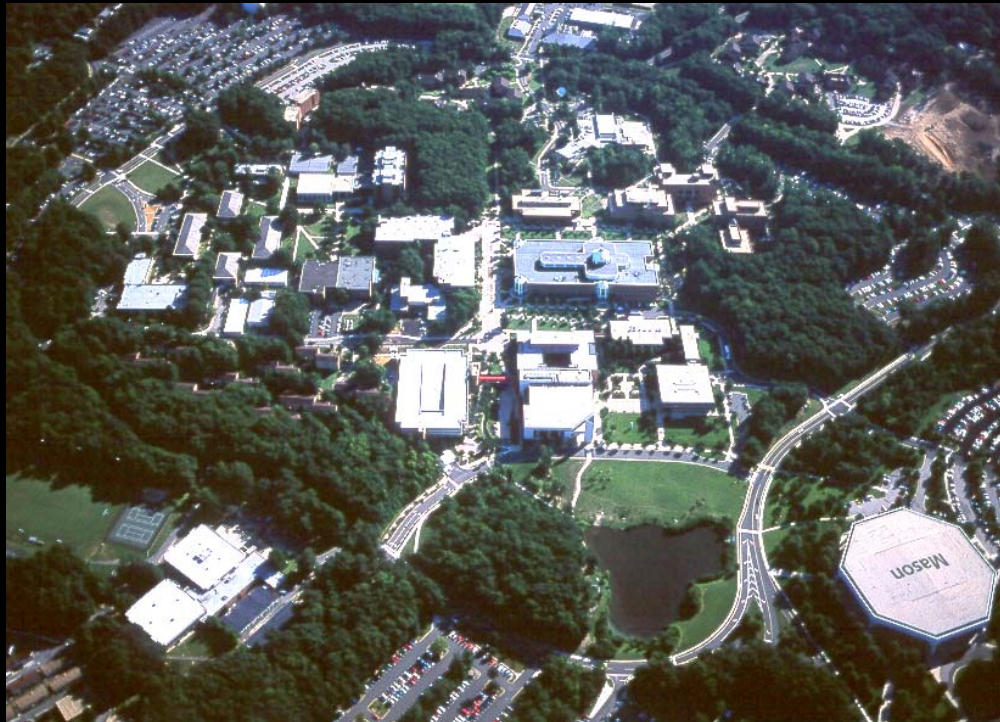


**GEORGE MASON UNIVERSITY  
NE SECTOR PLAN  
Determination and Analysis of  
Market Demand and Program/Planning  
November, 2004**



**Fairfax Campus**

## NE Sector

The goal of the study was to develop a master plan for the Northeast Sector based on a comprehensive market analysis for various program components including:

- Student housing
- Dining
- Retail
- Student Union
- Parking
- Traffic

Following the market research phase, the team developed a *Vision Plan* for the Northeast Sector. The *Vision Plan* establishes the urban design framework for the NE Sector and recommends the distribution of proposed program elements identified in the market study. In addition, the team developed a phased implementation strategy for all new buildings and related infrastructure and utilities.

## **Student Housing**

**The market study was conducted by the design team through focus groups and a campus wide survey. The following details were determined from the study in order to highlight student preferences for new housing development at GMU.**

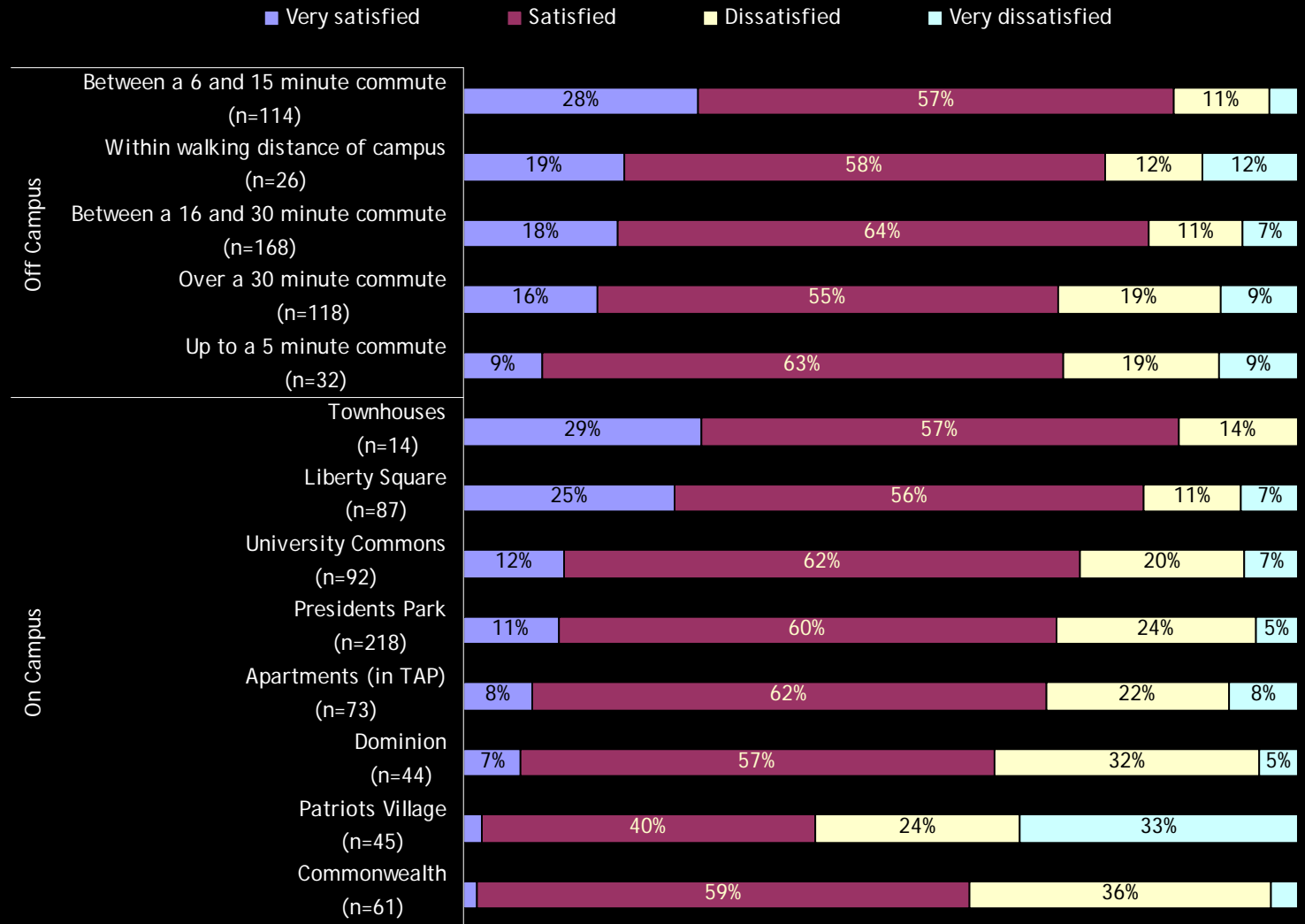
- Focus Group comments**
- Student satisfaction with current housing**
- Desired amenities**
- Unit preferences**
- Interest in new housing**
- Demand**

**Market  
Determination  
Student Housing**

## **Focus Group Comments**

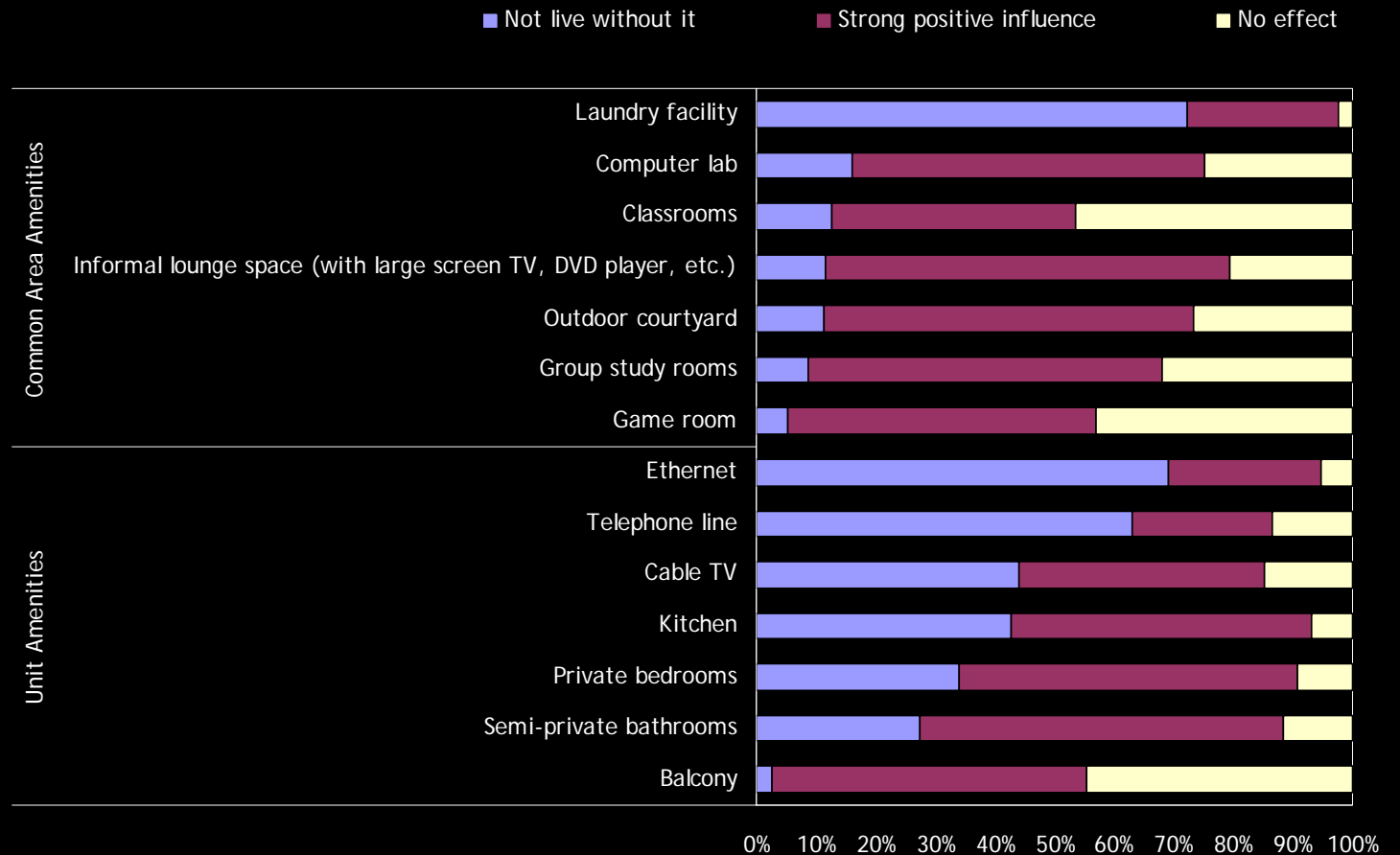
- **Occupancy per unit**
  - Four to six is most popular
  - Eight is too many
  - More may be acceptable if able to choose roommates
- **Occupancy per bedroom**
  - Doubles OK for freshmen and are expected
  - Prefer singles as seniors
  - Prefer apartment double to single on corridor
  - Should be variety and unit progression with class standing
- **Residents per bathroom**
  - 2:1 ratio is ideal; 4:1 is acceptable
  - Community baths are acceptable for freshmen; not preferred
- **Other comments**
  - Should be 9-mo and 12-mo lease option
  - Kitchens are important to some, not others

## Student Satisfaction with Current Housing



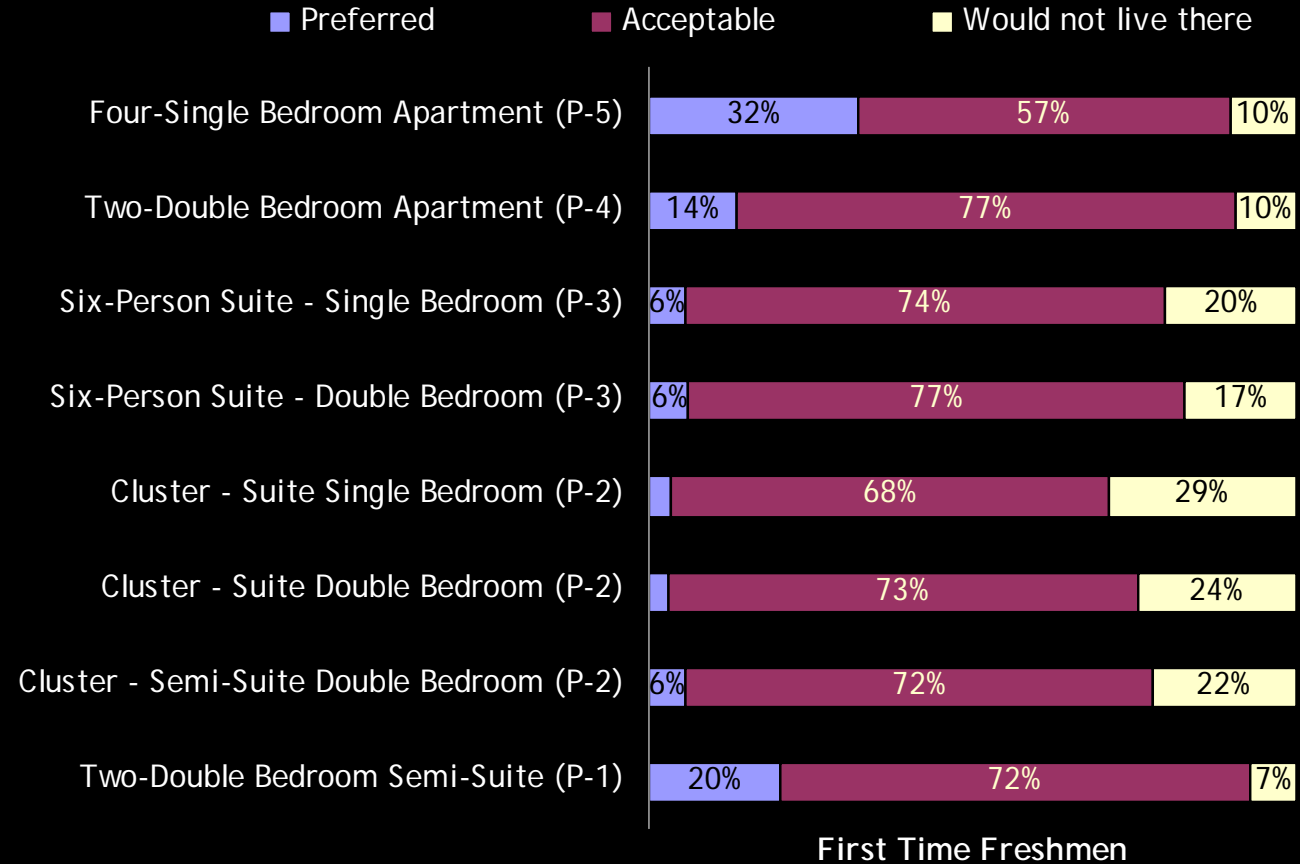
**Market  
Determination  
Student Housing**

