

### University Community Plan Update Subcommittee Meeting

July 17, 2019









- 6:00 CALL TO ORDER / ROLL CALL BY CHAIR Andy Wiese APPROVAL OF THE MINUTES – May 21, 2019; June 18, 2019 NON-AGENDA PUBLIC COMMENT – Two minutes per speaker
- 6:15 Item 1 INFO ITEM Mobility Strategies & Existing Conditions Mobility Report (Claudia Brizuela & Pedro Valera, Mobility Planning, Planning Department)
- 8:30 Item 2 ACTION ITEM Draft CPU Vision Statement & Guiding Principles
- 9:00 Item 3 NEXT STEPS Next Meeting <u>September 17, 2019</u> (University City High School, 6949 Genesee Avenue, San Diego, CA 92121)
   ADJOURNMENT

### ITEM 1 MOBILITY STRATEGIES & EXISTING CONDITIONS MOBILITY REPORT

4370







Northern Trust



### 1. Background

- 2. Mobility Methodology
- 3. Mobility Analysis and Opportunities
- 4. Next Steps
- 5. Breakout Session





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- Auto-centric (85% commute by vehicle)
- Residences in the Central and South areas
- Regional employment in the North and Central areas
- UC San Diego
- Mid-Coast Trolley Extension
- Sorrento Valley Station



Source: US Census Bureau (OntheMap), 2015

### **UNIVERSITY** Commute to University Community



Community Plan Update

- 7% live and work in University - north of Rose Canyon and south of La Jolla Village Drive
- 93% commute to University
- About 25% of UC San Diego employees travel less than 5 miles

Source: US Census Bureau (OntheMap), 2015



A Safe, Integrated Mobility System. A mobility system that provides multi-modal options, including enhanced walkability and bikeability, and a safe, integrated network for travel within the community and connectivity to the urban core and the region, enhancing economic growth, livability, bikeability, walkability and sustainability.











### City of San Diego Climate Action Plan

### Mobility Measures in Transit Priority Areas

- Increase Walking, Bicycling, and Transit
- Implement roundabouts to reduce vehicle fuel consumption
- Reduce Vehicle commute distance by 2 miles

#### 2035 Citywide CAP Mode Share Goal



Source: City of San Diego Climate Action Plan, 2015



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### **UNIVERSITY** Mobility Assessment Methodology

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PERFORMANCE MEASURE	<b>İİ</b>	<b>5</b> 0 <b>5</b> 0		
DEMAND	<ul> <li>Pedestrian Priority Model (PPM)</li> <li>Peak-Period Counts</li> <li>Census Data</li> </ul>	<ul> <li>Bicycle Demand Model (BDM)</li> <li>Peak-Period Counts</li> <li>Census Data</li> </ul>	<ul> <li>Existing Transit Ridership Data</li> <li>Census Data</li> </ul>	<ul> <li>Peak-Period Counts</li> <li>Daily Roadway Volume Counts</li> <li>Vehicle Classification Counts</li> </ul>
SAFETY	<ul> <li>SDPD Historic Crashes (5 Yrs) involving Pedestrians</li> </ul>	<ul> <li>SDPD Historic Crashes (5 Yrs) involving Cyclists</li> </ul>	• SDPD Crashes History (5 Yr) near Transit Stops	• SDPD Historic Crashes (5 Yrs) involving Vehicles
QUALITY	<ul> <li>Pedestrian</li> <li>Environment Quality</li> <li>Evaluation (PEQE)</li> </ul>	• Bicycle Level of Traffic Stress (LTS)	<ul> <li>Transit Stop Amenities</li> <li>Transit Performance</li> <li>Transit Speed</li> </ul>	<ul> <li>Level of Service (LOS) at Intersections, Roadways, and Freeways</li> <li>Freeway Ramp Capacity</li> </ul>
CONNECTIVITY	<ul> <li>Sidewalk Inventory Data</li> <li>Walkshed Ratio</li> </ul>	<ul> <li>Connectivity on Low- Stress Facilities</li> <li>Bikeshed Ratio</li> </ul>	<ul> <li>Quality Walkshed and Bikeshed Ratios from Major Transit Stops</li> </ul>	• VMT (Future only)



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### Mobility - Pedestrian

- Demand Peak period counts and Pedestrian Priority Model
- **Quality –** Pedestrian Environment Quality Evaluation (PEQE)









### Mobility - Pedestrian

- Safety 6 intersections with pedestrian concerns
- Connectivity Missing/asphalt sidewalks



Nobel Drive & Regents Road



La Jolla Village Drive & Eastgate Mall





### **Pedestrian Network Strategies**

- Identify countermeasures at pedestrian-involved crash locations
- Reduce crossing distances
- Address barriers in pedestrian
   network





### Pedestrian Network Strategies

- **Quality connections** to high pedestrian activity areas
- **Connect land uses** where desire lines are not served
- Complement Mid-Coast transit investment with first- and lastmile connections





#### **Curb Extensions**

- Reduces crossing distance
- Enhances visibility
- Encourage slower speeds
- Increased staging area

