

# The Intersection of Architecture and Maslow's Hierarchy of Needs in the Design of Individual and Private Restrooms



# Learning Objectives

- You will learn the importance and benefits of individual and private restroom design and its impact on promoting inclusivity, privacy, and safety for all users.
- You will learn how to gather and incorporate community feedback from pre- and post-construction surveys to create effective and inclusive gender-neutral restroom design solutions.
- You will learn about ways to respond to community criticism, why are they individual and private, not gender neutral?
- You will learn about ways to program individual and private restrooms in your K12 and community colleges.

# Core Competency

- Design of Educational Facilities: Acts as a resource to the design team in providing ongoing guidance and support to ensure that the emerging and ultimate design aligns with the established community vision, education goals, future programming, written design standards, best/next practices and education policy.

# Speakers



Dr. Tammeil Gilkerson, Ed. D.  
President

Evergreen Valley College



Andrea Alexander  
Vice President  
Administrative Services  
Evergreen Valley College



Kimberly Coffeen, AIA, ALEP  
Principal

Perkins Eastman



Ty Taylor, ALEP  
Director

Brailsford and Dunlavey



Dr. Tammeil Gilkerson, Ed. D.  
President  
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Vice President  
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Kimberly Coffeen, AIA,  
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**Vice President Administrative Services  
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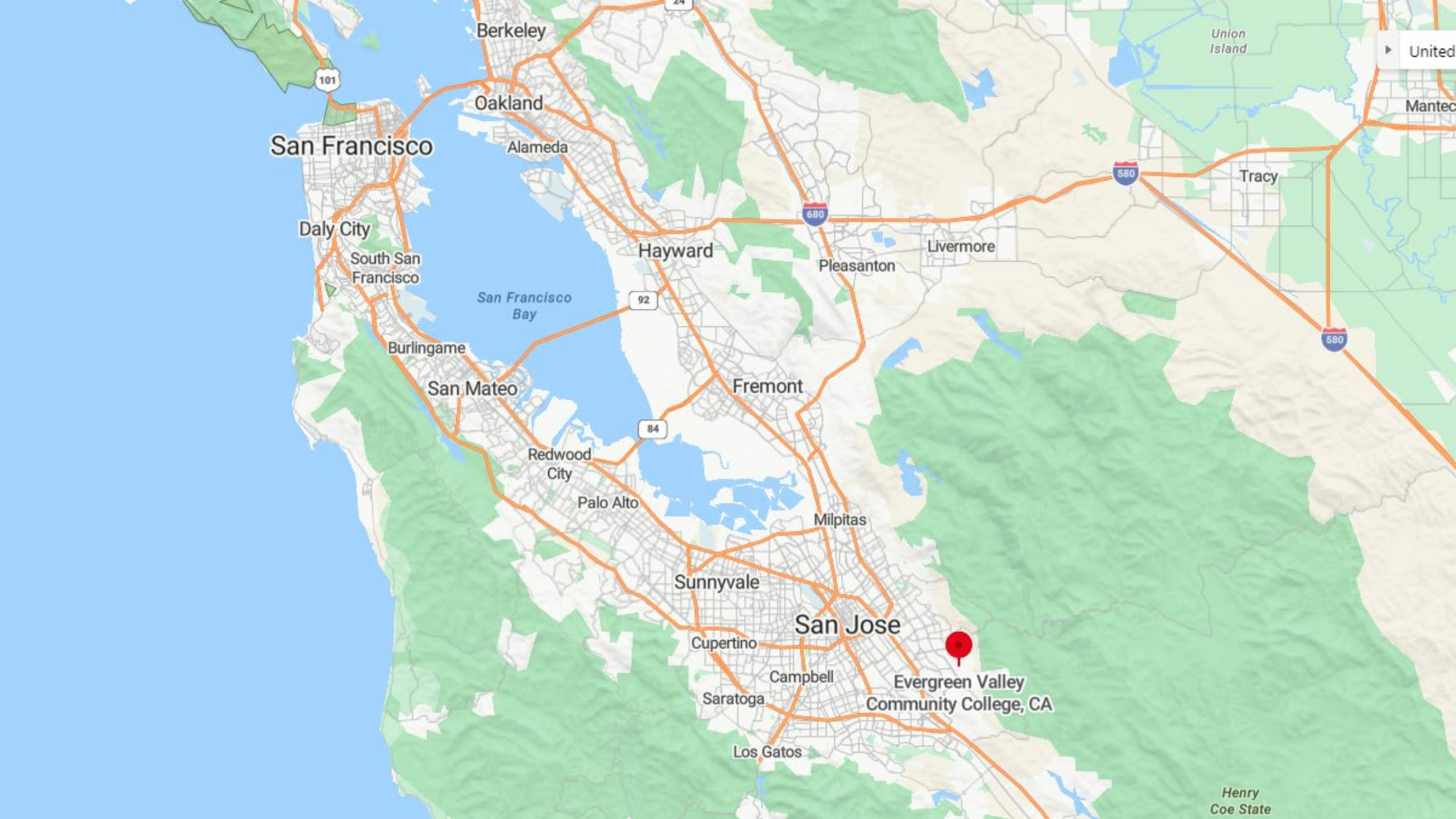


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Director  
Brailsford and Dunlavey