## Desired Amenities



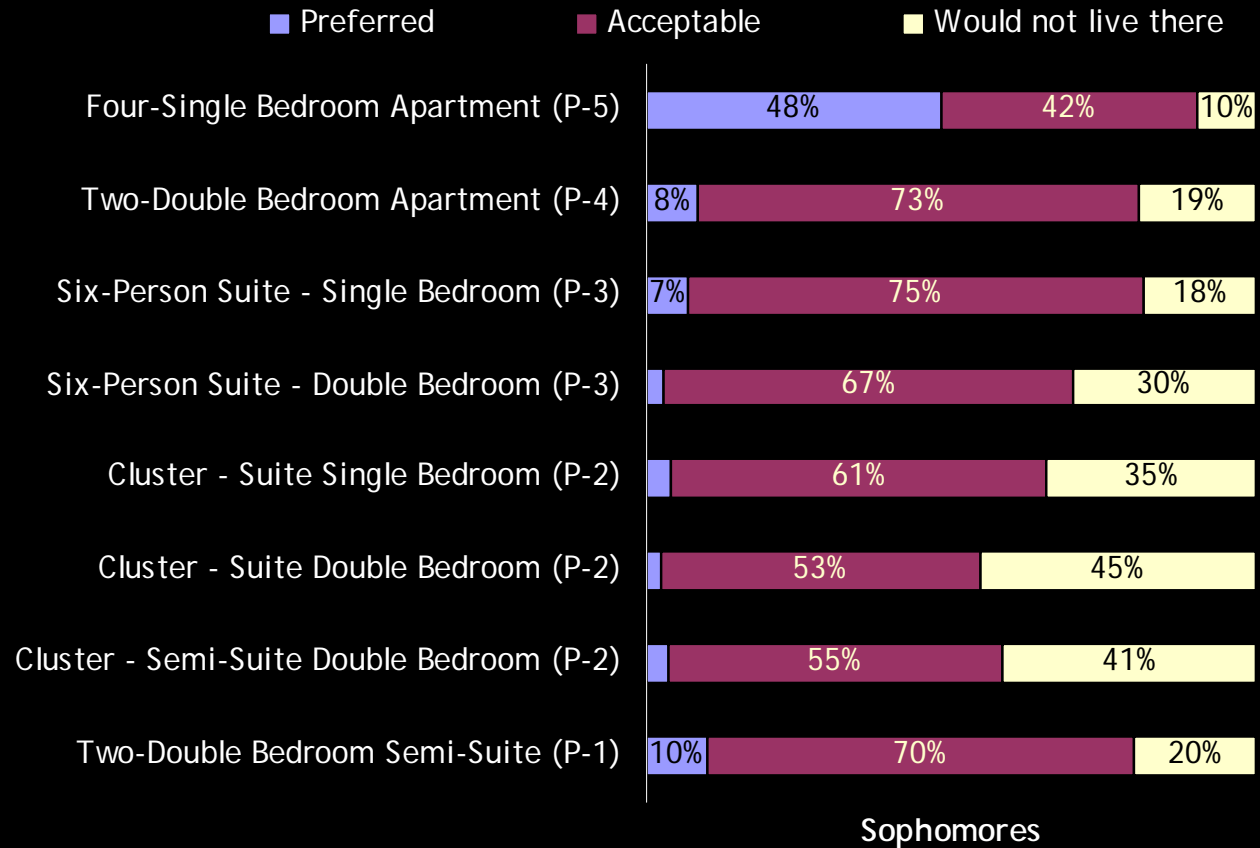
**Market  
Determination  
Student Housing**

