

July Brown Bag Lunch Presentations

Presentation 1: Deferred Maintenance Program

Presentation 2: Upcoming Shuttle Route Changes

Deferred Maintenance Program

25JUL17



Agenda

- Deferred Maintenance (DM) Terminology
- Campus Facility Condition Assessment
- Campus DM Program
 - Capital Renewal Advisory Group (CRAG)
 - Project Selection Process
- DM Projects
 - Past & Present

Terminology

- Facility Renewal: Repairs or replacement/rebuilding of major building components that are, or will be, at the end of their useful service life *within the next 10 years*.
- Deferred Maintenance: Repairs or replacement/rebuilding of major building components that *have already exceeded* their economically useful service life.
- Plant Adaptation: Expenditures required to adapt the facility to evolving needs of the College, or to changing standards and codes.

Terminology

Facility Condition Needs Index (FCNI)

- The FCNI is an industry standard used to compare assets, individually or grouped, to others in terms of relative condition.
- $FCNI = \text{Total Deficiencies} / \text{Current Replacement Value}$
- A lower FCNI indicates a facility that is in better condition than a facility with a higher FCNI

Facility Condition Assessment

- Beginning in 2010, UCSD initiated a Facilities Condition Assessment (FCA) to physically inspect and assess the condition of all campus buildings and supporting infrastructure.
- FCA inspections were conducted for each building - identifying and prioritizing which components and systems should be replaced within a 10 year period.
- The FCA was completed last June 2016.

Building FCNI Indications

Excellent Condition

Typically
new
construction

Fair Condition

In need of
normal
renovation

Poor Condition

Gut/
renovation
warranted

Good Condition

Renovations
occur on
schedule

Below Avg Condition

Major
renovation
warranted

Complete facility replacement warranted

Complete Executive Summary



**Facility
Condition
Needs Index**

0.21



**Total
Cost/SF**
\$100.50

**Total
Project Costs**

\$1.1 B

UC San Diego
PHASES 1-6

**241
Buildings**
10.8 M GSF



**Current
Replacement
Value**

\$5.2 B



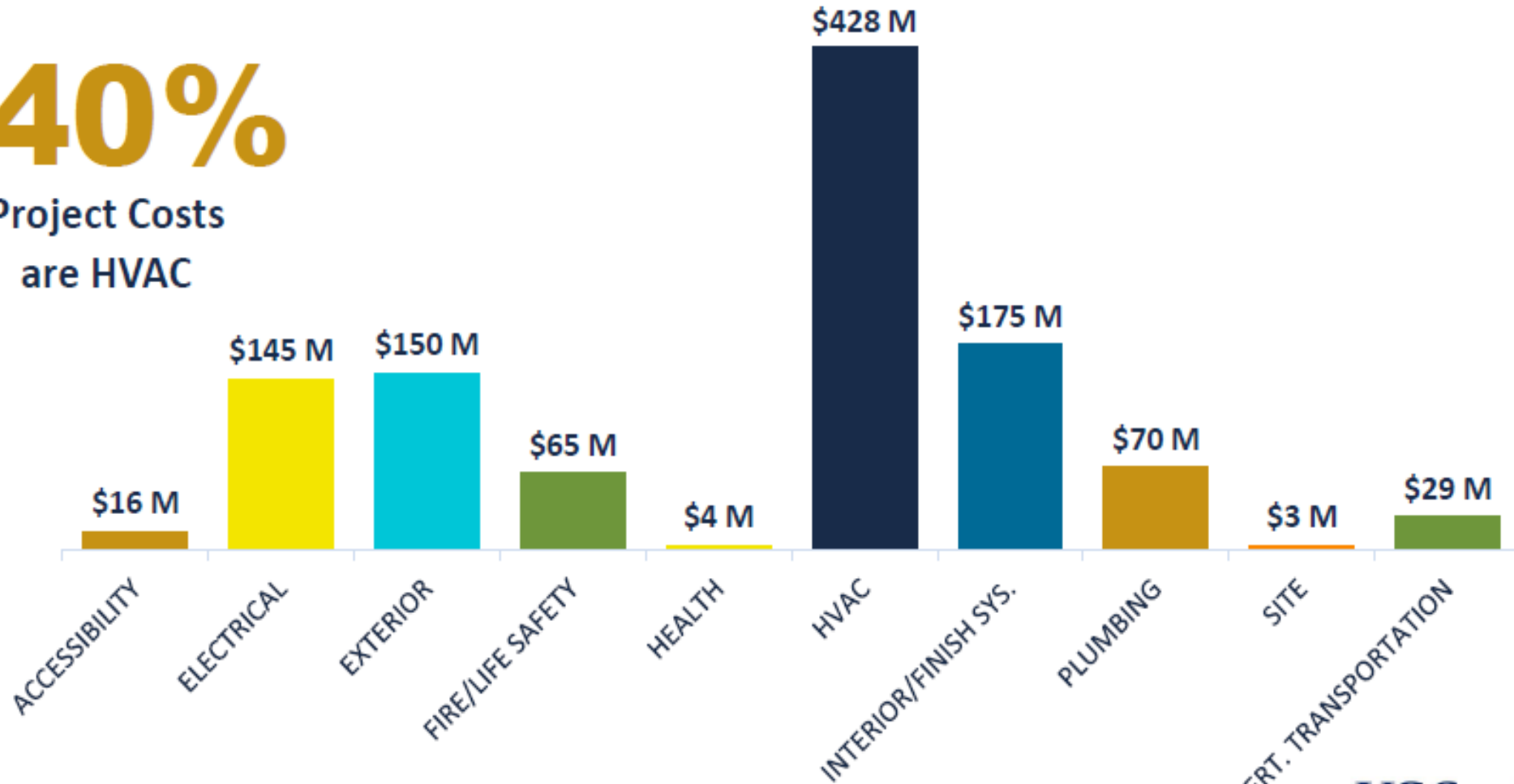
Summary of Findings

BUILDING SYSTEM	PROJECT PRIORITIES (\$)				TOTALS (\$)
	1	2	3	4	
Accessibility	1,171,531	7,427,150	6,307,446	925,304	15,831,430
Electrical	0	2,733,382	87,158,546	55,234,815	145,126,743
Exterior	104,652	20,597,381	62,427,095	66,908,375	150,037,503
Fire/Life Safety	3,741,838	28,815,074	19,241,236	13,559,339	65,357,487
Health	79,000	53,659	2,713,246	822,832	3,668,737
HVAC	116,980	1,994,771	227,914,895	198,254,524	428,281,170
Interior Finishes/Systems	0	538,516	136,544,073	37,494,651	174,577,241
Plumbing	0	34,849	37,193,998	32,880,101	70,108,948
Site	0	342,413	2,837,466	246,010	3,425,889
Vertical Transportation	0	299,083	19,611,810	8,621,754	28,532,646
TOTALS	\$5,214,001	\$62,836,277	\$601,949,811	\$414,947,705	\$1,084,947,793