San Francisco

Berkeley

Oakland

Alameda

Hayward

Fremont

San Jose

Evergreen Valley  
Community College, CA

Tracy

Daly City

South San  
Francisco

Burlingame

San Mateo

Redwood  
City

Palo Alto

Sunnyvale

Cupertino

Campbell

Saratoga

Los Gatos

Pleasanton

Livermore

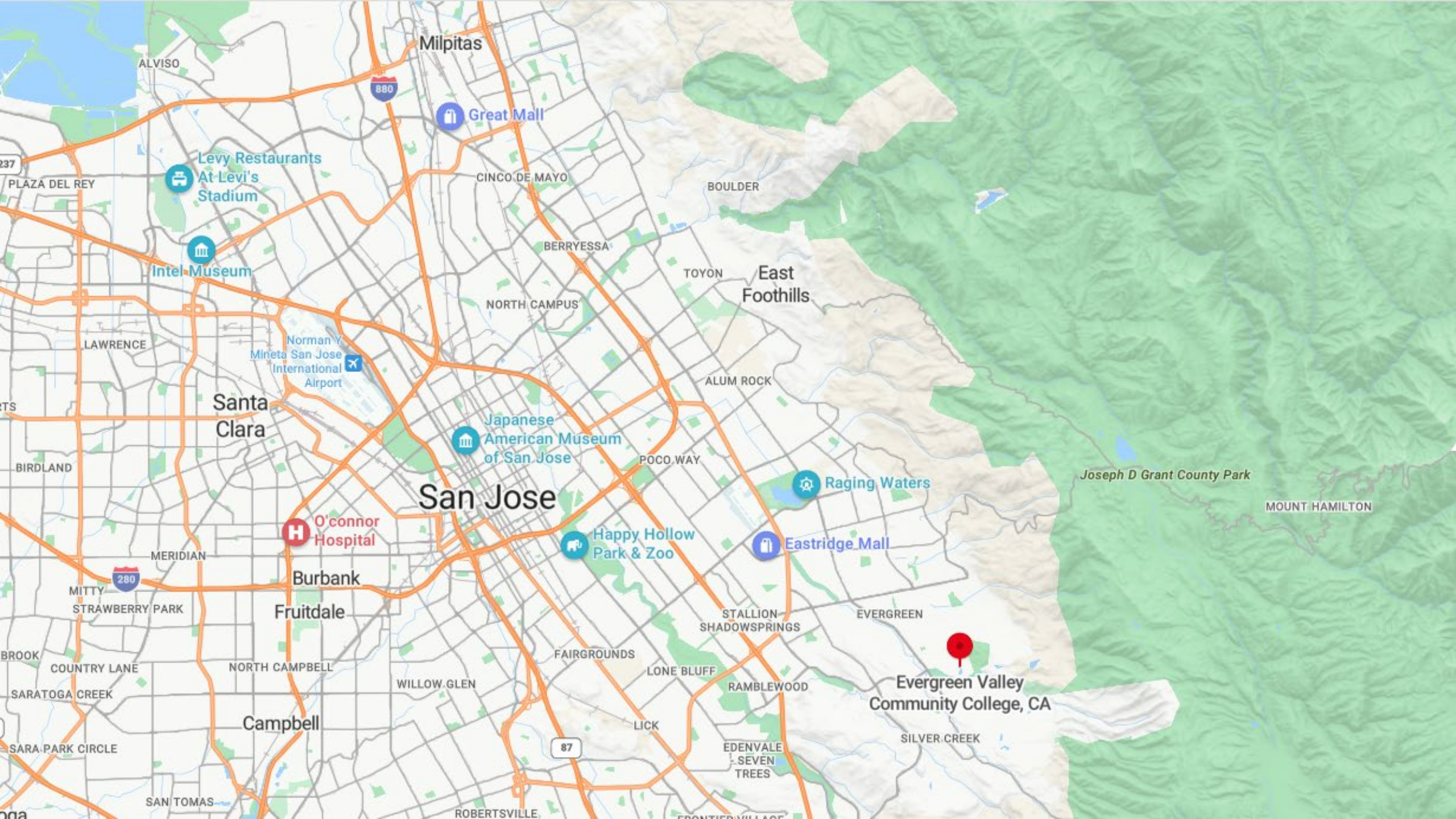
Union  
Island

United

Mantec

Henry  
Coe State





Milpitas

ALVISO



Great Mall

Levy Restaurants  
At Levi's  
Stadium

CINCO DE MAYO

BOULDER

Intel Museum

BERRYESSA

TOYON

East  
Foothills

NORTH CAMPUS

Norman Y  
Mineta San Jose  
International  
Airport

ALUM ROCK

LAWRENCE

Santa  
Clara

Japanese  
American Museum  
of San Jose

POCO WAY

Raging Waters

Joseph D Grant County Park

MOUNT HAMILTON

San Jose

Happy Hollow  
Park & Zoo

Eastridge Mall

O'Connor  
Hospital

MERIDIAN

Burbank

STALLION  
SHADOWSPRINGS

EVERGREEN

MITTY  
STRAWBERRY PARK

Fruitdale

FAIRGROUNDS

LONE BLUFF

RAMBLEWOOD

Evergreen Valley  
Community College, CA

SILVER CREEK

87

Campbell

NORTH CAMPBELL

WILLOW GLEN

LICK

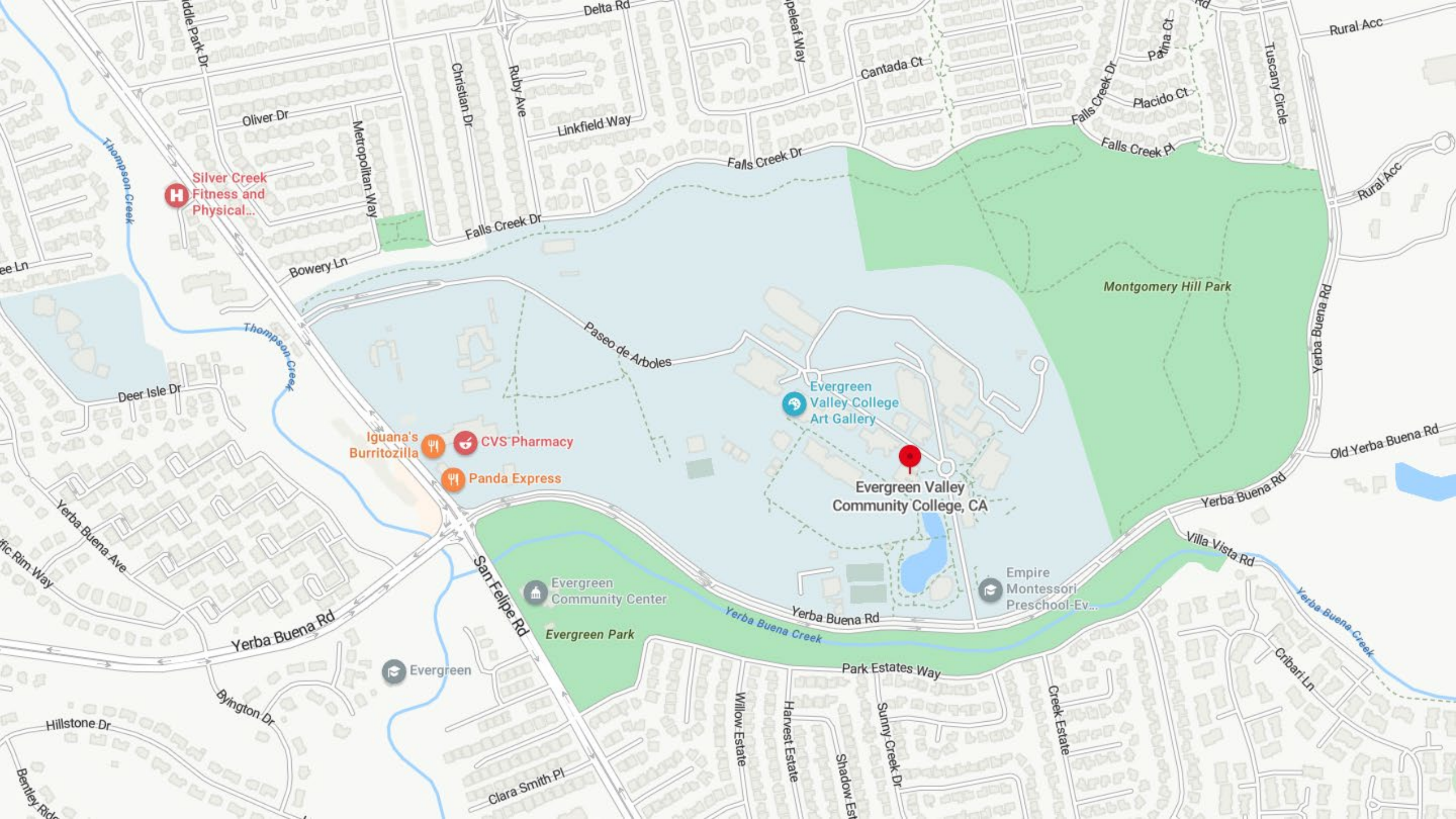
EDENVALE  
SEVEN  
TREES

SAN TOMAS

ROBERTSVILLE

FRONTIER VILLAGE





**H** Silver Creek Fitness and Physical...

Iguana's Burritozilla  
CVS Pharmacy  
Panda Express

Evergreen Valley College Art Gallery

Evergreen Valley Community College, CA

Evergreen Community Center

Empire Montessori Preschool-Ev...

Evergreen

Montgomery Hill Park

Evergreen Park





Cedro

Library/  
Education  
Tech Center

Evergreen  
Valley College  
Art Gallery

Physical  
Education

Evergreen Valley  
College

Gullo II

Student  
Services  
Center

Acacia

Evergreen Valley Community College

Sequoia  
Lecture  
Hall

Gullo  
Student  
Center

Sequoia

Performing  
Arts

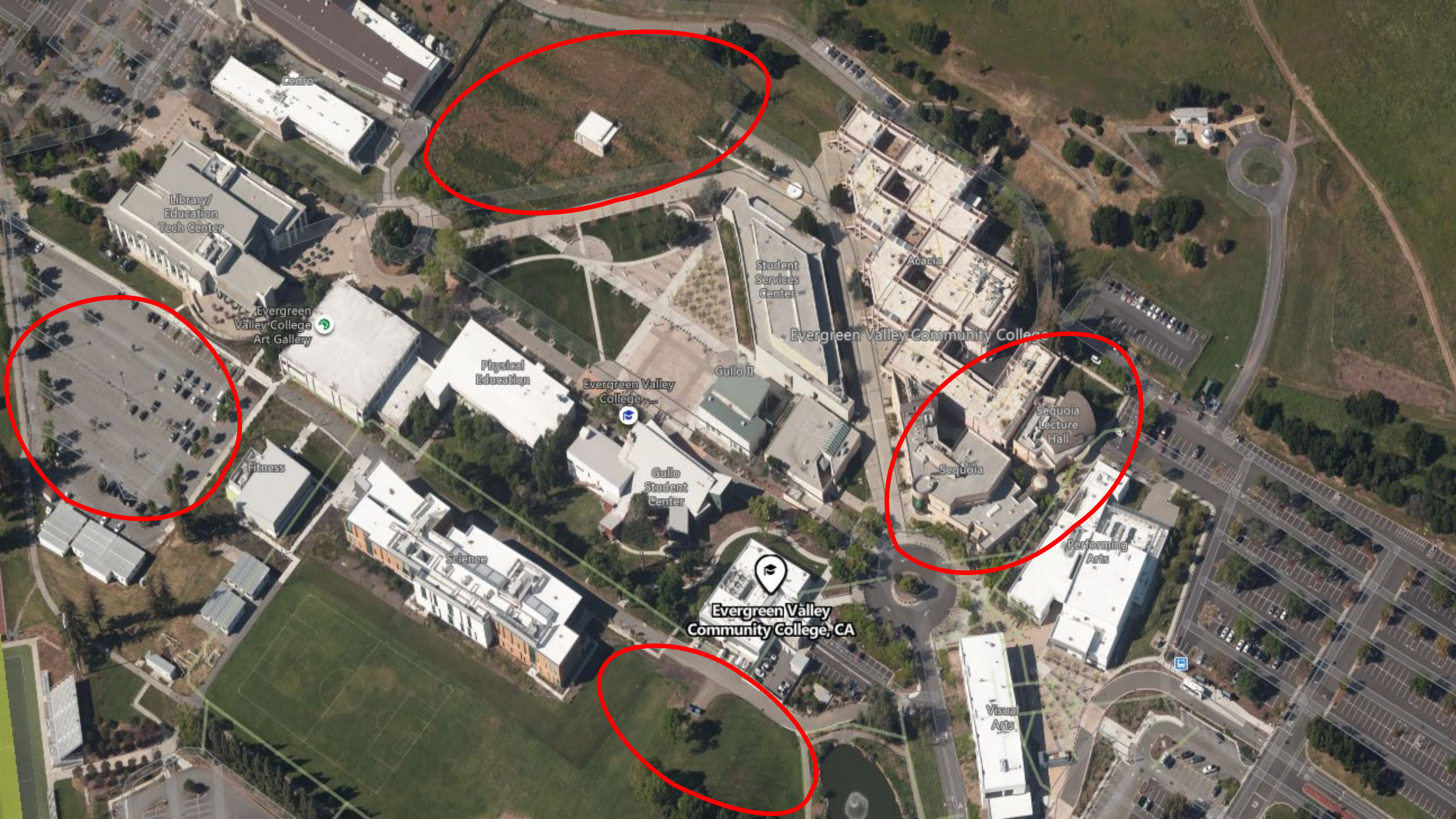
Evergreen Valley  
Community College, CA

Visual  
Arts

Science

Fitness





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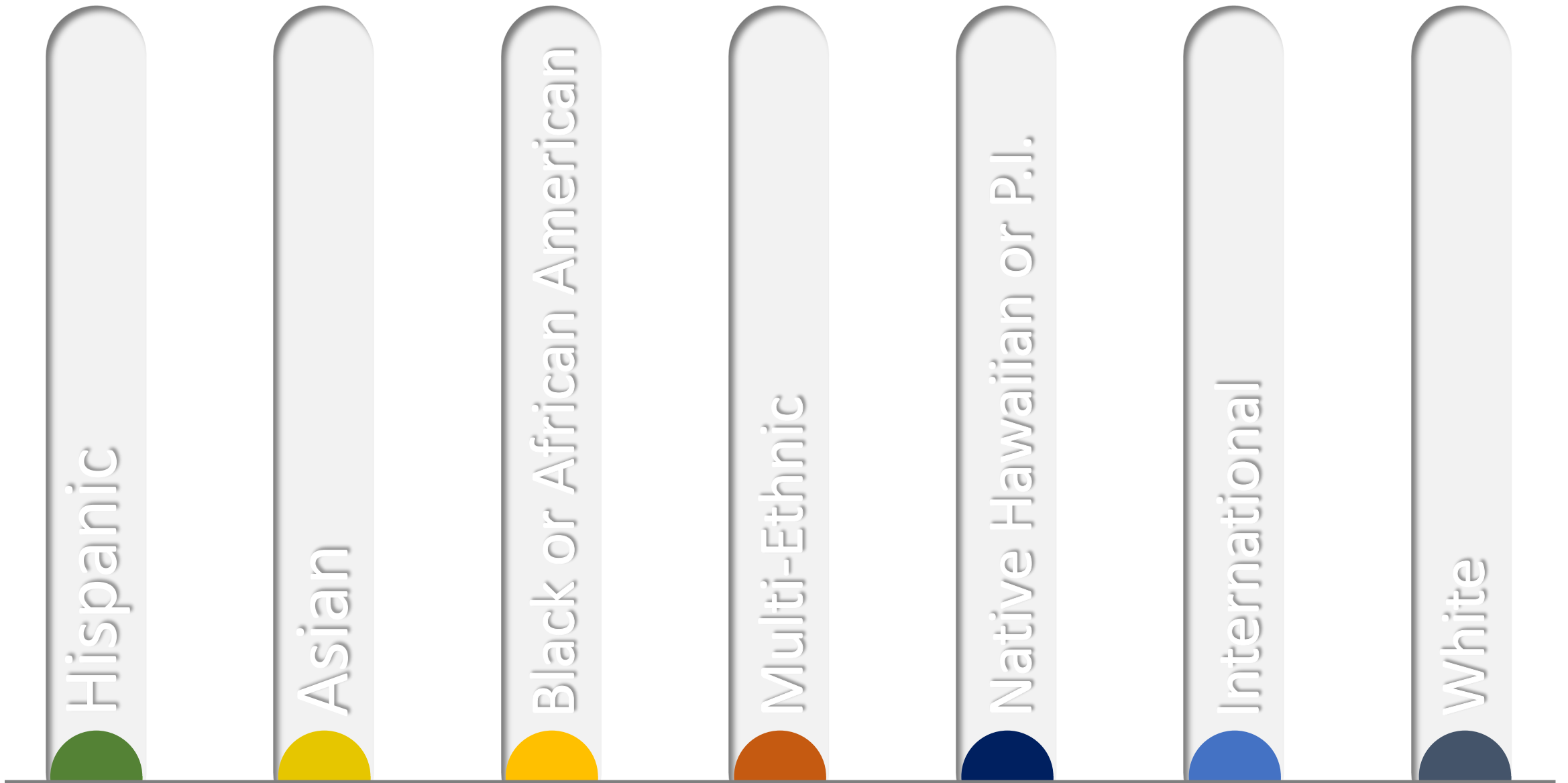
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Arts

