

Northwestern University Athletics and Recreation Master Plan Recreation Facilities Planning & Implementation



Presenters: Daniel M. Bulfin – Director of Recreational Sports, Northwestern University
Greg Wachalski – Vice President, Brailsford & Dunlavey

FIRM INTRODUCTION

BRAILSFORD & DUNLAVEY



Experience

- ◆ Over 200 Student Recreation Clients
- ◆ Nearly 30 Higher Education Projects in Illinois

Staff

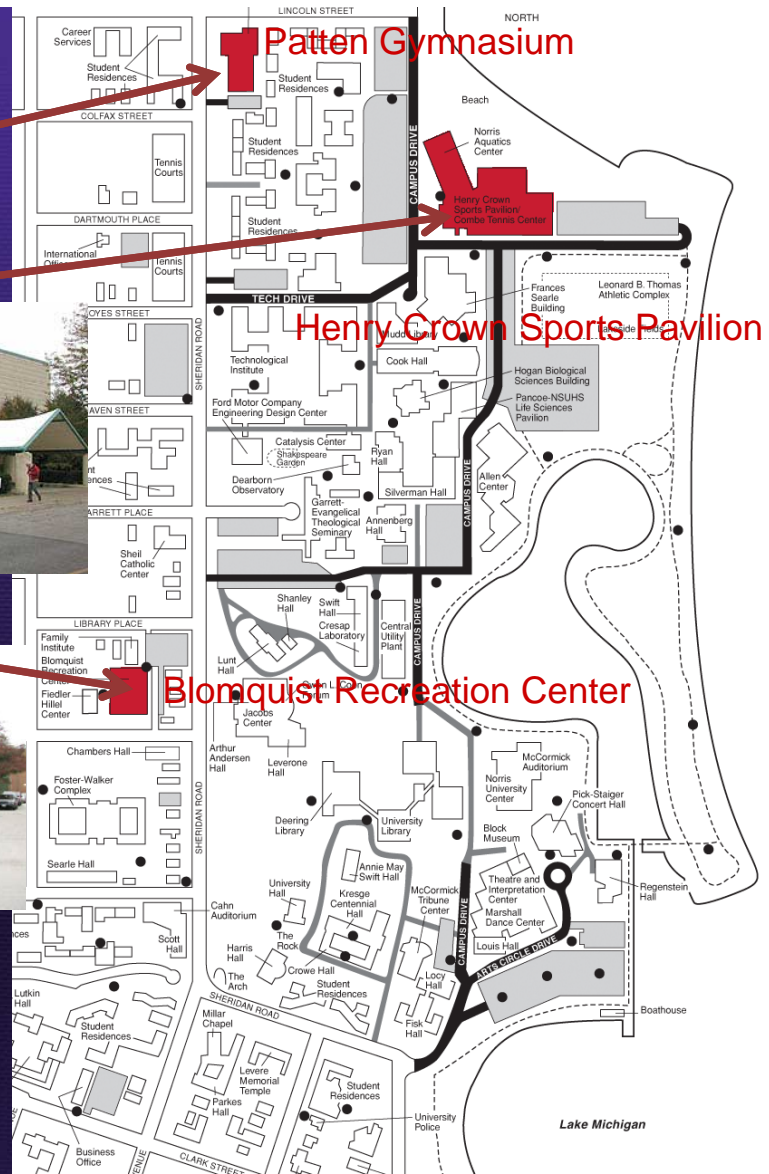
- ◆ Diverse Skill Set and Backgrounds

Services

- ◆ Planning Through Implementation

Existing Conditions





Peer Analysis



Peer Schools	# of Facilities	Gross Sq Ft	Gross Sq Ft/ Student	Weight & Fitness Sq Ft	Weight & Fitness Sq Ft/ Student	Indoor Basketball Courts	Racquetball/ Squash Courts	Climbing Wall
University of Pennsylvania	3	283,000	11.5	27,000	1.1	6	11	Yes
Duke University	2*	130,000	9.1	20,053	1.4	7	4	Yes
Vanderbilt University	1*	132,343	10.6	8,600	0.7	3	8	Yes
University of Notre Dame	2	122,000	10.3	8,600	0.7	6	12	Yes
Dartmouth College	1	129,000	21.5	14,000	2.3	2	13	No
Stanford University	4*	85,000	4.6	27,000	1.5	6	11	Yes
Northwestern University**	3	158,338	10.1	15,670	0.98	7	7	No

*Does not include fitness centers only for faculty/staff or alumni.

**As operated

Peer Schools	Multipurpose Fields			Outdoor Tennis Courts	Baseball/Softball Fields	Other
	Total	w/ Lights	Artificial			
University of Pennsylvania	3	0	0	6	0	Penn Park will add a multipurpose stadium, 2 synthetic fields, a softball field, and 12 tennis courts.
Duke University	5	5	2	12	2	Walking/running trails
Vanderbilt University	4	4	1	10	4	-
University of Notre Dame	7	2	0	14	2	2 horseshoe courts w/ lights. Walking/running trails
Dartmouth College	11	0	2	9	0	Dartmouth Skiway
Stanford University	8	0	0	16	0	Walking/running trails
Northwestern University	3	2	2	15	0	Sailing Center

Peer Schools	Student Recreation Fee	Faculty/Staff Fees	Public Memberships?	Public Fees?
University of Pennsylvania	\$360/year	\$460/year	Only Alumni	\$675/year
Duke University	\$208/year	\$208/year	Only Alumni	\$208/year
Vanderbilt University	\$472/year	\$456 - \$518/year (depends on income level)	Yes (limited to 200 members)	\$660/year
University of Notre Dame	None	None	Only Alumni	None
Dartmouth College	None	\$261 - \$422/year	Yes	\$641/year
Stanford University	None	None	Only Alumni	\$5/day for Alumni*
Northwestern University	None	\$296/year	Yes	\$495/year**