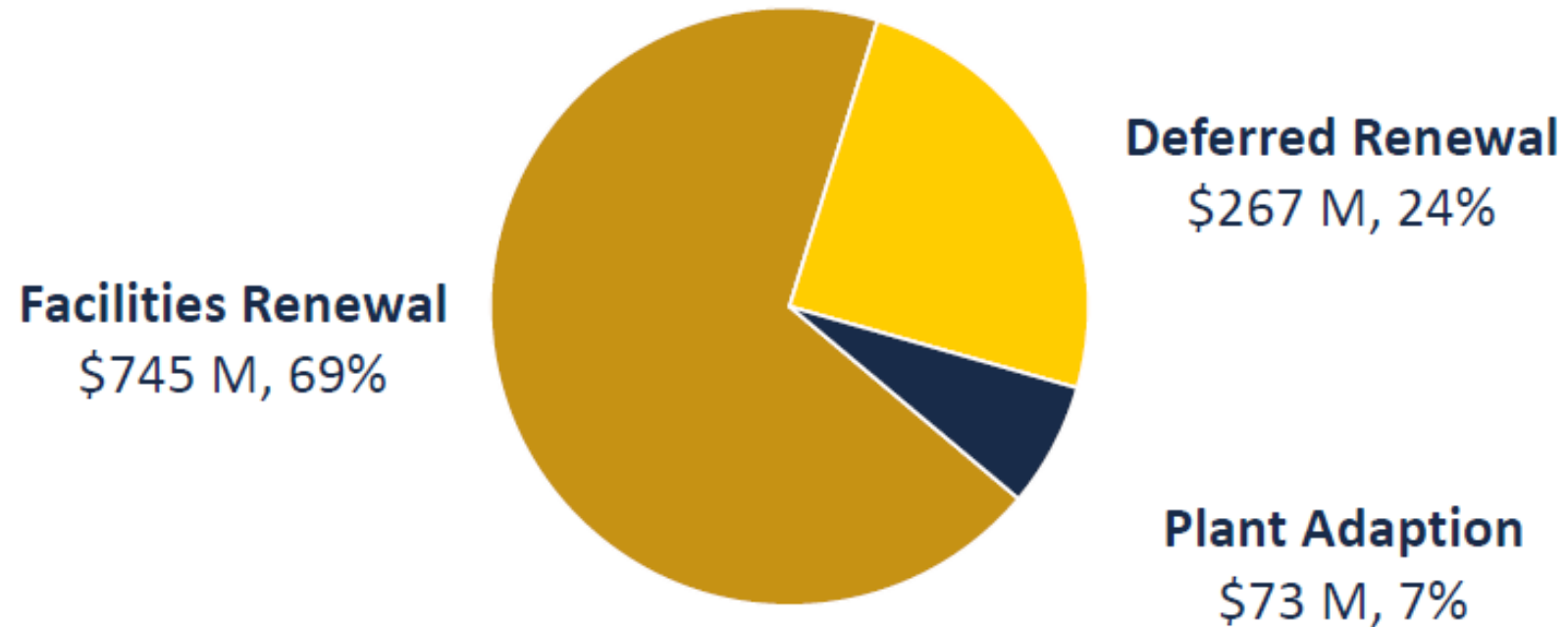
Project Cost by System

40%

Project Costs
are HVAC

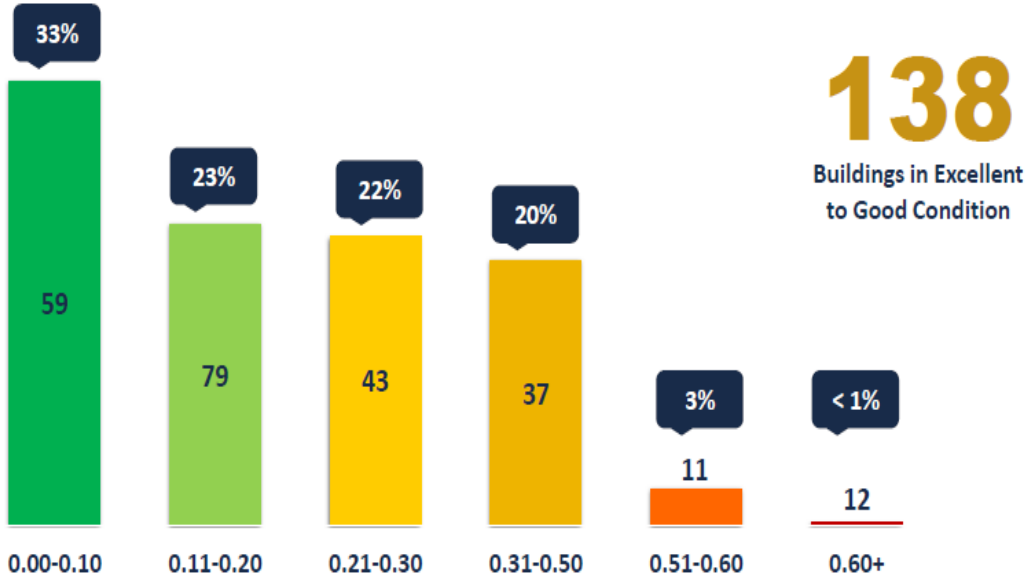


Project Cost by Classification



Facility Condition Needs Index

FCNI =	$\frac{\text{Total Project Costs}}{\text{Current Replacement Value}}$
0.21 =	$\frac{\$1,084,947,793}{\$5,202,554,644}$



Campus Comparative Analysis

ISES Client	Facility Condition Needs Index	Gross Square Feet	Asset Count	Avg Year Built	Avg Age at Insp	Project Value/ Square Foot	Project Value Totals	FCNI Percent Rank	Avg Age Percent Rank
Stanford University	0.18	2,080,908	41	1966	49	\$93.77	\$195,120,875	79%	21%
University of Southern California	0.19	13,031,467	198	1968	47	\$85.43	\$1,113,218,736	76%	28%
University of Chicago	0.19	10,525,622	141	1957	58	\$101.86	\$1,072,093,816	76%	10%
University of California, San Diego	0.21	10,795,495	241	1988	28	\$100.50	\$1,084,947,793	67%	78%
California Institute of Technology	0.24	4,330,206	186	1969	46	\$104.85	\$454,004,140	61%	29%
University of San Diego	0.24	3,222,911	86	1986	27	\$68.18	\$219,724,286	61%	80%
University of Pittsburgh	0.26	15,026,726	241	1969	46	\$92.43	\$1,388,913,663	54%	15%
University of Iowa	0.32	13,271,357	142	1960	54	\$97.87	\$1,298,829,812	32%	13%
San Francisco State University	0.38	4,407,478	81	1966	49	\$146.18	\$644,305,613	16%	21%
University of North Dakota	0.39	5,552,908	197	1965	50	\$124.57	\$691,741,853	14%	18%
AVERAGES (All ISES Clients)	0.24	3,072,139	64	1967	39	\$76.15	\$233,953,330		

FCA Report Conclusions

- An FCNI of 0.21 reflects an “Above Average” Building Condition.
- To sustain an FCNI of 0.21 would need to re-invest \$98.3M annually.
- Facilities appear to be deteriorating at a normal rate.
- 40% of the overall project costs are HVAC

Capital Renewal Advisory Group

Charter: Develop criterion and process for prioritizing Deferred Maintenance and Facility Renewal projects for Core funded facilities at UCSD.