Science

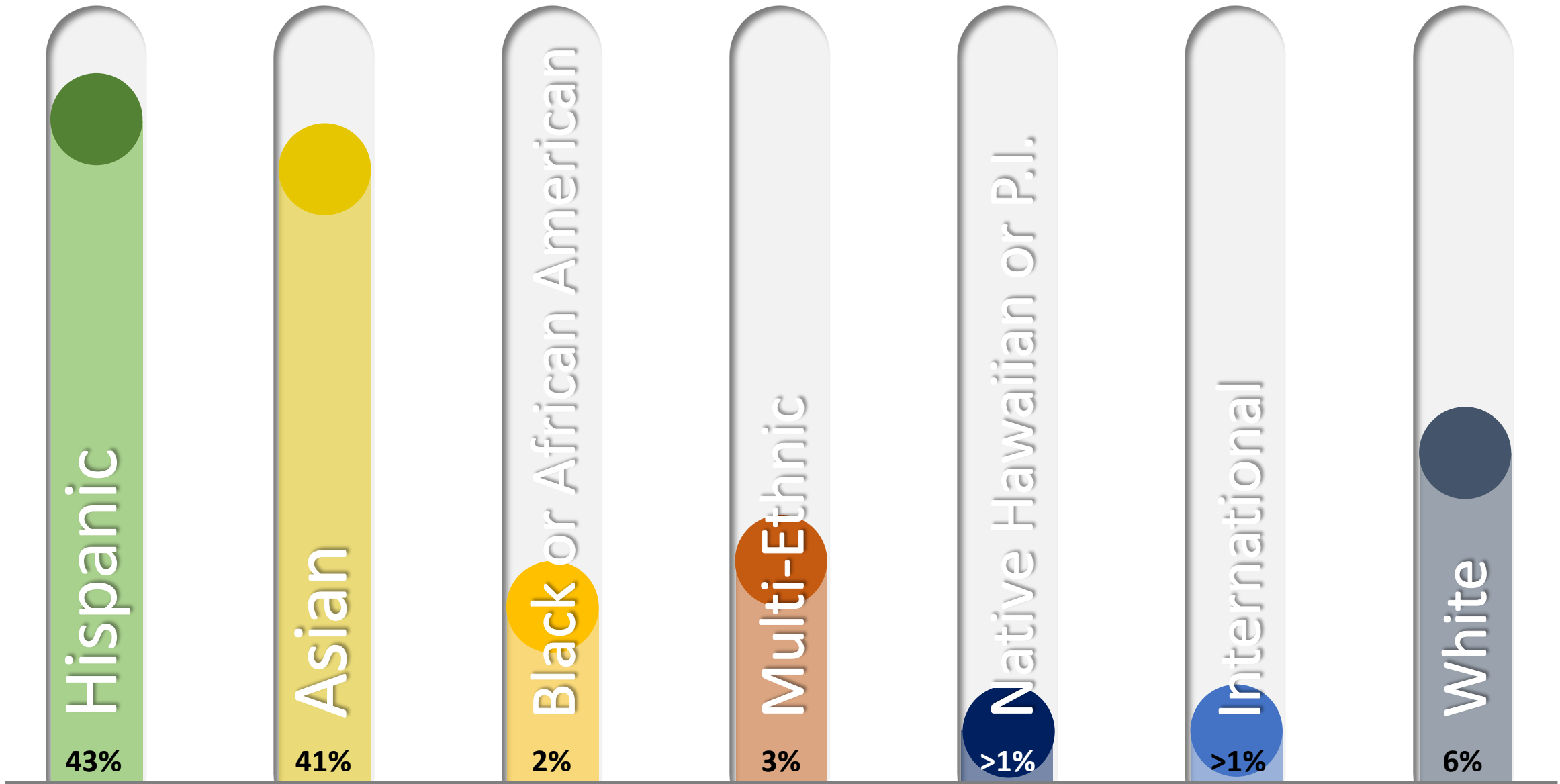
Gullo  
Student  
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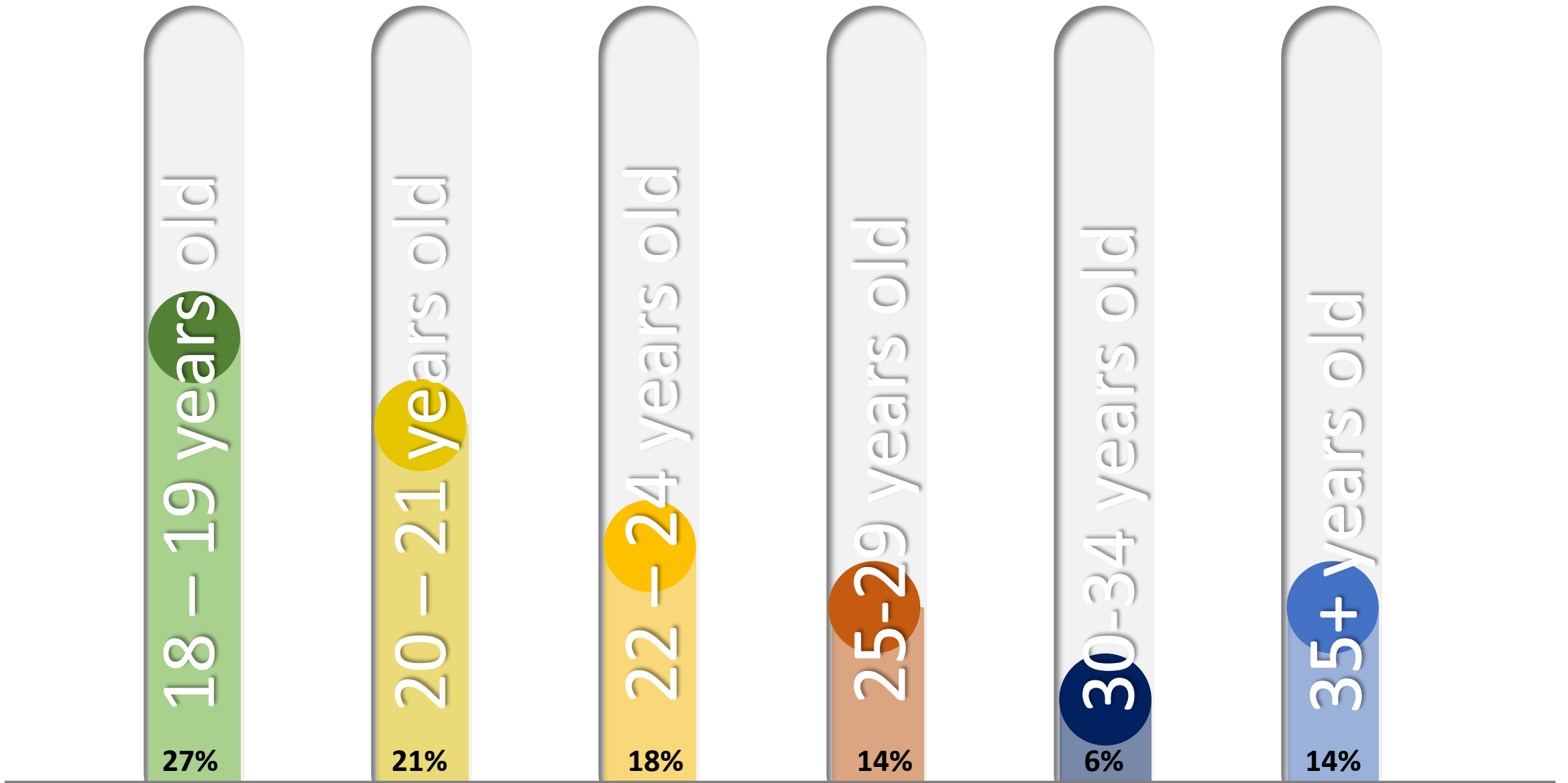


**Ethnic Diversity – Evergreen Valley College**

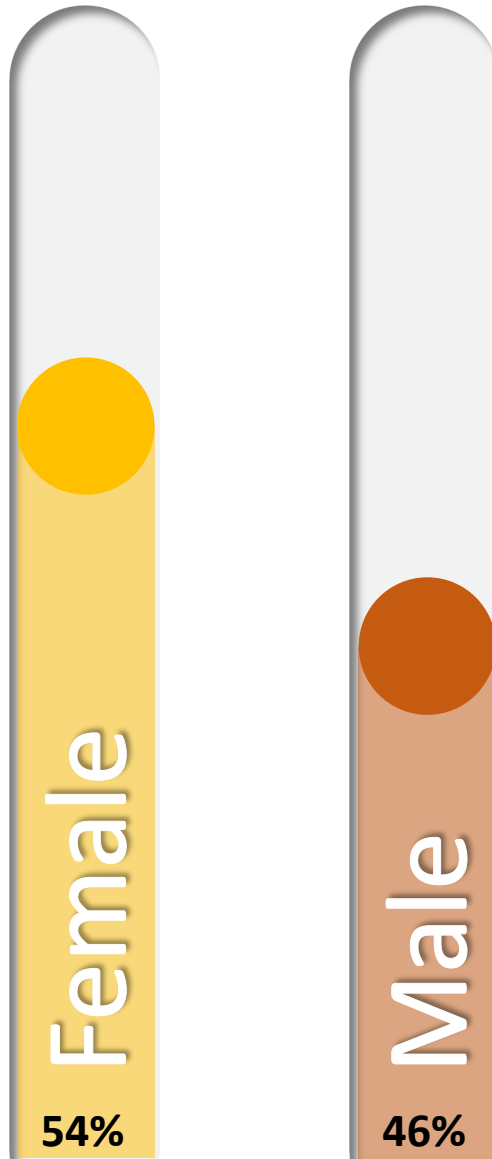


**Ethnic Diversity – Evergreen Valley College**

**3% Not Reported**



Student Age Ranges – Evergreen Valley College



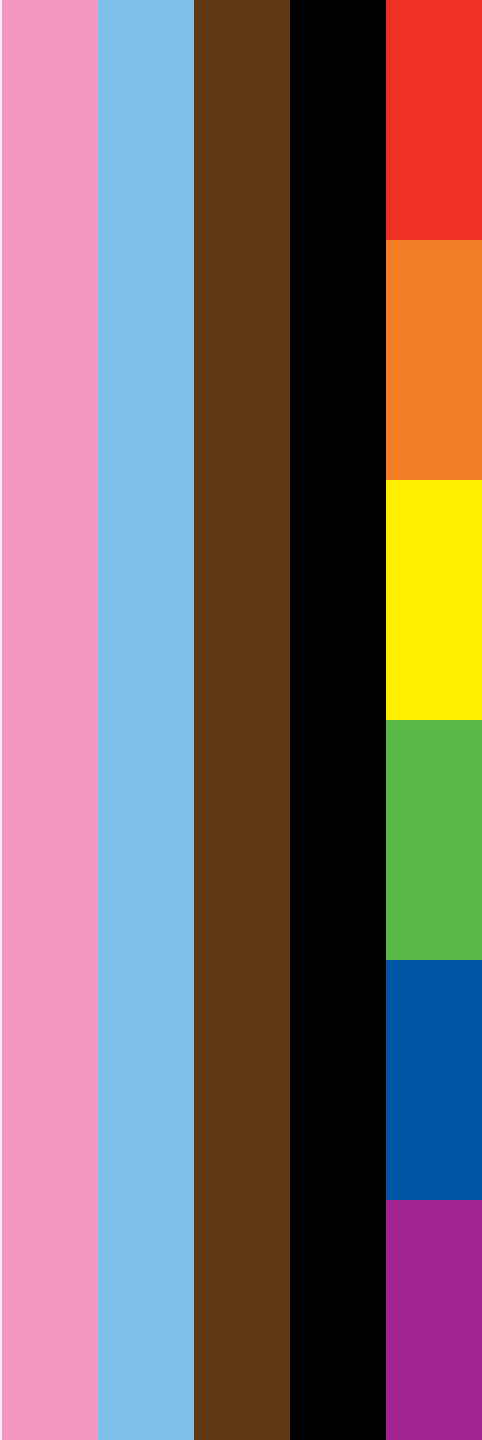
Sex – Evergreen Valley College





LGBTQIA Students in Higher Education. . .

