District Wide Master Plan & Ft. Bliss Campus Design

PART B | CAMPUS ANALYSIS

SEPTEMBER 17, 2014

SMITHGROUP JJR + mijares • mora

Introduction

1. Circulation & Parking
    - Regional Access
    - Internal Circulation
2. Wayfinding & Signage
3. Site Infrastructure
    - Hydrology
    - Site Utilities
4. Building Condition Assessment
    - Architecture
    - Mechanical & Electrical
5. Technology Assessment
6. Existing Space Utilization
    - Classroom Utilization
    - Class Lab Utilization


Valle Verde

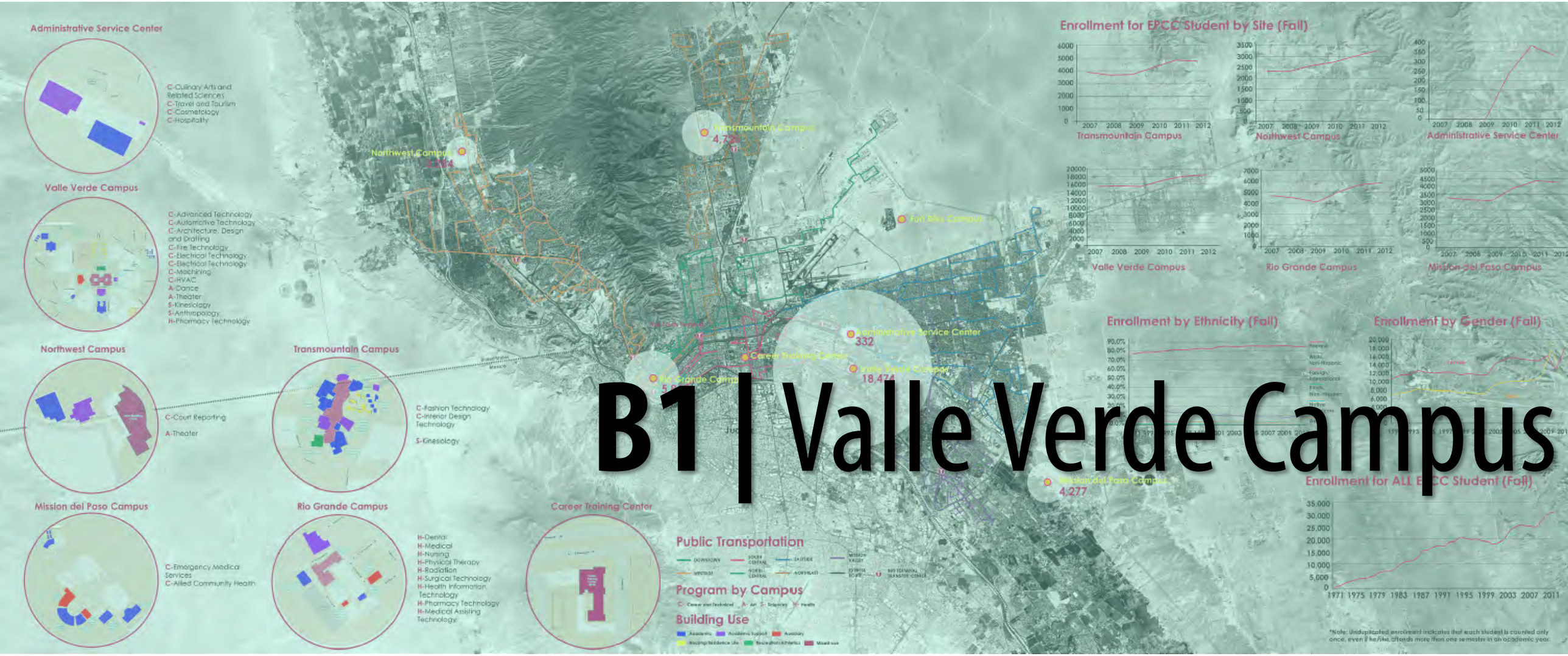

Rio Grande

Transmountain


Northwest

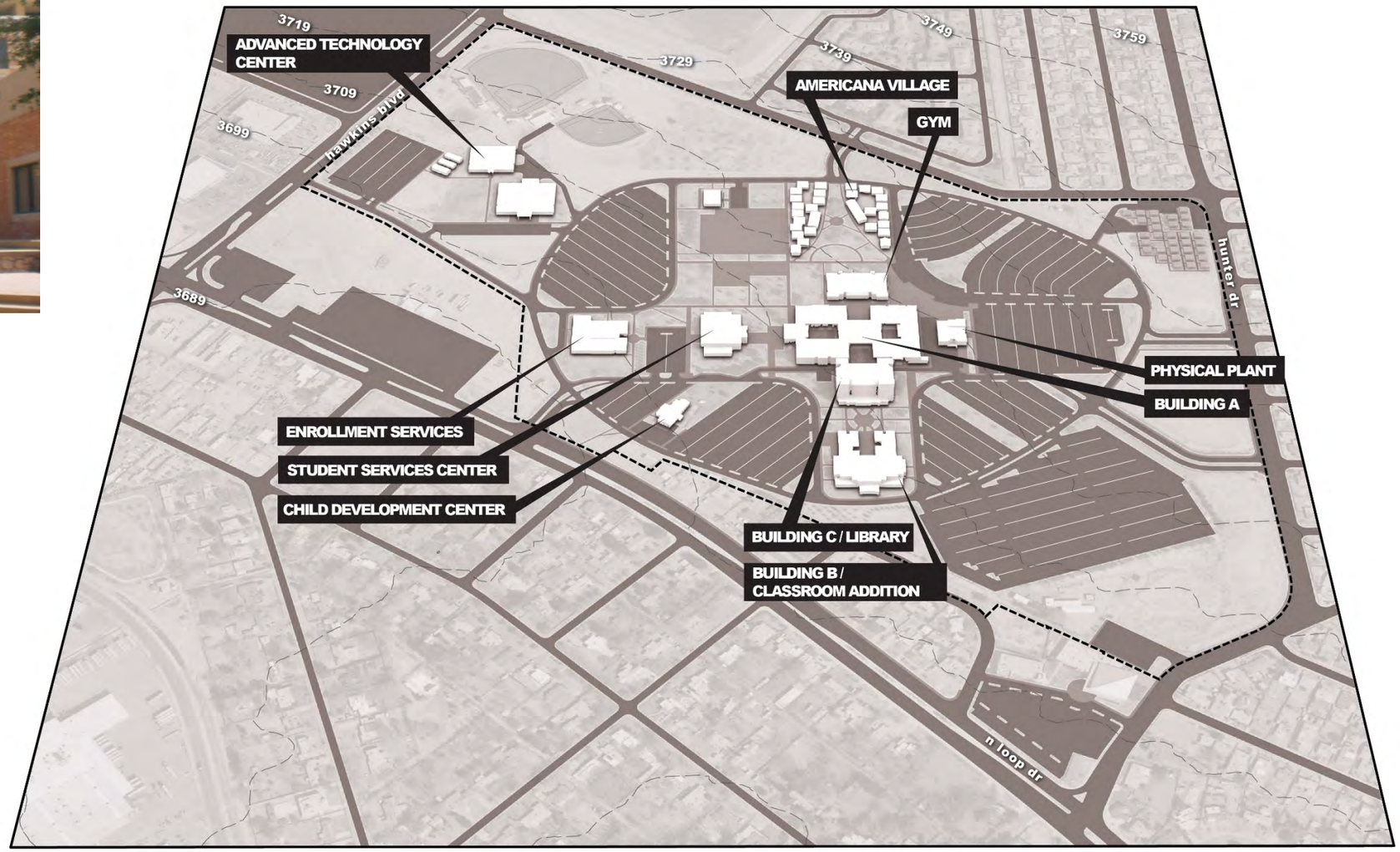

Mission del Paso


Administrative Services Center



B1 | Valle Verde Campus

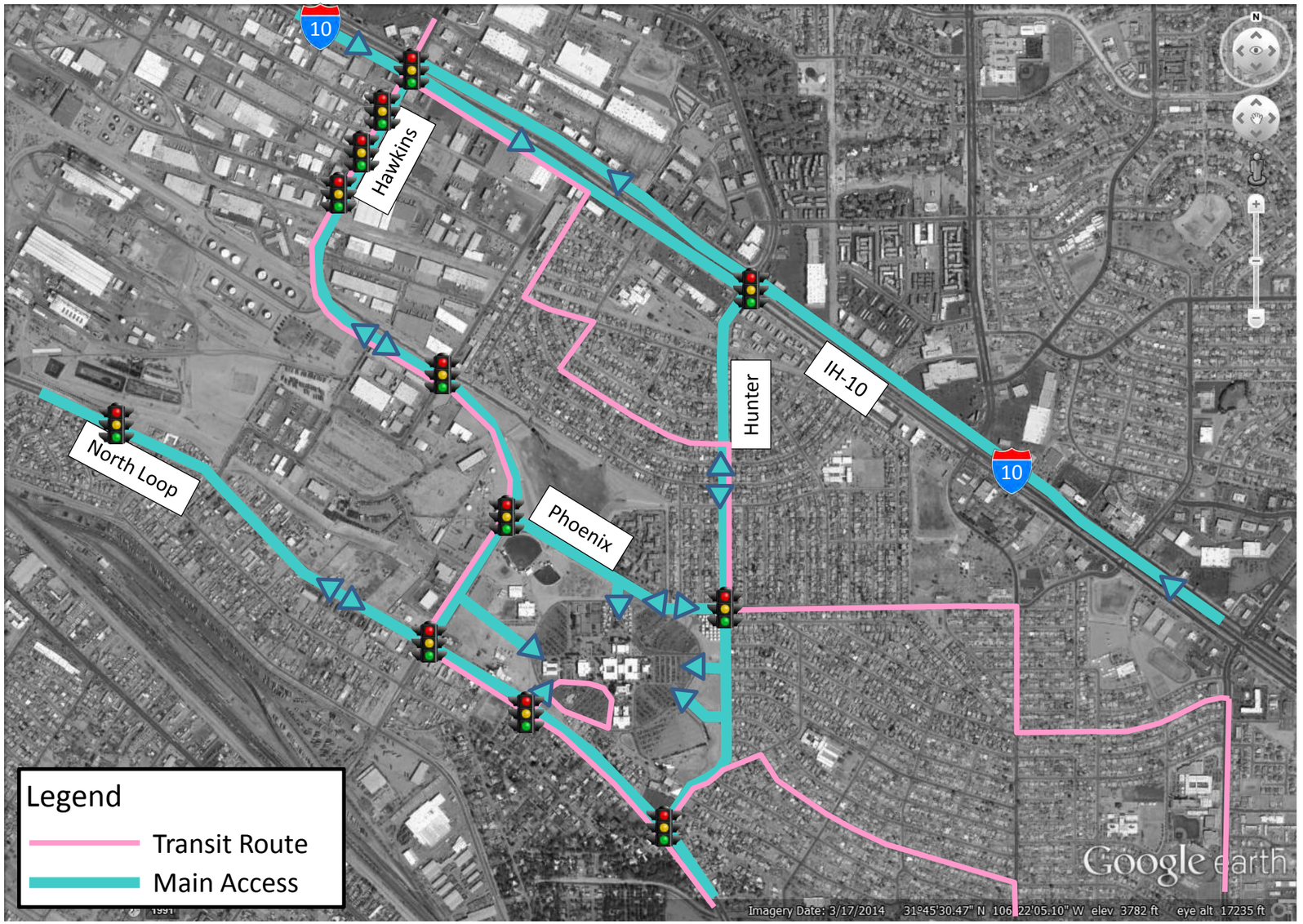
Valle Verde Campus



Valle Verde Campus

Regional Access

- I-10 Highway East/West Access
  - Hawkins Exit
  - Hunter Exit
- Loop 375 Access
  - North Loop Drive
- Good transit service to campus
  - Routes 7, 63, 65,66



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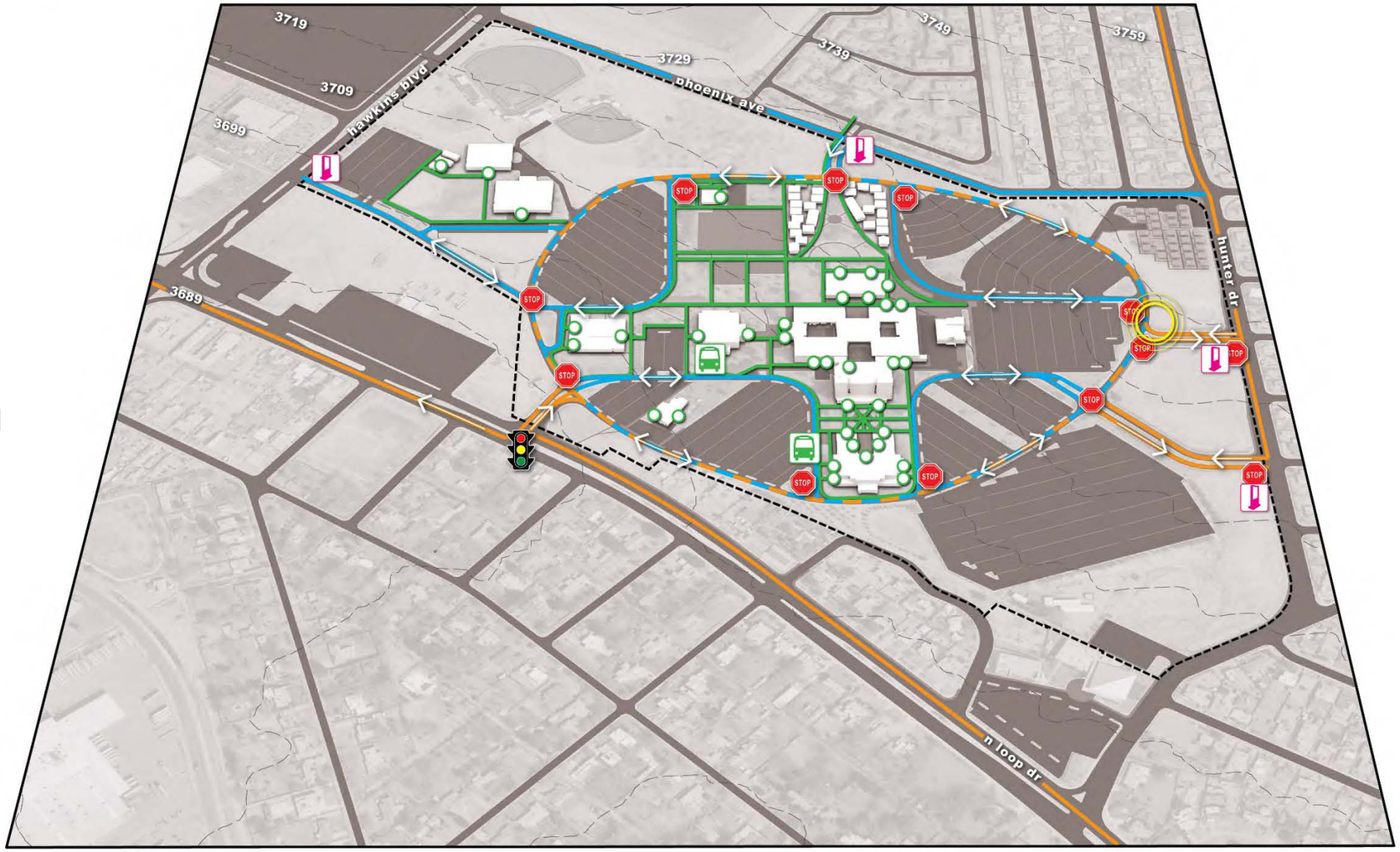
Internal Circulation

- Sufficient parking locations
- Good circulation between lots
- Ring road covering all parking areas
- Sun Metro stops inside campus
- Clear pedestrian paths from parking lots to building entries
- Drop off zone designated
- Conflicting movements at Ring Road and Estudiante Court



Legend

- Vehicular Movement – Primary
- Vehicular Movement – Secondary
- Pedestrian Movement
- Building Entrance
- Bus Stop
- Sign & Monuments
- Problem Area

Valle Verde Campus

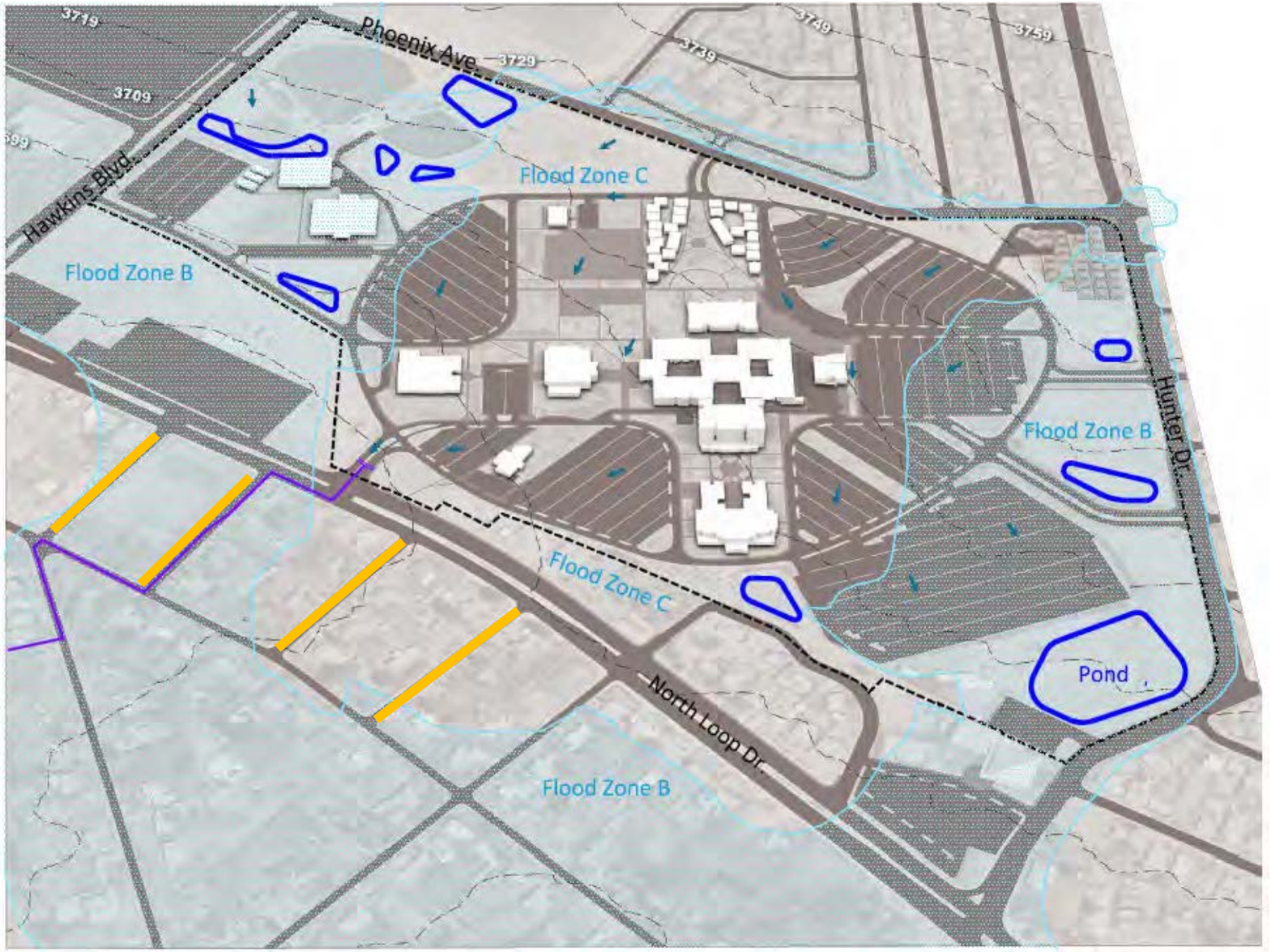
Signage & Wayfinding

- In many cases, 2 or more signs identifying one room or communicating messages
- Lack of a hierarchy of elements to identify destinations
- Porous campus entry and several inner rings for parking make for complex wayfinding
- Desire to better project the EPCC “brand” and welcome community into campus
- Interior signage does exist but the messages may not be current or they are paper print outs attached to walls
- High school feeds into the campus, requiring significant pedestrian wayfinding
- Bus stops require signage to help direct individuals on foot with minimal car and pedestrian traffic conflict

Valle Verde Campus

Hydrology

- Some on-site ponding
- Storm water flows to storm system – outfall @ Mesa Drain
- Flood zones B & C – areas between limits of the 100-yr and 500-yr flood & areas of minimal flooding
- Property zoning – (R-F)
- Future expansion will likely require on-site ponding
- Local flooding issues will need to be addressed with any new development



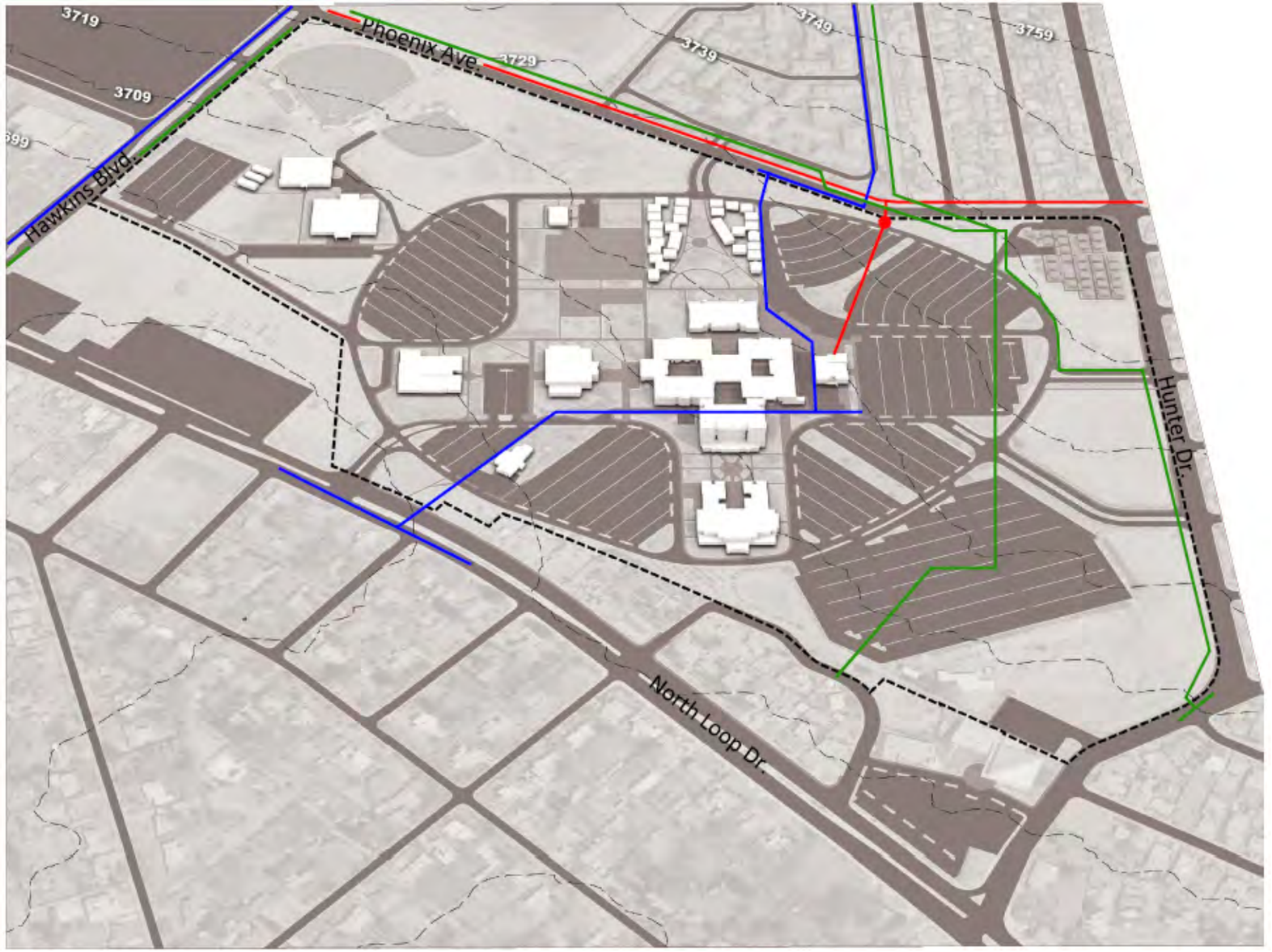
Legend

- Ponding areas
- Storm sewer system
- Arroyos
- Storm runoff flow
- Flood zone
- Localized street flooding (per SMP)

Valle Verde Campus

Site Utilities

- Adjacently located site utilities along Phoenix Avenue and Hawkins Blvd
- Water & Sewer provided by El Paso Water Utilities (EPWU)
- Gas provided by Texas Gas Service
- Electric provided by El Paso Electric
- Expansion requires evaluation of each utilities' capacity vs. increased demands



Legend

- Potable water
- Sanitary sewer
- Natural gas (pending)
- Electric
- Telecomm (pending)

Valle Verde Campus

Building Condition Assessment

Exterior Space and Entry

1. No single defined main entrance to the campus.
2. Potential for additional exterior hangout space and better existing.

Interior Common Space and Elements

3. Non-code compliant vertical circulation elements.
4. Restrooms are not code compliant.
5. Offices are small and crowded potential for no ADA accessibility.
6. Code violations such as non compliant drinking fountains, fire extinguishers, sinks and door hardware.
7. No large meeting space; potential to improve ex. hangout/study spaces.
8. Sound transfer between student dining and student assembly through existing glass wall.
9. Improve on greeting spaces.

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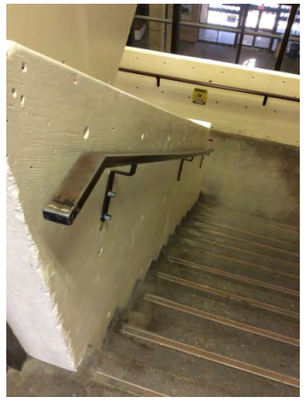

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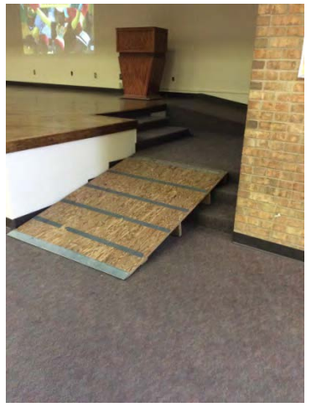

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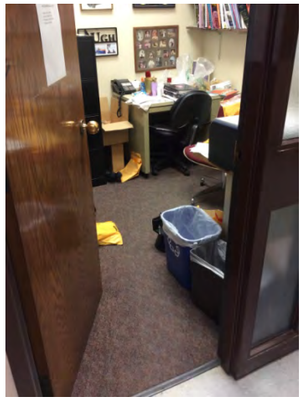

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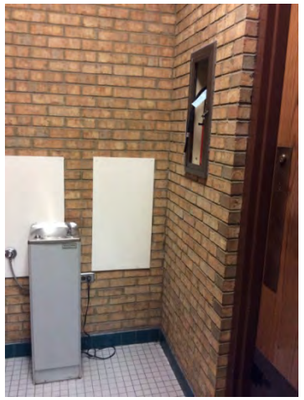

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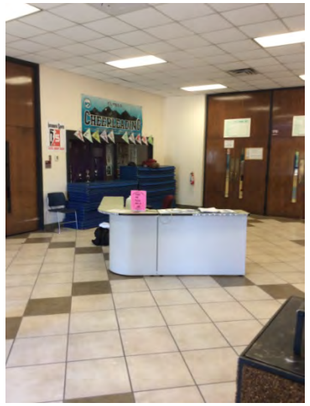

9.

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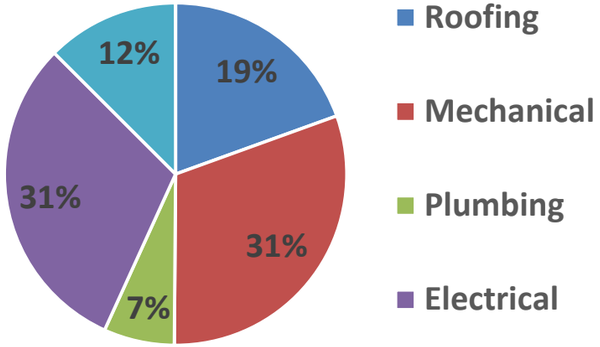
Mechanical/Electrical Assessment

Existing Conditions:

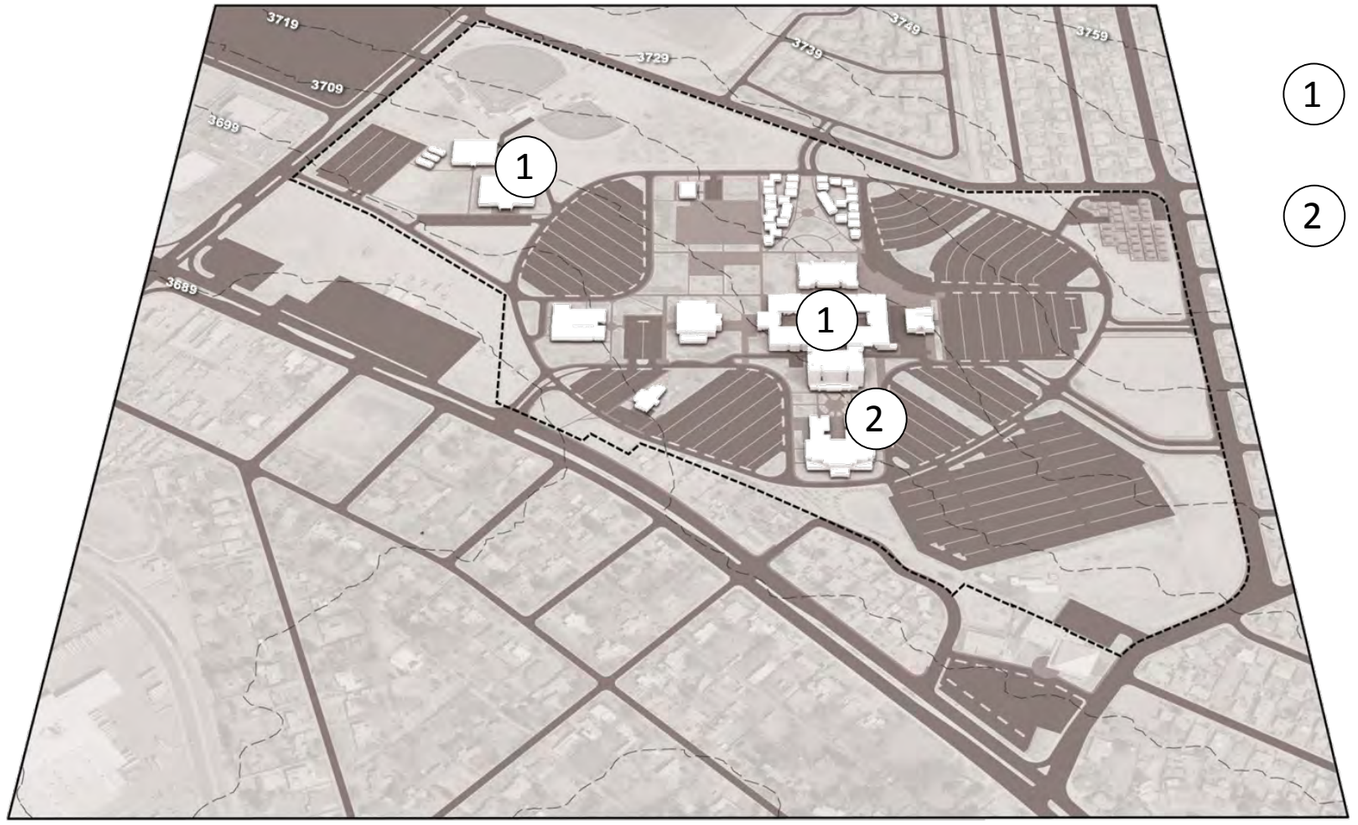
- Chillers w/ Ice storage. Cooling capacity 1875 tons (3 x 625 ton chillers)
- Boilers. Heating capacity 12,000 mbh (3 x 4000 mbh boilers)
- Large Custom Air Handling Units
- Elect Primary metering/site distribution

Priority 1-3 Deficiencies: $17.8M



Future Available Capacity:

- Cooling = 1 x 625 ton Redundant Chiller
- Heating = at Capacity, short by 5000 mbh
- Elect demand readings required to determine capacities



1 Install Fire Sprinklers

2 HVAC System Replacement

Replace defective FA system devices, egress lighting, general lighting, electrical panelboards/ equipment, campus-wide

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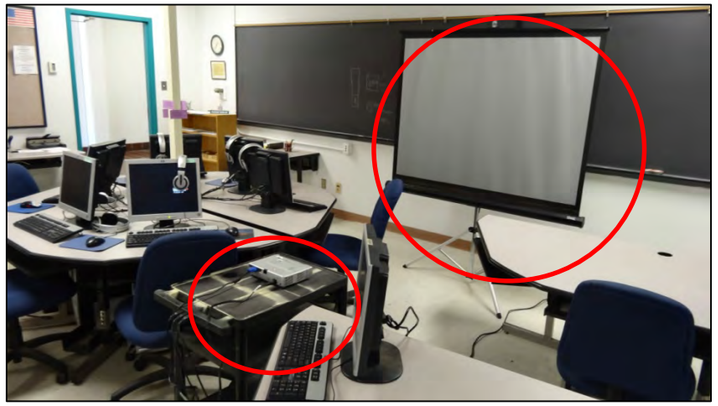
Technology Assessment

1. Observed mobile equipment being used as permanent presentation and instruction setups.
2. Noted high use of informal student gathering spaces where technology infrastructure would be useful.
3. Abandoned or unused TVs in common areas.
4. No common enterprise-wide digital signage system.
5. Pockets of innovation exist across campuses as seen in the 3D image/gaming lab.
6. No digital connectivity in classroom to support newer walk-in devices (Laptops, tablets, etc) for presentation.
7. No network access to installed projector for remote support.



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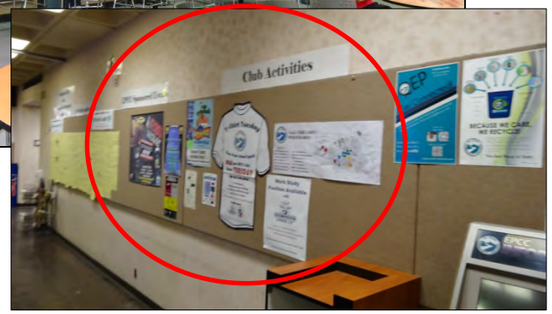

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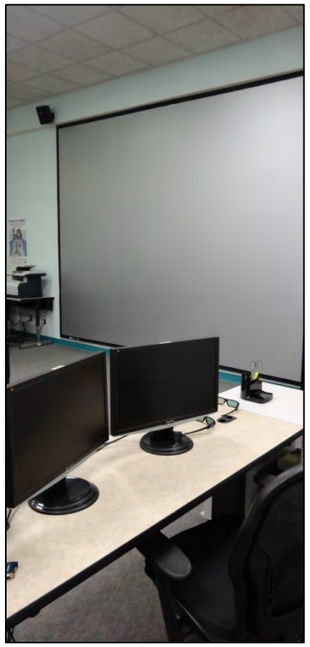

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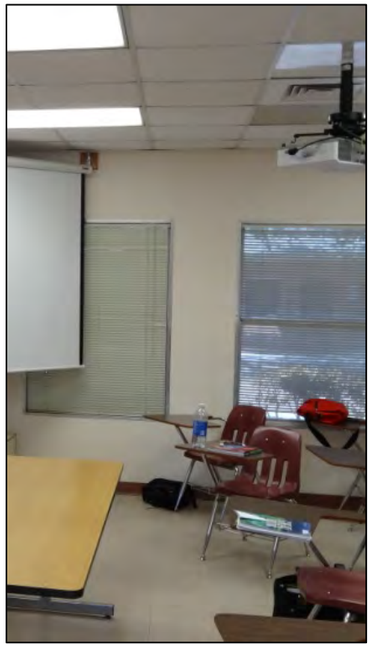

6.

Classroom and Lab Utilization

Goals

- To understand how well classrooms and labs are used
- Identify opportunities for better use of space

Approach to Analysis

- We use a variety of measuring sticks
  - All courses by day of the week
  - All courses by time of day
  - Classroom and lab enrollment vs. capacity
  - Classroom and lab use by time of day
  - Classroom and lab hours per week

Classroom and Lab Utilization

District-Wide Summary Findings

- All 5 campuses offer courses on Saturday
- Two campuses offer courses on Sunday
- Friday use is strong compared to other colleges
- There are definitive peak times
  - 8:00 AM – 12:00, 1:00 PM and 5:00 PM to 7:00 PM
- Laboratory peaks less definitive, except for Northwest
- Enrollment vs. capacity is generally good, but targeted improvement is possible
- Classroom hours per week shows wide disparity at all campuses
  - some way above target, some way below
- Near universal use of labs for lecture – advise caution here

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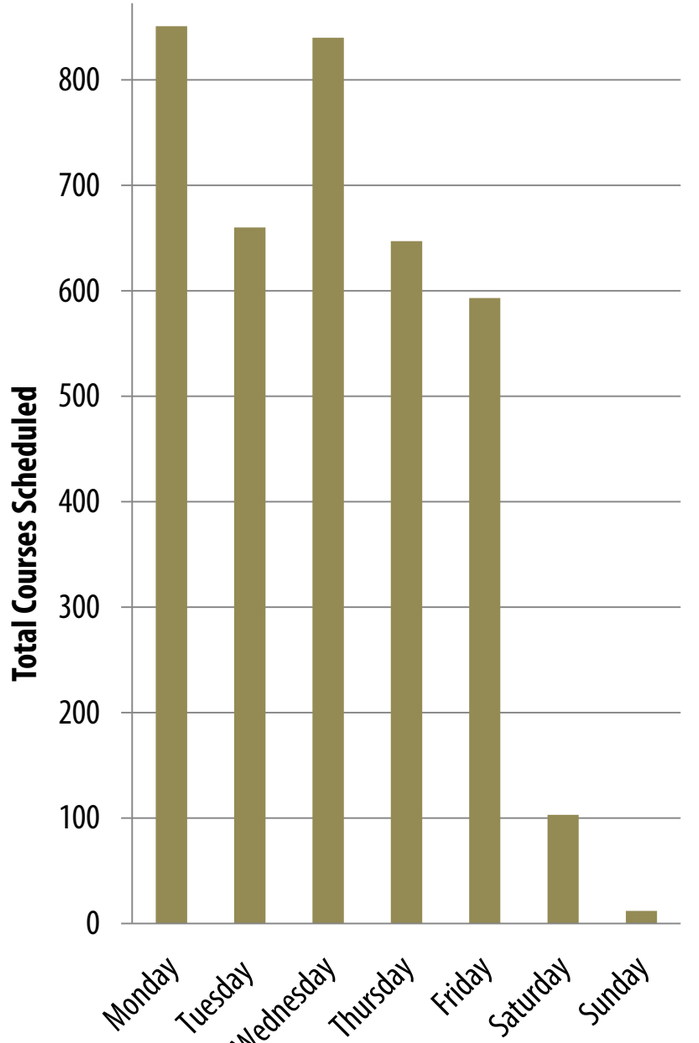
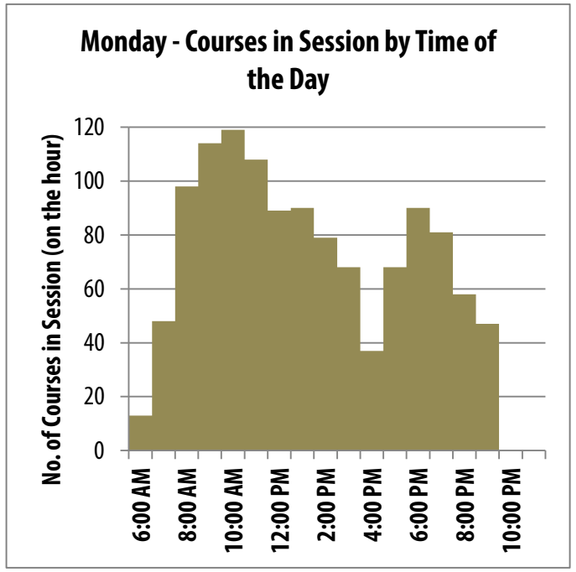
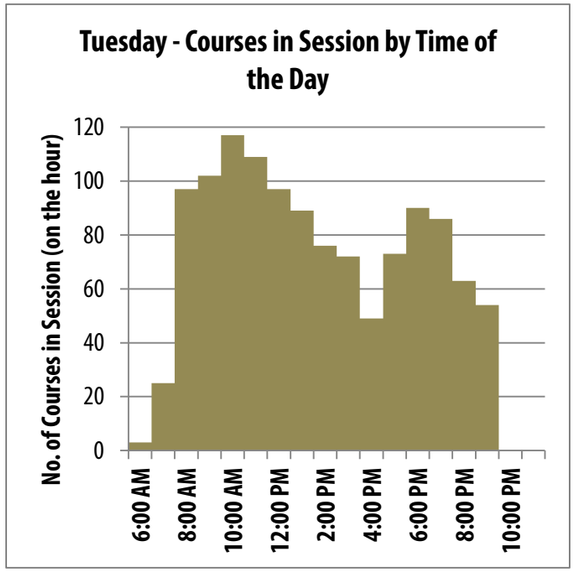
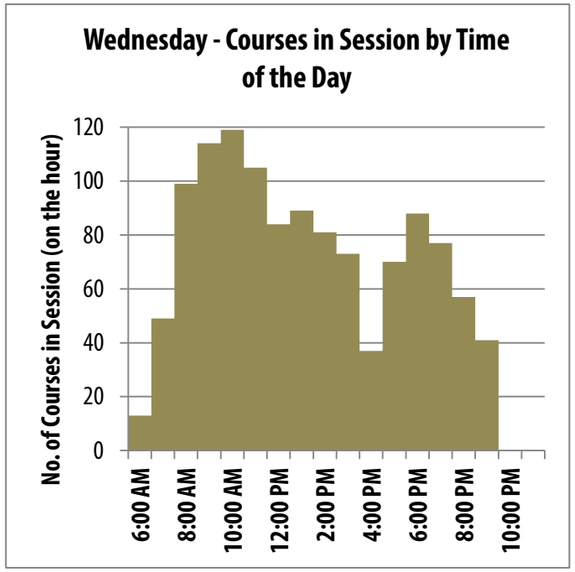
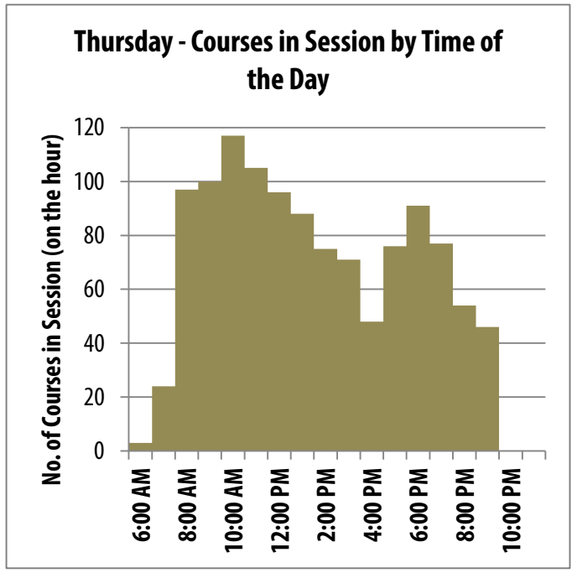
Total Courses in Session

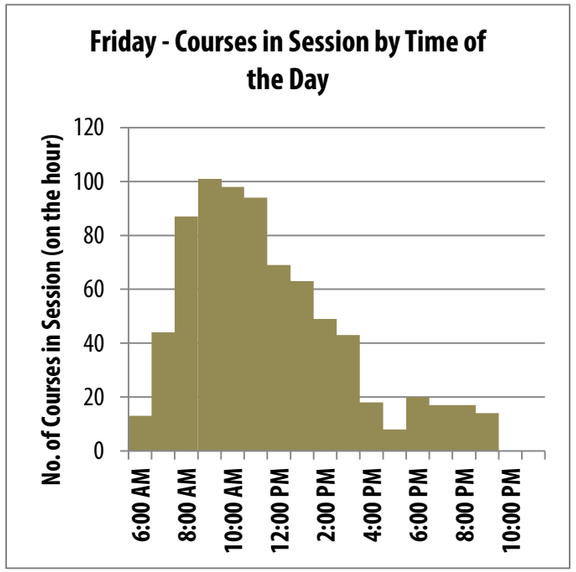


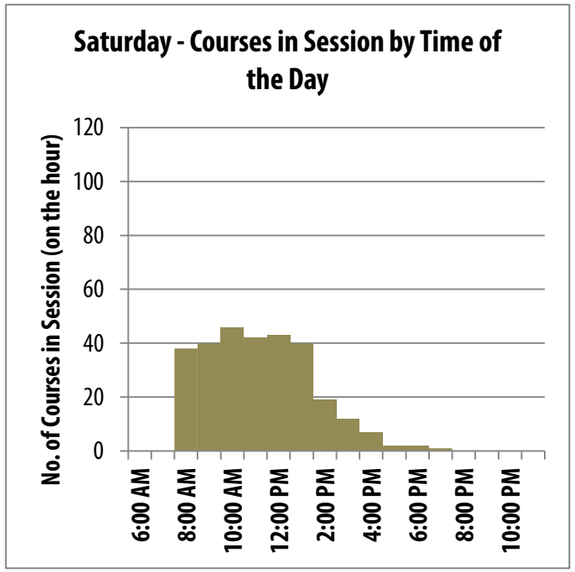




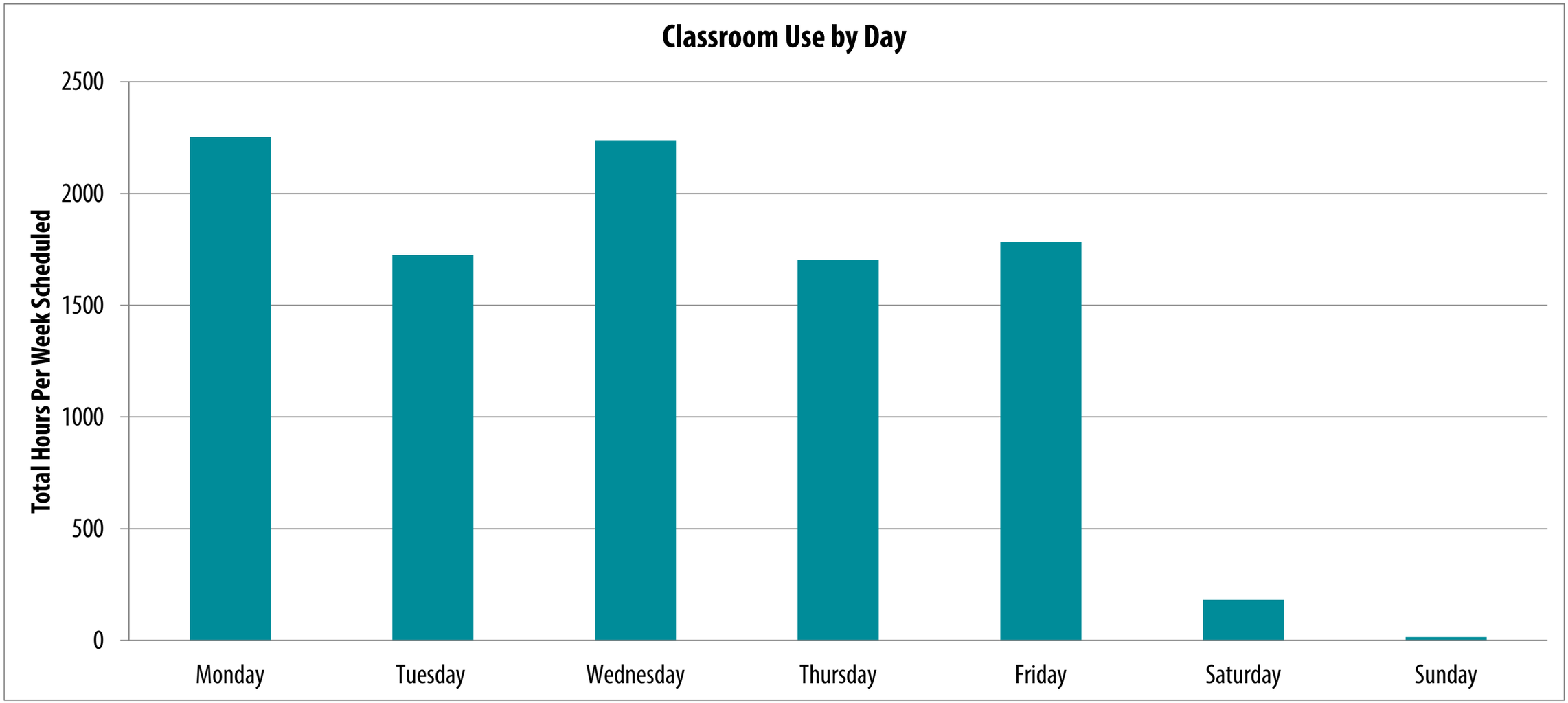








Classroom Utilization



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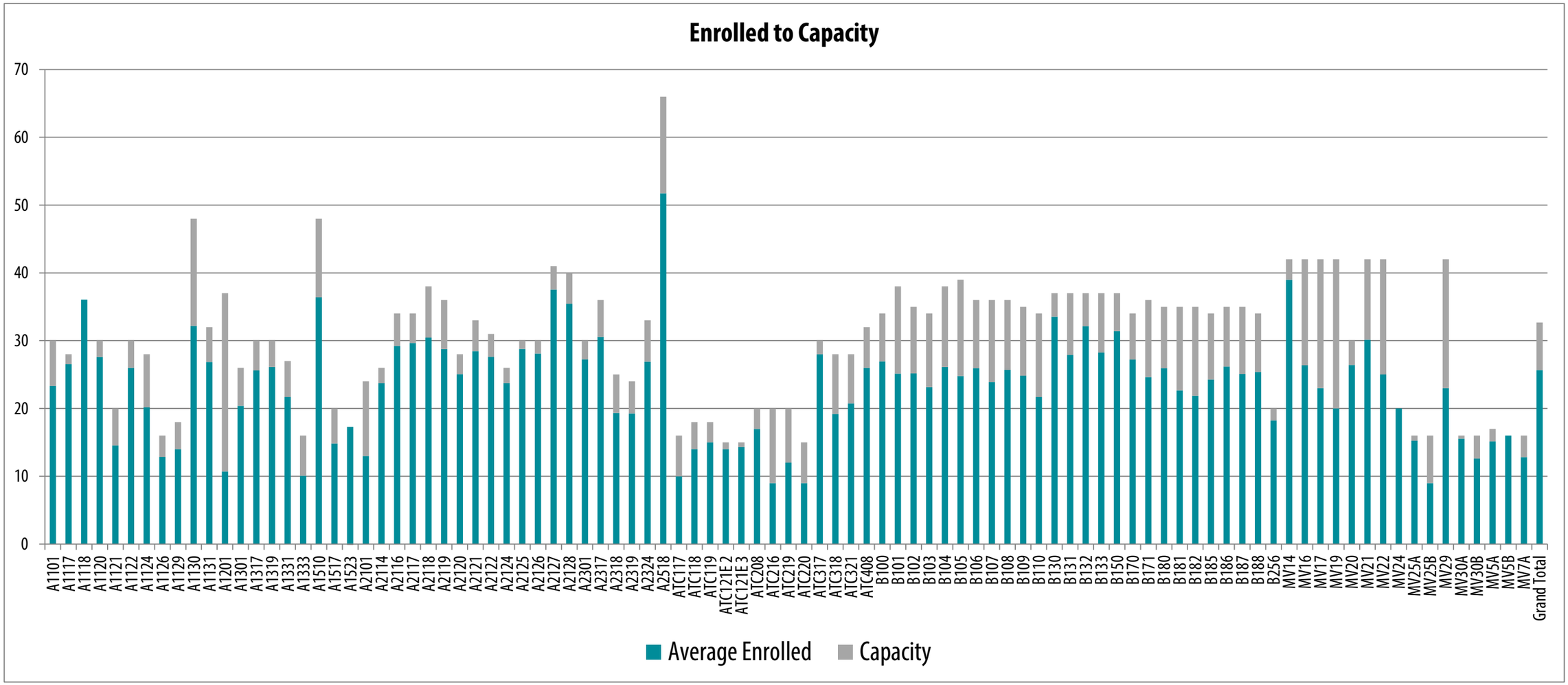
Classroom Utilization

Building	No. of Classrooms	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly CR Hours	Average Weekly Hours per CR
A Building	41	1,255	52,493	131%	1,949	48
Advanced Technology Center	13	275	6,521	74%	412	32
American Village	16	457	5,573	38%	269	17
B Building	26	913	35,765	122%	1,373	53
Total	96	2,900	100,352	108%	4,003	37

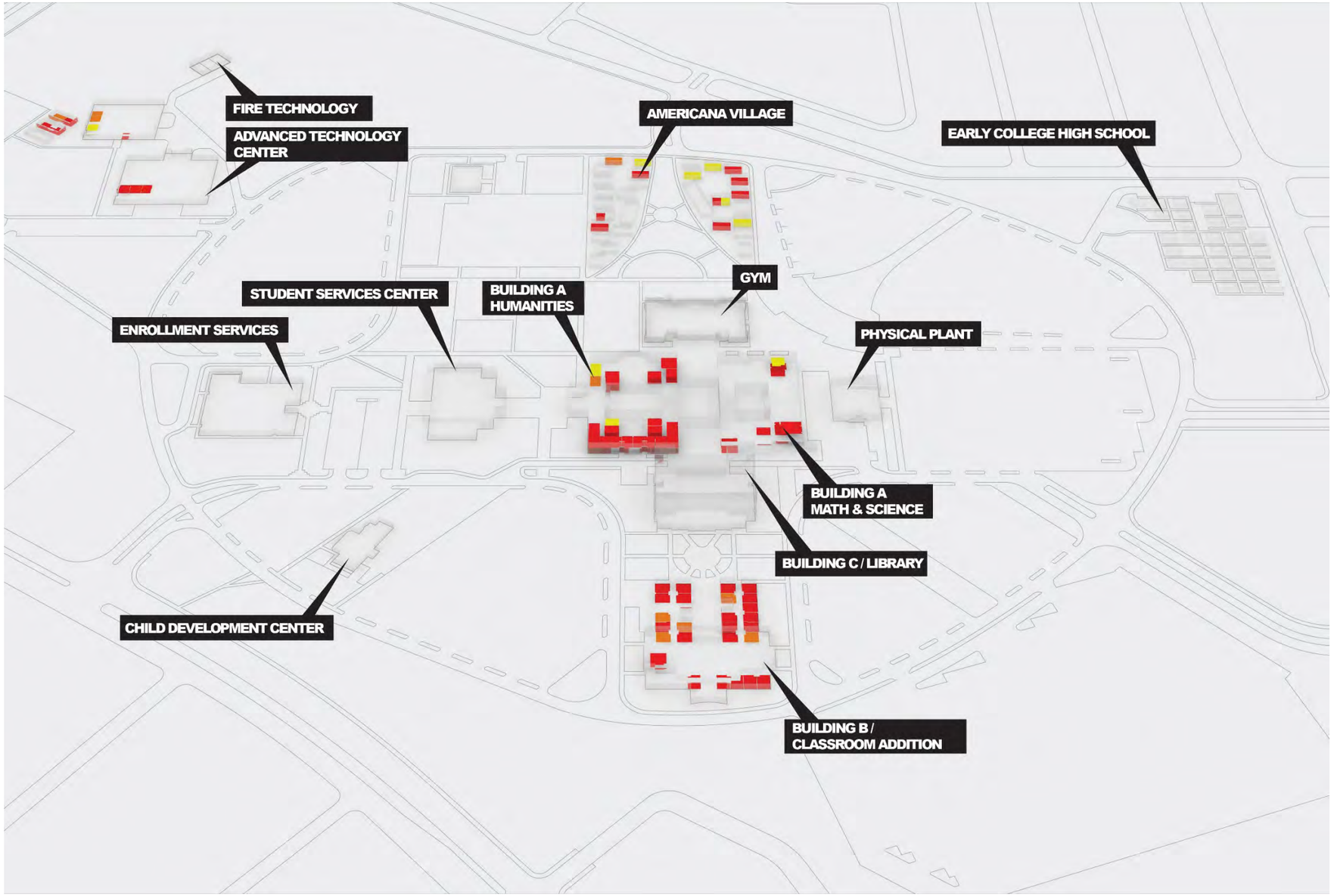
Valle Verde Campus

Classroom Capacity



Valle Verde Campus

Classroom Capacity



Enrolled to Capacity

- *Less than* ***60%***
- ***60-70%***
- *More than* ***70%***

Valle Verde Campus

Classroom Utilization

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
A Building	92%
Advanced Technology Center	102%
American Village	92%
B Building	89%
Total	91%

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
A Building	82%
Advanced Technology Center	77%
American Village	83%
B Building	73%
Total	79%