Work Group Co-Chairs:

Robert Hannahs, *Campus Budget Office*

Wendy Schiefer, *Facilities Management*

VC Representatives:

Tara Cameron, *Academic Affairs*

Kim Carnot, *Health Sciences*

Ken Hall, *Scripps Institute of Oceanography*

Robert Hannahs, *Budget Office*

Steve Jackson, *Resource Management & Planning*

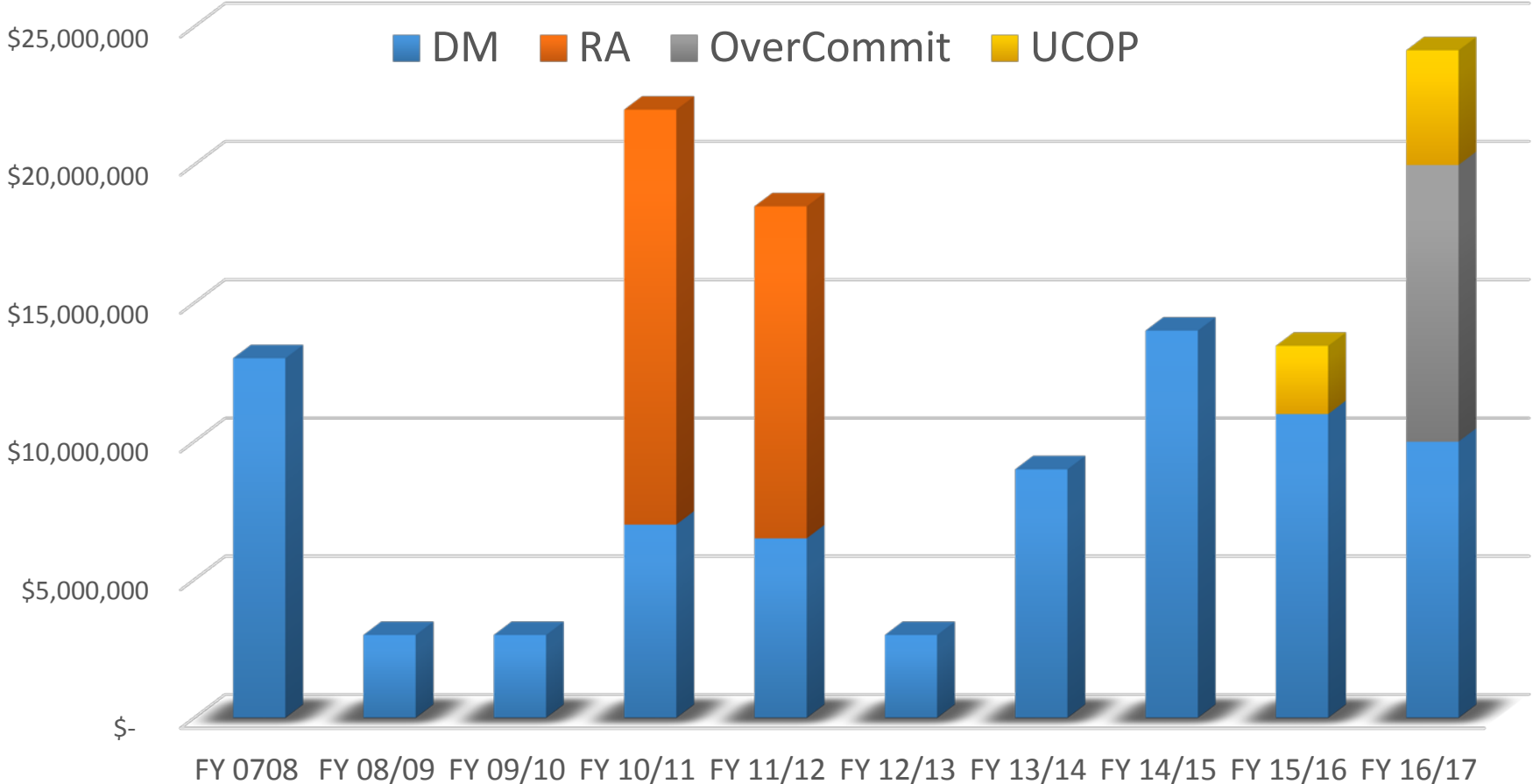
Capital Renewal Advisory Group

Process: Based on an expected annual funding allotment of \$14M.

1. Projects identified by Work Group.
2. Each VC representative prioritizes their own VC area projects.
area.
3. Project data is combined into one spreadsheet.
4. FM provides initial ranking of all projects - Safety, Urgency,
Energy.
5. Working Group meets to discuss, prioritize, and advance the
finalized project list for Campus Leadership approval.