#### **Potential Locations**

- High pedestrian activity areas
- Near schools and parks
- Where parking exists
- Where mid-block crossings exist



Spreckels Elementary School



#### **Lead Pedestrian Intervals**

- Enhances visibility
- 3-7 second head start
- Reduces pedestrian crashes by as much as 60%<sup>1</sup>

#### **Potential Locations**

- High pedestrian activity areas
- Near retail, schools and parks
- Where heavy right-turning traffic conflicts with pedestrians (crashes)



5<sup>th</sup> Avenue and University Avenue (Hillcrest)

<sup>1</sup> Safety Effectiveness of Leading Pedestrian intervals Evaluated by a Before-After Study with Comparison Groups



#### **Rectangular Rapid Flashing Beacons**

- Enhances visibility of pedestrians at mid-block crossing by alerting motorists
- Pedestrian activated
- Can reduce pedestrian crashes by 47%<sup>1</sup>

#### **Potential Locations**

- At an uncontrolled crosswalk
- High pedestrian activity areas
- Where pedestrian volumes fluctuate such as near schools and parks
- Where mid-block crossing occurs and yield rates are low



Executive Drive, east of Judicial Drive



Villa La Jolla Park

<sup>1</sup>NCHRP Research Report 841



#### **Pedestrian Hybrid Beacon**

- Enhances visibility for pedestrians at mid-block crossing by increasing driver attention
- Pedestrian activated
- Can reduce pedestrian crashes by 69% and total crashes by 29%<sup>1</sup>

#### **Potential Locations**

- At uncontrolled crosswalk
- High pedestrian demand areas
- Where mid-block crossing occurs, with higher roadway volume and higher speeds





Mission Center Road



Executive Drive, east of Judicial Drive



#### **Address Missing Sidewalk**

- Where feasible at gaps in sidewalk network
- Near transit stops

Gilman Drive & La Jolla Village Drive Ramps

#### **Pedestrian Bridges**

- Grade separates pedestrians and motorists
- Does not impede traffic flow
- Links popular destinations where desire lines are not served



La Jolla Village Drive, east of Genesee Avenue



### Mobility - Bicycle

- Demand peak period counts and Bicycle Demand Model
- Quality All high-stress facilities on major roadways



Scripps Hospital







### Mobility - Bicycle

- Safety 4 intersections with bicycle concerns
- Connectivity Discontinuous dedicated bicycle facilities



Governor Dr, approaching Genesee Ave



Regents Road & La Jolla Village Drive





### **Bicycle Network Strategies**

- Provide local trips and regional connectivity
  - Address bike lanes that are discontinuous
  - Identify low-stress facilities
  - Identify intersection treatments where needed
  - Identify traffic calming features







### Class I – Multi-Use Path

- Provides physical separation from vehicular traffic
- Can accommodate bicycle, pedestrian, and other non-motorized travel





#### **Class II – Bike Lane**

- Dedicated bicycle facility within roadway
- Can have horizontal separation from vehicular traffic with a buffer





#### **Class III – Bike Route**

- Bicycle facility shared with vehicle traffic
- Provide continuity to other bike facilities





#### **Class IV – Cycle Track**

- Dedicated bicycle facility within roadway
- Provide horizontal and vertical separation from vehicular traffic



## **UNIVERSITY** Existing Bicycle Network

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Torrey Pine State Natu Reserve Sorrento Valley Torrey Pines Golf Course UCSD Pacific Ocean MIRAMAR RD NOBEL DR MCAS Miramar JOLLA PKY La Jolla Clairemon CLAIREMONT MESA BLVD

#### **Class I Bike Paths**

**Class II Bike Lanes** 

Class III Bike Routes

Freeway Shoulder





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#### Class IV Cycle Track

- Gilman Drive
- Regents Road
- Governor Drive
- Nobel Drive
- Eastgate Mall
- Executive Drive
- Miramar Road





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- Villa La Jolla Drive
- Towne Centre Drive
- Judicial Drive



### Proposed Bicycle Network









### Class I

- I-5 Southbound
   Class III
- Eastgate Mall

## **UNIVERSITY** Proposed + Existing Bicycle Network

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### Class I Bike Path Class II Bike Lanes

Class III Bike Routes

Class IV Cycle Track



### Toolbox - Bicycle



#### **Bike Box**

- Enhances visibility
- Bikes get ahead of queued traffic during red time
- Increases separation from crossing pedestrians
- Where heavy right-turning traffic conflicts with bicycles (crashes)

Two-Stage Left-Turn BoxImproves comfort for left turns



#### Bend out

- Reduces right-hook conflict
- Enhances visibility of pedestrian and cyclists



#### **Protected Intersection**

- Reduces crossing distance
- Enhances visibility
- Encourage slower speeds
- Where parking exists

**Tradeoff:** Eliminates exclusive rightturn lanes and right-turn on red



# **UNIVERSITY** Mobility - Transit

- **Demand** MTS Ridership data
- **Quality** Amenity at transit stop evaluation









### Mobility - Transit

- **Safety** 12 locations with bicycle/pedestrian concerns
- Connectivity Quality pedestrian and bicycle facilities from transit stops