## Unit Preference Freshman



**Market  
Determination  
Student Housing**

## Unit Preference Sophomores

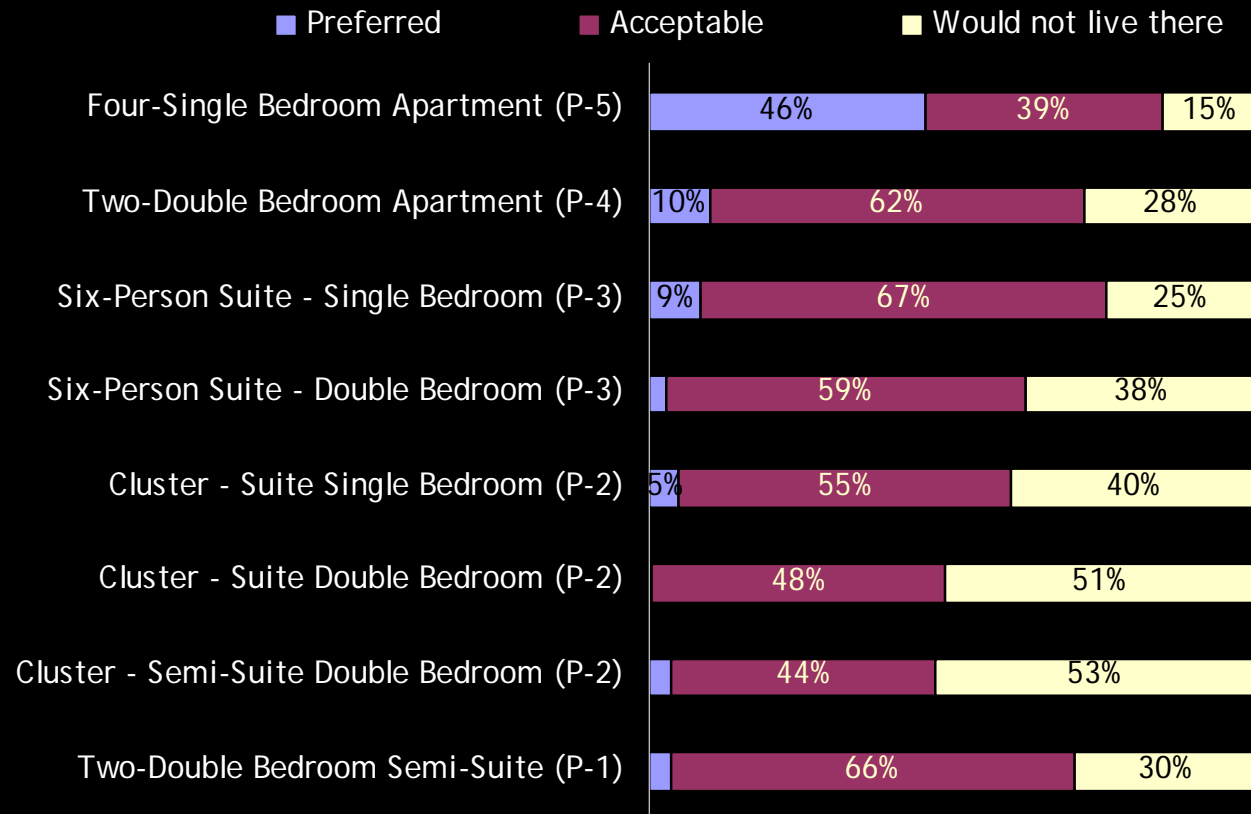


**Market  
Determination  
Student Housing**



## Unit Preference

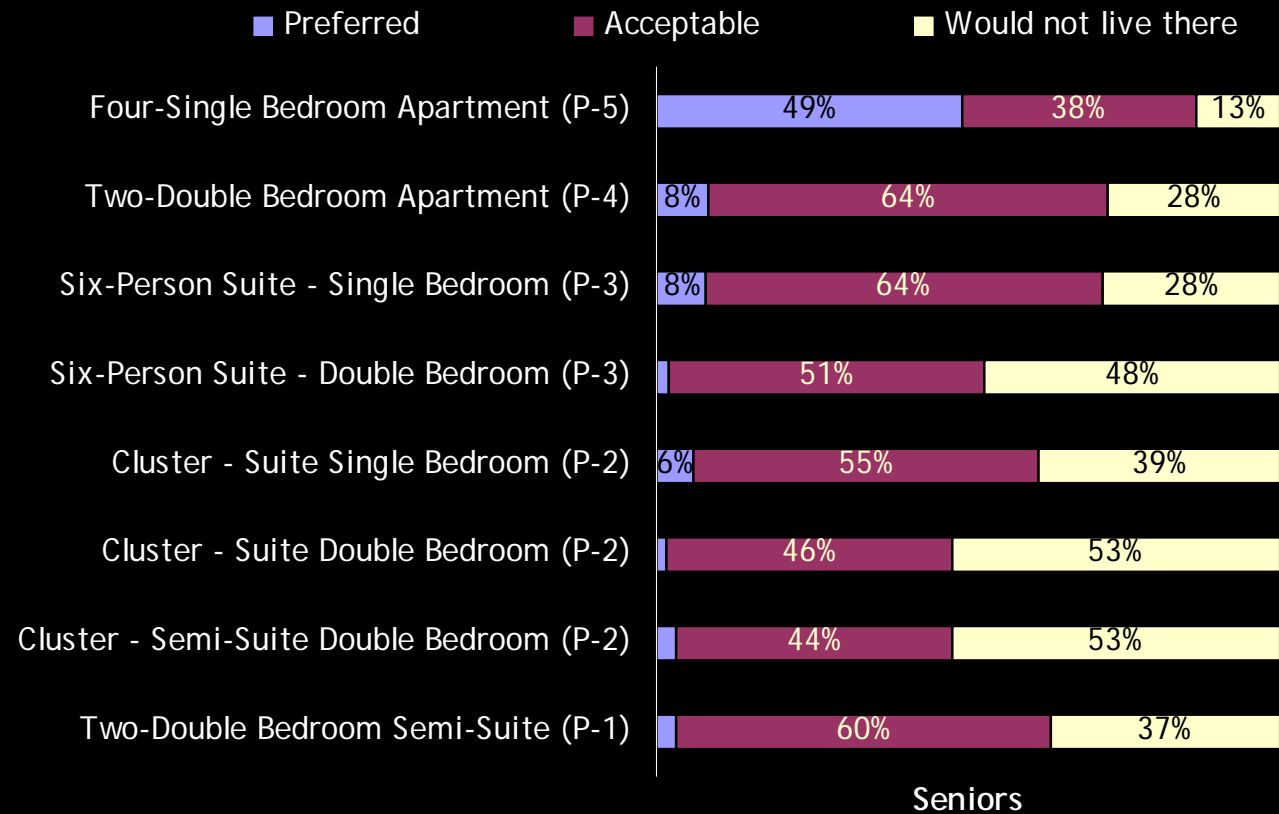
### Juniors



Juniors

**Market  
Determination  
Student Housing**

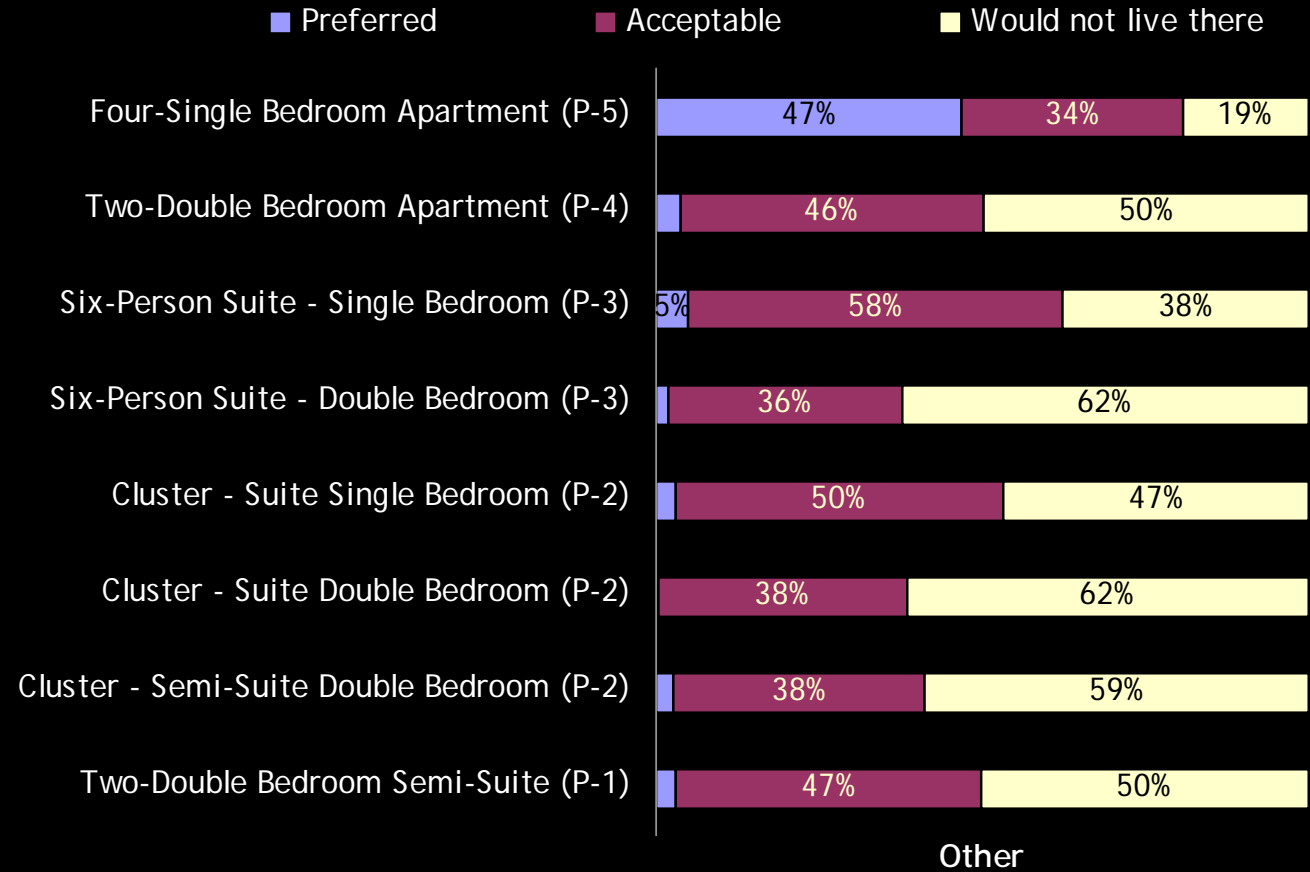
## Unit Preference Seniors



**Market  
Determination  
Student Housing**

## Unit Preference

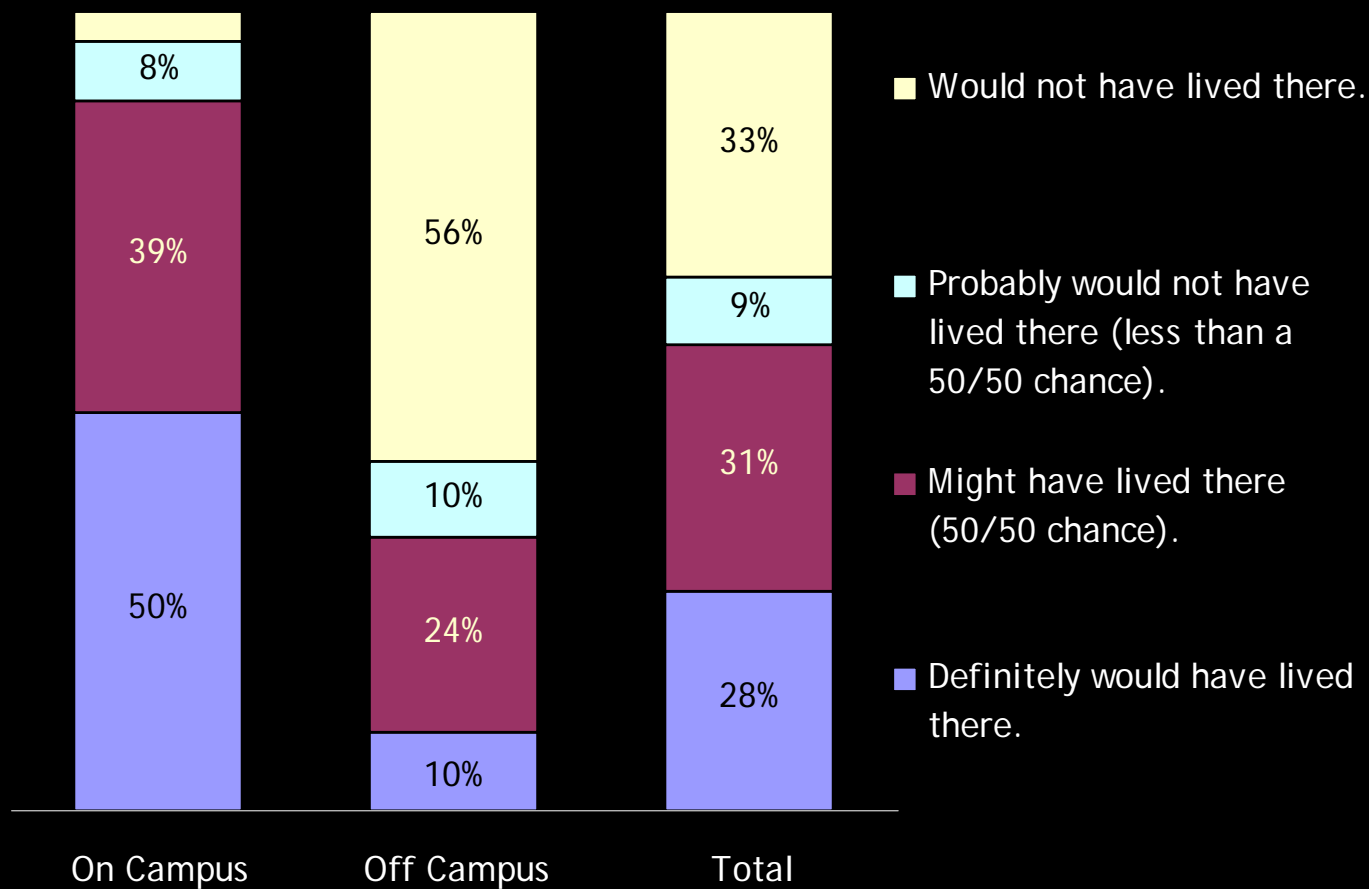
### Others - Grads



**Market  
Determination  
Student Housing**

**Market  
Determination  
Student Housing**

## Interest in New Housing



## Demand

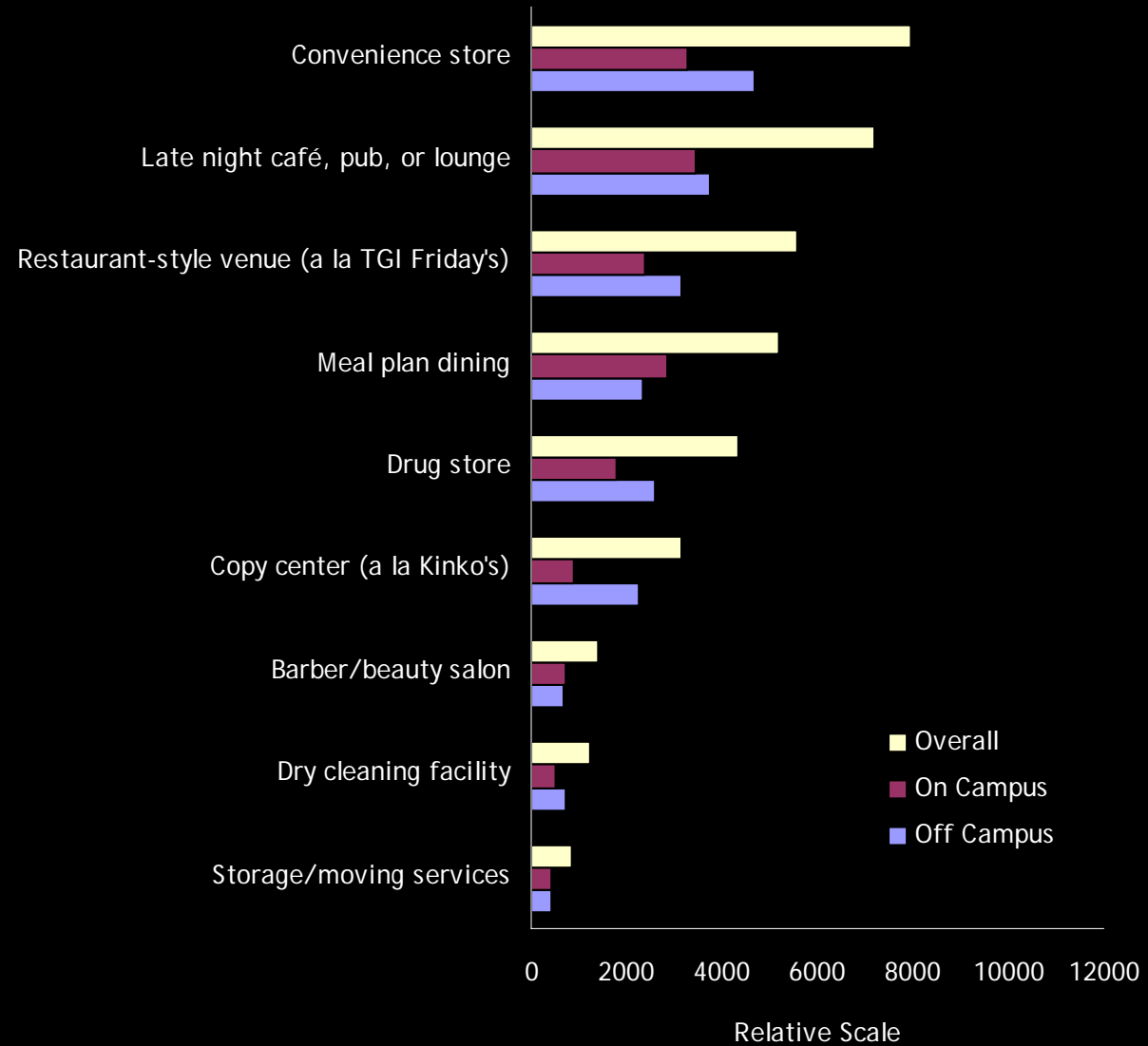
FALL 2003 Class	Full-time Off-Campus Enrollment	Definitely Interested		Might Be Interested		Potential Projected Demand
		<i>Capture Rate</i>	<i>50% Closure</i>	<i>Capture Rate</i>	<i>25% Closure</i>	
First Time Freshmen	883	8%	37	17%	38	75
Other Freshmen	830	23%	94	27%	57	151
Sophomores	2,132	13%	135	33%	176	311
Juniors	2,597	14%	176	33%	215	391
Seniors	2,828	12%	166	24%	168	334
M/PhD/Law	2,054	6%	59	22%	115	173
Total	11,324	11.21%	667	26.73%	769	1,436

## Market Determination Student Housing

Although the market study identified the new housing demand at approximately 1,436 beds, GMU authorized the design team to develop a master plan that provides a minimum of 1,100 beds within the first 2 funded phases of housing. The remaining 336 beds will for a yet to be funded phase in the NE Sector.

## Survey Results – Dining/Retail

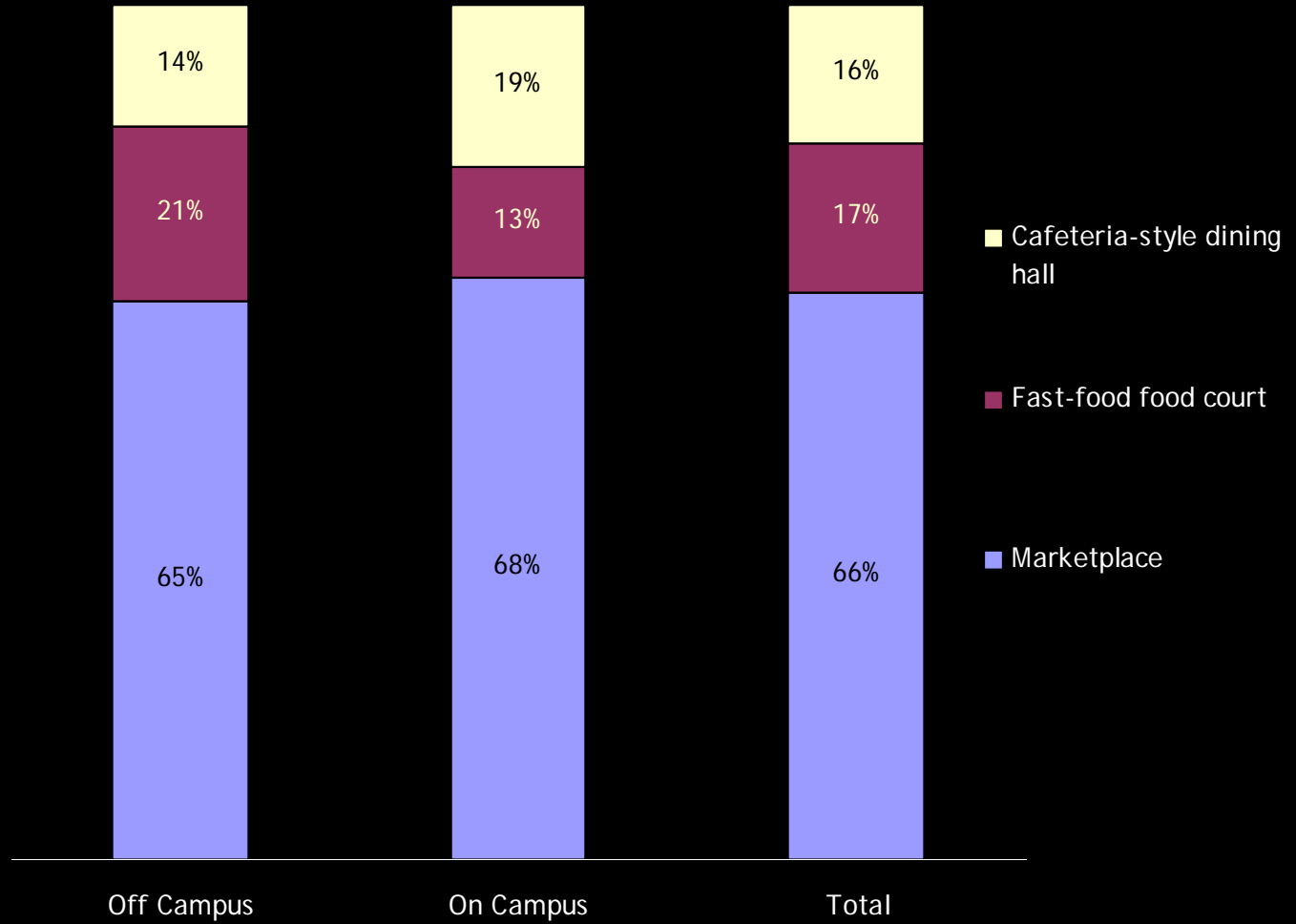
### Retail and Dining Preferences



**Market  
Determination  
Dining**

**Market  
Determination  
Dining**

**Board Plan Dining Preference**



## Dining

Based on the market study results and our existing conditions survey, our team determined that retail dining was viable throughout the NE Sector and that the “All-you-care-to eat” options on campus could be provided in 1 of three ways. Each option addresses the renovation or replacement of the existing Ciao Hall Venue in order to raise the standard of board plan dining on campus.

Dining Alternatives	Retail Dining	All-you-care-to-eat
Option 1	NE Sector	New Venue Sub II*
Option 2	NE Sector	2 New Venue's in NE Sector & S. Campus
Option 3	NE Sector	Renovation SUB II, Ciao Hall**

\* Addition at Sub II to replace Ciao Hall, adjacent to proposed student plaza in NE Sector.