Past DM Project Spending

Fiscal Year Allocations



HTHW Pipe Joint Replacement



Before



After



Pacific Hall Switchgear Replacement



Before



After

EBU-I AHU Replacement



BEFORE



AFTER

AHU 1



BEFORE



AFTER



BEFORE



AFTER

FY16/17 Current DM Projects

Funding Stage	Project Location/Description	Cost Est (000)	Cum Cost (000)
FY 15/16 UCOP	Stein Air Handler	\$1,700	\$1,700
FY 15/16 UCOP	Campuswide HTW Ball Joints	\$750	\$2,450
FY 16/17 UCOP	CCS Structural, Electrical, HV	\$3,100	\$3,100
FY 16/17 UCOP	IGPP Munk Exterior	\$650	\$3,750
FY 16/17 UCOP	Stein Air Handler (Remaining Balance)	\$400	\$4,150
FY 16/17 DM Budget	Debt Service	\$1,000	\$1,000
FY 16/17 DM Budget	EGap	\$2,000	\$3,000
FY 16/17 DM Budget	ADA	\$1,000	\$4,000
FY 16/17 DM Budget	Muir Biology Air Handlers	\$800	\$4,800
FY 16/17 DM Budget	EBUI Air Handlers - 6	\$1,323	\$6,123
FY 16/17 DM Budget	SIO Admin Air Handler	\$600	\$6,723
FY 16/17 DM Budget	Deep Sea Drilling E. Exterior Siding/Window Renewal	\$300	\$7,023
FY 16/17 DM Budget	Sumner Air Handler	\$500	\$7,523
FY 16/17 DM Budget	Kaplan Labs Exterior	\$800	\$8,323
FY 16/17 DM Budget	SIO Sea Water Valves, pumps	\$1,400	\$9,723
FY 16/17 DM Budget	AP&M Transformer Cooling Fins	\$750	\$10,473
FY 16/17 DM Budget	CMRR Air Handlers	\$1,000	\$11,473
FY 16/17 DM Budget	Keck Center OAR Air Handlers 1&2	\$350	\$11,823
FY 16/17 DM Budget	Isaacs Lighting/Wiring/Controls	\$250	\$12,073
FY 16/17 DM Budget	Mandel Weiss Forum Air Handlers	\$200	\$12,273
FY 16/17 DM Budget	Campus-wide High Voltage	\$500	\$12,773
FY 16/17 DM Budget	Pacific Hall, Vivarium Air Handler	\$850	\$13,623
FY 16/17 DM "Carry-Over"	BSB Vivarium VAV Air Handler	\$1,000	\$14,623
FY 16/17 DM "Carry-Over"	IRPS Air Handlers	\$400	\$15,023
FY 16/17 DM "Carry-Over"	Campus-wide Metasys	\$1,000	\$16,023
FY 16/17 DM "Carry-Over"	SIO Seawater Controls & Pump	\$1,500	\$17,523
FY 16/17 DM "Carry-Over"	Hillcrest Infrastructure High Voltage	\$500	\$18,023
FY 16/17 DM "Carry-Over"	Vaughan Hall Atrium Kalwall Supports	\$500	\$18,523
FY 16/17 DM "Carry-Over"	Sumner Auditorium Stairs and Slab on Grade Hardscape	\$500	\$19,023
FY 16/17 DM "Carry-Over"	Campuswide Renew Water Systems	\$500	\$19,523
FY 16/17 DM "Carry-Over"	CTF Main Electrical Distribution	\$500	\$20,023
FY 16/17 DM "Carry-Over"	IGPP Munk S. Woden Stairs Renewal	\$200	\$20,223
FY 16/17 DM "Carry-Over"	Urey Hall Fan Coil Renewal	\$500	\$20,723
FY 16/17 DM "Carry-Over"	CTF Vivarium Air Handler Renewal	\$500	\$21,223
FY 16/17 DM "Carry-Over"	York Air Handlers & Controls	\$650	\$21,873
FY 16/17 DM "Carry-Over"	Sverdrup Hall Heating System Renewal	\$1,000	\$22,873
FY 16/17 DM "Carry-Over"	Marfac Bldg Exterior	\$700	\$23,573
FY 16/17 DM "Carry-Over"	Ritter Hall N.Wing Ventilation	\$500	\$24,073

Questions ?

Upcoming Shuttle Route Change

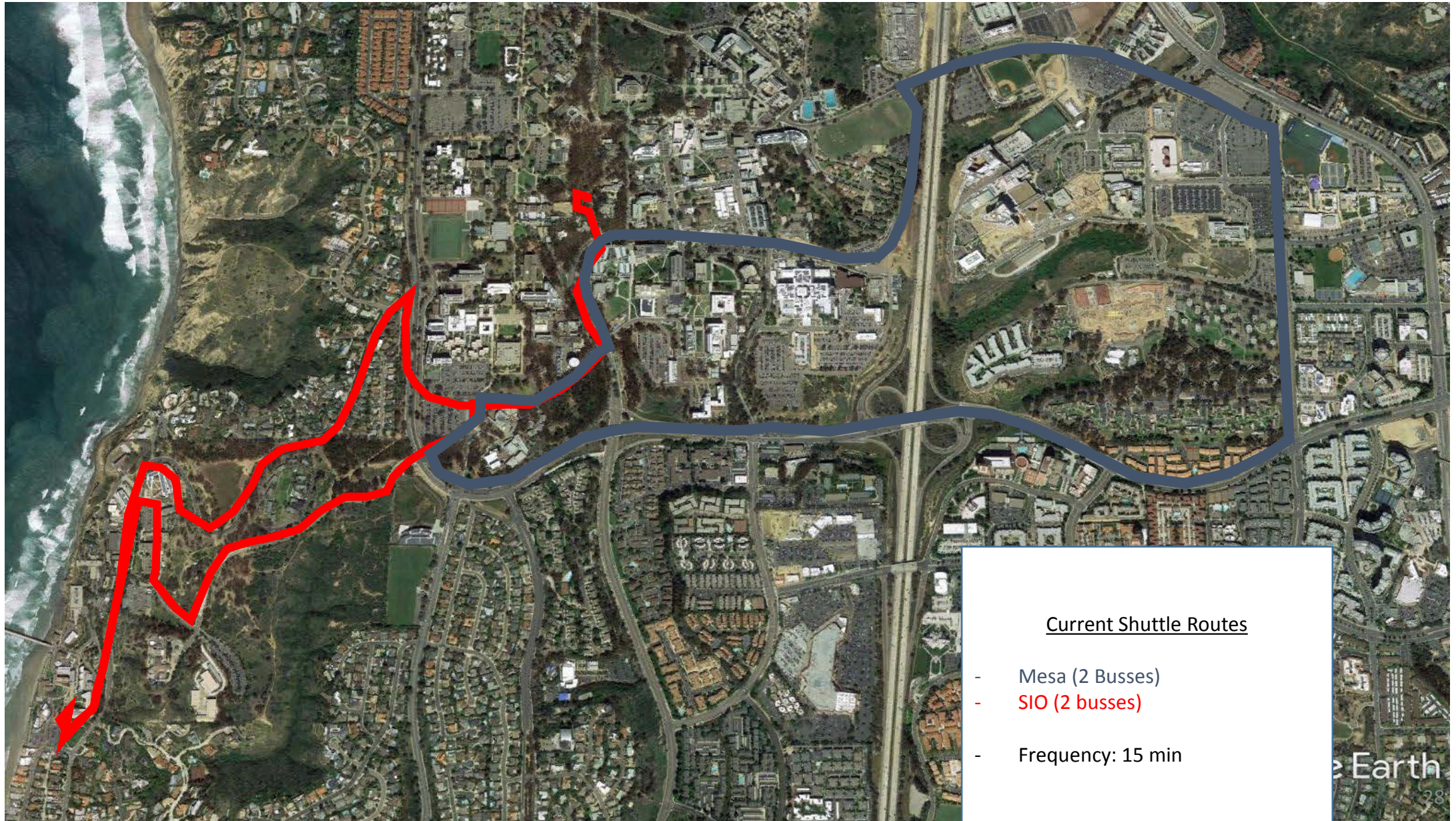
Agenda

- Shuttle Route Changes
 - Impetus for the Change
 - SIO/Mesa
 - Coaster
- Communication
 - Town Halls
 - Website
 - Shuttle Stop Signage