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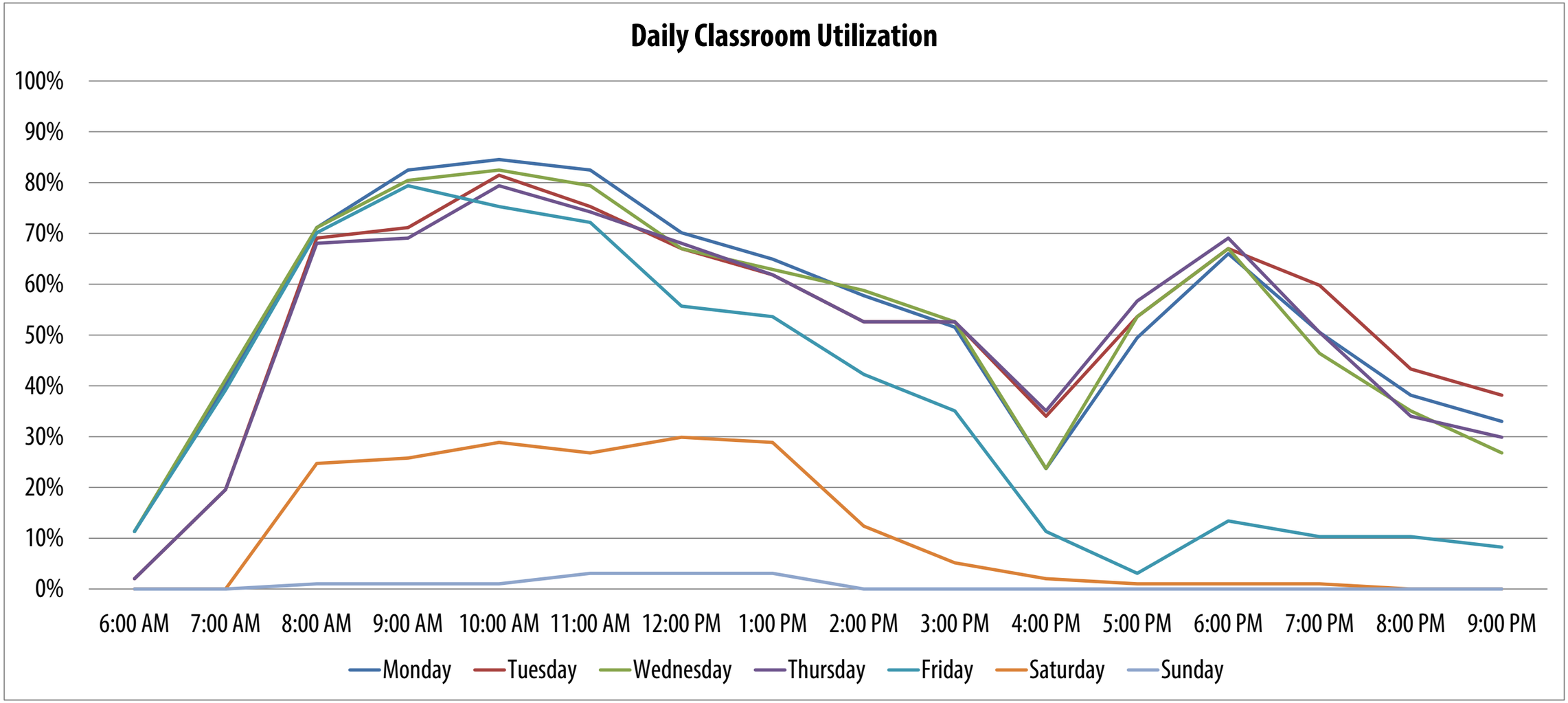
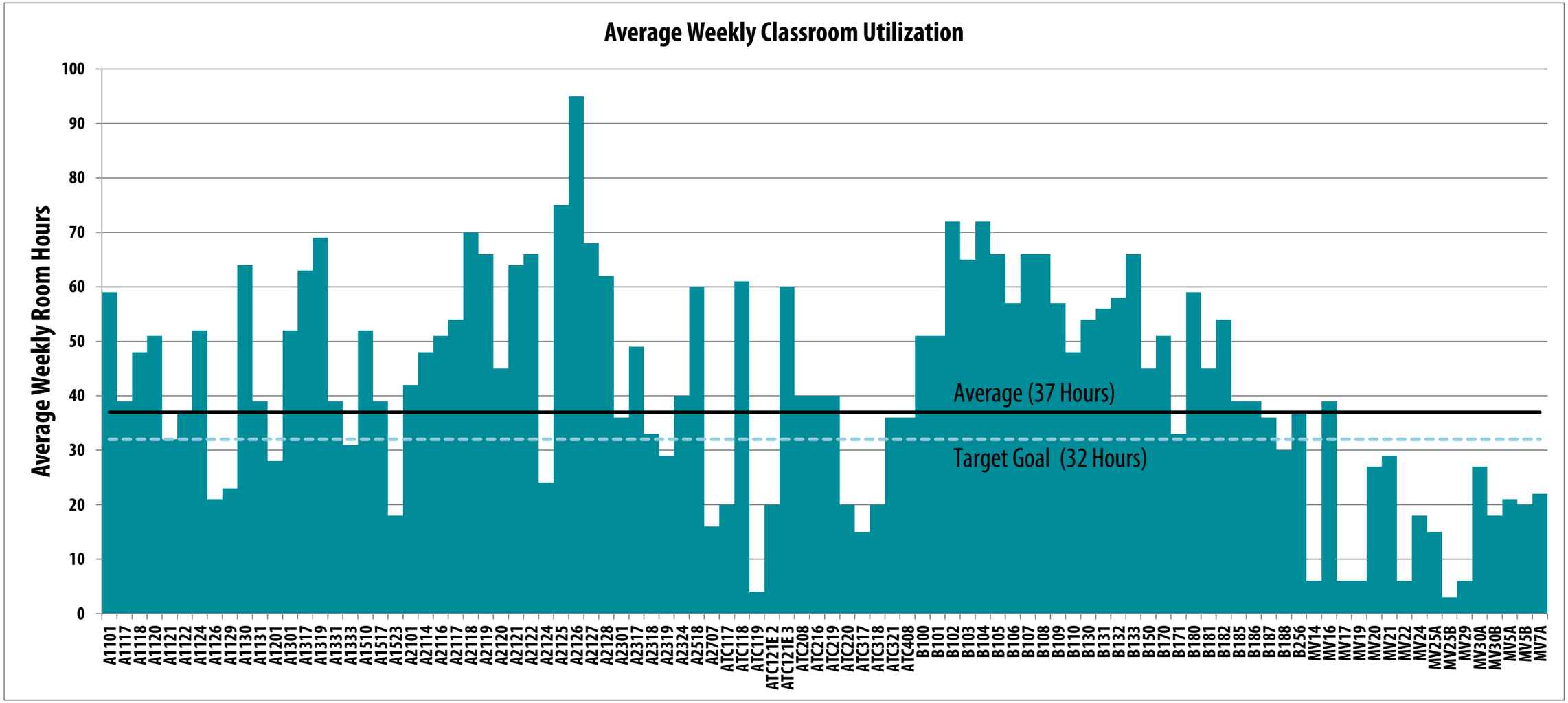
Classroom Utilization



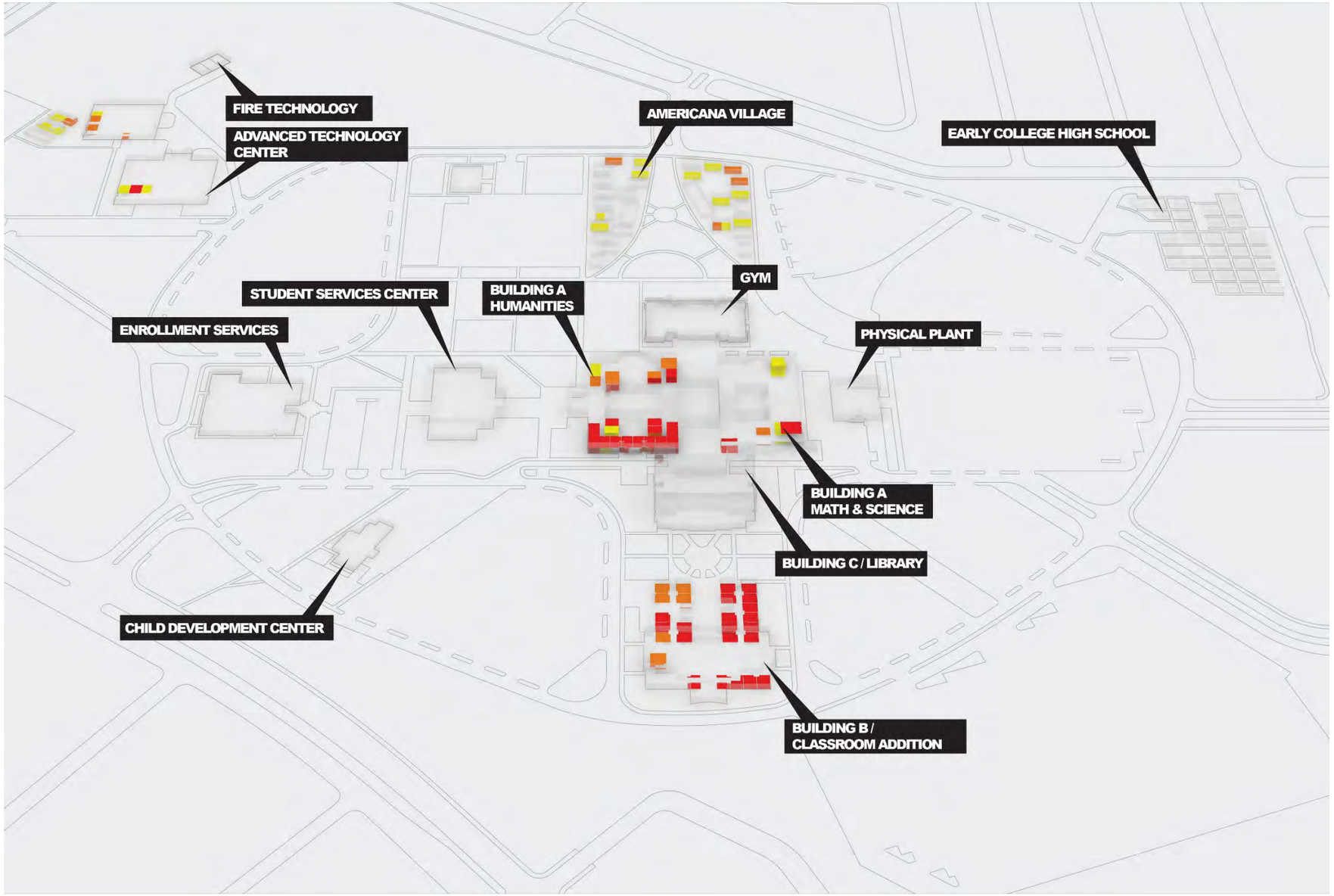
Valle Verde Campus

Classroom Utilization



Valle Verde Campus

Classroom Utilization



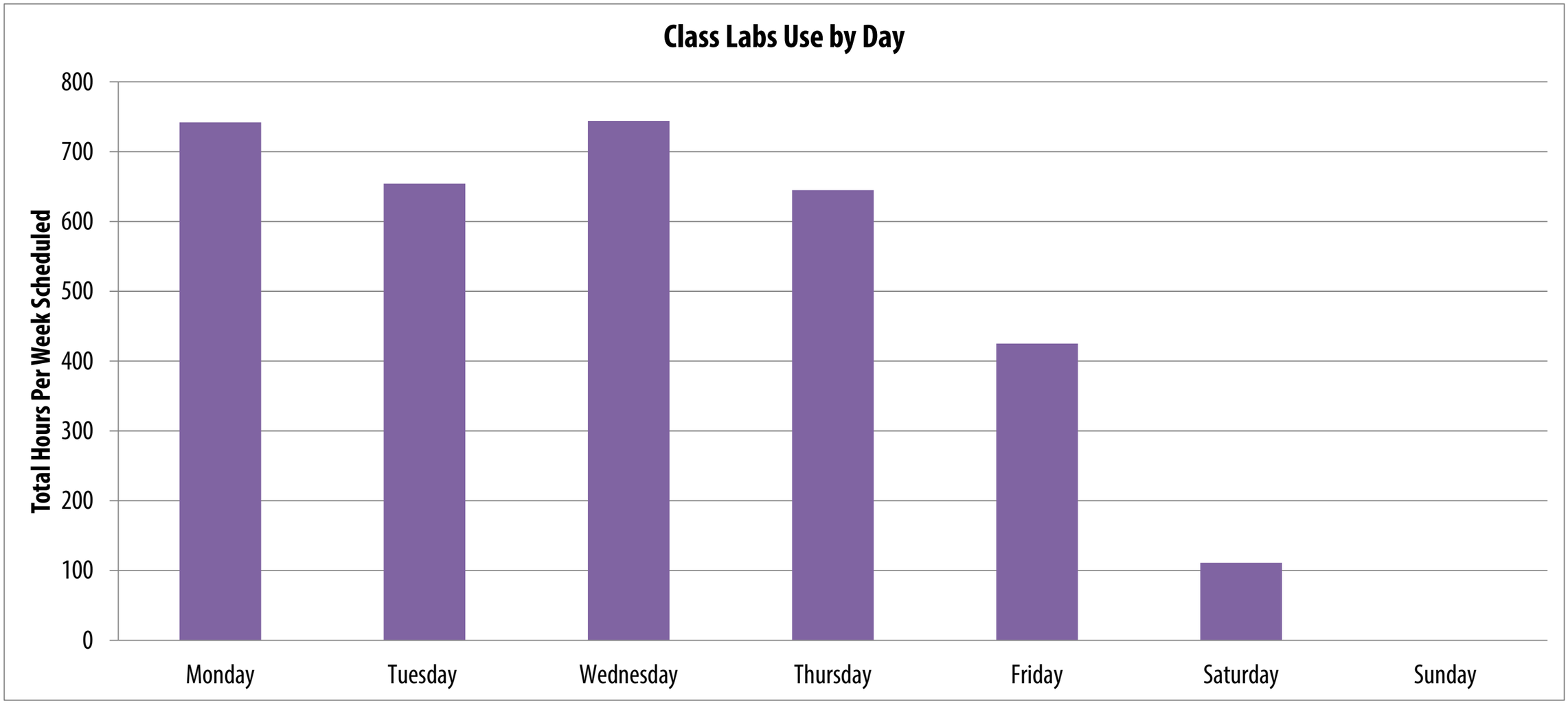
Weekly Hours

- *Less than **25** hours*
- ***25-40** hours*
- *More than **40** hours*

Classroom Utilization Recap

- Friday use is strong
- Enrollment/Capacity is strong at 79% on average
- Peak not so pronounced; strong afternoon use but some room for improvements
- Many classrooms used heavily, a few underutilized
- VV classrooms are well utilized
  - Village has capacity
  - Ad Astra will help balance classroom use

Class Lab Utilization



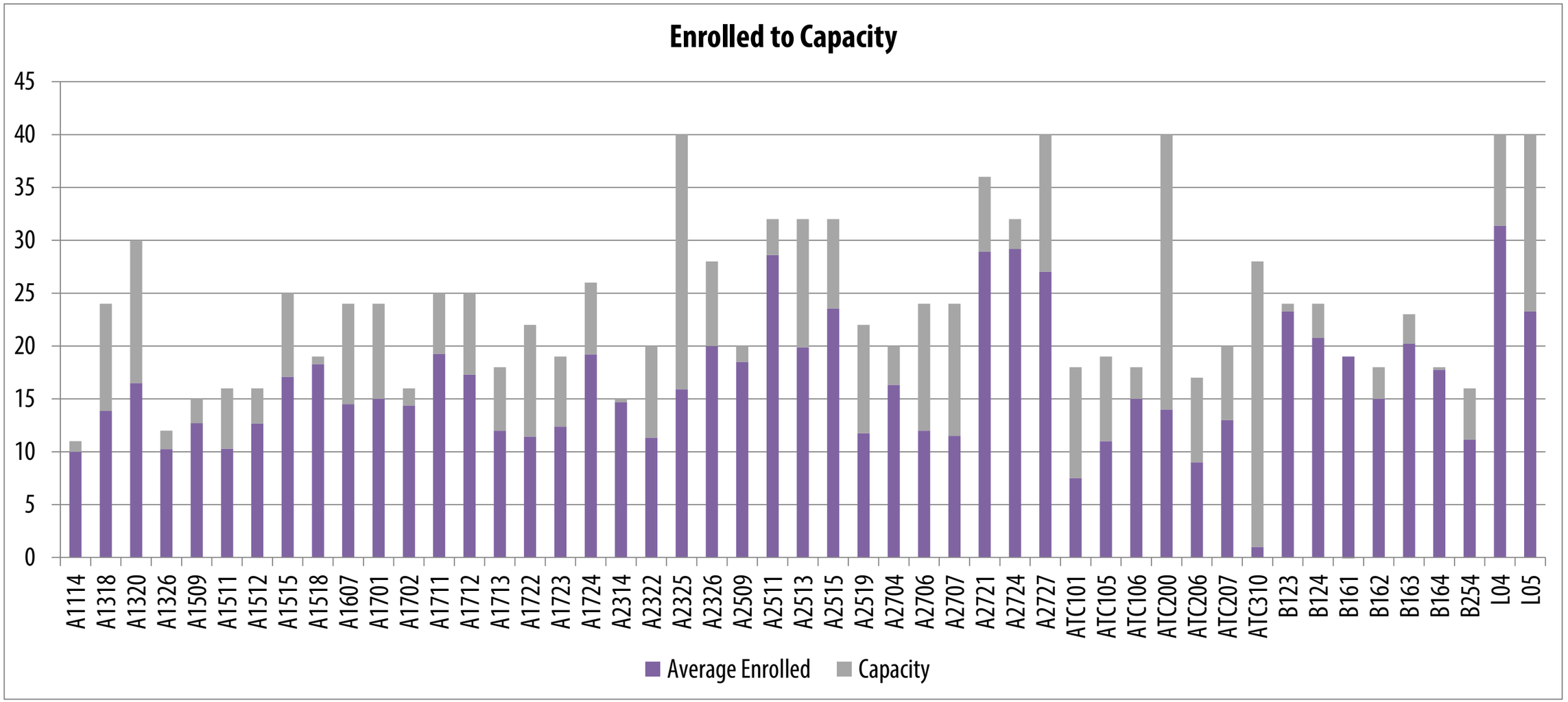
Valle Verde Campus

Class Lab Utilization

Building	No. of Class Labs	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly Lab Hours	Average Weekly Hours per Lab
A Building	33	784	23,457	120%	1,249	38
Advanced Technology Center	7	160	1,316	33%	134	19
B Building	7	141	3,838	109%	205	29
Fire Technology	3	112	3,150	113%	130	43
Total	50	1,197	31,761	106%	1,718	32

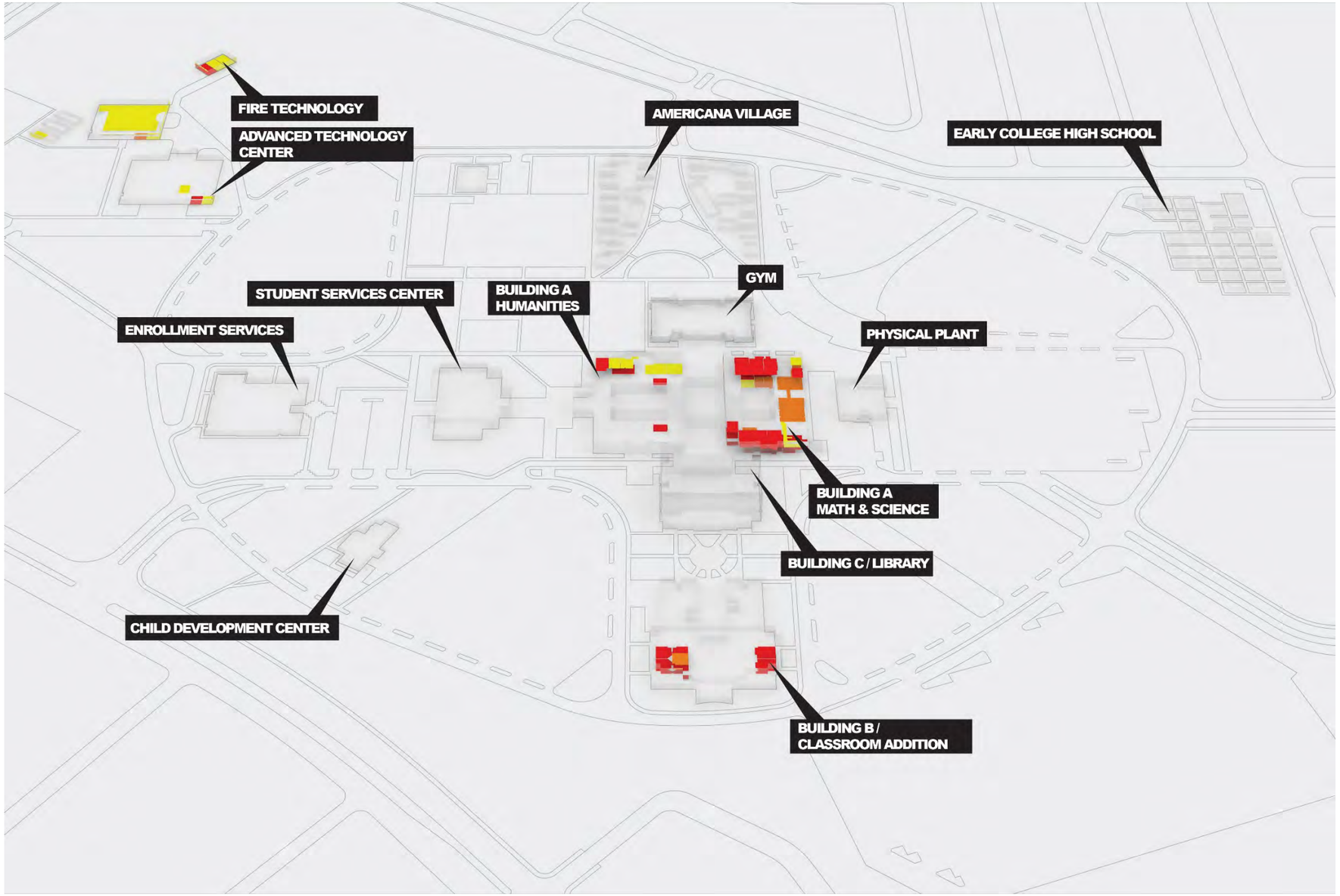
Valle Verde Campus

Class Lab Capacity



Valle Verde Campus

Class Lab Capacity



Enrolled to Capacity

- *Less than* ***60%***
- ***60-70%***
- *More than* ***70%***

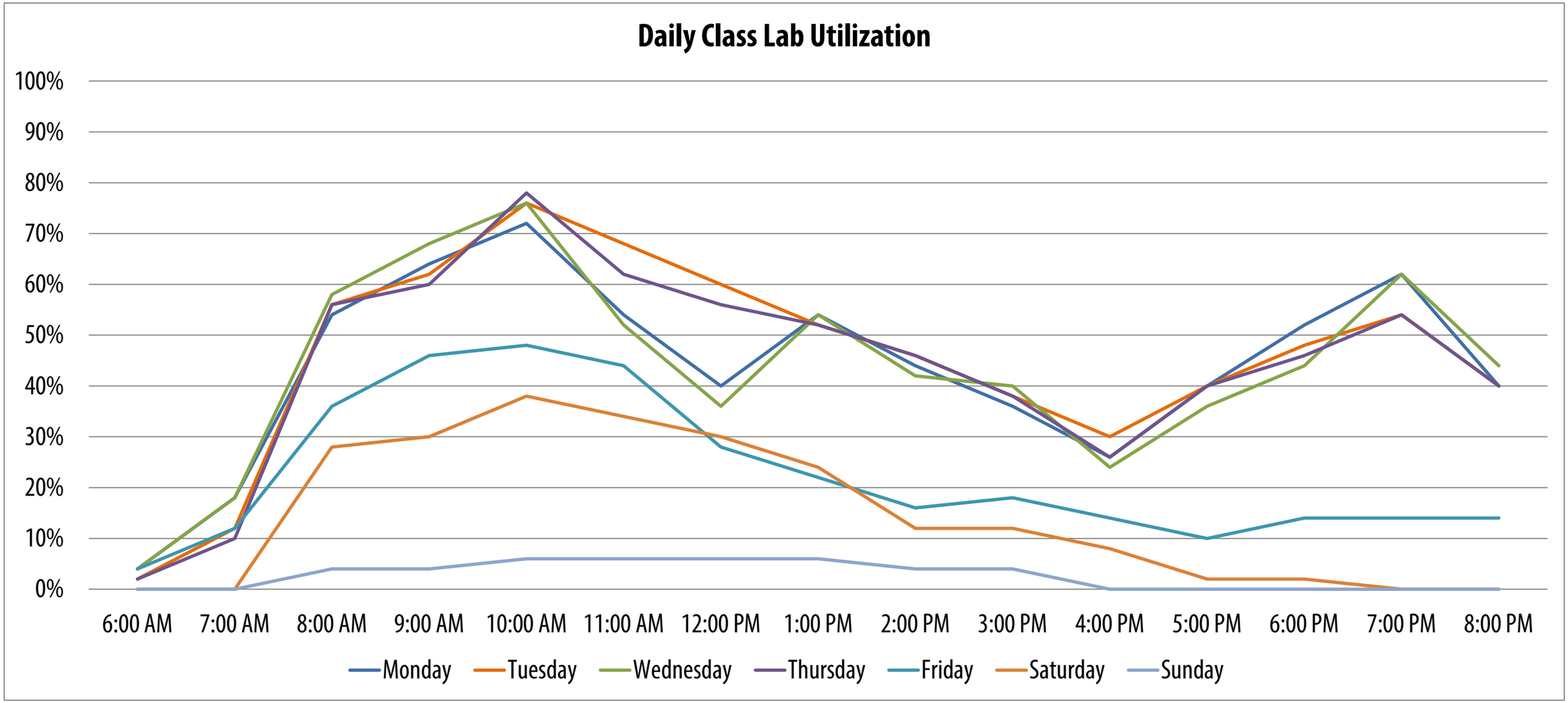
Valle Verde Campus

Class Lab Utilization

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
A Building	91%
Advanced Technology Center	103%
B Building	92%
Fire Technology	91%
Total	92%

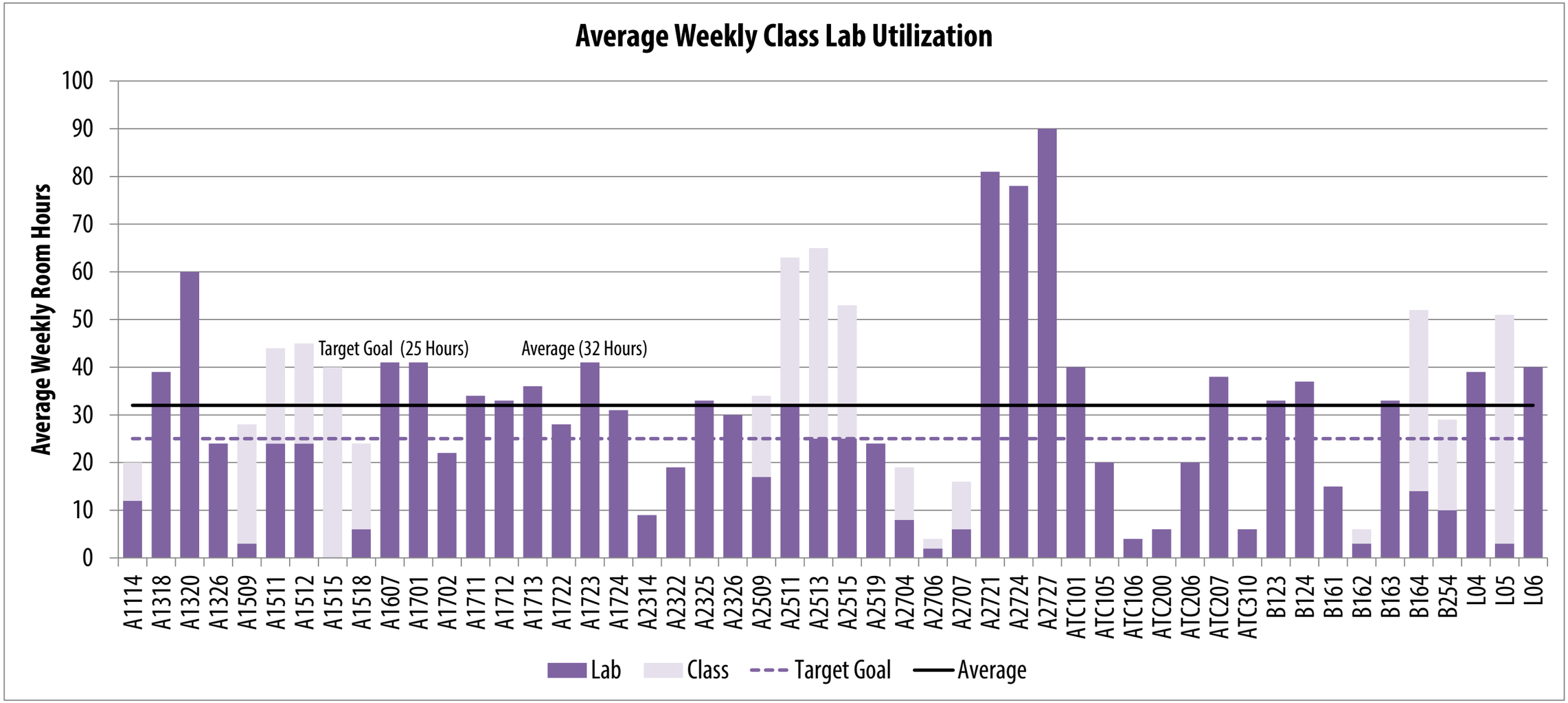
Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
A Building	73%
Advanced Technology Center	52%
B Building	89%
Fire Technology	58%
Total	73%

Class Lab Utilization



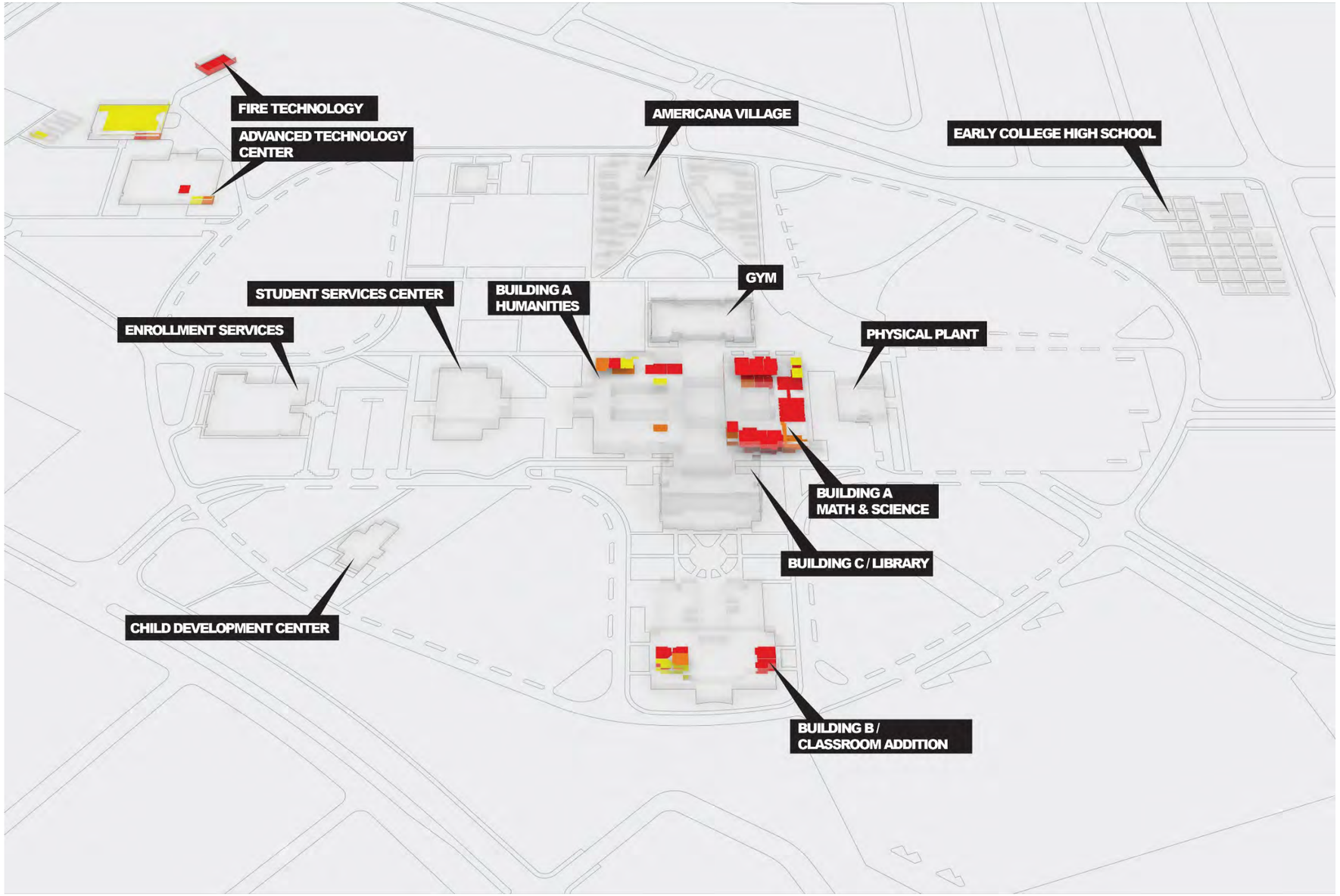
Valle Verde Campus

Class Lab Utilization



Valle Verde Campus

Class Lab Utilization



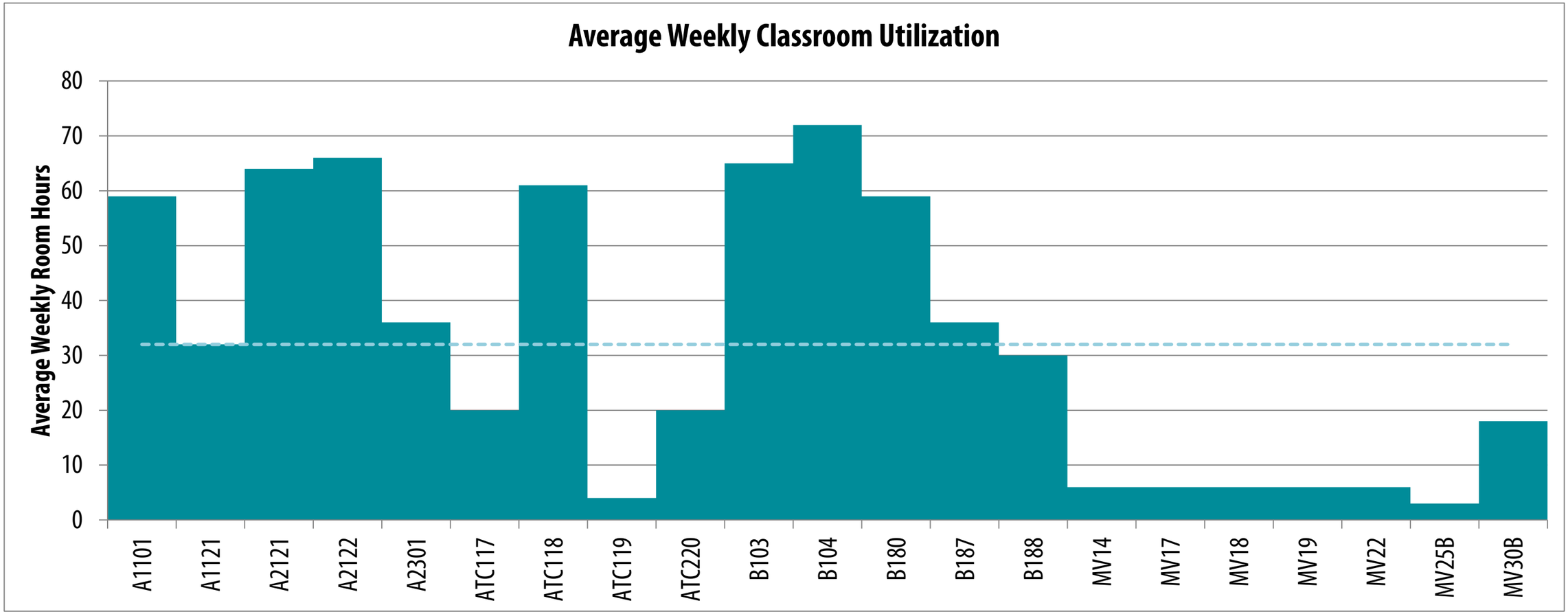
Weekly Hours

- *Less than **20** hours*
- ***20-30** hours*
- *More than **30** hours*

Class Lab Utilization Recap

- Chemistry and Biology lab utilization is off the charts
- There is opportunity for improved use of some labs
- Lecture in lab problem

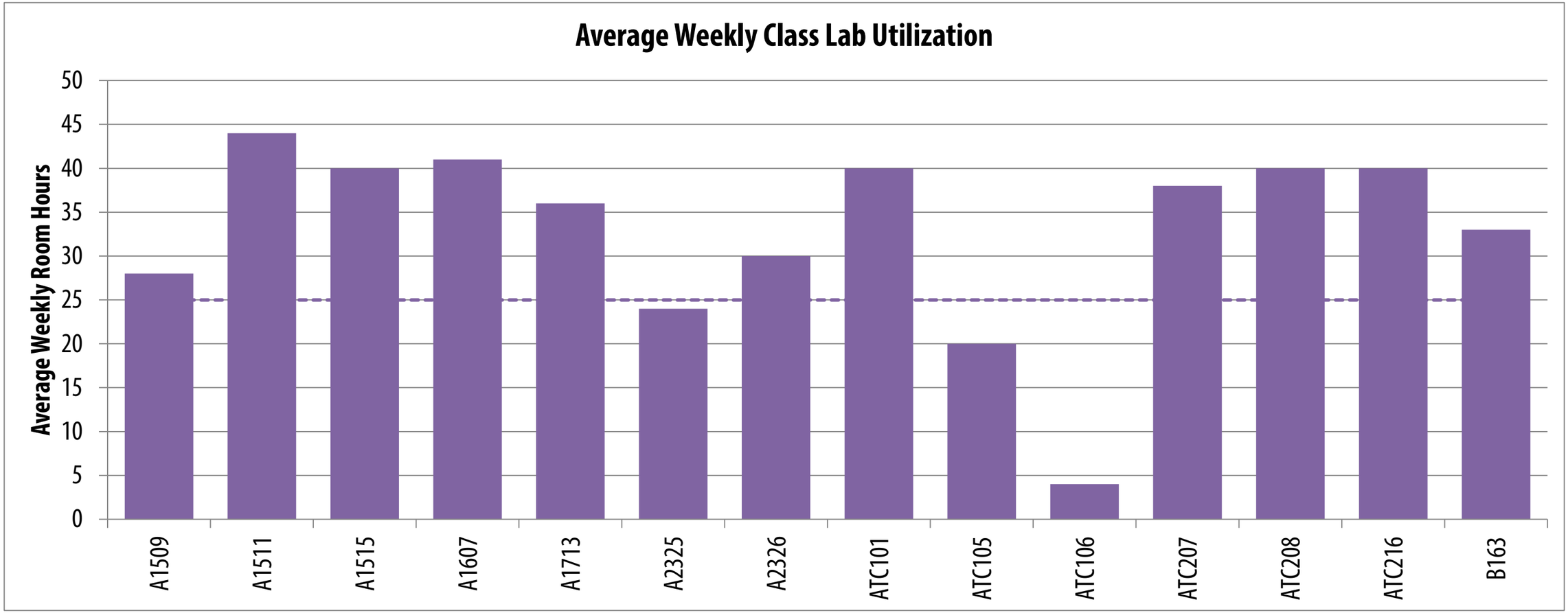
Continuing Education - Classrooms



Best Week – Between 9/29 - 10/5 there are 33 courses being scheduled

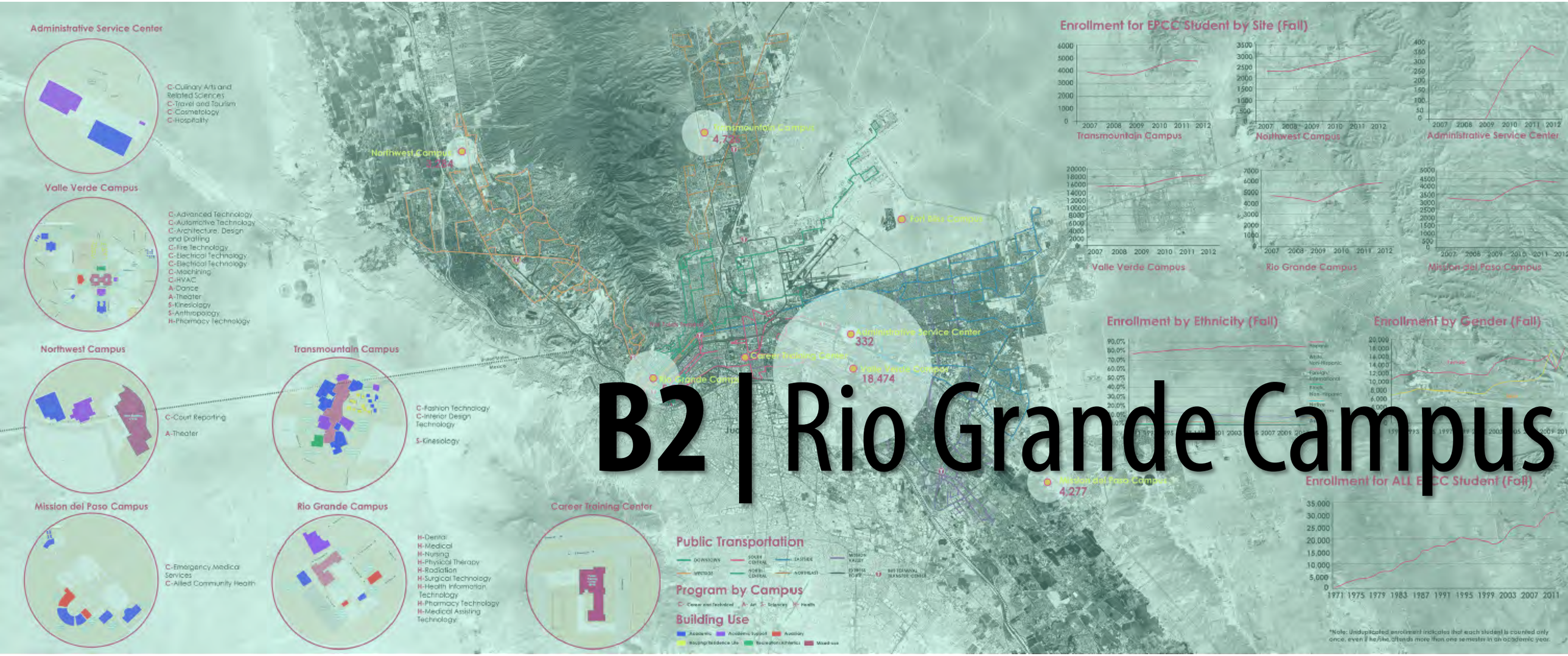
Worst Week – Between 12/15 – 12/21 there is only 1 course being scheduled

Continuing Education - Labs



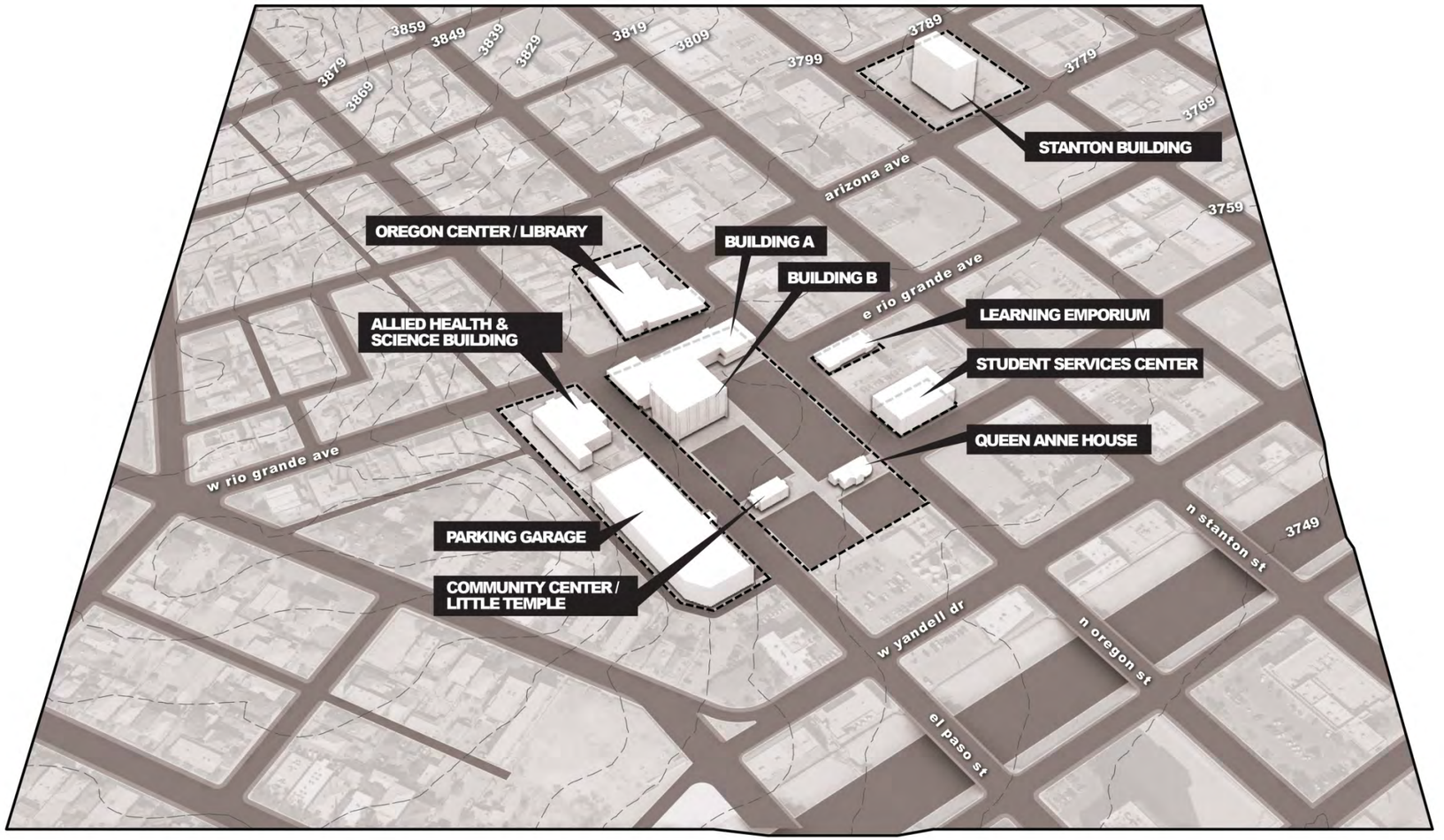
Best Week – Between 9/29 - 10/5 there are 24 courses being scheduled

Worst Week – Between 12/15 - 12/21 there is only 1 course being scheduled



B2 | Rio Grande Campus

Rio Grande Campus

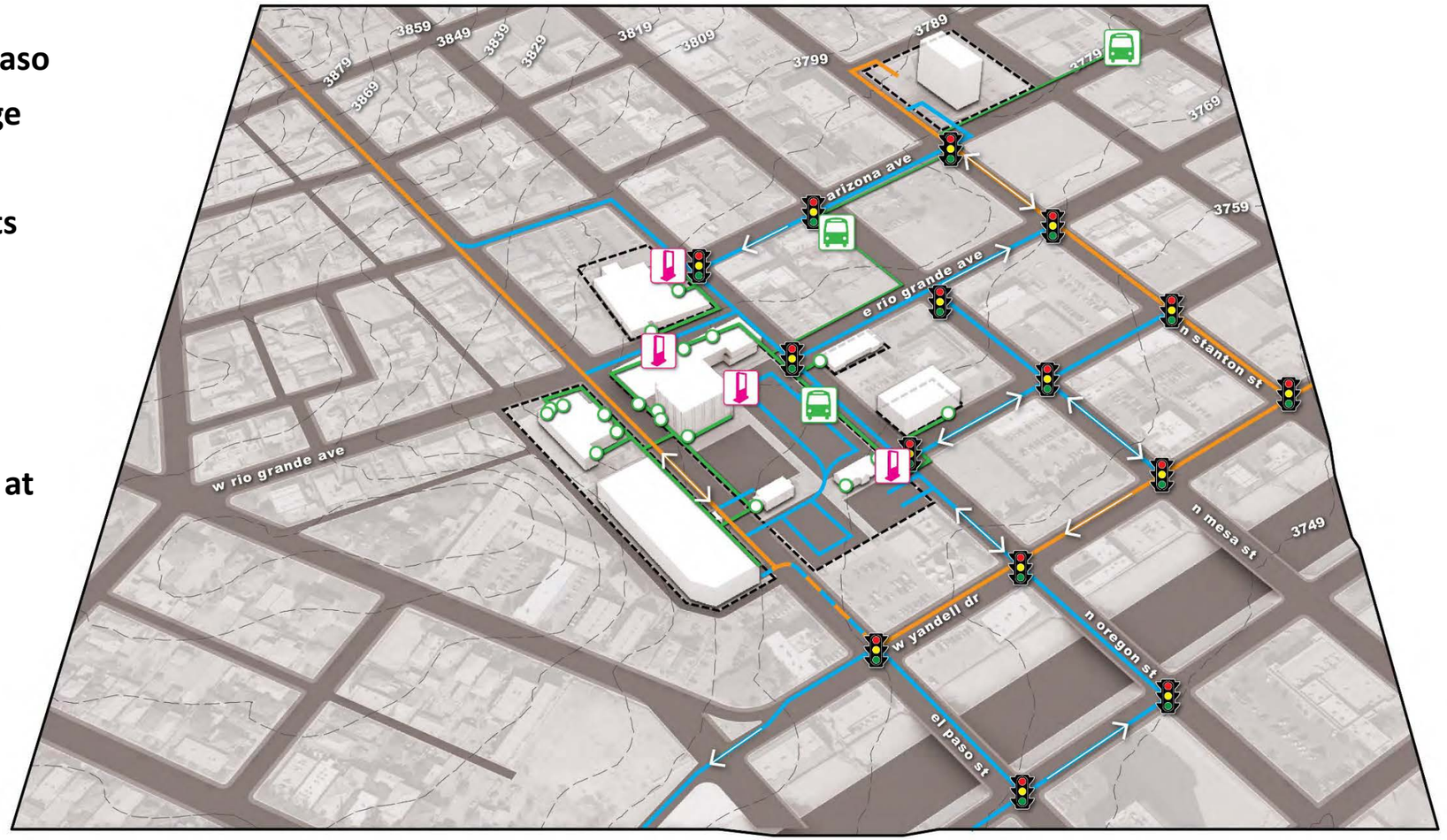


Regional Access

- I-10 Highway East/West Access
  - Downtown Exit
- Numerous ways to access campus:
  - Oregon Street
  - El Paso Street
  - Mesa Street
- Good transit service to campus
  - Routes 11, 70, 75, 204

Internal Circulation

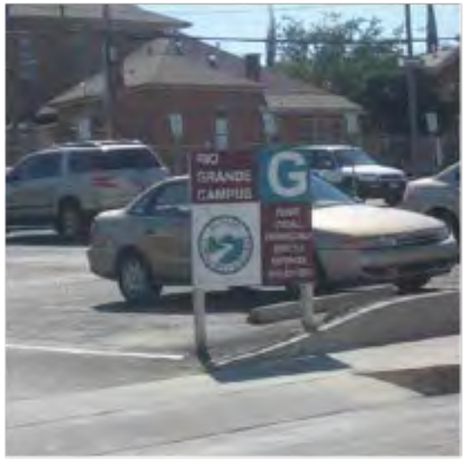
- Access primarily through Oregon and El Paso
- 4 Parking surface lots and 1 parking garage
- Connectivity between two surface lots
- Confusing circulation between surface lots
- Parking garage access from El Paso
- Pedestrian walkway mixes with vehicular traffic presenting potential conflicts
- Potential to include a drop-off area
- Improve pedestrian-vehicular interaction at surface lots



Legend

- Vehicular Movement – Primary
- Vehicular Movement – Secondary
- Pedestrian Movement
- Building Entrance
- Bus Stop
- Sign & Monuments
- Problem Area

Signage & Wayfinding

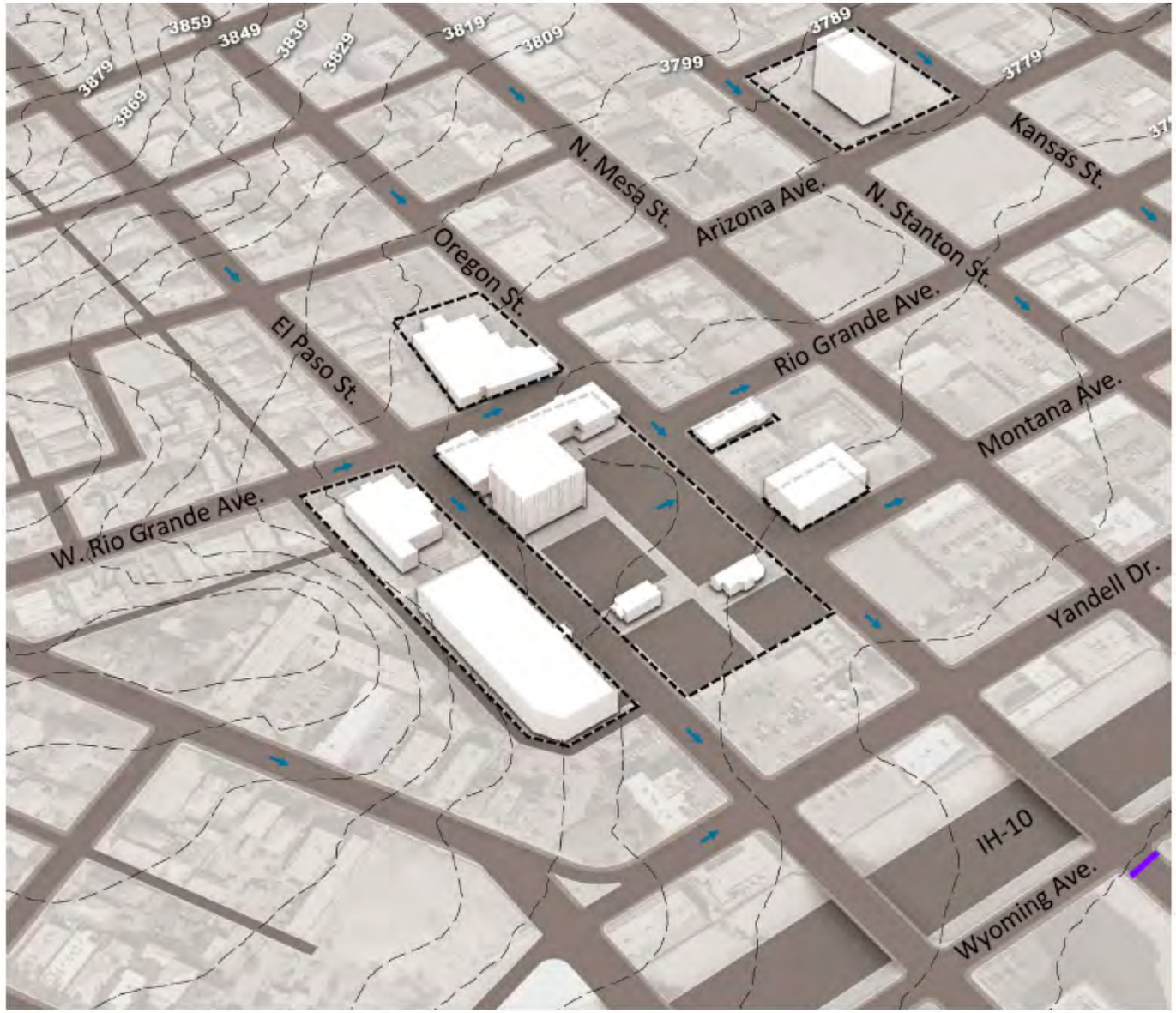


- All campus buildings intersect city streets, which may provide opportunity to engage city to allow for wayfinding directionals to be applied to city light poles, etc.
- High involvement from surrounding community, particularly with the clinical facilities presents desire to better project the EPCC “brand” and welcome messages.
- The campus is lacking in wayfinding directionals and directory information as you approach the campus in a vehicle or on foot.
- Clinic patients are often getting lost.
- The building identity is inconsistent.
- The bus stops require signage to help direct pedestrians with minimal car traffic conflict.
- The campus has many front doors making it difficult to navigate for visitors.

Rio Grande Campus

Hydrology

- Storm runoff into City of El Paso drainage system
- Flood zone C – areas of minimal flooding
- Property zoning – (A-3, C-2, C-4 SP, S-D)
- Nearest storm sewer outfall:
    - Oregon St. & Wyoming Ave.
- Address localized flooding problems within the campus
- Evaluate capacity of existing storm pipe street network to accommodate future development

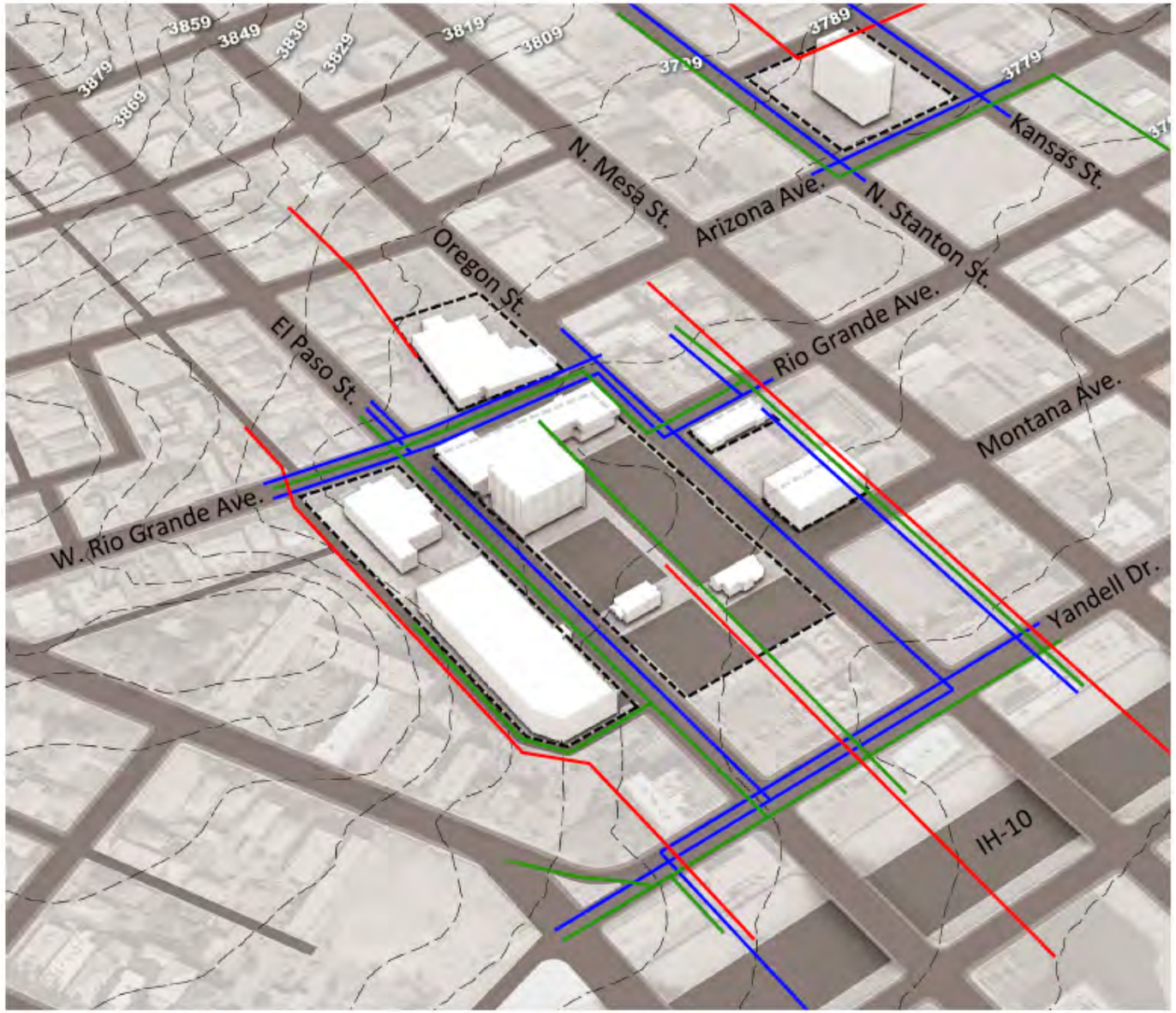


Legend

- Ponding areas
- Storm sewer system
- Arroyos
- Storm runoff flow
- Flood zone
- Localized street flooding (per SMP)

Site Utilities

- Adjacently located site utilities
- Water & Sewer provided by El Paso Water Utilities (EPWU)
- Gas provided by Texas Gas Service
- Electric provided by El Paso Electric
- Expansion requires evaluation of each utilities' capacity vs. increased demands



Legend

- Potable water
- Sanitary sewer
- Natural gas (pending)
- Electric
- Telecomm (pending)

Rio Grande Campus

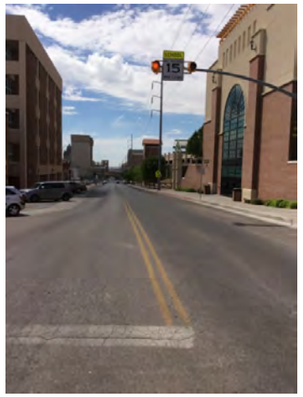
Building Condition Assessment

Exterior Space and Entry

1. No one defined main entrance to the campus or building connection.
2. Drainage flooding problems
3. Lack of landscape/maintenance.