17% of students identify as Gay, Lesbian, Bisexual, Asexual, Queer, or Questioning. –Association of American Universities (AAU)





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– The Williams Institute

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Gay Men earn 31% less than straight peers - Prudential

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Age 12 – 20

LGBTQ 3.5x as likely to attempt suicide.

Trans 5.9x as likely to attempt suicide

-Journal of American Medical Association

Pediatrics

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22% of LGBTQ students choose colleges away from family in search of a more welcoming environment compared to 5% of non-LGBTQ students.

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LGBTQ students are 3x as likely to be sexually assaulted.  
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LGBTQ college students are 4x as likely to think about suicide and commit self harm.

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# Self-actualization

Desire to become the most that one can be

## Esteem

Respect, self-esteem, status, recognition, strength, freedom

## Love and belonging

Friendship, intimacy, family, sense of connection

## Safety needs

Personal security, employment, resources, health, property

## Physiological needs

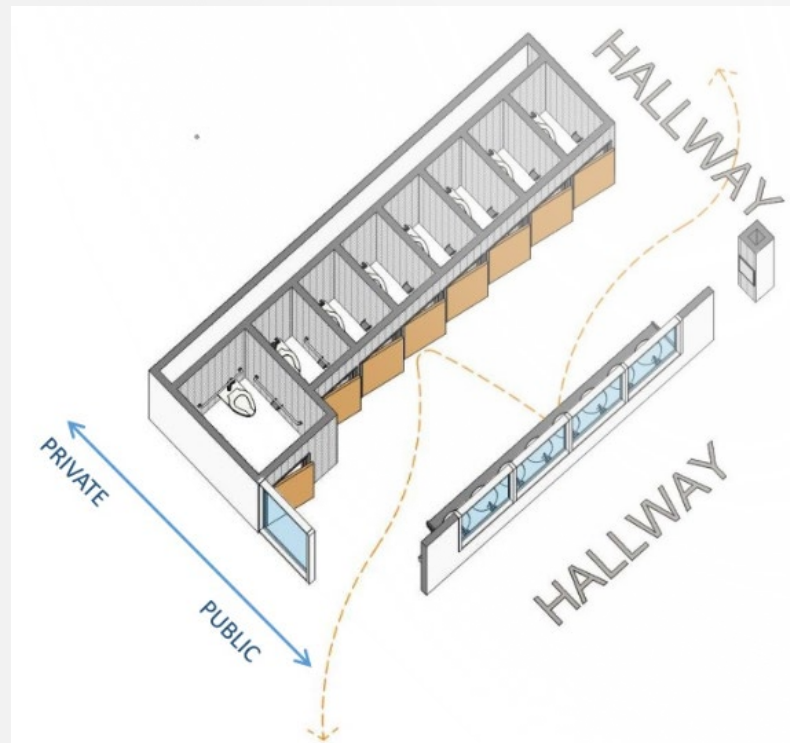
Air, water, food, shelter, sleep, clothing, bathroom

The purpose of this survey is to evaluate and understand your input on restroom use at higher education institutions. Your feedback is extremely valuable as it will provide input into the design of future restrooms at higher education institutions.

These questions have been peer reviewed by Dr. Mike Hoffshire, a published expert of gender and inclusivity at Saint Mary's College in California.

This is an example of a future restroom. This is a series of individual, private restrooms, with a large shared wash area. There is no door in to or out of this area as it is not a bathroom, but a series of private rooms. Each restroom has floor to ceiling walls and a full door with an internal lock. On the outside of each door there is an automatic sign that says "vacant" or "occupied." Anyone can use any restroom easing lines and wait times. (Image Cite: Cuningham Group Architects)

restroom easing lines and wait times. (Image Cite: Cuningham Group Architects)





How safe do you feel using the traditional restroom (Separated male and female group restrooms), shown below?

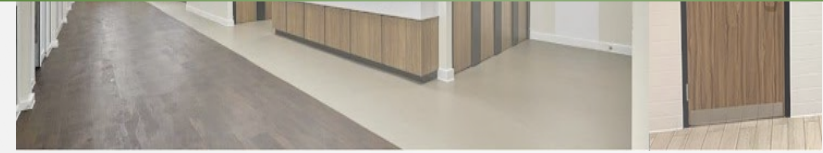


How safe do you feel using an individual, private, single person restroom, shown below?



What is your preferred type of restroom, if you had your choice?

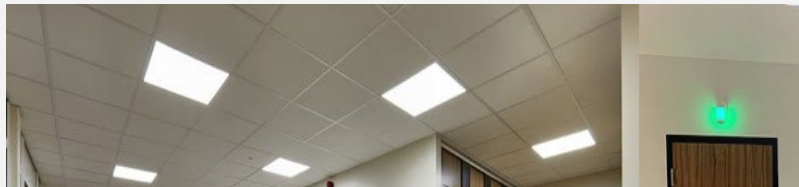
- Individual and Private Restrooms
- Separated male and female group



What is your preferred type of restroom, if you had your choice?

- Individual and Private Restrooms
- Separated male and female group restrooms

Would you use a series of public sinks in a hallway, shown below





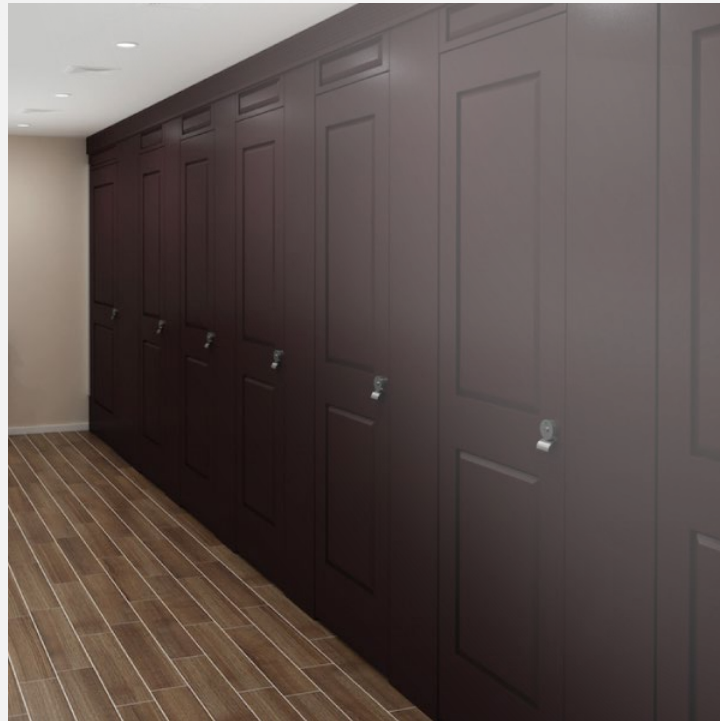
- Separated male and female group restrooms

Would you use a series of public sinks in a hallway, shown below



The walls for each private restroom are thick with floor to ceiling walls. There is no ability to peek through, over, or under

The walls for each private restroom are thick with floor to ceiling walls. There is no ability to peek through, over, or under stalls. Does that make you feel secure?





Having restroom doors that can be seen from the hallway makes me feel.

Knowing the door to the restroom stall has no gaps and is lockable on the inside makes me feel.

Knowing that an all-inclusive restroom is a private room, with floor to ceiling separation, and locks from the inside makes me feel:



How safe do you feel using the traditional restroom (Separated male and female group restrooms), shown below?



- Very Safe
- Somewhat Safe
- Somewhat Safe
- Very Unsafe
- Neutral

Very Safe

Somewhat Safe

Neutral

Somewhat Unsafe

Very Unsafe

How safe do you feel using the traditional restroom (Separated male and female group restrooms), shown below?



- Very Safe
- Somewhat Safe
- Somewhat Safe
- Very Unsafe
- Neutral

35%

Very Safe

36%

Somewhat Safe

18%

Neutral

8%

Somewhat Unsafe

3%

Very Unsafe

How safe do you feel using an individual, private, single person restroom, shown below?



68%  
33%+

Very Safe

17%  
19%-

Somewhat Safe

10%  
8%-

Neutral

4%  
4%-

Somewhat Unsafe

1%  
2%-

Very Unsafe

What is your preferred type of restroom, if you had your choice?

69%

Individual & Private

6%

Either

25%

Male / Female

85% report safe or very safe in an individual & private bathroom, but 75% report this would be their preferred bathroom type.



Would you use a series of public sinks in a hallway, shown below

79%

Yes

21%

No

Most common comments for no include a need for space to do private face care in a mirror and a place to set down a bag or purse without it getting wet.

The walls for each private restroom are thick with floor to ceiling wall. There is no ability to peek through, over, or under stalls. Does that make you feel secure?