Impetus for the Change

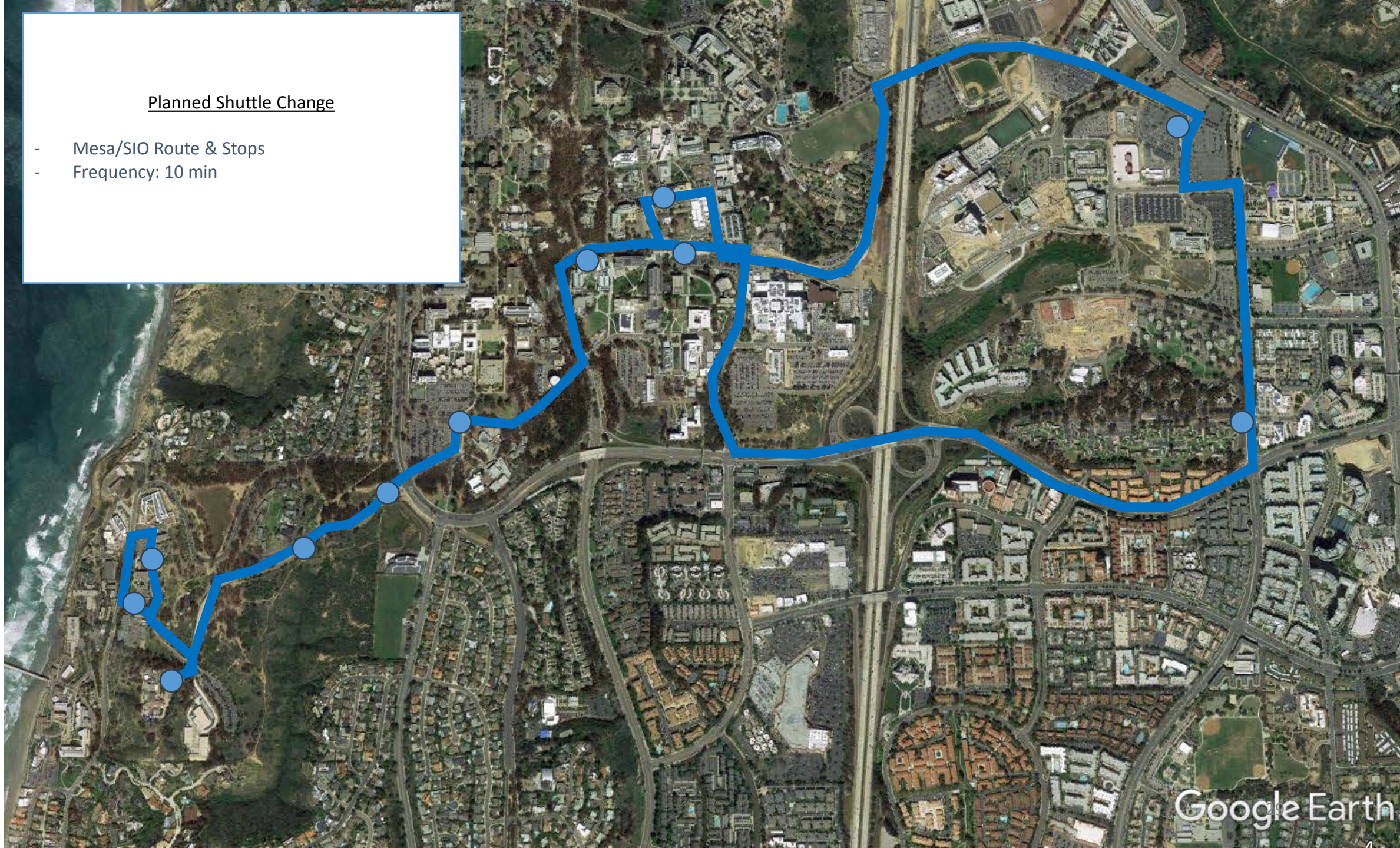
- Construction Impacts
- Traffic Congestion on Campus interior/exterior roads
- Optimization
- Safety
- Performance and Service Level Improvement

