS



There are a number of walking audit planning tools and checklists to choose from when assessing the built environment.

This excellent resource primes communities to undertake walking audits, but also provides a matrix of other walk audit tools based on length, complexity, and audience in case a bespoke audit tool is desired.

RESOURCE:

https://www.saferoutespartnership.org/sites/default/files/walk_audit_toolkit_2018.pdf

SafeRoutes



NEXT STEPS: DEVELOP A WALKING SCHOOL BUS PROGRAM

A walking school bus is a group of children walking to school with one or more adults. If that sounds simple, It is, and that's part of the beauty of the walking school bus. It can be as informal as two families taking turns walking their children to school to as structured as a route with meeting points, a timetable and a regularly rotated schedule of trained volunteers.

Beach Cities Health District's Walking School Bus program rolled into elementary schools in the Beach Cities in 2010 and has since spread to include hundreds of participating students. Each year, Walking School Bus participants log thousands of miles, save unnecessary car trips and burn excess calories – while also gaining valuable social connection and interaction with their peers.

Two or more trained adult volunteers safely guide students and parents along designated "bus" routes to school – which are carefully selected/mapped by BCHD, school administrators, and local police for accessibility and safety. This program, and others introduced by the BCHD led to a 65% reduction in childhood obesity.

<http://www.bchd.org/walkingschoolbus>



Educating Parents

- Pedestrian and bicyclist safety guidelines need to reinforce safe practices
- Value and techniques for walking with and bicycling with child for school trips
- Safe and courteous driving near schools
- School pick up and drop off procedures
- Consideration for remote drop-off and pick up locations to reduce chaos and danger of unsafe practices at school (if school offers such a program)



Encouraging Active Transportation

The more children who walk and ride bikes to school, the sooner motorists change their behavior, not just around schools, but in many neighborhoods. This adds to the safety and respect needed for children and for all people who walk and bike. Experience has proven that the more times and places motorists see people walking and riding bikes, the more likely the driver forms a mental “signature” on what is traffic, which broadens their respect and understanding to share the road.

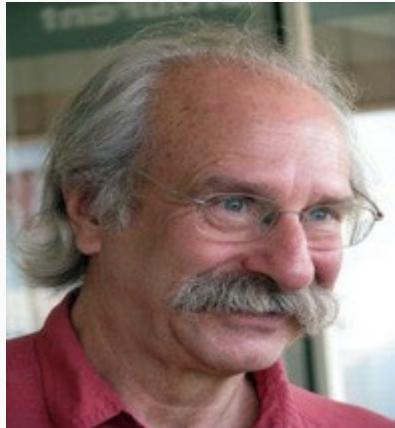


Subject Matter Experts



JOSH MEYER: Josh Meyer is a planning consultant specializing in active transportation and Safe Routes to School. His twenty-five years of experience in the active transportation, traffic calming and Safe Routes to School field has taught him how to work with the public and government agencies to reach consensus, obtain grants and bring projects to fruition.

Subject Matter Experts



DAN BURDEN: with over 40 years of experience in community and transportation planning, urban design, and active transportation studies, is a renowned expert in creating livable and walkable communities.

- Dan launched Florida's school crossing guard training and certification program.
- Dan launched Florida's, Montana's and Hawaii's statewide traffic safety education programs

He specializes in a wide range of areas, including trails design, Safe Routes To School, traffic calming, and complete streets.