

# STANFORD UNIVERSITY LAB PLATINUM RENEWAL OVERVIEW AUGUST—2023

JOIN US FOR A RIDE AROUND OUR PLATINUM LEVEL BIKE FRIENDLY CAMPUS



# SPINNING OUR WHEELS ON THE STANFORD CAMPUS SINCE 1891



1891-Encina Wheelmen IN FRONT OF ENCINA HALL

- Over \*22% of university commuters ride bikes; 85% of new students own bikes.
- Over 13,000 bikes on the campus on a daily basis.
- Average Commute by bicycle off campus to campus is 3.6 miles one way.
- 20,000+ Bike Parking Spaces & Five Bike Commuter Cages on the campus.

• \*2022 Stanford Transportation Annual Commute Survey



# BICYCLE FRIENDLY—PLATINUM LEVEL—2011 to 2023

Stanford Awarded as a 3-Time Platinum Level Bicycle Friendly University  
Focus on the 5-E's: Education, Engineering, Equity, Encouragement & Evaluation



Photo: Steve Castillo



The League of American Bicyclists (LAB) recognized Stanford University with a third Platinum Bicycle Friendly University (BFU<sup>SM</sup>) award.



Photo: Miles Keep

## About Stanford's Platinum Award



Stanford news release



Stanford Bicycle Commuter Access Study (PDF)



Bike safety program presentation (PDF)

## About Stanford's Bicycle Program



'E's your way to a better bike program (PDF)



Stanford's Bicycle Program website



Stanford's bicycle safety efforts

# FOCUS ON THE 5 E'S STANFORD BICYCLE PROGRAM—TARGET GOALS



**Educate** our bike riding community to be safe, prepared and equipped.



**Encourage** commuters to use alternative transportation to reduce net new car trips.



**Engineering** expertise and expansion in areas of circulation and infrastructure.



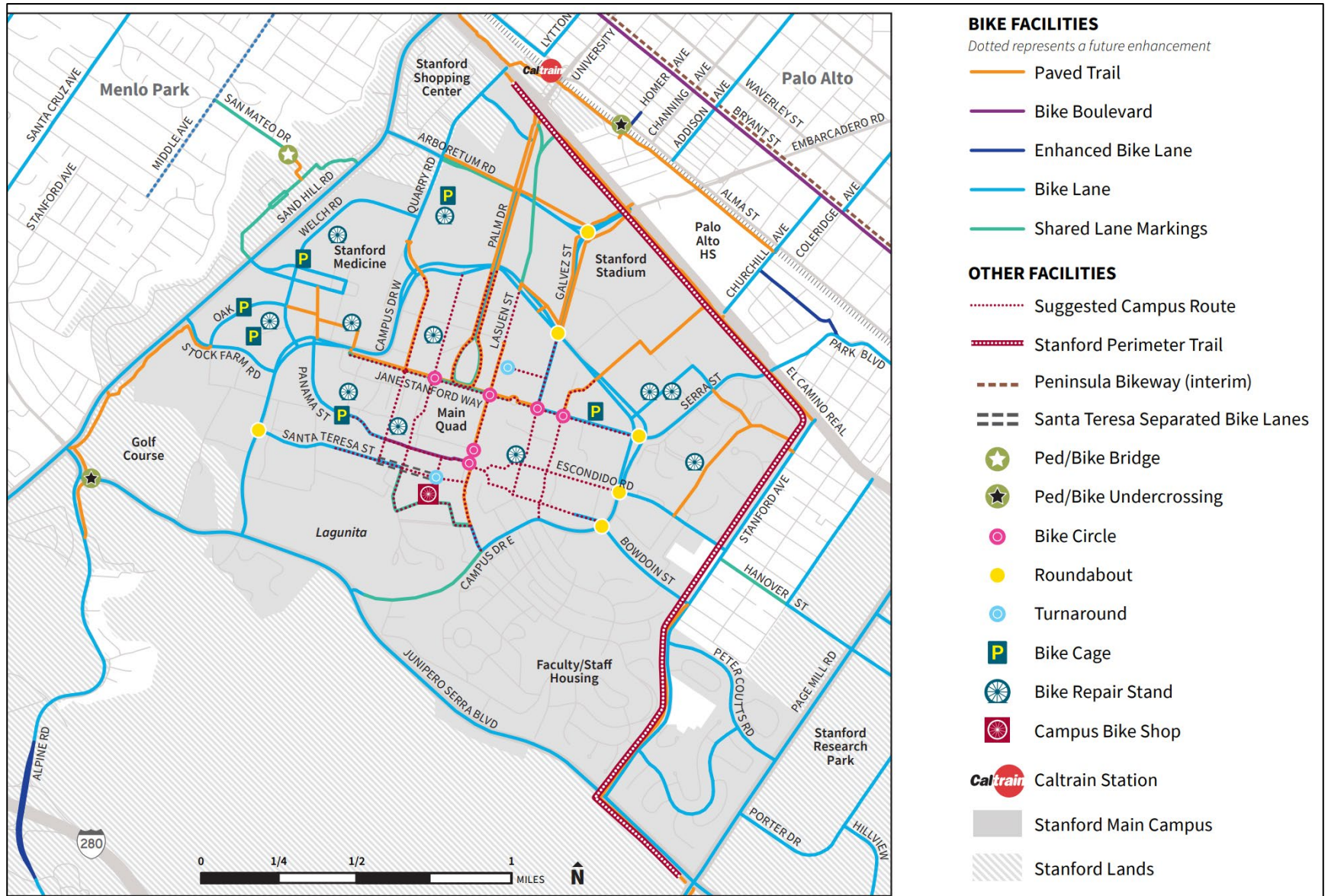
**Evaluate** our programs to determine program success and outcomes.