Current SIO & Mesa Shuttle Routes



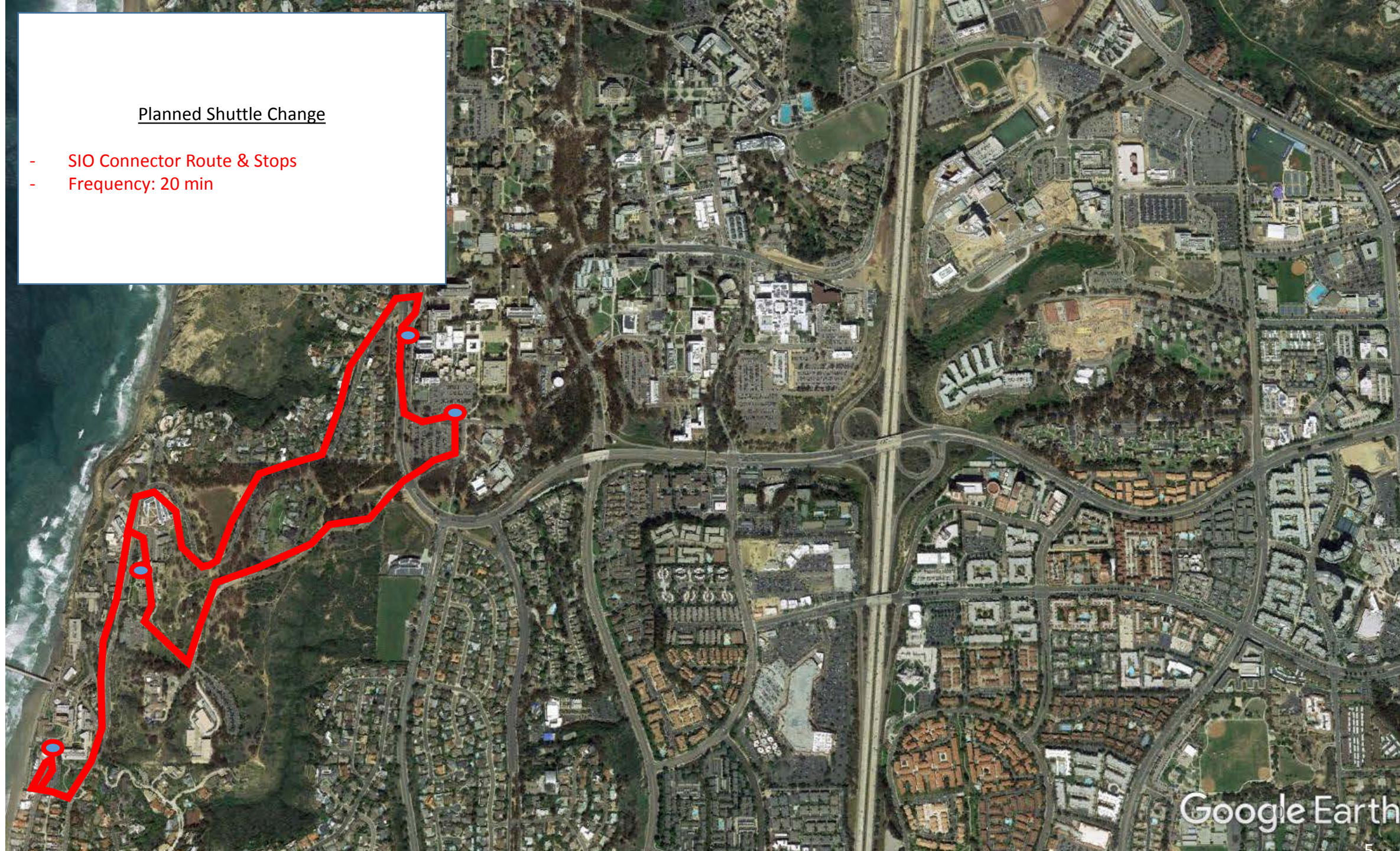
Planned Shuttle Change

- Mesa/SIO Route & Stops
- Frequency: 10 min

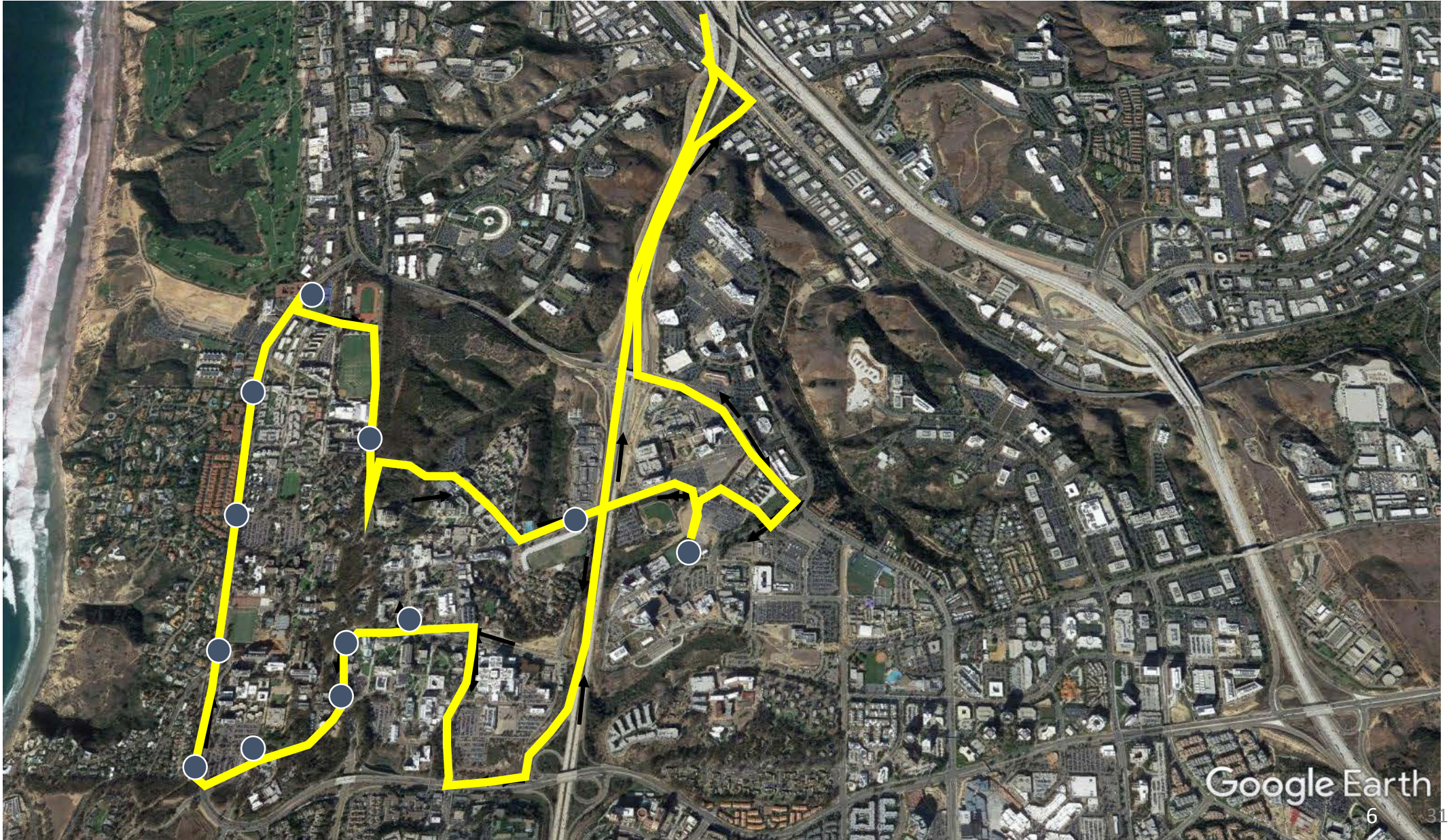


Planned Shuttle Change

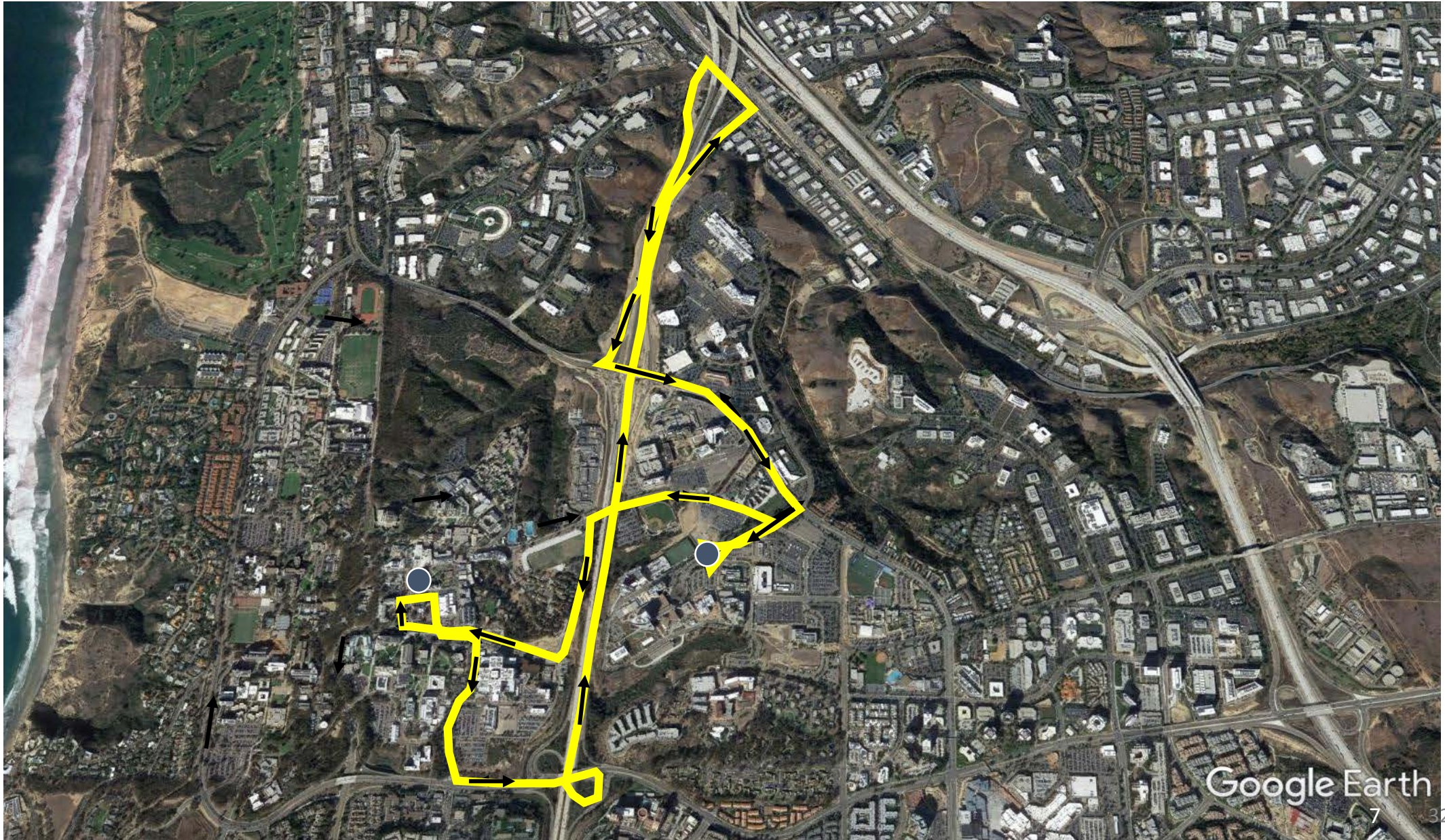
- SIO Connector Route & Stops
- Frequency: 20 min



Current Coaster Shuttle Route

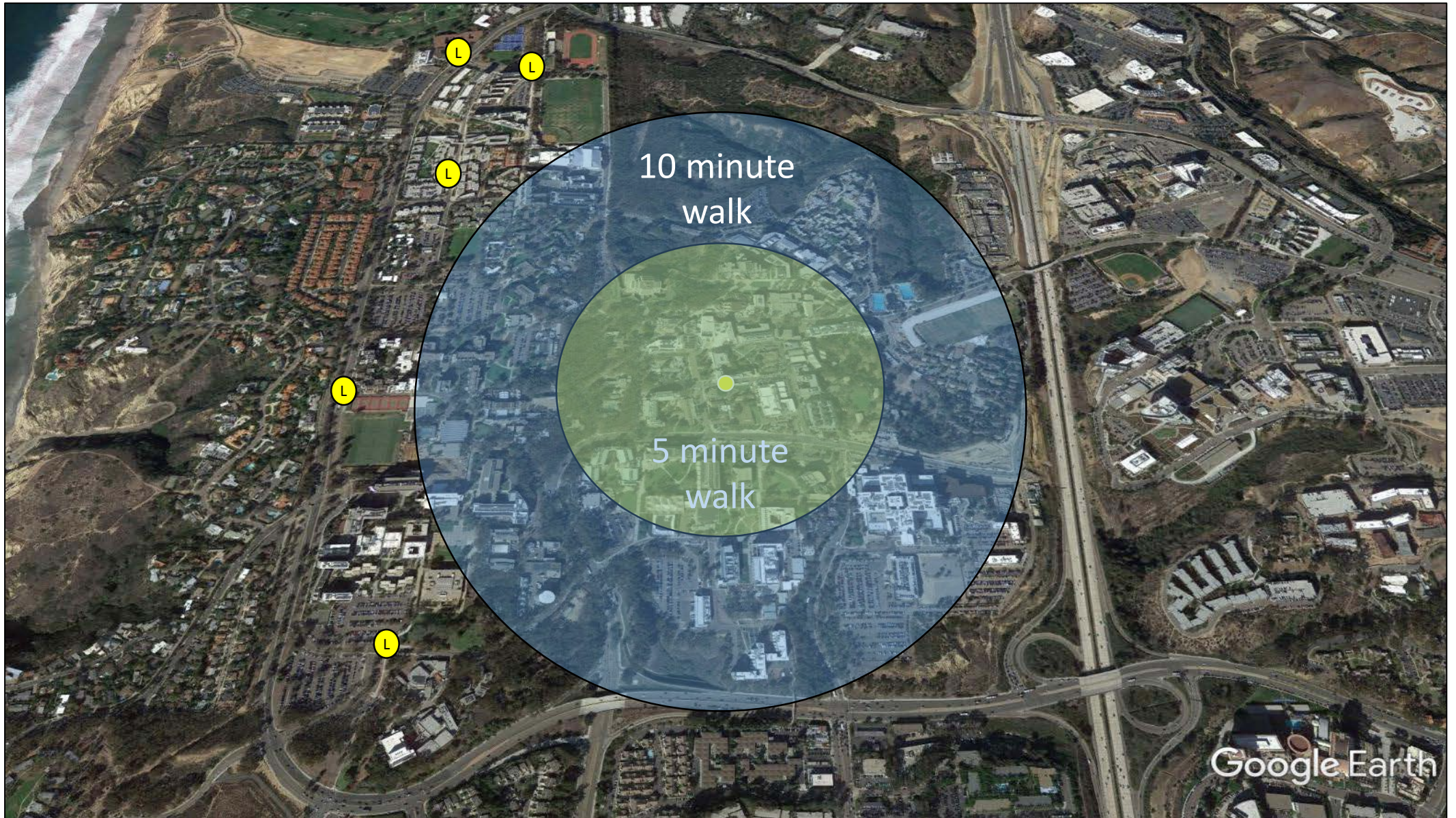


Planned Shuttle Route Change









New Route Advantages

- Provides most direct routing to/from the Station.
- Enables the shortest route for the maximum ridership.
- Both stops are centrally located for East and Main Campus.
- Sequencing connecting shuttles from SIO, Revelle, Muir, ERC, & TPCS to try and minimize total commute times.