## **Transit Network Strategies**

- Anticipate proposed regional transit planning projects:
  - Mid-Coast Trolley Extension
  - Aerial skyway stations
  - Sorrento Valley Station relocation
- Improve underperforming routes
- Improve amenities at transit stops
- Quality first- and last-mile connections to transit stops



**UTC Transit Center** 



### 2021 SANDAG Regional Plan

#### **5** BIG MOVES

Transportation technology is evolving and changing how we travel daily. Embracing these innovations, the 5 Big Moves will enhance connectivity, increase sustainability, and improve quality of life. The 2021 Regional Plan will synchronize the 5 Big Moves to deliver a fully integrated, world class transportation system.



#### The backbone of a complete transportation system that leverages technology, pricing, and connectivity to repurpose how both highways and local roads are used

Complete Corridors increase safety, capacity, and efficiency; provide dedicated space for high-speed transit and other pooled services; manage demand in real-time; and maximize use of existing roadways. Local roads are designed and operated to equally accommodate all users, including transit, bikes, and pedestrians.



#### A complete network of high-capacity, high-speed, and high-frequency transit services that incorporates new transit modes and improves existing services

These routes will connect travelers to their homes. jobs, and other major destinations as fast or faster than driving.



MOBILITY HUBS

#### Places of connectivity where a variety of travel options converge to deliver a seamless travel experience

Mobility Hubs are aligned with the Transit Leap and offer numerous shared mobility services, enhanced bike and pedestrian infrastructure, and supporting amenities that work for every traveler and trip, all in the heart of the communities where people live, work, and play.



#### On-demand, shared, electric vehicles that connect to transit and travel between Mobility Hubs along the network of Complete Corridors

Diverse vehicles - including micromobility, like bikes and scooters, microtransit, and rideshare provide personalized solutions for different types of trips and environments. In the future, driverless vehicle fleets will communicate to each other and surrounding infrastructure to make safe and timely connections.

#### NEXT OS



#### The "brain" of the transportation system

An integrated platform that will make all of the strategies work together by connecting users, transportation service providers, and infrastructure to orchestrate more efficient movement of people and goods. This holistic approach enables realtime data exchange for seamless multimodal travel, more accessible and cost-effective travel with a single payment and ticket, and dynamic pricing and incentives to balance network performance. This regional system manages supply and demand, drives system-wide optimization, and facilitates increased use of existing transportation systems to achieve desired goals around climate, environment, safety, and mobility.



Identify services and amenities for each Mid-Coast station

- Improved pedestrian and bicycle connections
- Micro-mobility storage
- On-demand ridesharing services
- Wayfinding

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Voigt Drive Station

Source: SANDAG Mobility Hubs



### Toolbox - Transit

- Transit Priority Treatments
- Access to Transit Stops



Transit Signal Priority



Bus Lane



#### Transit Stop Amenities



Queue Jump



### Mobility - Vehicle

- Demand peak period counts and average daily trips
- **Quality** Operations analysis



Genesee Avenue & Governor Drive





### Mobility - Vehicle

- Safety 13 locations with vehicle concerns
- **Connectivity** travel time analysis



La Jolla Village Drive & Villa La Jolla Drive



La Jolla Village Drive & Regents Road





# Mobility - Parking

- Higher Utilization UC San Diego, office and retail centers
- Consideration for maximizing efficiency of roadways



# **UNIVERSITY** Vehicle Network Strategies

Identify improvements at intersections and roadway segments

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- Accommodate new land uses
- Identify traffic calming features
- Maximize efficiency of roadway through curb management

"Adding highway lanes to deal with traffic congestion is like loosening your belt to cure obesity." – Lewis Mumford in 1955.







#### Toolbox – Vehicle



Flex Lane



Adaptive Signal Timing





Roundabouts

# **UNIVERSITY** Toolbox – Emerging Technologies



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#### Neighborhood Electric Vehicle







#### Autonomous Vehicles



Scootershare



**Rideshare services** 

## **UNIVERSITY** Toolbox – Curbside Management





#### **Mobility - Coordination**









Transportation & Storm Water





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# **Breakout Session**



### ITEM 2 VISION STATEMENT & GUIDING PRINCIPLES

4370







Northern Trust



A diverse and dynamic community with renowned higher education, healthcare, scientific research and technology institutions and businesses connected through a robust multi-modal transportation network to a vibrant mixed-use urban core and varied residential neighborhoods, which protects its **unique natural habitat and canyon systems.** The community includes distinctive neighborhoods on either side of Rose Canyon. The Northern portion is envisioned as a relatively high density center of education, employment, and healthcare with multi-family and single family residences, as well as regional and neighborhood shopping. The southern portion, which is envisioned to change relatively little, is primarily single family neighborhoods, parks, local shopping, some multi-family housing and a business park.

> **Bold - Approved Draft** *Italic - Proposed Addition*



University City is a family friendly community that fully supports the safety, health, and well being of children and families.