Interior Common Space and Elements

4. Small entry lobby at Student Service
5. Non-code compliant vertical circulation elements.
6. Some restrooms are not code compliant.
7. Small offices; accessibility issue.
8. Improve on lighting and furniture at small study areas and potential for additional seating.
9. Potential for large meeting space.
10. Small student activity area.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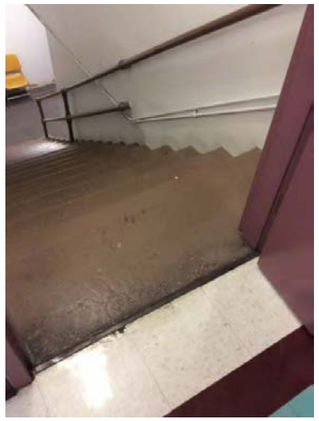
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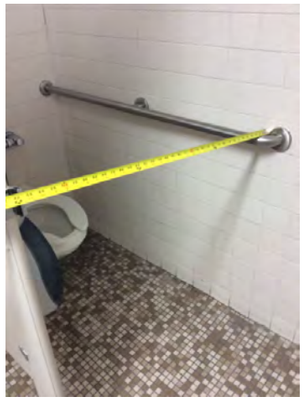
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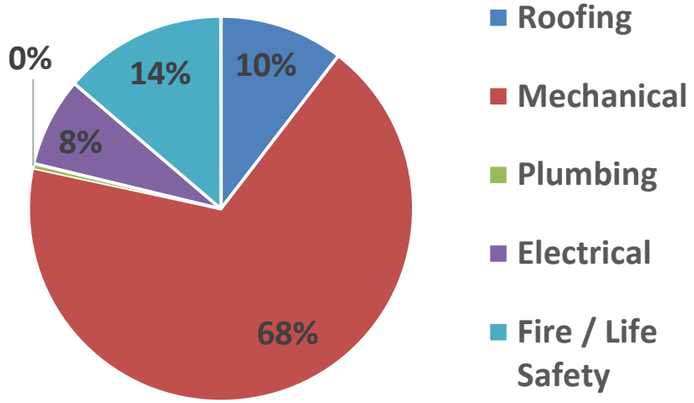
Rio Grande Campus

Mechanical/Electrical Assessment

Existing Conditions

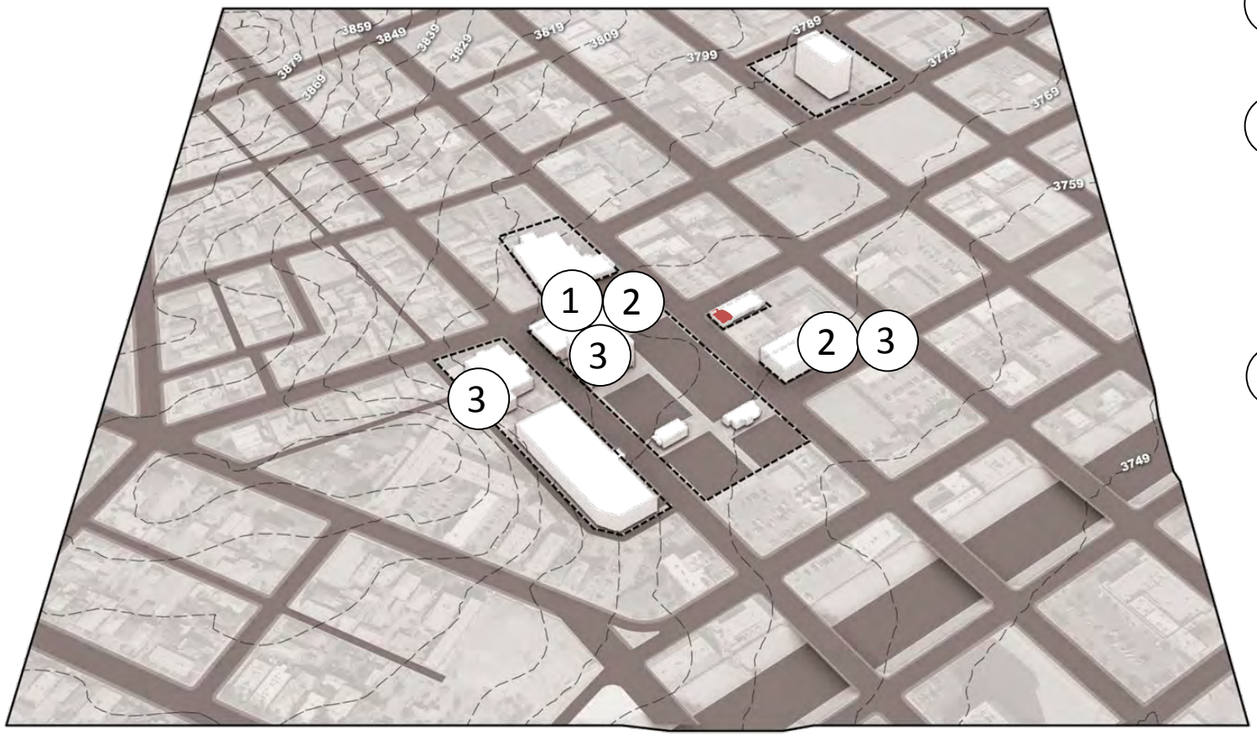
- Multiple Types of Chillers, Boilers
- Air handlers, Fancoil Units
- Individual Utility metering at Each Building

Priority 1-3 Deficiencies $7.5M



Future Available Capacity

- Main Bldg. Cooling – 50 tons
- Main Bldg. Heating – 840 mbh
- Electrical Capacities to be determined from Utility Co. Peak Demand Data



1. Install Fire Sprinklers
2. Replace damaged /defective lighting, egress lighting, panelboards, FA panels and devices
3. Complete system replacement (chiller redundancy)

Rio Grande Campus

Technology Assessment

1. Older infrastructure creates challenges - Observed Power, Network, and AV extension when wall outlets or a floor box would provide proper access.
2. Pendant lighting fixtures interfere with sightlines to projection screen.
3. Noted AV-related theft issues.
4. CPUs on floors in some labs creating possible dust or maintenance issue.
5. Noted that some classrooms lack instructional technology.
6. Discovered duplicate instructional technology in some rooms (i.e. equipped smart cart in an equipped smart classroom).
7. Lack of wireless network access within simulation rooms. One control room to serve the entire program.

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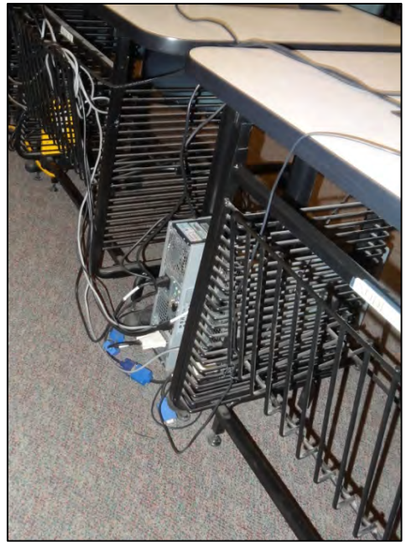

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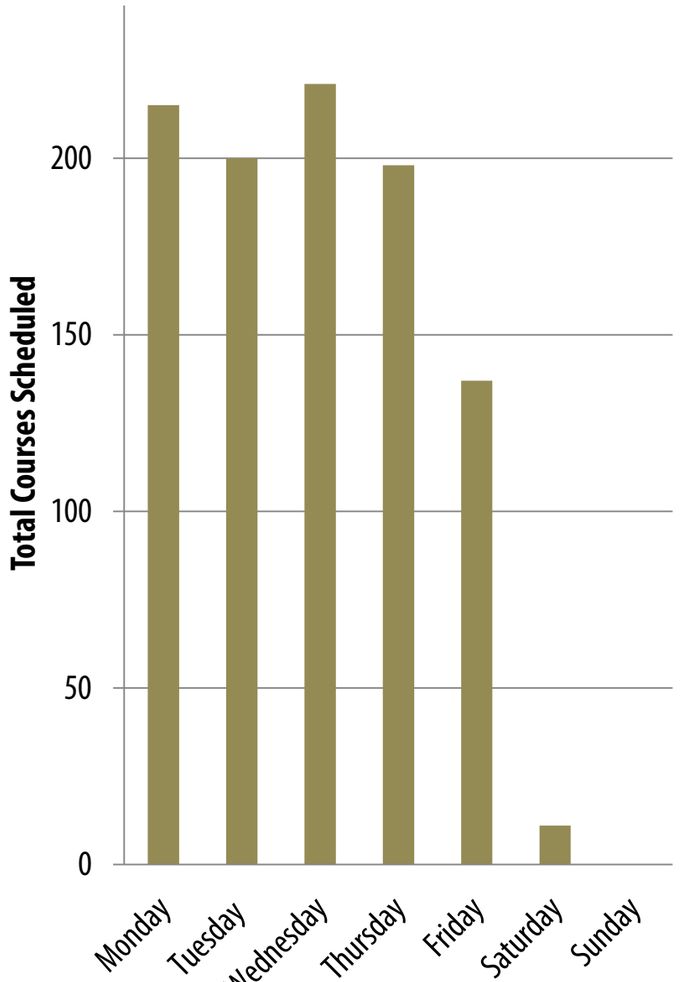
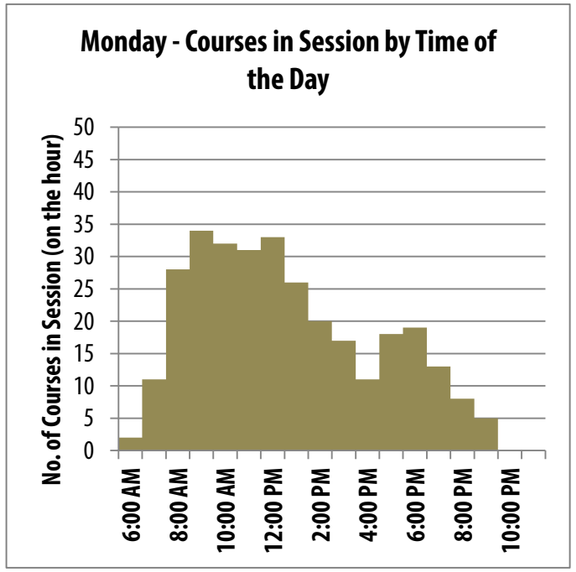
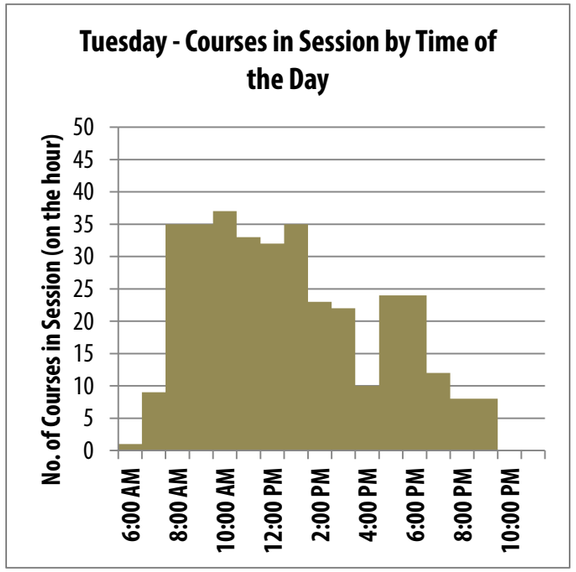
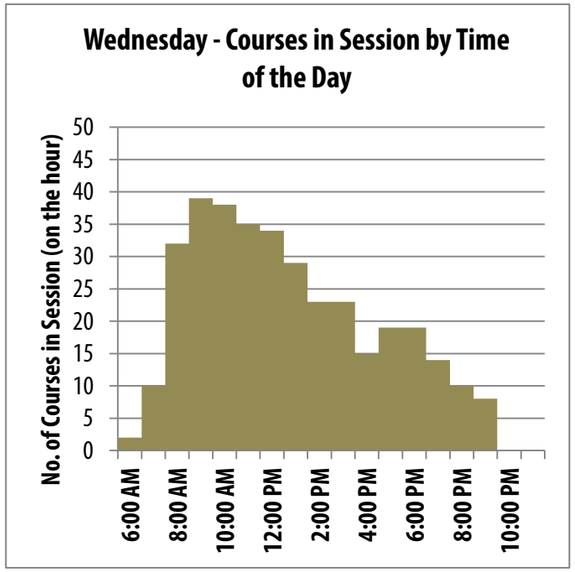
Rio Grande Campus

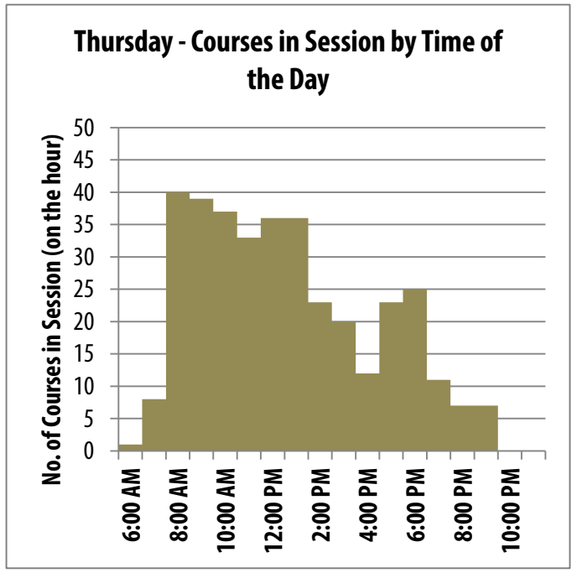
Total Courses in Session

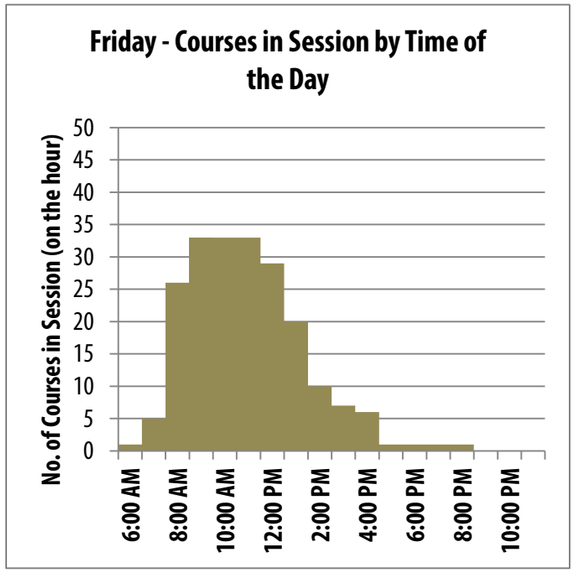


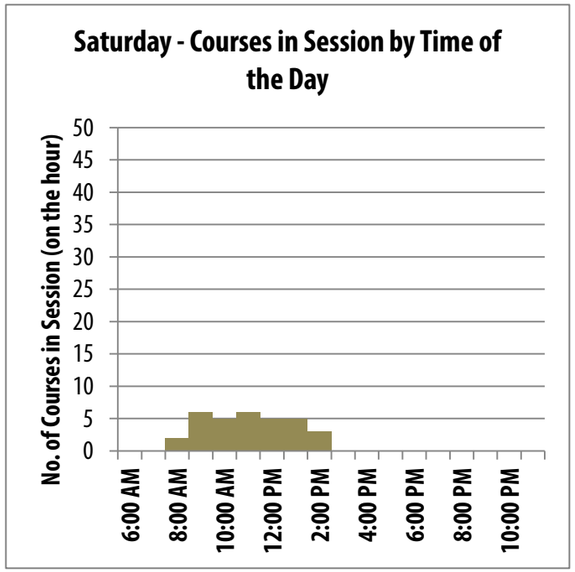




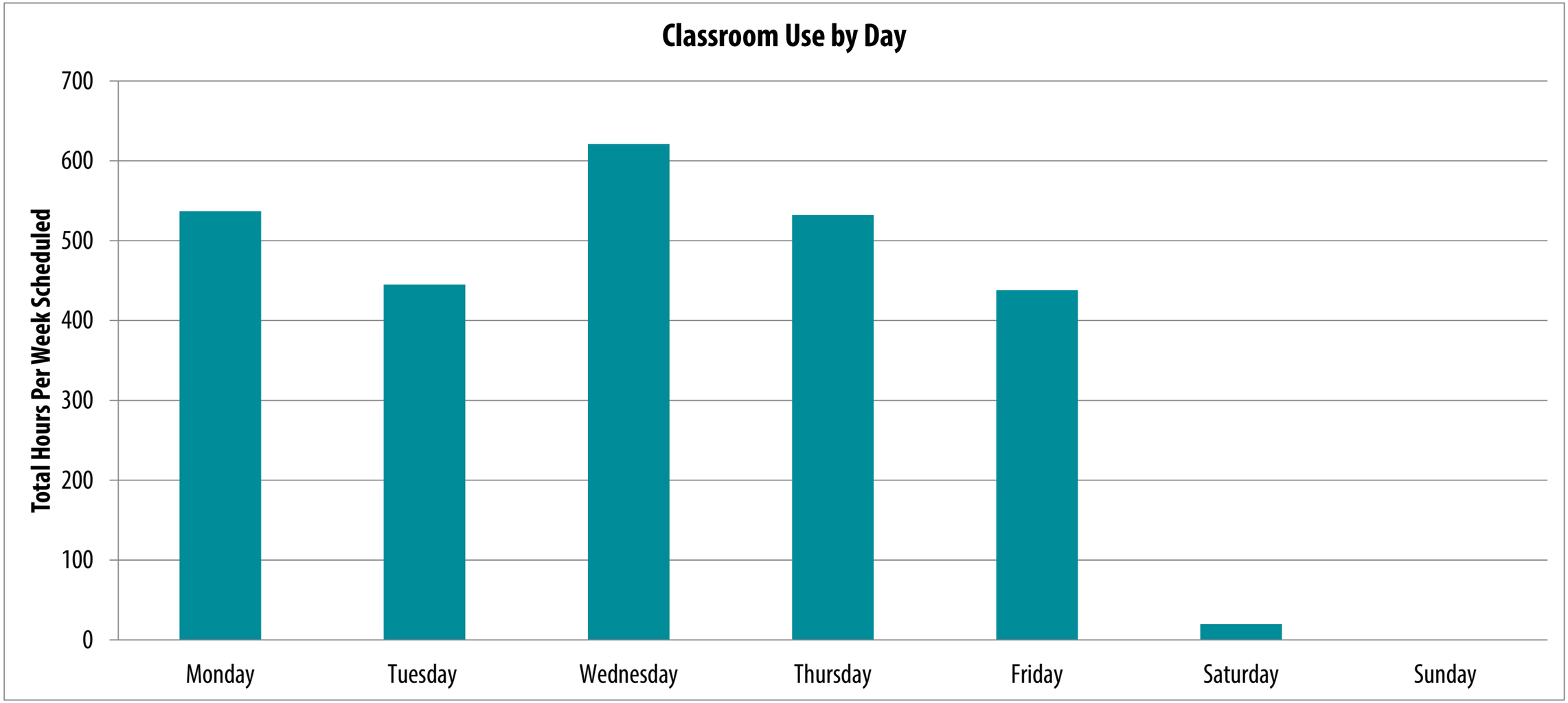








Classroom Utilization

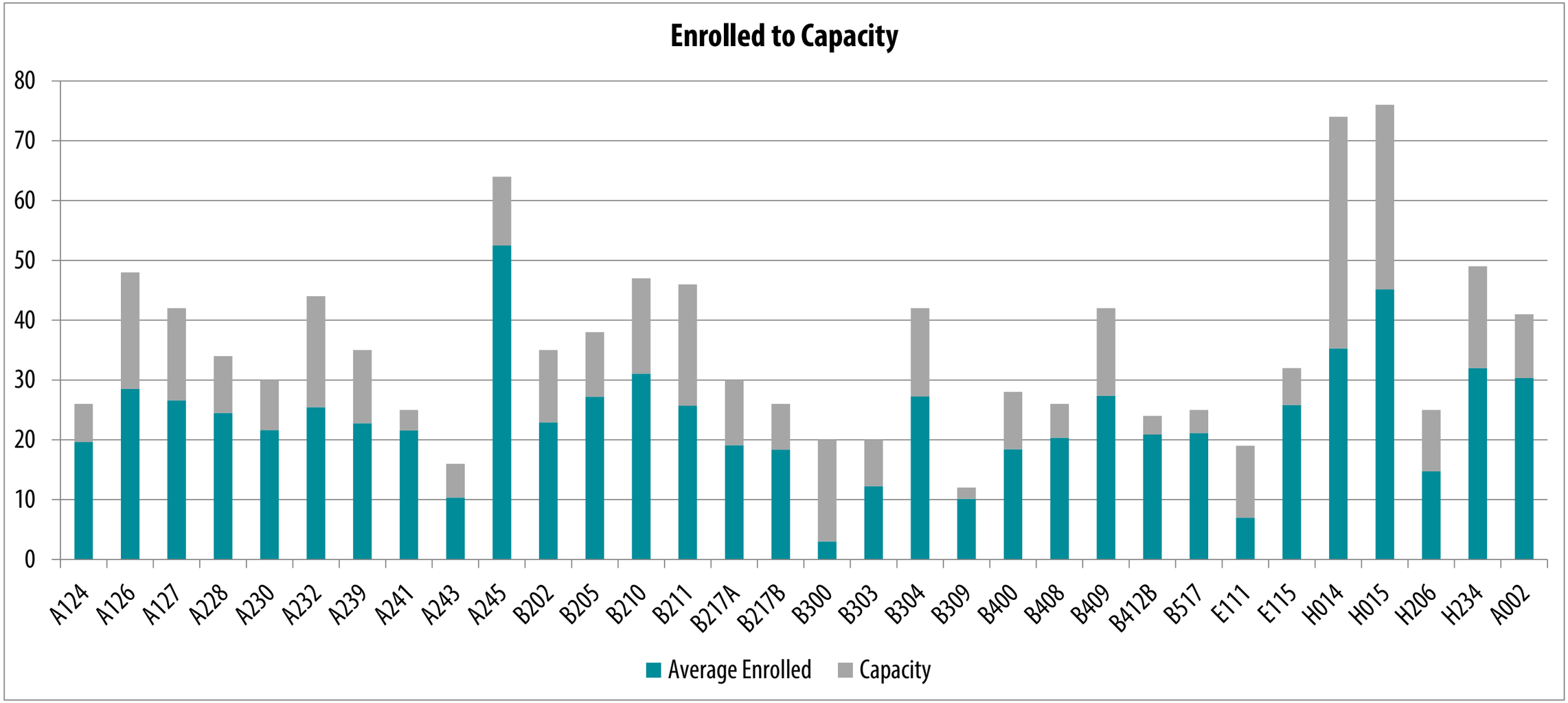


Rio Grande Campus

Classroom Utilization

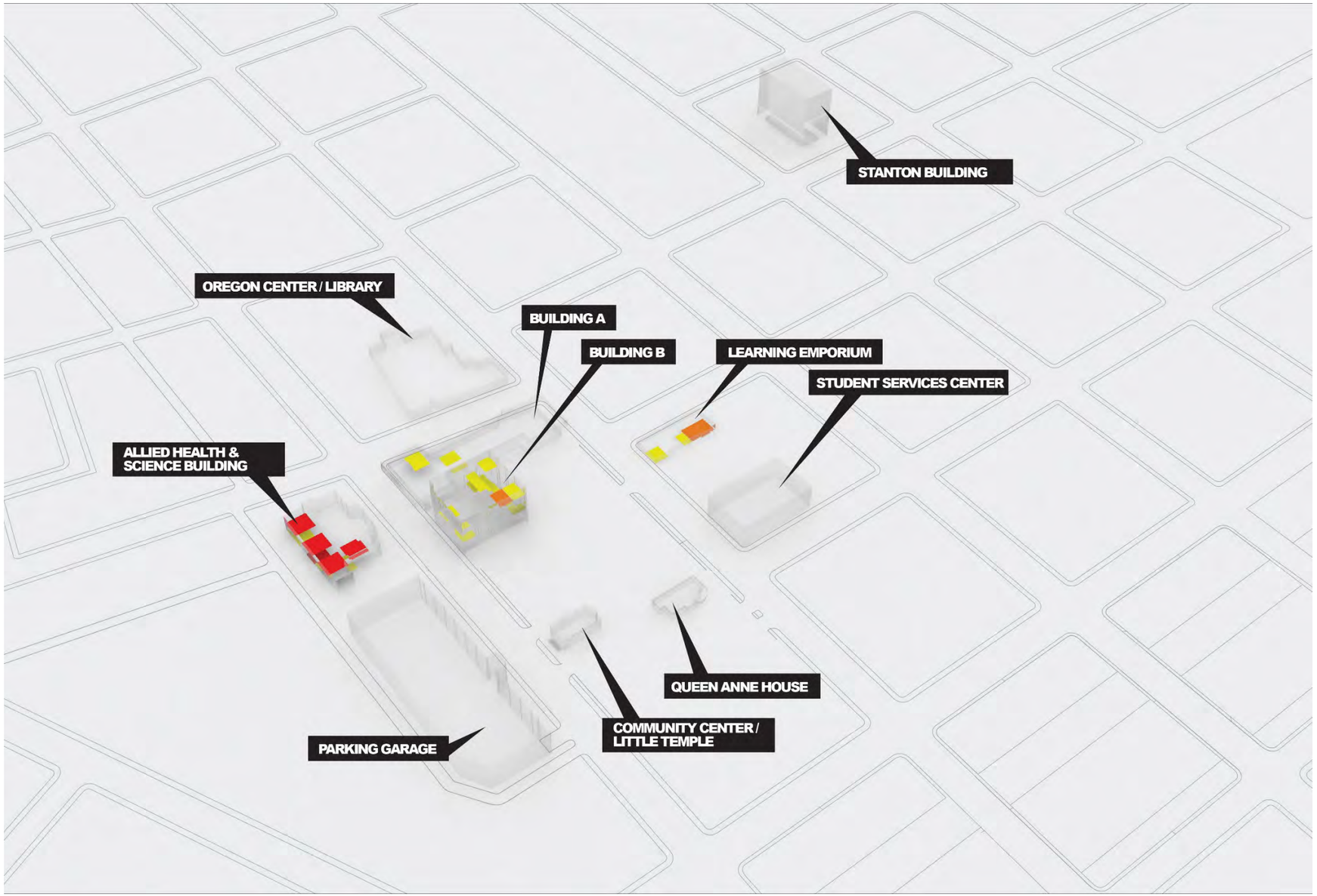
Building	No. of Classrooms	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly CR Hours	Average Weekly Hours per CR
A Building	11	405	9,718	75%	378	34
Allied Health Building	4	224	5,006	70%	150	38
B Building	15	461	12,951	88%	571	38
Library	2	51	873	53%	36	18
Total	32	1,141	28,548	78%	284	32

Classroom Capacity



Rio Grande Campus

Classroom Capacity



Enrolled to Capacity

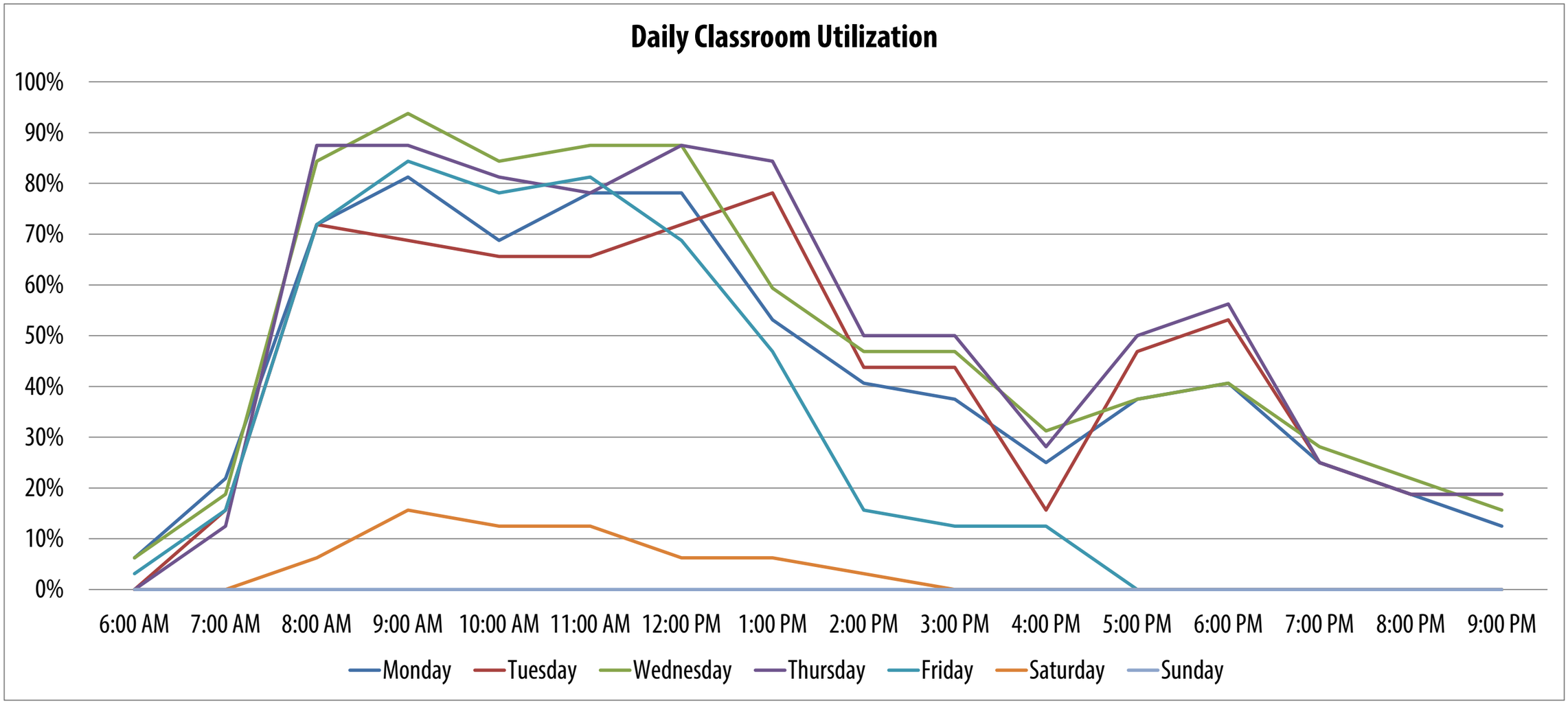
- *Less than **60%***
- ***60-70%***
- *More than **70%***

Classroom Utilization

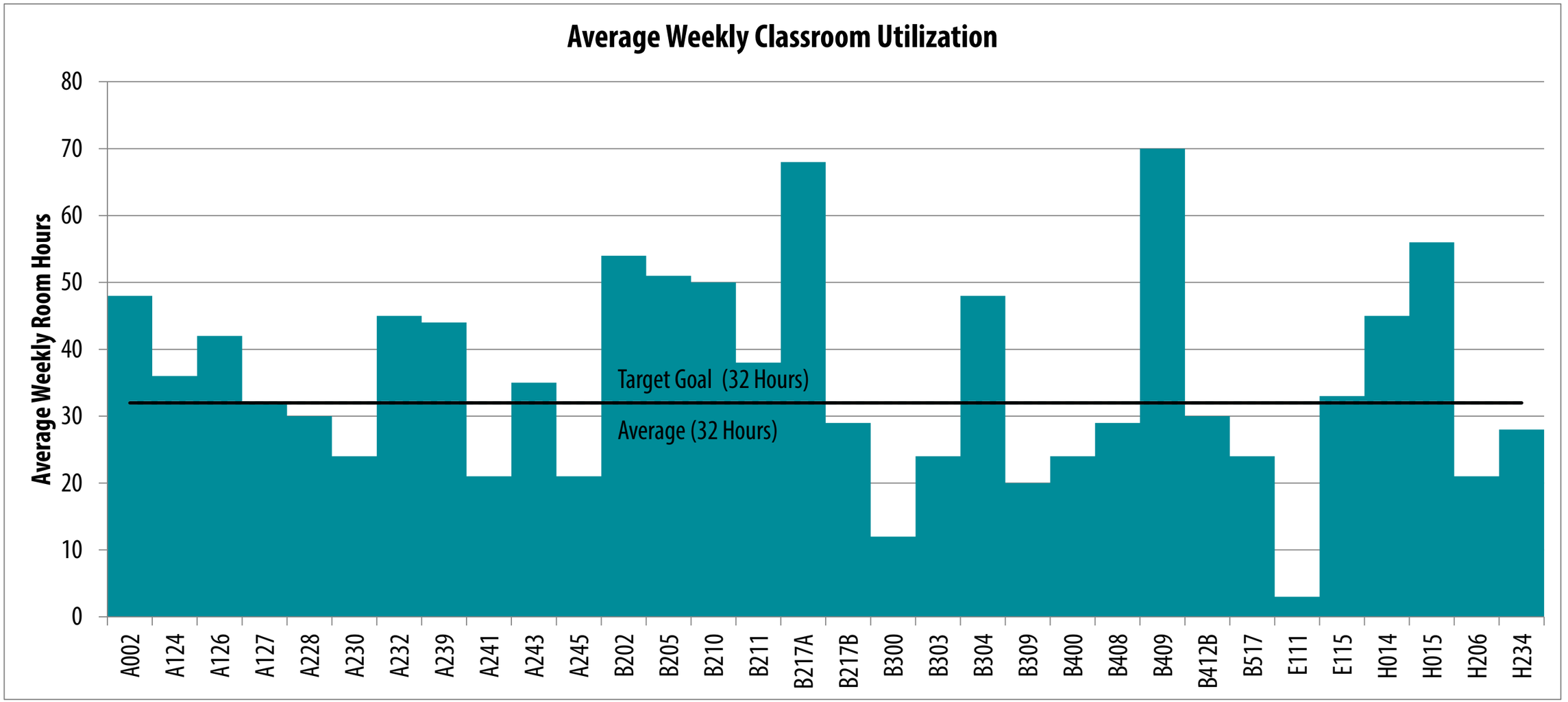
Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
A Building	83%
Allied Health Building	83%
B Building	82%
Library	91%
Total	83%

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
A Building	68%
Allied Health Building	56%
B Building	68%
Library	77%
Total	68%

Classroom Utilization

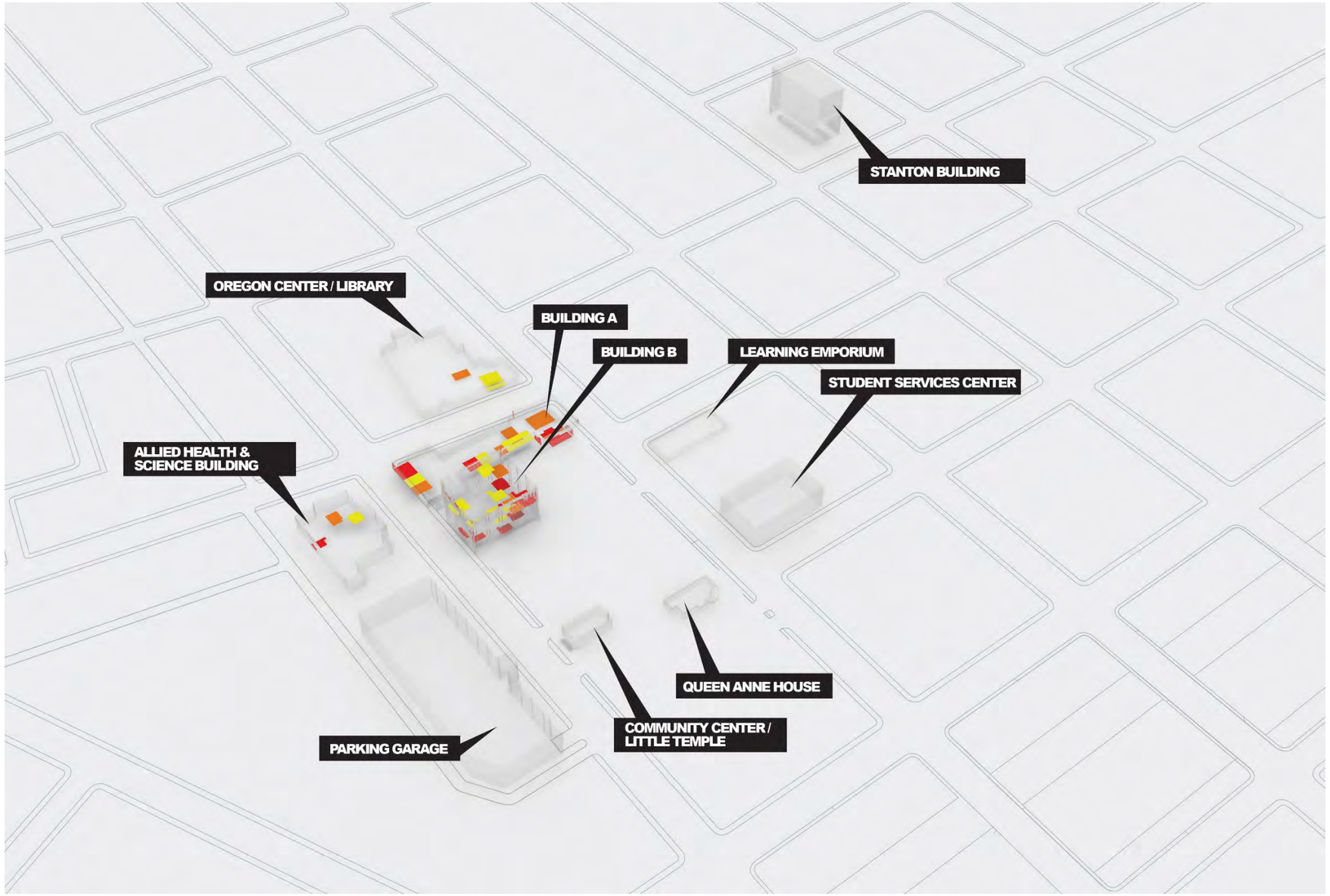


Classroom Utilization



Rio Grande Campus

Classroom Utilization



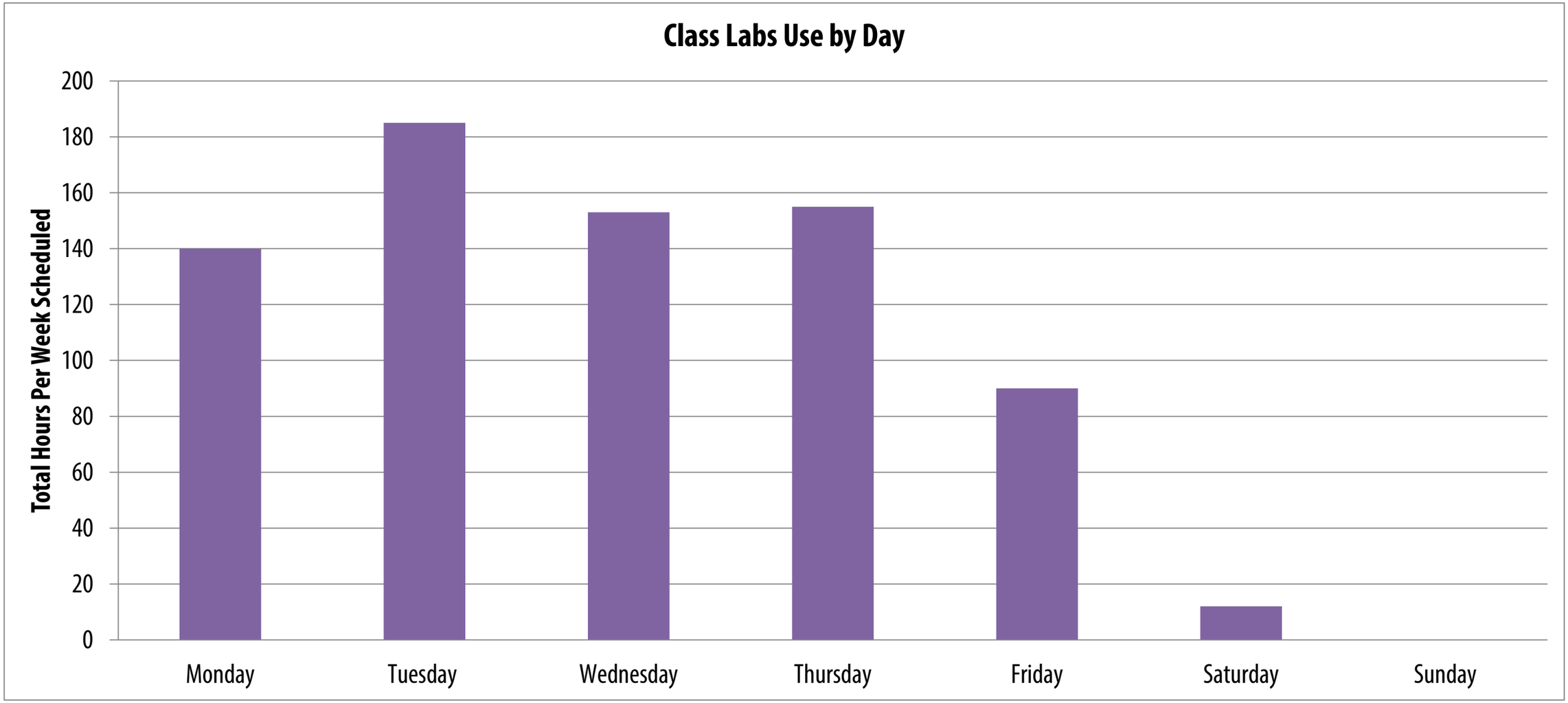
Weekly Hours

- *Less than **25** hours*
- ***25-40** hours*
- *More than **40** hours*

Classroom Utilization Recap

- Friday use good, but some opportunity in the afternoon
- Enrollment/capacity good; some opportunity in large classrooms in H building
- Classroom use peaks from 8:00 - 1:00; but some opportunity in afternoons
- Opportunity for better use of classrooms on 5th floor of B building

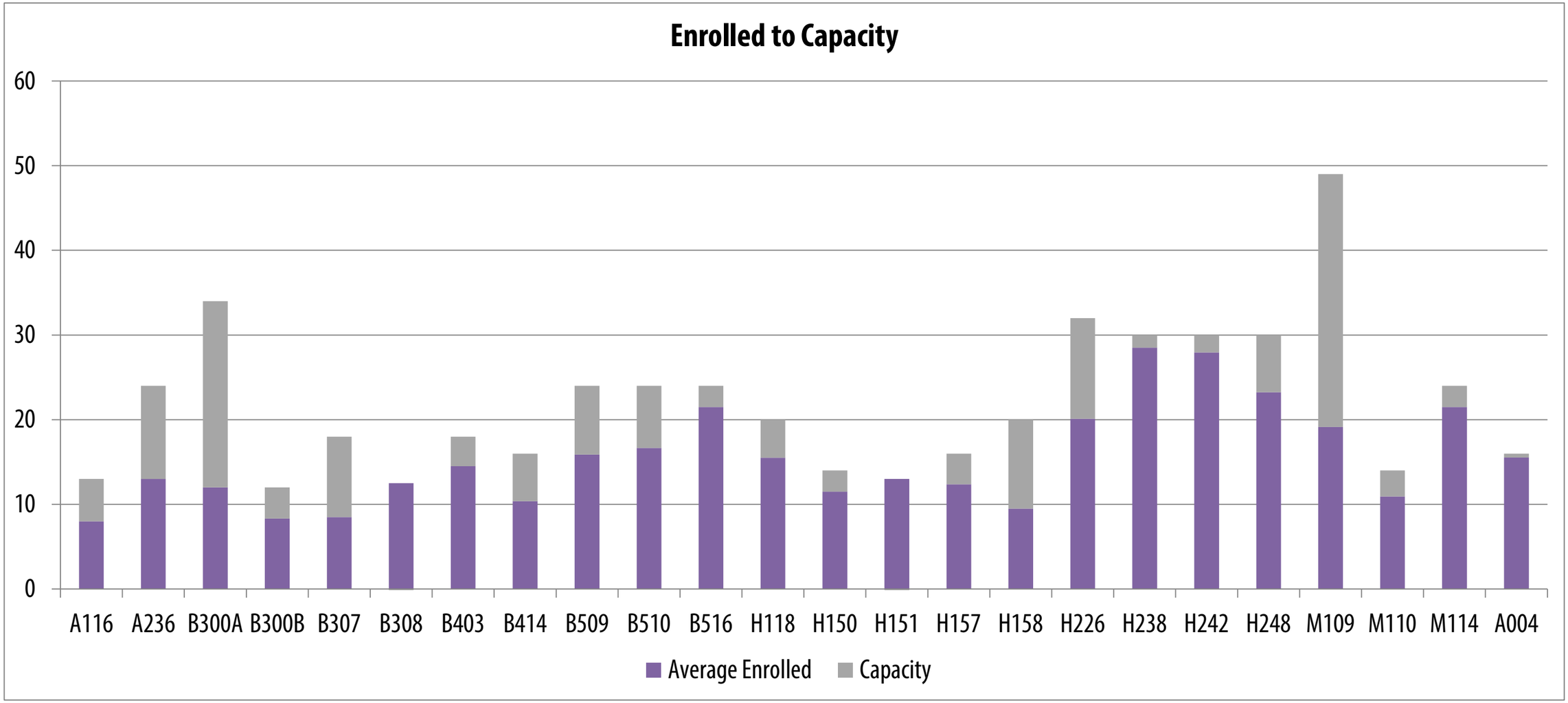
Class Lab Utilization



Class Lab Utilization

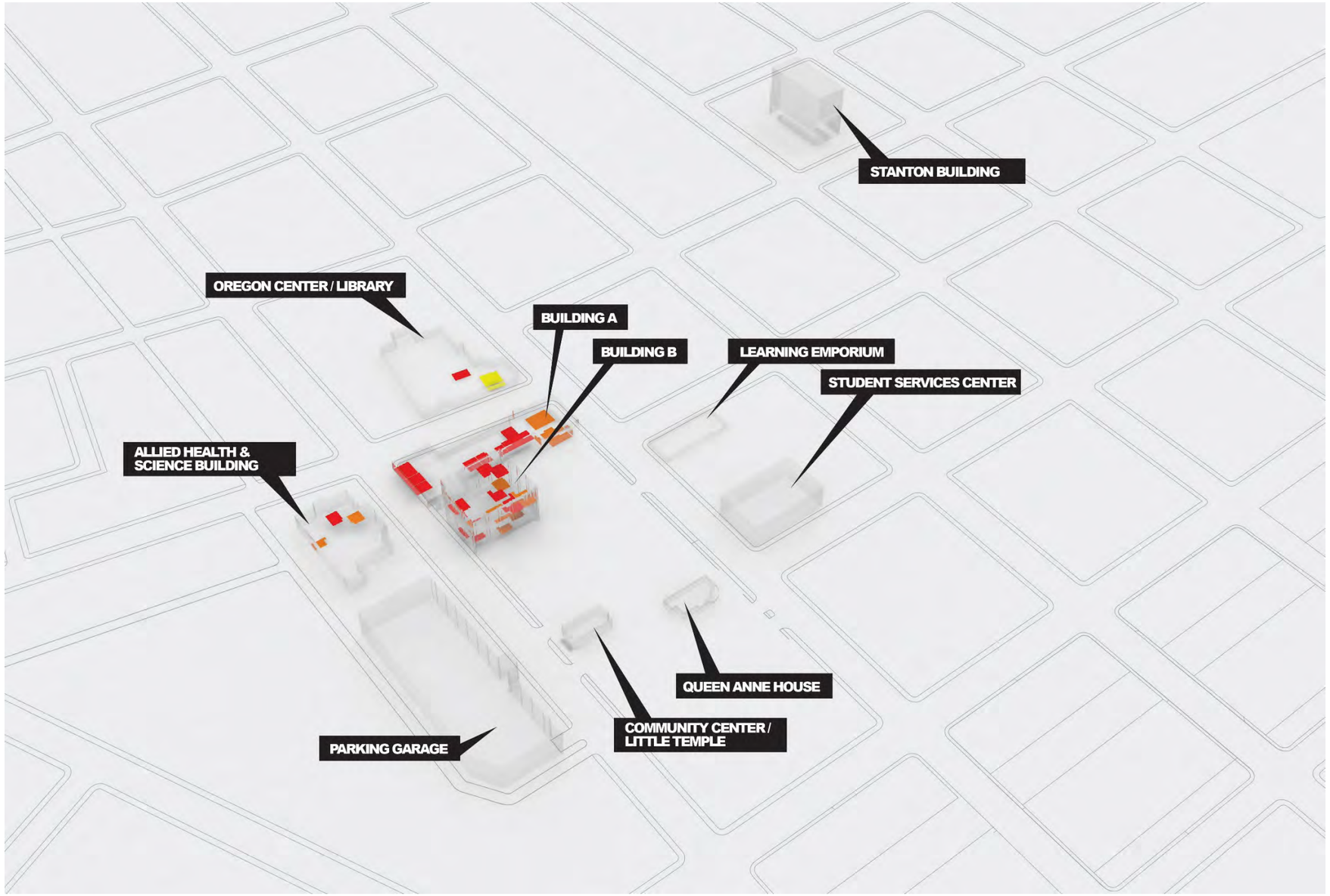
Building	No. of Class Labs	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly Lab Hours	Average Weekly Hours per Lab
A Building	3	53	753	57%	54	18
B Building	9	182	1,336	29%	103	11
Allied Health Building	9	204	4,938	97%	233	26
Math Lab	3	87	702	32%	42	14
Total	24	526	7,729	59%	432	17

Class Lab Capacity



Rio Grande Campus

Class Lab Capacity



Enrolled to Capacity

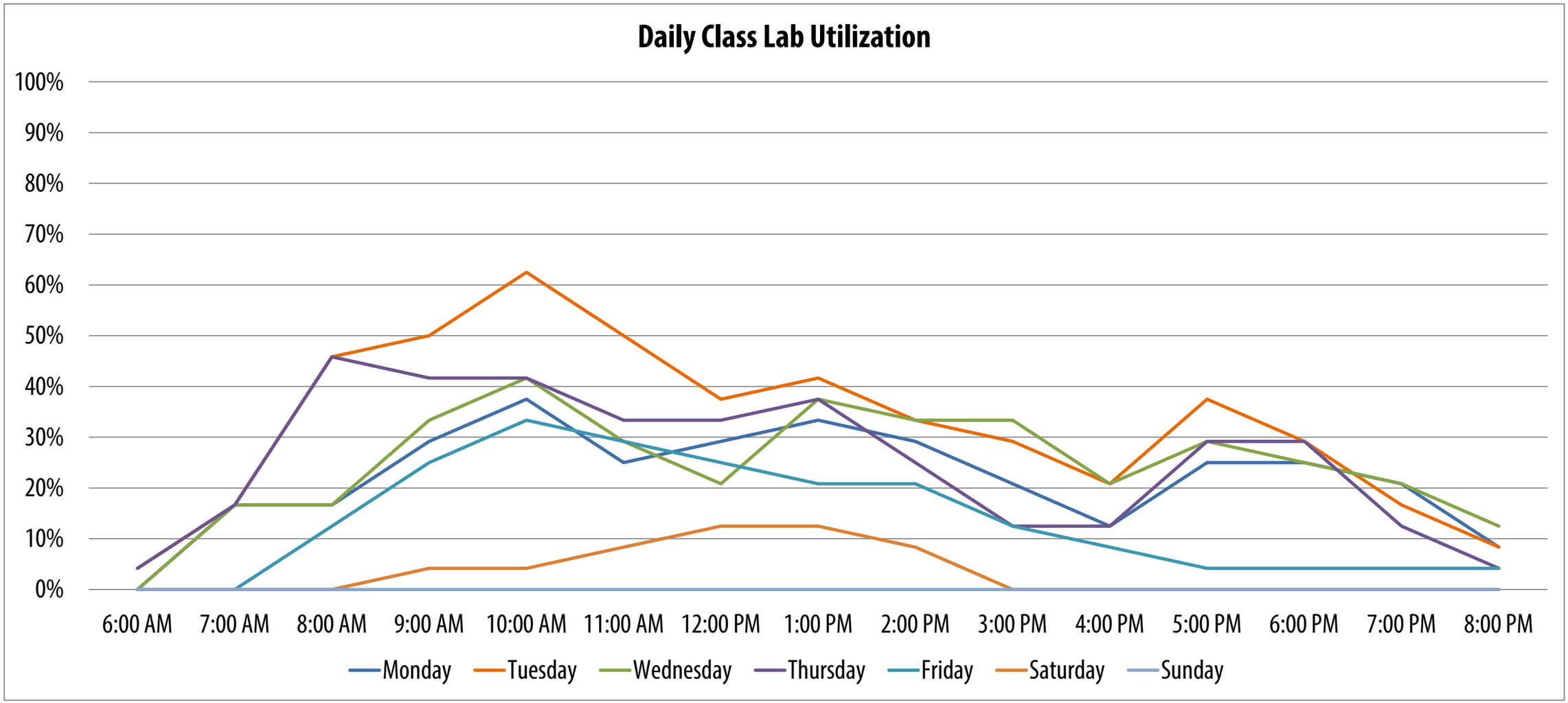
- *Less than **60%***
- ***60-70%***
- *More than **70%***

Class Lab Utilization

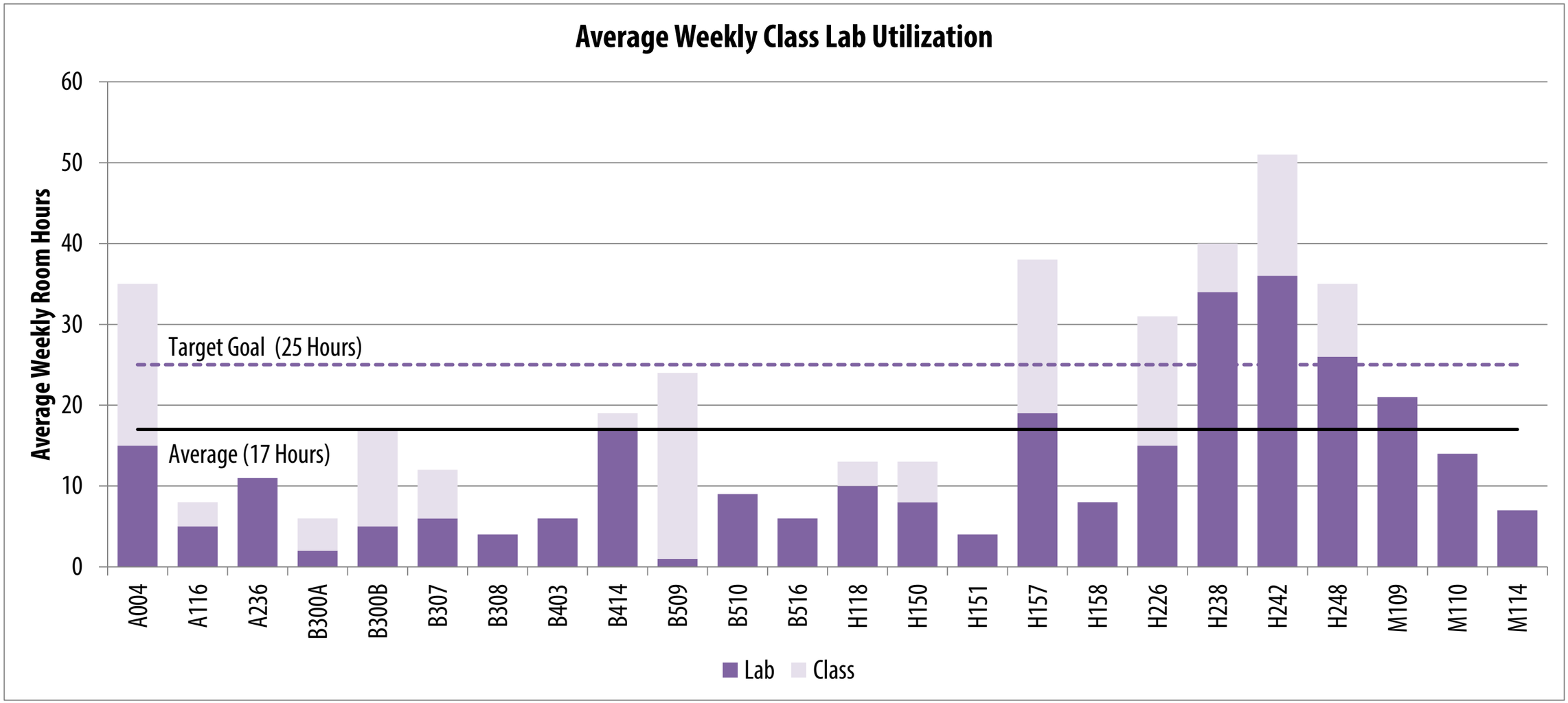
Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
A Building	92%
B Building	82%
Allied Health Building	95%
Math Lab	82%
Total	90%

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
A Building	87%
B Building	67%
Allied Health Building	82%
Math Lab	67%
Total	77%