**Equitable** elements in our work creating a bike friendly environment for all.



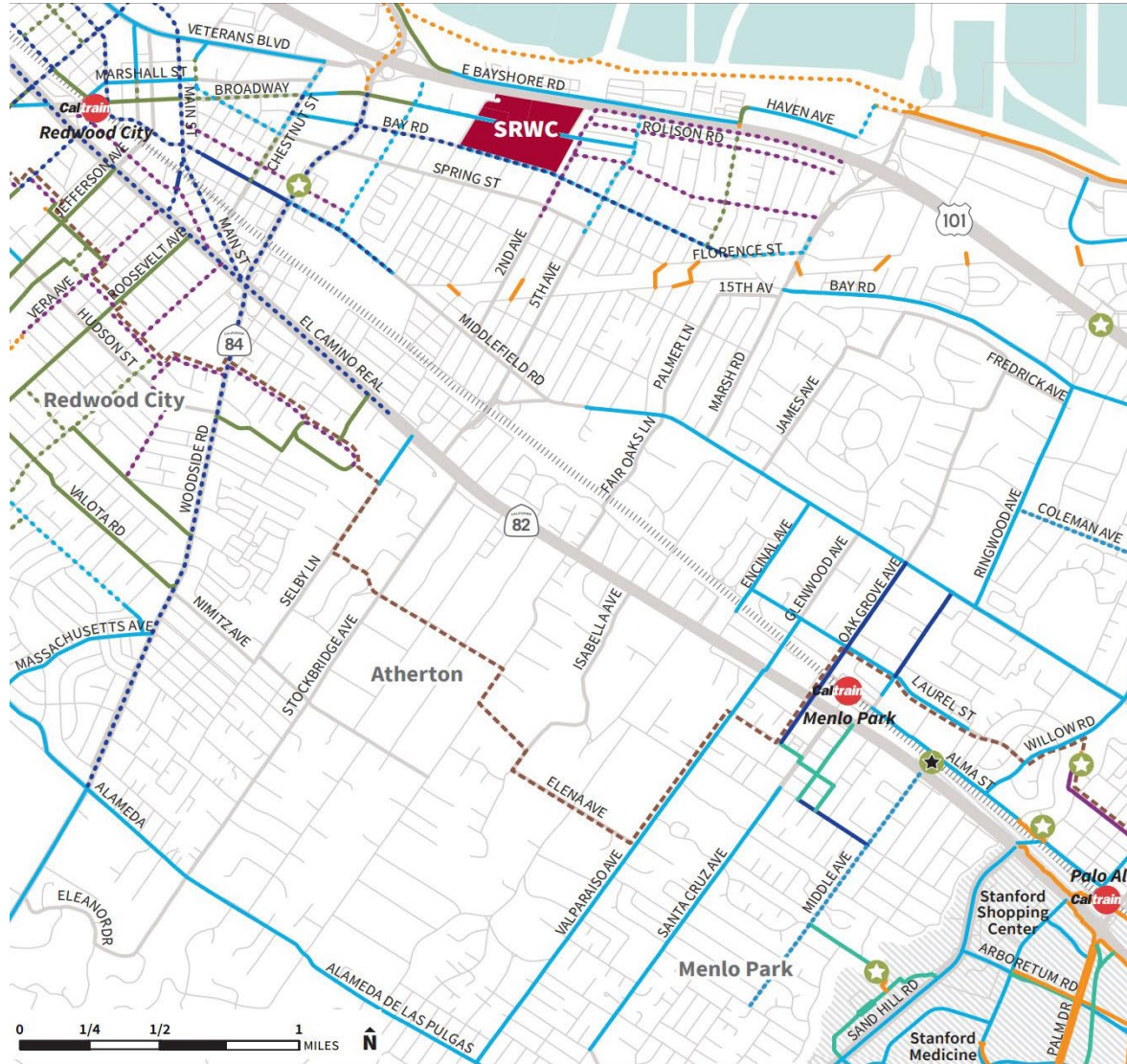


# OVERVIEW—STANFORD MAIN CAMPUS

















# OVERVIEW—STANFORD REDWOOD CITY CAMPUS



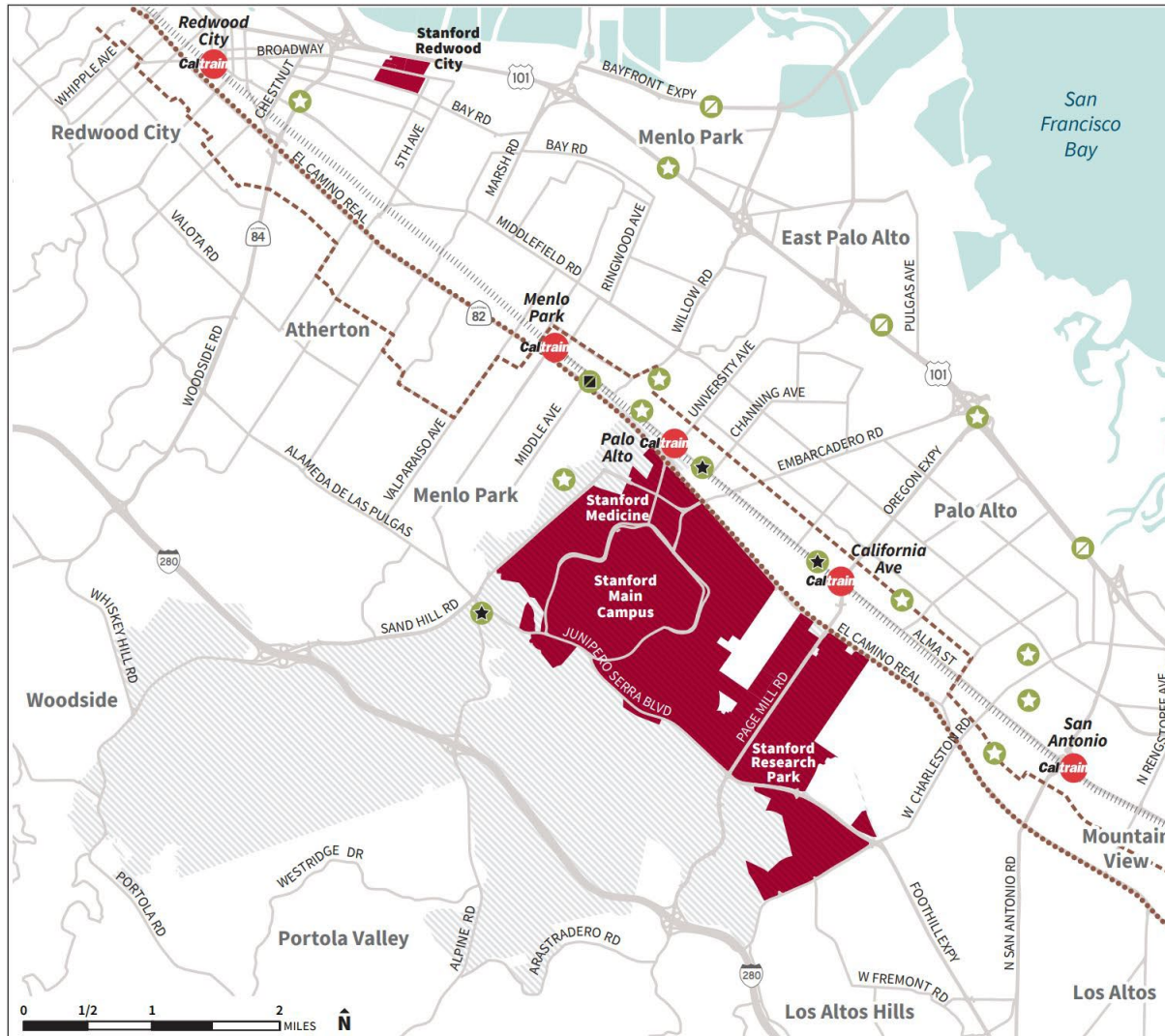
## BIKE FACILITIES

(dotted: represents a future enhancement)

-  Paved Trail
-  Bike Boulevard
-  Enhanced Bike Lane
-  Bike Lane
-  Shared Lane Markings
-  Bike Route
-  Peninsula Bikeway (interim)
-  Ped/Bike Bridge
-  Ped/Bike Undercrossing
-  Caltrain Station
-  Stanford Redwood City
-  Stanford Lands



# OVERVIEW—REGIONAL PARTNERSHIPS



## KEY REGIONAL BIKEWAY CONNECTIONS

### Ped/Bike Bridge

- Existing (Green star icon)
- New (Green square with diagonal line icon)

### Ped/Bike Undercrossing

- Existing (Green star icon)
- Future (Green square with diagonal line icon)

- Peninsula Bikeway (interim) (Dashed brown line)
- Peninsula Bikeway (future) (Dotted brown line)
- Pedaling Forward Study Area (Red solid area)
- Stanford Lands (Grey hatched area)

The Interim Peninsula Bikeway is the first step in creating a viable north-south bike option for most trips between the cities of Redwood City, Atherton, Menlo Park, Palo Alto, and Mountain View. The temporary bikeway route covers almost 16 miles, and runs from Evelyn Avenue in Mountain View to Warwick Street in Redwood City. The route takes advantage of existing facilities with a focus on including low stress bike streets.

Stanford continues to support the long-term bikeway vision of creating a stress-free network which aligns with the university's sustainability and equity goals. The future long term bikeway is currently planned for El Camino Real. El Camino Real represents the most cohesive, connected, and appropriate opportunity for implementing the long-range vision.