*\$4/day for Alumni Association Members

**After \$1,000 donation

Community Survey



Survey Results – Students

Surveys Sent – 7,546

Respondents – 1,118

Response Rate – 14.8%

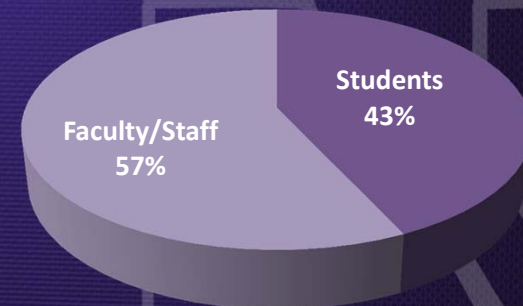
Survey Results – Faculty and Staff

Surveys Sent – 12,657

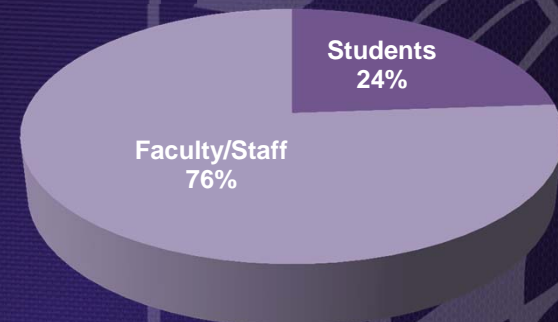
Respondents – 2,000

Response Rate – 15.8%

Evanston Survey Results

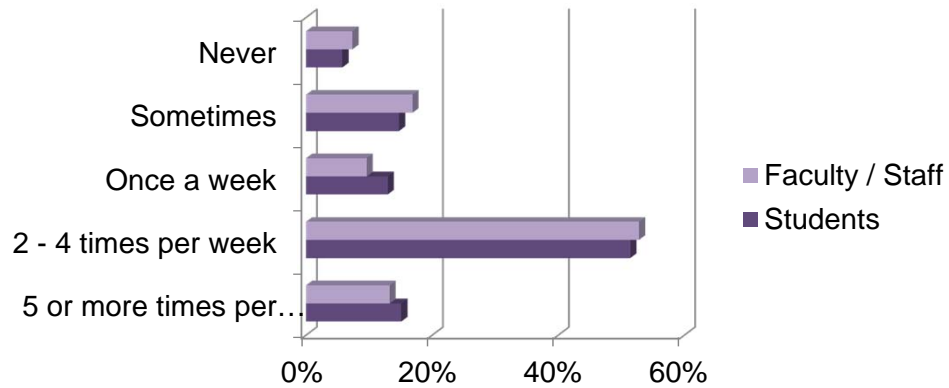


Chicago Survey

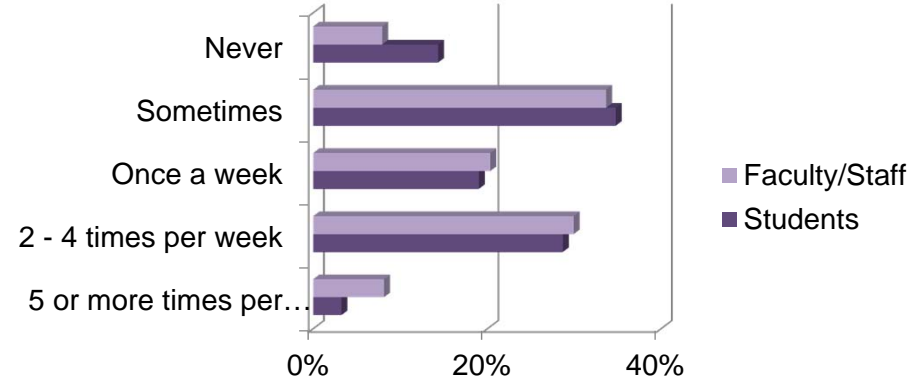


How often do you pursue sports and/or fitness activities?

Indoor

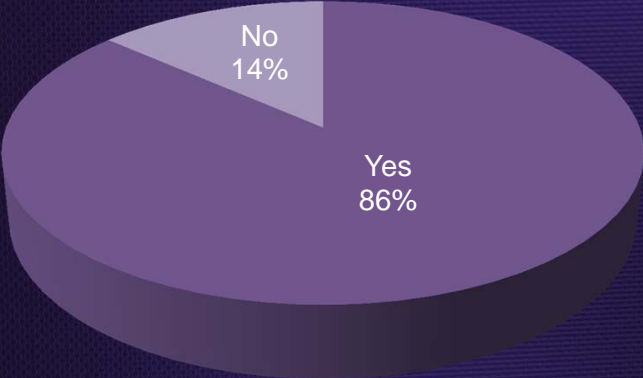


Outdoor

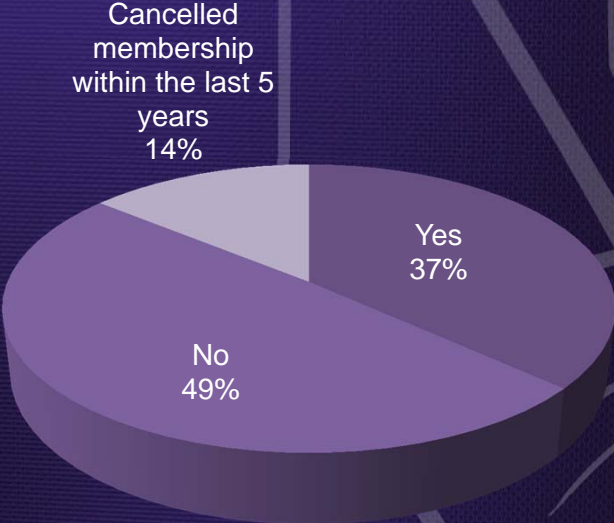


Do you use any Northwestern Fitness/Recreation Facility on the Evanston Campus for sports and/or fitness activities?