Afternoon Connection Options

Nirenberg  (SIO)	TPCS 	ERC 	MUIR 	Revelle 	Rupertus Ln. 	Train Departure
3:30 pm	3:23 pm	3:25 pm	3:27 pm	3:30 pm	3:40 pm	4:06 pm
3:40 pm	4:08 pm	4:10 pm	4:12 pm	4:15 pm	4:25 pm	4:51 pm
4:40 pm	4:38 pm	4:40 pm	4:42 pm	4:45 m	4:55 pm	5:24 pm
5:20 pm	5:23 pm	5:25 pm	5:27 pm	5:30 pm	5:40 pm	6:08 pm
6:10 pm	5:53 pm	5:55 pm	5:57 pm	6:00 pm	6:25 pm	6:54 pm
7:10 pm	7:00 pm*	7:06 pm	7:08 pm	7:10 pm	7:25 pm	7:43 pm

* Reflects pick-up at North Campus stop (last shuttle service to TPCS is at 6:00pm)

Communication Plan

✓ SIO Town Hall: May 24, 2017

✓ Coaster Town Hall: 03MAY17

✓ Comment/Feedback Period: May – June17

✓ Comment/Feedback Period: MAY-JUN17

✓ Second SIO Town Hall: July 2017

✓ 2nd Coaster Town Hall: 06JUL17

- Rollout final plan based on comments/inputs/ideas

- Roll Out Final Plan based on comments/inputs/ideas

• SIO Route Change: August 7, 2017

• Coaster Route Change: 07AUG17

Website

http://transportation.ucsd.edu/shuttles/coaster.html#New-Route-Effec Coaster Shuttle

Convert Select

HOME - Campus Shuttles - Coaster Shuttle

Campus Shuttles

- Student Shuttle Drivers
- Campus Loop
- City Shuttle
- Coaster Shuttle**
- East Campus Connector
- East/Regents
- Hillcrest/Campus
- Mesa Housing
- SIO
- Holiday Airport Shuttle
- Charter a Shuttle for Campus Events



Coaster Shuttle

The Coaster shuttle runs weekdays between the [Sorrento Valley Coaster Station](#) and campus, excluding [university holidays](#).

- During peak morning and late afternoon hours, the East and West routes serve campus.
- During off-peak midday hours, one combined route serves all stops, except as indicated below.

Upon the shuttle driver's request, riders must show a valid UC San Diego ID and either a monthly or quarterly Coaster pass or [transit pass](#). For more information, see the [Coaster schedule](#).

Route Symbols

 
Coaster East Coaster West
[live tracking and arrival times](#)

Sorrento Valley Coaster Station Diversions

When weather or traffic delays occur, we may divert:

- From the regular drop-off/pickup location to the northeast side of the track
- To Carmel Mountain Rd. as an alternate route

Although this may delay our station arrivals, we anticipate meeting all of our designated service times.

Shuttle Stops

- Sorrento Valley Coaster station ([map](#))
- North Torrey Pines Road transit stop, west side, just south of Genesee ([map](#))
- Salk Institute Road ([map](#))
- Muir College Drive at North Torrey Pines Road ([map](#))
- La Jolla Shores Drive at North Torrey Pines Road ([map](#))
- Expedition Way at North Torrey Pines Road ([map](#))
- Villa La Jolla Drive at La Jolla Village Drive, at gas station (not served by combined route) ([map](#))
- Gilman Drive and Osler Lane ([map](#))
- Gilman Drive and Mandeville Lane ([map](#))
- Gilman Transit Center ([south](#))
- Lot P701 ([map](#))
- UC San Diego Health – La Jolla: Thornton Hospital ([map](#))

[+ Expand All](#)

- ▶ [New Route Effective Aug. 7, 2017](#)
- ▶ [Coaster Shuttle East sSchedule and Map](#)
- ▶ [Coaster Shuttle West Schedule and Map](#)
- ▶ [Combined East-West Coaster Shuttle Schedule and Map](#)

5:08 PM 7/18/2017

Shuttle Stop Signage

- Placing signage at all impacted stops to alert customers and direct them to website with more information.

ROUTE ALERT

Monday, August 7

New Routes and
Schedule Changes

Details at:

shuttles.ucsd.edu

UC San Diego
Shuttle Services

Questions/ Comments

Coaster Feedback Received

Total # of Comments Received: 11

Summary of comments:

- 3 comments were directed towards errors on the schedules
- 3 comments supported the two stop concept (option 3) or a variation of our connecting loop service
- 3 comments supported the status-quo and did not want any changes
- 1 comment focused on increasing the subsidy of the Coaster pass
- 1 comment suggested eliminating East campus stops (Thornton)

COASTER Shuttle Service Survey Results
 41 Surveys Collected
 May-17

Total Score

1. How long riding COASTER?

< 1 year	10
between 1 and 5 years	14
between 5 and 20 years	15
> 20 years	2

2. Rate the reason from 1 to 5 with 1 being the highest rating why you ride the COASTER (lowest score = highest rating)

Traffic on I-5	89
Less stress than driving	103
Personally support the environmental benefits	118
Less cost than driving	118
Limited parking on campus	120
Support UC San Diego in Go Green Initiatives	145
Do not own or have access to a car	194

3. Rate from 1-5 with 1 being the highest rating what is most important to you about the COASTER shuttle service (lowest score = most important)

Route efficiency (takes no more than 30 min)	84
On time station arrivals to COASTER station	89
Convenient shuttle stop location	114
Free service	117
Route has dedicated buses and drivers	117
Safety	127
Bus is not overcrowded	147

4. Would you prefer 2 stops and trip time < 30 minutes or 9 or 10 stops with trip time > 60 minutes	
2 stops, farther from office, < 30 minute trip	36
10 stops, closer to office, > 60 minute trip	1
5. Suggestions for improving shuttle service (comments)	
Keep East/West and separate shuttle route for Thornton Hospital	8
Add buses to current service to decrease travel time to/from campus	3
Don't make changes, current schedule is running smoothly	3
Bus driver staying at train station until train arrives	2
Shorter travel time on bus	2
Fewer stops, travel time no more than 30 minutes	2
Better coordination between shuttle and train schedule	2
Shuttle comes on time	2
Look at model of Charles River Transportation Management Association	1
Work with MTS to add stops to 978/979 shuttles	1
Look for other cost savings measures within Parking and Transportation	1
Coaster bus runs in middle of day to Sorrento Valley	1
2 buses -- 1 clockwise and the other counter clockwise for pickup and delivery	1
Raise parking for faculty to fund COASTER shuttle	1
Recalculate pricing for all green transportation and adjust parking prices to balance budget	1

6. Will the new proposed route cause you to discontinue taking the COASTER?

Yes	16
No	9
Maybe	16

7. Why will you discontinue taking the COASTER? (comments)

Increased shuttle travel time will add to already long commute	17
Work day will be shorter because of changes to shuttle schedule	4
Won't sit on a bus for longer than 30 minutes	3
Must get to work on time	3
Impact patient care schedule	1
101 bus will be shorter commute	1

8. Rate from 1-5 with 1 being the highest rating ideas that might increase COASTER ridership (lowest = highest rating)

More efficient shuttle service (multiple, short-run routes)	91
Increase campus subsidy of COASTER pass so cost is less than parking	105
Identify employees and students who live in North County	114
Increase awareness to the campus community	117
Free monthly pass for new employees	135
Incentives to current riders who bring in new riders	165