# EDUCATION—BIKE SAFETY ROUNDABOUT TRAINING

Interactive rider education measured for comprehension & behavior change



- The design puts the bicyclist on the road entering, riding within, and exiting Stanford roundabouts.
- Will be featured on the Stanford STARS educational platform—Bike Bingo Debuts!
- Students will receive a free Stanford bike light if they the pass the quiz!

[Control Click to View  
Sample Drone Footage](#)

Stanford University



# EDUCATION—BIKE SAFETY ROUNDABOUT TRAINING

Bike Safety (Proof of Concept)

RESOURCES

BINGO				
From bus: Cyclists and car in roundabout	Cyclist pulls into bus driver's blindspot	Rider entering roundabout with cars	Rider in roundabout signals to turn right	Bike Visible in Driver's Left Rearview Mirror
From bus: Cyclist rides through stop sign	Yield sign	Cyclist can be seen in driver's right rearview mirror	When cyclist can NOT be seen by bus driver	Cyclist follows too close behind bus
Bike visible in Driver's Right Rearview Mirror	Cyclist signals to turn left in roundabout	Pedestrian in bike lane	2 cyclists enter roundabout before truck	Cars intrude into bike lane
Car in roundabout stops for pedestrian	Cyclist can be seen in left rear view mirror	bike signals to merge in traffic at roundabout	Cyclist pauses for two pedestrians	Busses, bike, car, pedestrians negotiate roundabout
Roundabout Ahead" sign	Cyclist stops at roundabout crosswalk	Bike stops behind bus stopping for pedestrian at roundabout	Cyclist doesn't yield when entering roundabout	Cyclist drives between cars & exits roundabout

Click a BINGO box. Each presents an important aspect of the *system* that is a traffic roundabout.

Some aspects you may have considered, some not. We used a variety of video techniques to help you see them.

Continue to get a full BINGO row. When you do, you can play again with more videos, or continue to the next screen.

**CLICK FOR A "HOW TO PLAY" DEMO**

**"Control Click"  
To View Test Bike Bingo**

# EDUCATION—BIKE SAFETY WEBINARS DURING COVID

570+

## CYCLING ENTHUSIASTS ATTEND WEBINARS & EVENTS

We offered 20+ free online webinars and in-person events to help educate riders on bike safety and best practices.



- Pivoting to train virtually during COVID
- 677 Views of our Ready to Roll Bike Safety Webinar

## Key Bike Riding Tips You Need to Know



**Wear a Properly Fitted Helmet for Every Ride**



**Register Bike Project529.com**



**Use Lights at Night. It's the Law.**



**Ride Counter Clockwise in Roundabouts**



**Be Aware of Surroundings**



**Show Courtesy & Respect on roads and paths**



**Stop at All Stop Signs**



**Rack & Roll Lock-up your bike.**



**Use Hand Signals**



**Be Seen in Bus Drivers Mirrors**



**Safe Speeds for Conditions**

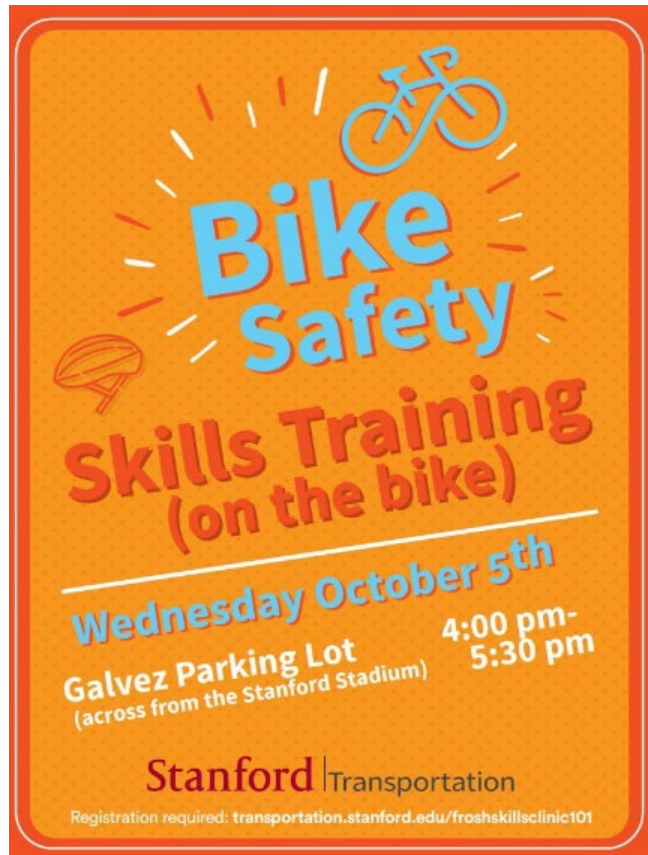


**No Bikes on Rails or Ramps**



# EDUCATION—NEW STUDENT ORIENTATION SKILLS CLINIC ON THE BIKE

- League Certified Instructors (LCI's) on-site to teach
- On-site skills on how to ride and navigate roundabouts
- Stanford Marguerite Bus Operations Team joined us
- Tips for riding around buses to be seen by drivers



**Bike Safety**  
**Skills Training**  
(on the bike)

Wednesday October 5th  
Galvez Parking Lot  
(across from the Stanford Stadium) 4:00 pm - 5:30 pm

Stanford Transportation  
Registration required: [transportation.stanford.edu/froshskillsclinic101](https://transportation.stanford.edu/froshskillsclinic101)



[Click to View the Skills Clinic Video](#)

# EDUCATION— D. SCHOOL & BIKE HELMETS

Invited to join Stanford d. School Professor Stuart Coulson Design for Extreme Affordability & Design Team Challenge—How to Increase Helmet Use at Stanford



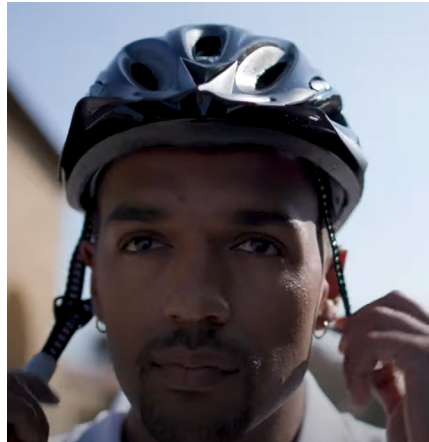
Results—The Team Delivered a Playbook for Fall Quarter that will be implement this September with the team's support.

- [Bike Safety Continuation Manual & Guide](#)
- [Prototype Idea Box](#) with ideas for summer/fall launch



# EDUCATION— STANFORD MEDICINE & STANFORD ATHLETICS BIKE SAFETY HELMET VIDEO

- Video debuted at Stanford Football Home Game on Jumbotron Screen
- 29,496 views on September 14, 2021
- Stanford Athletics YouTube Video Channel has 42.4K subscribers



WE DON'T TAKE THE FIELD WITHOUT OUR HELMETS.  
**DON'T TAKE THE ROAD WITHOUT YOURS.**

[Click to View Helmet Video](#)

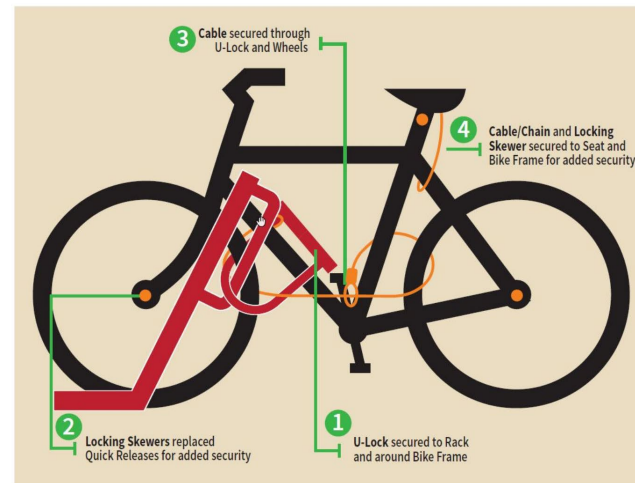
# EDUCATION—BIKE THEFT PREVENTION ON CAMPUS COLLABORATION WITH STANFORD PUBLIC SAFETY



## How to Lock Your Bike

- Use a **U-shaped lock** to lock your bike **to a bike rack**
- **Lock the frame and wheel** to the bike rack, **not** to sign posts or poles
- **Extra security:** Use a long cable lock to lock the wheels to the U-shaped lock
- **Using a bike cage?** Make sure to lock your bike and wheels!