Class Lab Utilization



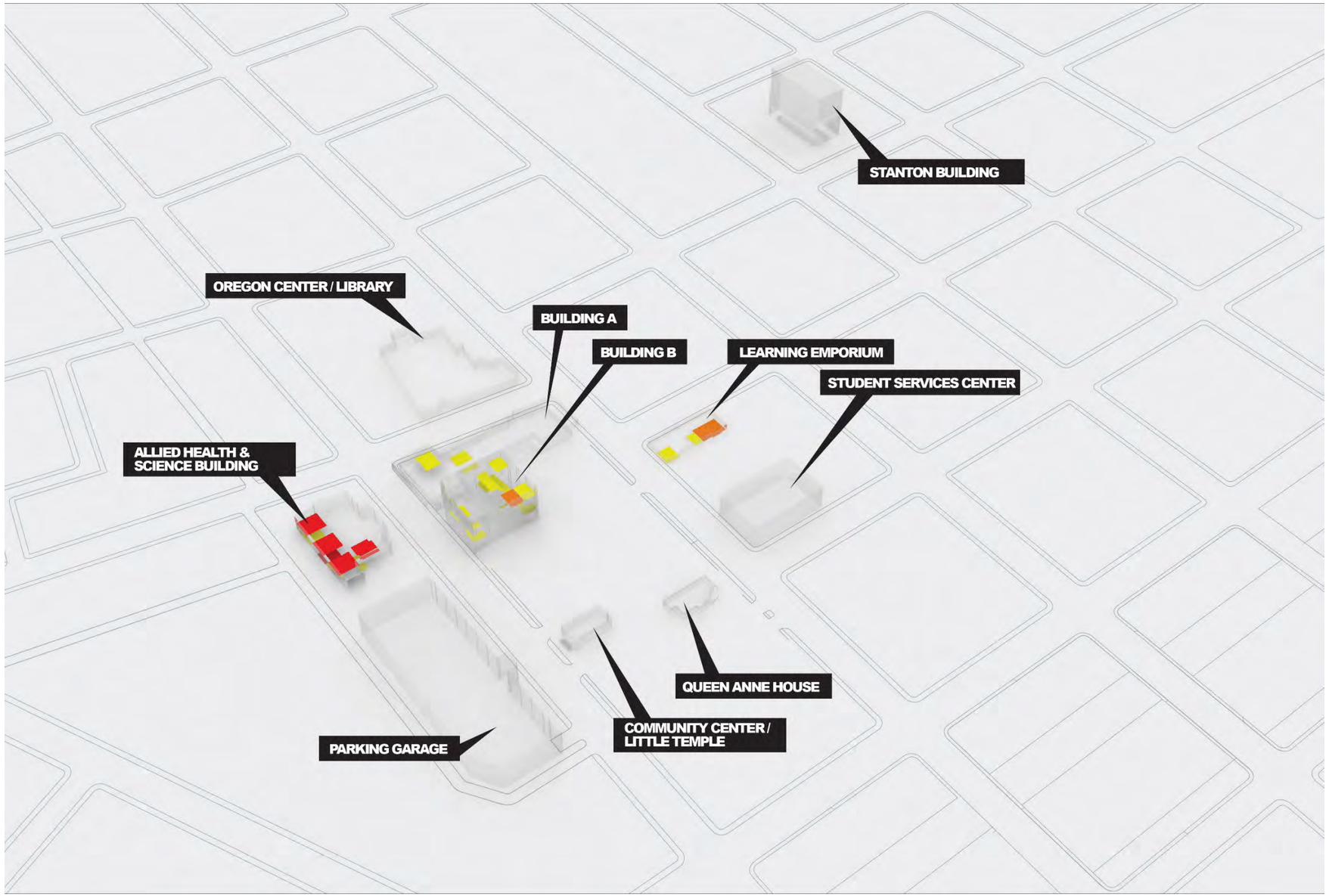
Class Lab Utilization



Labs H170, H171, and H172 are not shown above because there are no credit courses schedule in these rooms listed on the schedule

Rio Grande Campus

Class Lab Utilization



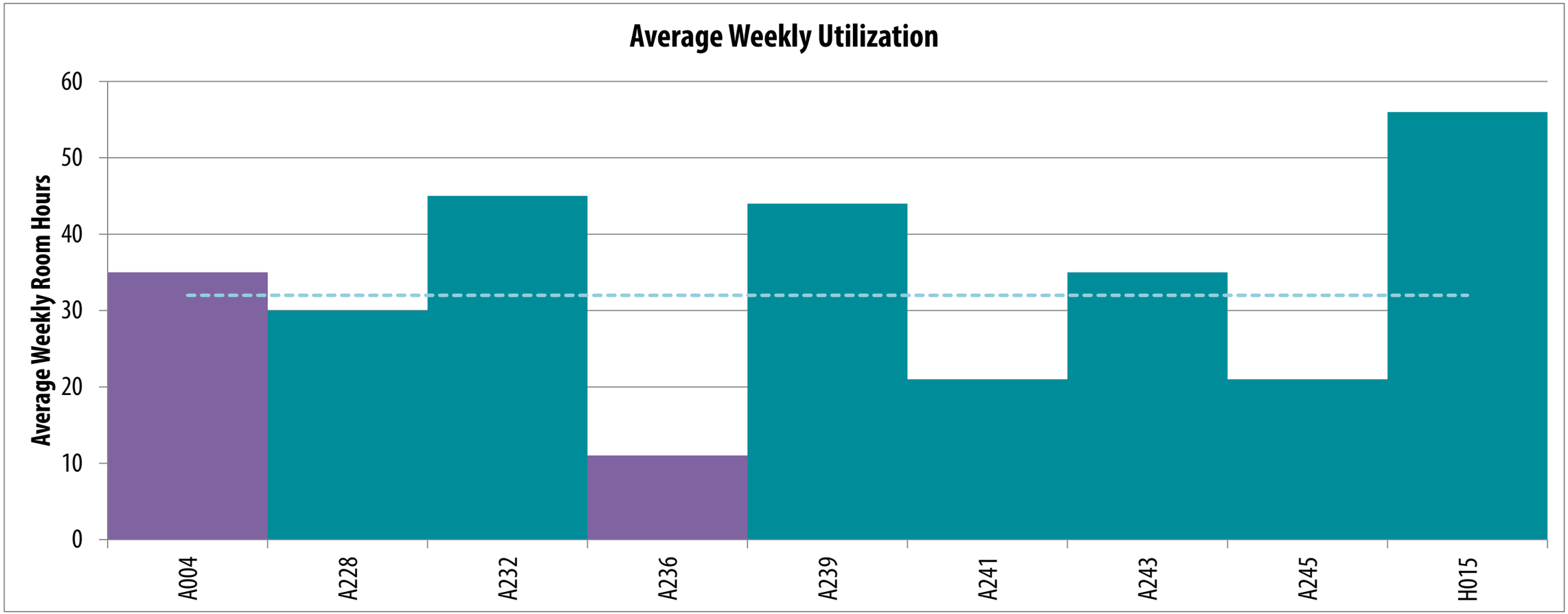
Weekly Hours

- *Less than **20** hours*
- ***20-30** hours*
- *More than **30** hours*

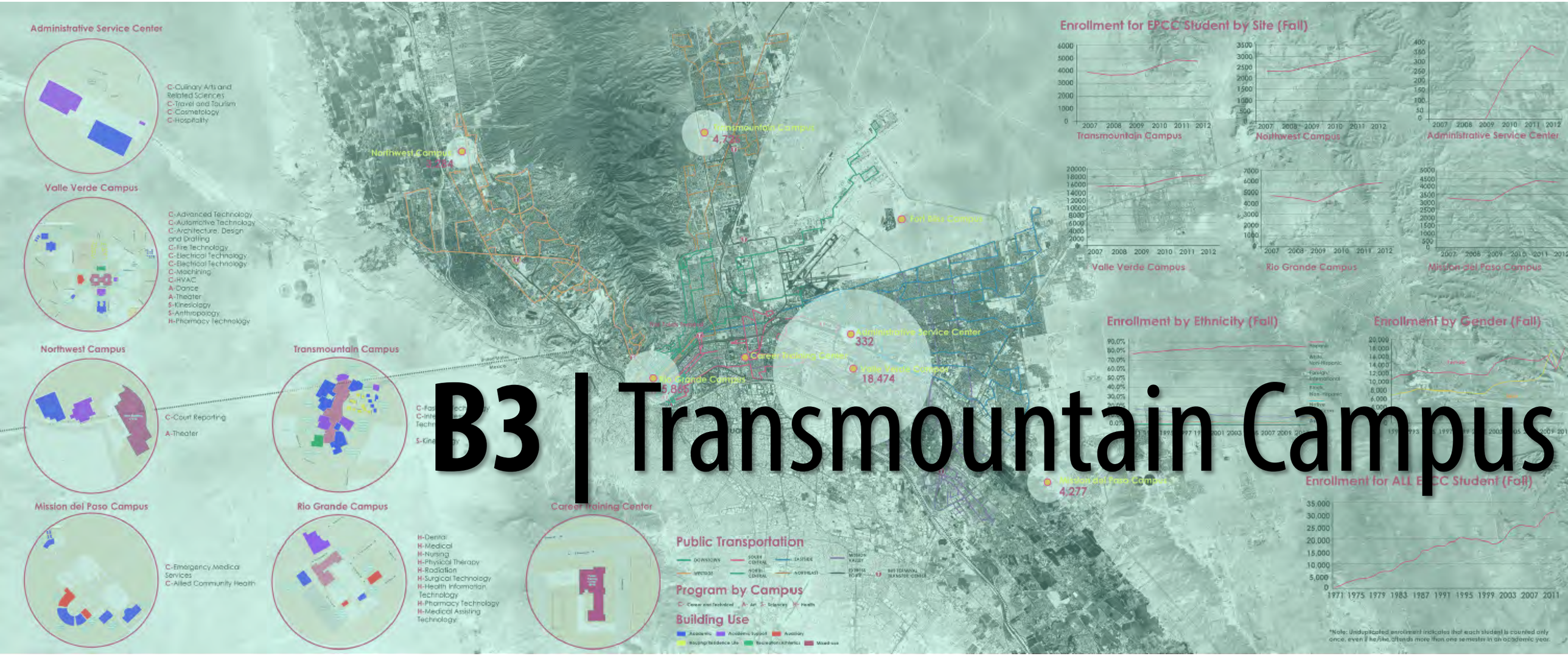
Class Lab Utilization Recap

- Some labs well used, but there is opportunity for better utilization of labs
- Lecture in lab problem

Continuing Education

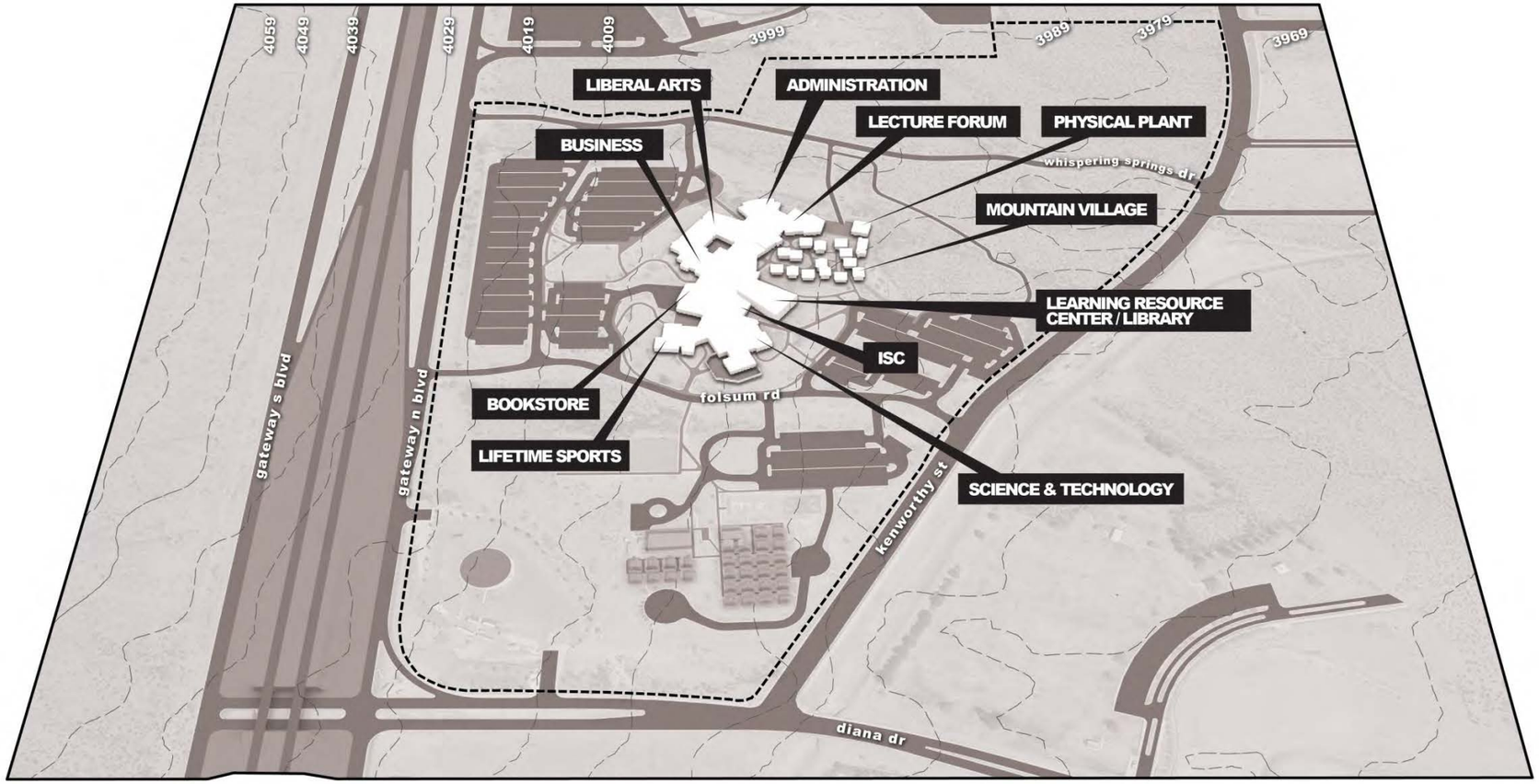


Best Week – Between 11/3 - 11/23 there are 3 courses being scheduled
Worst Week – Between 10/27 - 11/2 there is only 1 course being scheduled



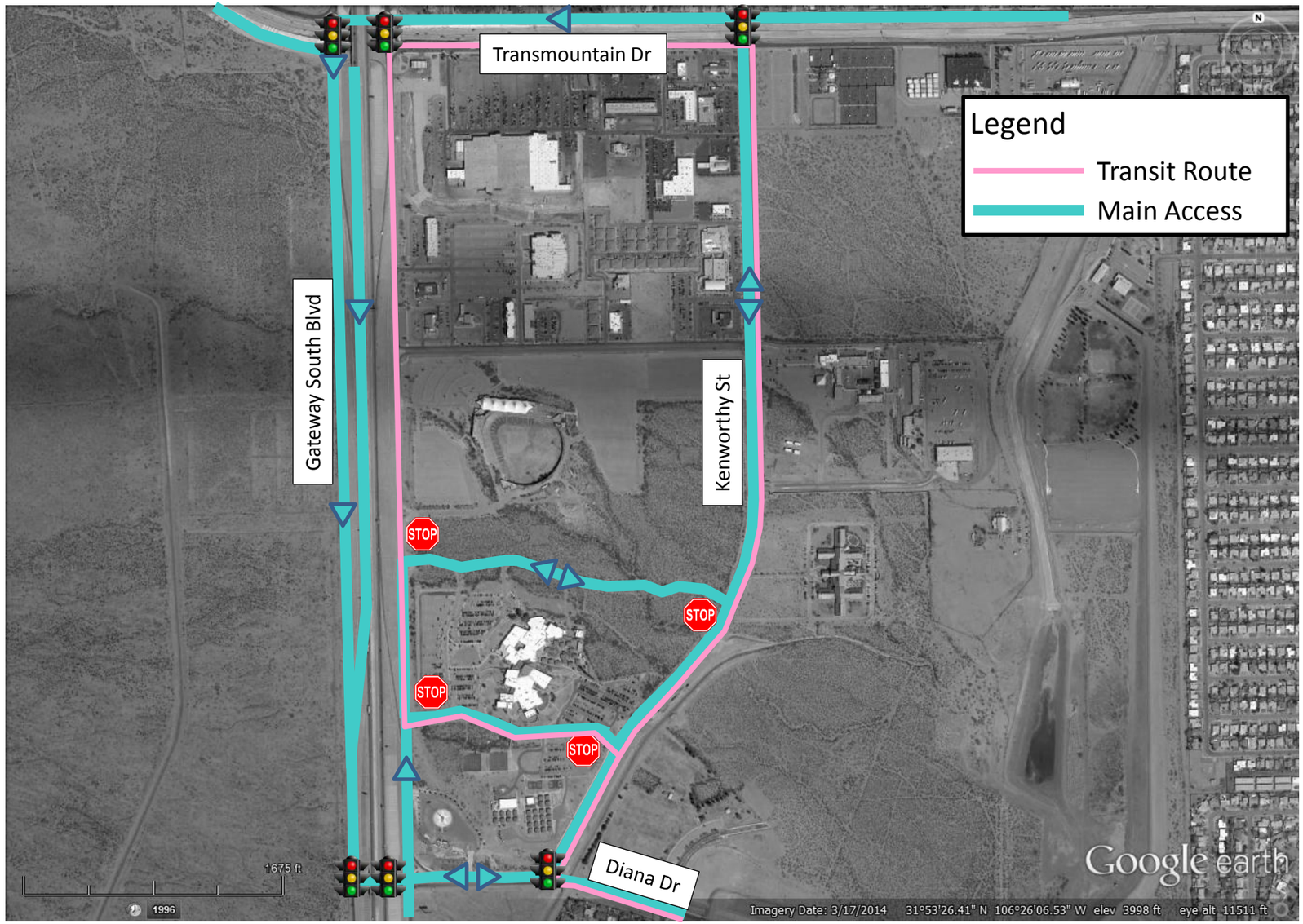
B3 | Transmountain Campus

Transmountain Campus



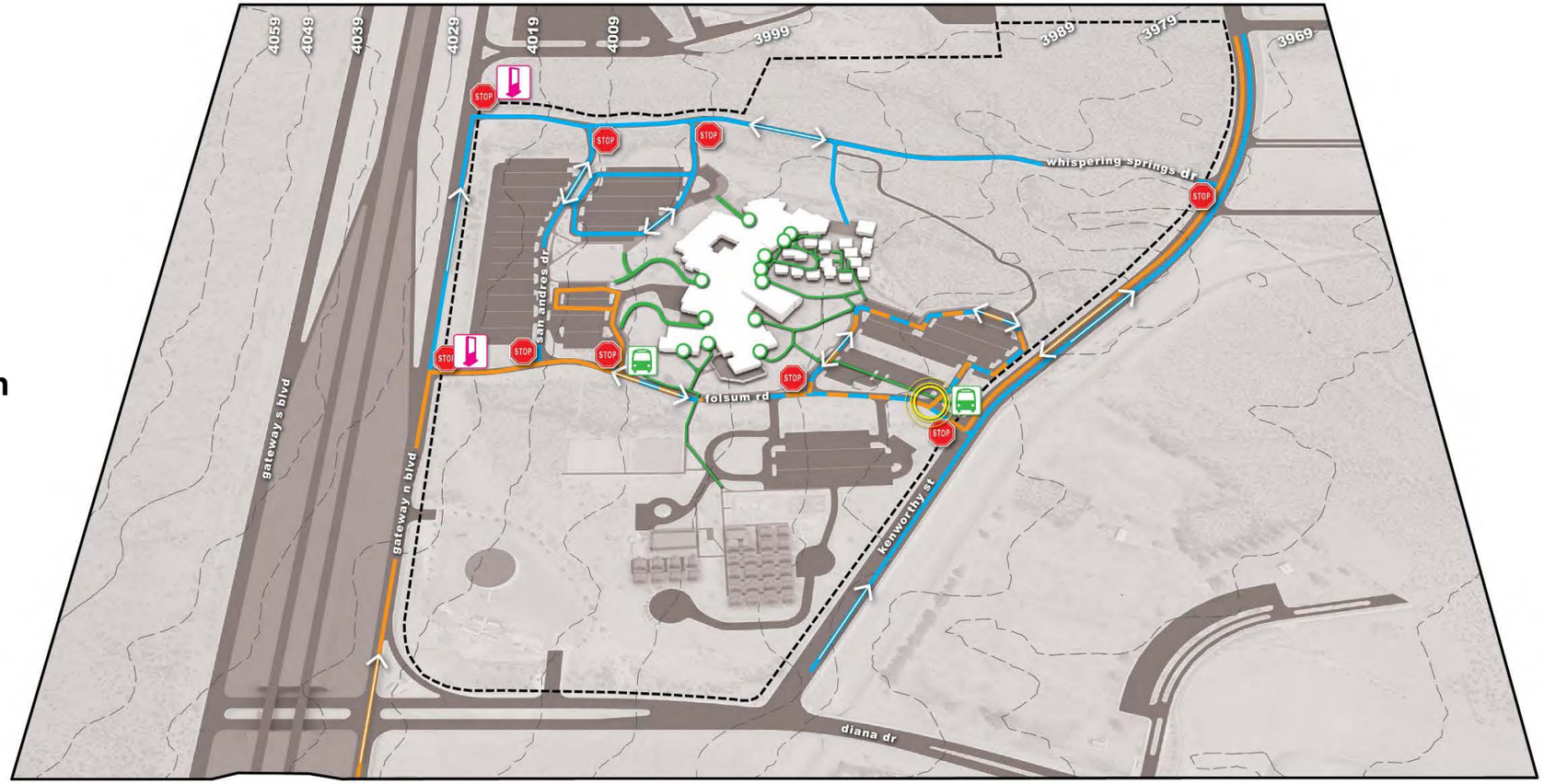
Regional Access

- US-54 North and South Access
  - Diana Exit
- Loop 375 Access
- Local Road Access
  - Gateway North Blvd
  - Transmountain Dr
  - Kenworthy St
- Good transit service
  - Routes 7, 45, 46



Internal Circulation

- Main entrance through Folsom Road
- Good internal circulation
- No clear pedestrian paths from parking lots to campus present potential for conflicts
- First driveway at Folsom Rd is too close to the Kenworthy St entrance
- Depending on future campus expansion a Ring Road can provide better circulation and connectivity



Legend

- Vehicular Movement – Primary
- Vehicular Movement – Secondary
- Pedestrian Movement
- Building Entrance
- Bus Stop
- Sign & Monuments
- Problem Area

Transmountain Campus

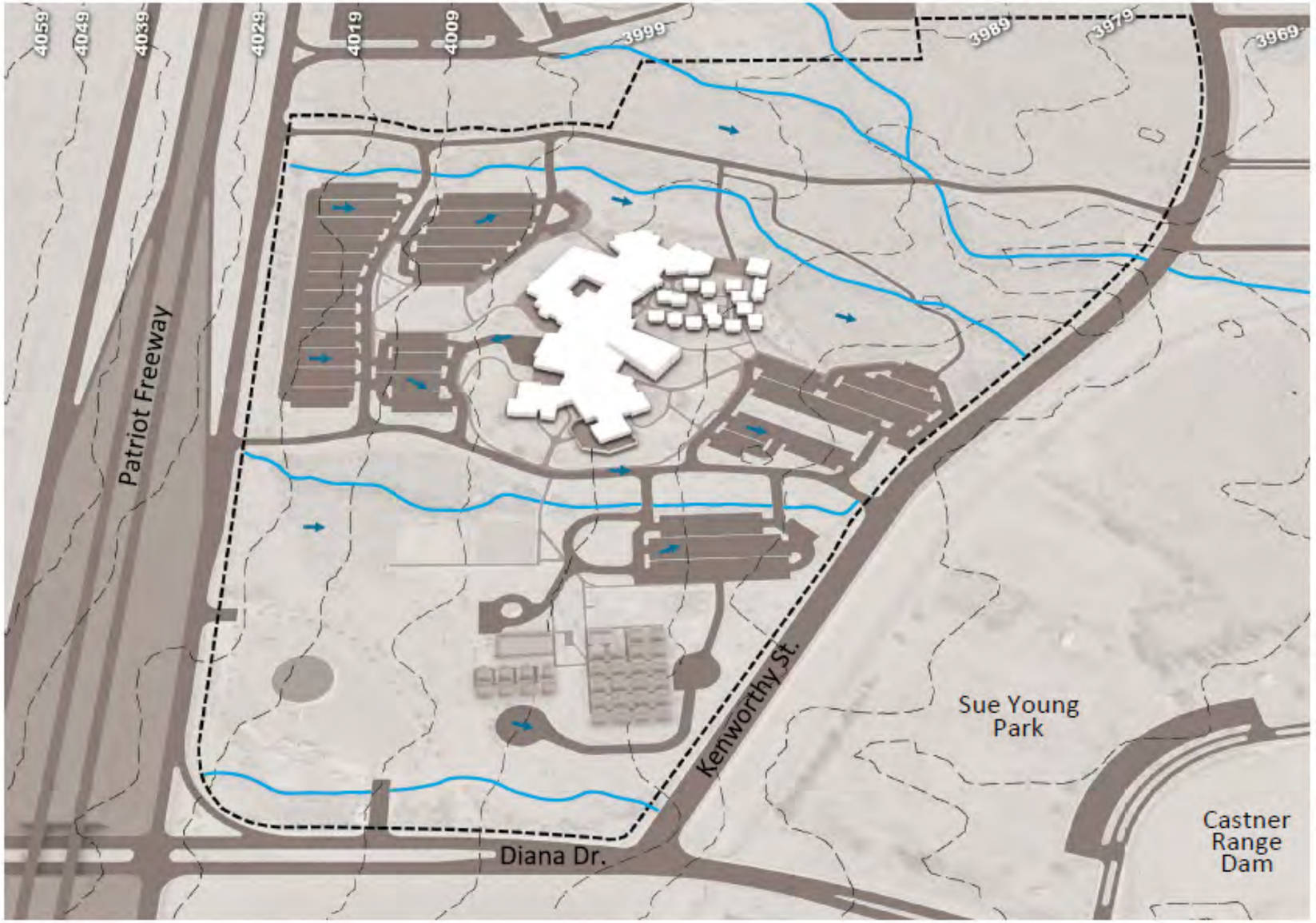
Signage & Wayfinding

- **There is one main building with many entrances.**
- **Room numbers break sequence.**
- **Faculty offices are intermixed with classrooms and are not well designated.**
- **Community Theater attracts the public to campus.**
- **High school feeds into the campus, requiring wayfinding for pedestrian traffic to and from the campuses.**
- **The campus is lacking in wayfinding directionals and directory information upon approach on foot as well as in a vehicle.**
- **The building identity is inconsistent and not readily seen from the parking areas.**
- **The bus stops require signage to help direct pedestrians with minimal car traffic conflict.**

Transmountain Campus

Hydrology

- Natural flow towards Castner Range Dam
- Arroyos identified - multiple
- Flood zone D – areas of determined, but possible, flood hazards
- Property zoning – (R-4)
- Future expansion will require on-site ponding
- Local flooding issues should be addressed during future development



Legend

- Ponding areas
- Storm sewer system
- Arroyos
- Storm runoff flow
- Flood zone
- Localized street flooding (per SMP)

Transmountain Campus

Site Utilities

- Adjacently located site utilities
- Water & Sewer provided by El Paso Water Utilities (EPWU)
- Gas provided by Texas Gas Service
- Electric provided by El Paso Electric
- Expansion requires evaluation of each utilities' capacity vs. increased demands

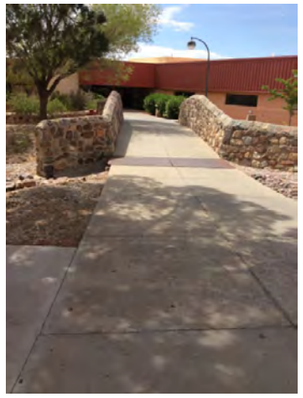
Legend

- Potable water
- Sanitary sewer
- Natural gas (pending)
- Electric
- Telecomm (pending)

Building Condition Assessment

Exterior Space and Entry

1. No defined exterior building entries or front entrance
2. “Desire” paths created in landscape; potential for student trails/paths.
3. Drainage flooding problems
4. Landscape requires maintenance; potential for exterior usable spaces.



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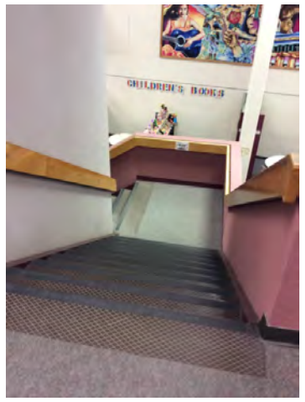
Interior Common Space and Elements

5. Furniture needs replacement .
6. Code violations such as door hardware, restrooms, handrails and stairs.
7. Stage is not ADA accessible.
8. Potential to utilize interior lobby/mall for improving study/hangout space.
9. Small classrooms.
10. Improve department signage/identification.



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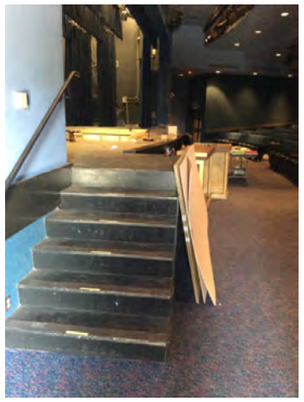

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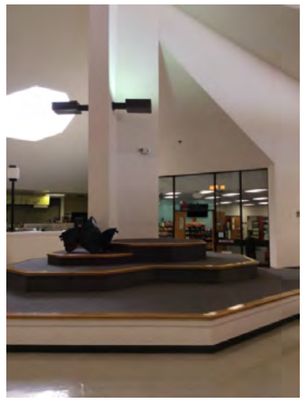

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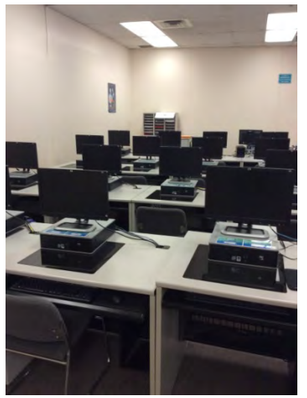

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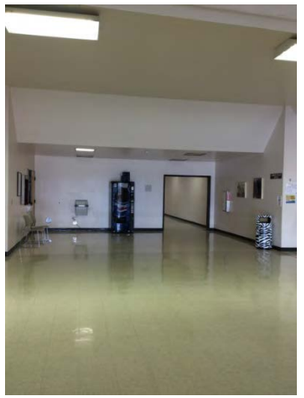


10.

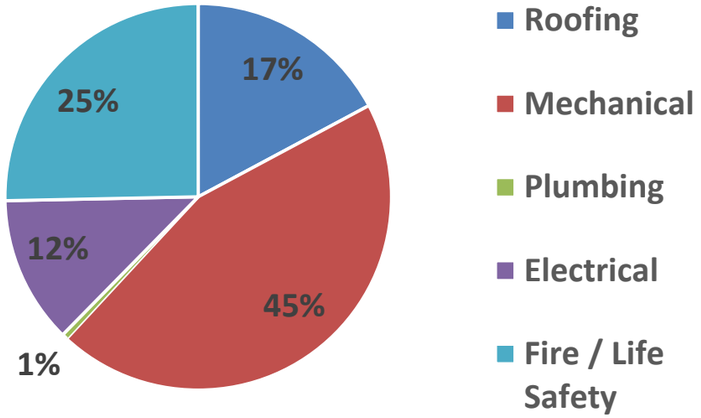
Transmountain Campus

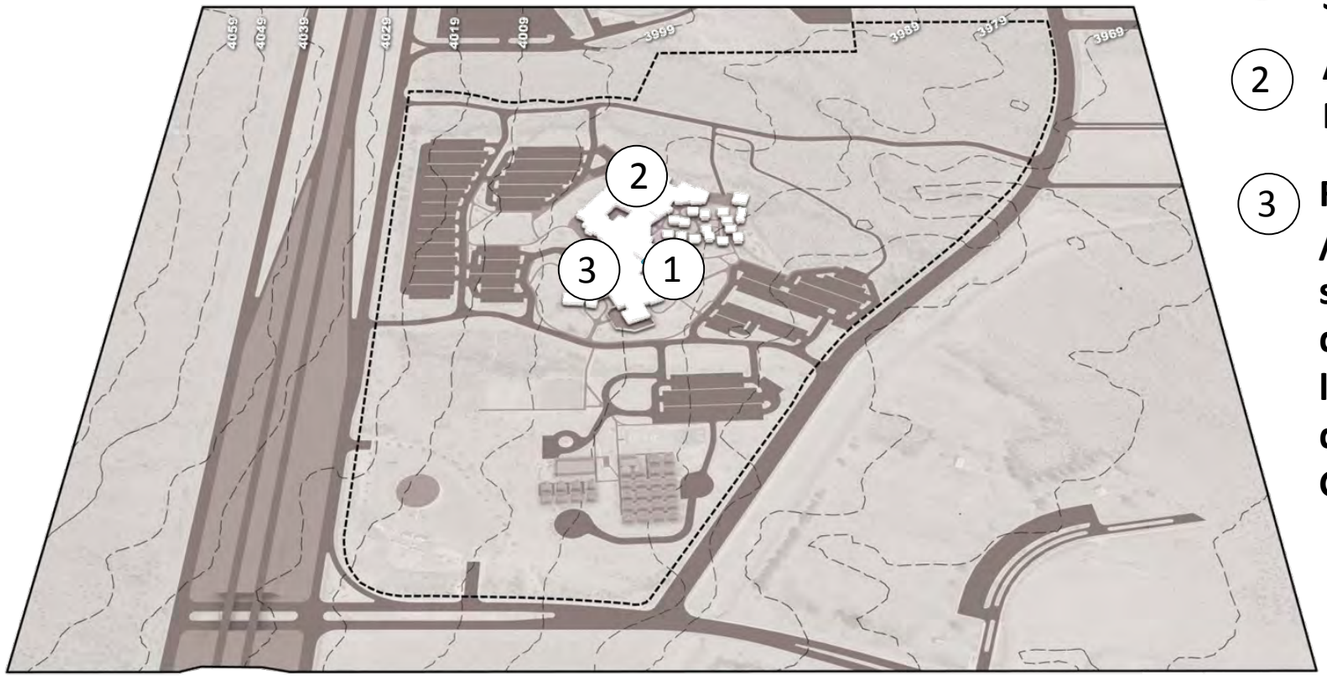
Mechanical/Electrical Assessment

Existing Conditions

- 2 Chillers (600 tons) w/ Ice Storage, Boilers
- Fan Room & Roof Mounted AHUs
- Individual Utility metering at Each Building.

Priority 1-3 Deficiencies $6.6M





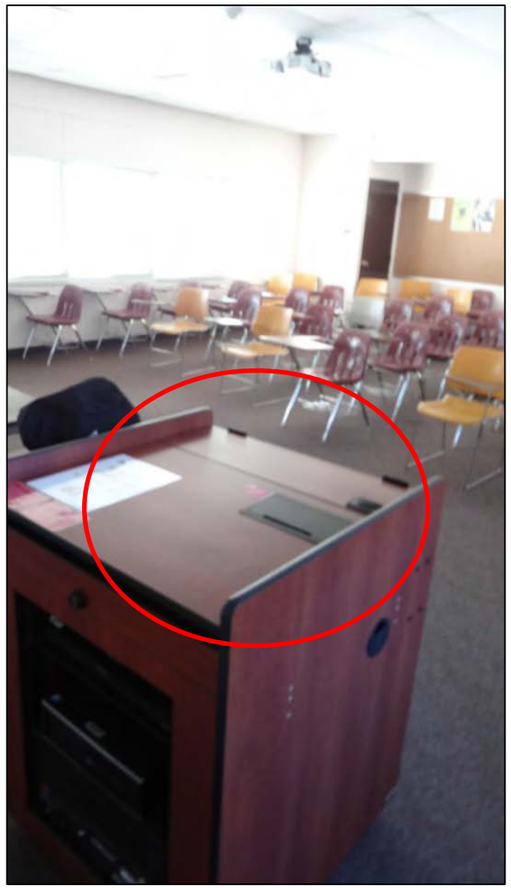
1. Install Fire Sprinklers
2. Air Handler Replacement
3. Replace/upgrade / add FA systems, replace defective egress lighting, security devices, add GFCI recepts

Future Available Capacity

- Cooling - 150 tons (Redundancy)
- Heating – at Capacity, Short
- Electrical Capacities to be determined from Utility Co. Peak Demand Data

Technology Assessment

1. Missing local computer monitor in several rooms.
2. Fixed chairs do not support collaboration in many classrooms.
3. Wireless access is limited across the campus including in portables.
4. Theater/auditorium utilizes end-of-life and end-of-support equipment.



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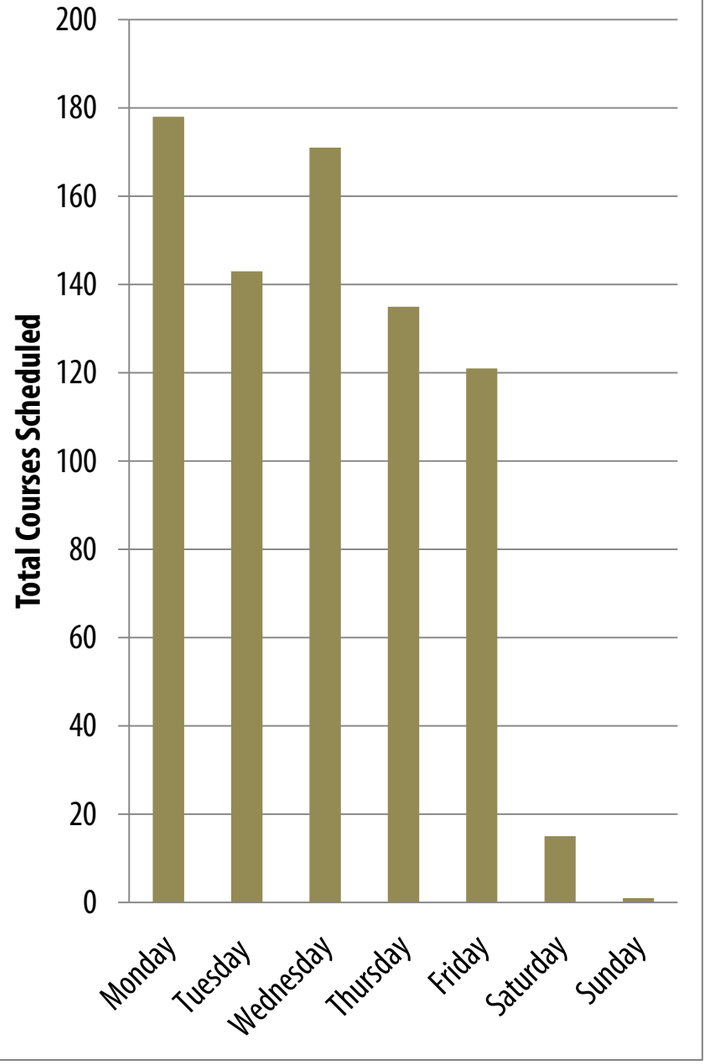
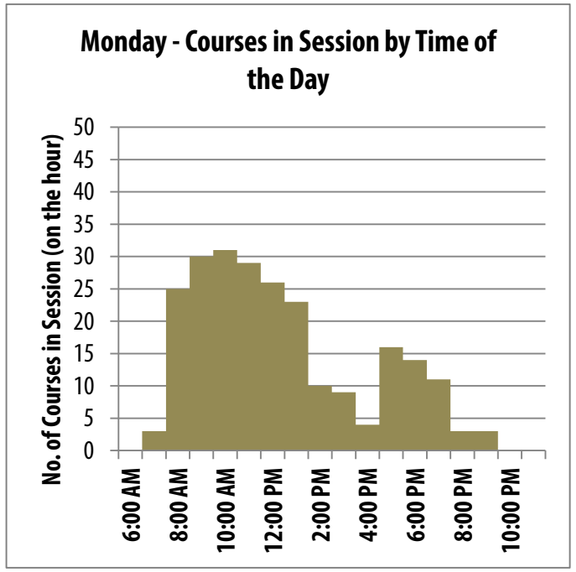
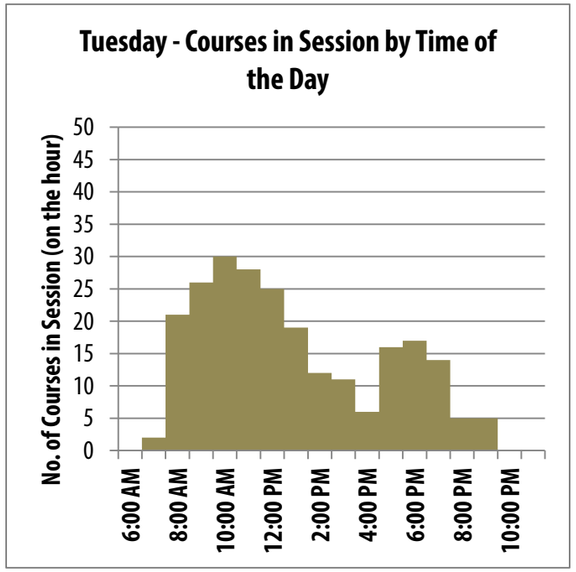
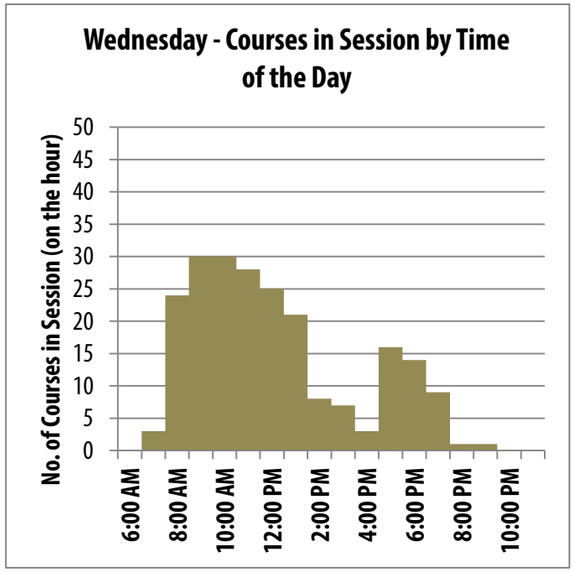
Transmountain Campus

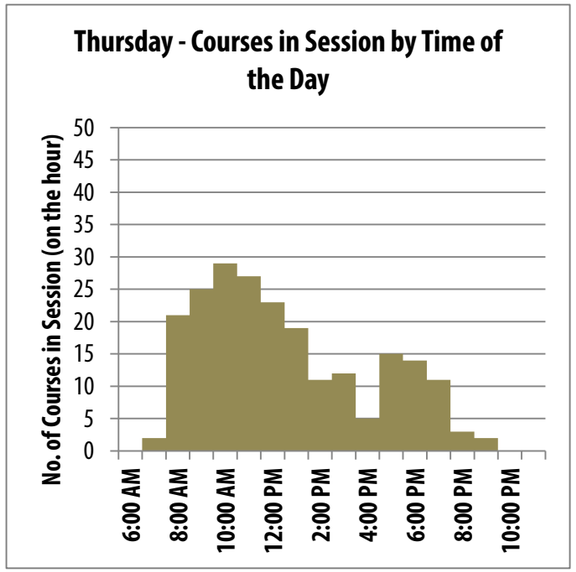
Total Courses in Session

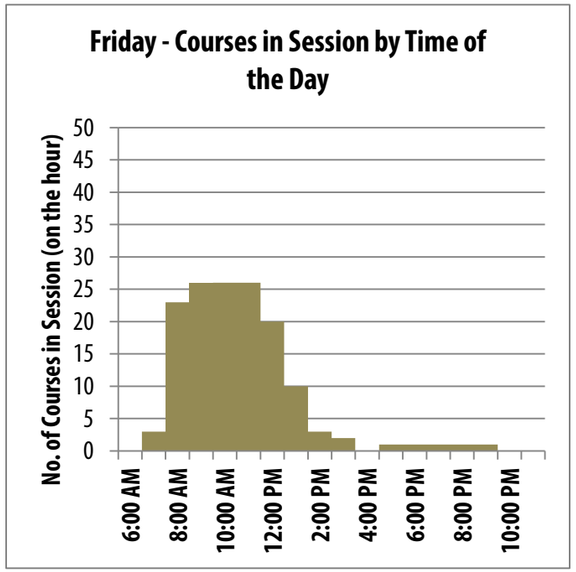


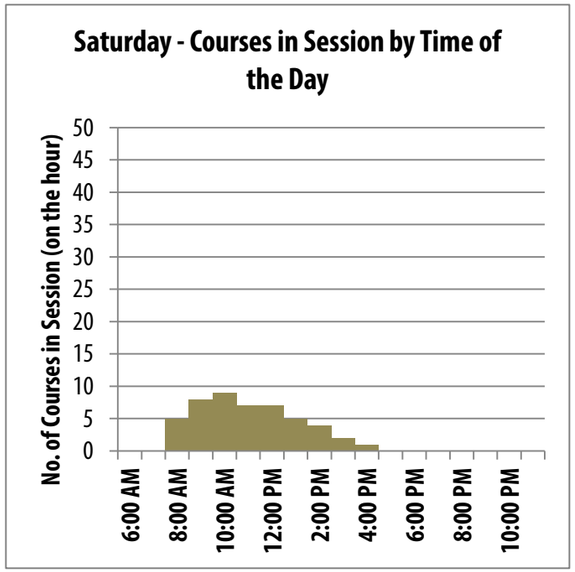






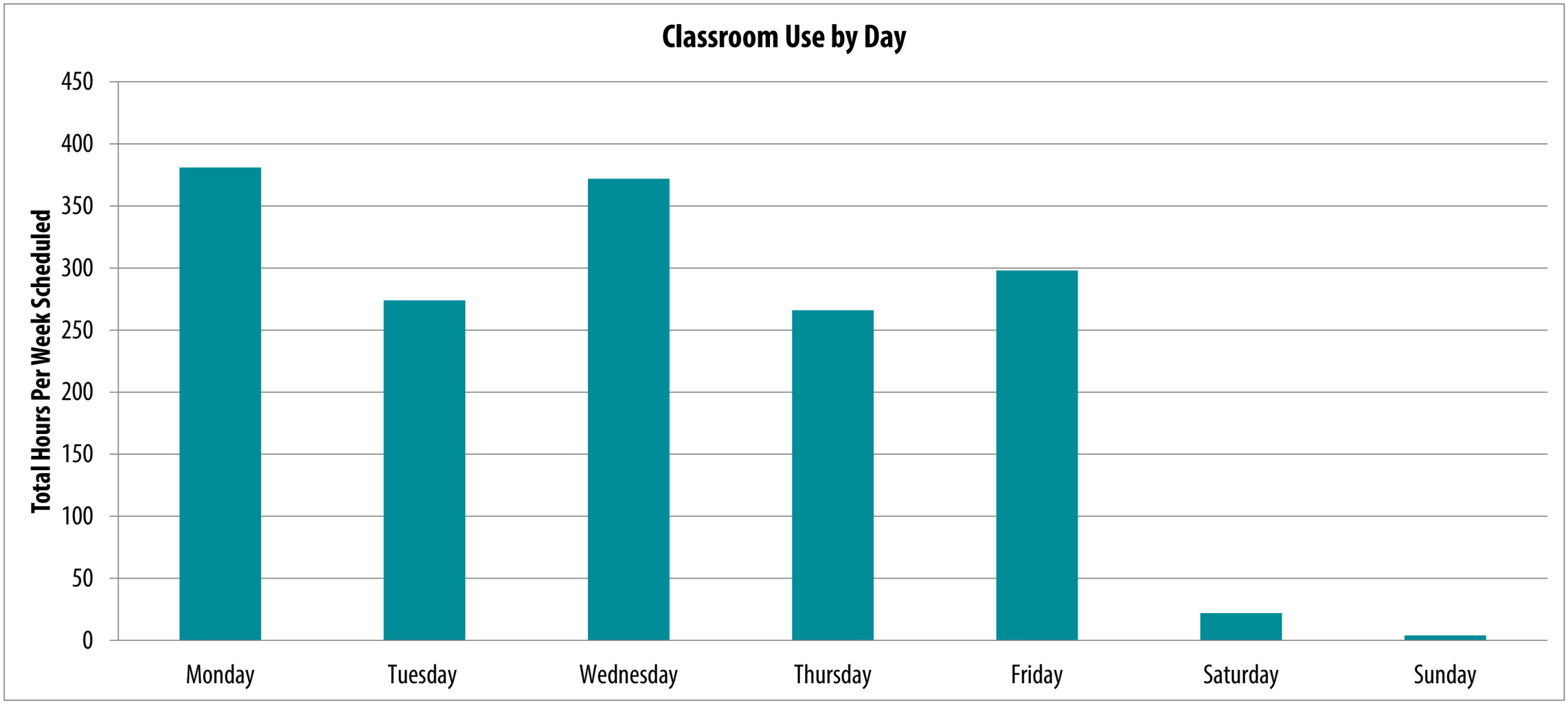






Transmountain Campus

Classroom Utilization



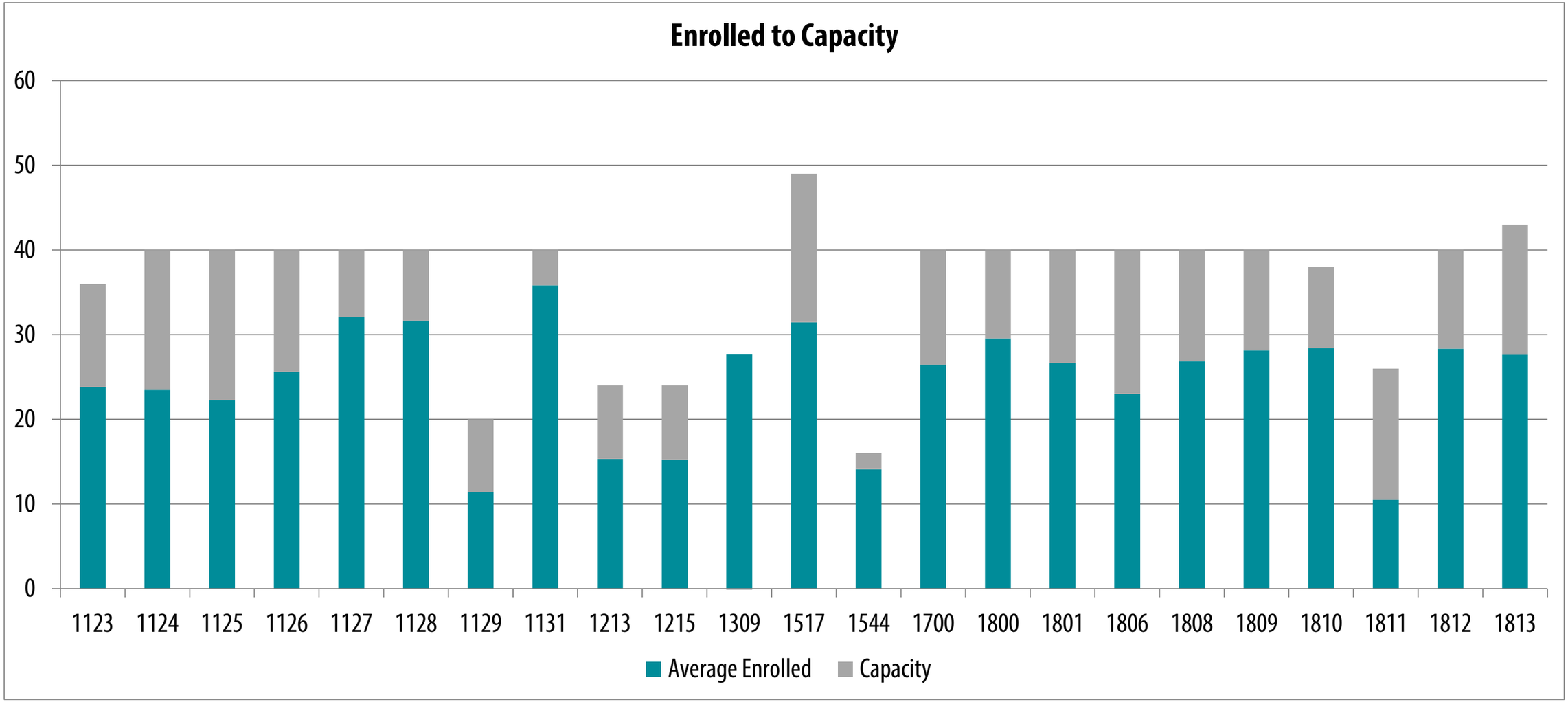
Transmountain Campus

Classroom Utilization

Building	No. of Classrooms	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly CR Hours	Average Weekly Hours per CR
Liberal Arts Building	8	296	9,188	97%	346	43
Humanities Buildings	10	387	6,443	52%	242	24
Science and Technology	2	65	1,693	81%	67	34
Business Area	2	48	459	30%	30	15
Bookstore Area	1	24	330	43%	12	12
Total	23	820	18,113	69%	697	26

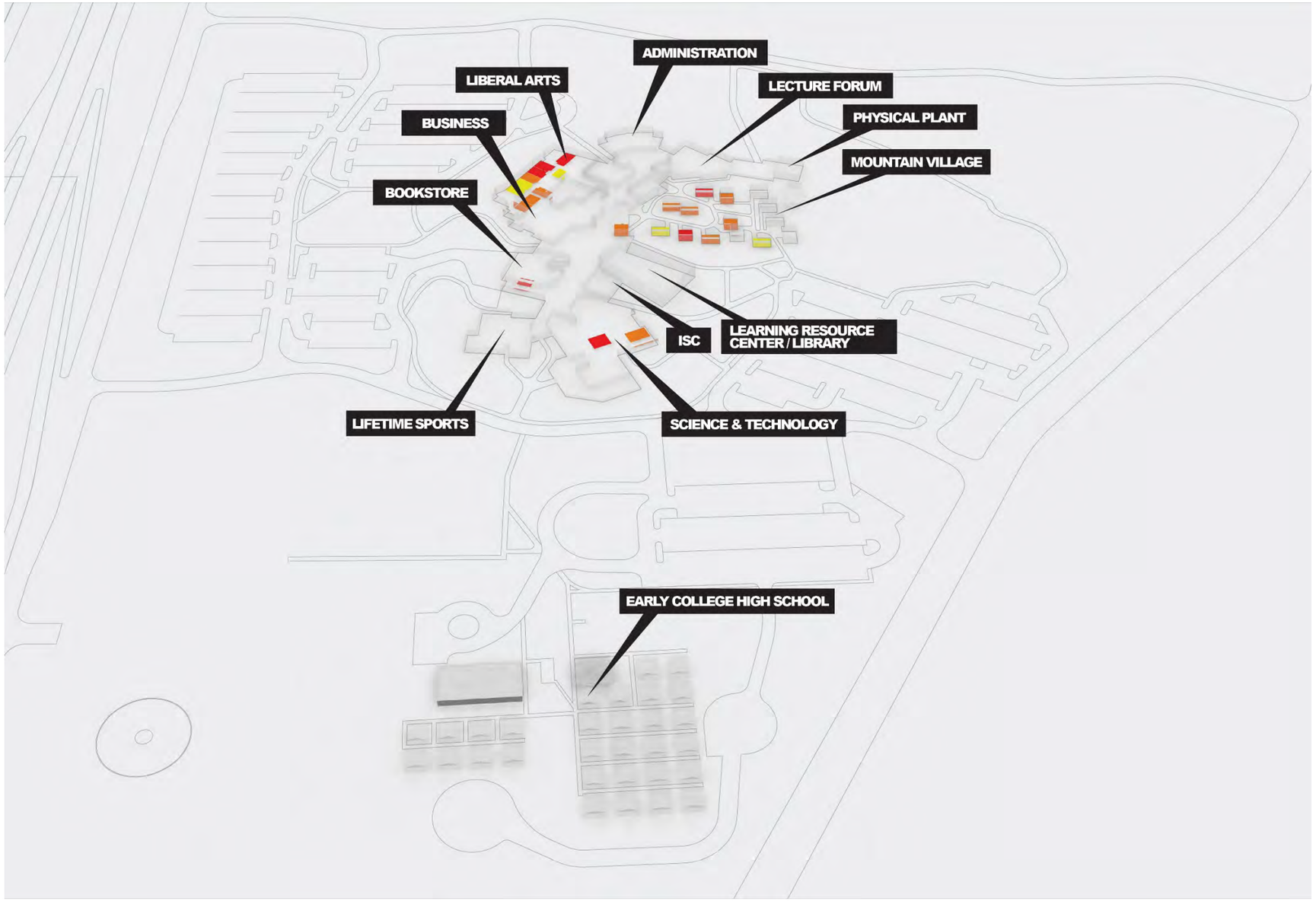
Transmountain Campus

Classroom Capacity



Transmountain Campus

Classroom Capacity



Enrolled to Capacity

- *Less than **60**%*
- ***60-70**%*
- *More than **70**%*

Transmountain Campus

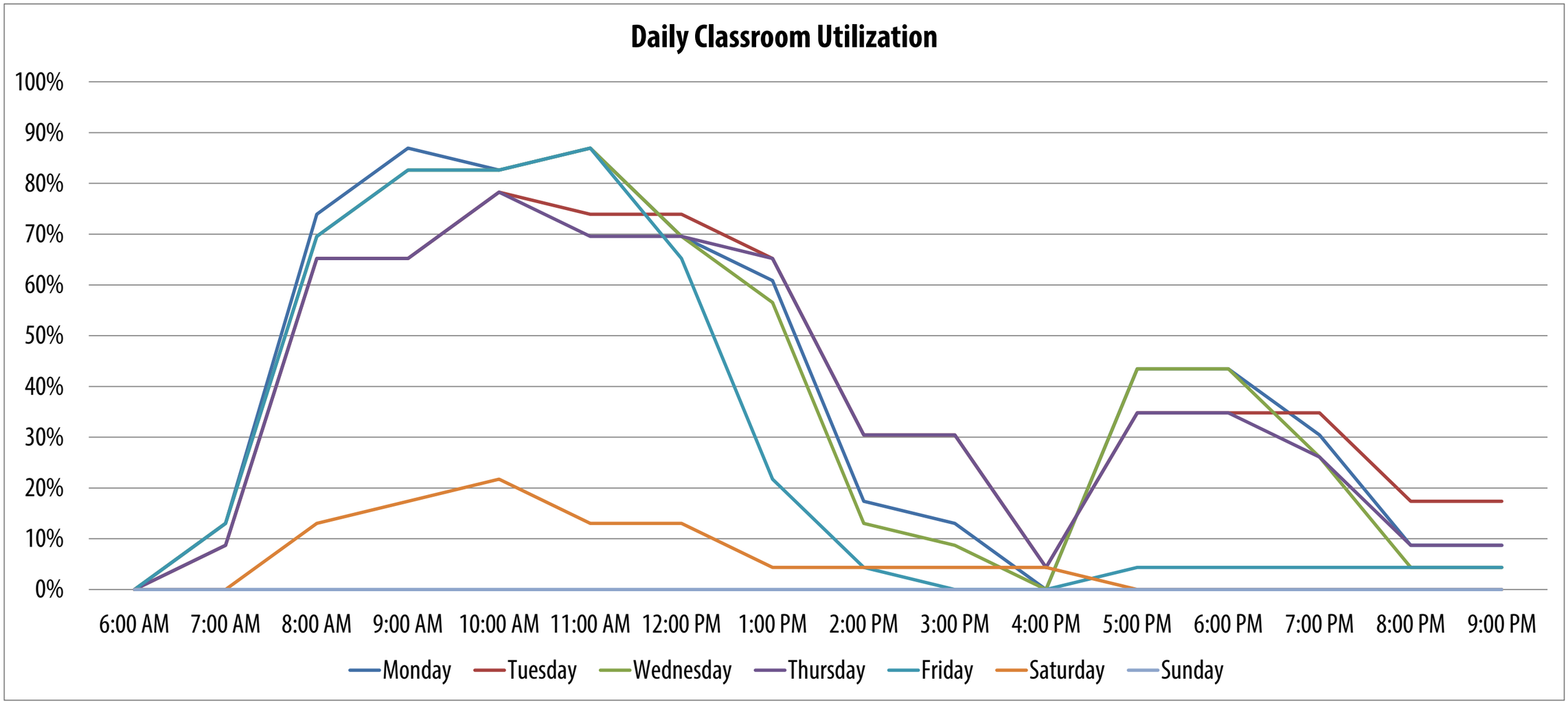
Classroom Utilization

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
Liberal Arts Building	82%
Humanities Buildings	82%
Science and Technology	89%
Business Area	75%
Bookstore Area	115%
Total	83%