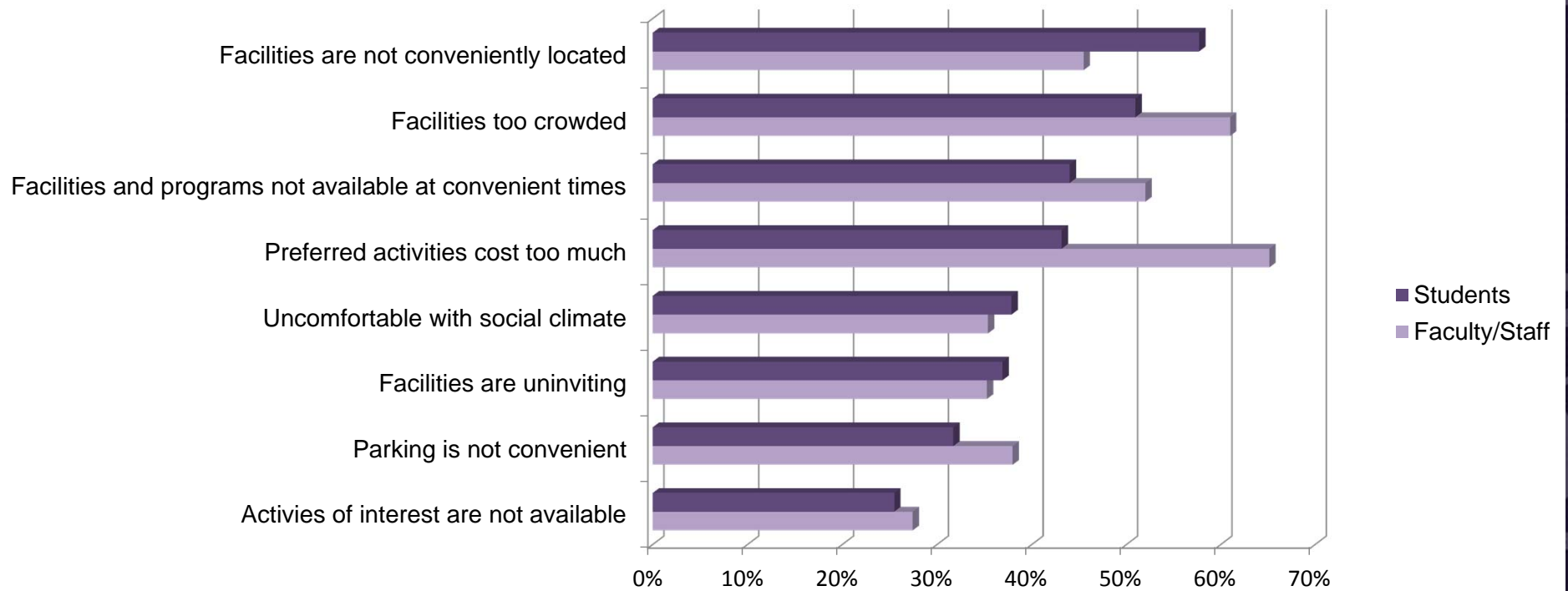
Students



Faculty/Staff

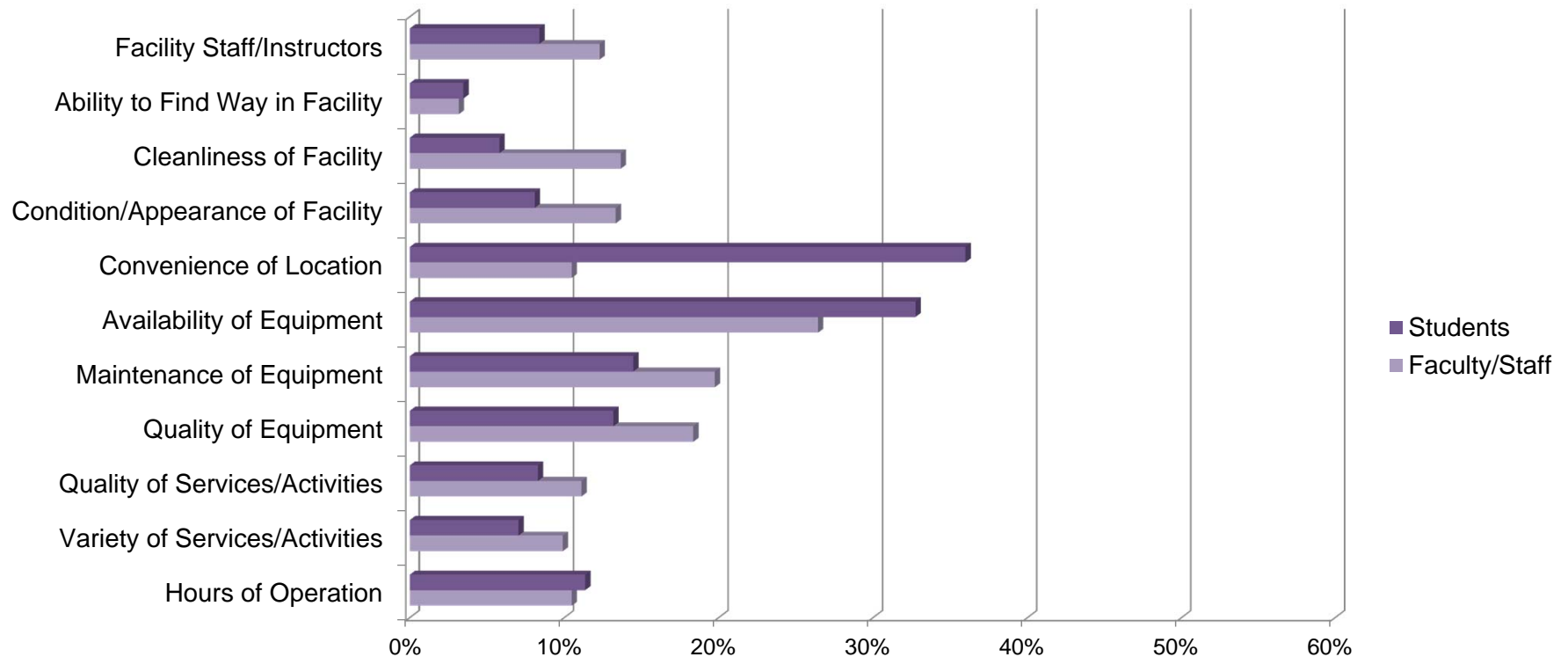


Reasons Cited as "Important" or "Very Important" For Not Utilizing Evanston Fitness/Recreation Facilities



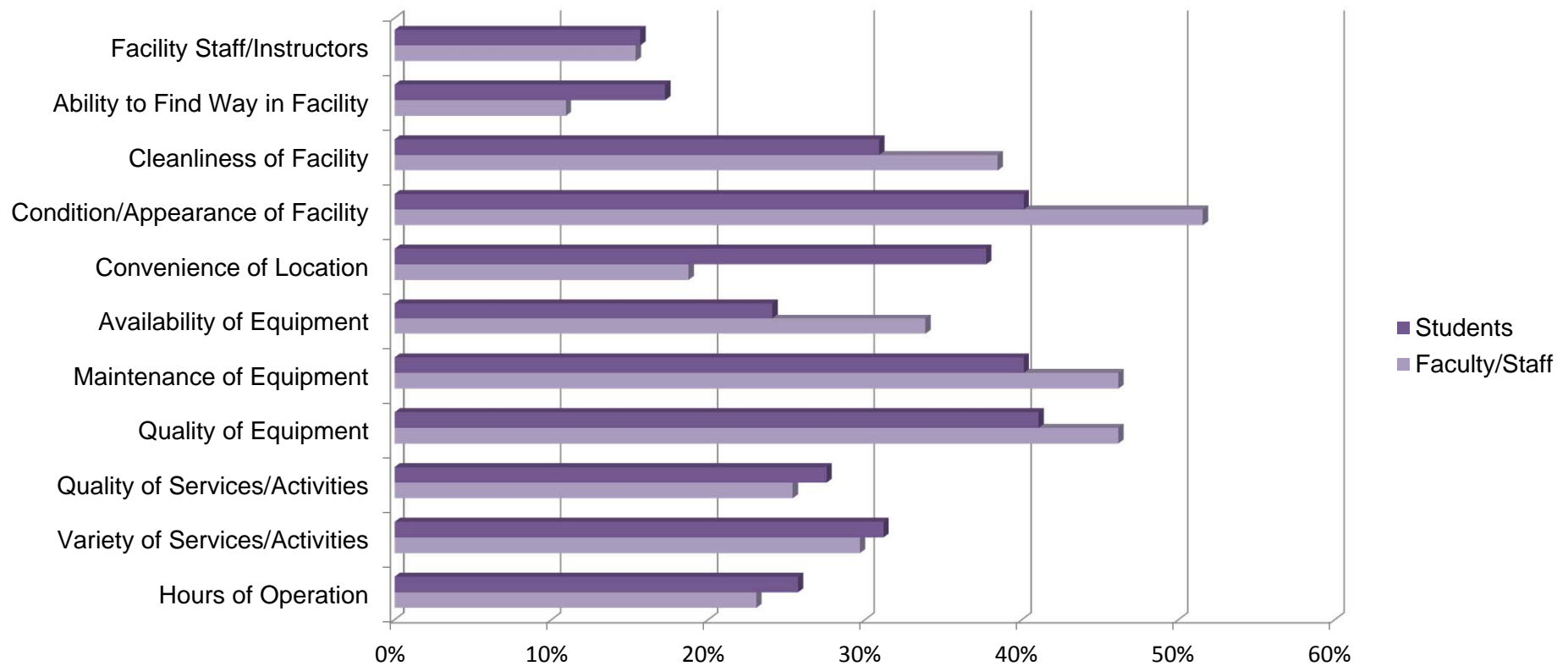
Percentage of Respondents Who Were “Dissatisfied” or “Very Dissatisfied” with Elements of Facility