Questions?  
[bike-information@stanford.edu](mailto:bike-information@stanford.edu)





# EDUCATION — BIKE REGISTRATION & THEFT PREVENTION

- Transitioned Bike Registration to Stanford Public Safety via online Project 529.
- Transferred 91,449 bike registration records from 1996 to date to Public Safety.
- Cost savings \$8k annually (reduced staffing & event costs for New Student Orientation)
- More effective way for students to register online/verify ownership for free.



# ENCOURAGEMENT BIKE TO WORK DAY 2023



## BTW Day Overview & Recap

- Greeted over 300+ Bike Riders & Celebrated Active Mobility.
- Sprocket Man on site!
- SRWC & Stanford Campus Station Locations.
- Free BTW Day Bag Giveaways.
- Volunteers (13 total) received free BTW t-shirts & bike safety kit.
- Longest Commute, 60 Miles from Morgan Hill!
- Best Commute Story, first day of work at Stanford, Beyond Excited!
- We collectively offset 1,705 pounds of CO2
- Thank you, bike riders and volunteers!

## \*2023 Riders, Round Trip Miles & CO2 Emissions Reduced

Location	Rider Total	Round Trip Miles	CO2 Offset
Stanford	294	1676.5	1609.4 lbs.
Redwood City	21	100	96 lbs.





# ENCOURAGEMENT—STANFORD SPOKES



- A group of Stanford Students riding bikes 3,000+ miles across the USA this summer
- Stopping along the way to teach at 7 schools, DEI curriculum
- Ride ends in Washington D.C. late August
- Pending Meet & Greet in DC with Secretary of Transportation Pete Buttigieg
- Follow [the Stanford Spokes blog](#) to be inspired and stay connected!



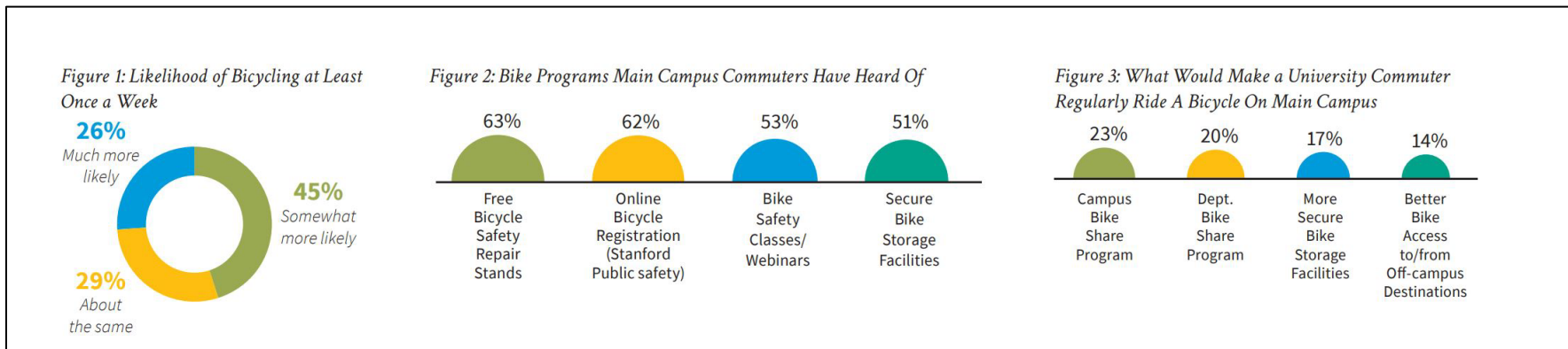
# ENCOURAGEMENT—PEDAL TOGETHER PILOT

Stanford's Pedal Together Pilot Program launched in April 2021.

The program educated, informed, inspired community engagement & support among peers.

Program highlights included:

- A three-month pilot to encourage commuters to opt to ride to work instead of drive upon returning to campus post-COVID shutdown
- Monthly activity log and free bike webinars sparked engagement with a Slack channel to support and offer guidance and recommendation on bike commuting



*Compared to before Pedal Together, riders reported how likely they would be to bike at least once a week for fun, errands or commute to work (Figure 1).*



# ENCOURAGEMENT—WELCOME PETITE MARGUERITE

- Our new sustainable all-in-one event bike
- Named after the first carriage, circa 1890's and horse Marguerite
- Sustainable and economical—no expenses incurred for event services set up.



# ENCOURAGEMENT—

## Meet Dr. Jordan Knox, Stanford Class of 2010

*Kettering Healthcare Medical Group*



Leaving a Bike Safety Legacy!

Dr. Knox was hired by Stanford Transportation, April '07 to June '10, as part of the bicycle safety outreach group to encourage helmet use on campus, and resurrected the persona of \*Stanford's bike safety superhero "Sprocket Man."

Recently published *Helmets—The Most Important Summer Accessory* for Kettering Health

*\*Sprocket Man* founded in 1975 by Stanford Student Louis Saekow.



# ENCOURAGEMENT—STANFORD CAMPUS BIKE TOURS

- Free Bicycle Tours hosted by the Stanford Bicycle Program for classes and departments.
- Stop over at key partners and historical markers celebrating sustainable transportation.
- A highlight for new staff to view landmarks and sustainable programs by biking.



# ENCOURAGEMENT—Stanford Bicycle Safety Committee

Chair: Brian Shaw, Stanford Transportation, Executive Director

Host: Ariadne Scott, Stanford Transportation, Assistant Director of Active Mobility

## Students:

- Nicolas Michael Harvey, Student, Class of 2024
- Syamantak Payra, Graduate Student
- Alanna Dorsey '24, Synapse, Bike Helmet Survey
- Brandon Kenery, Student, Class of 2023

## Staff and Key Supporters

- Connor Wilms, EH&S, Safety Representative
- Robert (Bobby) Moser, Stanford Health Care, Injury Prevention
- Rediet Tesfaye, Director—Transportation Services, Stanford Health Care
- Jackie Stiasny, Manager, Transportation Demand Management, SHC
- Kyle Cole, Kyle Cole, Ph.D., Director Office of STEM Outreach
- Meagan Gershon, Vaden Student Health Services
- Cathy Blake, Campus Planning & Design
- Bill Larson, Stanford Public Safety
- Don and Andrew Meyer, Campus Bike Shop

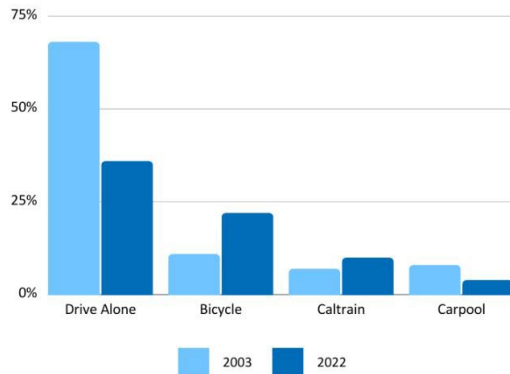


# EVALUATION— OUR STANFORD ANNUAL COMMUTE SURVEY

- Stanford Transportation has distributed the commute survey to Stanford University students, employees, affiliates, Stanford Health Care, and Lucile Packard Children's Hospital employees for the past 21 years.
- This survey helps us gather valuable information that shapes our transportation program, meet reporting requirements for Stanford's General Use Permit, enhance campus transportation services.
- We gather key data on our bike riding population.