\*\*Renovation per Sodexho recommendations with additional capacity for NE sector residents



## Dining Program Options

### Dining Alternatives

**Option 1 –**  
New dining center  
for all students on  
meal plans

### Pro's

**SS**Single location for meal plan dining enhances community and socialization.  
**SS**UB II space opened up for non-food uses – One Stop Student Services.  
**CC**reation of 'new' all-you-care-to-eat dining with design and operating features that are state-of-the-art.  
**OO**perating economies of a single central meal plan dining facility.  
**PP**roject phasing (use SUB II until new dining center is ready).  
**CC**reates new student activity center with vitality, energy, and appeal.

### Con's

**SS**UB II ballroom and meeting rooms must rely on Johnson Center for catering production.  
**PP**erceived distance from south campus (Presidents Park).

## Dining Program Options

### Dining Alternatives

#### Option 2 –

Two new dining centers, right sized for each campus community. One will be provided in NE Sector for North Campus Students, including new NE Sector residents and one in South Campus for south campus students currently on meal plan.

### Pro's

Smaller venues for meal plan dining enhances community and socialization within each part of campus.

SUB II space opened up for non-food uses– One Stop Student Services.

Creation of 'new' all-you-care-to-eat dining with design and operating features that are state-of-the-art.

Project phasing (use SUB II until new dining centers are ready).

Creates new student activity center with vitality, energy, and appeal.

### Con's

SUB II ballroom and meeting rooms must rely on Johnson Center for catering production.

Operating economies of a de-centralized meal plan dining facilities may not be cost effective.

## Dining Program Options

### Dining Alternatives

**Option 3** –  
Ciao Hall  
renovation and  
expansion for all  
students on meal  
plans

### Pro's

**Maximize** use of existing  
foodservice facilities in  
SUB II.  
**Maintain** proximity of  
meal plan dining to  
south campus housing.  
**Single** location for meal  
plan dining enhances  
community and  
socialization.  
**Operating** economies of a  
single central meal plan  
dining facility.

### Con's

**Premium/high cost** of  
appreciable improvement  
and expansion to existing  
facilities.  
**Potential interruption** of  
meal plan dining services  
if renovation not  
completed over a summer  
period (~90 days).  
**SUB II space** not available  
for non-food uses – One  
Stop Student Services.

## Dining Matrix

	Uninterrupted Dining Service	Phasing Required	Visibility/ Accessibility	Capitol Costs	Operating Costs	Supports One Stop Shop at SUB II	Easily Served
<b>Option 1</b>							
New Dining Venue at SUB II	+	+	+	○	○	+	+
<b>Option 2</b>							
2 New Dining Outlets Proximate to Housing	+	+	+	-	-	+	-
<b>Option 3</b>							
Renovate Existing Ciao Hall	-	-	-	+	○	-	+



Positive Impact



Neutral



Negative Impact

## Preferred Dining Option

In order to provide board plan dining in close proximity to the residential communities at GMU, the University has chosen to develop the Vision Plan with dining Option 2.

Two smaller “all you care to eat” venues will be developed, one in the NE Sector and one in South Campus. The NE Sector Venue will primarily support the new NE Sector community as well as Commonwealth, Dominion and University Commons. The South Campus venue will support the existing President’s Park, Patriot’s Village and Potomac Heights communities.

Ciao Hall will remain in service until the occupancy of the new NE Sector venue. Once vacated, Ciao Hall will be renovated to provide a “One Stop Shop” for student services within SUB II. Services to be provided include Student Accts., Mason Money, Academic Advising, Financial Aid and the Registrar.

## Retail Assessment

Research and analysis shows that up to 10,000-12,000 square feet of neighborhood - or “main street”-style, ground-floor retail product could be sustainable on the campus at GMU. The types of viable retail that present the greatest opportunity to both serve the students and energize the campus include food-related retail and non-food convenience retail. The team believes the food and beverage program will be *critical* to the viability of any non-food retail program implemented on campus. The possible types of non-food retailers that are likely to have the greatest success include:

- C-Store
- Bank
- Beauty Salon
- Dry Cleaner
- Specialty Newstand
- Cell Phone Shop

Market  
Determination  
Retail

## Retail Dining

As determined by the retail market study and the student survey, several retail food venues can be supported within the NE Sector *in addition* to the board plan dining venue. The following retail dining programs are currently being proposed as part of the new NE Sector Development:

- Juice Bar
- Coffee Shop
- “White table cloth” Restaurant

## **Student Union**

**The location of the “One Stop Shop” Student Services program to SUB II supports the Vision Plan of NE Sector in two ways. The first is it meets the student demand to minimize the “Mason Shuffle”. By providing the one-stop shop, GMU students will no longer need to walk all over campus to access basic student service services. Secondly with the relocation of student services to SUB II, North and South Chesapeake can be removed in order to fully implement the urban design concepts for the NE Sector.**

**Sub II will require the renovation of approximately 21,480 GSF of vacated kitchen, servery, dining and support space to provide a new home for:**

- Student Accts.**
- Mason Money**
- Academic Advising**
- Financial Aid**
- Registrar**



## January 2005 Parking Assessment Fairfax Campus

**January 2005  
Parking**

Parking Type	Parking Supply	Occupied Spaces	Percent Occupied
Students, Meter, & General *	9,994	7,156	72%
Faculty, & Staff, & Administration	1,129	1,058	94%
Handicapped, Visitor, Loading, & Motorcycle	249	90	36%
Service/Repair & Reserved	265	169	64%
Total **	11,637	8,473	73%
Total Spaces Recommended to Allow for Circulation	10,591	8,473	80%
<b>Fairfax Campus Parking Surplus / (Deficit)</b>	<b>1,046</b>		

\* Includes new parking spaces on Lots R & J as well as the new parking garage adjacent to Lot B. Increase in parking spaces equates to approximately 1575 spaces.

\*\* 10,062 (Spring 2004) + 1575 (Lots R, J, & B) = 11,637 (Total Fairfax Campus Parking January 2005)

## **2010 Enrollment Projection Fairfax Campus**

**Projected (2010)  
Parking**

- Existing (Spring 2004) Enrollment – 26,554
- Future (2010) Enrollment – 28,872
- Percent Increase – 8.7%

## Projected (2010) New Demand Fairfax Campus

### Projected (2010) Parking

	New People	Parking Recommended
Projected (2010) Commuters (Increase Student Parking by 4.6% )*	1,218	426
Projected (2010) Residents (2.25 spaces per 3 beds)	1,100	825
Projected (2010) Faculty/Staff (1.5 parking spaces per 2 faculty/staff)	400	267
<i>Projected (2010) New Demand</i>	<i>2,718</i>	<i>1,517</i>

*\* Based on total recommended parking spaces (10591) to meet existing demand discounting Faculty, Staff & Administration*

## Future (2010) Parking Surplus / (Deficit) Fairfax Campus

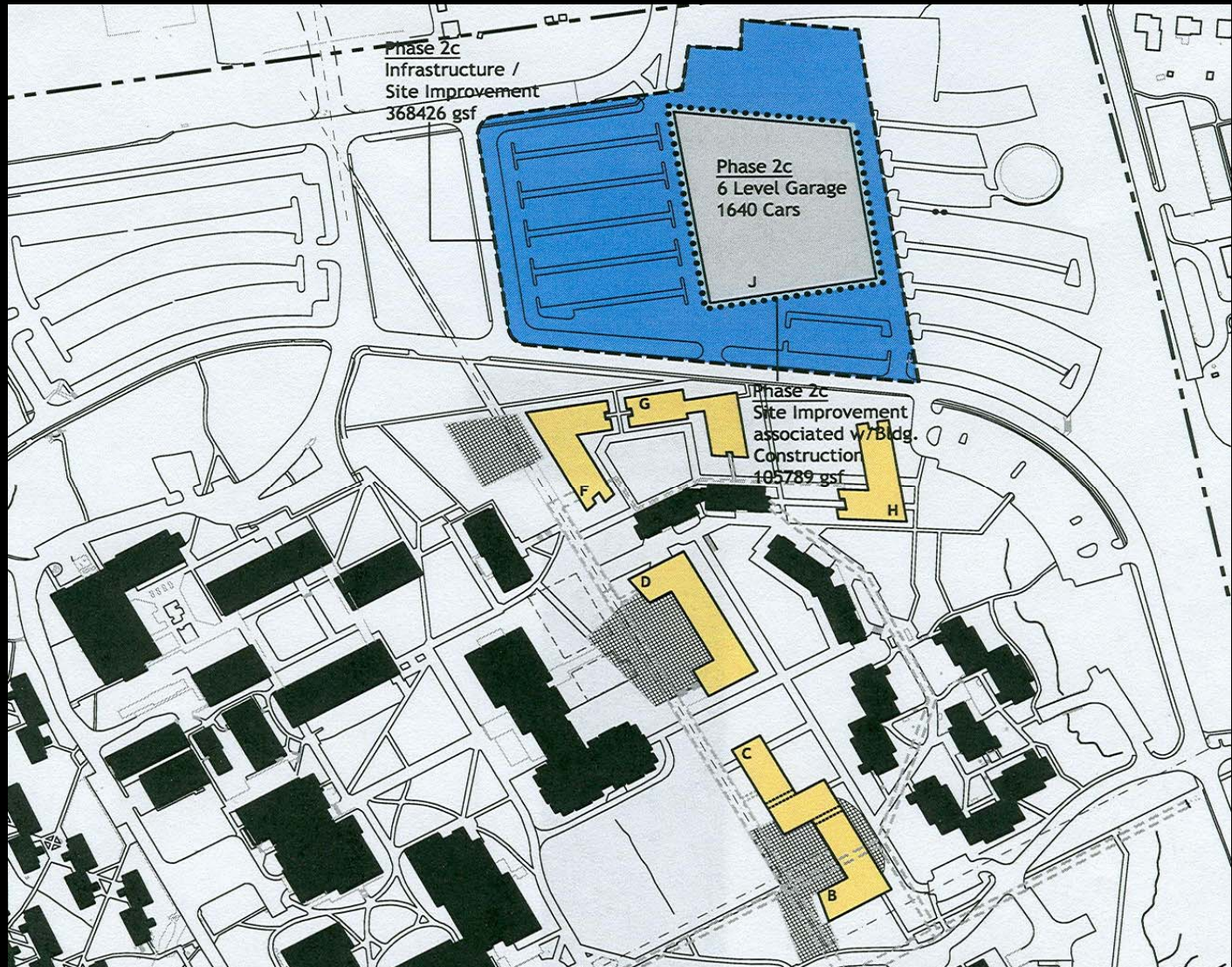
### Projected (2010) Parking

<b>January 2005 *</b> <b>Total Fairfax Campus Parking</b>	<b>11,637</b>
<b>Projected 2010</b> <b>Total Fairfax Campus Parking Demand</b> (10,591+1,517=12,108)	<b>12,108</b>
<b><i>Future (2010) Parking Surplus / (Deficit)</i></b>	<b><i>(471)</i></b>

*\* Includes new parking spaces on Lots R & J as well as the new parking garage adjacent to Lot B. Increase in parking spaces equates to approximately 1575 spaces. 10,062 (Spring 2004) + 1575 (Lots R, J, & B) = 11,637 (Total Fairfax Campus Parking January 2005)*

# Northeast Sector Plan Fairfax Campus (1,100 New Beds & 1,640 Space Garage)

Northeast Sector  
Proposed (2010)  
Parking



## Northeast Sector Parking Garage Assessment Fairfax Campus

### Northeast Sector Proposed (2010) Parking

Parking Summary	Parking Spaces
Existing Parking Spaces in North Campus (328 Lot E, 980 Lot F, 424 Lot G, 364 Lot H, 308 Lot I)	2,404
Loss of Surface Parking due to Master Plan Construction and Lot F Garage (-352 Lot G, -286 Lot F, -164 Lot E, -265 Lot B)	-1,067
New Parking Spaces with Completion of Lot F Garage (1,640 Lot F Garage)	1,640
Total Parking Spaces Located in North Campus Due to New Lot F Garage & Master Plan Construction	2,977
Net New Parking Spaces Located in North Campus Due to New Lot F Garage & Master Plan Construction	573

**Northeast Sector  
Parking Surplus / (Deficit)  
Fairfax Campus**

**Northeast Sector  
Proposed (2010)  
Parking**

<i>Northeast Sector Proposed (2010) Parking</i>	
<i>Projected Fairfax Campus (2010) Parking Surplus / (Deficit)</i>	<i>(471)</i>
<b>Northeast Sector Plan Proposed (2010) New Parking Spaces</b>	<b>573</b>
<i>Proposed Fairfax Campus (2010) Parking Surplus / (Deficit)</i>	<i>102</i>



**Fairfax Campus  
Parking  
Assessment**

## Fairfax Campus Parking Assessment

Year	Fairfax Campus Parking Supply	Parking Increase / (Decrease)	Projected Parking Demand (Vehicles)	Parking Supply to Meet Demand (Spaces)	Parking Surplus / (Deficit)
2005	11,637	0	9,209	10,844	793
2006	10,857	(780)	9,473	11,097	(240)
<b>2007*</b>	<b>10,221</b>	<b>(636)</b>	<b>9,737</b>	<b>11,350</b>	<b>(1,129)</b>
2008	11,861	1640	10,001	11,603	258
2009	12,211	350	10,265	11,856	355
2010	12,211	0	10,529	12,109	102