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
Liberal Arts Building	70%
Humanities Buildings	67%
Science and Technology	74%
Business Area	64%
Bookstore Area	115%
Total	69%

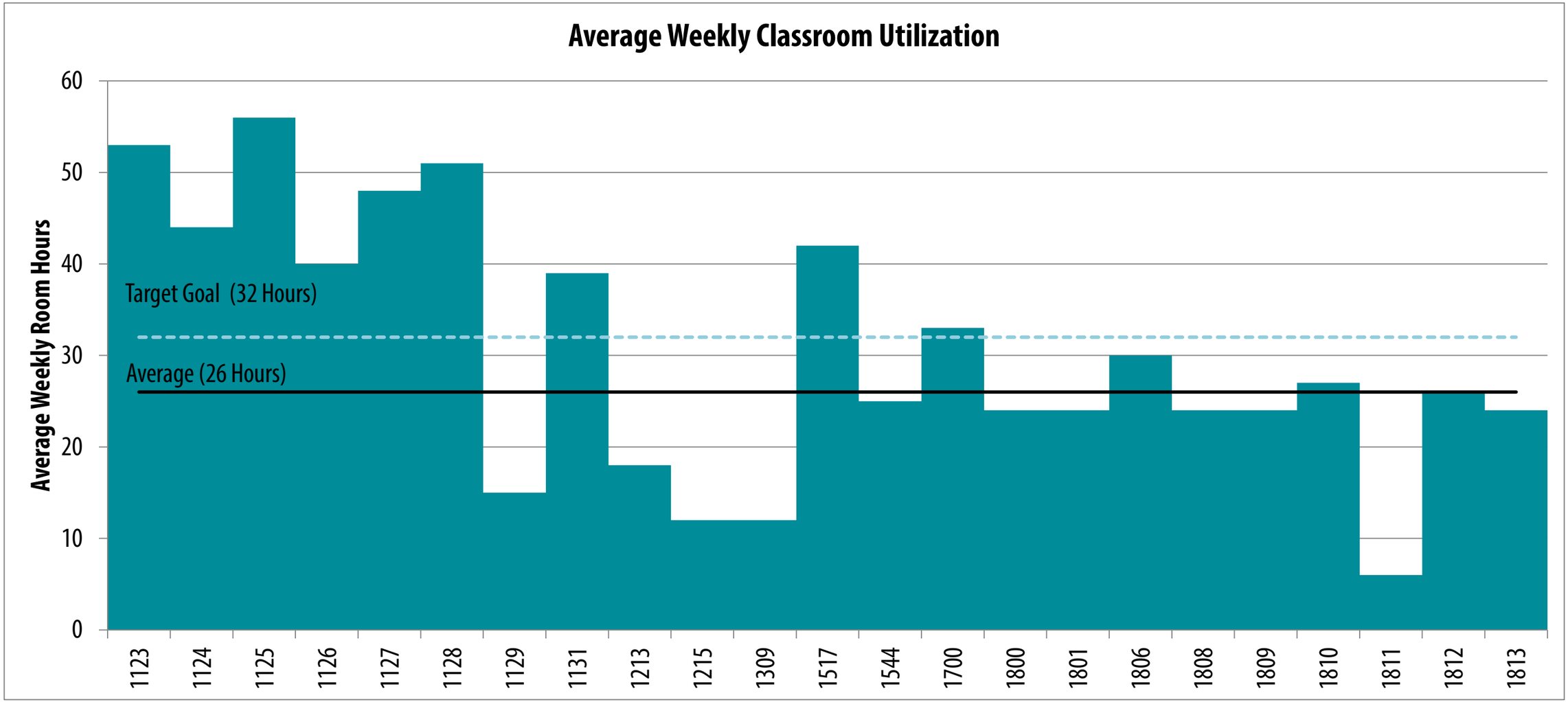
Transmountain Campus

Classroom Utilization



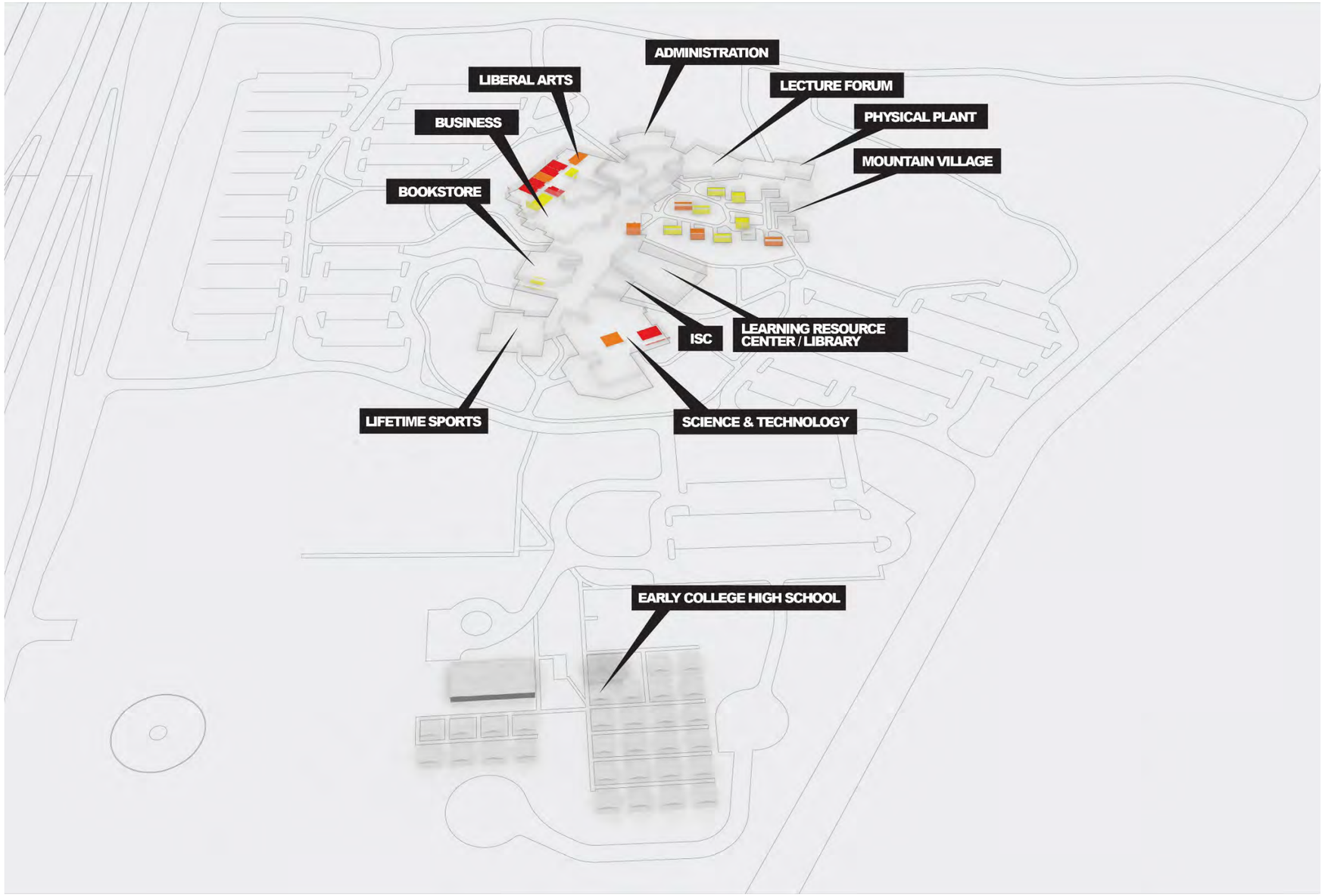
Transmountain Campus

Classroom Utilization



Transmountain Campus

Classroom Utilization



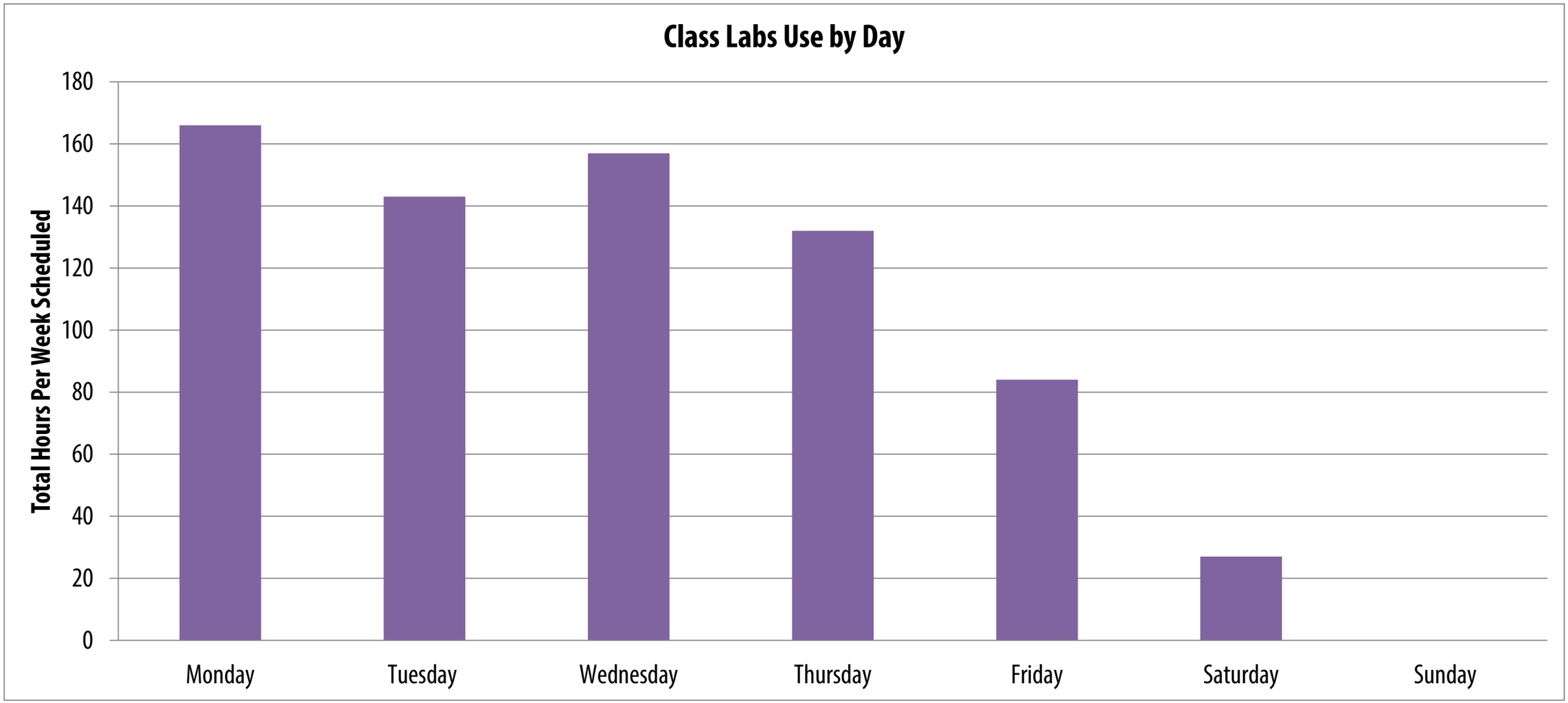
Weekly Hours

- *Less than **25** hours*
- ***25-40** hours*
- *More than **40** hours*

Classroom Utilization Recap

- Friday AM use is excellent; tanks in the PM
- A few classrooms can be better utilized (hours/week) and enrollment/capacity - opportunity

Class Lab Utilization

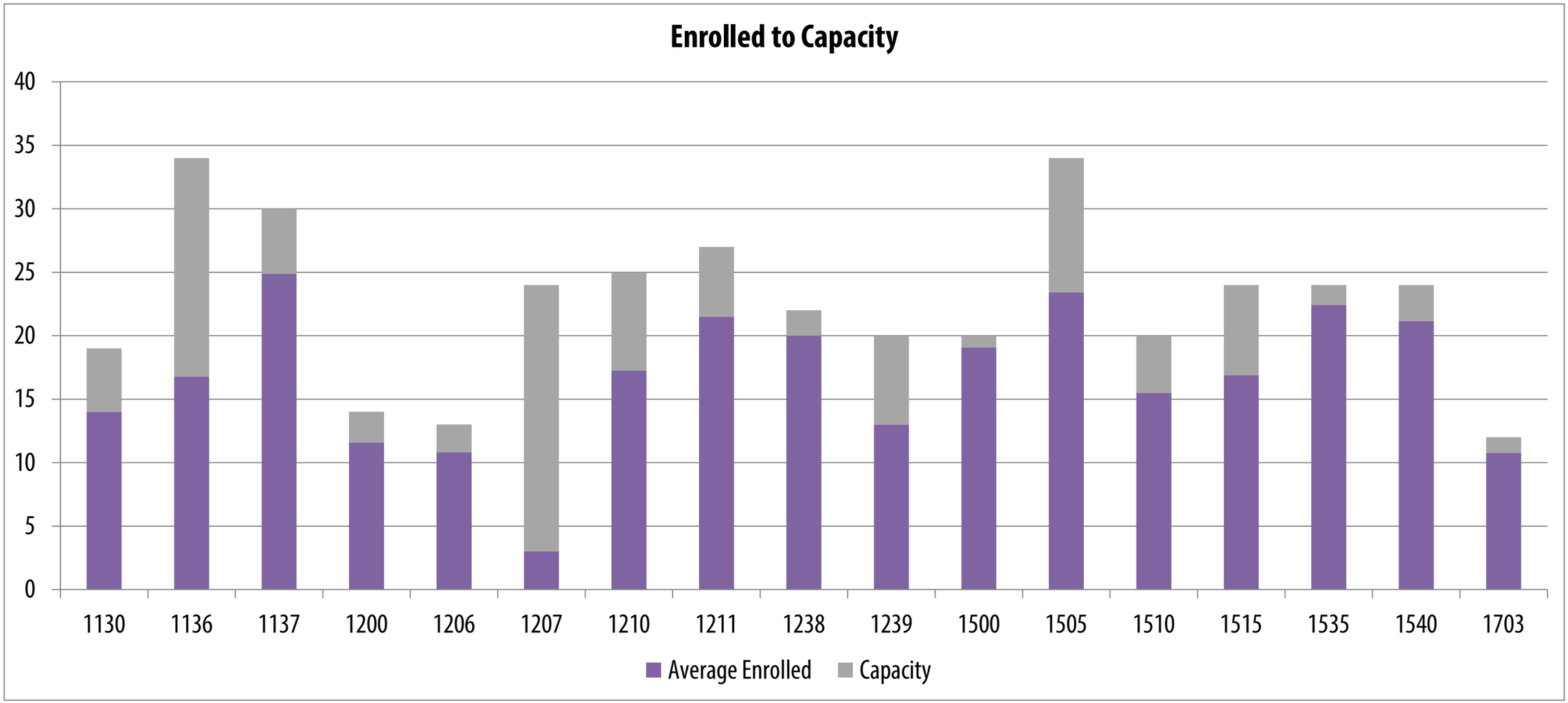


Class Lab Utilization

Building	No. of Class Labs	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly Lab Hours	Average Weekly Hours per Lab
Liberal Arts Building	3	83	1,159	56%	56	19
Humanities Buildings	1	12	184	61%	17	17
Science and Technology	6	146	4,343	119%	214	36
Business Area	7	145	1,572	43%	104	15
Total	17	386	7,258	75%	391	22

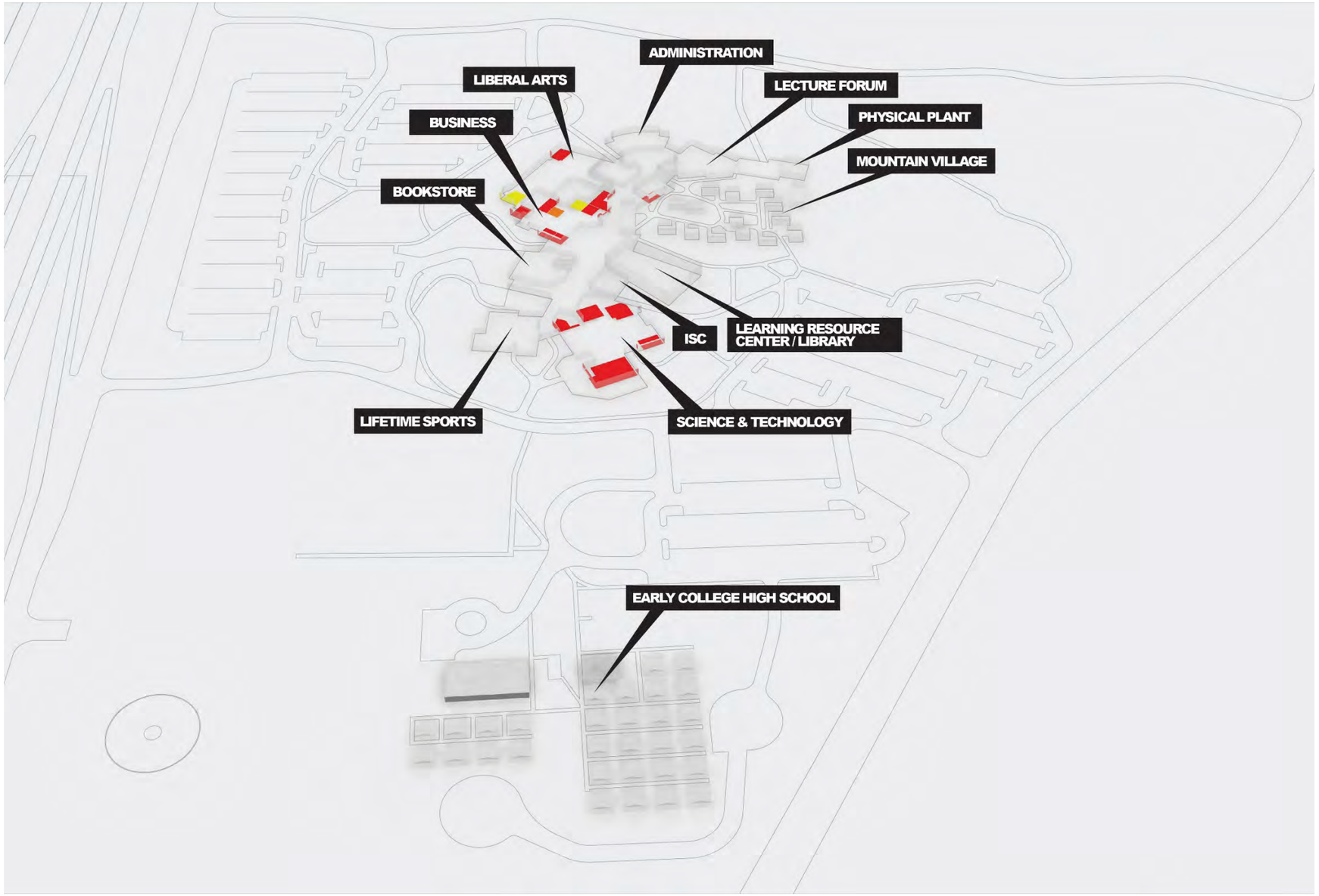
Transmountain Campus

Class Lab Capacity



Transmountain Campus

Class Lab Capacity



Enrolled to Capacity

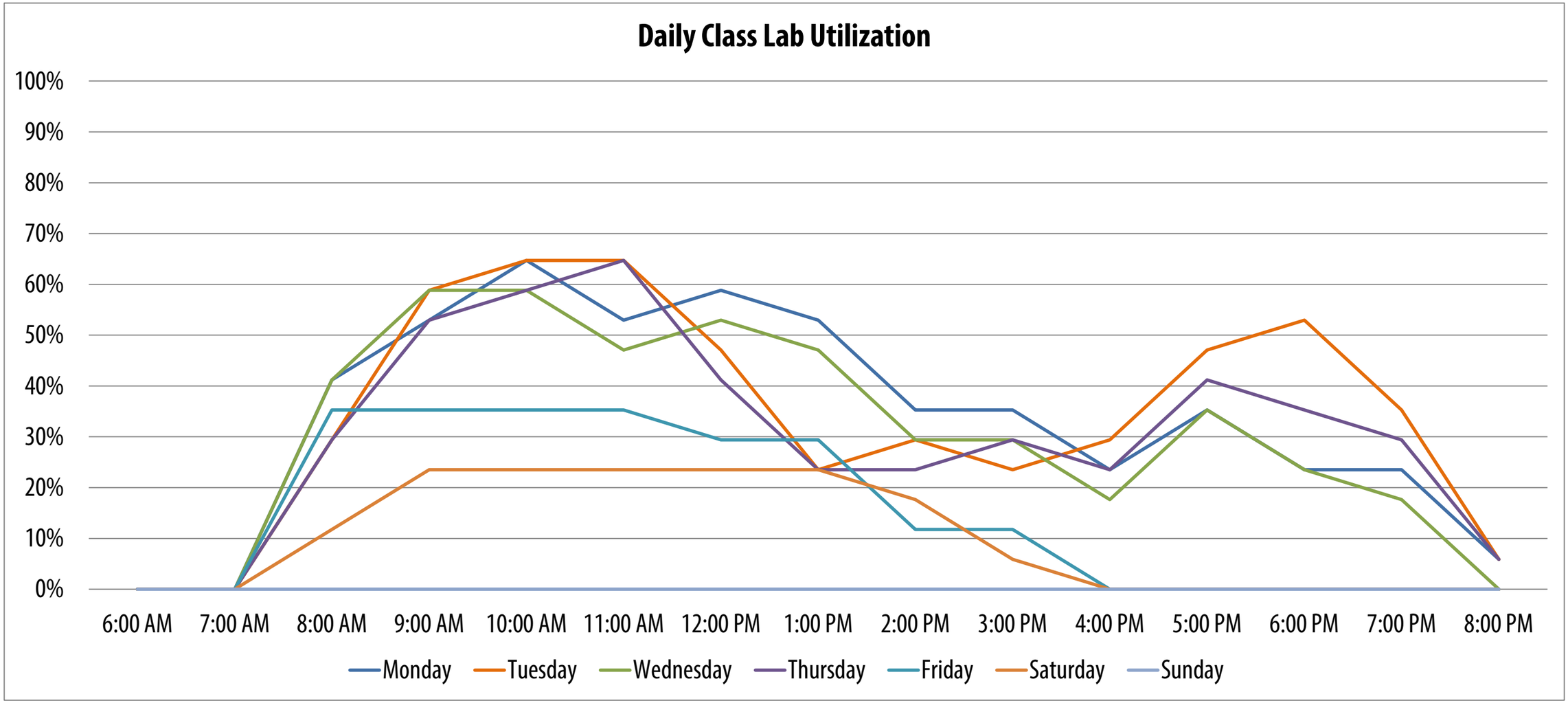
- *Less than **60**%*
- ***60-70%***
- *More than **70**%*

Class Lab Utilization

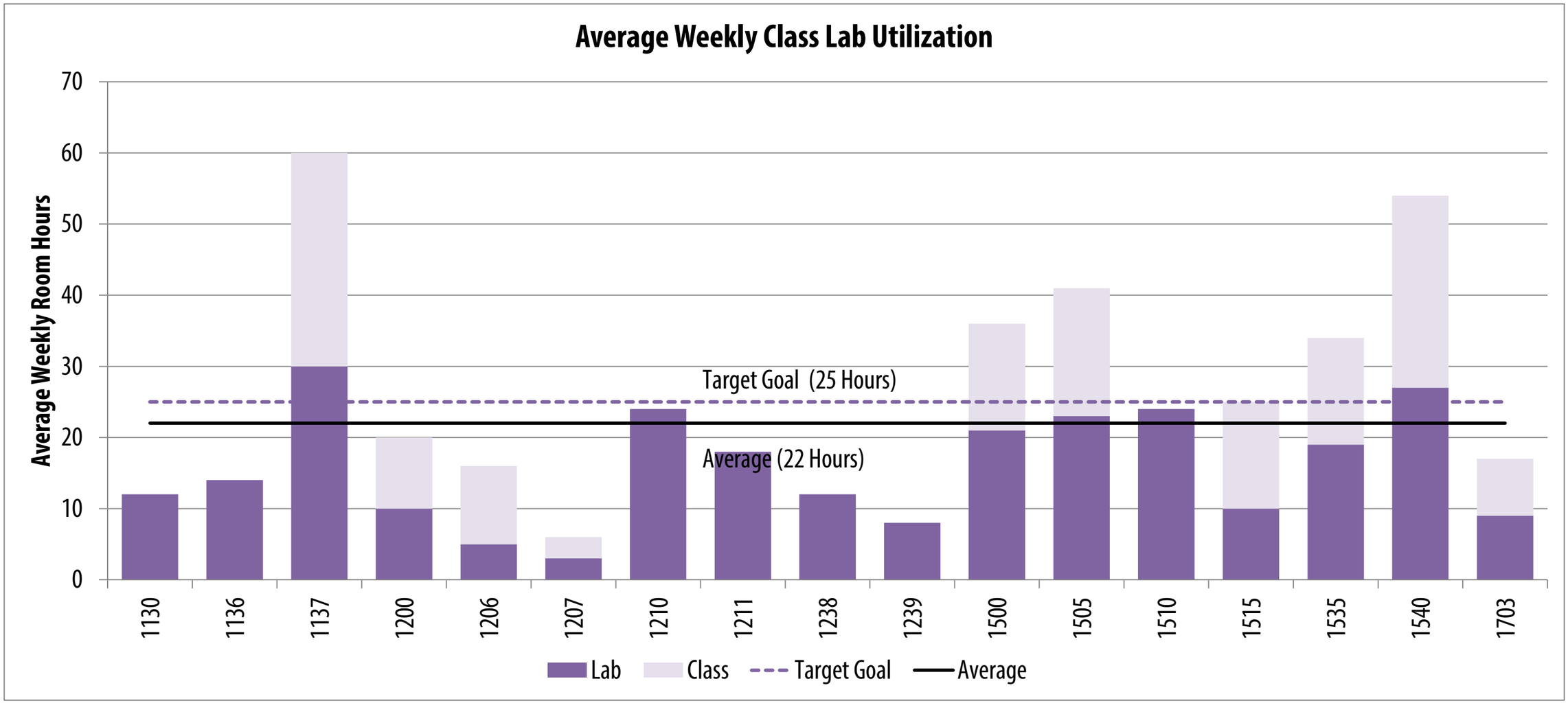
Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
Liberal Arts Building	90%
Humanities Buildings	98%
Science and Technology	91%
Business Area	94%
Total	92%

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
Liberal Arts Building	65%
Humanities Buildings	90%
Science and Technology	83%
Business Area	75%
Total	78%

Class Lab Utilization

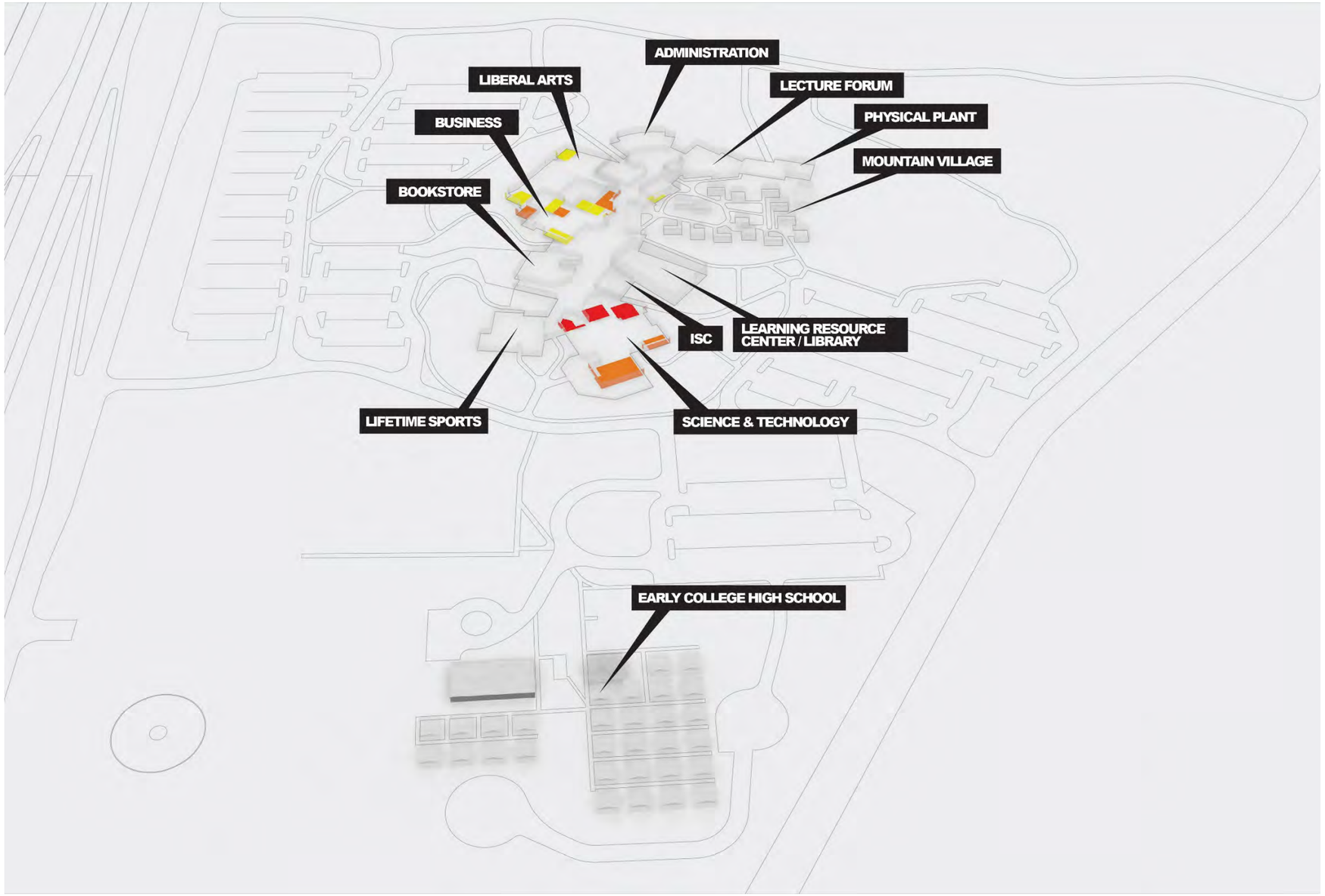


Class Lab Utilization



Transmountain Campus

Class Lab Utilization



Weekly Hours

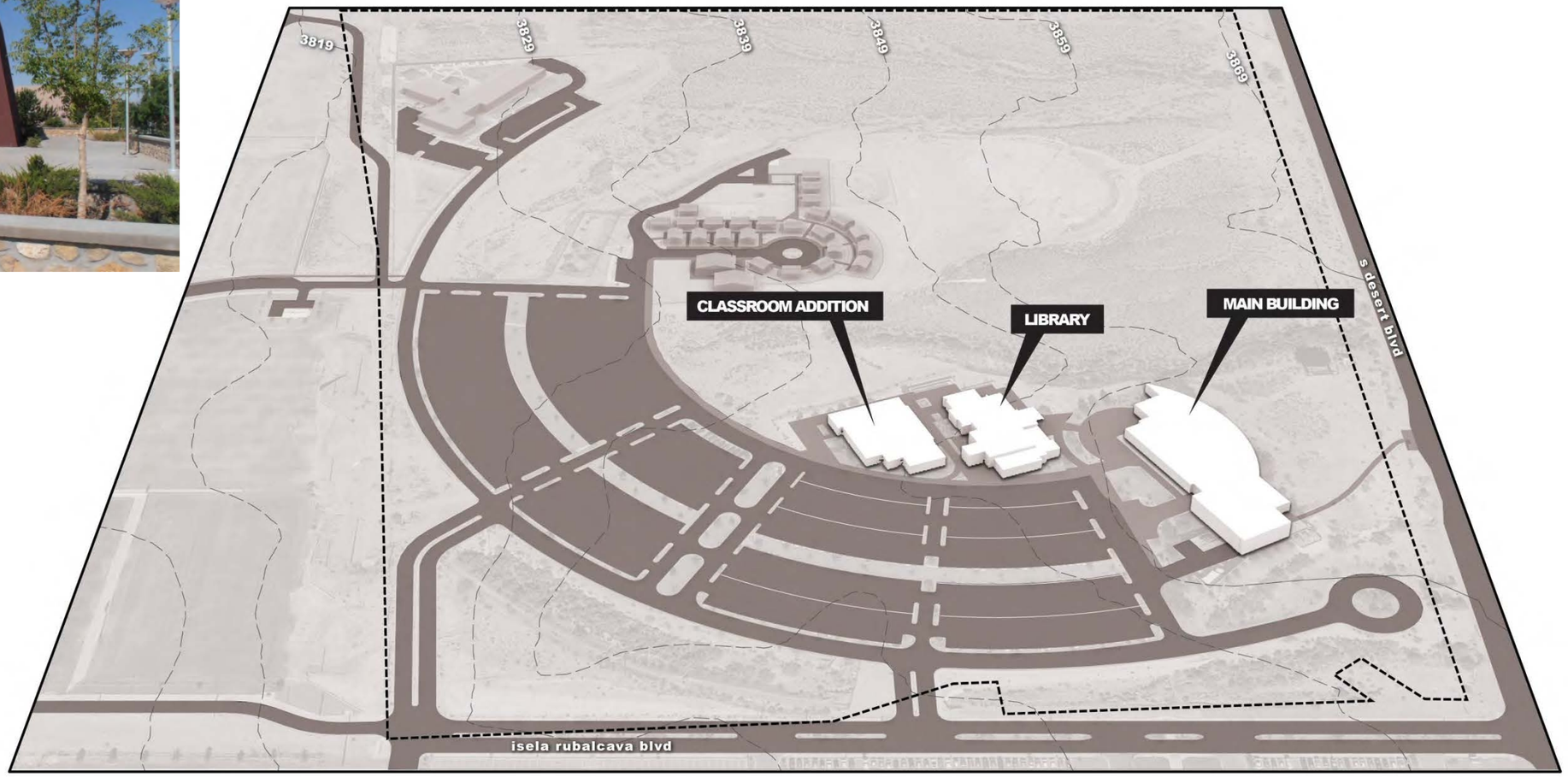
- *Less than **20** hours*
- ***20-30** hours*
- *More than **30** hours*

Class Lab Utilization Recap

- Enrollment/ capacity is good
- Some opportunities in afternoon
- Lecture in lab problem

B4 | Northwest Campus

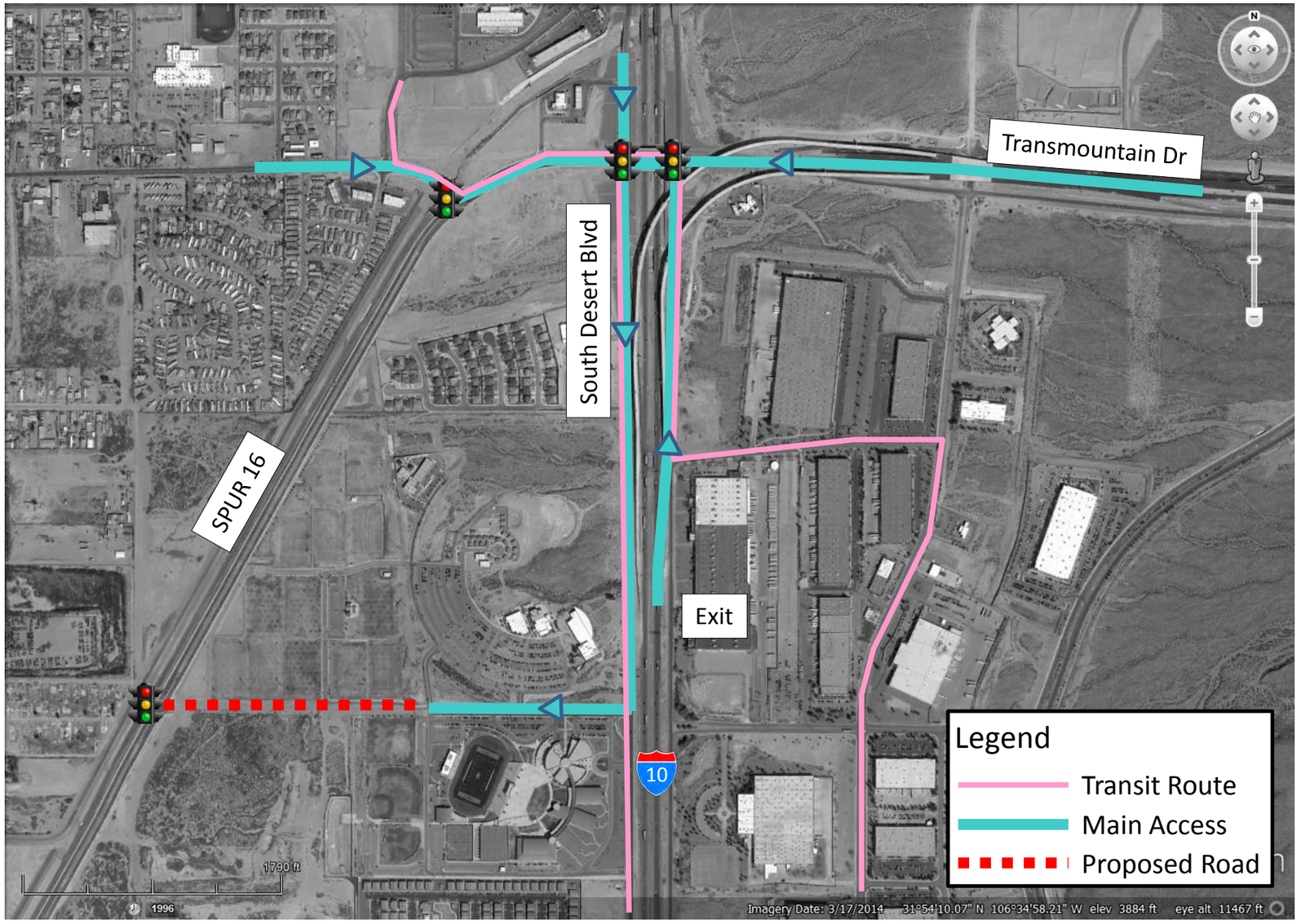
Northwest Campus



Northwest Campus

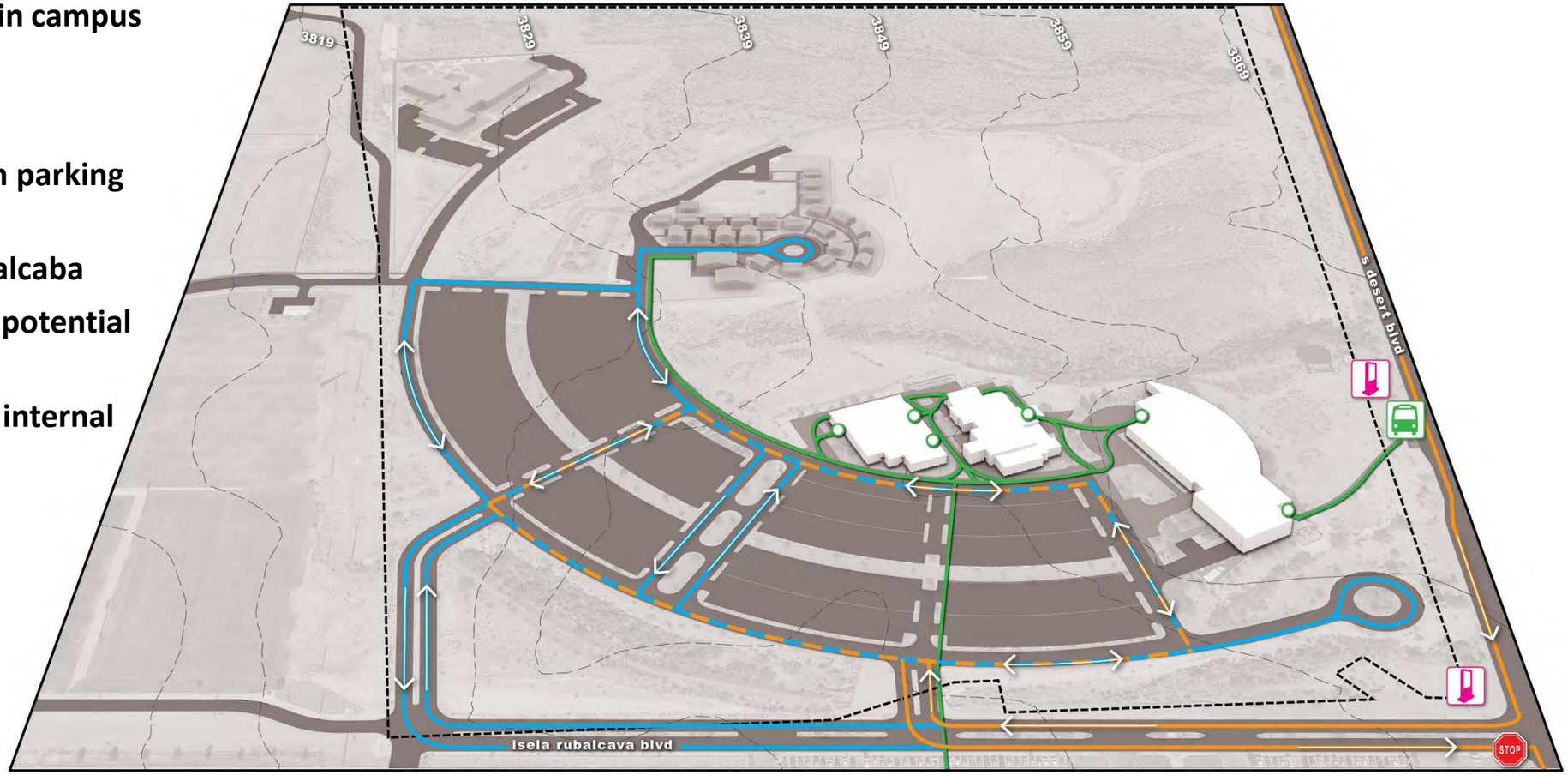
Regional Access

- **Entrance/Exit along South Desert Blvd**
  - **Right in/Right out**
- **Proposed road extension of Isela Ruvalcaba to SPUR 16 will provide additional entrance/exit to campus**
- **Limited transit service**
  - **Route 17**



Internal Circulation

- Unnecessary roundabout within campus
- Good internal circulation
- Good parking distribution
- No clear pedestrian paths from parking lots to campus
- Two access points at Isela Ruvalcaba
- Roundabout may be used as a potential drop-off site
- Depending on expansion align internal road with first entrance



Legend

- Vehicular Movement – Primary
- Vehicular Movement – Secondary
- Pedestrian Movement
- Building Entrance
- Bus Stop
- Sign & Monuments
- Problem Area

Signage & Wayfinding

- A freeway monument exists, but the digital board messaging is contracted and controlled by others, minimizing the campus identity.
- Two High schools feed into the campus, requiring a unique wayfinding opportunity for pedestrian traffic to and from the campuses.
- The bus stops require signage to help direct individuals on foot with minimal car / pedestrian traffic conflict.
- The campus is lacking in wayfinding directionals and directory information as you approach the campus in a vehicle or on foot.
- The building identities are inconsistent and not all are readily seen from parking areas.

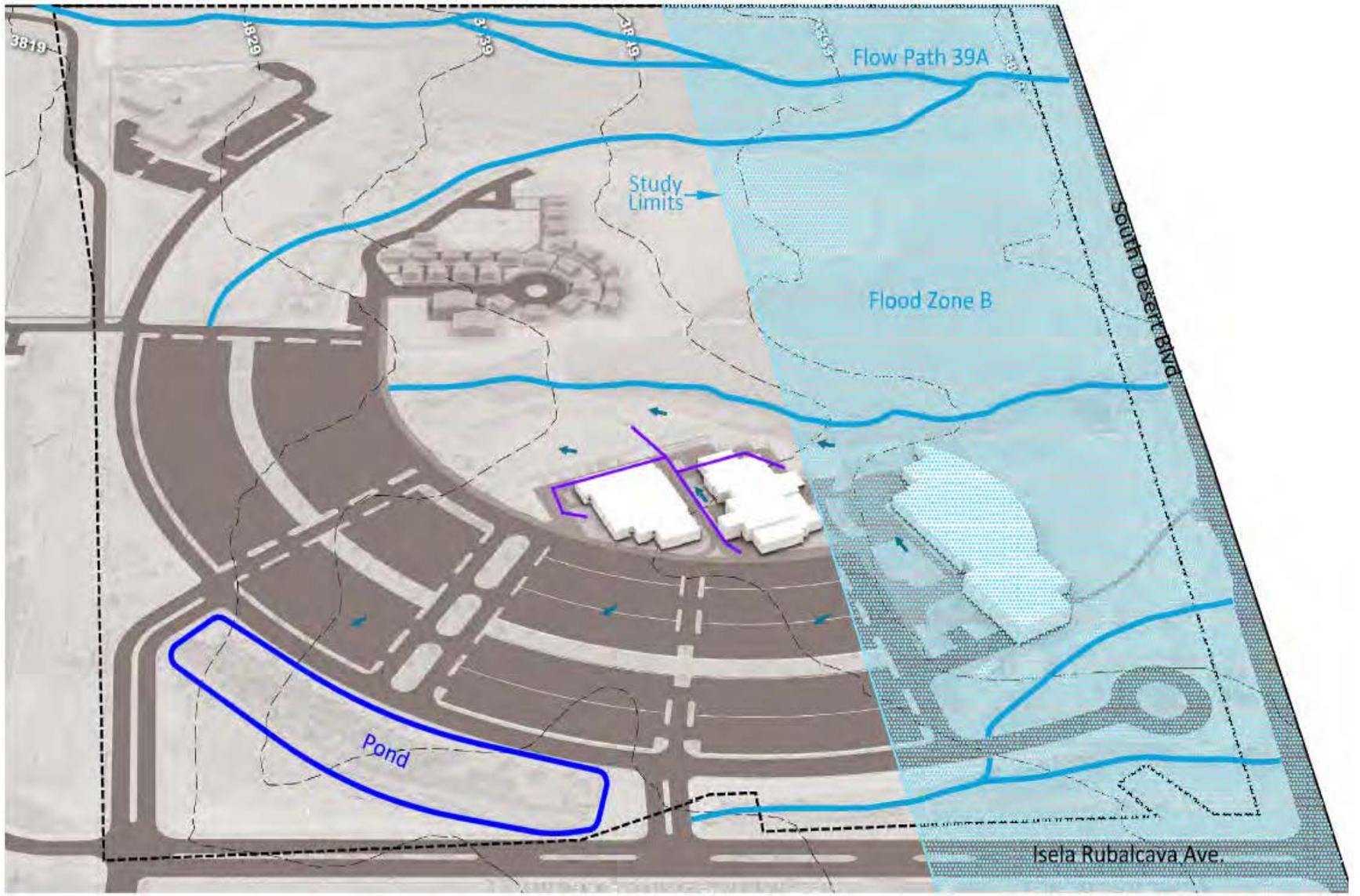
Northwest Campus

Hydrology

- Some on-site ponding and natural flow towards Rio Grande
- Arroyos identified – multiple (potential 100-yr flood zones)
- Flood zone B – areas between limits of the 100-yr and 500-yr flood
- Property zoning – (R-3 SP)
- Expansion may require increasing ponding area capacity
- Expand outside of flood zone areas

Legend

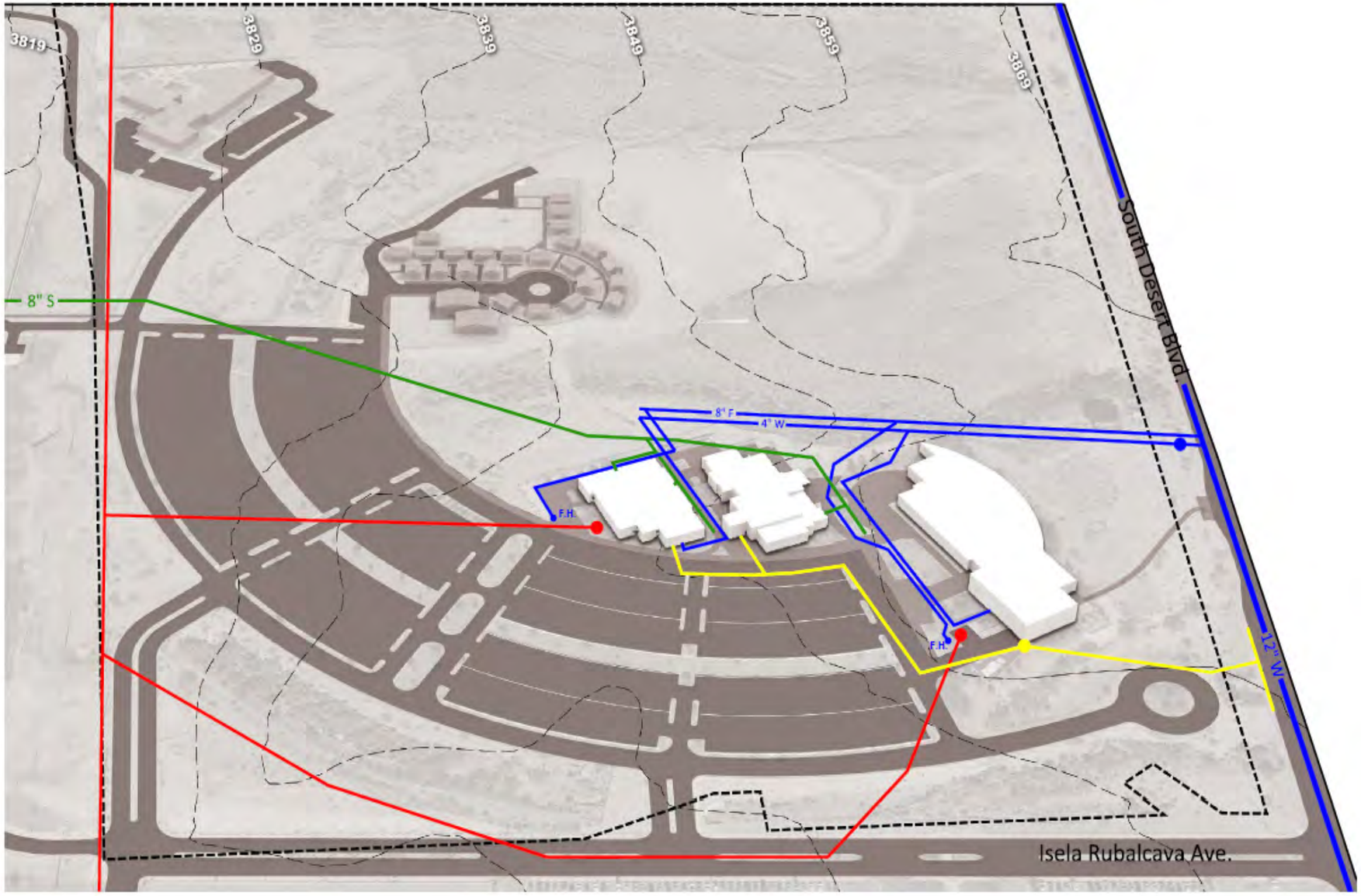
- Ponding areas
- Storm sewer system
- Arroyos
- Storm runoff flow
- Flood zone
- Localized street flooding (per SMP)



Northwest Campus

Site Utilities

- Adjacently located site utilities
- Water & Sewer provided by El Paso Water Utilities (EPWU)
- Gas provided by Texas Gas Service
- Electric provided by El Paso Electric
- Expansion requires evaluation of each utilities' capacity vs. increased demands



Legend

- Potable water
- Sanitary sewer
- Natural gas (pending)
- Electric
- Telecomm (pending)

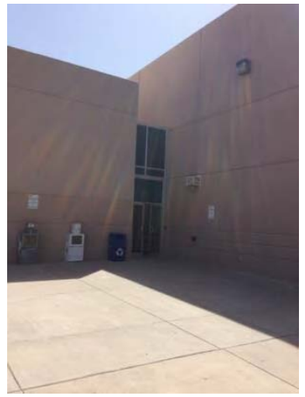
Building Condition Assessment

Exterior Space and Entry

1. No defined main building entry/front door.
2. Potential for exterior study/shade space and trails around desert perimeter.
3. Lack of screen for electrical transformer.

Interior Common Space and Elements

4. No small study spaces on interior.
5. Entry lobby is crowded.
6. Department queuing lines are in main corridor.
7. Restroom locations are not identified
8. Lack of small quiet/study space (in general, at “stack area” and off computer area).
9. Lack of large meeting/commons space for student activity.
10. Handrails are not code compliant
11. Small student dining area.
12. Crowded computer classrooms.
13. No gymnasium or large meeting space.



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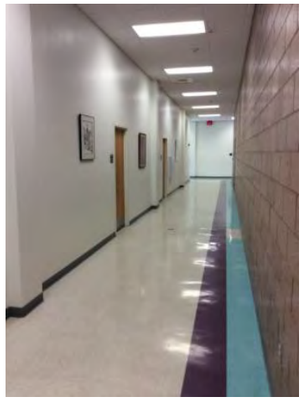

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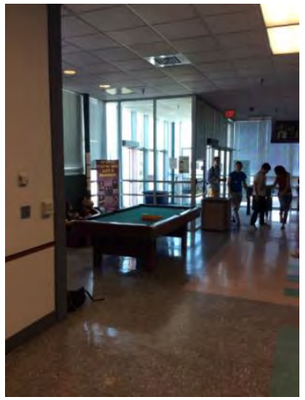

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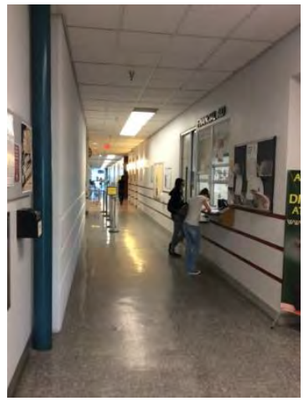

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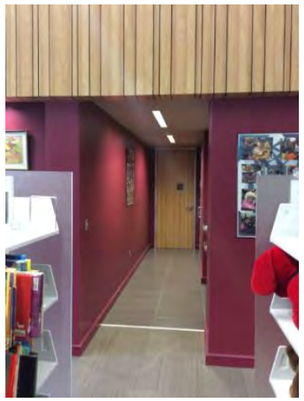

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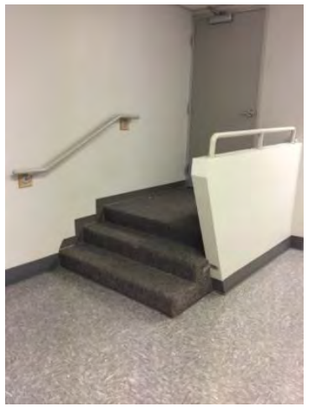

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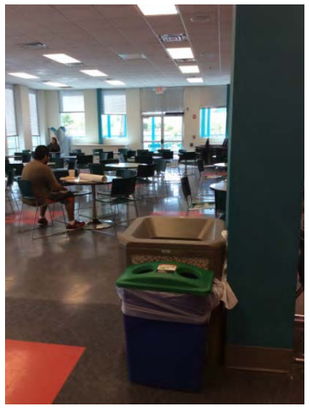


11.