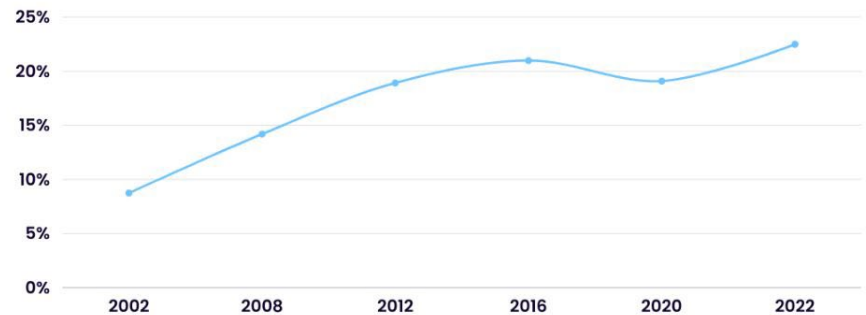
Thanks to our **sustainable commute programs**, the drive-alone rate for our commuting students, faculty, and staff went from 67% in 2003 to 36% in 2022.

### Commuter Modes



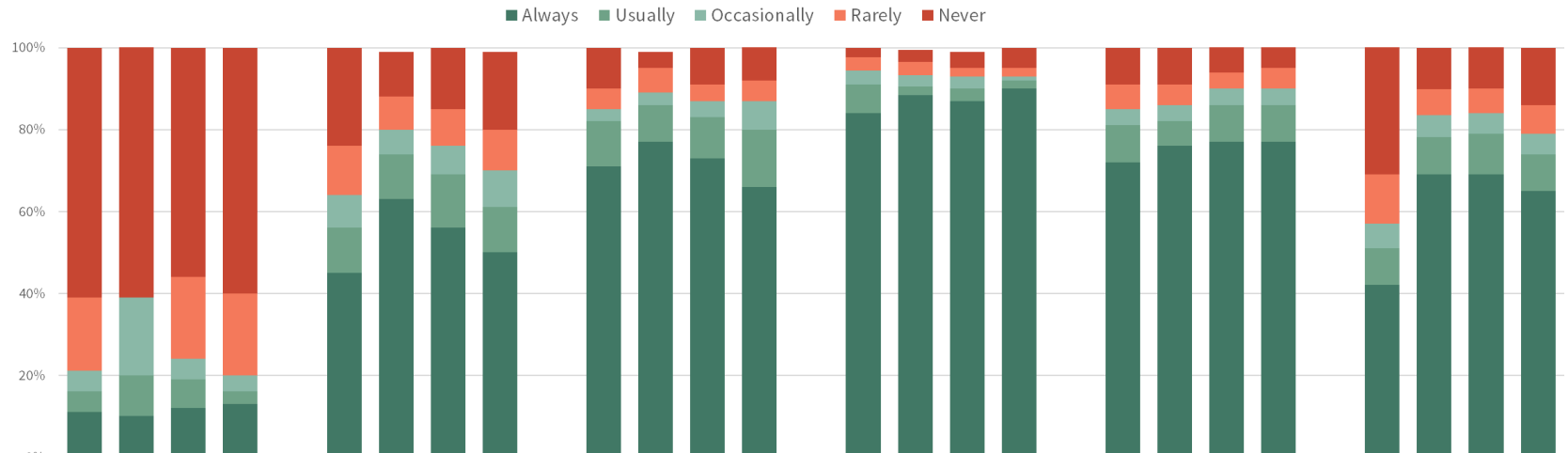
In 2022, bike commuting climbed from 9% in 2002 to an all-time high of 22%.