Crown Sports Pavilion and Aquatic Center (SPAC)



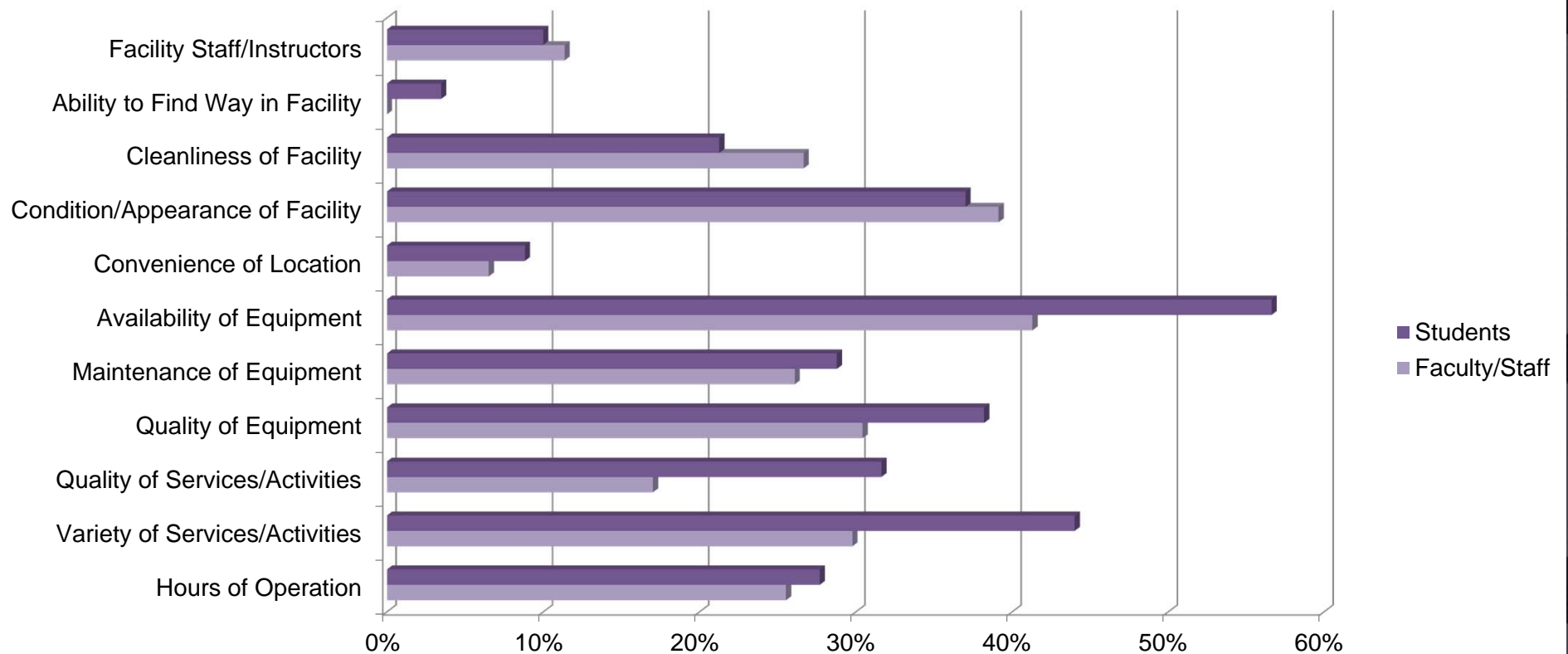
Percentage of Respondents Who Were “Dissatisfied” or “Very Dissatisfied” with Elements of Facility

Patten Gymnasium



Percentage of Respondents Who Were “Dissatisfied” or “Very Dissatisfied” with Elements of Facility

Blomquist Recreation Center



Demand-Based Programming Model



Demand-Based Programming

Q68. If a Northwestern recreational facility that met your needs were offered on your campus, how often and during which time period would you participate in the following activities? Please select one frequency and one time period for each activity. - Free weights

Count	Percent		
50	6.50%		5 or more times per week
287	37.32%		2-4 times per week
104	13.52%		Once a week
169	21.98%		Sometimes
159	20.68%		Never
769	Respondents		

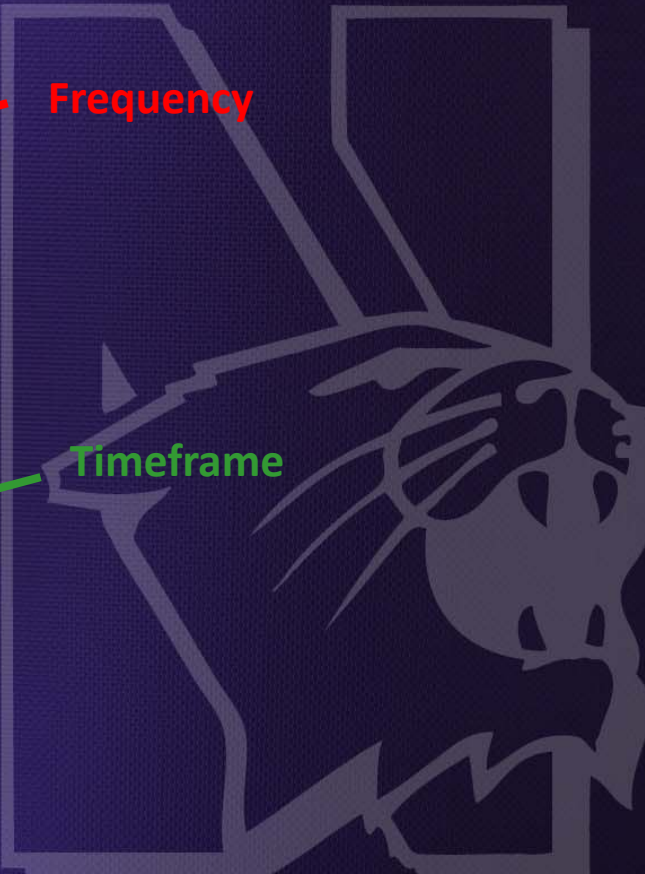
Frequency



Q77. If a Northwestern recreational facility that met your needs were offered on your campus, how often and during which time period would you participate in the following activities? Please select one frequency and one time period for each activity. - Free weights