86%

Yes

14%

No

85% report safe or very safe in an individual & private bathroom, 75% report this would be their preferred bathroom type, and 86% feel this is a secure solution

Having restroom doors that can be seen from the hallway makes me feel:

17%

Very Safe

18%

Somewhat Safe

45%

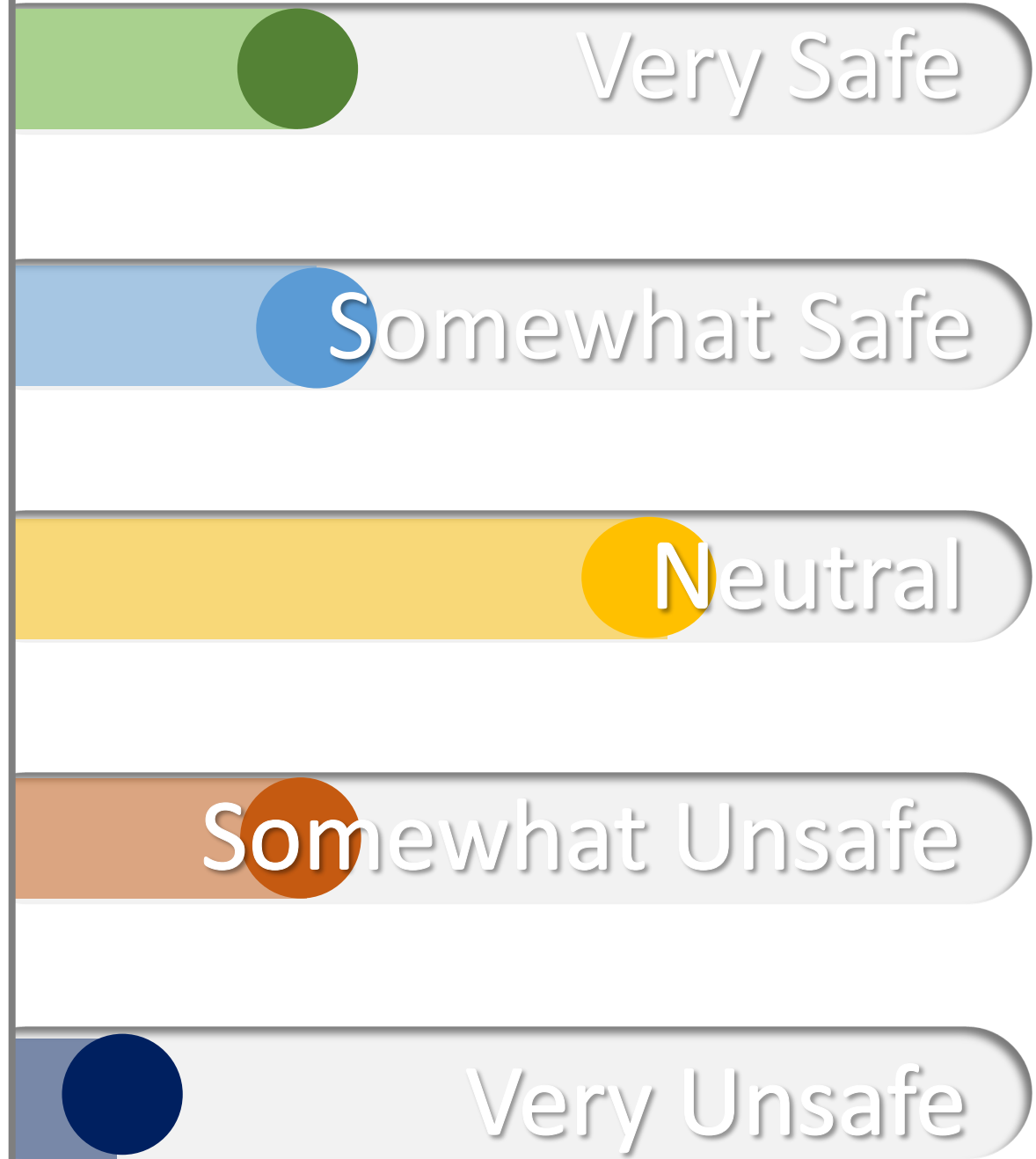
Neutral

14%

Somewhat Unsafe

6%

Very Unsafe



Knowing the door to the restroom stall has no gaps and is lockable on the inside makes me feel:

This question is a rewording of question 5 as a confirmation check. Q5 resulted in 86% feeling safe and this question resulted in 81% feeling safe. Consistent results.

58%

Very Safe

23%

Somewhat Safe

11%

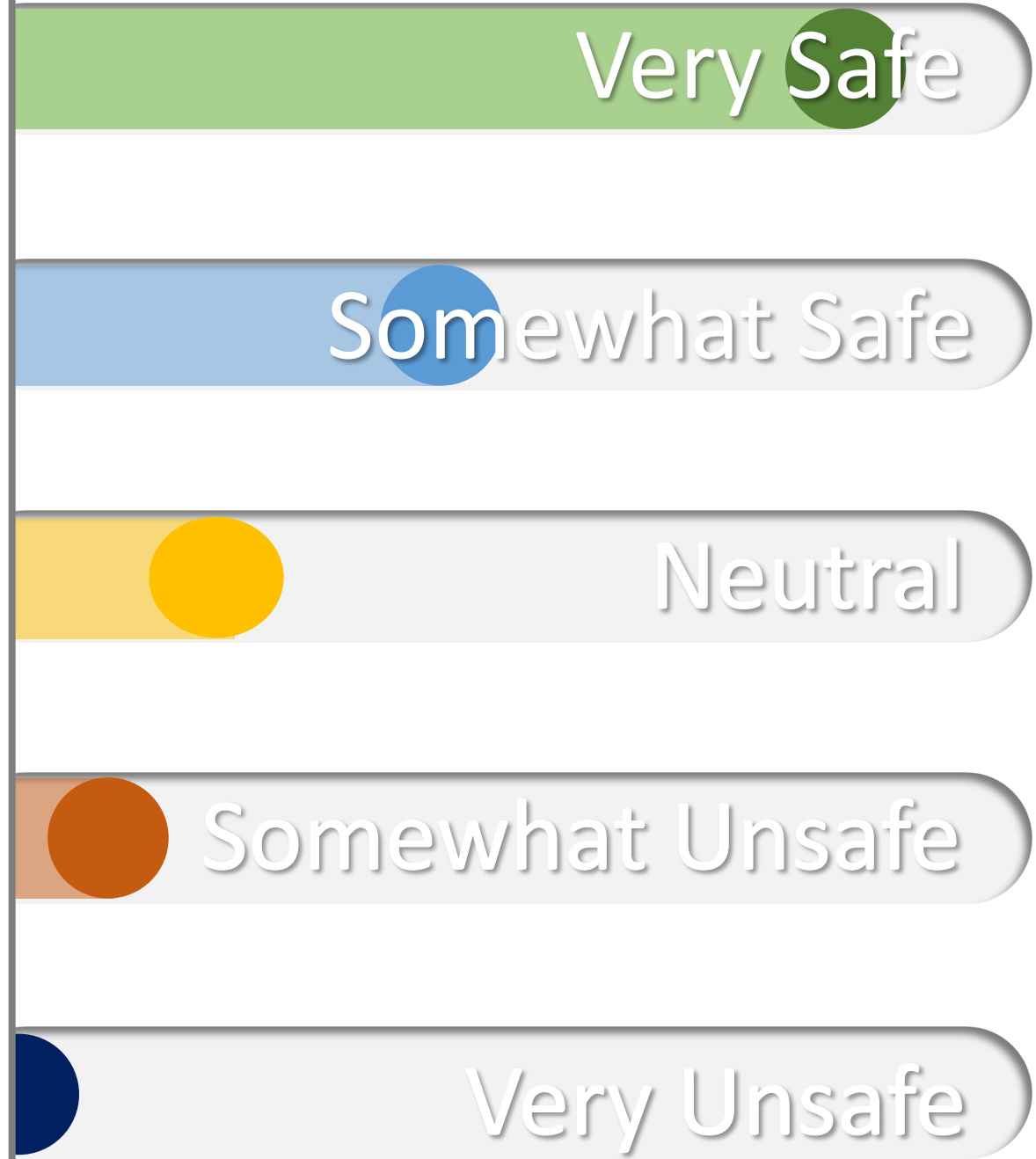
Neutral

7%

Somewhat Unsafe

1%

Very Unsafe





Knowing that an all-inclusive restroom is a private room, with floor to ceiling separation, and locks from the inside makes me feel:

This question resulted in a 10% drop in perceived safety and an 2x increase in perceived danger. The only words that changed were “individual & private” became “all-inclusive.”