### Bicycle Commute



# EVALUATION—BIKE HELMET USE 2022

## How Often Do You Wear A Helmet On Campus?

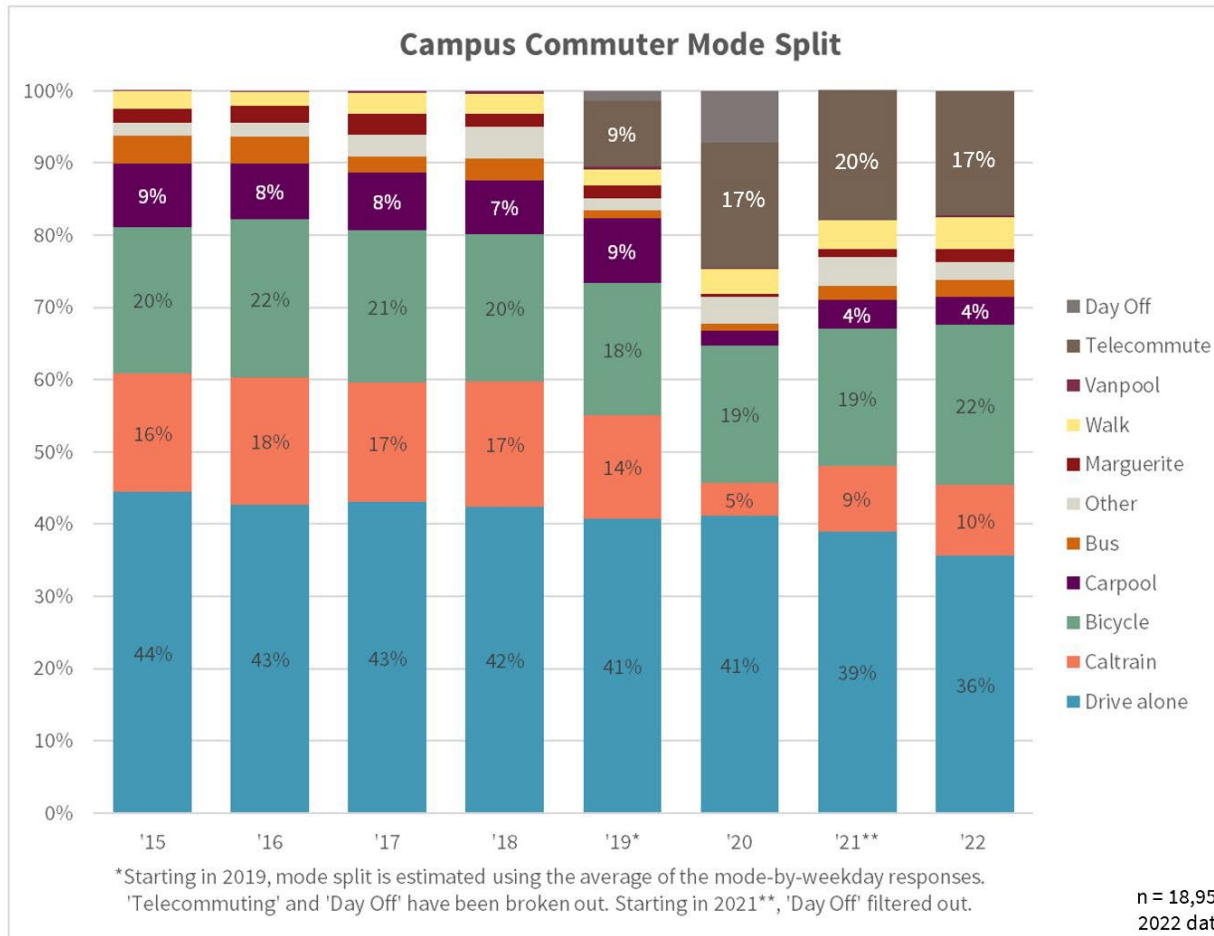


	Undergraduates				Graduates				Post-Docs				Hospital Employees				University Employees				Weighted Average			
	'19	'20	'21	'22	'19	'20	'21	'22	'19	'20	'21	'22	'19	'20	'21	'22	'19	'20	'21	'22	'19	'20	'21	'22
Never	61%	62%	56%	60%	24%	11%	15%	19%	10%	4%	9%	9%	2%	3%	4%	5%	9%	9%	7%	6%	32%	10%	11%	14%
Rarely	18%	0%	20%	20%	12%	8%	9%	10%	5%	6%	4%	5%	3%	3%	2%	2%	6%	5%	4%	5%	12%	6%	6%	7%
Occasionally	5%	19%	5%	4%	8%	6%	7%	9%	3%	3%	4%	7%	3%	3%	3%	1%	4%	4%	4%	4%	6%	5%	5%	5%
Usually	5%	10%	7%	3%	11%	11%	13%	11%	11%	9%	10%	14%	7%	2%	3%	2%	9%	6%	9%	9%	9%	9%	10%	9%
Always	11%	10%	12%	13%	45%	63%	56%	50%	71%	77%	73%	66%	84%	88%	87%	90%	72%	76%	77%	77%	42%	69%	69%	65%



# EVALUATION—BIKE COMMUTE MODE

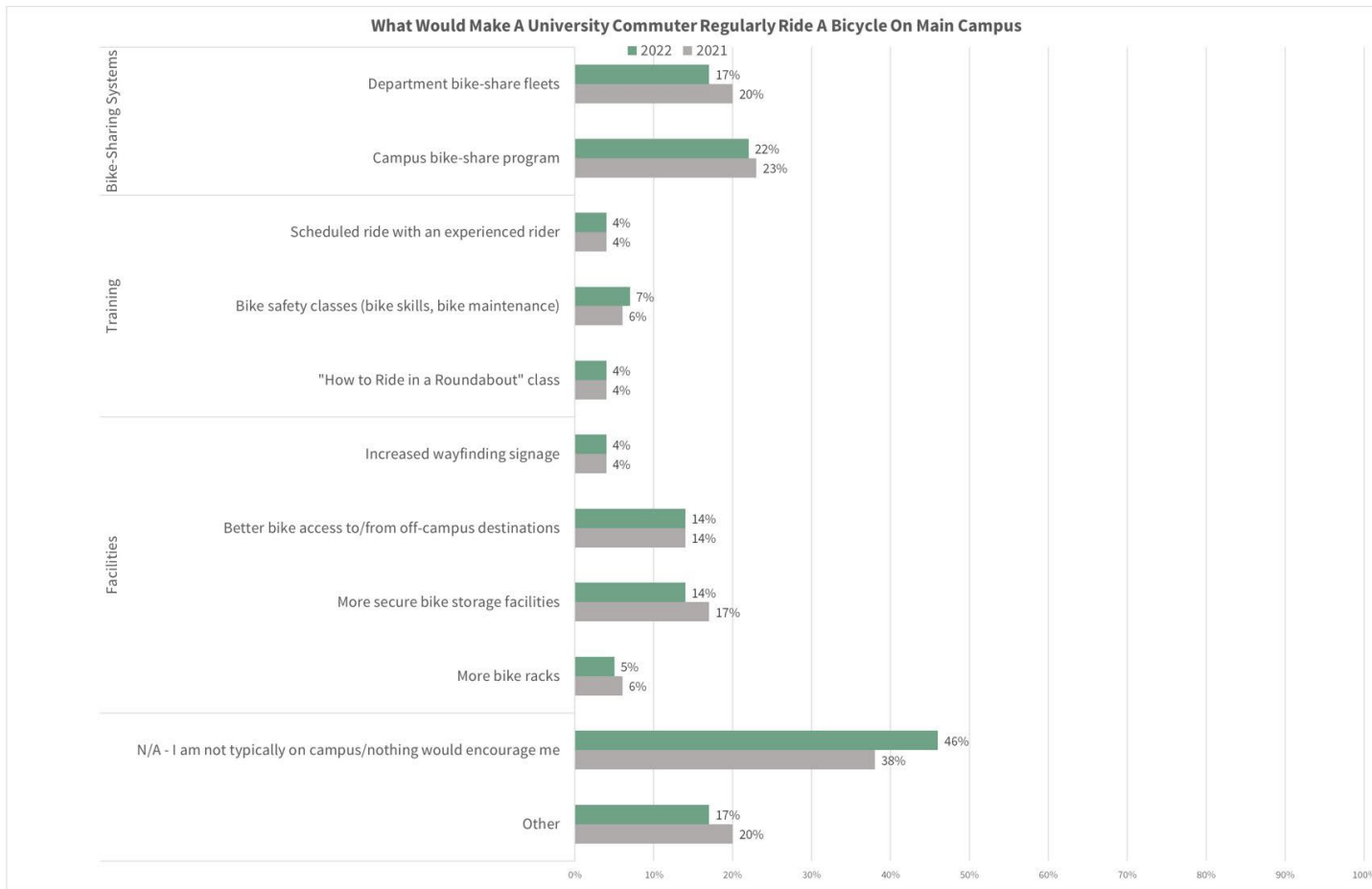
'Drive alone' rate has continued to decrease. Compared to last year, 'bike' rate has increased and 'telecommute' rate has decreased.



# EVALUATION—BIKE COMMUTE MODE

## WHAT WOULD MAKE A BIKE COMMUTER REGULARLY RIDE A BICYCLE

The top choice that would make a commuter regularly ride a bicycle is having a bike-share program. No significant change in percentage rates to last year.



n = 5,027  
2022 data

Q: What would make you more likely to regularly ride a bicycle on **main campus**? Choose all that apply.



# EVALUATION—NEW BIKE HELMET SURVEY RESULTS



**Stanford Synapse**  
Brain Injury Support Group

*A team of undergrad students working to prevent brain injury by promoting helmet safety and use of helmets.*