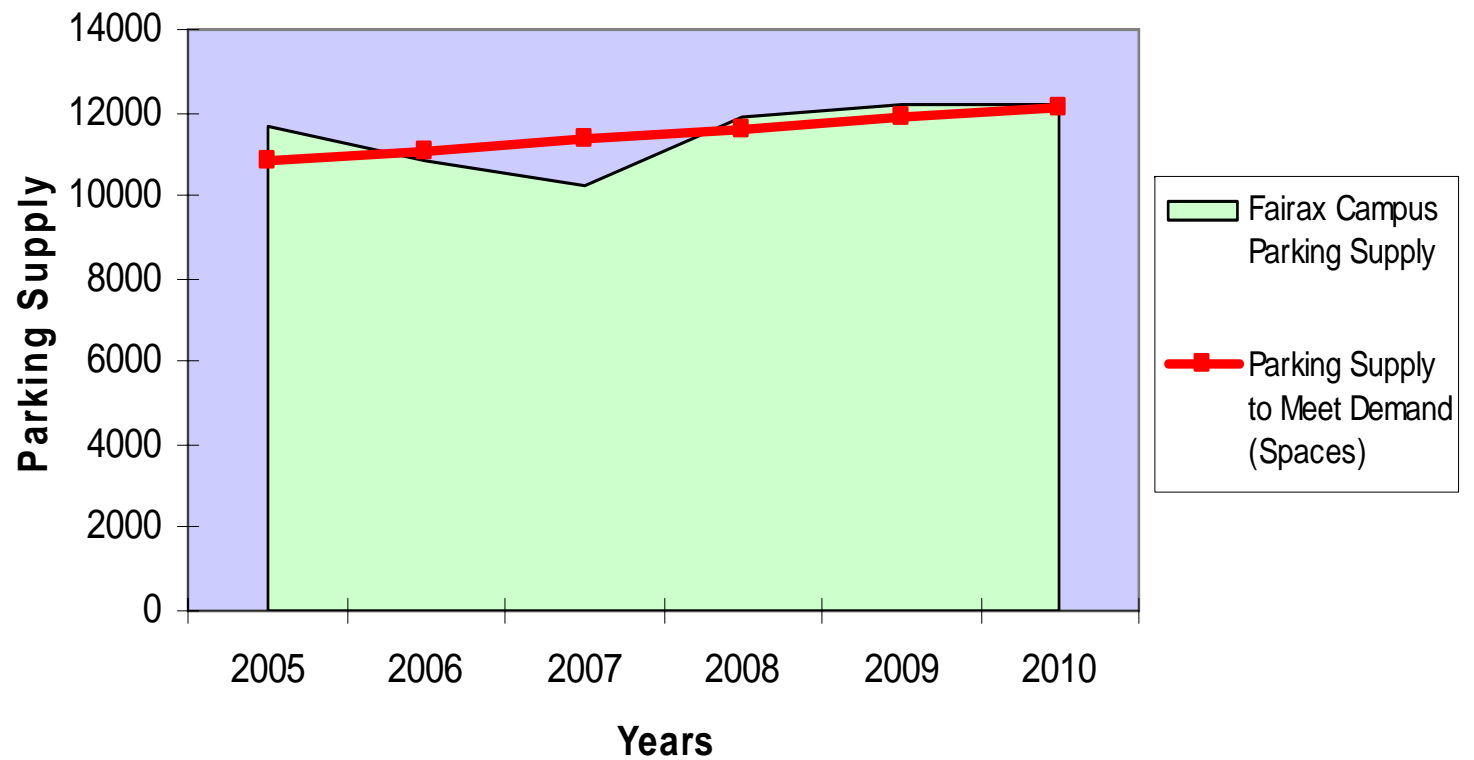
*\* Construct temporary parking area in the North Campus near Braddock Road and create a Bus Shuttle System by 2006 to account for parking shortfall during construction.*



## Fairfax Campus Parking Assessment

### Fairfax Campus Parking Assessment

### George Mason University - Fairfax Campus



**Projected (2010)  
Parking**

## **2010 Enrollment Projection Fairfax Campus**

- Existing (2004)
  - » Enrollment – 26,554
  - » Parking – 10,062
  - » Students per Parking Space Ratio– 2.64
- Future (2010)
  - » Enrollment – 28,872
  - » Parking – 12,211
  - » Students per Parking Space Ratio – 2.36
- Net Increase (2004 – 2010)
  - » New Students - 2,318
  - » Net New Parking - 2,149
  - » Students per Parking Space Ratio – 1.08

**Existing  
Traffic**

## **Existing Overall Review of Traffic Fairfax Campus**

### **Congestion on adjacent public roads**

- **Along Braddock Road between Ox Road and Roberts Road**
- **University Drive at Ox / Chain Bridge Road**

### **Traffic Signal Timing**

- **Signal Cycle length creates long backup and interference with upstream intersections**

### **On Campus Conflicts**

- **Vehicles Turning into access driveways**
- **Pedestrians**

### **Parking Shortfall**

- **Motorists Recirculate in search of parking**

# **Virginia Department of Transportation & Fairfax County Public Roadway Improvements**

## **Completed Projects to Date**

- **Right Turn Lane Westbound along Braddock Road at Ox Road**

## **Projects Designed but Not Funded**

- **Bicycle Lane along Roberts Road North of Braddock Road**
- **Right Turn Lane Westbound along Braddock Road West of Roanoke River Road**

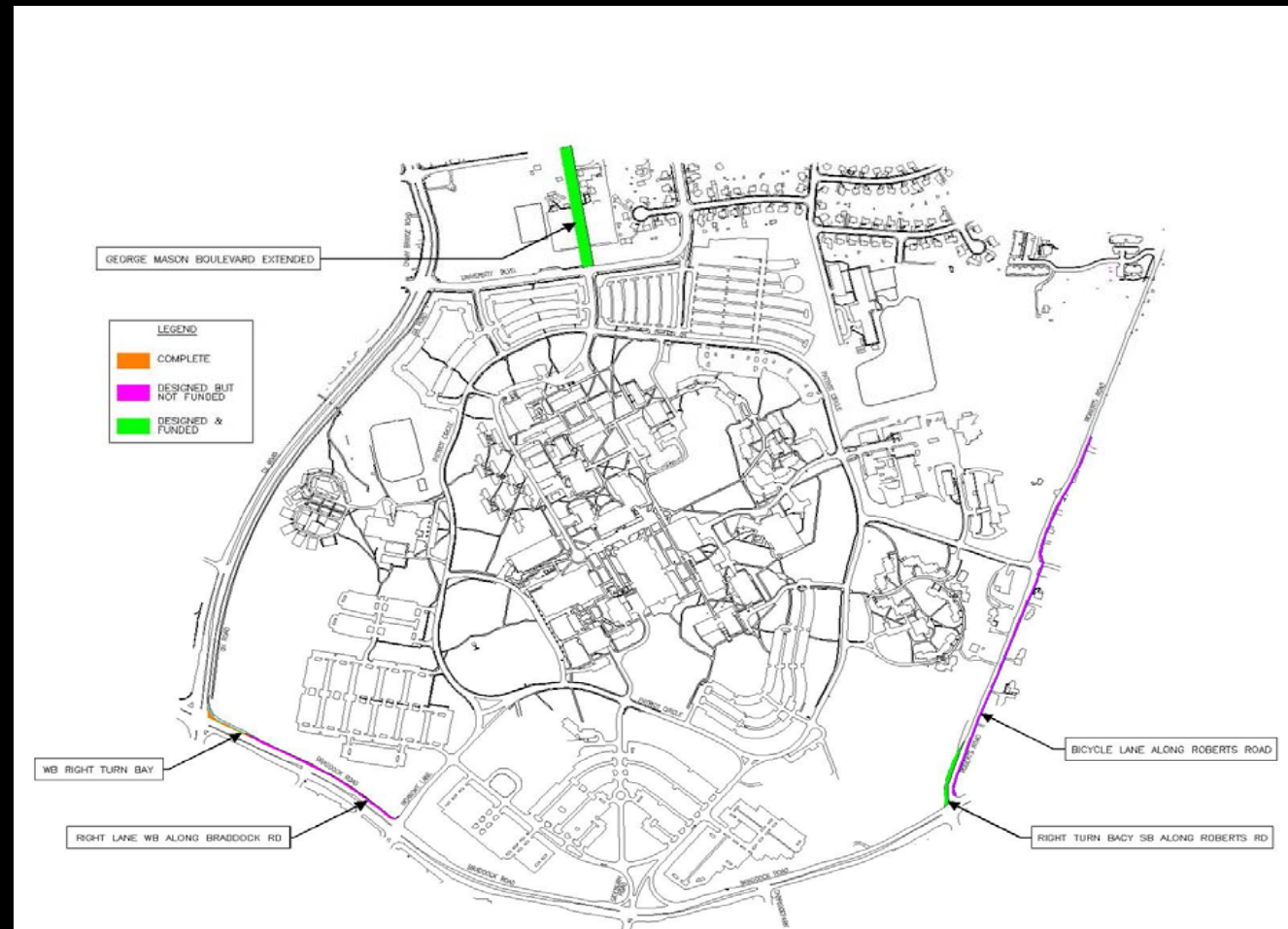
## **Projects Designed & Funded but Not Complete**

- **George Mason Drive North of University Drive**
- **Right Turn Lane Southbound along Roberts Road at Braddock Road**

**Existing  
&  
Proposed  
Traffic**

# Virginia Department of Transportation & Fairfax County Public Roadway Improvements

Existing  
&  
Proposed  
Traffic



**Existing  
&  
Proposed  
Traffic**

**Traffic Assessment  
Fairfax Campus**

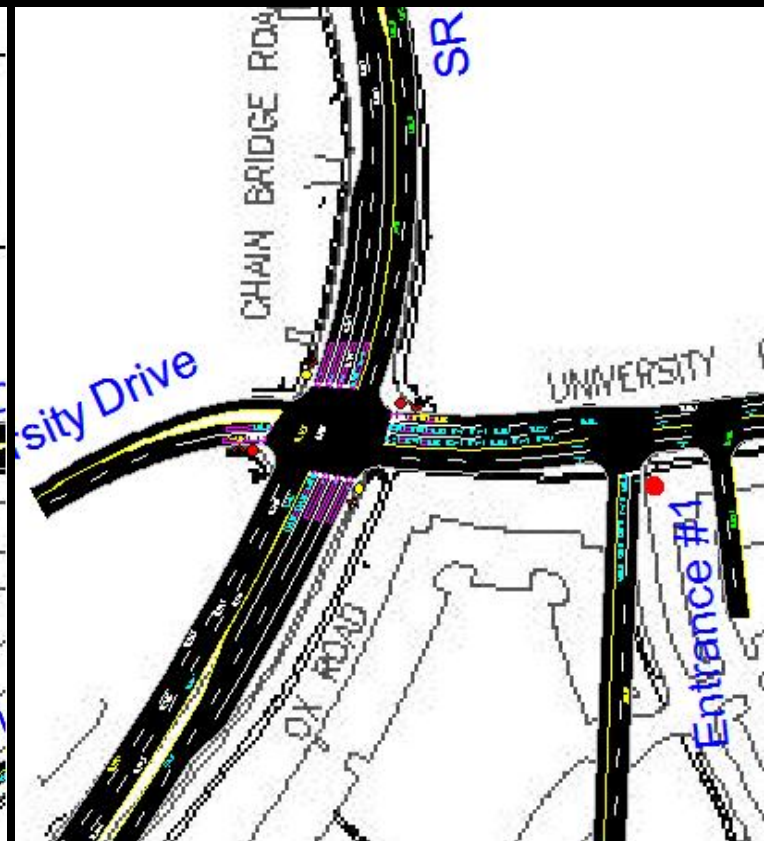
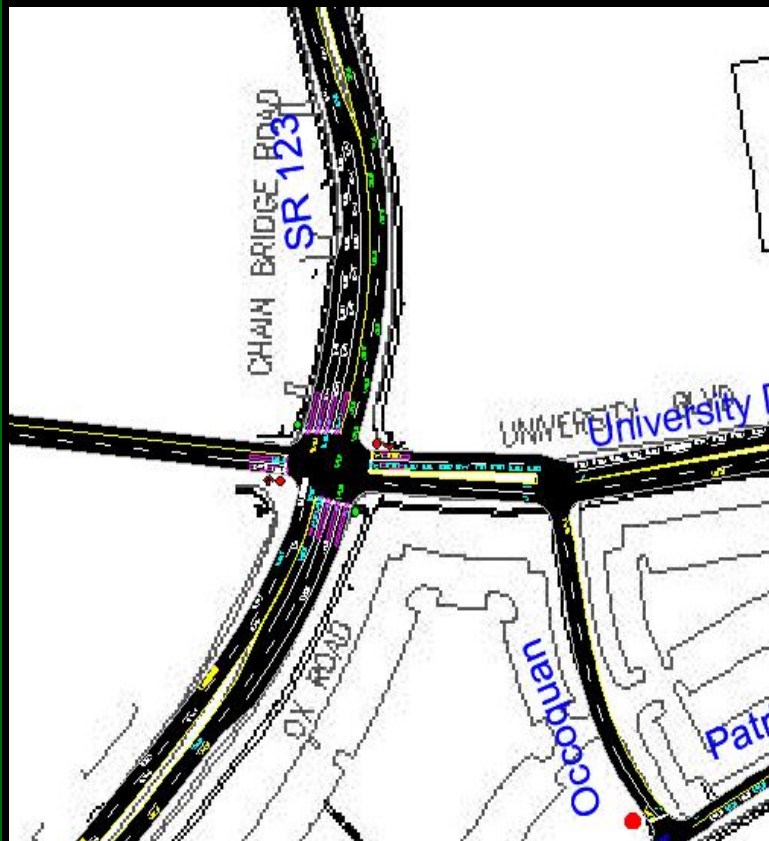
- **Adjust Signal Timings, Splits, & Phasing throughout local roadway network**
- **Re-Stripe University Drive to a Four Lane Section**
- **University Drive at Ox / Chain Bridge Road**
  - **Add a Westbound Left Turn Lane**
- **Braddock Road at Ox Road**
  - **Add one Through Lane Westbound along Braddock between Roanoke Road and Ox Road**
  - **Add one Through Lane Southbound along Ox Road**
  - **Add one Northbound Left Turn Bay along Ox Road**
  - **Add one Westbound Left Turn Bay along Braddock Road**