56%  
12%-

Very Safe

19%  
2%+

Somewhat Safe

14%  
4%+

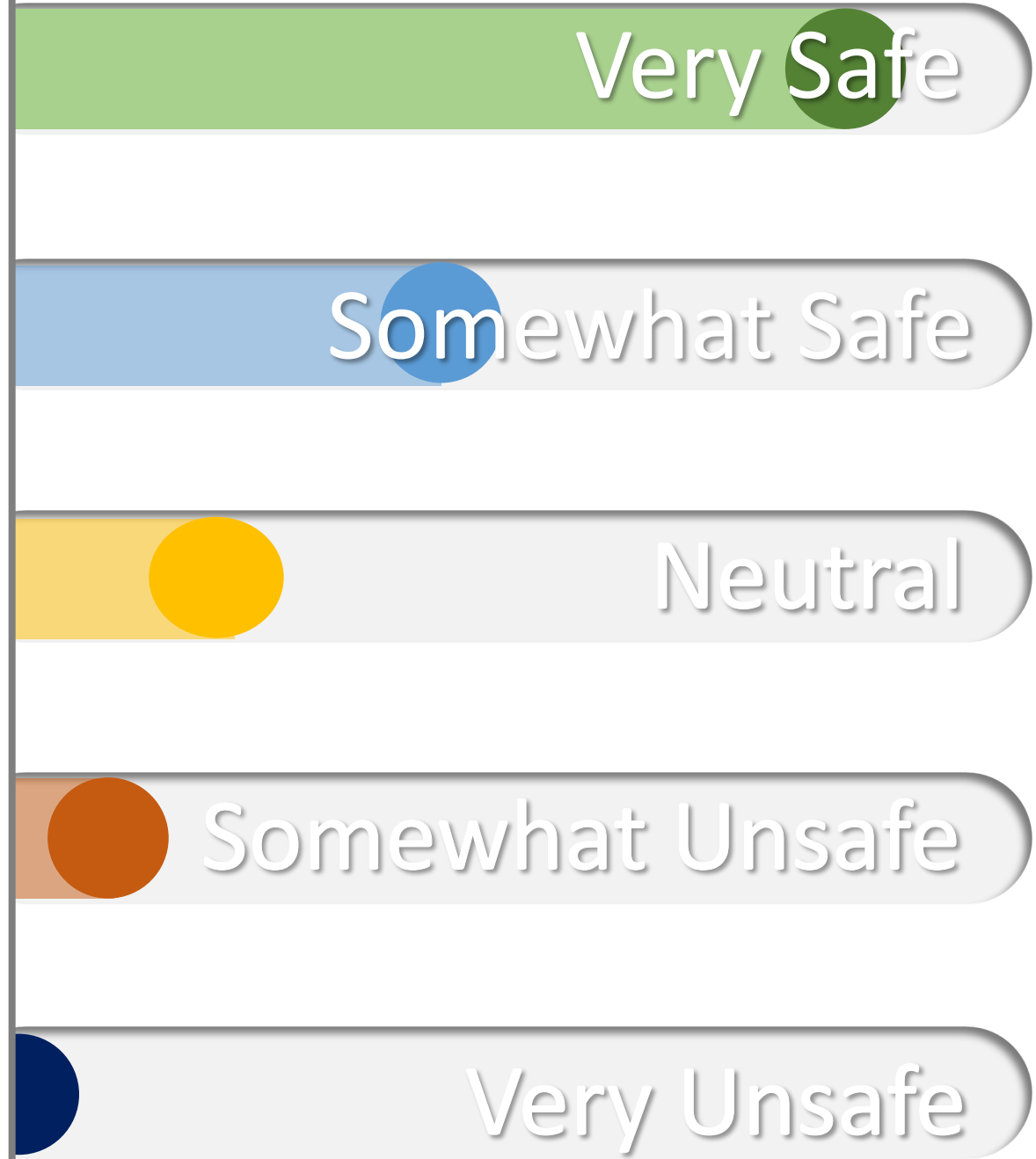
Neutral

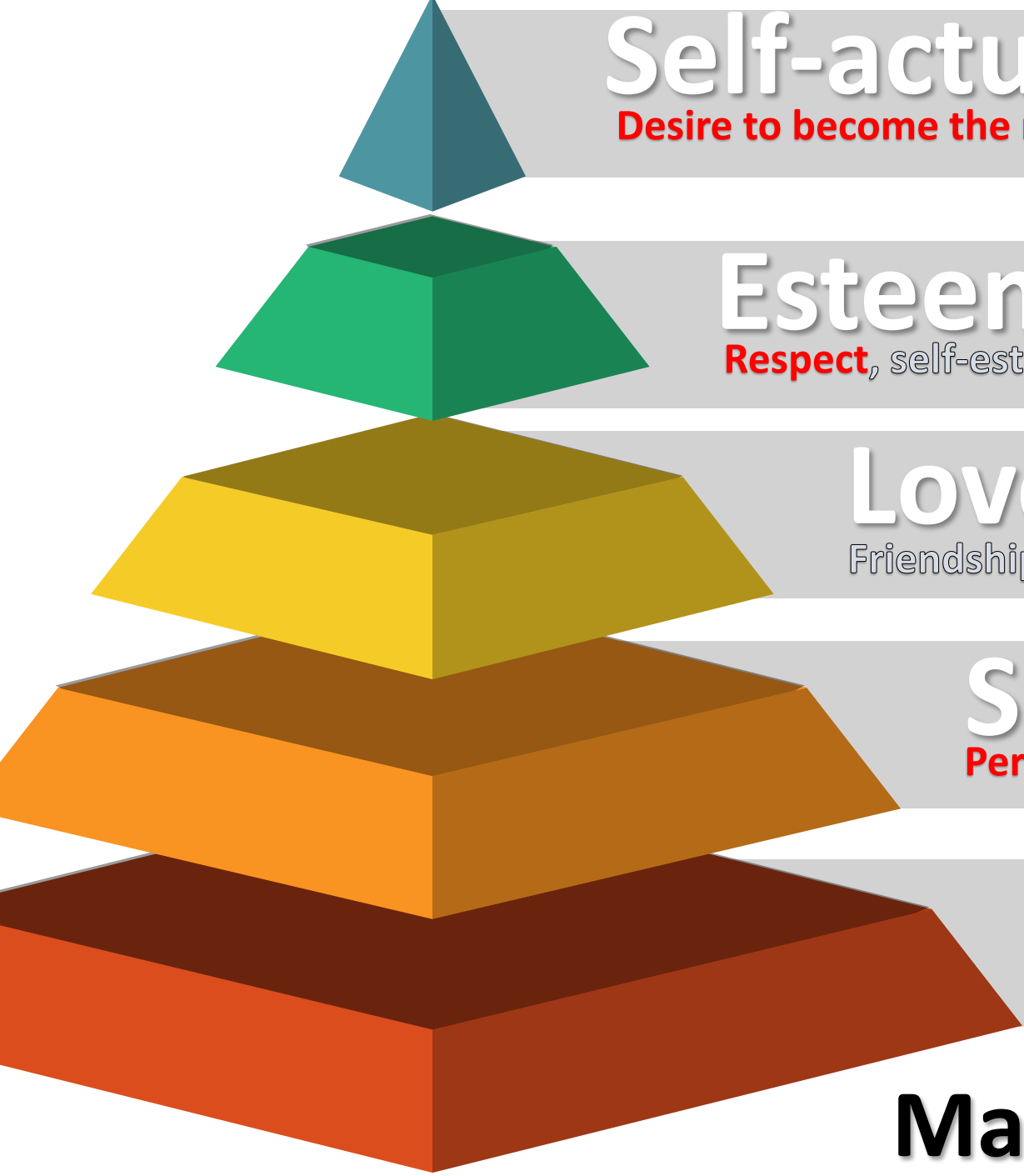
8%  
4%+

Somewhat Unsafe

3%  
2%+

Very Unsafe





# Self-actualization

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## Esteem

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## Safety needs

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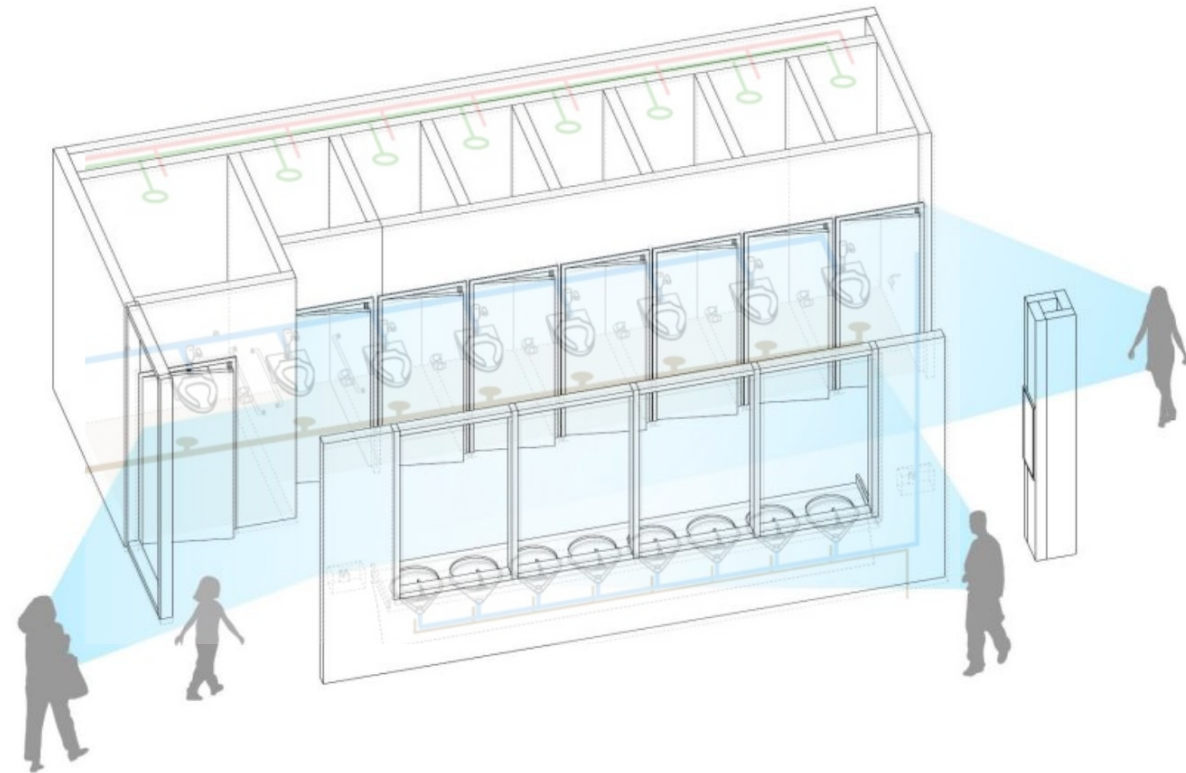
Air, water, food, shelter, sleep, clothing, bathroom

# Maslow's Hierarchy of Needs

Good design should provide solutions to those with the highest needs.

Architecture provides solutions that benefit everyone, not just those in need.

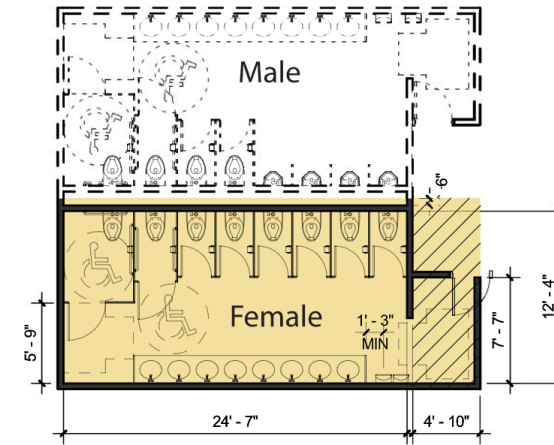
# Design Inspiration from Cuningham Group





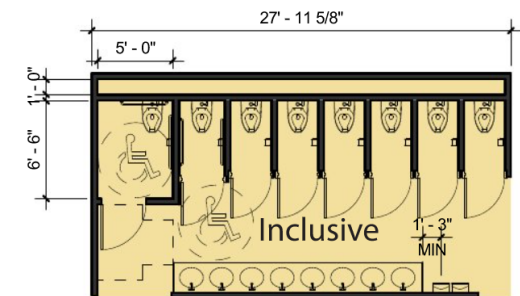
# Plumbing Count and Cost

- 1) Individual and Private restroom save space compared to gender separated restrooms.
- 2) Total count of Individual and Private restrooms is equal to or less than total plumbing count for gender separated restrooms. Urinals are replaced with toilets with the benefit that any one can use an Individual and Private restrooms. This increases the quantity of fixtures available to any person.
- 3) Total handwashing stations is significantly reduced by more than half.
- 4) Cost to convert (E) separated restrooms into an individual and private restroom is about 15-20% increase.
- 5) Cost to build new is about 2-3% increase because of the following factors:
  - Fire horn, strobe, sprinkler, and evac. fan in each bathroom
  - Increased material for full height walls between each bathroom
  - Reduced square footage by nearly 50%.