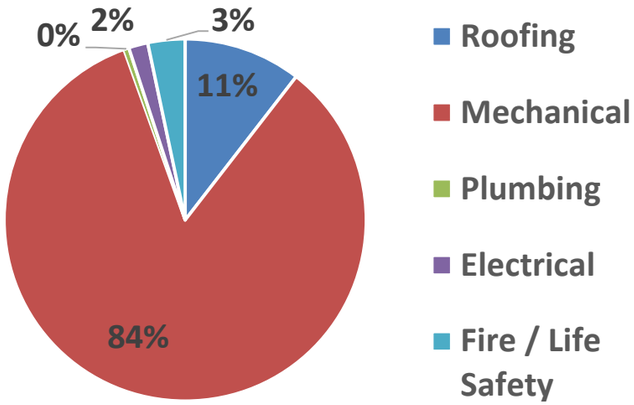
Northwest Campus

Mechanical/Electrical Assessment

Existing Conditions

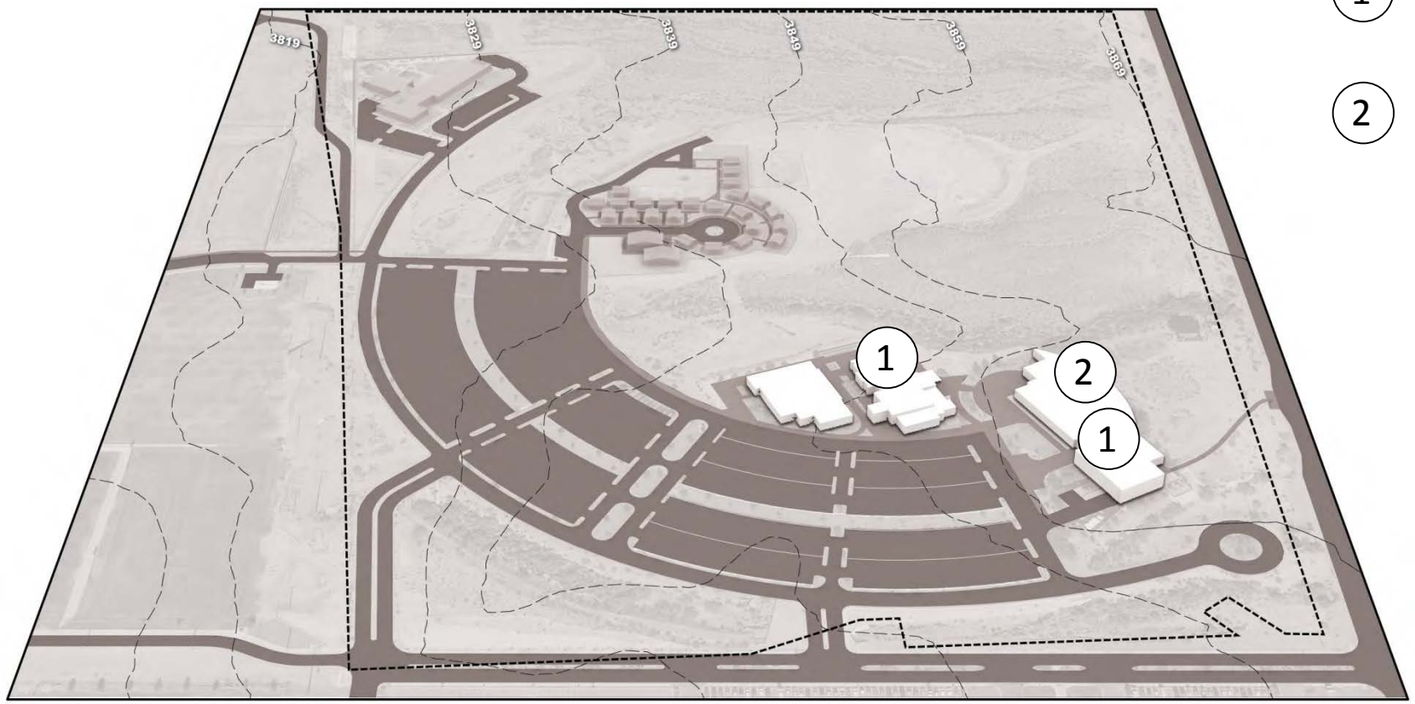
- Chiller, Boiler, Air Cooled Chiller
- Air Handling Units
- Individual Utility metering at Each Building. Elect systems generally in good condition

Priority 1-3 Deficiencies $609K



Future Available Capacity

- Main Bldg. Cooling – 45 tons
- Main Bldg. Heating – at Capacity
- Electrical Capacities to be determined from Utility Co. Peak Demand Data



1 HVAC Chiller & Plant Redundancy

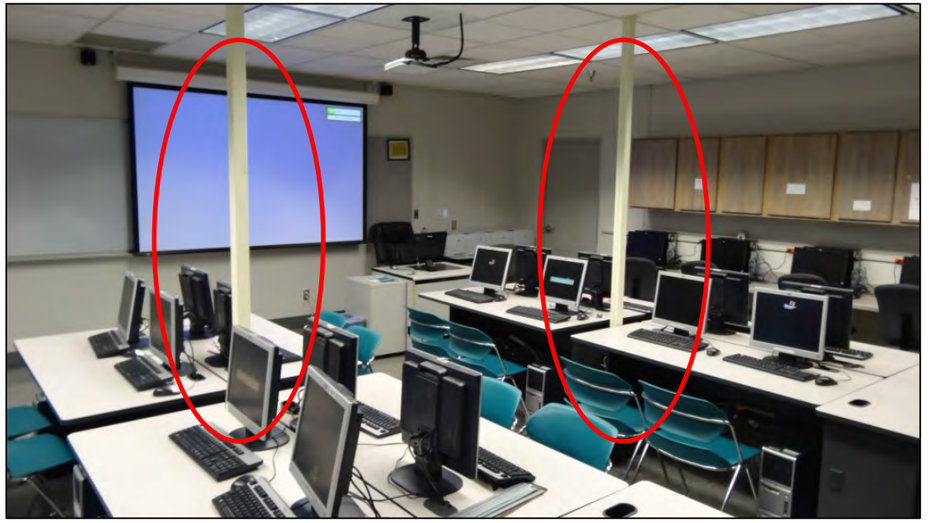
2 Replace roofing

Replace defective FA system devices, exit signs, and lighting fixtures campus-wide

Technology Assessment

1. Standard smart rooms have a common user interface for control. Non-standard rooms have different control interfaces and unsupported AV equipment.
2. Digital AV connectivity (HDMI) needed in all classrooms to support newer laptops and devices.
3. Observed power poles obstructing sightlines in some teaching spaces.
4. Large number of printers across labs and classrooms would benefit from tracking utilization to reclaim costs and reduce waste.
5. Some computer labs running Windows XP (unsupported).
6. Existing Distance Ed videoconferencing equipment across multiple rooms and campuses no longer used.

1.



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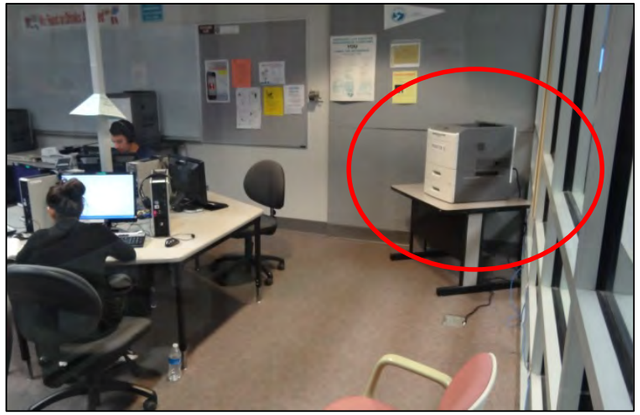

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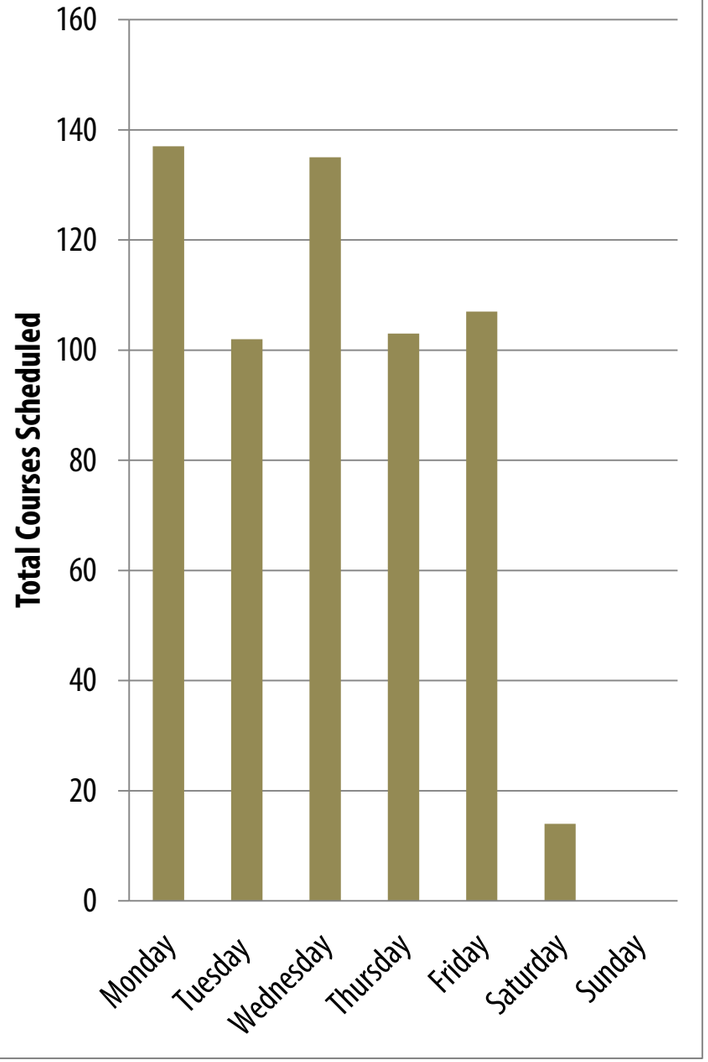
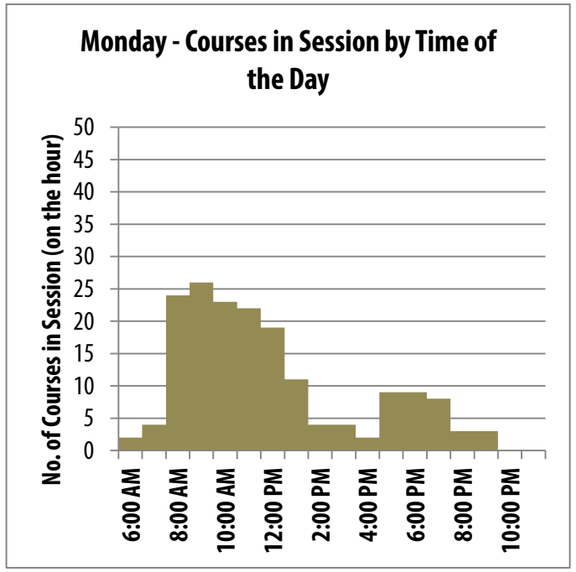
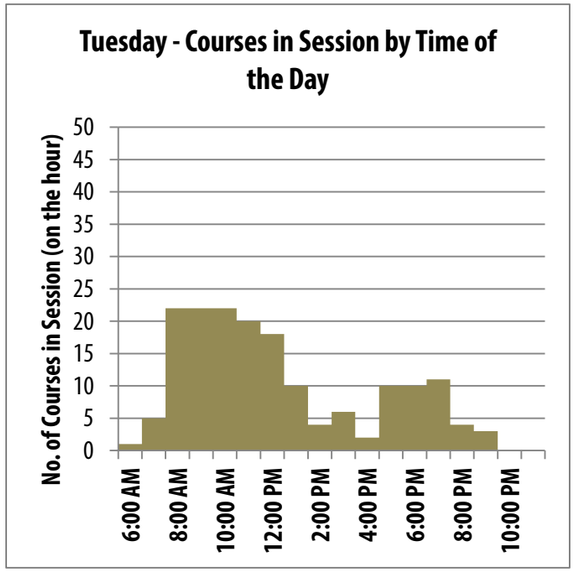
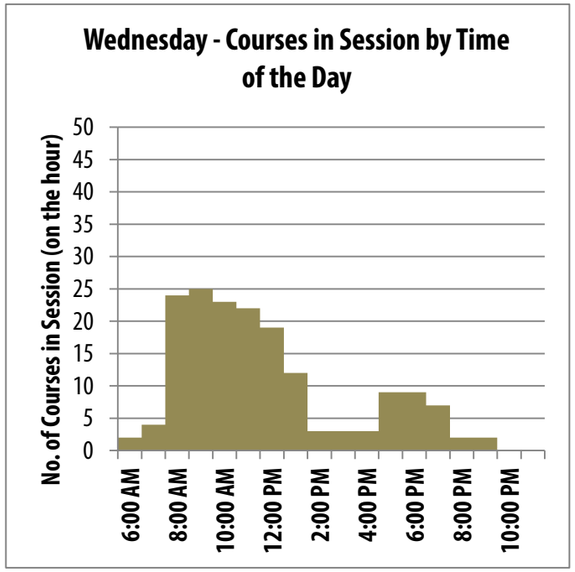
Northwest Campus

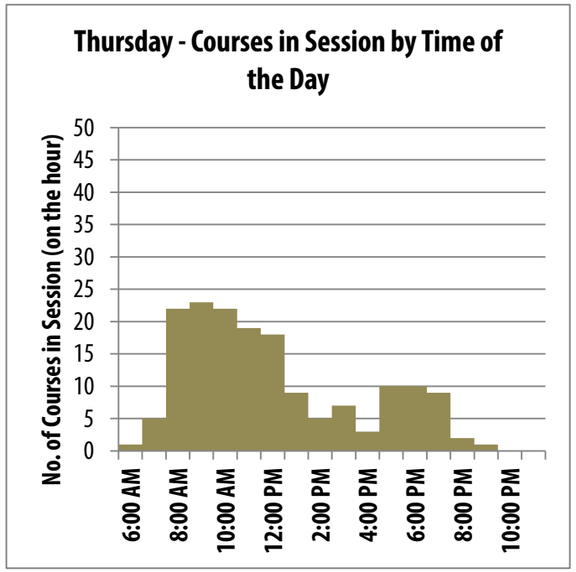
Total Courses in Session

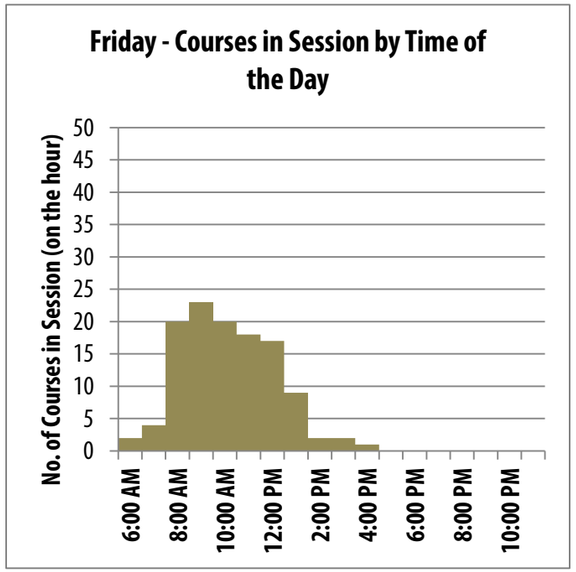


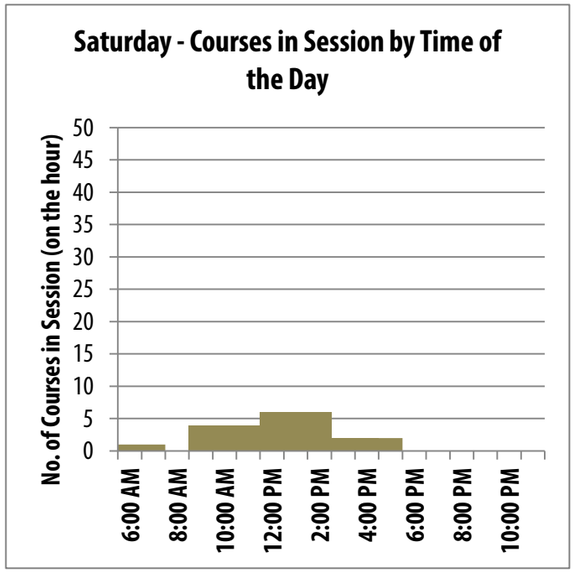




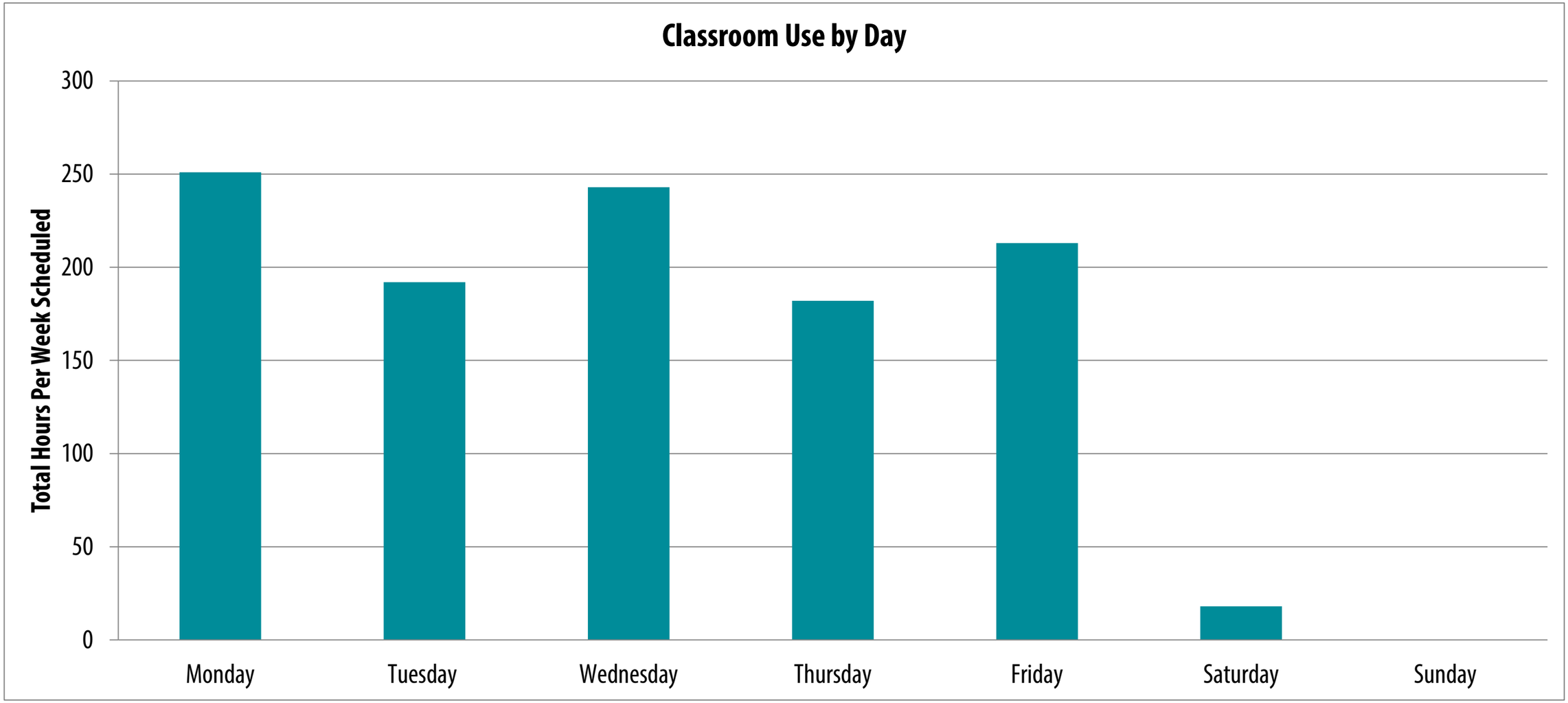








Classroom Utilization



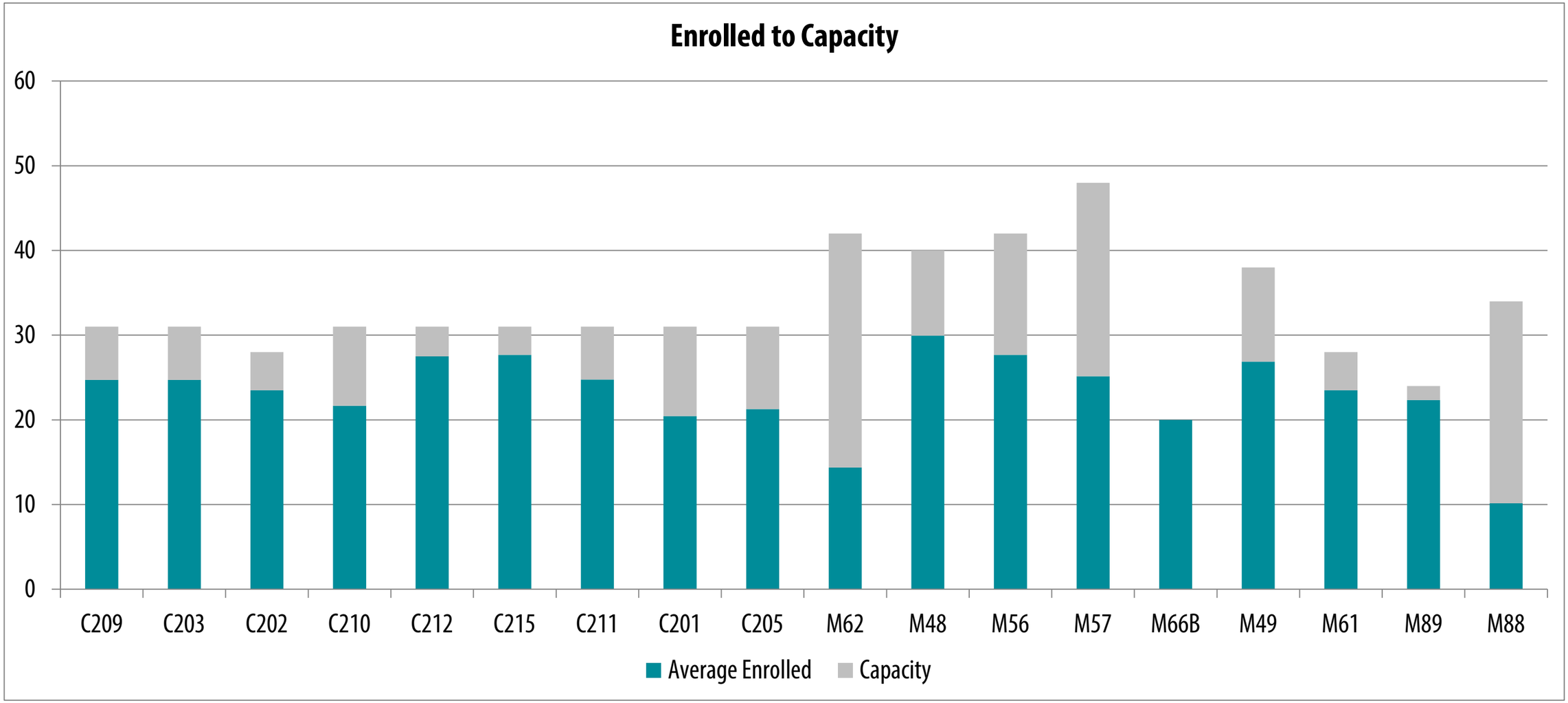
Northwest Campus

Classroom Utilization

Building	No. of Classrooms	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly CR Hours	Average Weekly Hours per CR
Classroom Building	9	276	5,533	**63%**	234	26
Main Building	9	316	5,944	**59%**	249	28
Total	18	592	11,477	61%	483	27

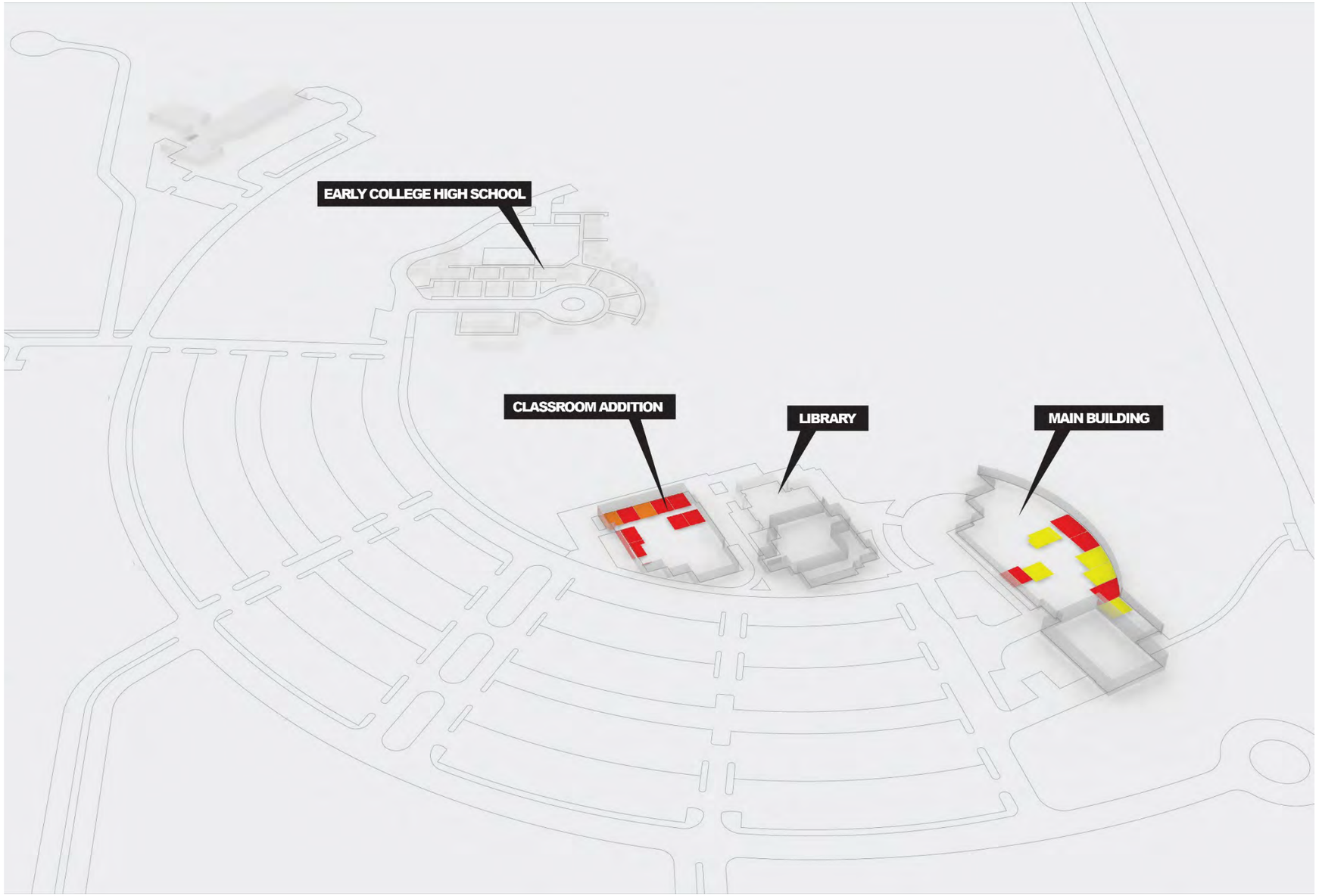
Northwest Campus

Classroom Capacity



Northwest Campus

Classroom Capacity



Enrolled to Capacity

- *Less than **60**%*
- ***60-70**%*
- *More than **70**%*

Northwest Campus

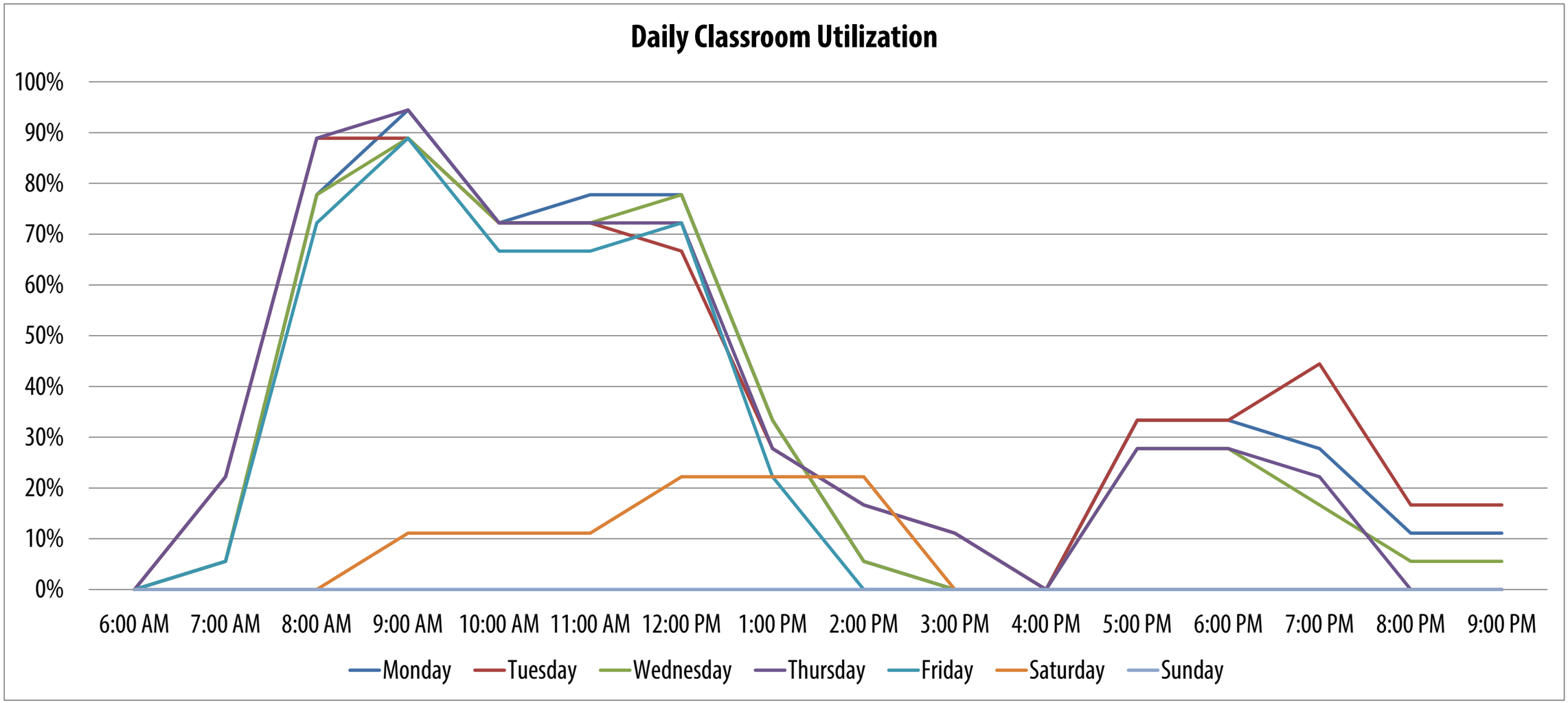
Classroom Utilization

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
Classroom Building	83%
Main Building	81%
Total	82%

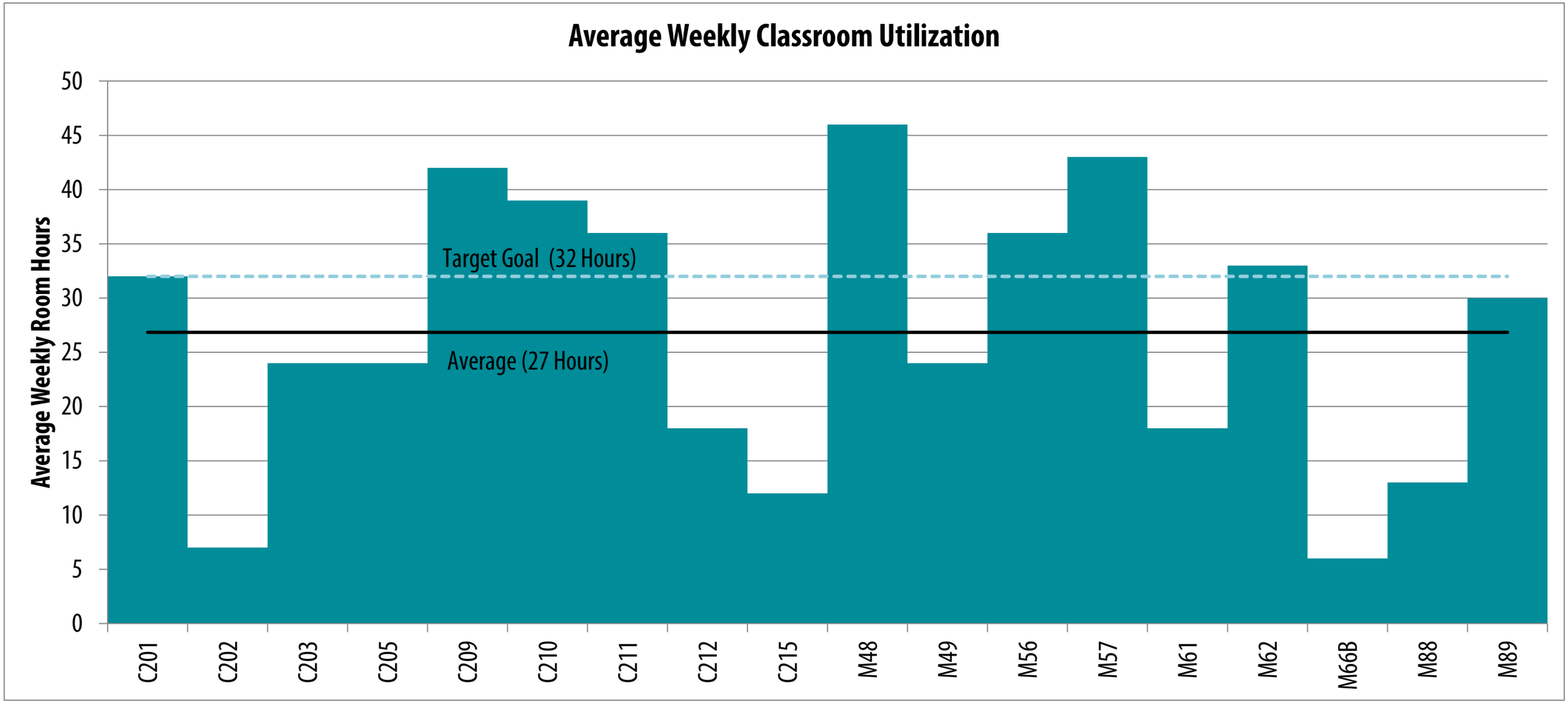
Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
Classroom Building	76%
Main Building	61%
Total	68%

Northwest Campus

Classroom Utilization

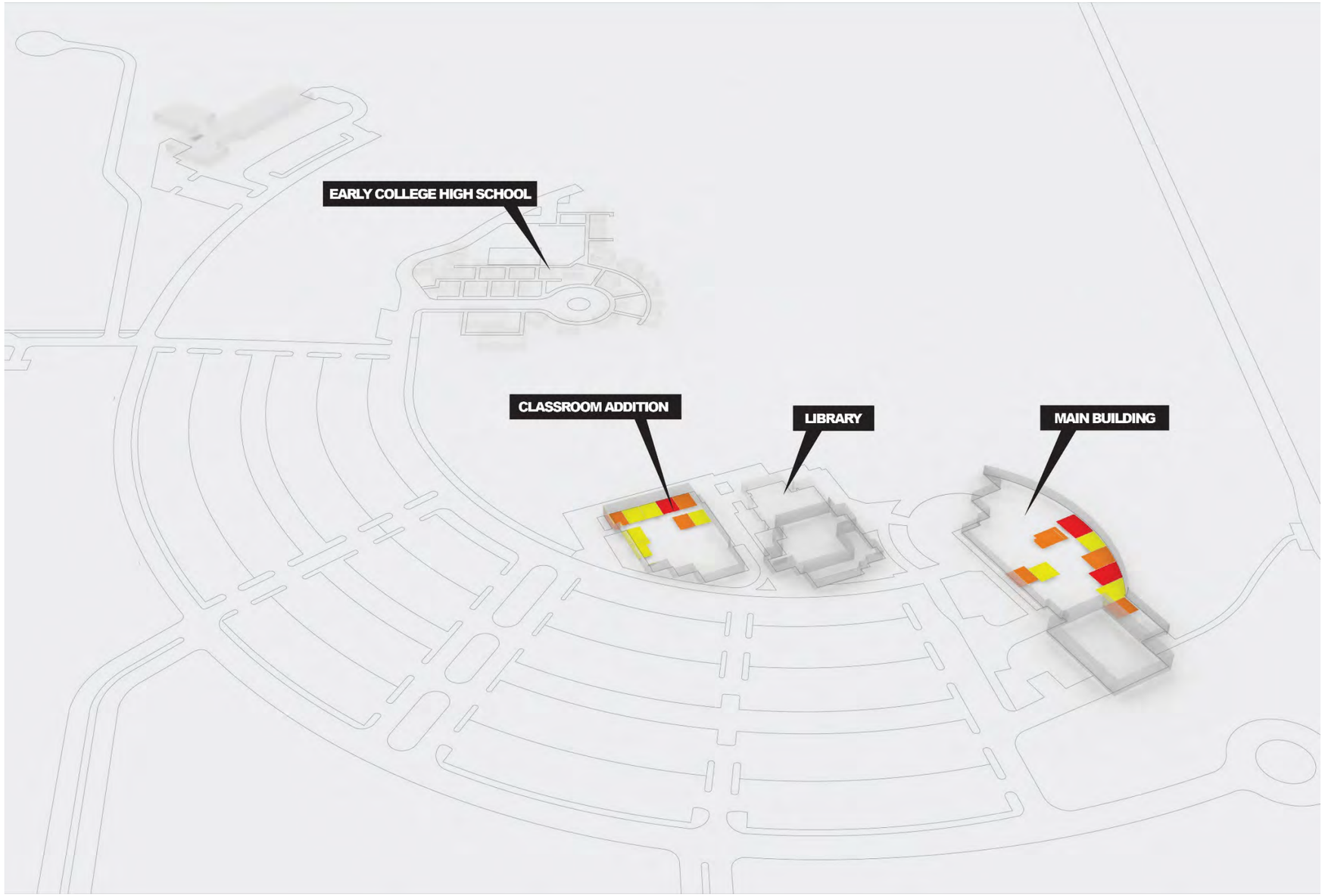


Classroom Utilization



Northwest Campus

Classroom Utilization



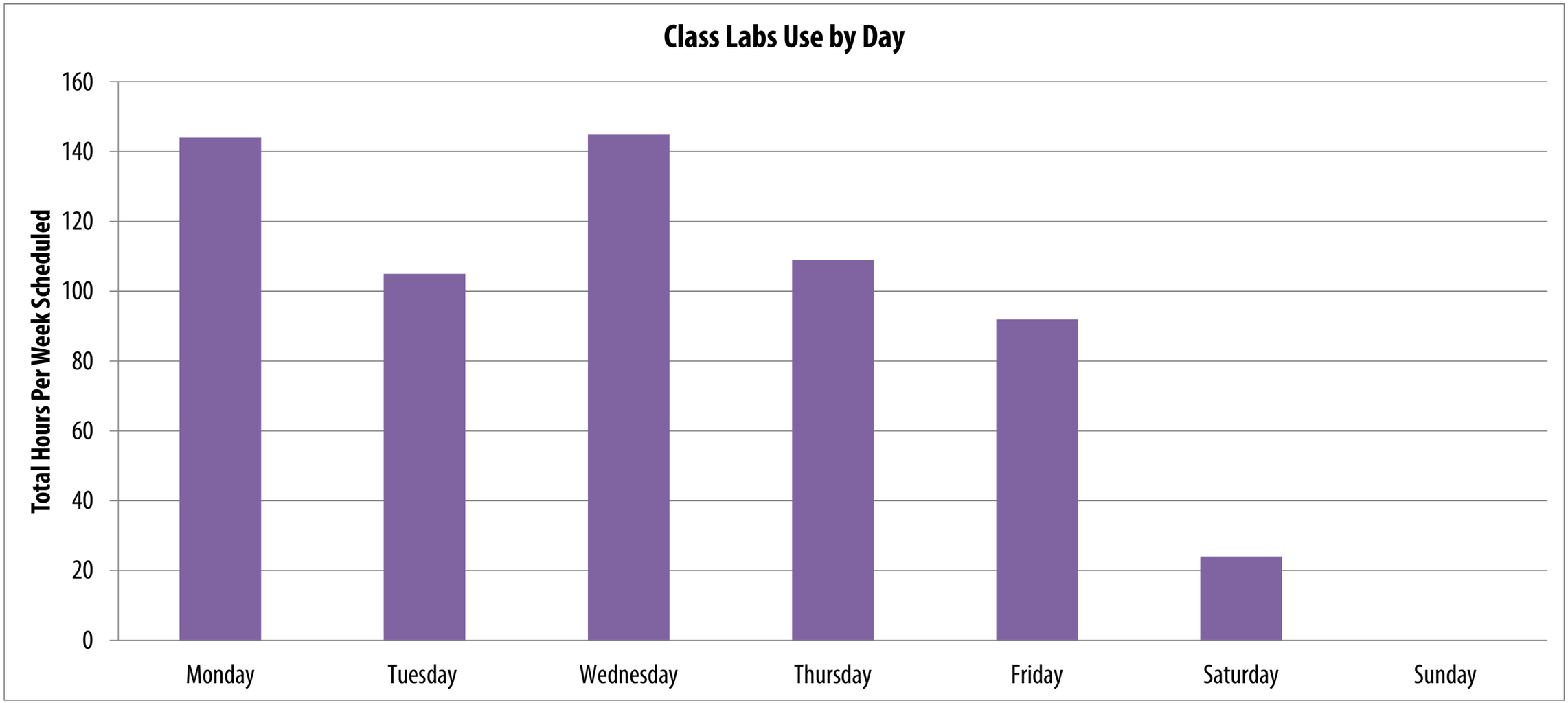
Weekly Hours

- *Less than **25** hours*
- ***25-40** hours*
- *More than **40** hours*

Classroom Utilization Recap

- Good Friday usage
- Opportunity for more utilization in the afternoons
- Opportunity for improved enrollment/utilization in the Main building

Class Lab Utilization

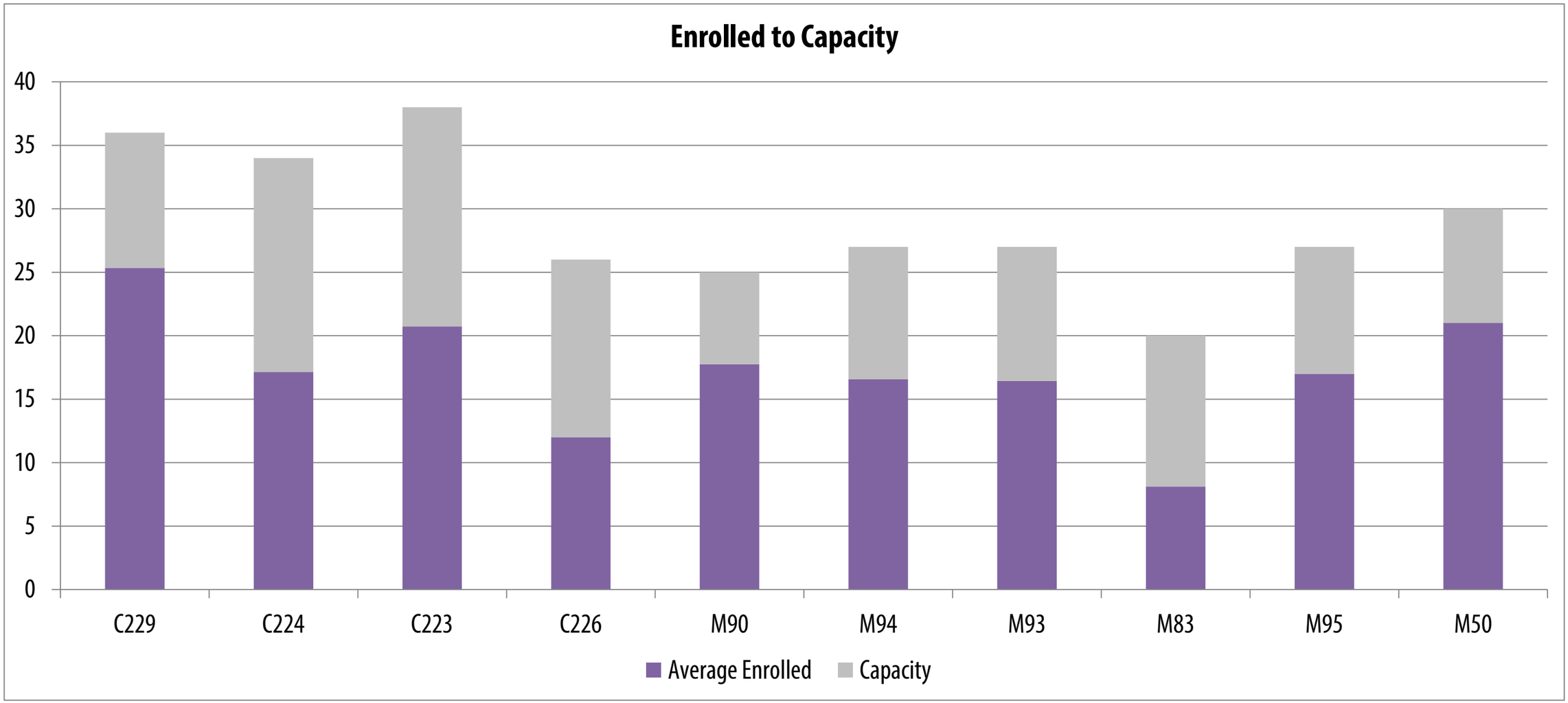


Class Lab Utilization

Building	No. of Class Labs	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly Lab Hours	Average Weekly Hours per Lab
Classroom Building	4	134	3,844	115%	181	45
Main Building	6	156	1,786	46%	117	20
Total	10	290	5,630	78%	298	32

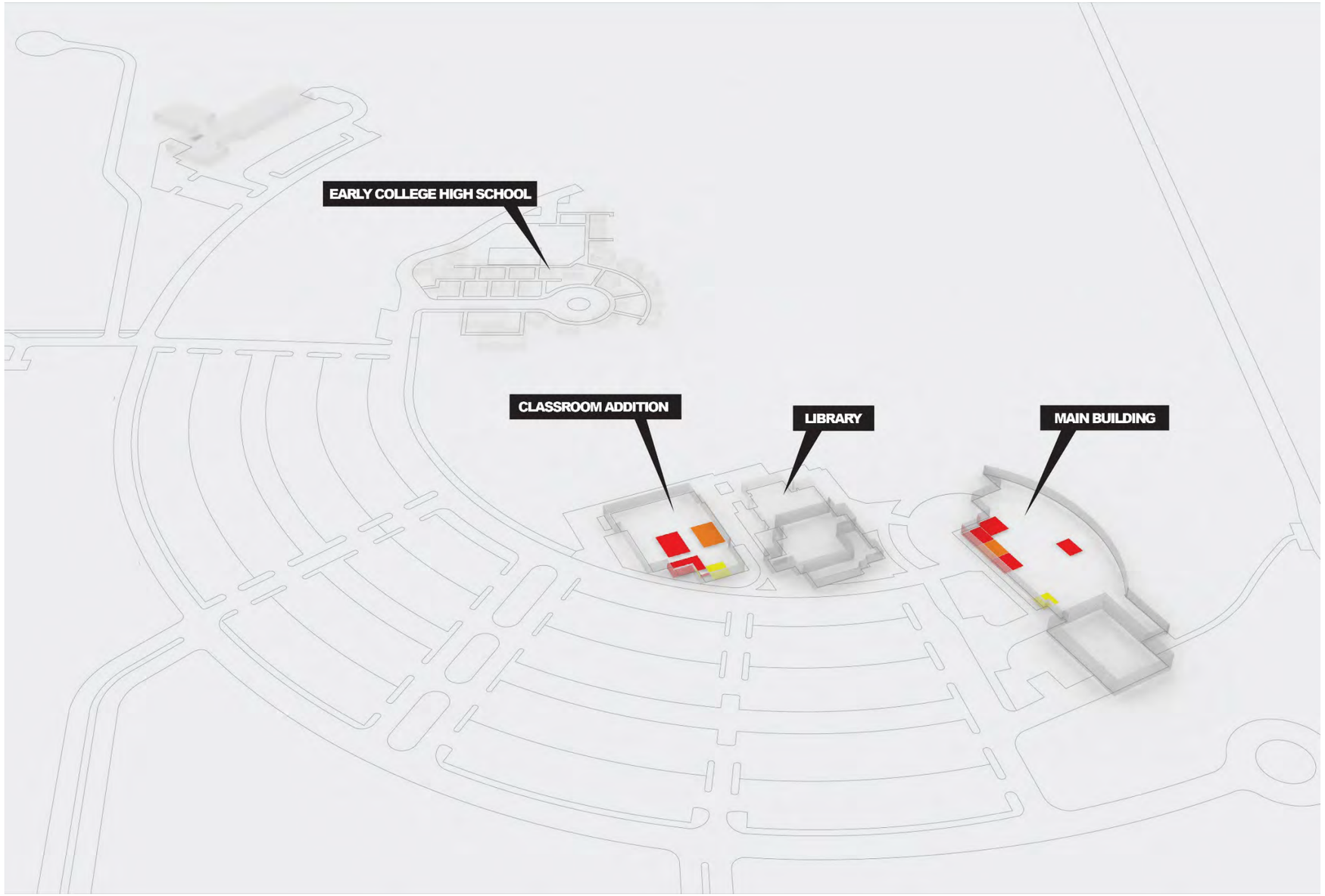
Northwest Campus

Class Lab Capacity



Northwest Campus

Class Lab Capacity



Enrolled to Capacity

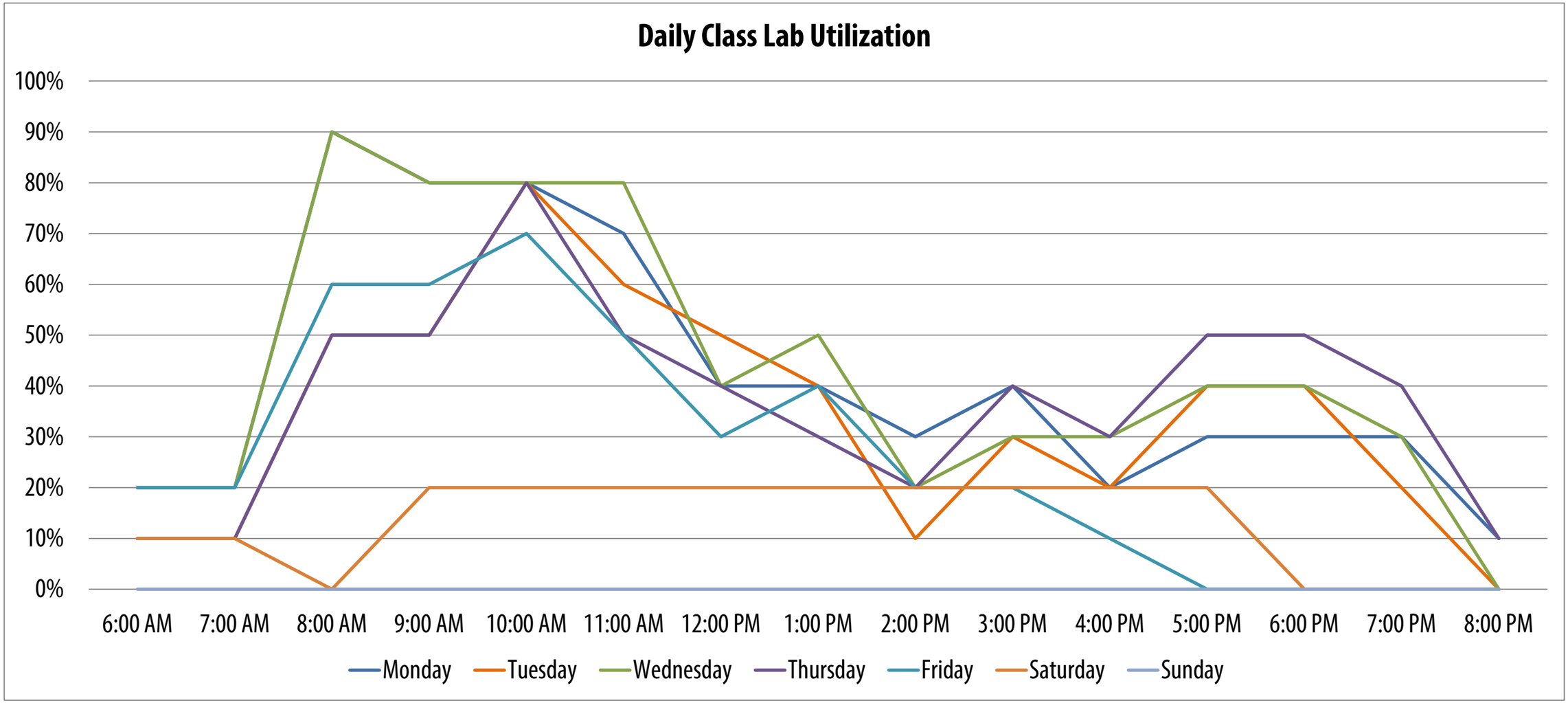
- *Less than **60**%*
- ***60-70**%*
- *More than **70**%*

Class Lab Utilization

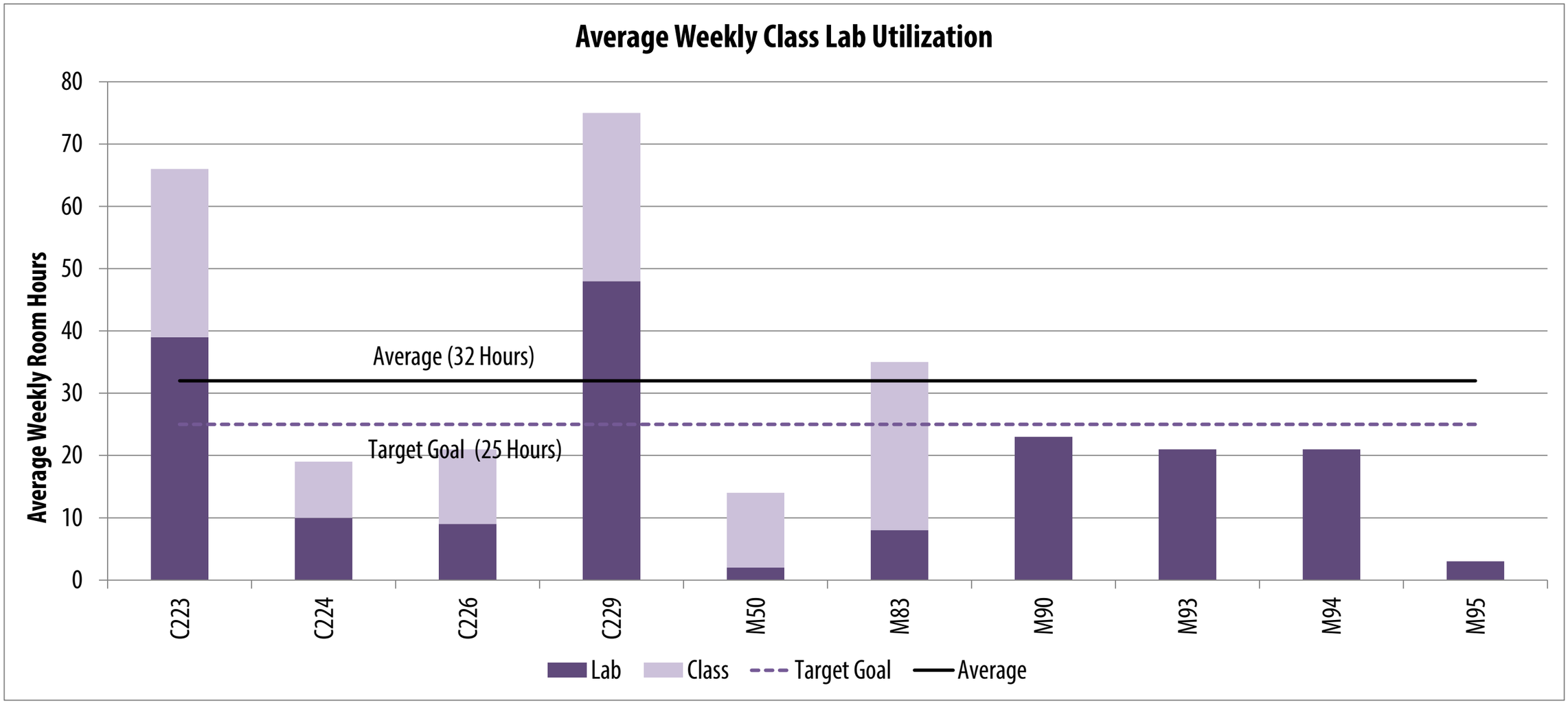
Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
Classroom Building	80%
Main Building	70%
Total	76%

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
Classroom Building	60%
Main Building	60%
Total	60%

Class Lab Utilization

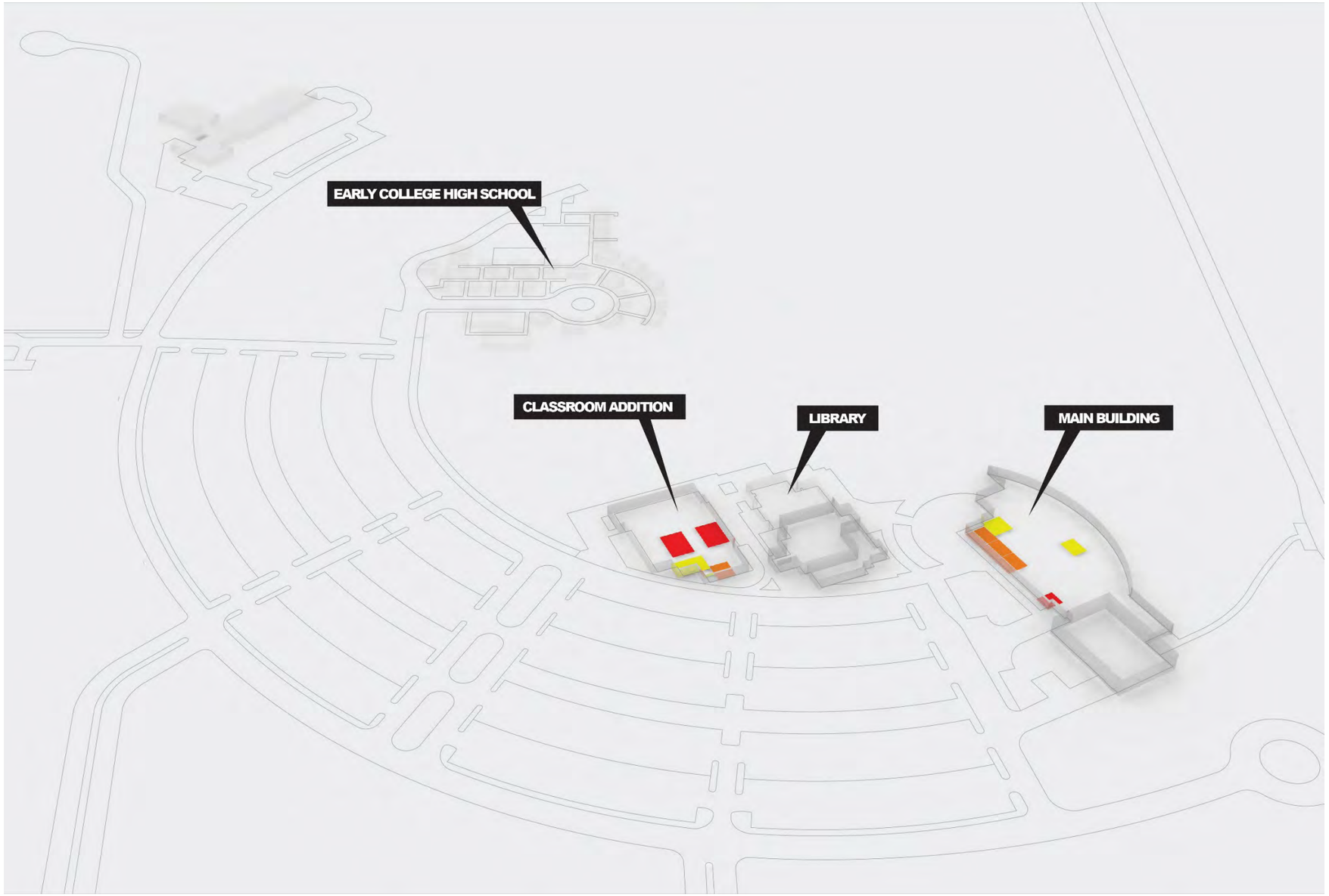


Class Lab Utilization



Northwest Campus

Class Lab Utilization



Weekly Hours

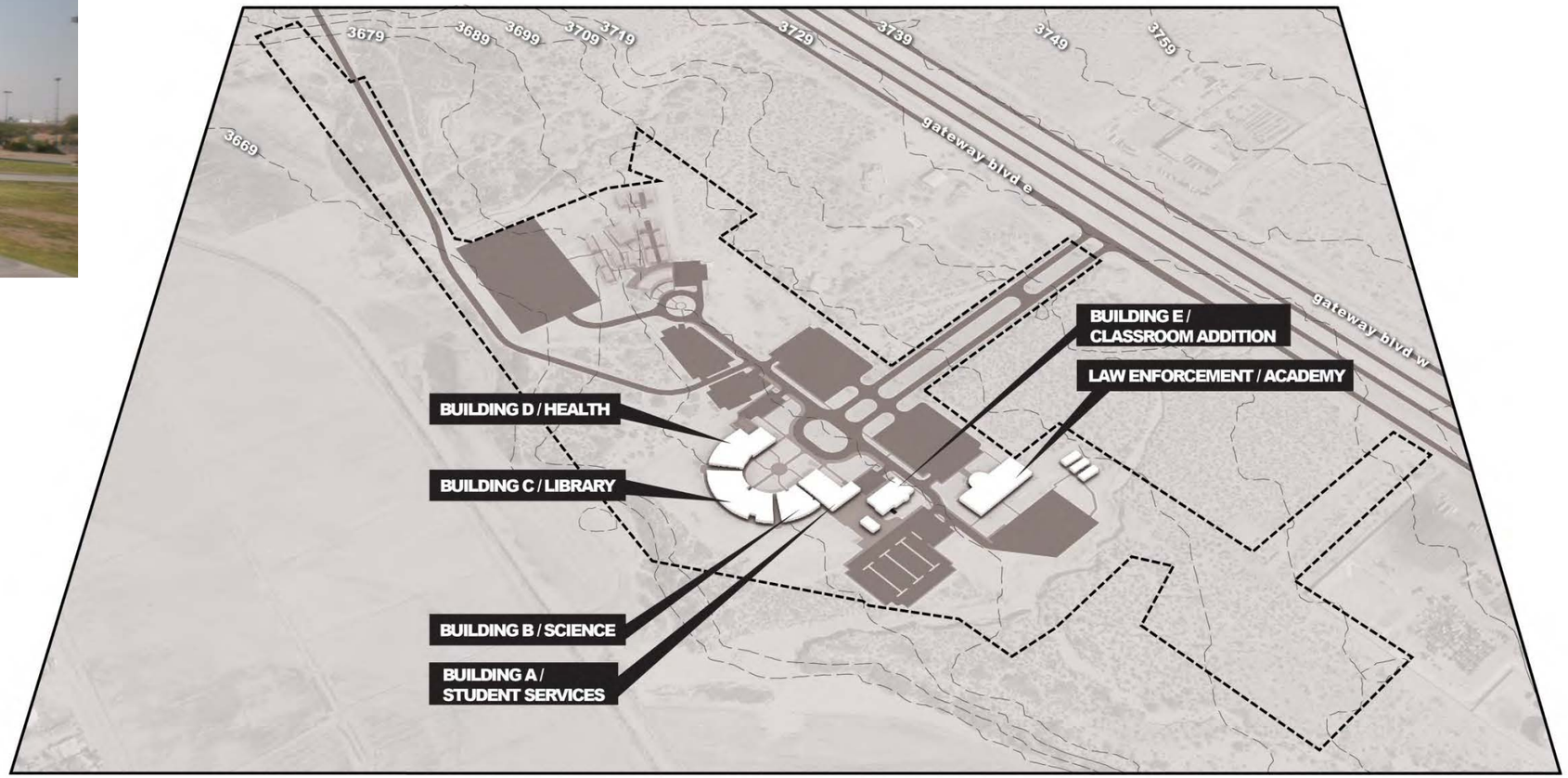
- *Less than **20** hours*
- ***20-30** hours*
- *More than **30** hours*