Count	Percent		
58	7.84%		Before 8 AM
87	11.76%		8 AM - 12 PM
11	1.49%		12 - 1 PM
76	10.27%		1 - 4 PM
117	15.81%		4 - 6 PM
178	24.05%		6 - 9 PM
74	10.00%		After 9PM
139	18.78%		Never
740	Respondents		

Timeframe



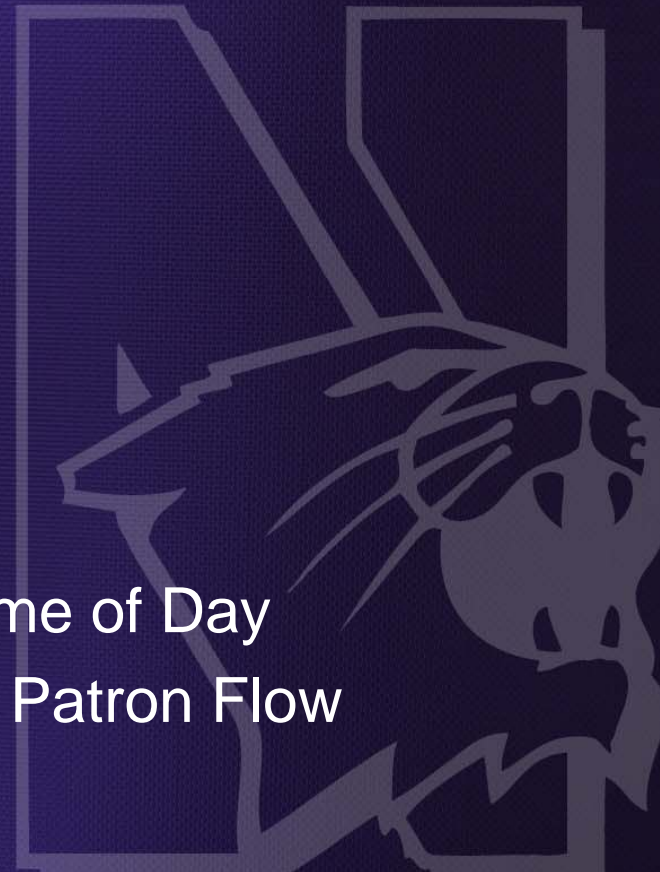
Demand-Based Programming (DBP)

Input:

- Type of Activity
- Duration
- Time / Frequency From Survey Data

Products:

- Projected Demand - Number of Users by Time of Day
- Projected Demand – Facility Size Based on Patron Flow



Demand-Based Programming (DBP)

How many times/week

How many workouts/time window

ACTIVITY:	1	FREE WEIGHTS	Activity Duration: 0.75 Hours			
Frequency	Period	Activity Frequency	Turnover Factor	Intensity Factor	Number of Users	Demand Projection
2-4 Times/Week	Before 8 AM	0.03	0.38	0.01	551	6
2-4 Times/Week	8 AM - 12 PM	0.03	0.19	0.01	874	5
2-4 Times/Week	12 PM - 1 PM	0.03	0.75	0.02	114	3
2-4 Times/Week	1 - 4 PM	0.03	0.25	0.01	684	5
2-4 Times/Week	4 - 6 PM	0.03	0.38	0.01	931	10
2-4 Times/Week	6 - 9 PM	0.03	0.25	0.01	1,520	11
2-4 Times/Week	After 9PM	0.03	0.38	0.01	646	7
2-4 Times/Week	Never	0.03	0.00	0.00	0	0
Daily	Before 8 AM	0	0.38	0.00	171	0
Daily	8 AM - 12 PM	0	0.19	0.00	57	0
Daily	12 PM - 1 PM	0	0.75	0.00	0	0
Daily	1 - 4 PM	0	0.25	0.00	133	0
Daily	4 - 6 PM	0	0.38	0.00	190	0
Daily	6 - 9 PM	0	0.25	0.00	266	0
Daily	After 9PM	0	0.38	0.00	133	0
Daily	Never	0	0.00	0.00	0	0

Additional Discount Factors

- New Year's Resolution Discount
- Overlap Discount

TOTAL NUMBER OF USERS PROJECTED PER PERIOD*:

Before 8 AM	8 AM - 12 PM	12 PM - 1 PM	1 - 4 PM	4 - 6 PM	6 - 9 PM	After 9PM	Never
47	33	18	52	119	128	78	0

SPACE DEMAND

NUMBER OF SQ. FT. **							
Before 8 AM	8 AM - 12 PM	12 PM - 1 PM	1 - 4 PM	4 - 6 PM	6 - 9 PM	After 9PM	Never
3,269	2,340	1,238	3,657	8,365	8,994	5,456	0

Number of Users

Square Footage Needed

Demand-Based Programming (DBP)

SRC Activity Ranked by Demand - Students		Depth	Breadth
1	Cardio Equipment	53.5%	80.0%
2	Free Weights	39.4%	70.6%
3	Weight Machines	32.0%	61.1%
4	Indoor Jogging / Walking	26.9%	57.9%
5	Group Fitness	18.3%	53.4%
6	Mind-Body Instructional Classes	15.2%	48.7%
7	Rock Wall Climbing	10.3%	44.6%
8	Lap Swimming	9.9%	38.5%
9	Indoor Basketball	9.8%	31.9%
10	Indoor Tennis	7.4%	32.4%
11	Recreational Swimming	5.6%	35.6%
12	Martial Arts	4.8%	20.2%
13	Badminton	3.6%	23.4%
14	Volleyball	3.5%	23.1%
15	Water Aerobics	3.3%	22.9%
16	Racquetball	3.2%	24.4%
17	Roller / Floor Hockey	2.3%	16.6%
18	Squash	1.9%	17.2%

Depth = Student Responses Who Will Use the Facility At Least Two Times a Week

- Activity is Critical to Lifestyle

Breadth = Student Responses Who Are Interested in Using the Facility At Least Sometimes

- Activity is Important to Campus Life

Demand-Based Programming (DBP)

SRC Activity Ranked by Demand - Students		Depth	Breadth
1	Cardio Equipment	53.5%	80.0%
2	Free Weights	39.4%	70.6%
3	Weight Machines	32.0%	61.1%
4	Indoor Jogging / Walking	26.9%	57.9%
5	Group Fitness	18.3%	53.4%
6	Mind-Body Instructional Classes	15.2%	48.7%
7	Rock Wall Climbing	10.3%	44.6%
8	Lap Swimming	9.9%	38.5%
9	Indoor Basketball	9.8%	31.9%
10	Indoor Tennis	7.4%	32.4%
11	Recreational Swimming	5.6%	35.6%
12	Martial Arts	4.8%	20.2%
13	Badminton	3.6%	23.4%
14	Volleyball	3.5%	23.1%
15	Water Aerobics	3.3%	22.9%
16	Racquetball	3.2%	24.4%
17	Roller / Floor Hockey	2.3%	16.6%
18	Squash	1.9%	17.2%