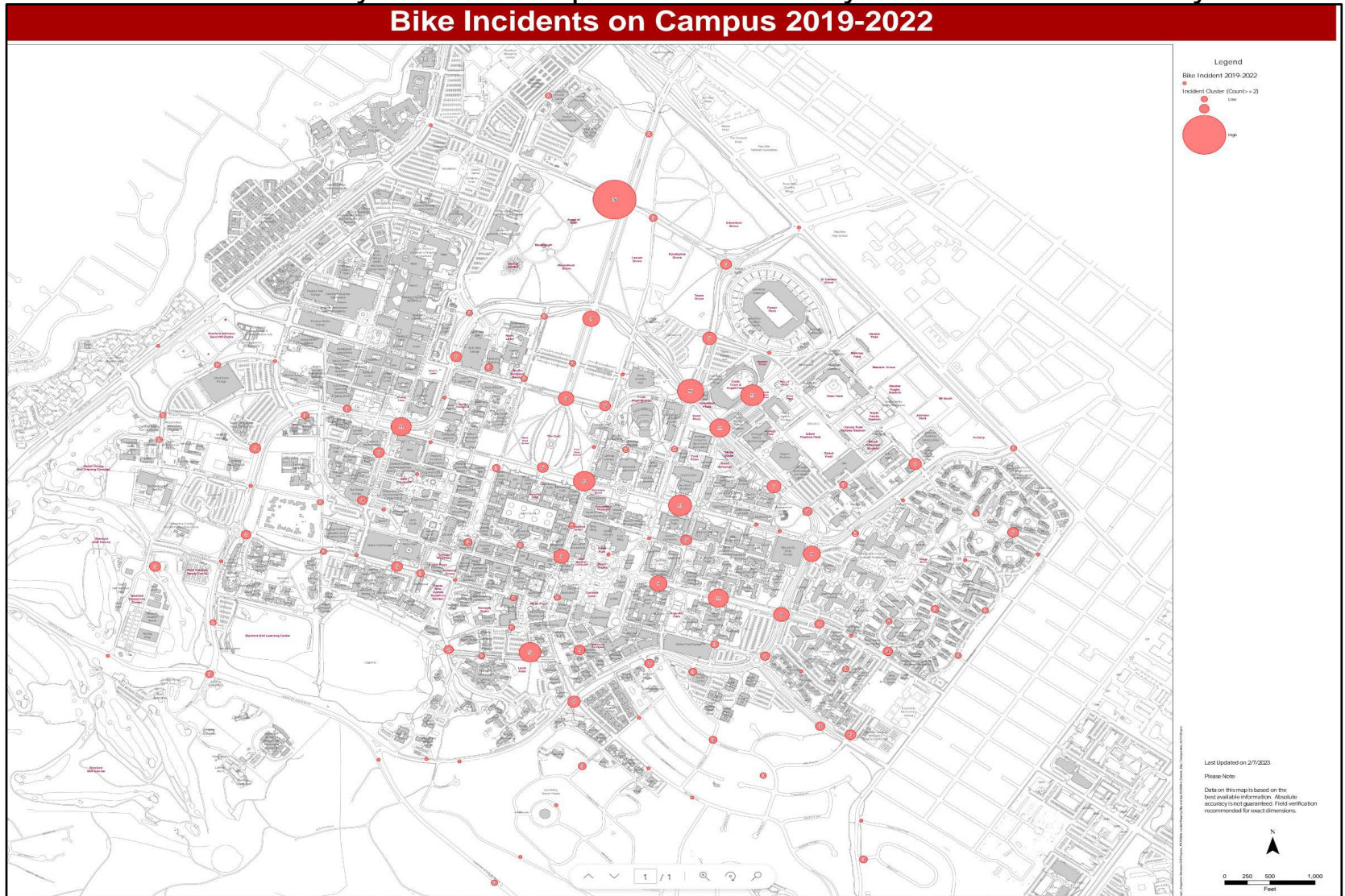
Student-led project surveyed 400 undergraduate students and provides an in-depth look at the nuanced reasons why Stanford undergraduates do not wear helmets. Survey approved by the Institutional Review Board (IRB).

Key findings:

- The top reason reported for why students don't wear a helmet is "Helmets mess up my hair." However, the top reasons are a mix of social influence, risk perception, and helmet characteristics, suggesting that we need a multi-faceted intervention.
- Some variation in helmet usage across class years – freshmen reported the lowest frequency – however all class years should be targeted.
- Participants report parents are the most common source of helmet safety, followed by medical professionals and friends.

# EVALUATION—PROGRAM HIGHLIGHTS

- Bike Crash Mapping Project in place with Vaden Health, Public Safety, Stanford Trauma.
- Annual Commute Survey provides data on bike ridership, helmet and bike light use.
- Bike Crashes last five years—166 reported incidents by Stanford Public Safety





# EQUITY—PEDALING FORWARD STUDY FINDINGS



- Pedaling Forward Bike Study published in 2022 with Land Use & Environmental Planning Covers the University's on-going Sustainability Work related to Bicycle Transportation, Partnerships, Feature New Bike-Related Infrastructure Projects.
- Next Steps, New Study Underway
  - Evaluating Inequities in Bike Infrastructure for Local Underserved Populations.
  - Researching Educational Opportunities to Share Bike Safety Best Practices.



# EQUITY—BIKE RIDE TO LIVE IN PEACE TRAINING PROGRAM FOR YOUTH AT RISK



- Live in Peace staff trains youth to be certified mechanics
- Teamwork inspires a love for cycling and community engagement
- Stanford Public Safety donated abandoned bikes to Live in Peace for repairs and resale
- Bridging the gap in underserved communities to improve roadway improvements.
- Visit Featured in the Stanford Report, July 21, 2023, [More than a Bike Shop](#)

# EQUITY— UNIVERSITY COMMUNICATIONS PARTNERSHIP



- Rack n' Roll Campaign to educate about mobility challenges in main quad arcades
- Encourage users to park bikes in compounds adjacent areas to minimize conflicts
- Student Vanessa Joy Onuhoa, '25, created bike safety video to promote bike safety



# ENGINEERING— NEW BIKE CAGE IN PLANNING FOR ROTH GARAGE

- Currently we have five bike cages for bike commuters.
- Offering over 250+ total spaces for daily storage use.
- Commuters rent space for \$72 annually; \$6 per month.
- Access space with Stanford ID Card for entry.