Class Lab Utilization Recap

- Some labs used very well
- There is opportunity for improved lab use
- Lecture/lab problem

B5 | Mission del Paso Campus

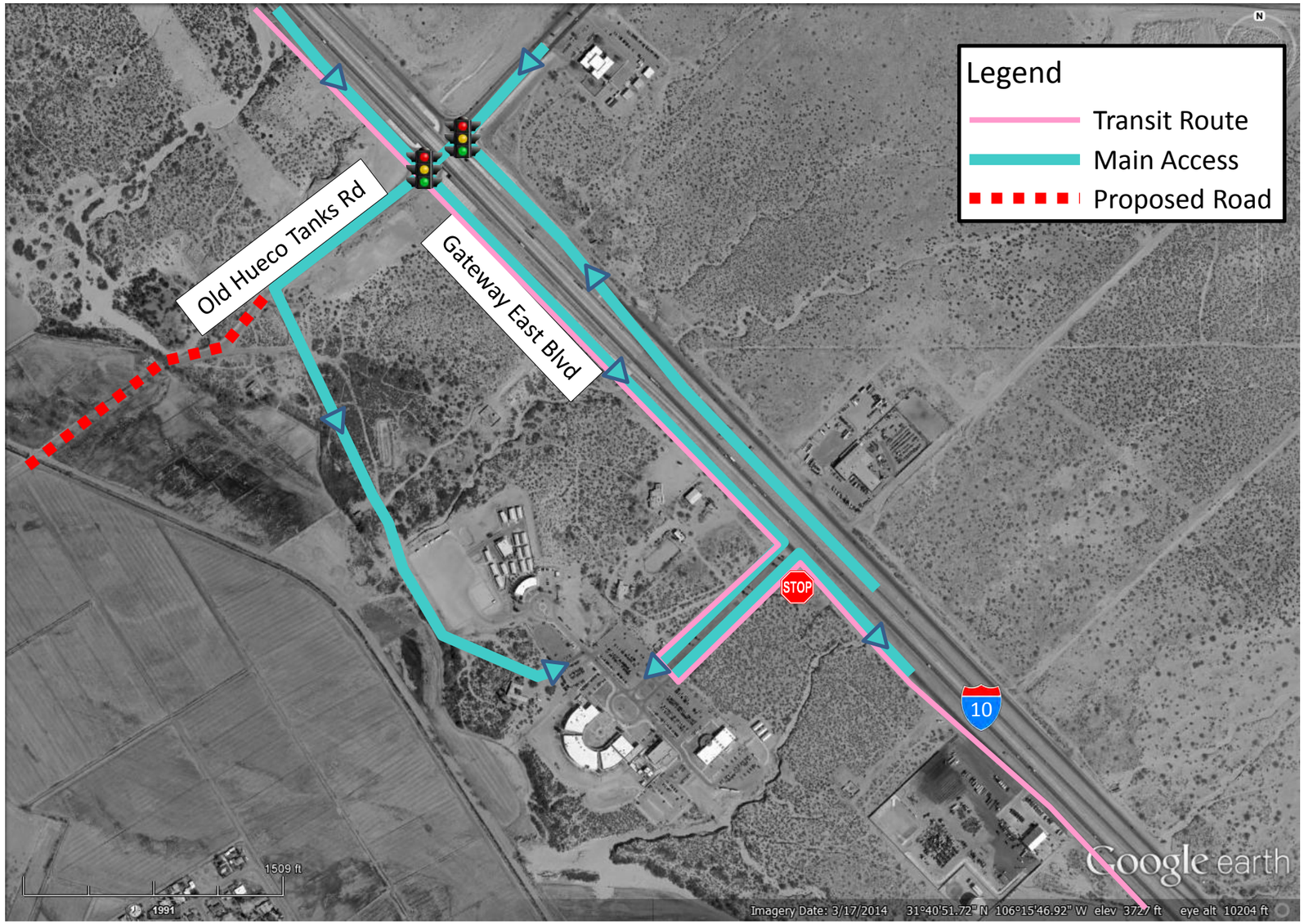
Mission del Paso Campus



Mission del Paso Campus

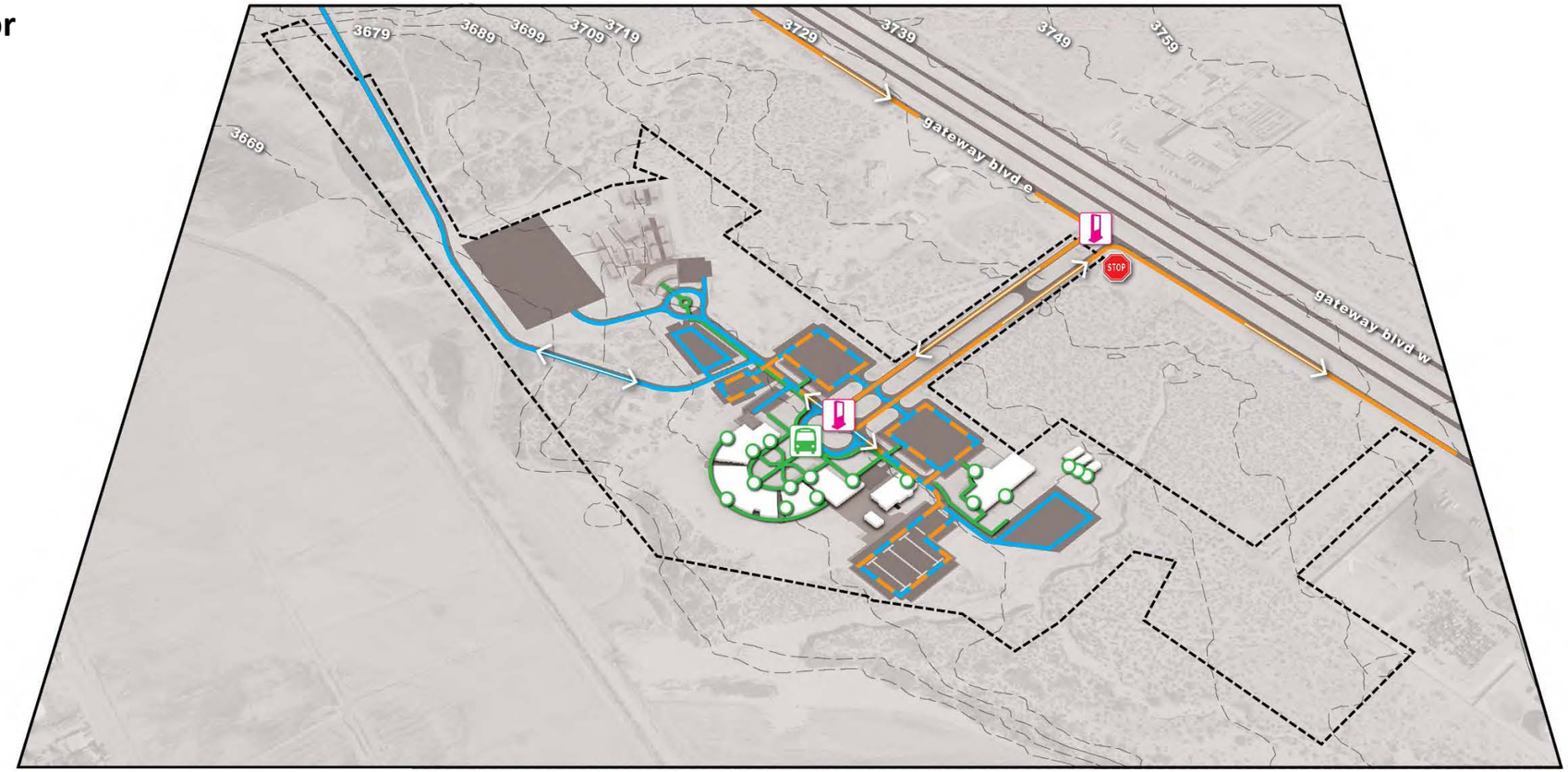
Regional Access

- **Entrance/Exit along Gateway East Blvd**
  - **Right in/Right out**
- **Old Hueco Tanks Road provides signalized access to IH-10 East and West**
- **Old Hueco Tanks Road future extension to North Loop will provide access to City of Socorro**
- **Limited transit service**
  - **Route 84**



Internal Circulation

- Acceleration and deceleration lanes for entrance and exit of the campus at Frontage road
- 2 entrance lanes
- Good parking distribution
- Clear pedestrian paths from parking lots to campus
- Traffic control at Old Hueco Tanks Rd due to the roadway extension



Legend

- Vehicular Movement – Primary
- Vehicular Movement – Secondary
- Pedestrian Movement
- Building Entrance
- Bus Stop
- Sign & Monuments
- Problem Area

Mission del Paso Campus

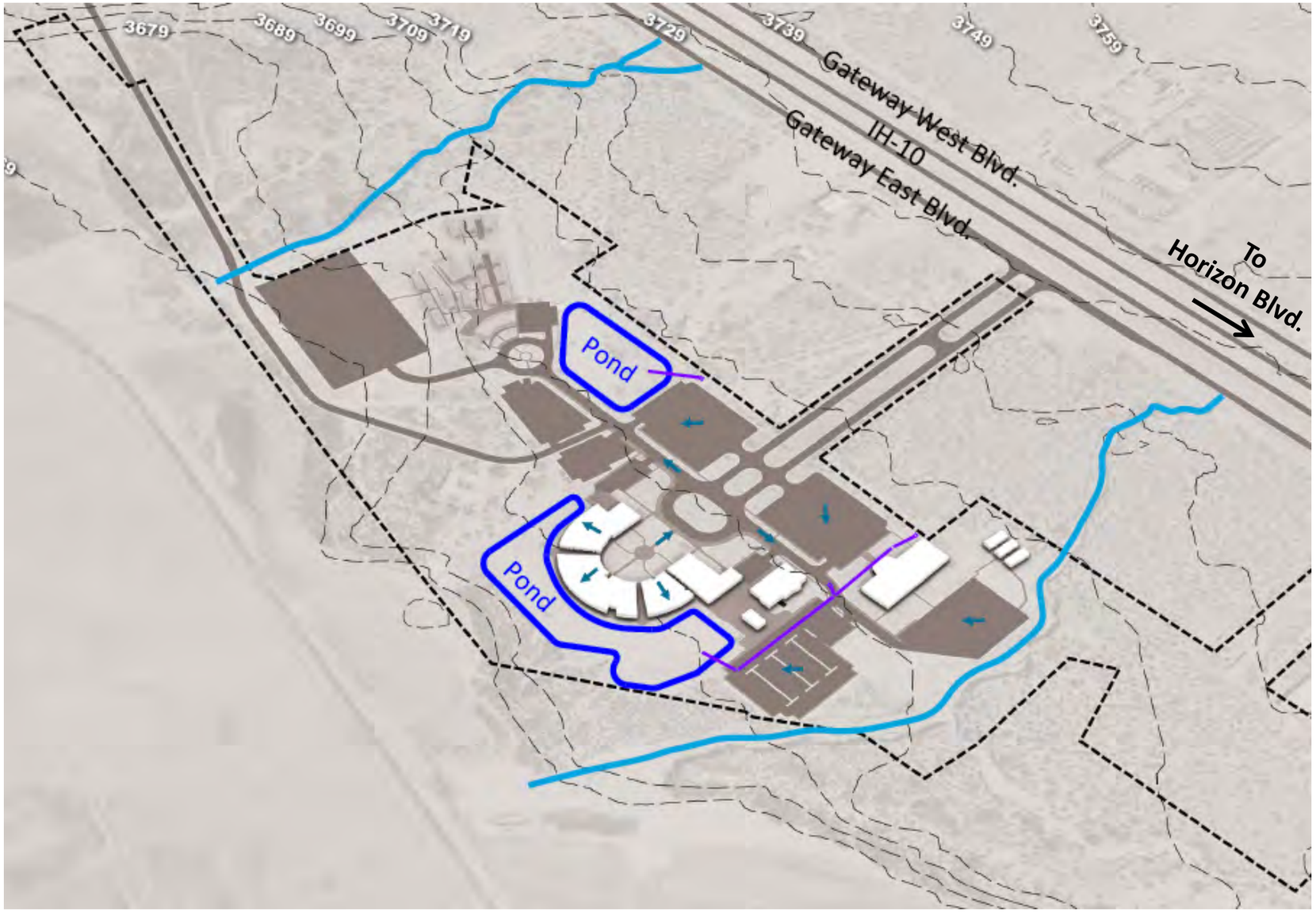
Signage & Wayfinding

- The campus is small but not easily navigated.
- Like all campuses, directional signage could help aid first time visitors.
- The campus has a substantial main identity, but could use a reorganization of identity and symbols within the sign structure.
- For example, will the campus identity be the primary and the district identity hold a secondary position on the monument sign? This is typical of all campuses.
- Observed areas where 2 or more signs were identifying one room or communicating multiple messages. This leads to confusion and a plethora of handmade paper signs.
- A system of sign requisitions that helps the office, department, administration, etc. monitor the amount and the messages for signs would help eliminate over signing an area.

Mission del Paso Campus

Hydrology

- On-site ponding
- Arroyos identified - 2
- Flood zone X – areas determined to be outside 500-yr flood plain
- No property zoning – located in the county
- Address localized flooding issues within campus
- Expansion may require increasing ponding area capacity
- Assess condition of ponds (erosion/sediment build-up)



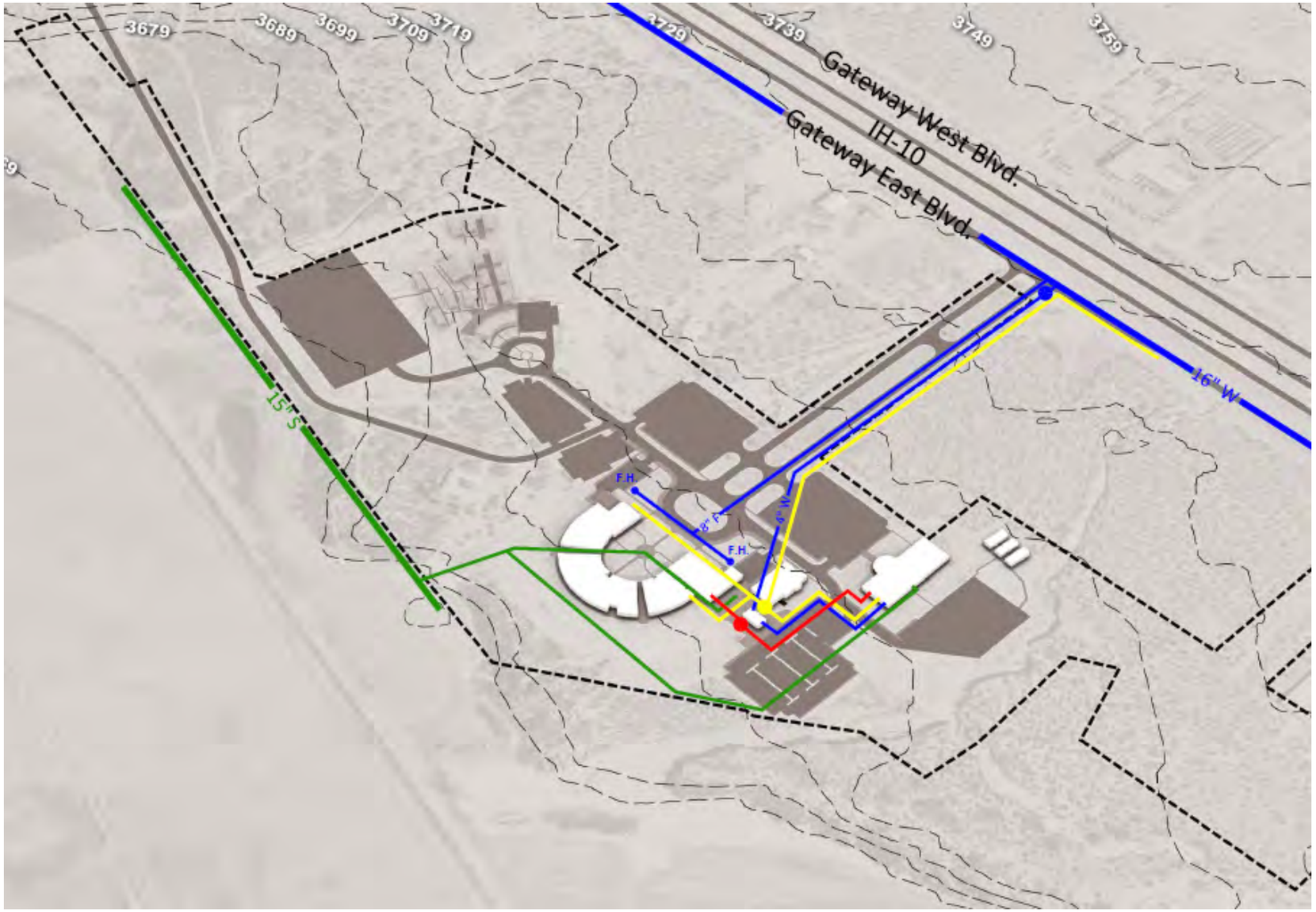
Legend

- Ponding areas
- Storm sewer system
- Arroyos
- Storm runoff flow
- Flood zone
- Localized street flooding (per SMP)

Mission del Paso Campus

Site Utilities

- Adjacently located site utilities
- Water & sewer provided by Lower Valley Water District (LVWD)
- Gas provided by Texas Gas Service
- Electric provided by El Paso Electric
- Expansion requires evaluation of each utilities' capacity vs. increased demands



Legend

- Potable water
- Sanitary sewer
- Natural gas (pending)
- Electric
- Telecomm (pending)

Building Condition Assessment

Exterior Space and Entry

1. One main defined entrance/exit to the campus.
2. Potential for additional exterior hangout space along inside colonnade and to utilize existing building perimeter.

Interior Common Space and Elements

3. No quiet study spaces or gathering spaces; hangout spaces are in corridor; campus needs student union and large meeting space.
4. Existing faculty offices are small/crowded.
5. Classroom/Labs are crowded.
6. No gymnasium; existing weight rooms are small.
7. Some doors equipped with automatic door openers.
8. Potential to use exterior study space off Library.

1.

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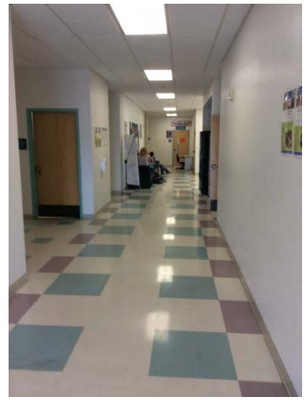

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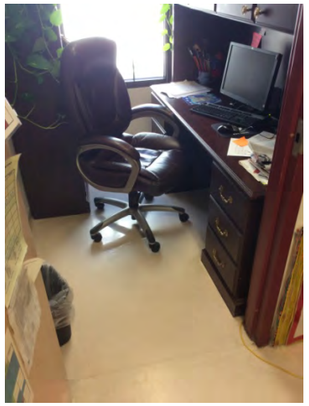

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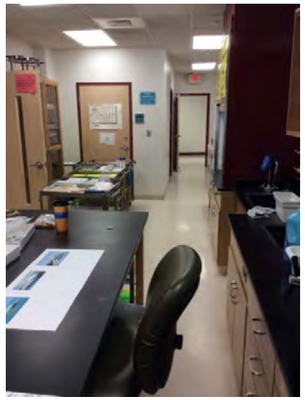

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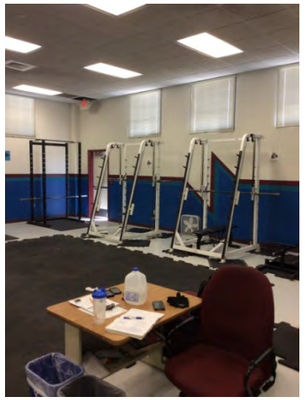

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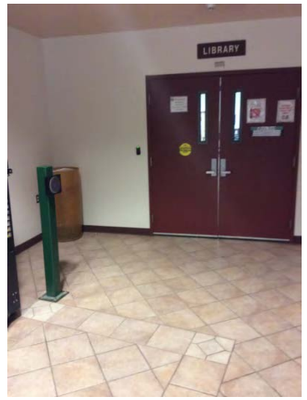

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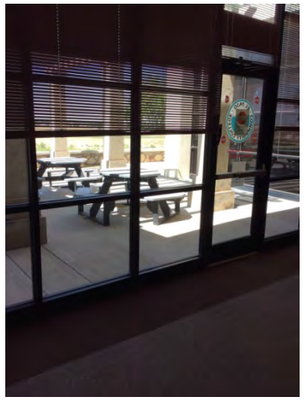


8.

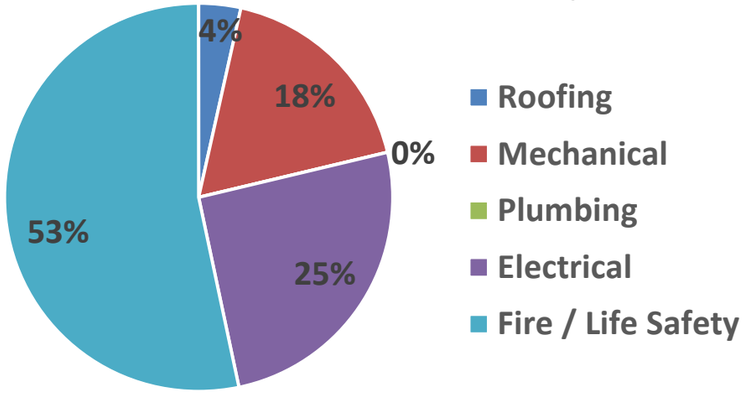
Mission del Paso Campus

Mechanical/Electrical Assessment

Existing Conditions

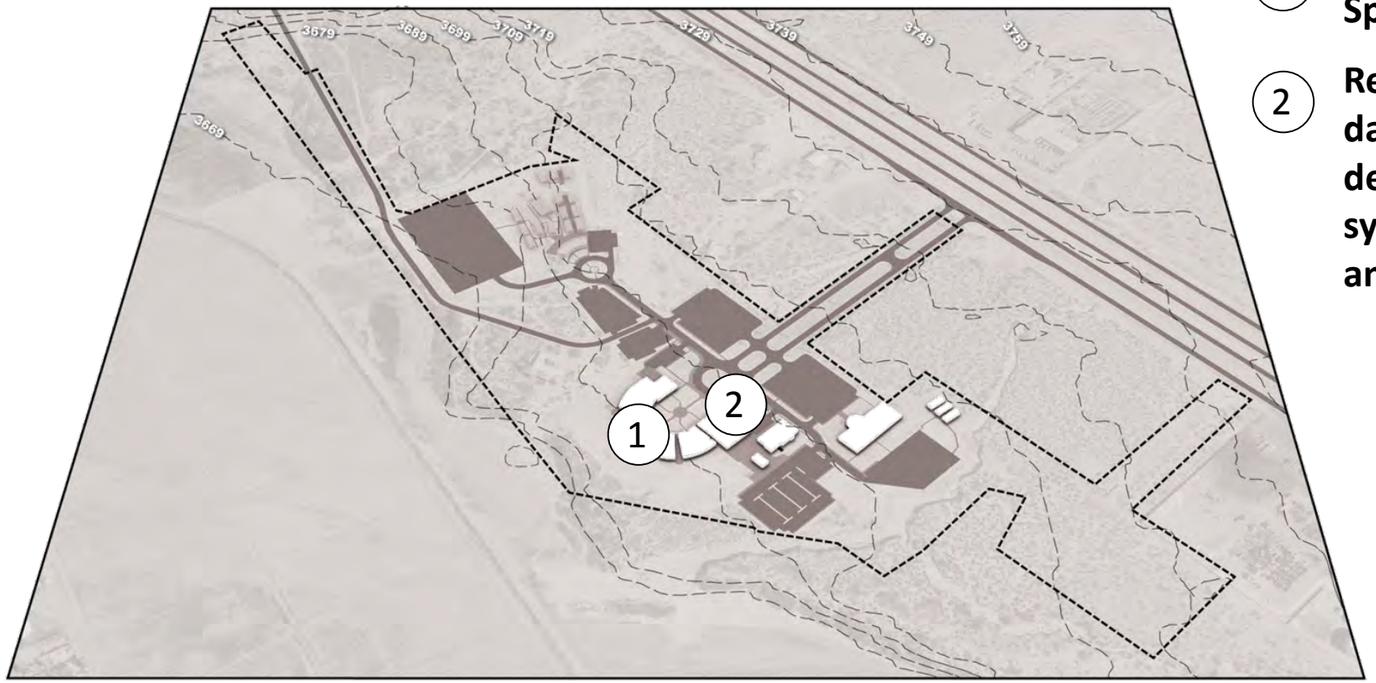
- 2 Chillers (250 + 99 tons), 1 Boiler (1167 mbh)
- Custom Air Handling Units
- Existing 1000A, 480/277V SES at Physical Plant serves all campus building except Bldg E.

Priority 1-3 Deficiencies $1.9M



Future Available Capacity

- Cooling – 150 tons, Redundant Chiller
- Heating – at Capacity, Short 1637 mbh
- Estimated Electrical service capacity at Physical Plant: 500KVA (To be verified with utility company peak demand data.)



1. Install Fire Sprinklers
2. Replaced damaged/ defective FA system devices and lighting

Mission del Paso Campus

Technology Assessment

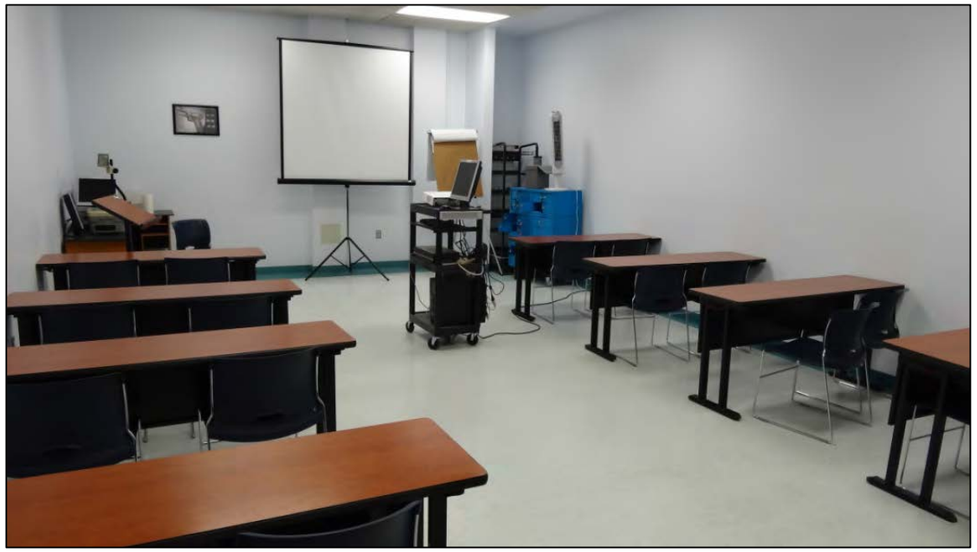
1. AV cabling /connectivity needed or not complete in some areas.

2. Workforce development spaces and some Law Enforcement Academy classrooms need permanent infrastructure to support AV (projection screen, ceiling mounted projector, instructor podium). Mobile equipment is used as a permanent setup.

3. Limited resources in EMT Training. One high fidelity mannequin, few computers, and task trainers for # of users.

4. EMT Training space is constrained and shared for lecture, computer lab use, demonstration, and storage.

1.



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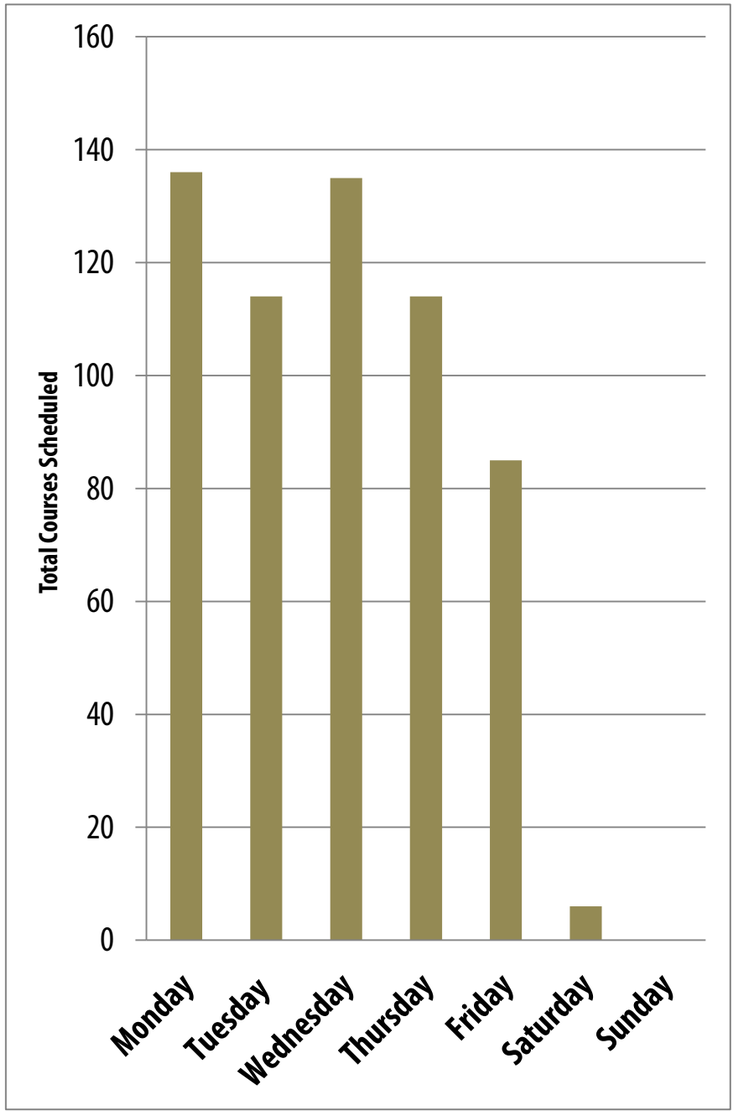
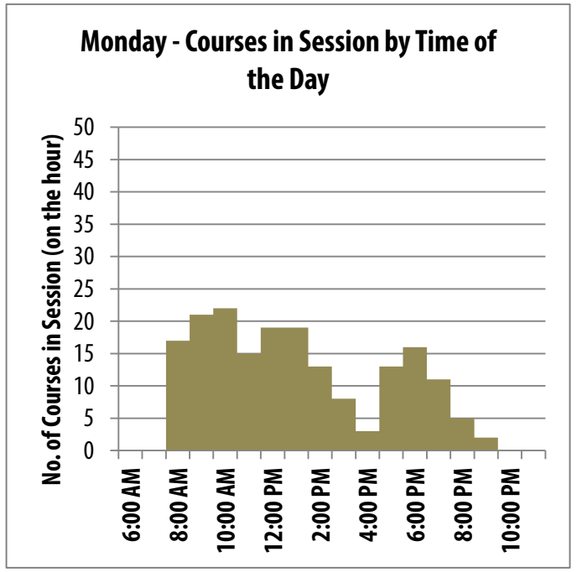
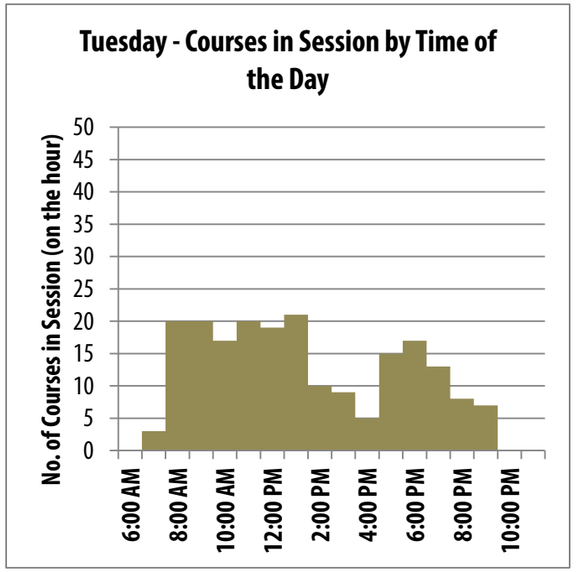
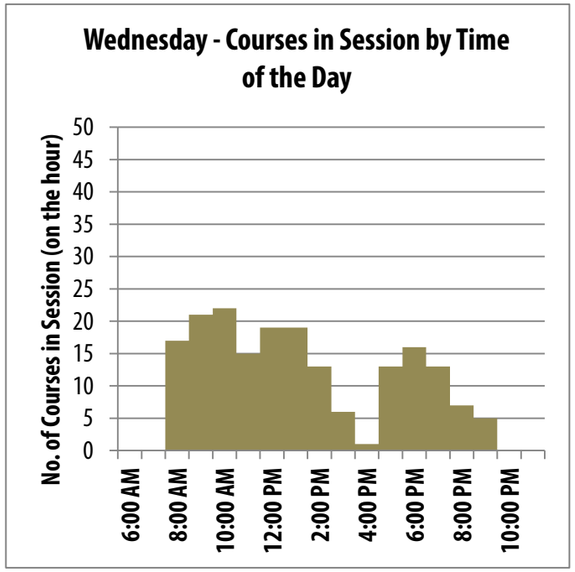
Mission del Paso Campus

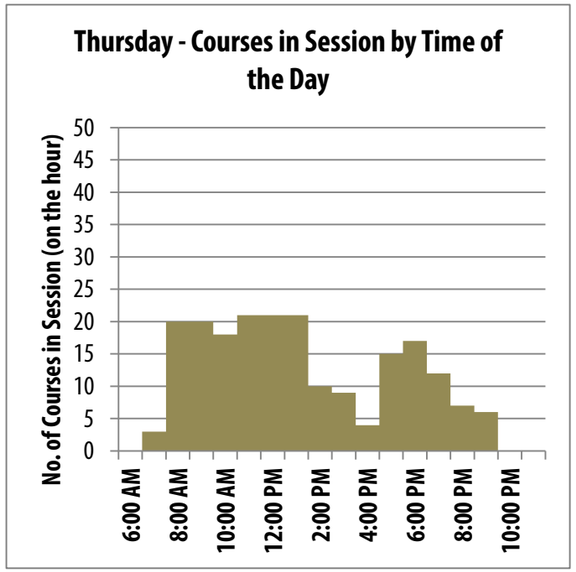
Total Courses in Session

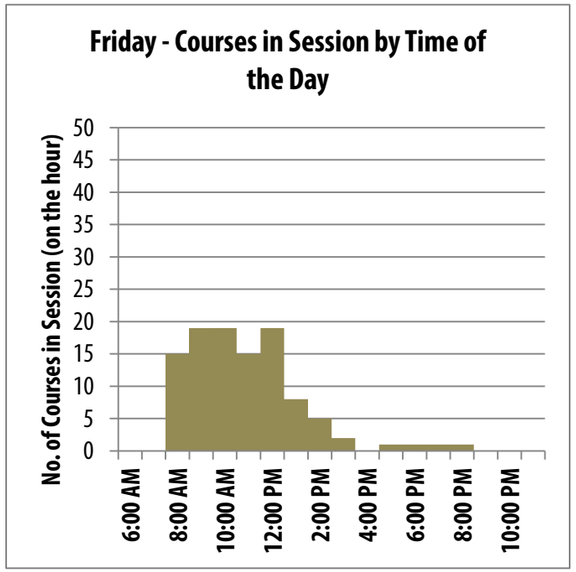


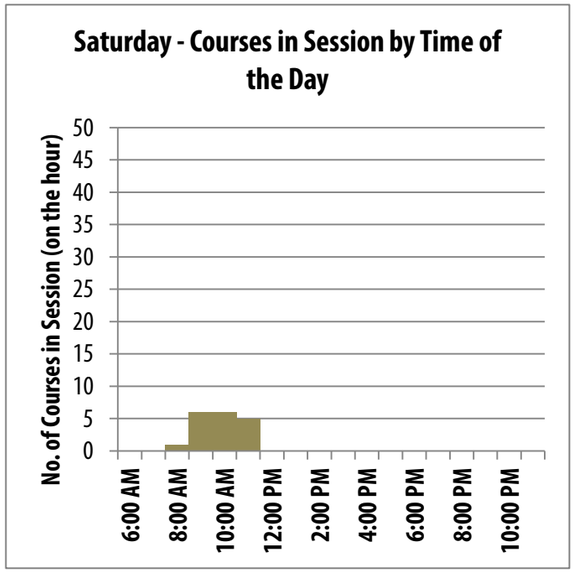






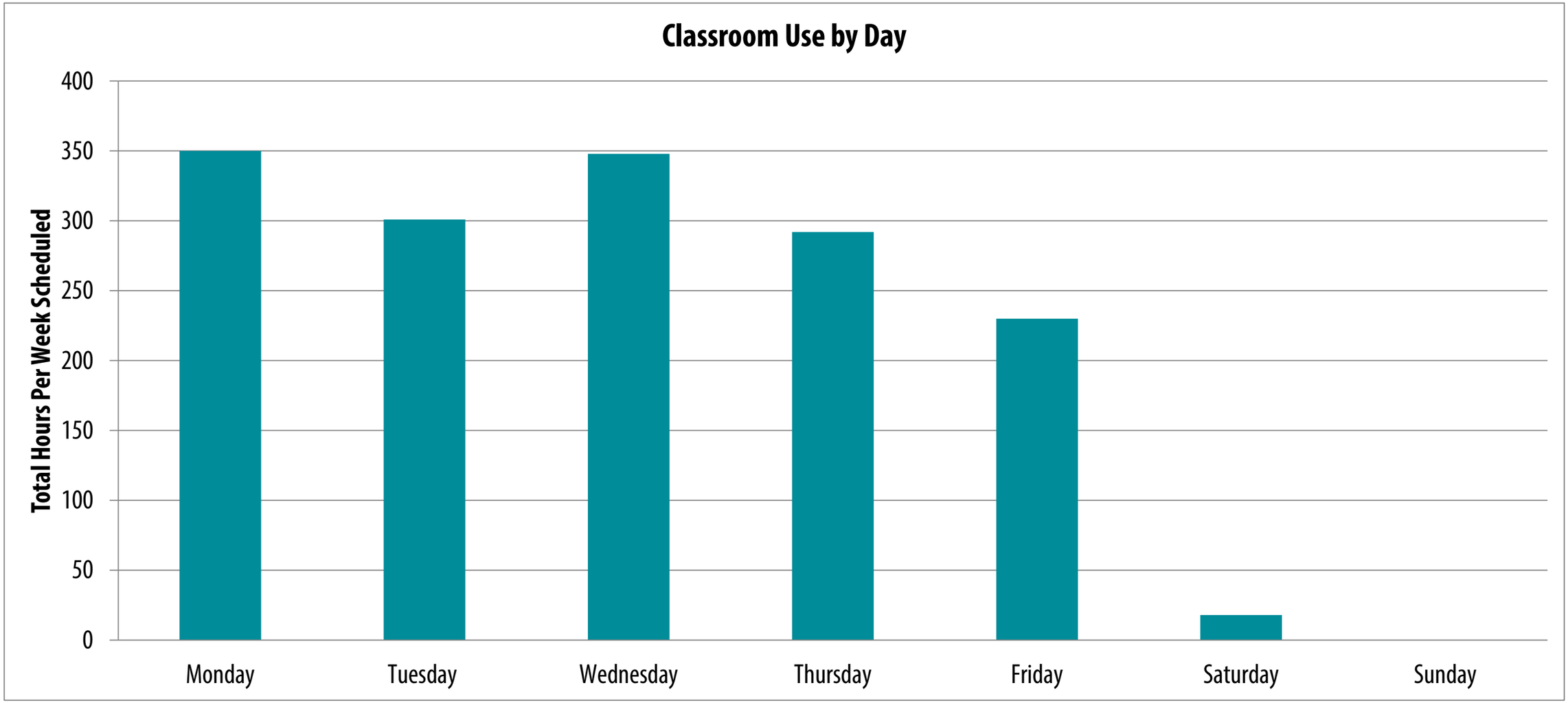






Mission del Paso Campus

Classroom Utilization



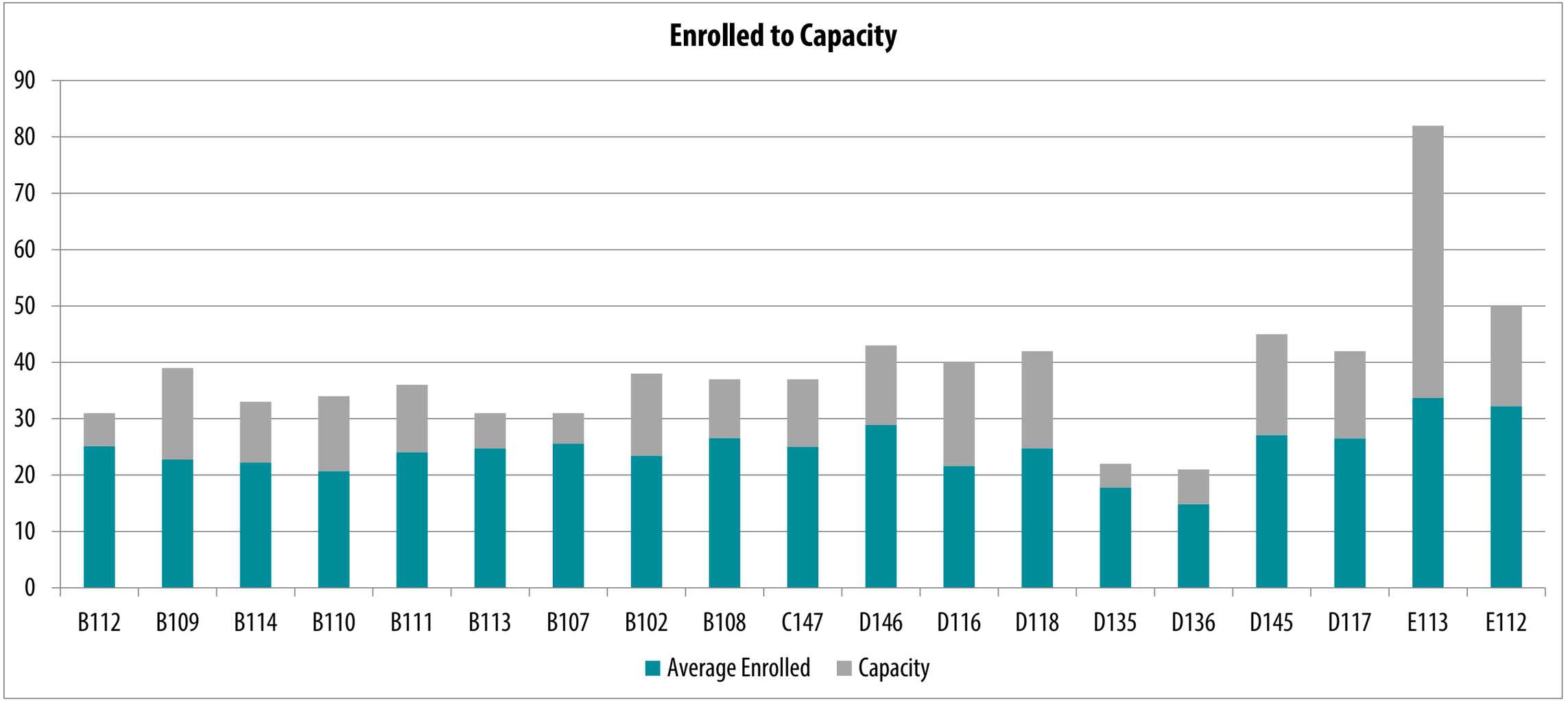
Mission del Paso Campus

Classroom Utilization

Building	No. of Classrooms	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly CR Hours	Average Weekly Hours per CR
Science Building	9	310	7,645	77%	318	35
Learning Resource Center	1	37	1,278	108%	51	51
Health Building	7	255	5,554	68%	239	34
Educational Resources Building	2	132	2,874	68%	87	44
Total	19	734	17,351	74%	695	41

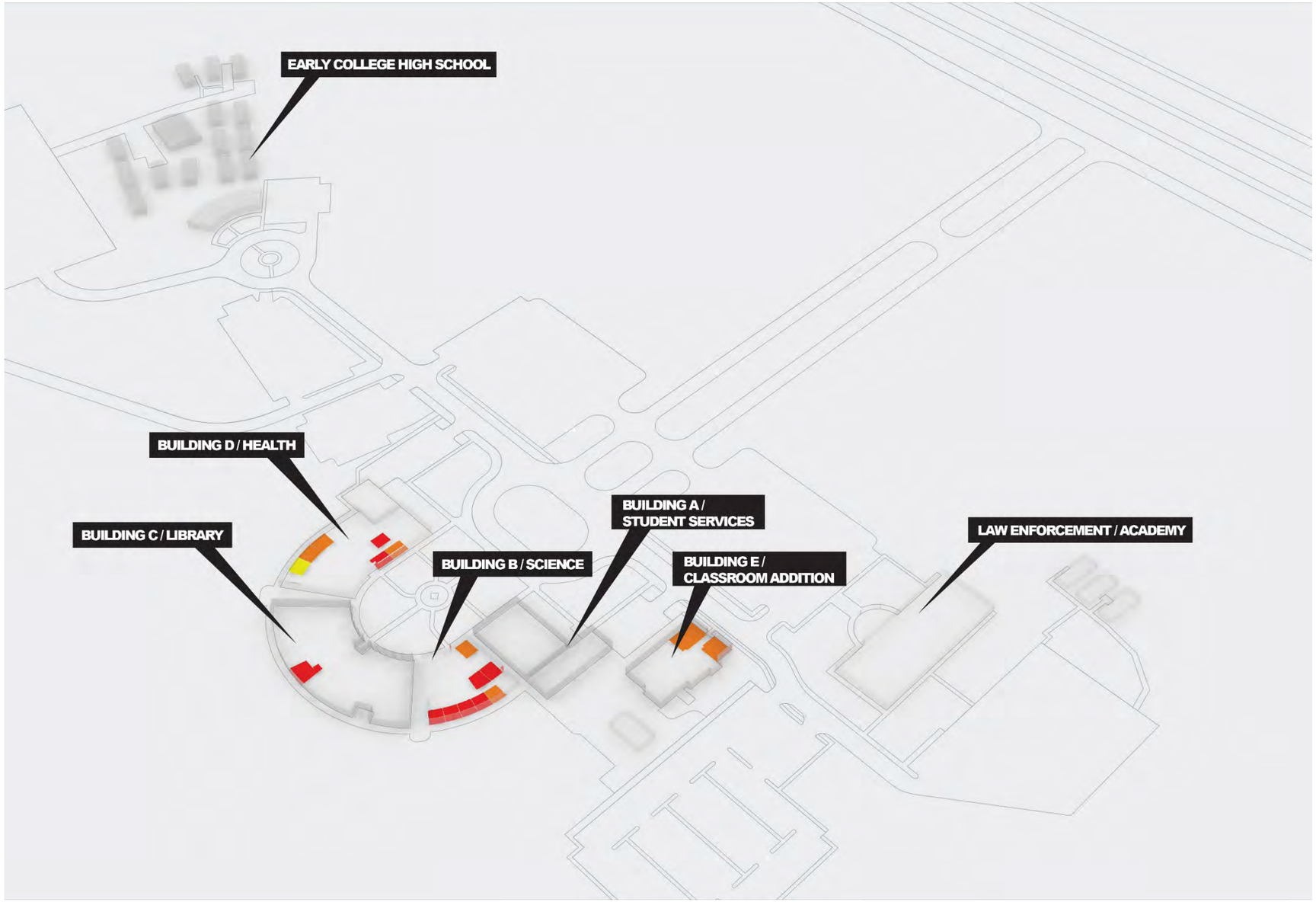
Mission del Paso Campus

Classroom Capacity



Mission del Paso Campus

Classroom Capacity



Enrolled to Capacity

- *Less than **60%***
- ***60-70%***
- *More than **70%***

Mission del Paso Campus

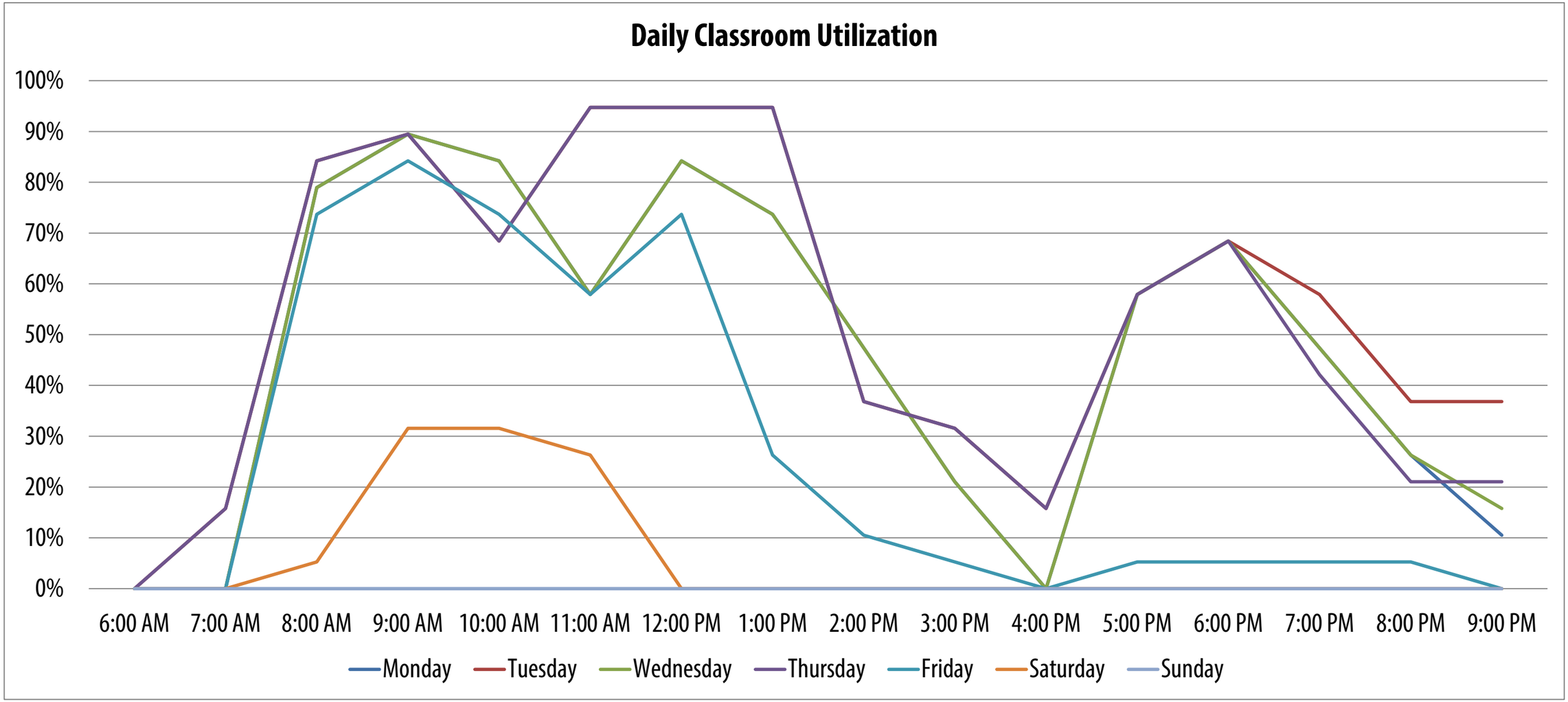
Classroom Utilization

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
Science Building	86%
Learning Resource Center	90%
Health Building	85%
Educational Resources Building	91%
Total	87%

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
Science Building	70%
Learning Resource Center	68%
Health Building	64%
Educational Resources Building	52%
Total	66%