RESTROOM W/ SINGLE DOOR ENTRY

- Total Area - 412.5 ft<sup>2</sup>
- ▨ Vestibule - 65.95 ft<sup>2</sup>



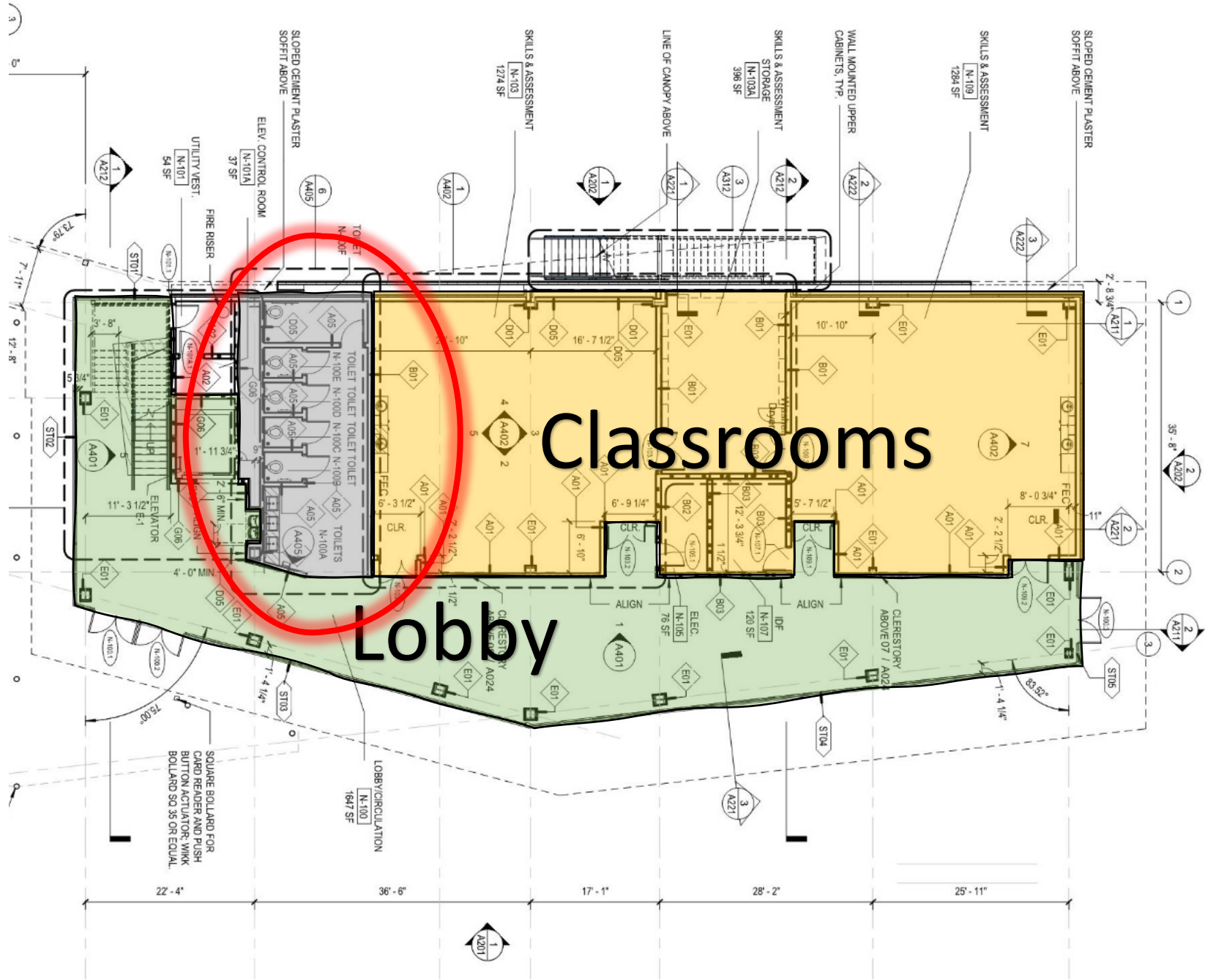
INCLUSIVE RESTROOM W/ OPEN ENTRY


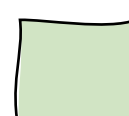

- Total Area - 407.29 ft<sup>2</sup>
- ▨ Vestibule - N/A

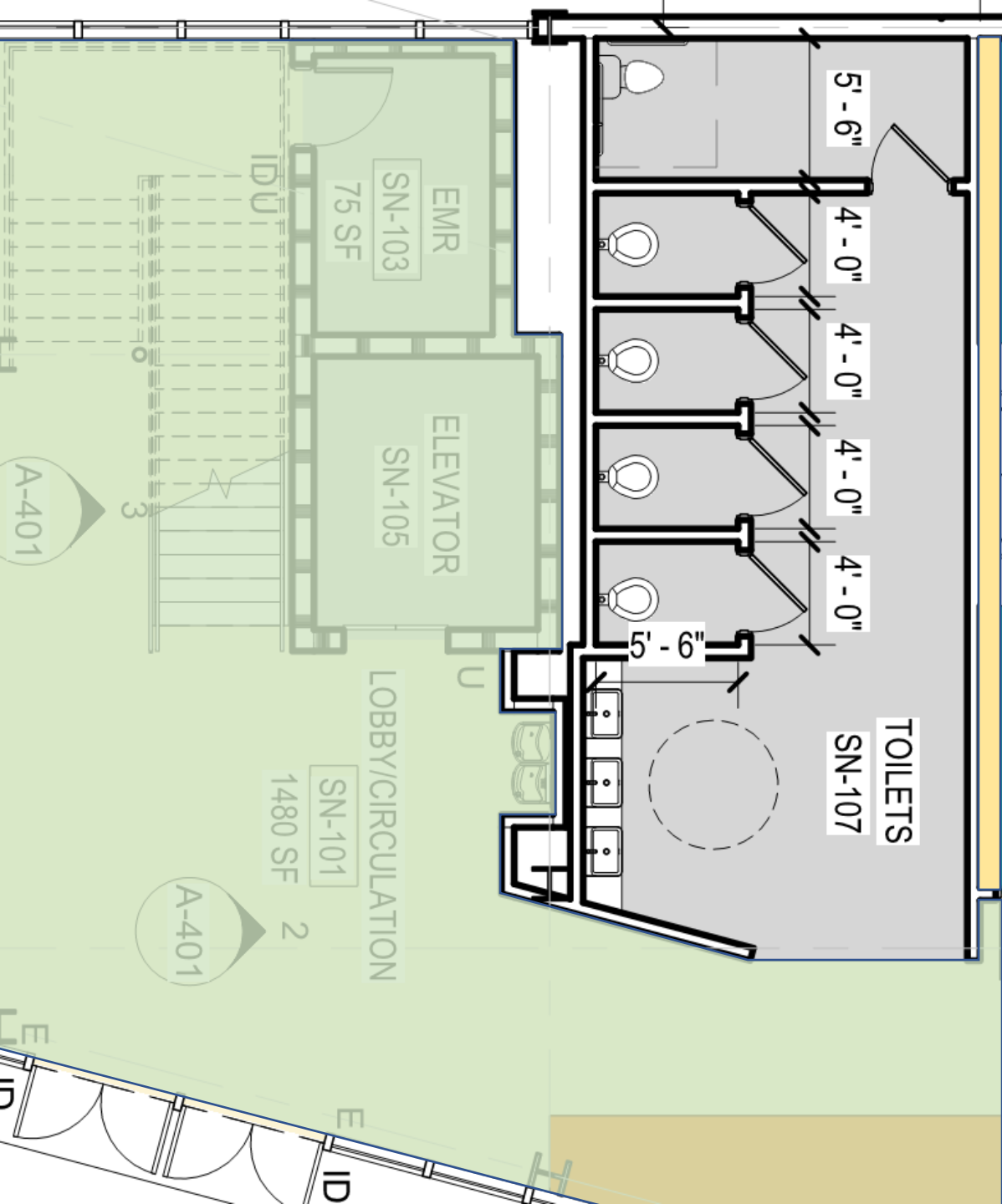
# SEQUOIA NURSING







-  Classroom / Storage
-  Circulation
-  Individual & Private Restrooms



## Features:

- All doors are visible from the hallway
- There is no door in/out, just a change of materials
- Mirror, sink, and countertop space provided
- Circulation width inside the bathroom can host two wheelchairs passing
- More plumbing count than required by code, but less count than having a female/male separated plan

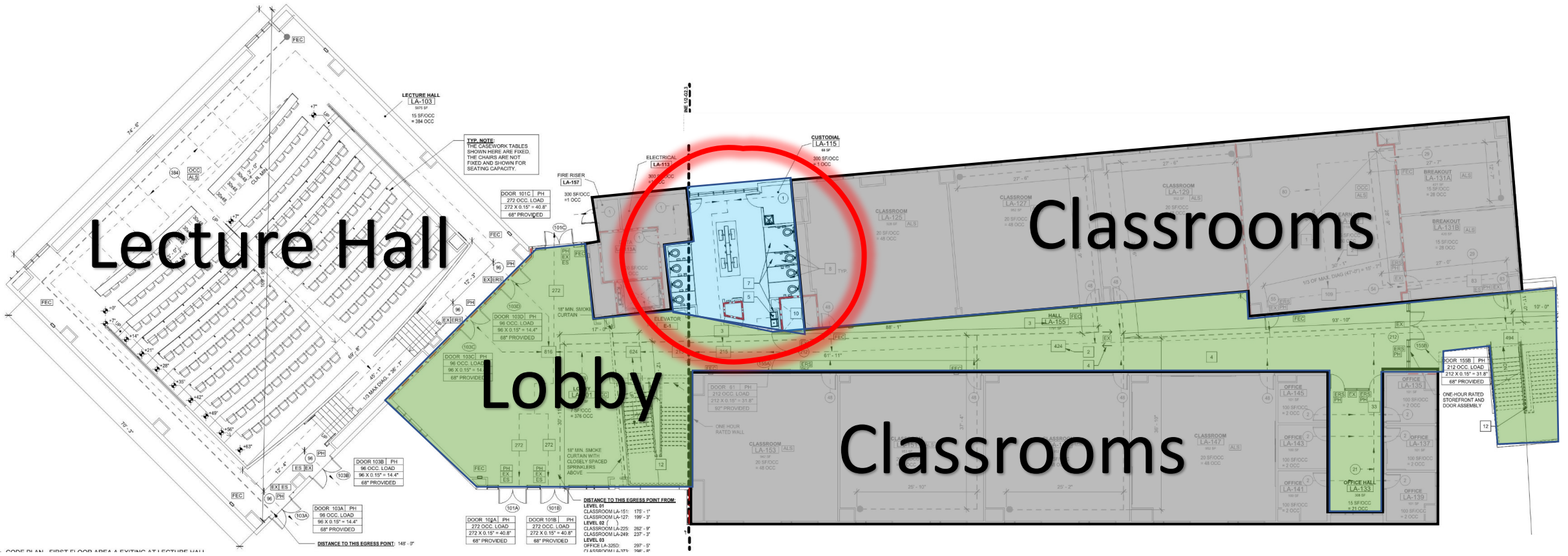




# LANGUAGE ARTS







# Lecture Hall

# Classrooms

# Lobby

# Classrooms

**TYP. NOTE:**  
THE CASEWORK TABLES SHOWN HERE ARE FIXED. THE CHAIRS ARE NOT FIXED AND SHOWN FOR SEATING CAPACITY.

LECTURE HALL  
[LA-103]  
15 SF/OCC  
= 384 OCC

CUSTOMAL  
[LA-115]  
89 SF  
200 SF/OCC  
= 1 OCC

DOOR 101C | PH  
272 OCC LOAD  
272 X 0.15' = 40.8'  
68" PROVIDED

FIRE RISER  
[LA-157]  
300 SF/OCC  
= 1 OCC

ELECTRICAL  
[LA-113]  
300 SF/OCC  
= 1 OCC

DOOR 103B | PH  
96 OCC LOAD  
96 X 0.15' = 14.4'  
68" PROVIDED

DISTANCE TO THIS EGRESS POINT: 148'-0"