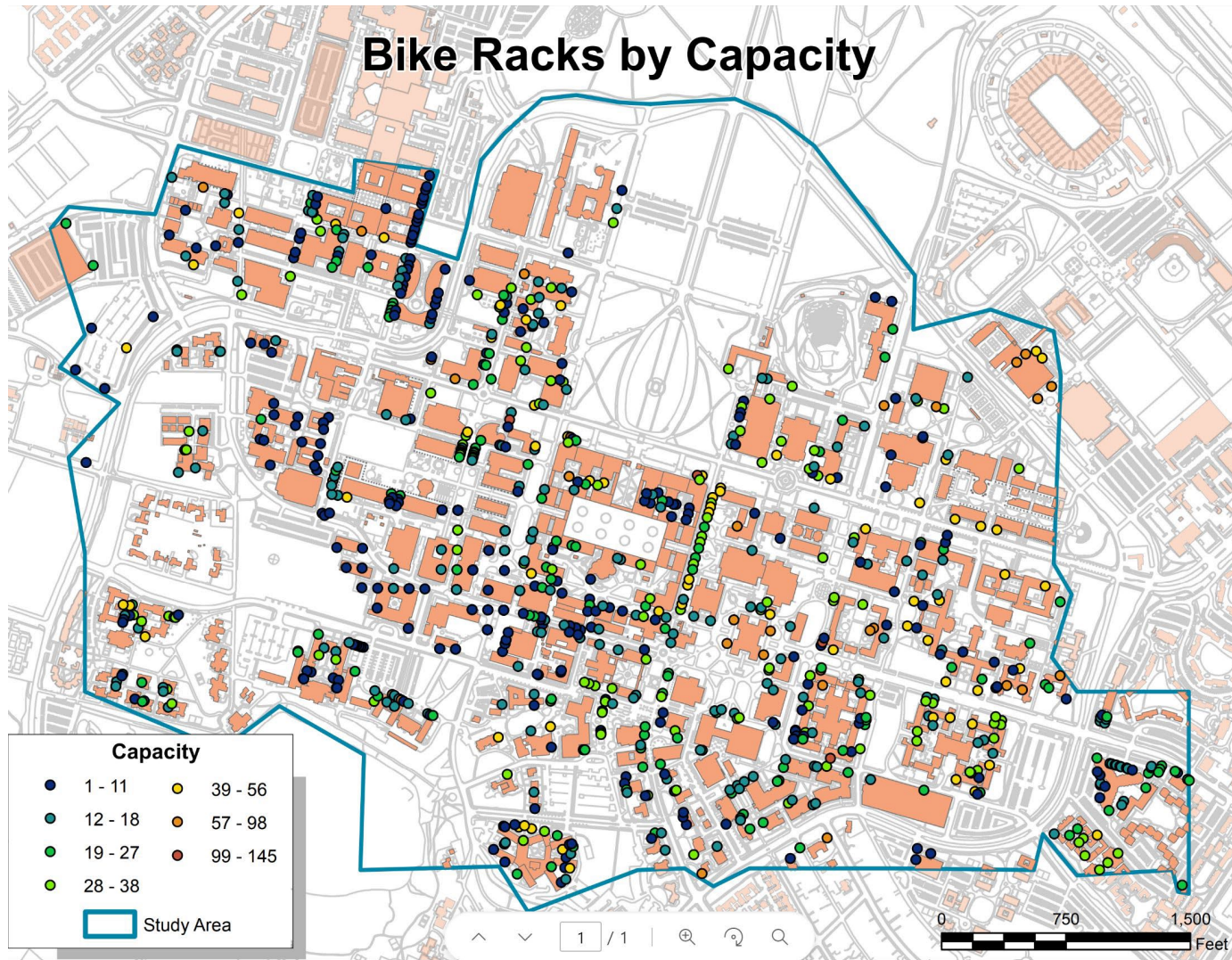


# ENGINEERING— SEPARATED BIKE LANE PILOT ON SANTA TERESA

- The new separated bike lanes are exclusively for bicyclists.
- Lanes physically separated from cars with a buffered lane or parked vehicles.
- Cars no longer back out of parking spaces and interfere with cyclists traveling.
- Pedestrians and those with mobility impairment have their own dedicated path.
- The turnaround keeps traffic flowing; all users have a better view of oncoming bicyclists, cars, and pedestrians.



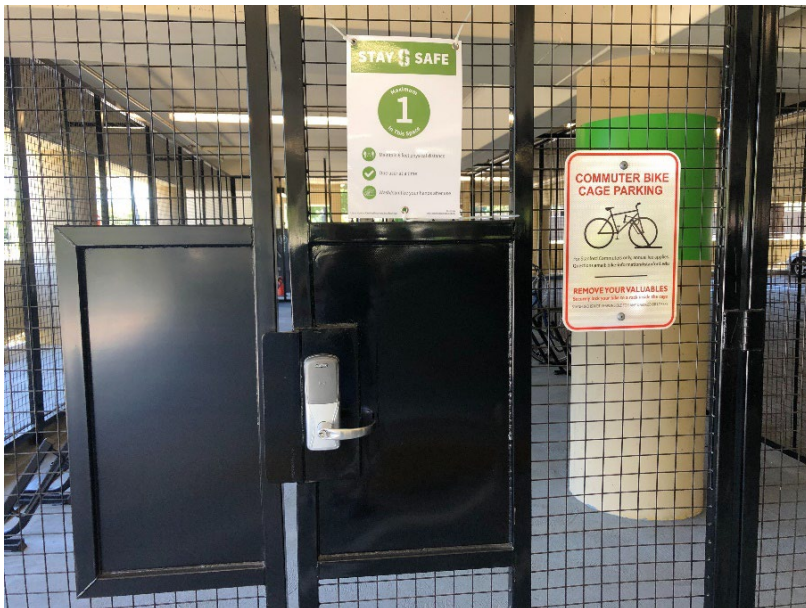
# ENGINEERING—CURRENT BIKE PARKING SPACES ON CAMPUS—20,352





# ENGINEERING –BIKE CAGE EXPANSION & DESIGN GUIDELINES

- Major transition of 200+ bike lockers to five centralized bike cages for bike commuters.
- 20,000+ bike racks on campus –2500 new bike racks, Escondido Village Graduate Housing
- All campus project plans reviewed for bike circulation and bike parking demands.
- Bicycle Cage Design Guidelines underway for design and construction consistency.





# ENGINEERING—BIKE CIRCLES REDESIGNED ON JANE STANFORD WAY

- Three upgraded Bike Circles on Jane Stanford Way improved for all bicyclists, mobility users and pedestrians.
- Corridor is a major east-to-west car-free route in front of the historic Main Quad.
- Design improvements at three locations: Galvez, Lausen and Arguello.
- The pavement markers are clearly marked, the diameters of the circles are wide, and pavers are designed to ensure safety when passing through.



# Come For a Visit to Our Bike Friendly Campus!

Hosted by Vanessa Joy Onuoha, Class of 2025



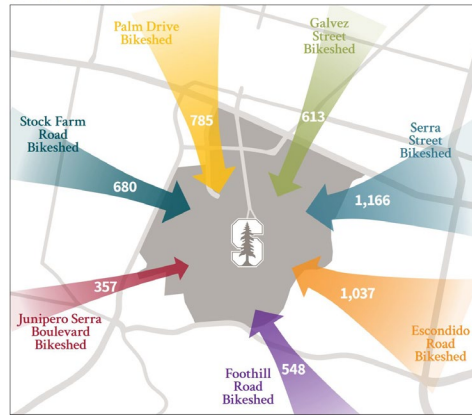
**[Click to Join the Ride Around the Campus!](#)**



# THANK YOU— LEAGUE OF AMERICAN BICYCLISTS inspired to create a bike friendly community for all

## Bicycle Commuters by Bike Shed (*Pedaling Forward Bike Study 2021*)

Figure 4: Bicycle Commuters by Bikeshed (2017 data)



**Rich Wilkins**, Environmental Health & Safety, Sprinkler Technician  
Rich commutes from East Palo Alto to Stanford. Working for Environmental Health and Safety (EH&S) for over 30 years, "safety first" is one of his mottos.



**Felipe Esparza**, Stanford LBRE, Department of Buildings and Grounds Maintenance  
Felipe rides every day from East Palo Alto to the main campus, an estimated 3-mile bike commute to work.



**Ken Chang**, Stanford LBRE, Business Intelligence Analyst  
Ken lives in Menlo Park and works primarily at the Redwood City campus but also rides to the main campus twice a week, riding in on Stock Farm Road.



**Ovie Ojeni**, Residential Education, Student Affairs, Residential Director  
Ovie lives on campus and commutes by bike or scooter to the Sunnyvale/Mountain View area.



**Chris Field**, Director, Stanford Woods Institute for the Environment  
Chris commutes from Portola Valley to Stanford Y2E2 via Alpine Road to Junipero Serra to West Campus.

**Junipero Serra Boulevard Bikeshed**

**Lori Gan Liu**, Stanford School of Medicine, Stanford Laboratory for Cell and Gene Medicine  
Lori commutes from the Sunnyvale area, a 9-plus mile bike commute via Foothill Expressway.



**Foothill Road Bikeshed**

**Escondido Road Bikeshed**

**Kim Ratcliff**, Communications Manager, Stanford Transportation  
Kim occasionally rides in from Los Gatos, a 25-mile commute from Stanford.





# ADDITIONAL RESOURCES & LINKS

[Pedaling Forward, Transportation Bike Study, 2022](#)

[Stanford Bicycle Commuter Access Study, 2017](#)

[Stanford Transportation YouTube Channel & Bike Webinars](#)

- [Stanford Leads the Way Among National Bike Program](#)
  - [School of Medicine Orientation & Helmet Testimonies](#)
  - [New Separated Bike Lane Pilot on Santa Teresa](#)
  - [More than a Bike Shop, Bike Ride to Live in Peace](#)
  - [Bike Stories Gone Wild](#)
  - [Cargo Bikes—The Happiest Transportation on Earth!](#)
- d. School Playbook for Fall Quarter to Encourage Helmet Use
- [Bike Safety Continuation Manual & Guide](#)
  - [Prototype Idea Box](#) with ideas for summer/fall launch

[Student Bike Tour Video of Campus](#)

[New Student Orientation Skills Training Video](#)

Contact:

Ariadne Delon Scott, Stanford Transportation, Assistant Director of Active Mobility

e-mail: [adscott@stanford.edu](mailto:adscott@stanford.edu)

phone: 650.725.2453