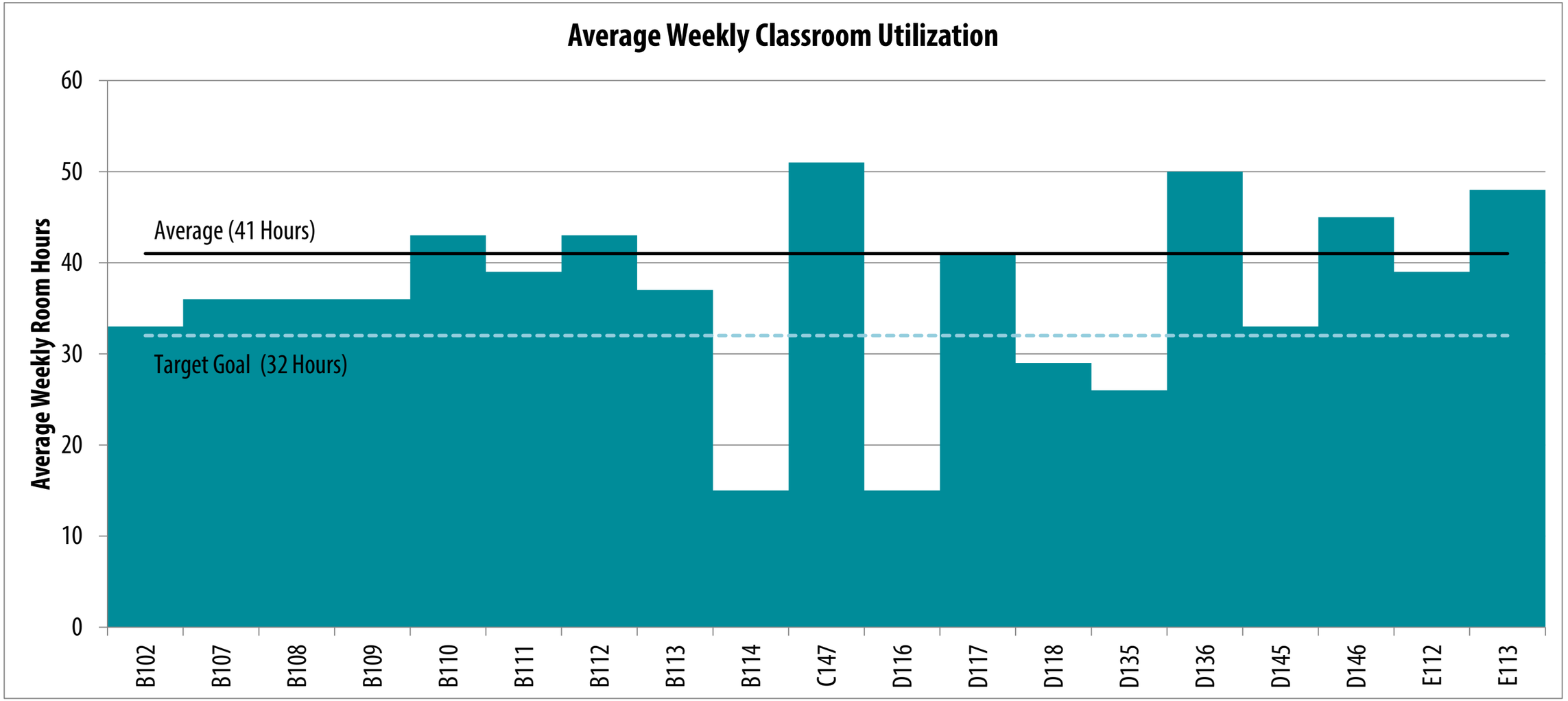
Mission del Paso Campus

Classroom Utilization



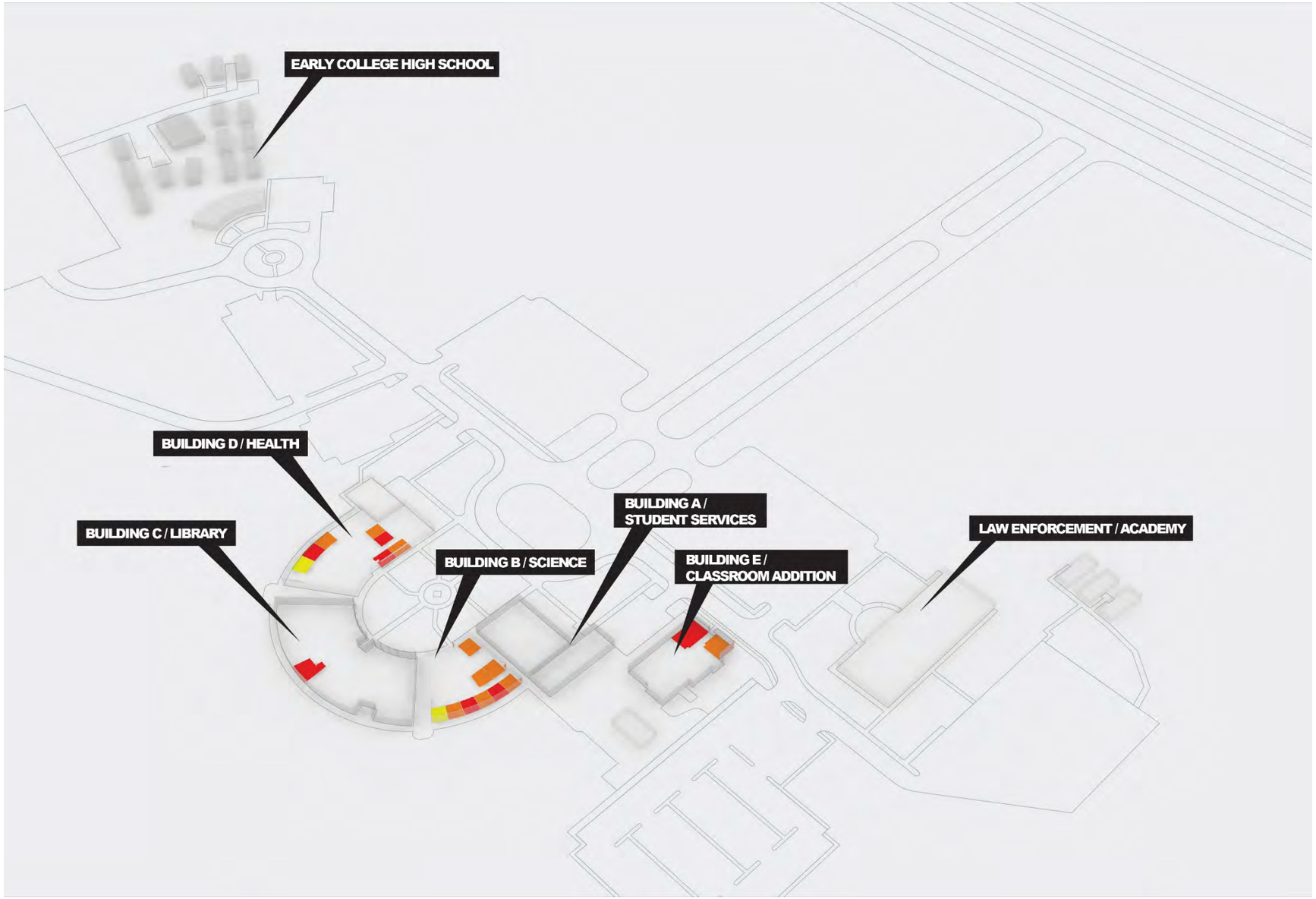
Mission del Paso Campus

Classroom Utilization



Mission del Paso Campus

Classroom Utilization



Weekly Hours

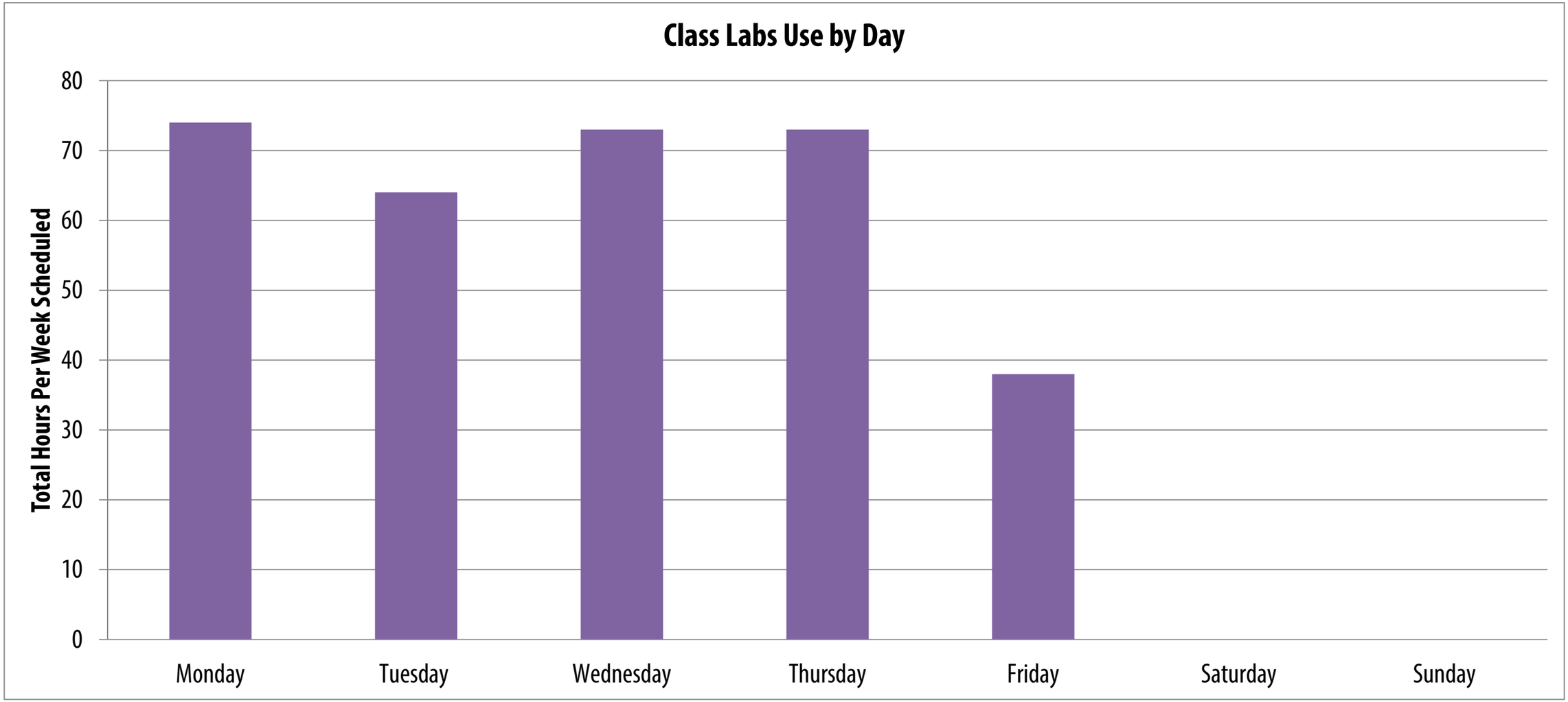
- *Less than **25** hours*
- ***25-40** hours*
- *More than **40** hours*

Classroom Utilization Recap

- Some opportunity for better utilization on Friday
- Some opportunity in the afternoons

Mission del Paso Campus

Class Lab Utilization



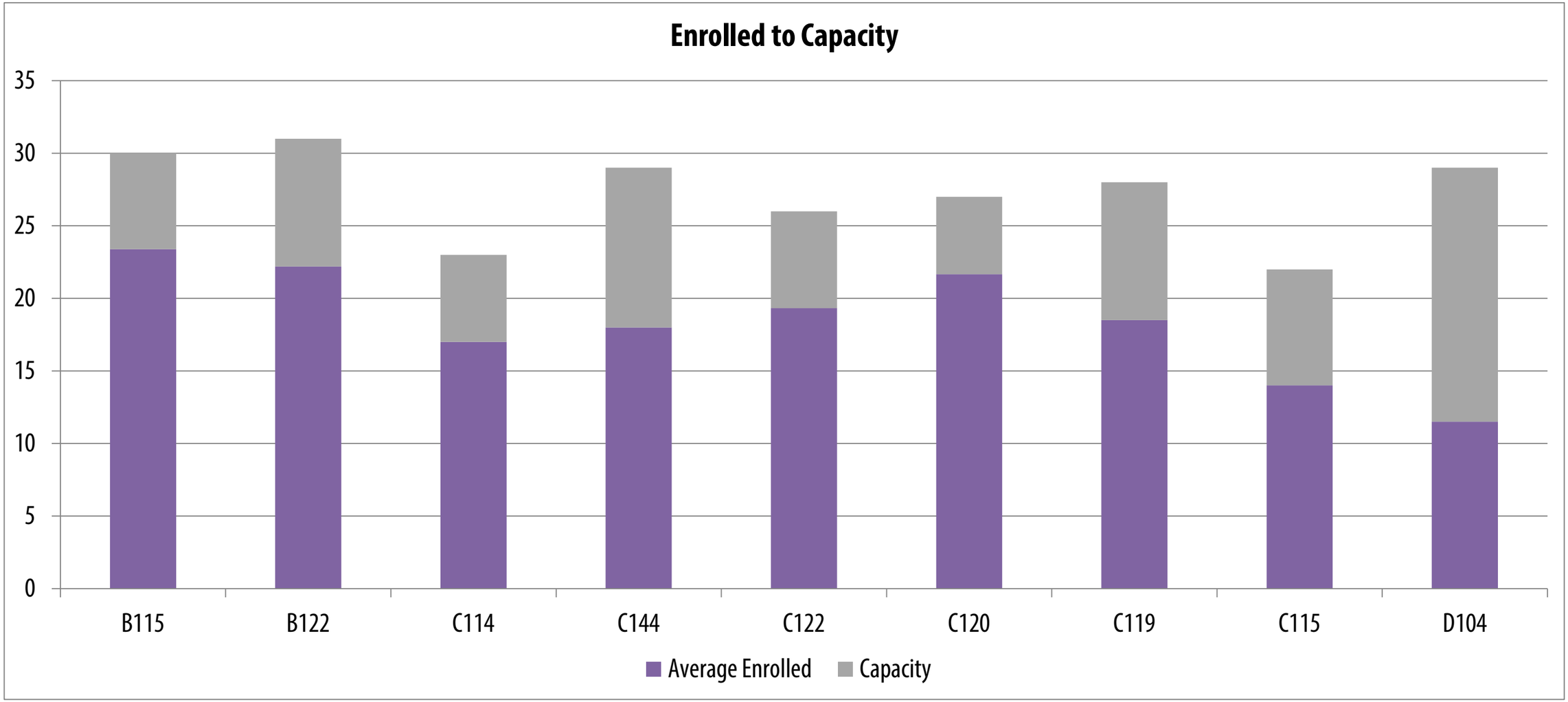
Mission del Paso Campus

Class Lab Utilization

Building	No. of Class Labs	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly Lab Hours	Average Weekly Hours per Lab
Science Building	2	61	1,871	123%	81	41
Learning Resource Center	6	155	1,793	46%	97	16
Health Building	1	29	137	19%	12	12
Total	9	245	3,801	62%	190	23

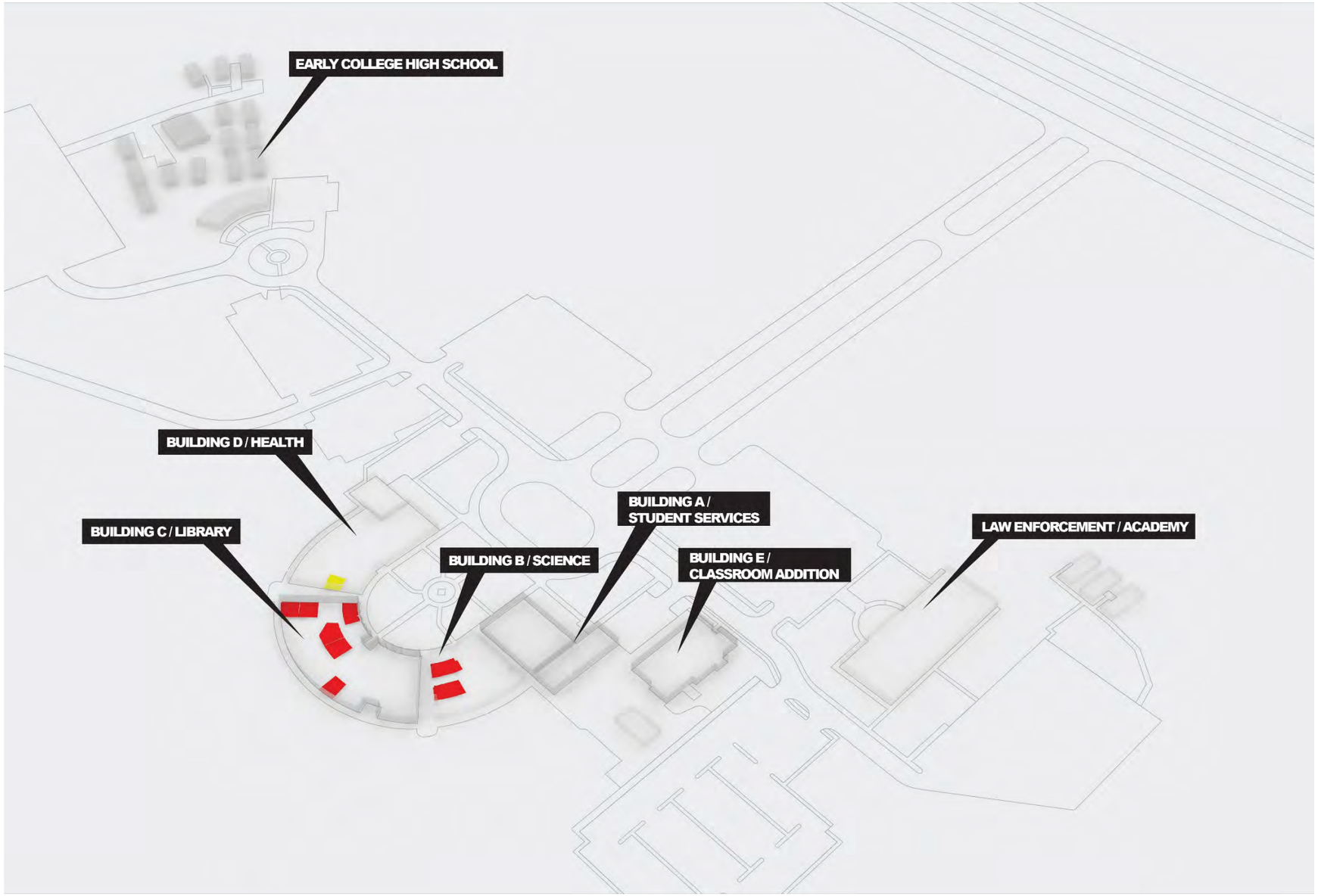
Mission del Paso Campus

Class Lab Capacity



Mission del Paso Campus

Class Lab Capacity



Enrolled to Capacity

- *Less than **60%***
- ***60-70%***
- *More than **70%***

Mission del Paso Campus

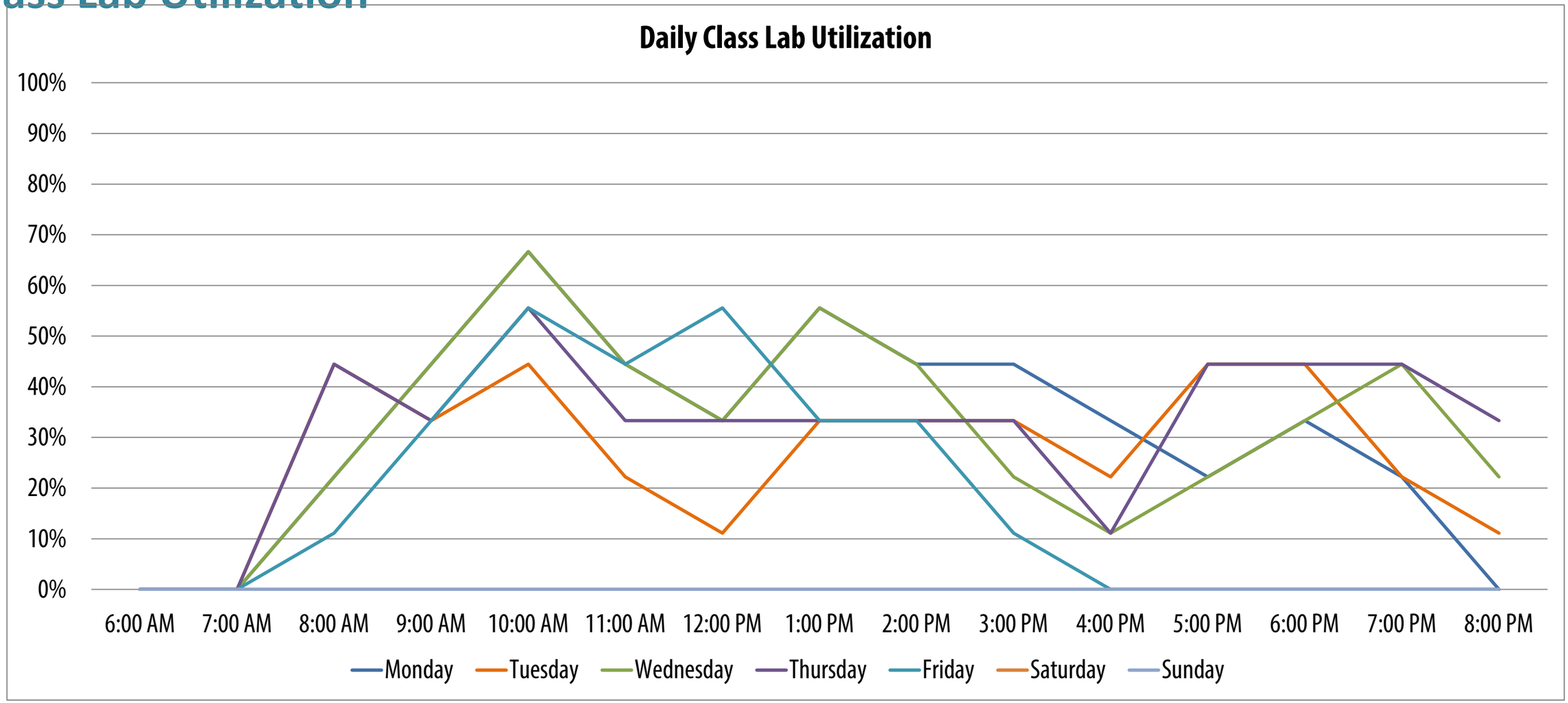
Class Lab Utilization

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
Science Building	96%
Learning Resource Center	89%
Health Building	48%
Total	90%

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
Science Building	76%
Learning Resource Center	69%
Health Building	40%
Total	71%

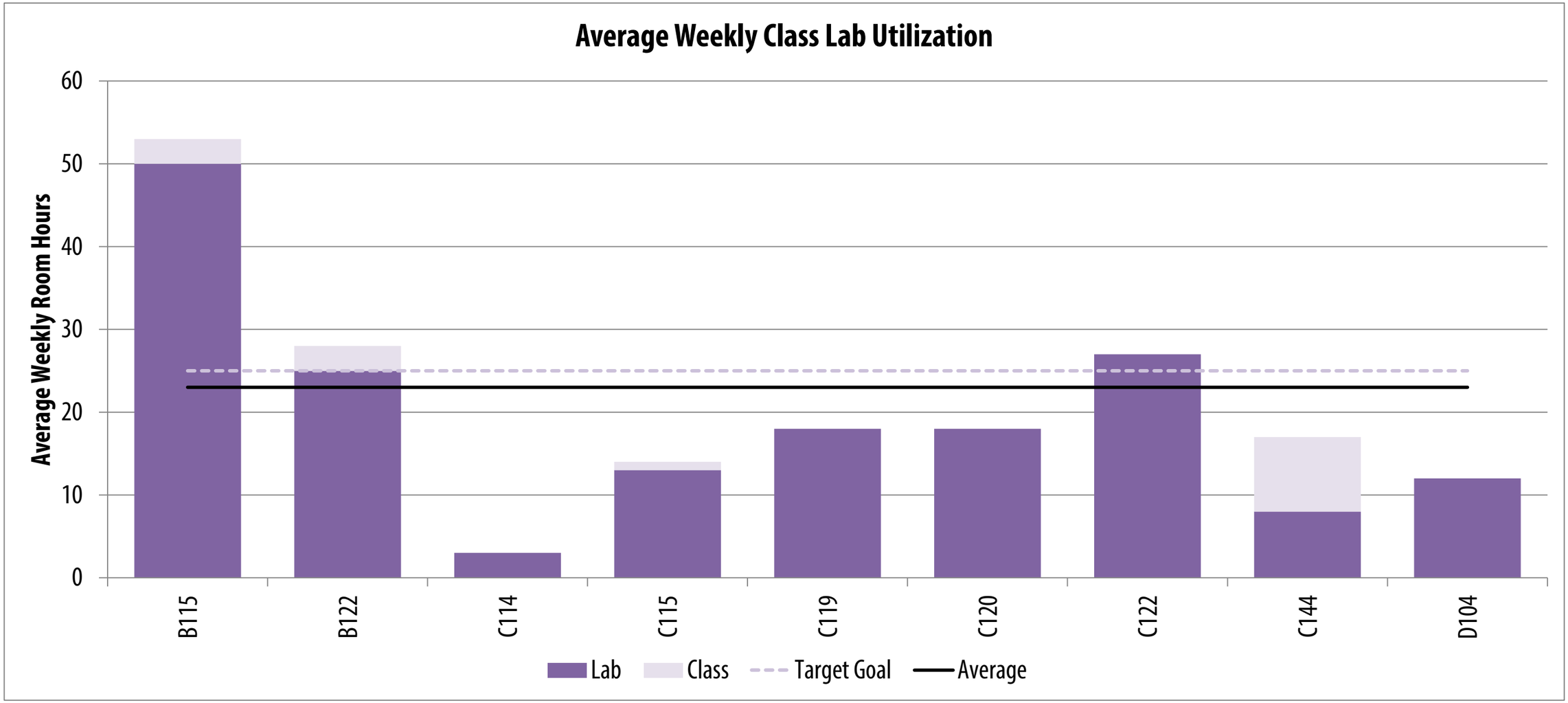
Mission del Paso Campus

Class Lab Utilization



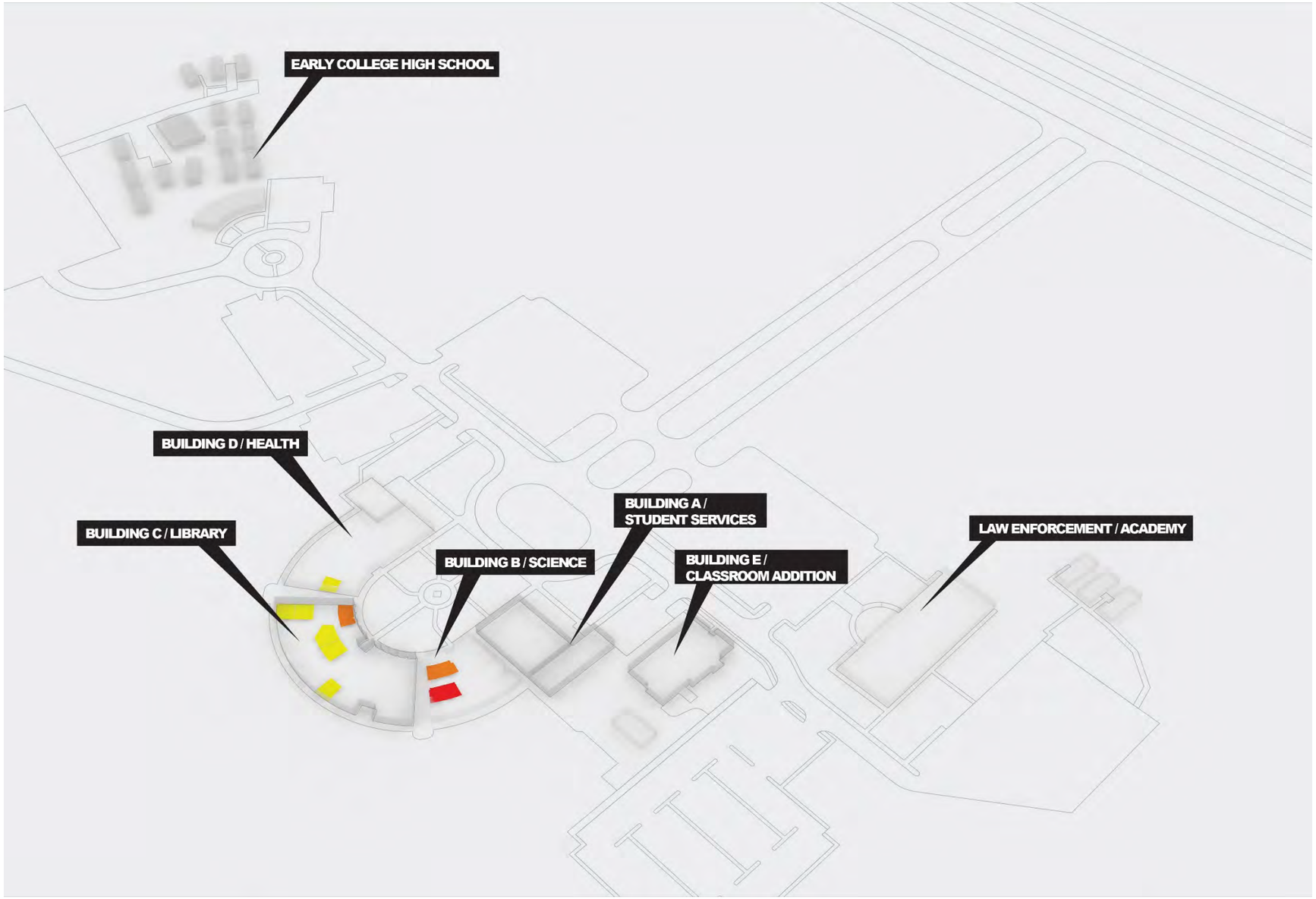
Mission del Paso Campus

Class Lab Utilization



Mission del Paso Campus

Class Lab Utilization



Weekly Hours

- *Less than **20** hours*
- ***20-30** hours*
- *More than **30** hours*

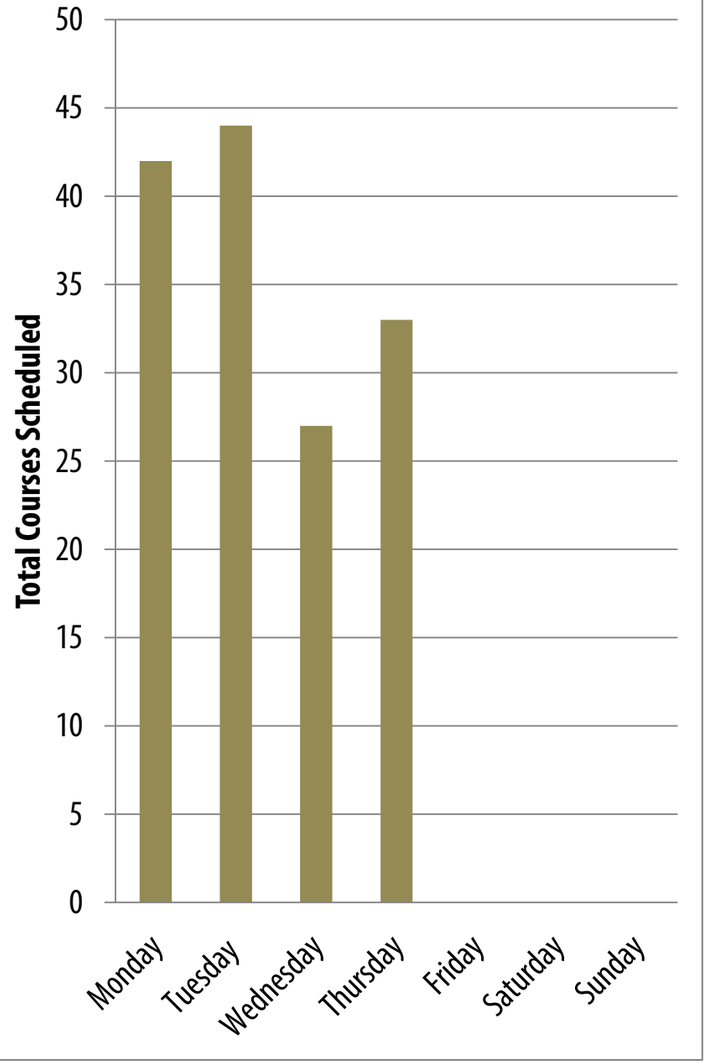
Class Lab Utilization Recap

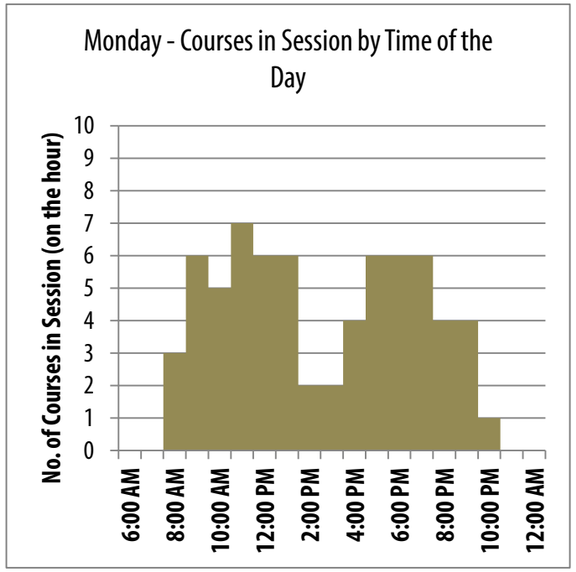
- Opportunity to better use labs (except B115)
- Opportunity for additional enrollment/capacity in Health building

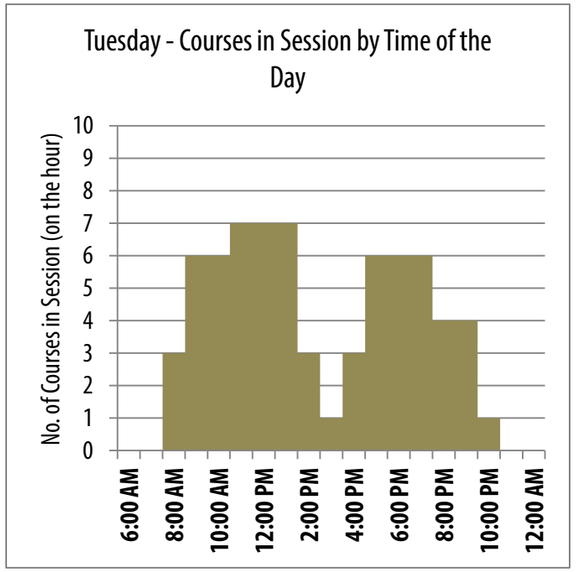
B6 | Administrative Services Center

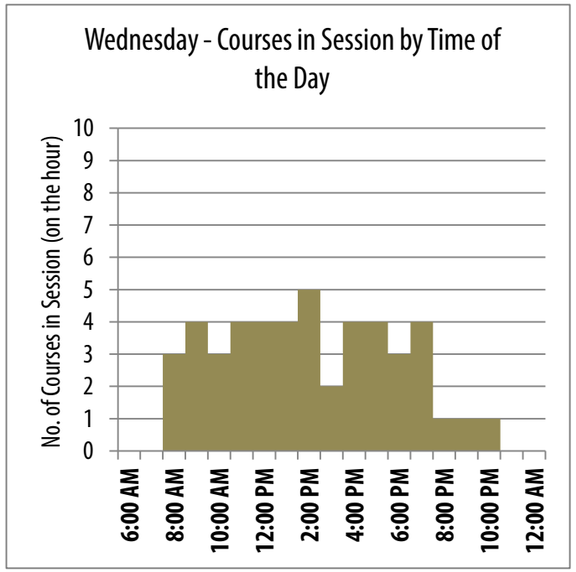
Administrative Services Center

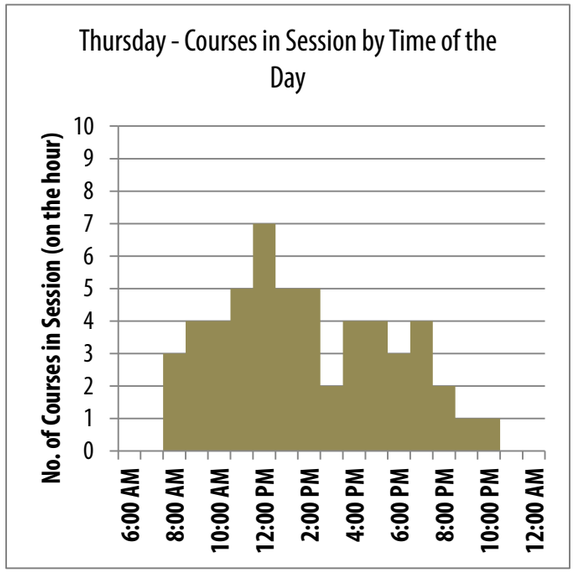
Total Courses in Session



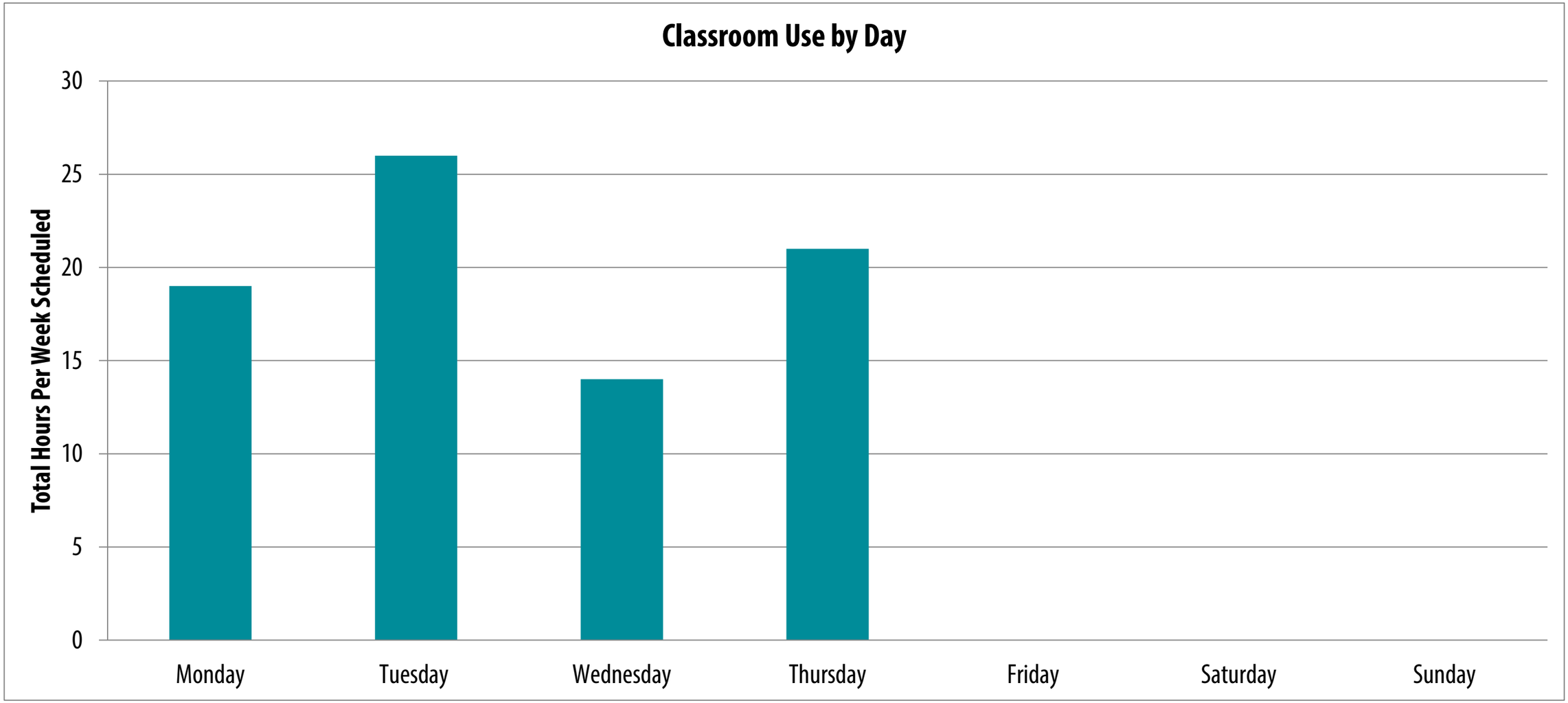








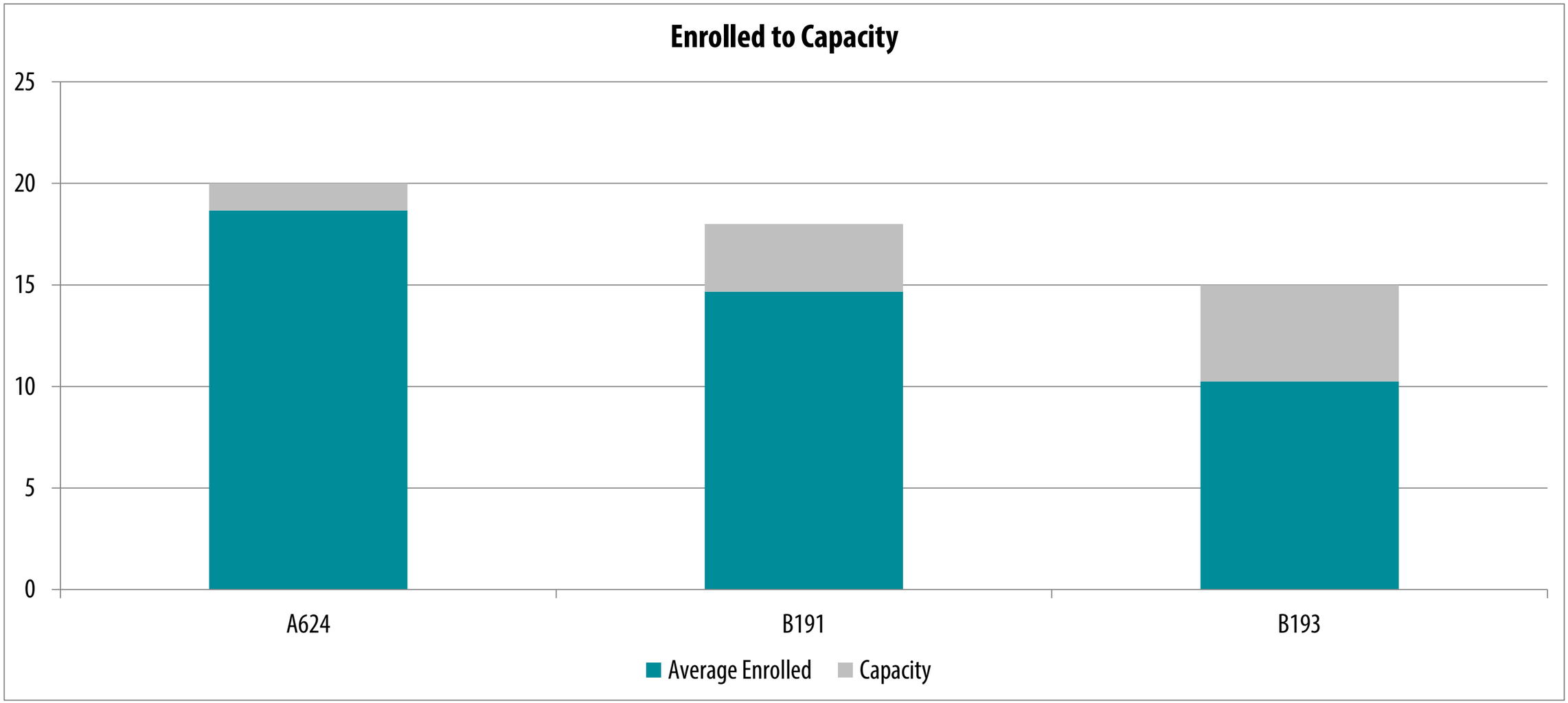
Classroom Utilization



Classroom Utilization

Building	No. of Classrooms	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly CR Hours	Average Weekly Hours per CR
A Building	1	20	168	**26%**	9	9
B Building	2	33	442	**42%**	33	17
Total	3	53	610	36%	42	13

Classroom Capacity



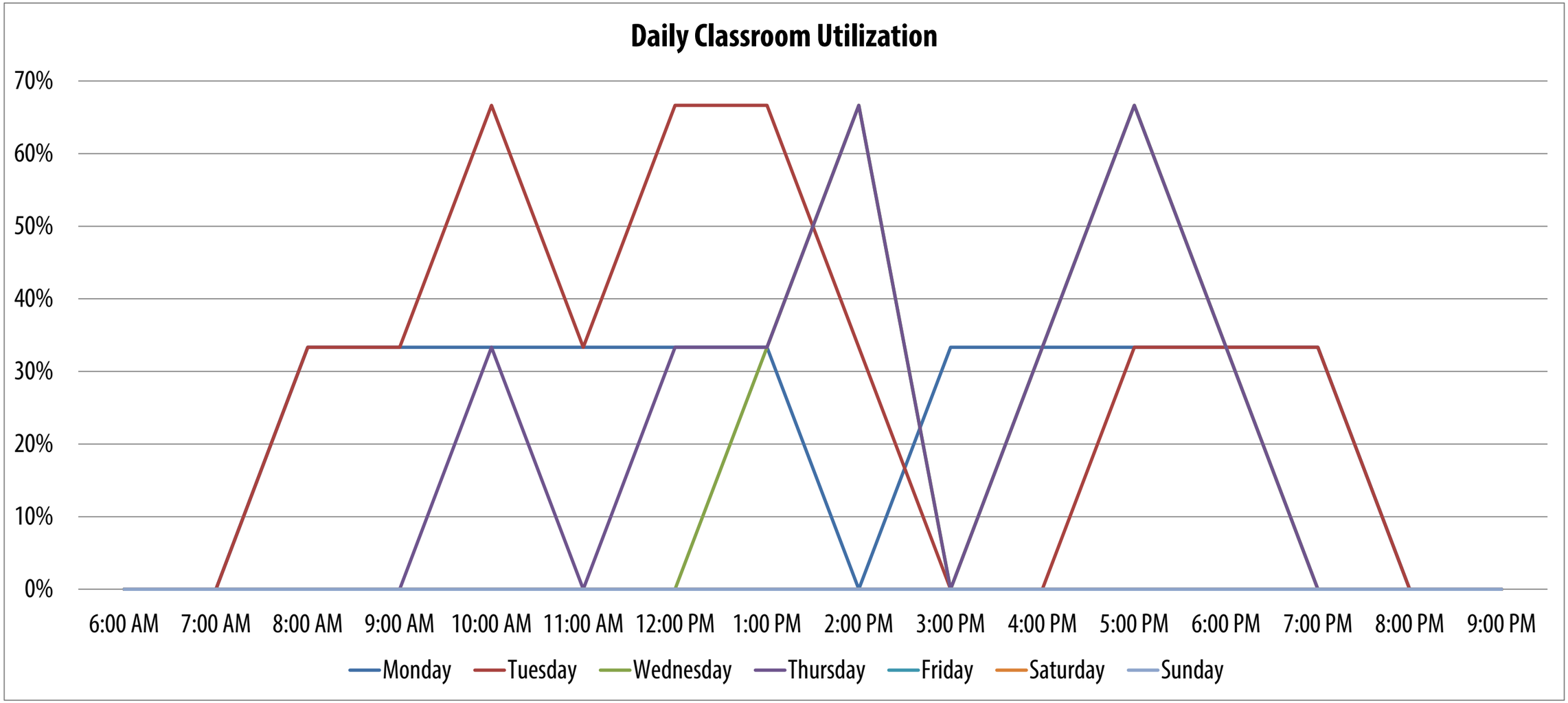
Administrative Services Center

Classroom Utilization

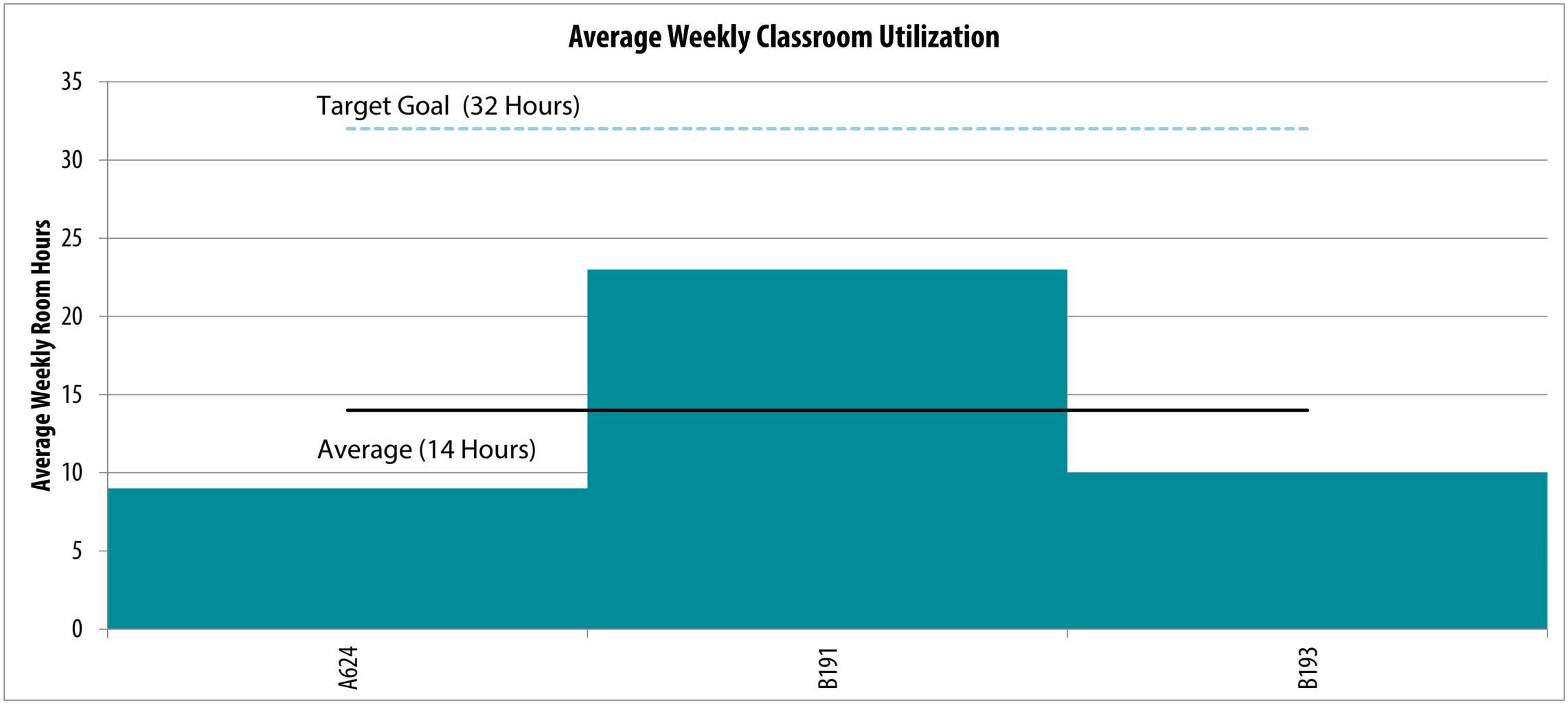
Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
A Building	93%
B Building	95%
Total	95%

Classroom Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
A Building	93%
B Building	77%
Total	80%

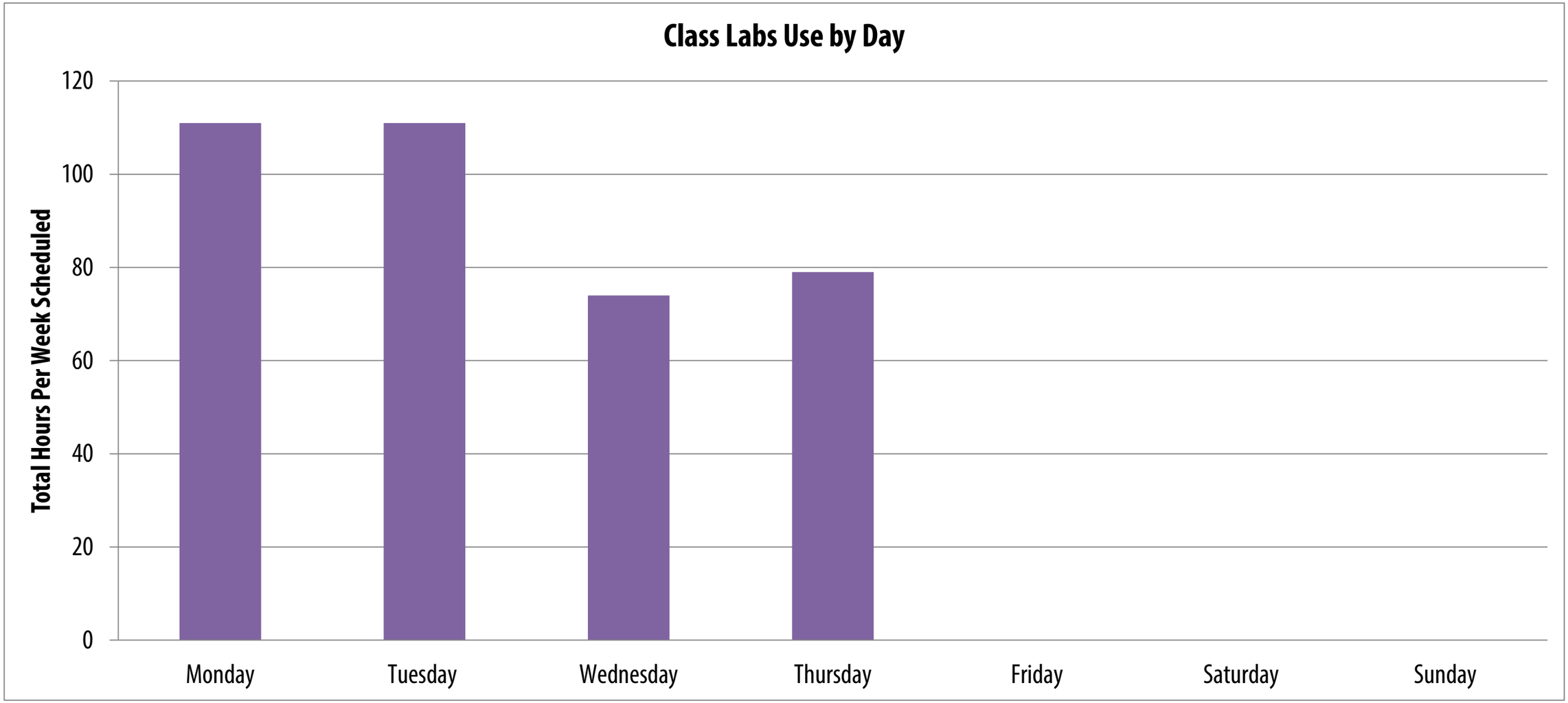
Classroom Utilization



Classroom Utilization



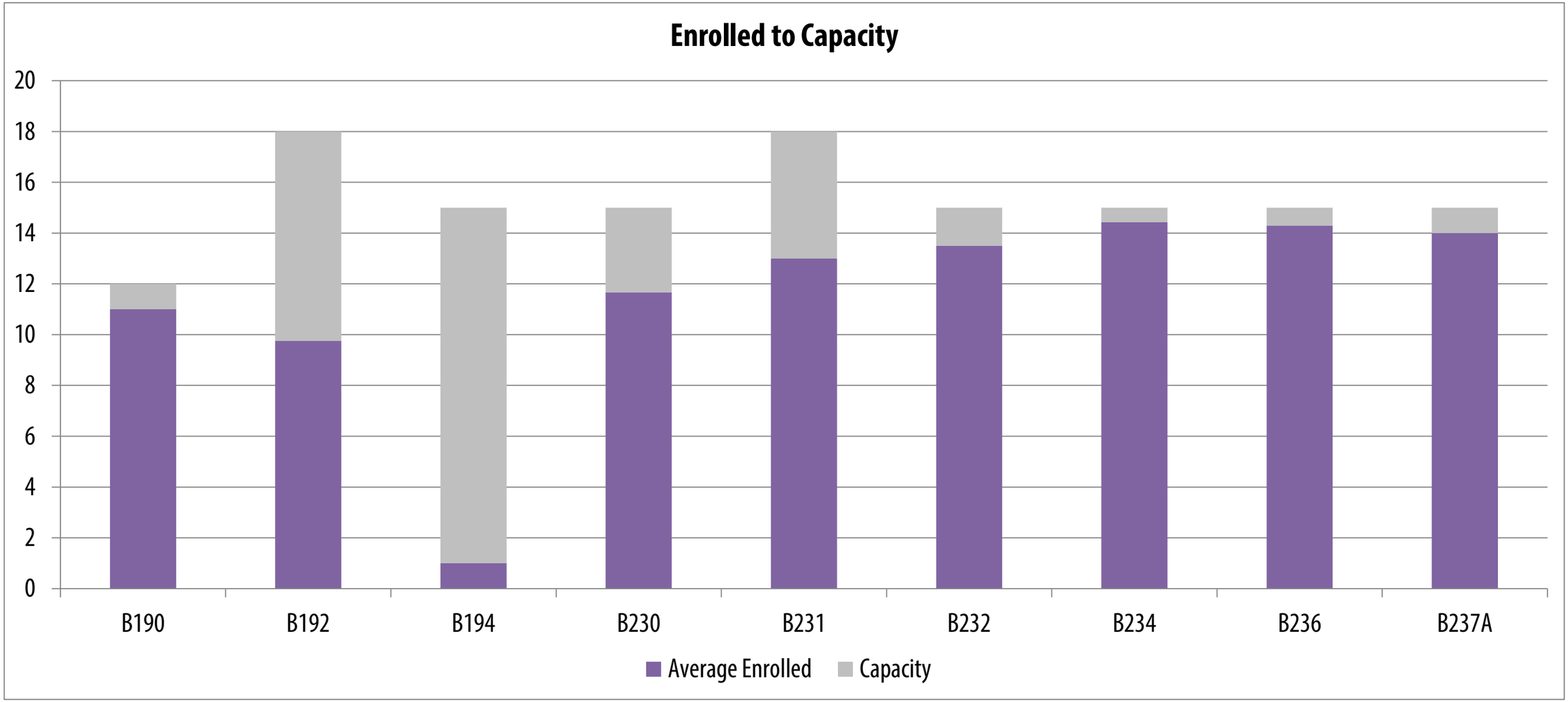
Class Lab Utilization



Class Lab Utilization

Building	No. of Class Labs	Capacity	Weekly Contact Hours	Capacity Utilization	Total Weekly Lab Hours	Average Weekly Hours per Lab
B Building	9	138	2,516	73%	190	21
Total	9	138	2,516	73%	190	21

Class Lab Capacity

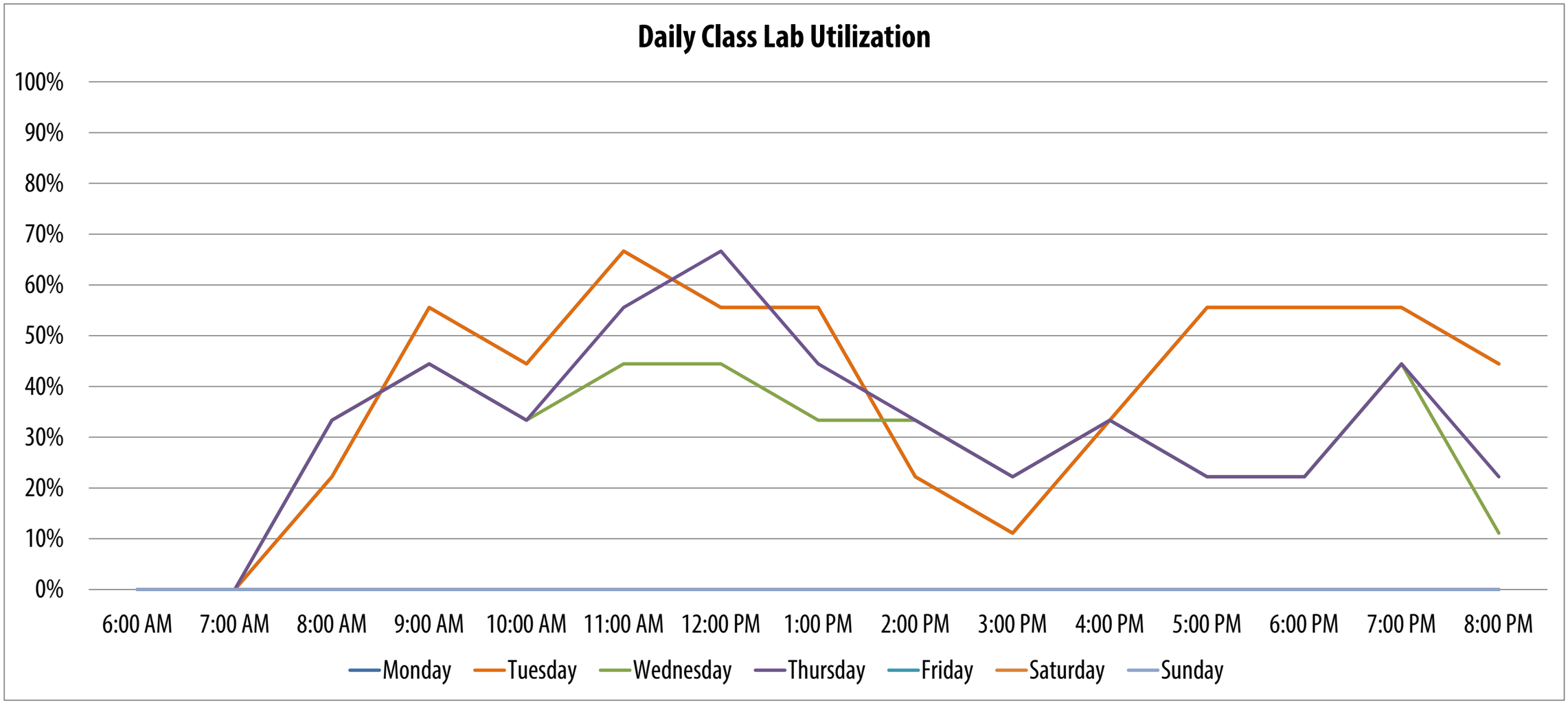


Class Lab Utilization

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Max Cap)
B Building	89%
Total	89%

Class Lab Section Fill by Building	
Building	Class Fill (Enrollment/Capacity)
B Building	86%
Total	86%

Class Lab Utilization



Class Lab Utilization