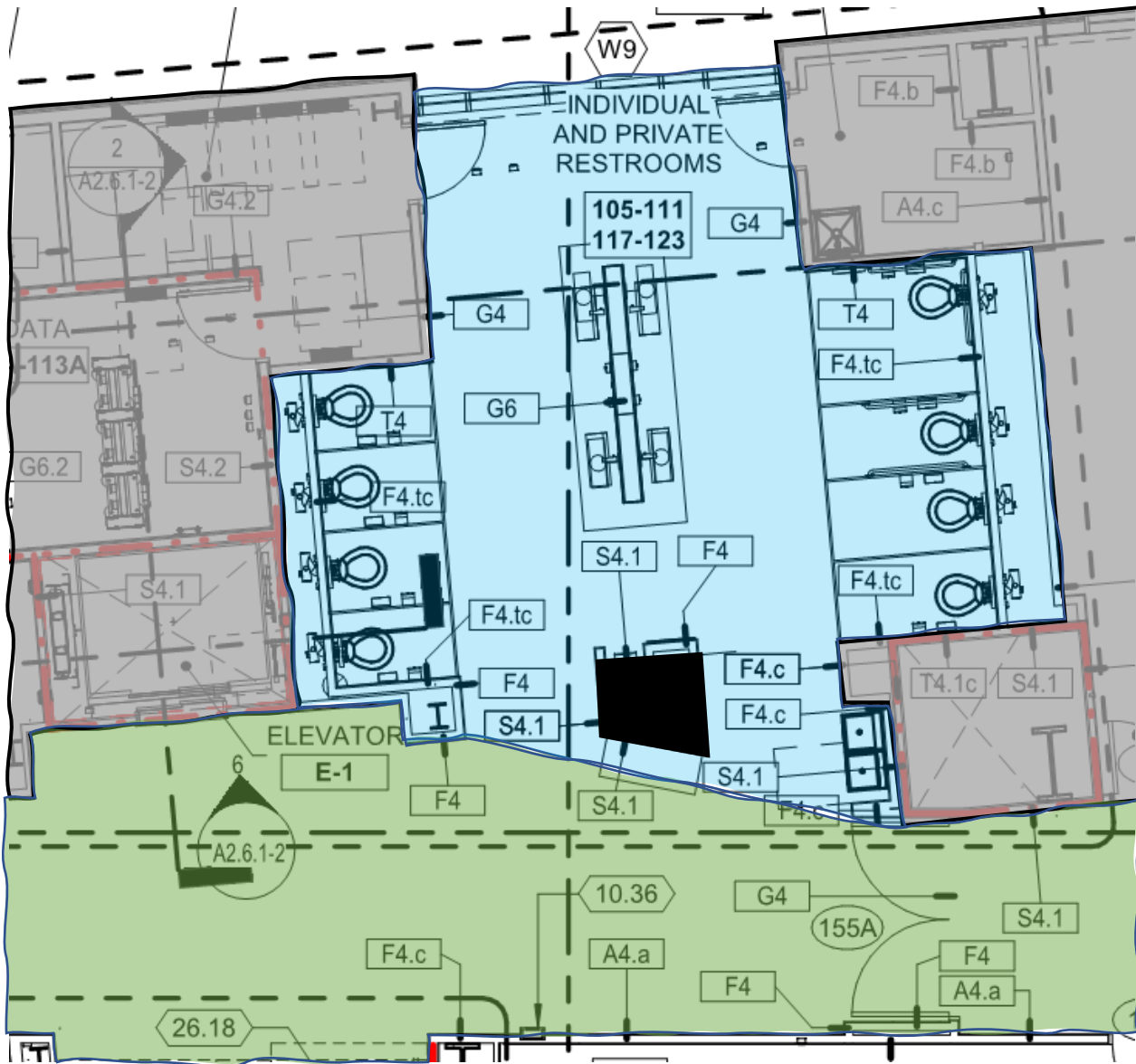
DOOR 101A | PH  
272 OCC LOAD  
272 X 0.15' = 40.8'  
68" PROVIDED

DOOR 101B | PH  
272 OCC LOAD  
272 X 0.15' = 40.8'  
68" PROVIDED

DISTANCE TO THIS EGRESS POINT FROM:  
LEVEL 01 CLASSROOM LA-151: 175'-1"  
CLASSROOM LA-127: 199'-3"  
LEVEL 02 CLASSROOM LA-225: 262'-9"  
CLASSROOM LA-249: 237'-3"  
LEVEL 03 OFFICE LA-325: 287'-5"  
73' 4" (MINIMUM) 11, 371' 798'-8"

DOOR 155B | PH  
212 OCC LOAD  
212 X 0.15' = 31.8'  
88" PROVIDED

ONE-HOUR RATED STOREFRONT AND DOOR ASSEMBLY



## Features:

- All restroom doors are visible from the hallway
- There is no door in/out, just a change of materials
- Mirror, sink, and countertop space provided
- Circulation width inside the bathroom can host two wheelchairs passing
- More plumbing count than required by code, but less count than having a female/male separated plan
- Desired horseshoe shape achieved
- Large floor to ceiling window wall provides natural filtered light





EVERGREEN VALLEY COLLEGE  
SAN JOSE, CA



FLOOR ONE  
Classroom  
Lobby/Office  
100-101



ADAPTING  
DIAM  
HIGH



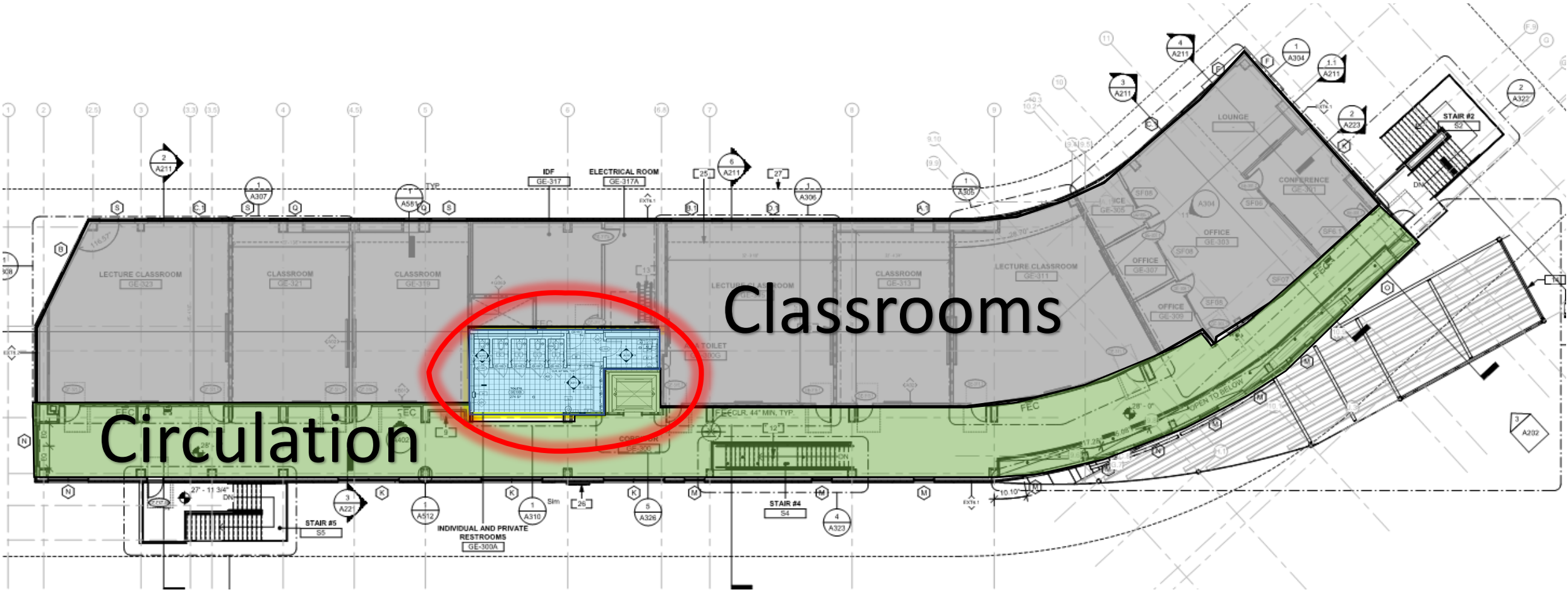
INDIVIDUAL  
AND PRIVATE  
RESTROOMS





# GENERAL EDUCATION

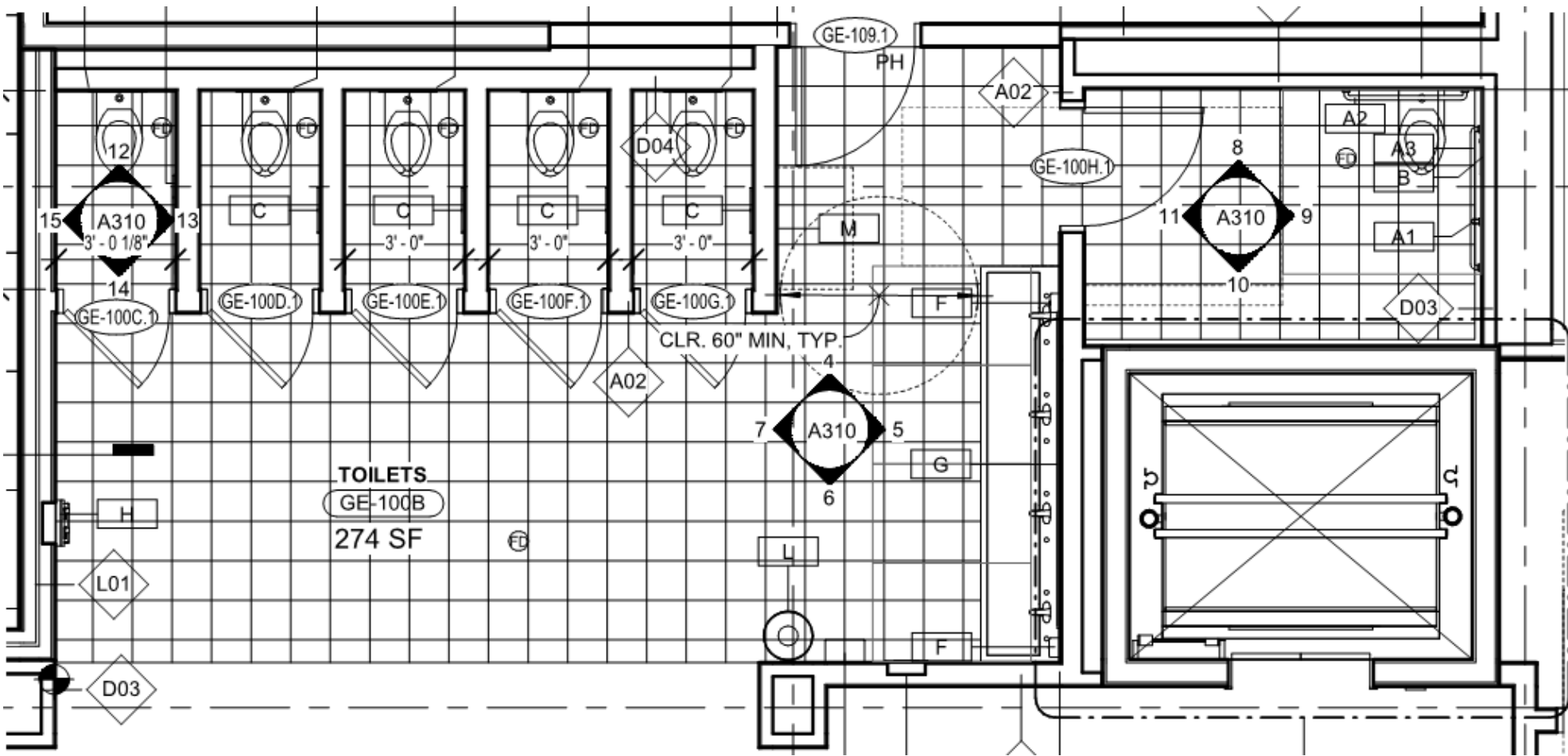




Classrooms

Circulation





**Features:**

- Feels like an extension of the hallway
- All bathroom doors are visible from the hallway
- No door in/out
- Mirror, sinks, and counter tops provided in a more private space





Dr. Gilkerson Video

Stalled – Check email and make resource page





# Thank you!



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