## University Drive with Ox / Chain Bridge Road

Existing

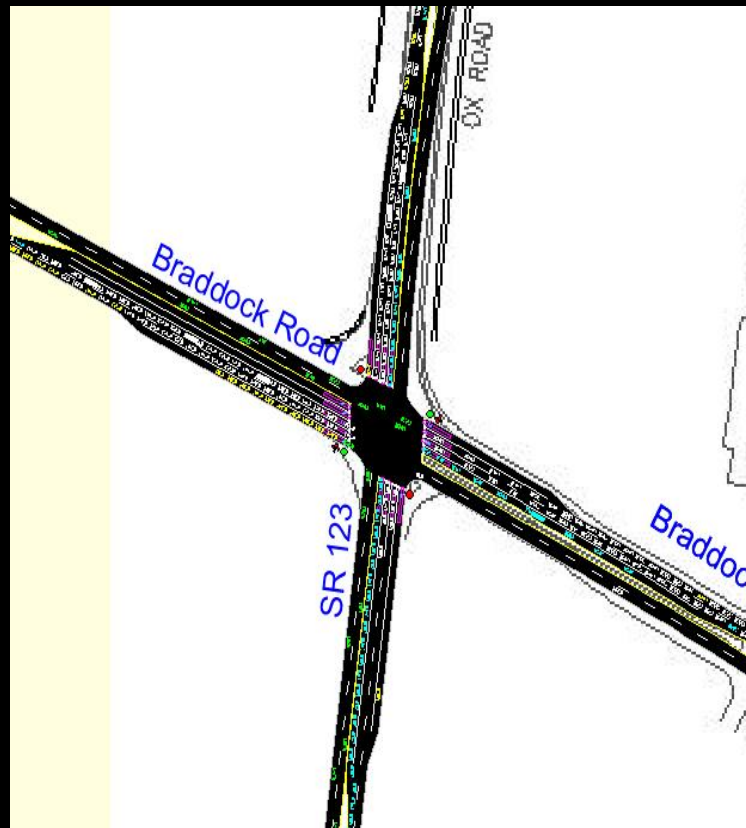
Recommended

Existing  
&  
Proposed  
Traffic

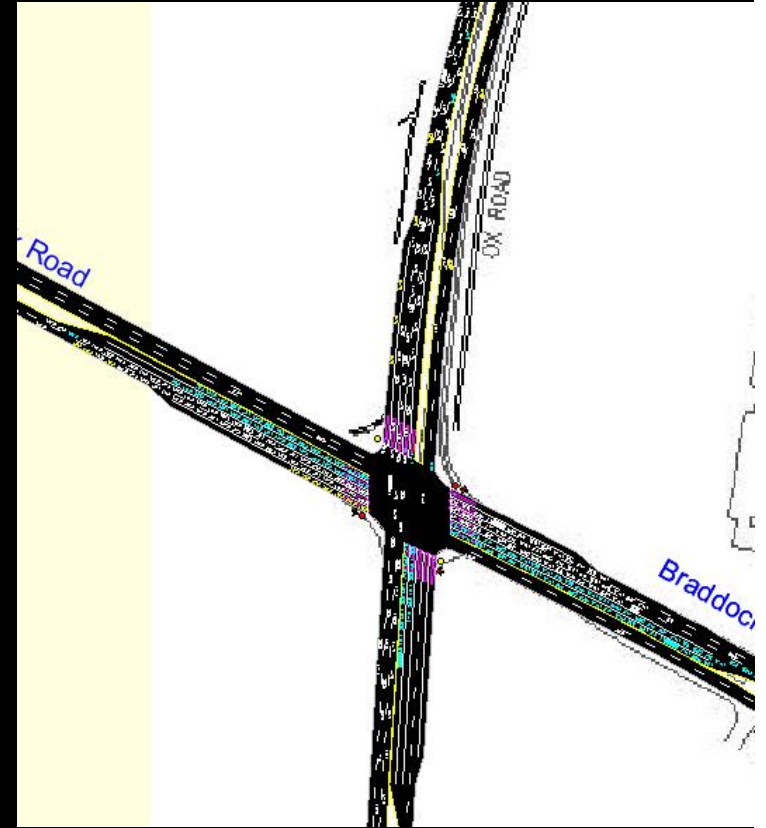


## Braddock Road with Ox Road

Existing



Recommended

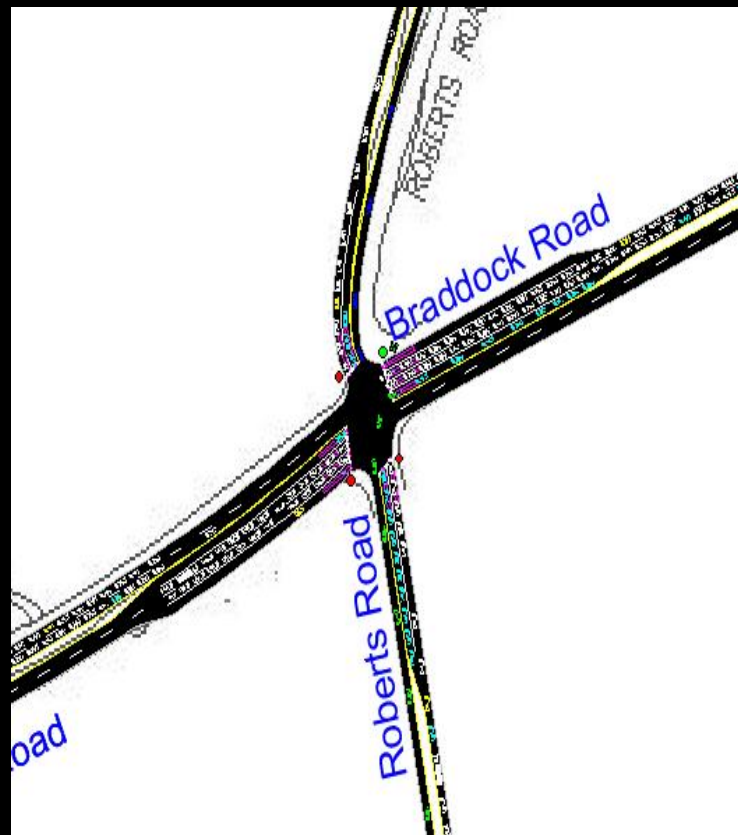


Existing  
&  
Proposed  
Traffic

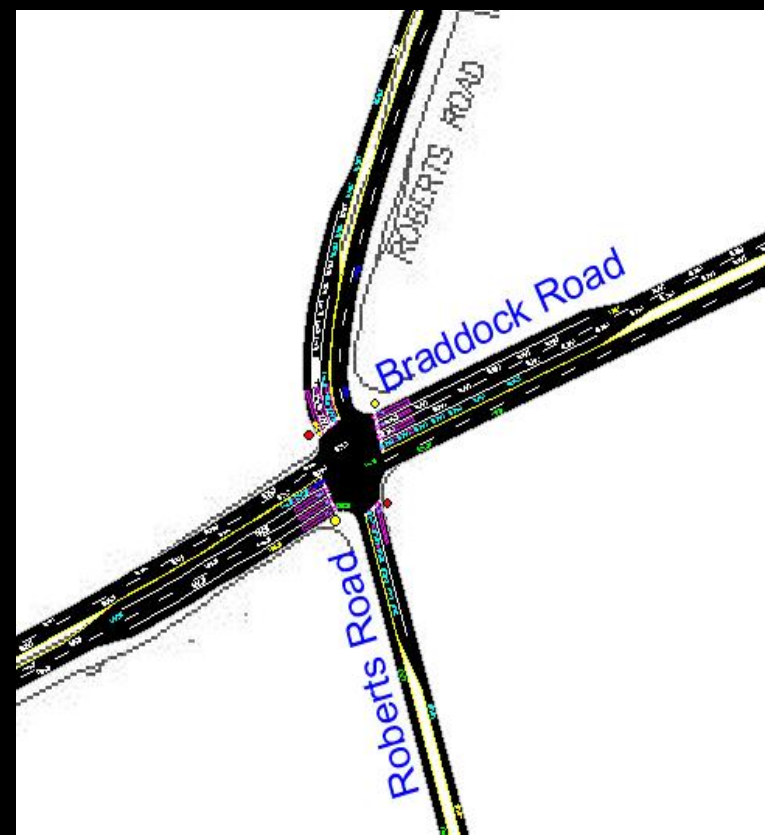


## Braddock Road with Roberts Road

Existing



Recommended



Existing  
&  
Proposed  
Traffic

**Transportation  
Demand  
Management  
Program**

## **Transportation Demand Management Program**

- **Adjust activity schedules to spread out traffic peaks**
- **Maintain or increase on campus pedestrian activity to enliven the campus**
- **Integrate the east and west campuses**
- **Provide cost savings and shuttle bus incentives for commuters to park on West campus**

*Currently approximately 92% of the commuter students drive to campus with approximately 1% biking, 5% take the bus, & 2% walking*

**Transportation  
Demand Management**

**East-West Connector**

## **East-West Connector**

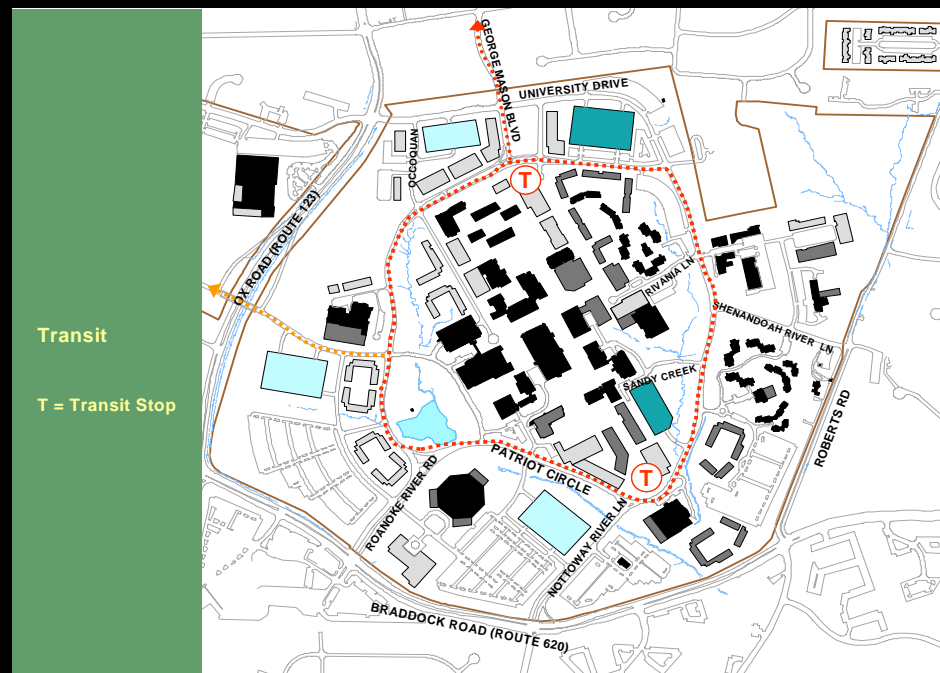
- **Provides traffic relief to and from the north & west**
- **Links East and West Campuses**
- **Improves Traffic Distribution on East Campus**
- **Reduces dependence on traffic capacity improvements on adjacent public roads**

## Transit System

- New CUE Bus stops convenient to on-Campus major destinations
- Safe, direct pedestrian connections to/from stops
- East-West Campus Shuttle
- Create an on Campus Bus Depot

Transportation Demand  
Management

Transit System



..... Future East-West Campus Shuttle Link

..... Future On-Campus Transit Route

## Bicycle Network

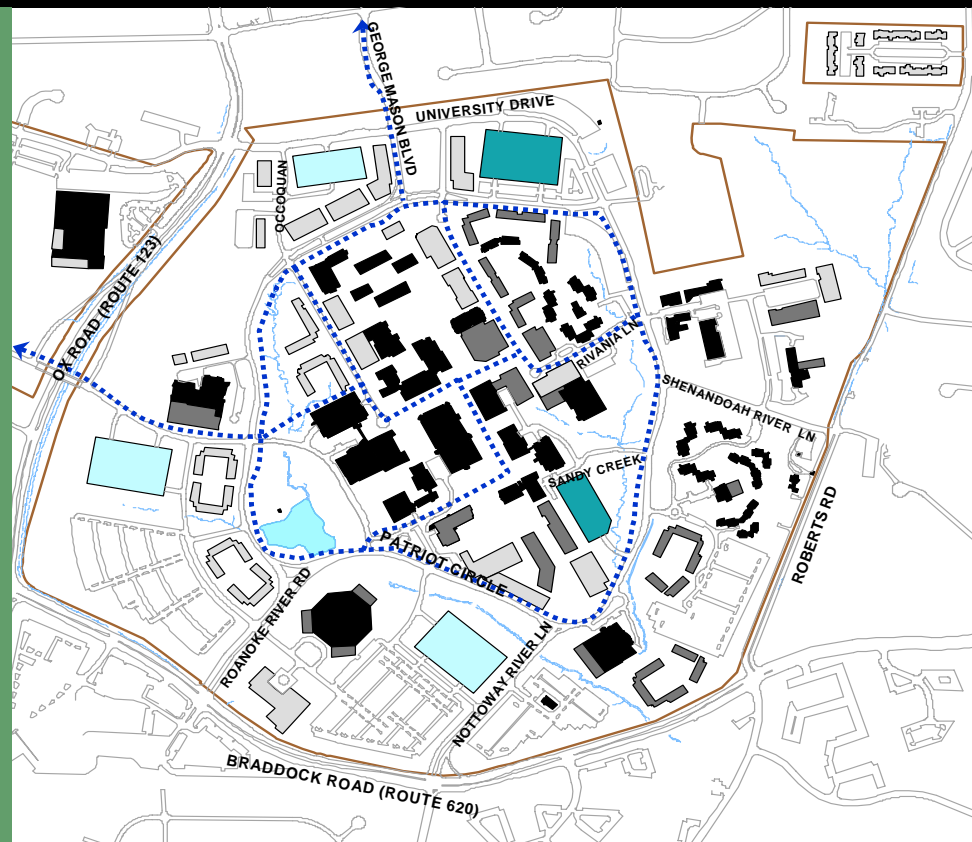
- Create an on-campus bicycle path system.