1st Priority

2nd Priority

3rd Priority

4th Priority

5th Priority

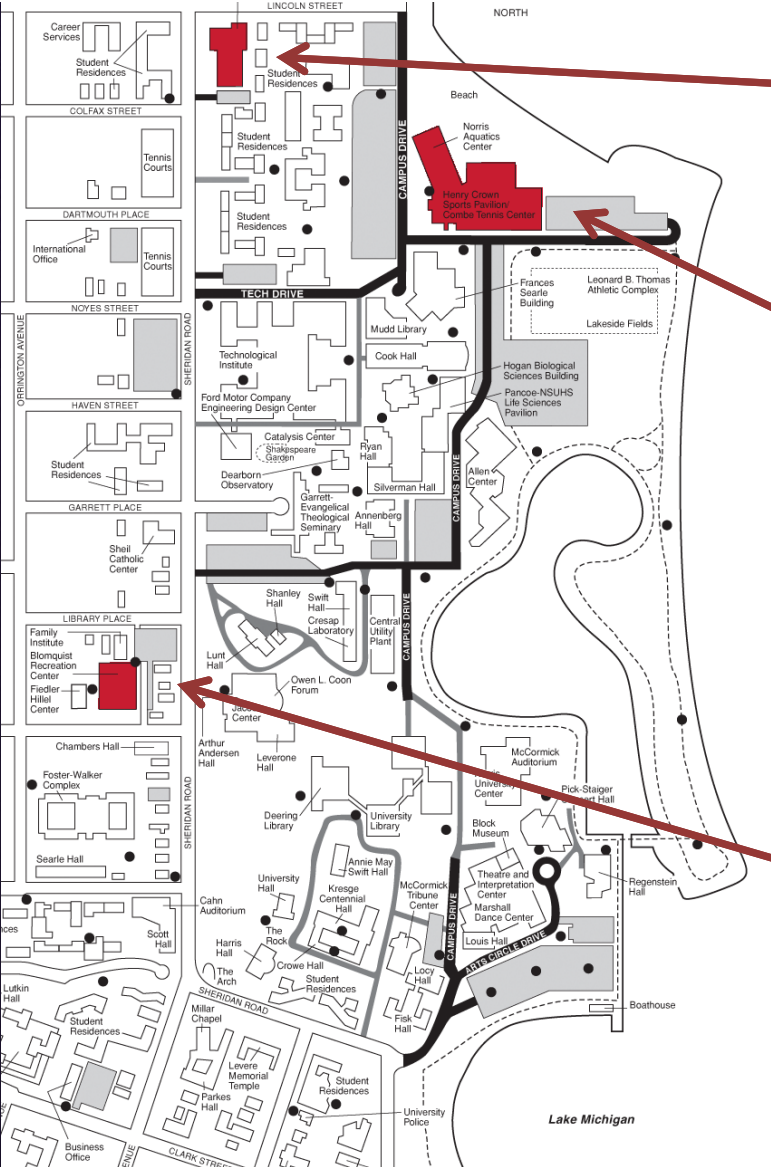


Evanston Campus - Students

Activity		Priority Category	Peak Accommodation	Space Type	Peak Demand	Space Allocation Based on Prioritization of Demand		
1	Cardio Equipment	first	75% to 85%	Sq. Ft.	11,367	8,500	to	9,700
2	Free Weights	first	75% to 85%	Sq. Ft.	8,994	6,700	to	7,600
3	Weight Machines	first	75% to 85%	Sq. Ft.	12,490	9,400	to	10,600
4	Indoor Jogging / Walking	first	75% to 85%	Sq. Ft.	7,761	5,800	to	6,600
5	Group Fitness	second	55% to 65%	Sq. Ft.	8,874	4,900	to	5,800
6	Mind-Body Instructional Classes	second	55% to 65%	Sq. Ft.	6,025	3,300	to	3,900
7	Rock Wall Climbing	third	40% to 50%	Linear Feet	399	160	to	200
8	Lap Swimming	third	40% to 50%	Lanes	8	3	to	4
9	Indoor Basketball	third	40% to 50%	Courts	15	6	to	8
10	Indoor Tennis	fourth	25% to 35%	Courts	22	6	to	8
11	Recreational Swimming	fourth	25% to 35%	Sq. Ft.	4,781	1,200	to	1,700
12	Martial Arts	fourth	25% to 35%	Sq. Ft.	2,779	700	to	1,000
13	Badminton	fourth	25% to 35%	Courts	14	4	to	5
14	Volleyball	fourth	25% to 35%	Courts	5	1	to	2
15	Water Aerobics	fourth	25% to 35%	Sq. Ft.	3,586	900	to	1,300
16	Racquetball	fourth	25% to 35%	Courts	12	3	to	4
17	Roller / Floor Hockey	fifth	10% to 20%	Courts	2	0	to	0
18	Squash	fifth	10% to 20%	Courts	13	1	to	3
1	COMBINED 1: Cardio Equipment, Weight Machines and Free Weights				20,600	15,400	to	17,500
					Activity Overlap:	63%		
2	COMBINED 2: Group Fitness and Instructional Fee-based Classes				17,700	5,700	to	6,900
					Activity Overlap:	65%		

Evanston Campus - Faculty / Staff

Activity		Priority Category	Peak Accommodation	Space Type	Peak Demand	Space Allocation Based on Prioritization of Demand			
1	Cardio Equipment	first	75% to 85%	Sq. Ft.	6,171	4,600	to	5,200	
2	Free Weights	first	75% to 85%	Sq. Ft.	3,764	2,800	to	3,200	
3	Indoor Jogging / Walking	first	75% to 85%	Sq. Ft.	5,786	4,300	to	4,900	
4	Weight Machines	first	75% to 85%	Sq. Ft.	5,945	4,500	to	5,100	
5	Mind-Body Instructional Classes	second	55% to 65%	Sq. Ft.	4,271	2,300	to	2,800	
6	Group Fitness	second	55% to 65%	Sq. Ft.	4,242	2,300	to	2,800	
7	Lap Swimming	third	40% to 50%	Lanes	6	2	to	3	
8	Recreational Swimming	third	40% to 50%	Sq. Ft.	2,300	900	to	1,200	
9	Water Aerobics	third	40% to 50%	Sq. Ft.	2,608	1,000	to	1,300	
10	Indoor Tennis	fourth	25% to 35%	Courts	7	2	to	2	
11	Martial Arts	fourth	25% to 35%	Sq. Ft.	882	221	to	309	
12	Indoor Basketball	fourth	25% to 35%	Courts	3	1	to	1	
13	Rock Wall Climbing	fourth	25% to 35%	Linear Feet	52	13	to	18	
14	Volleyball	fifth	10% to 20%	Courts	1	0	to	0	
15	Racquetball	fifth	10% to 20%	Courts	3	0	to	1	
16	Badminton	fifth	10% to 20%	Courts	3	0	to	1	
17	Squash	fifth	10% to 20%	Courts	5	1	to	1	
18	Roller / Floor Hockey	fifth	10% to 20%	Courts	1	0	to	0	
1	COMBINED 1: Cardio Equipment, Weight Machines and Free Weights				10,100	7,600	to	8,600	
					Activity Overlap:	64%			
2	COMBINED 2: Group Fitness and Instructional Fee-based Classes				8,500	2,900	to	3,500	
					Activity Overlap:	63%			



