Architecture is in the midst of understanding and absorbing massive changes in how we communicate, move through space and power our activities. Two areas in the Applied Sciences and Arts, architecture and transportation, are at the center of the current rethinking of our 21st century world. One key concern motivating many of these changes is global warming. The US Transportation Sector produces nearly thirty percent of all US global warming with the US building sector also contributing nearly 30 percent, these two sectors combined create the largest effect on our planet. These two aspects of our world are deeply intertwined and for long term solutions remaking of our world, they must be considered together.
The interrelationship of architecture and transportation created our earliest settlements and their combined ability to support and remake our world is deep and profound, affecting all aspects of who we are. The synergies that have not been possible in the past with transportation powering architecture and architecture powering transportation are now possible to provide a world in sync with the 21st century interconnections. Architecture students have been exploring these ideas in several 4th year and Masters Studios. Solar powered transportation is now possible and in combination with the Living Building Challenge can provide by 2030 sustainable resilient communities.
One of the key concepts of The Living Building Challenge seeks to create buildings that are self-sufficient within the resources of their site, producing more energy than they use. “Living buildings give more than they take, creating a positive impact on the human and natural systems that interact with them.” (https://living-future.org/lbc/basics/) How can buildings and transportation interact and interrelate to give more than they take? How can they support each other’s energy needs while sustaining our planet? How can they provide all of us with even greater mobility? The student ideas and solutions range from specific building designs for sustainability to large scale planning solutions for new communities’. These ideas and projects will be presented in detail and discussed as new visions for the 21st century.
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Sustainable Mobility System for Silicon Valley

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http://www.sjsu.edu/smssv/

http://designstudioatsiu.blogspot.com/2017/10/
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The Green Corridor

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The Green Corridor
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5th St Greenway
Section A-A Looking North

rocky soil - slotted storm drain - permeable pavement - porous concrete

145' 20' 46' 14'

Keyes St
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Public Spaces
This space mass contains all of the common spaces such as lobby, back of the house space, restaurants, spa, pool.

Guest Rooms
All of the guest rooms will be located in the double corridor tower overlooking different views but mainly to the stadium.

Bridge
The bridge will connect the hotel and the stadium giving it a more dynamic design.
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PROPOSED SITE LEGEND

- EXISTING BUILDING
- PROPOSED HOTEL
- PROPOSED GREENSPACE
- SPARTAN SUPERWAY LINE
- SPARTAN SUPERWAY STOP
- FUTURE BART LINE
- PROPOSED BART STATION
- PEDESTRIAN CIRCULATION
- SERVICE AND LOADING CIRCULATION
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Figure Ground

- Block
- Buildings
- Site
- Trails

TRANIT ROUTE
PEDESTRIAN ROUTE
URBAN VILLAGE MIXED USE:
COMMERCIAL + RESIDENTIAL

0 ft 1000 ft 2000 ft 4000 ft
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SOLAR ANALYSIS

SHADE IN DECEMBER AT NOON

SHADE IN JUNE AT NOON
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SOLAR ANALYSIS

SHADE IN DECEMBER AT NOON

SHADE IN JUNE AT NOON
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Downtown Santa Cruz Multi-Modal Station
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University of California at Santa Cruz
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University of California at Santa Cruz
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Arlanda Airport, Sweden On-Line Masters
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emerging typologies
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6,218 square meters

1. Classic Car Museum
2. Car share program parking structure
3. Pool car parking structure
4. Retail space #1
5. Retail space #2
6. Employee Areas
7. MEP/IP Area
8. Kitchen
9. Employee elevators
10. Coffee Shop
11. Bike rental Space
12. Lobby

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AERIAL FROM TRAIN STATION

MASTER PLAN

LEGEND
1. DRIVE LAB
2. HOTEL
3. MID-RISE RESIDENTIAL
4. LOGISTICS
5. LIVE WORK APARTMENTS
6. TRAIN STATION
7. RETENTION POND
8. POD CAR RAIL
9. MULTI-USE COMMUNITY

DRIVE LAB AREA MAP
Rather than isolating ourselves from the realities that we are now facing we need to embrace the new solutions and attempt to find ways to integrate them to address the emerging complex movement and environmental needs of our planet.

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