Transportation  
Demand  
Management

Bicycle Network

### Bikeways

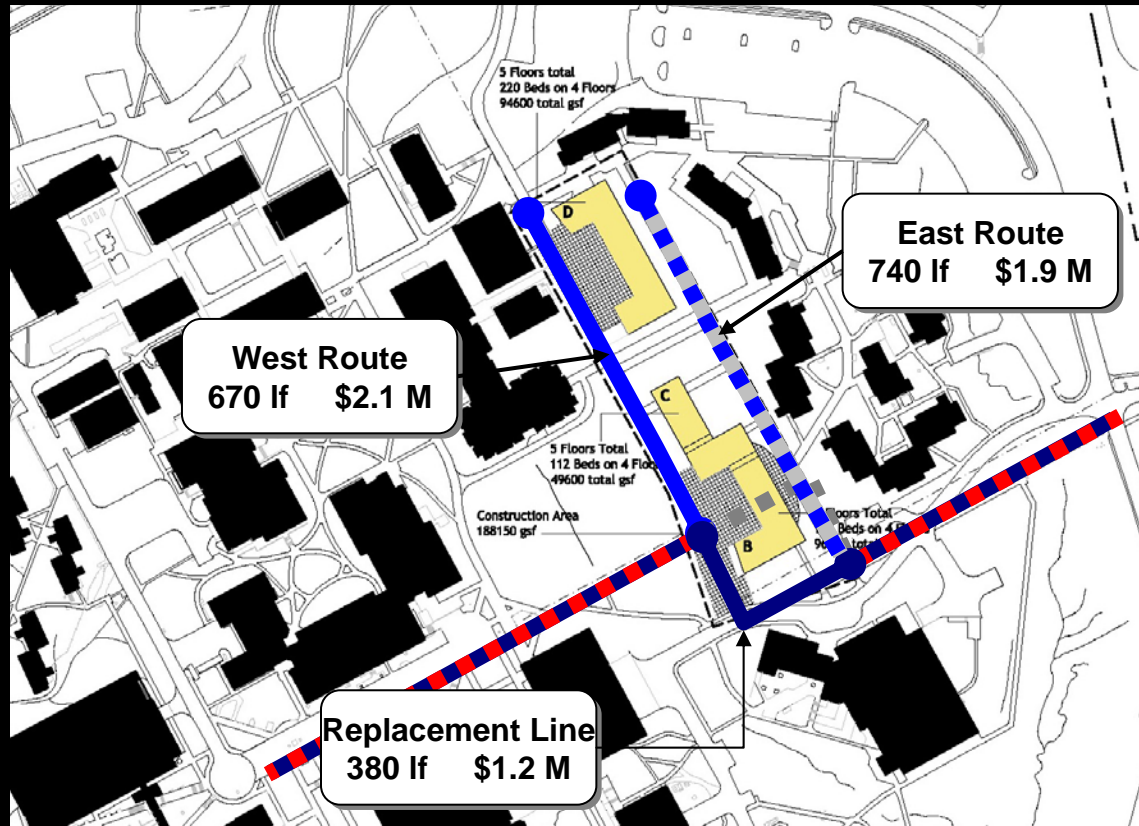
The location of the bikeway (inside or outside Patriot Circle) requires further study






..... Future Bicycle Path System

## Site Utilities

## Site Utilities Phase 1



-  Existing Mains
-  Phase 1 replacement piping
-  Phase 1 trench

### COST SUMMARY

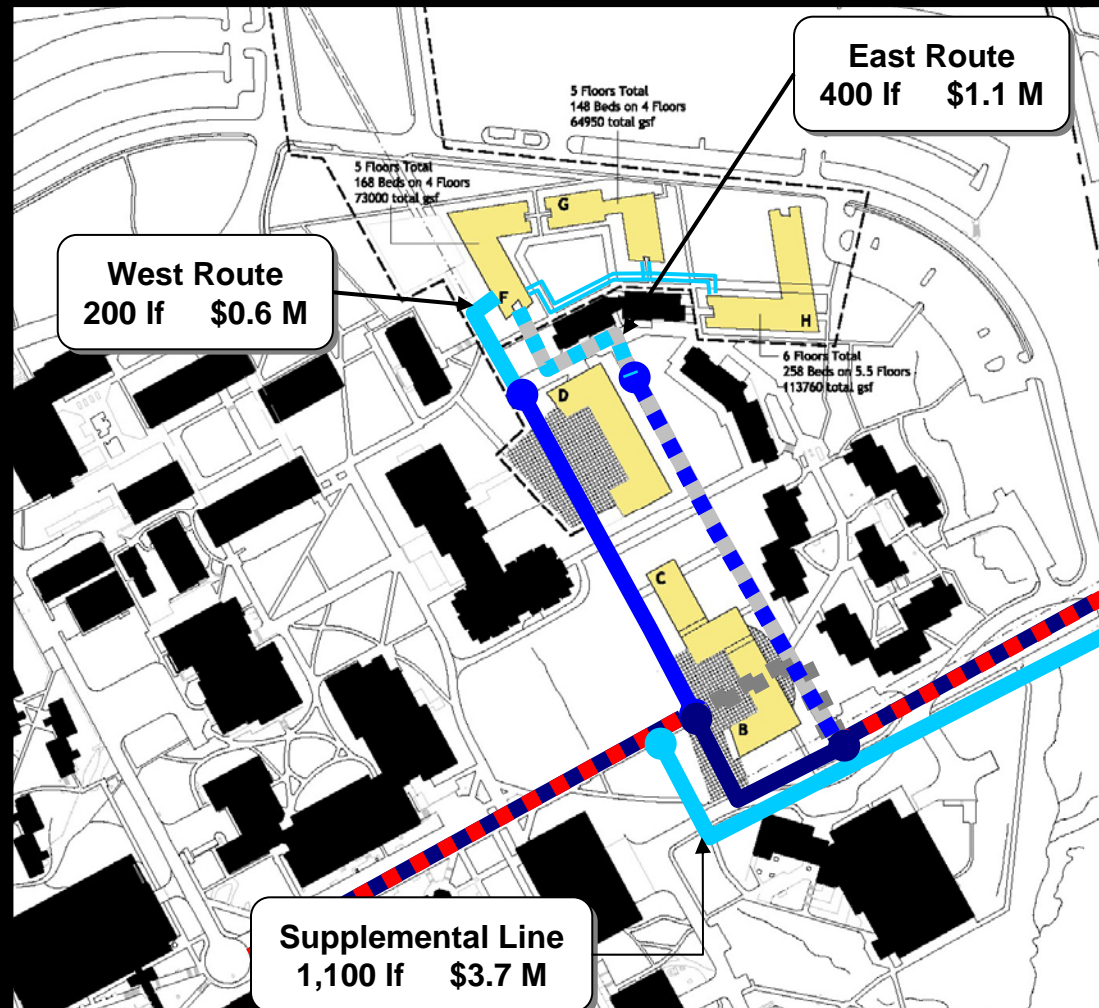
#### **West Option**

670 lf	\$2.1 M
380 lf	\$1.2 M
1,050 lf	\$3.3 M

#### **East Option**

740 lf	\$1.9 M
380 lf	\$1.2 M
1,120 lf	\$3.1 M

## Site Utilities Phase 2



- ■ ■ ■ ■ Existing Mains
- Phase 1 replacement piping
- Phase 1 trench
- Phase 2 trench
- ===== Phase 2 direct-buried

### COST SUMMARY

#### West Option

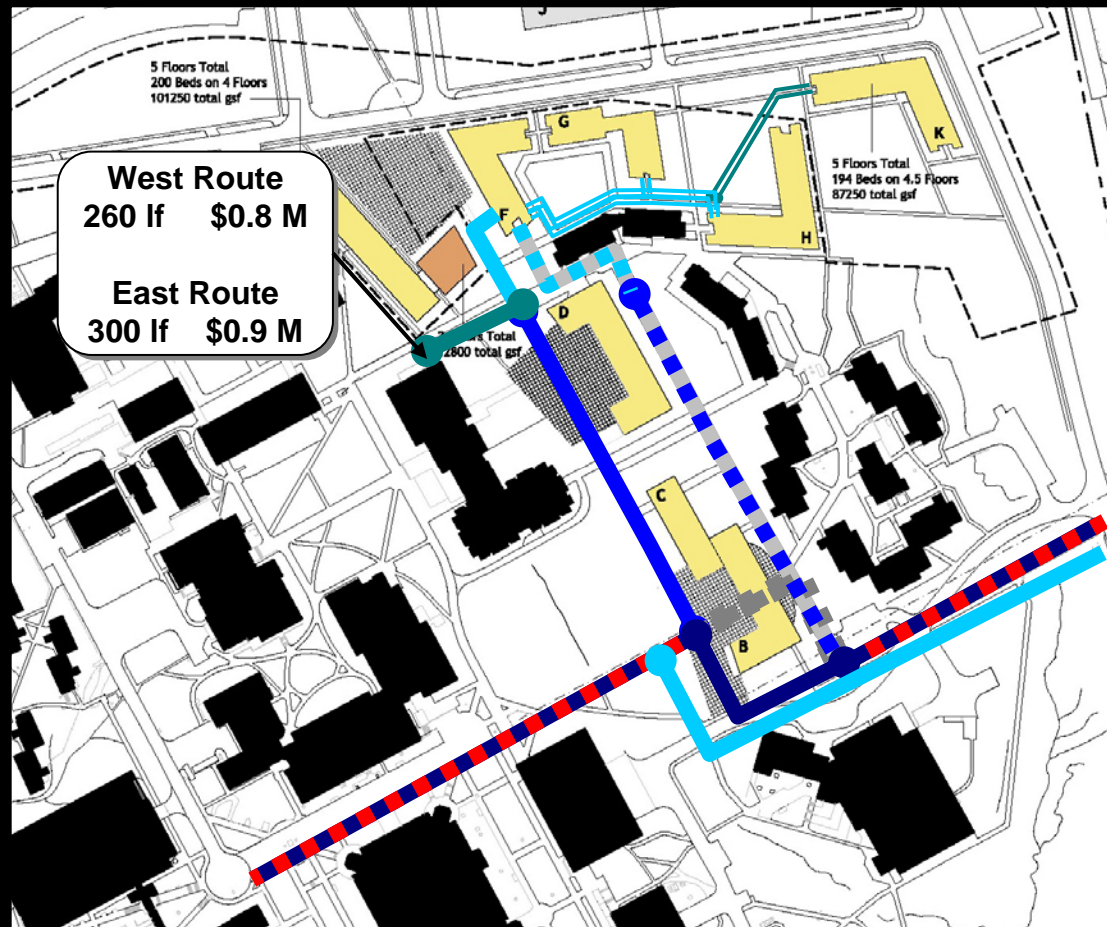
200 lf	\$0.6 M
1,100 lf	\$3.7 M
1,300 lf	\$4.3 M








#### East Option

400 lf	\$1.1 M
1,100 lf	\$3.7 M
1,500 lf	\$4.8 M



## Site Utilities Phase 3



-  Existing Mains
-  Phase 1 replacement piping
-  Phase 1 trench
-  Phase 2 trench
-  Phase 2 direct-buried
-  Phase 3 trench
-  Phase 3 direct-buried

### COST SUMMARY

<b>West Option</b>	
260 lf	\$0.8 M
<b>East Option</b>	
300 lf	\$0.9 M

## **Program**

**The following program was developed based information gathered from the following sources:**

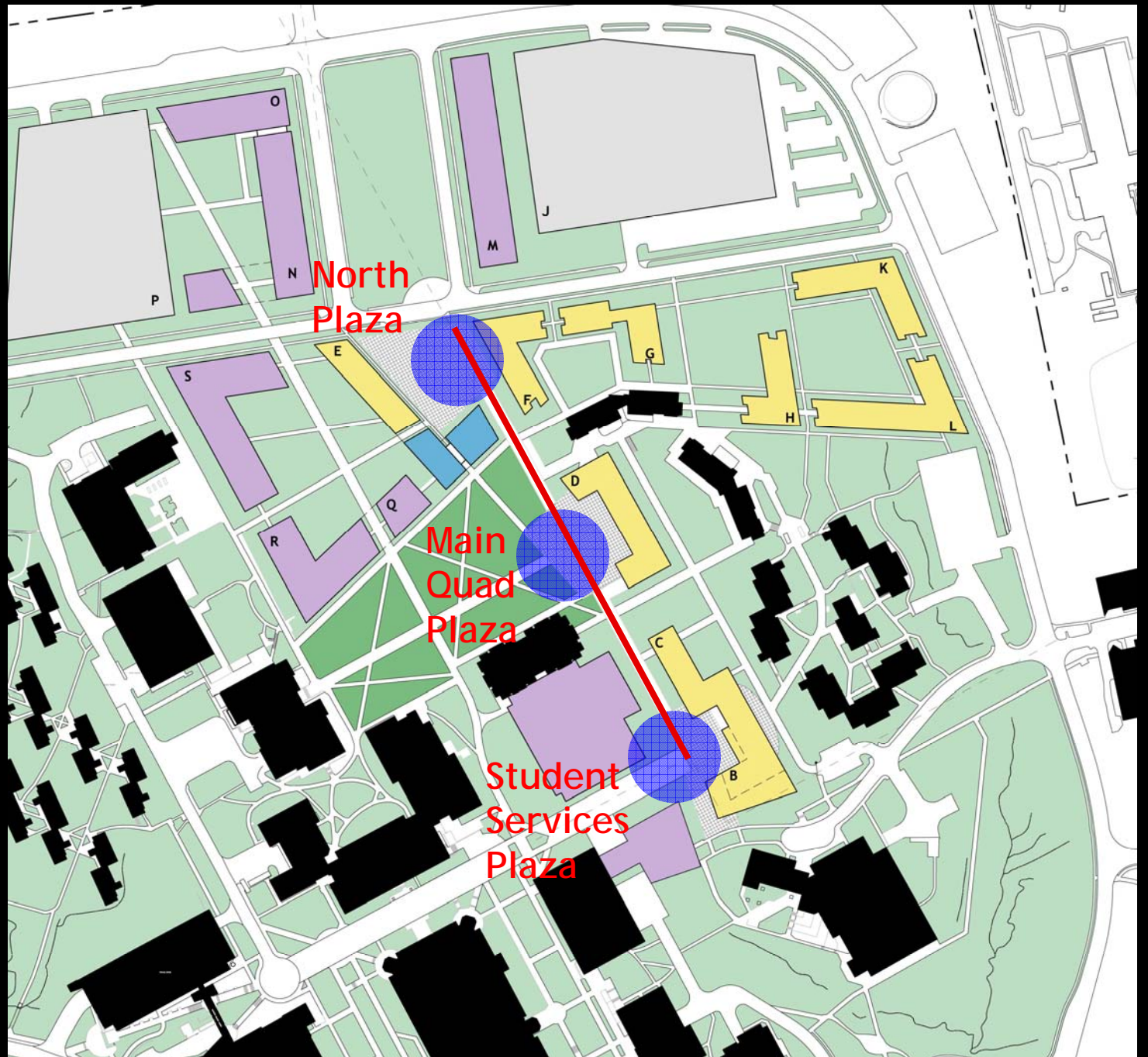
- **Focus Groups**
- **Housing, Retail and Food Service Market Studies**
- **GMU NE Sector Task Force Committee**
- **Design Team Research and Recommendations**
- **Sports Master Plan by Ewing Cole/Brailsford & Dunlavey**