Patten Gymnasium	As Designed	As Operated	Metric
Weight & Fitness Space	5,700	5,700	Sq. Ft.
Group/Instructional Fitness Space	1,592	1,592	Sq. Ft.
Indoor Basketball/Volleyball	3	3	Courts

Crown Sports Pavilion (SPAC)	As Designed	As Operated	Metric
Weight & Fitness Space	5,397	7,170	Sq. Ft.
Group/Instructional Fitness Space	0	6,600	Sq. Ft.
Indoor Jogging/Walking	6,400	6,400	Sq. Ft.
Indoor Basketball/Volleyball	3	2	Courts
Racquetball	6*	4	Courts
Squash	4	3	Courts
Recreational Swimming/Water Aerobics	0	0	Sq. Ft.
Lap Swimming	19	19	Lanes
Indoor Tennis	6	6	Courts

Blomquist Rec Center	As Designed	As Operated	Metric
Weight & Fitness Space	0	2,800	Sq. Ft.
Group/Instructional Fitness Space	0	2,800	Sq. Ft.
Indoor Basketball/Volleyball	3	2	Courts

Northwestern Recreation Facility Needs

Evanston Campus Recreation Facility Needs							
Space	Student Demand	Faculty/Staff Demand	Metric	% of Faculty/Staff Accommodation	Total Demand	Total Supply*	Surplus/(Deficit)
Weight & Fitness Space	17,500	8,600	Sq. Ft.	30%	20,080	11,037	(9,043)
Group/Instructional Fitness Space	6,900	3,500	Sq. Ft.	30%	7,950	1,592	(6,358)
Indoor Jogging/Walking	6,600	4,900	Sq. Ft.	30%	8,070	6,410	(1,660)
Indoor Basketball/Volleyball	10	1	Courts	30%	10	9	(1)
Badminton	5	1	Courts	30%	5	0	(5)
Racquetball	4	1	Courts	30%	4	6*	2
Squash	3	1	Courts	30%	3	4	1
Recreational Swimming/Water Aerobics	3,000	2,500	Sq. Ft.	30%	3,750	0	(3,750)
Lap Swimming	4	3	Lanes	30%	5	19	14
Roller/Floor Hockey	0	0	Courts	30%	0	0	0
Rock Wall Climbing	200	18	Linear Feet	30%	205	0	(205)
Indoor Tennis	8	2	Courts	30%	9	6	(3)

**Total supply calculations based upon "As Designed" configurations for all facilities*

Northwestern Recreation Facility Needs

Evanston Campus Preliminary Program

Activity Space		Other Building Elements*	
Activity Space	Sq. Ft.	Element	Sq. Ft.
Weight and Fitness	9,000	Office Suite	1,600
Multi-Purpose Fitness / Instructional (3 rooms @ 1,500 sf each)	4,500	Wellness Center	1,500
Multi-Purpose Fitness / Instructional (1 rooms @ 2,500 sf)	2,500	Entry/Lobby/Reception	2,000
Multi-Purpose Activity Court	7,500	Locker Rooms (2 @ 2,000 each)	4,000
2 court gym	13,000	Building Storage	2,000
Recreational Pool	8,000	Rec Equipment Checkout	1,000
Climbing Wall	1,000		12,100
Activity Space Storage	2,000		
	47,500	Building Core and Circulation @ 70%	25,000
		Total Gross Square Feet	85,000

*Assumes a satellite recreation facility; ultimate sizing of Other Building Elements is contingent upon overall allocation of recreation space on campus.

Northwestern Recreation Facility Needs

Evanston Campus Preliminary Program - South Campus Facility

Activity Space		Other Building Elements	
Activity Space	Sq. Ft.	Element	Sq. Ft.
Weight and Fitness	9,000	Office Suite	1,600
Multi-Purpose Activity Court	7,800	Entry/Lobby/Reception	2,000
Multi-Purpose Room - Low Ceiling (2 rooms @ 1,500sf)	3,000	Locker Rooms (2 @ 2,000sf each)	4,000
Two Court Gymnasium - 84ft Courts	12,800	Juice Bar	300
Recreational/Leisure Pool	8,000	Building Storage	2,000
Rock Climbing Wall	1,000	Rec Equipment Checkout	1,000
Activity Space Storage	1,700		10,900
	43,300	Building Core and Circulation @ 70%	23,000
		Total Gross Square Feet	77,000

Northwestern Recreation Facility Needs

Evanston Campus Preliminary Program - SPAC Expansion

Activity Space		Other Building Elements	
Activity Space	Sq. Ft.	Element	Sq. Ft.
Weight and Fitness*	5,700	Office Suite	2,900
Multi-Purpose Room - Low Ceiling	2,500	Wellness Center	1,400
Multi-Purpose Room - Low Ceiling (2 rooms @ 1,500sf)*	3,000	Entry/Lobby/Reception/Social Lounge	2,200
Activity Space Storage	700	Juice Bar	300
	11,900	Rec Equipment Checkout	1,000
			7,800
		Building Core and Circulation @ 70%	8,000
		Total Gross Square Feet	28,000