**Vision Plan  
Full Build-Out**





**Vision Plan**  
Urban Design





## New Housing





## Board Plan Dining





**Game Rooms  
& Meeting  
Rooms**





C-Store





**Health Club  
(2<sup>nd</sup> Floor)**





**Restaurant  
Coffee Shop**



## **Implementation**

**The following slides detail the phased implementation strategy for the development of the Northeast Sector.**

## Phase 1

- 550 New Beds
- North Campus Board Plan Dining Venue
- Game Rooms
- Meeting Rooms
- C-Store
- Juice Bar
- Health Club
- Retail

Phase 1  
Occupancy  
July 2007





## Phase 2

- 540 New Beds
- Coffee Shop
- Retail
- “One Stop Shop” for Student Services in SUB II

Phase 2  
Occupancy  
July 2008



### Phase 3

- 346 New Beds
- Restaurant
- Admissions
- Visitor's Center
- Structured Parking
- Re-routing of Patriots Circle

Phase 3  
Occupancy  
July 2010





### Phase 3

- 346 New Beds
- Restaurant
- Admissions
- Visitor's Center
- Structured Parking
- Re-routing of Patriots Circle
- South Campus Board Plan Dining

Phase 3  
Occupancy  
July 2010

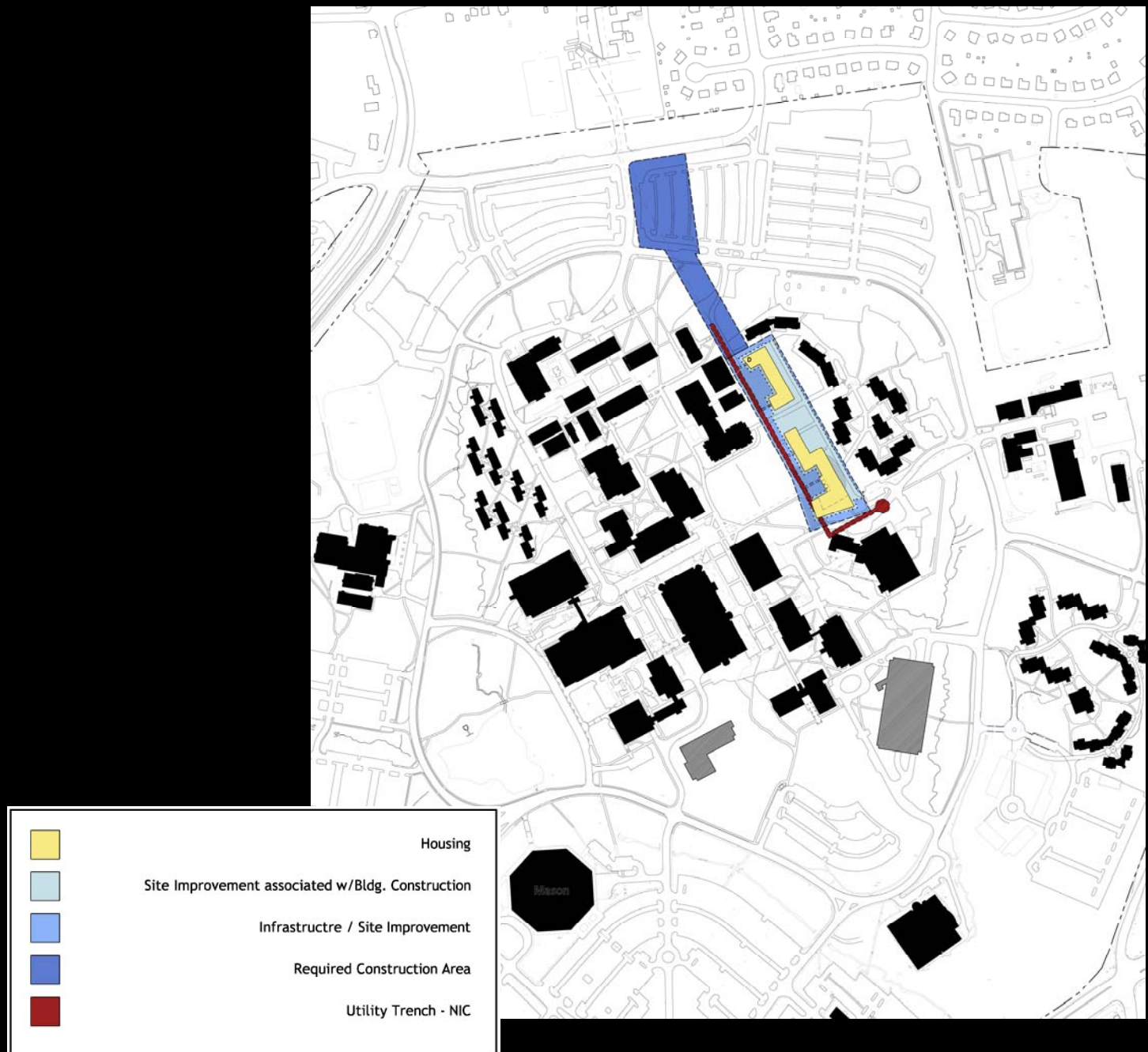


**Vision Plan  
Full Build-Out**

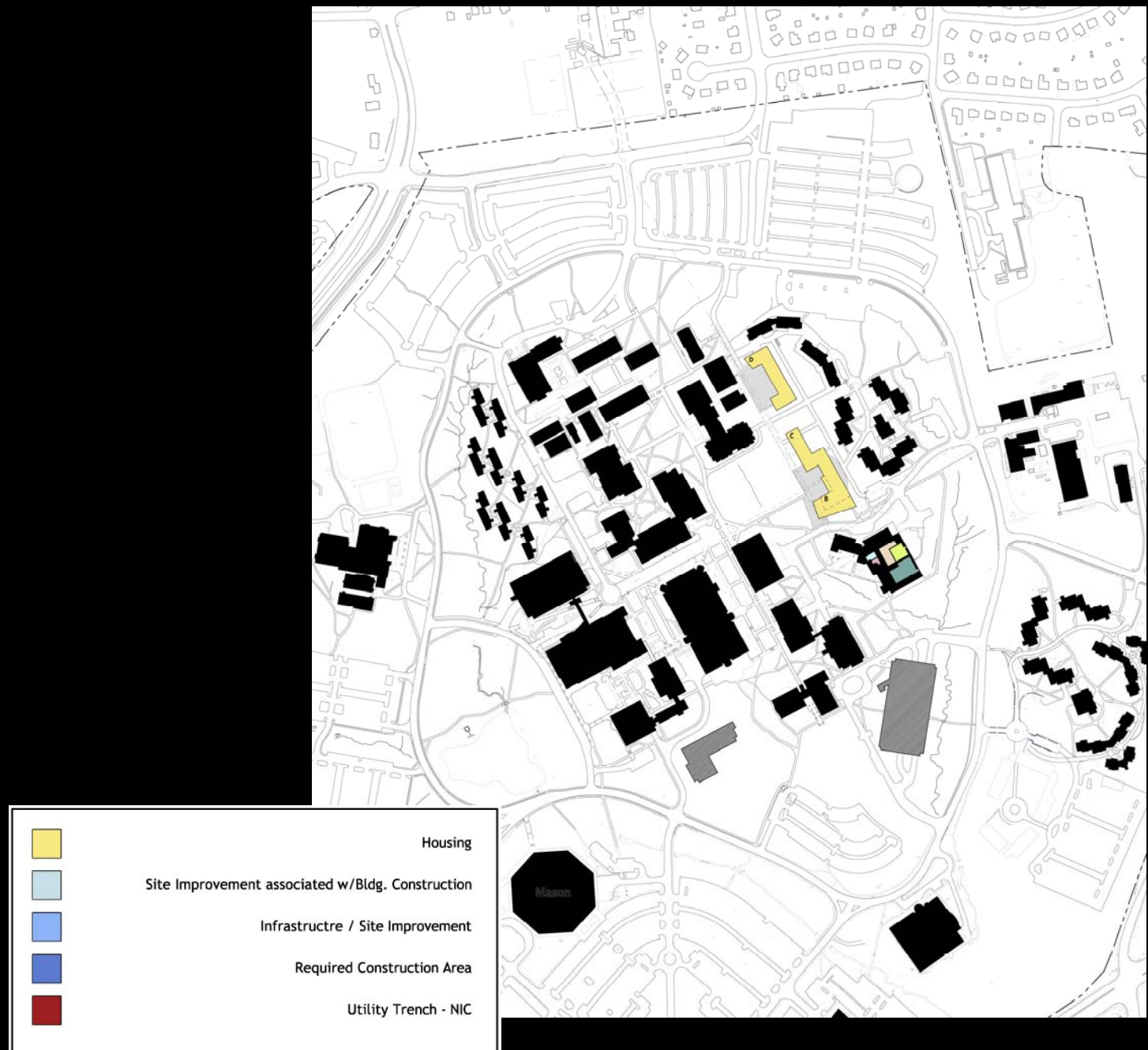




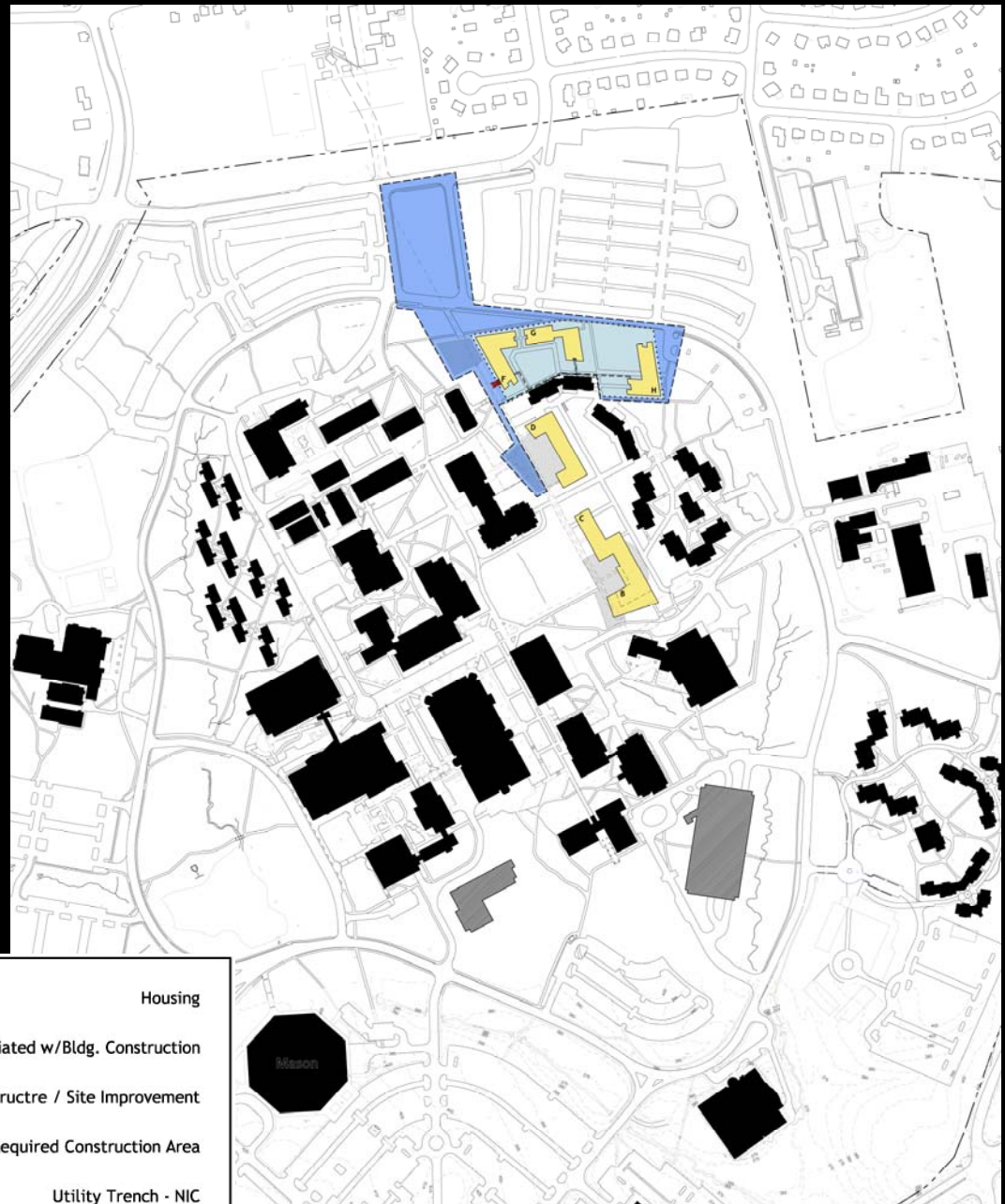
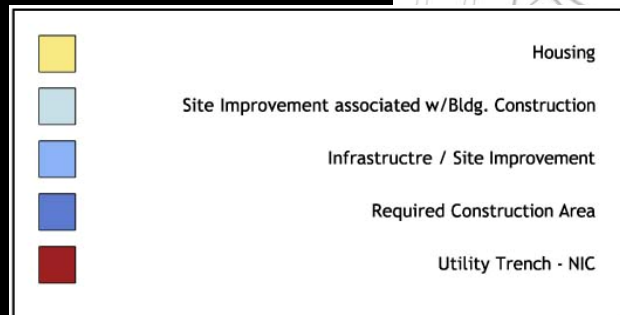
## Phase 1



## Phase 2A



## Phase 2B





## Phase 2C



## Phase 3