**assumes Patten Gymnasium is removed from rec system and program space incorporated into SPAC Expansion*

Implementation



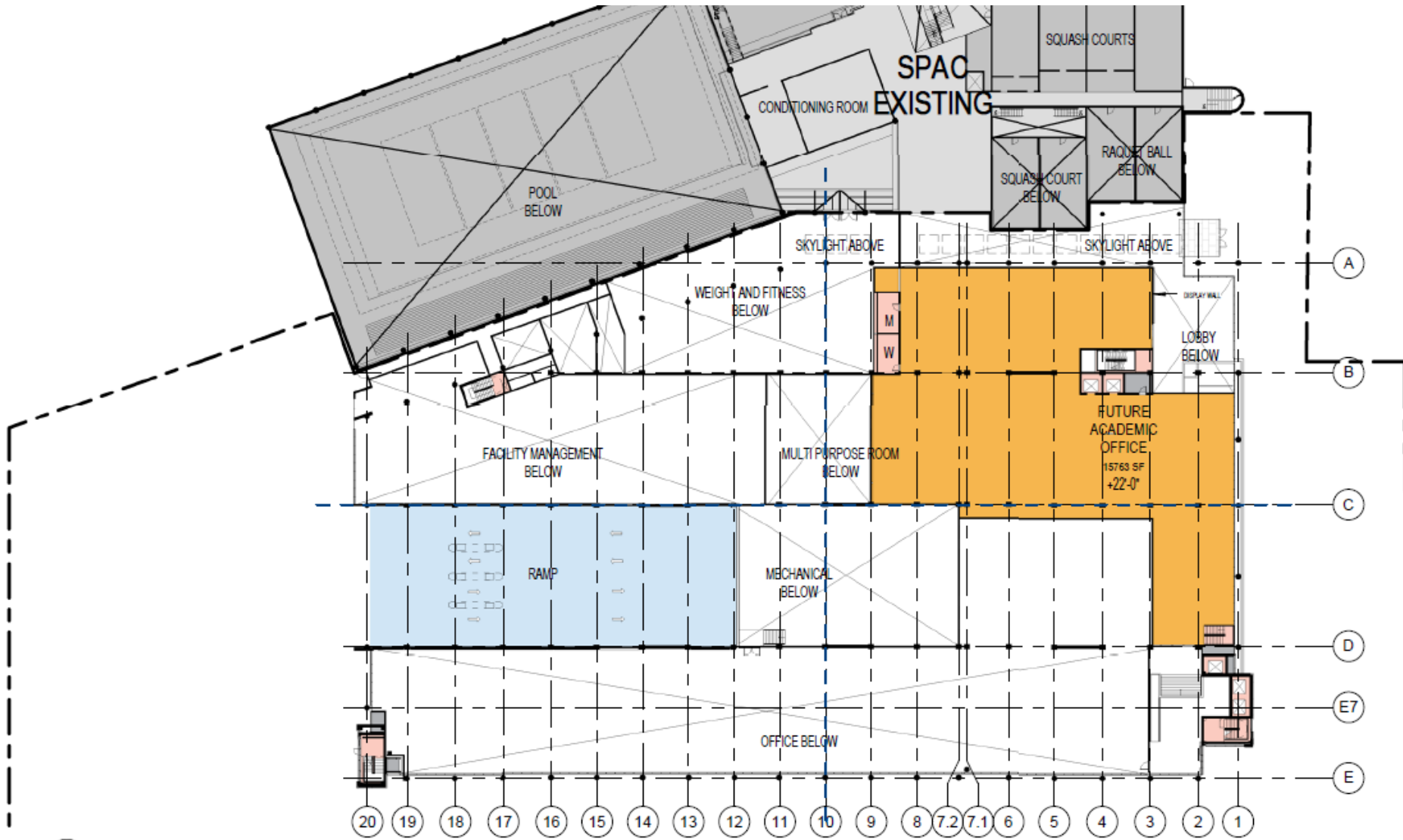


Northwestern North Garage
 Northwestern University
 August 29, 2012

Level 01 Floor Plan

1 LEVEL 01 Floor Plan
 1" = 40'-0"

PERKINS
 + WILL



Level 02 Floor Plan

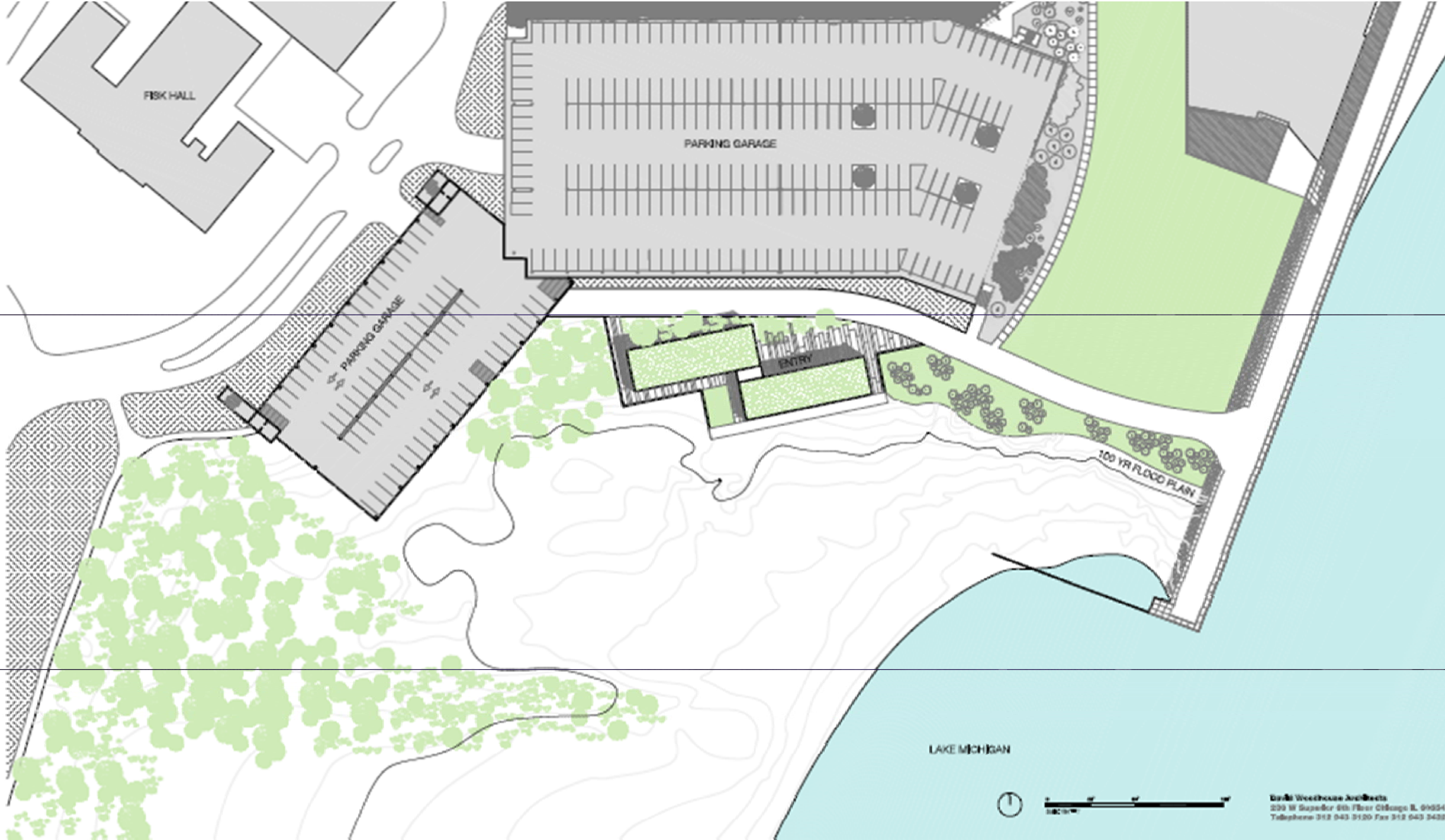
1 LEVEL 02 Floor Plan
1" = 4'-0"



Northwestern North Garage
Northwestern University
August 29, 2012

PERKINS
+ WILL





Northwestern University Athletics and Recreation Master Plan Recreation Facilities Planning & Implementation



Presenters: Daniel M. Bulfin – Director of Recreational Sports, Northwestern University
Greg Wachalski – Vice President, Brailsford & Dunlavey