



jennifer ju + eric tung **E**
california

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wisconsin

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puerto rico

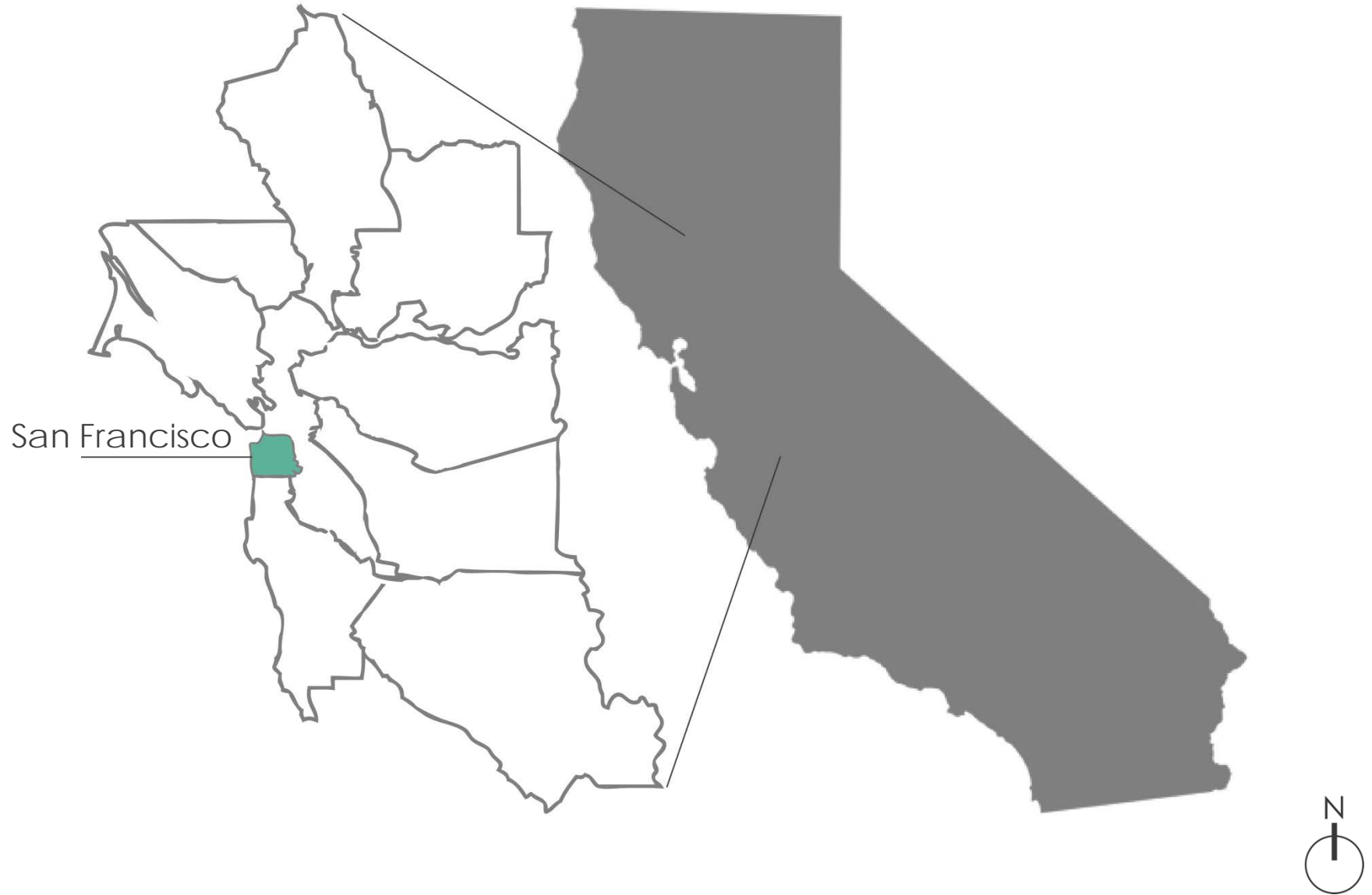
jonathan isaksson **CM**
sweden

Pacific Team 2012



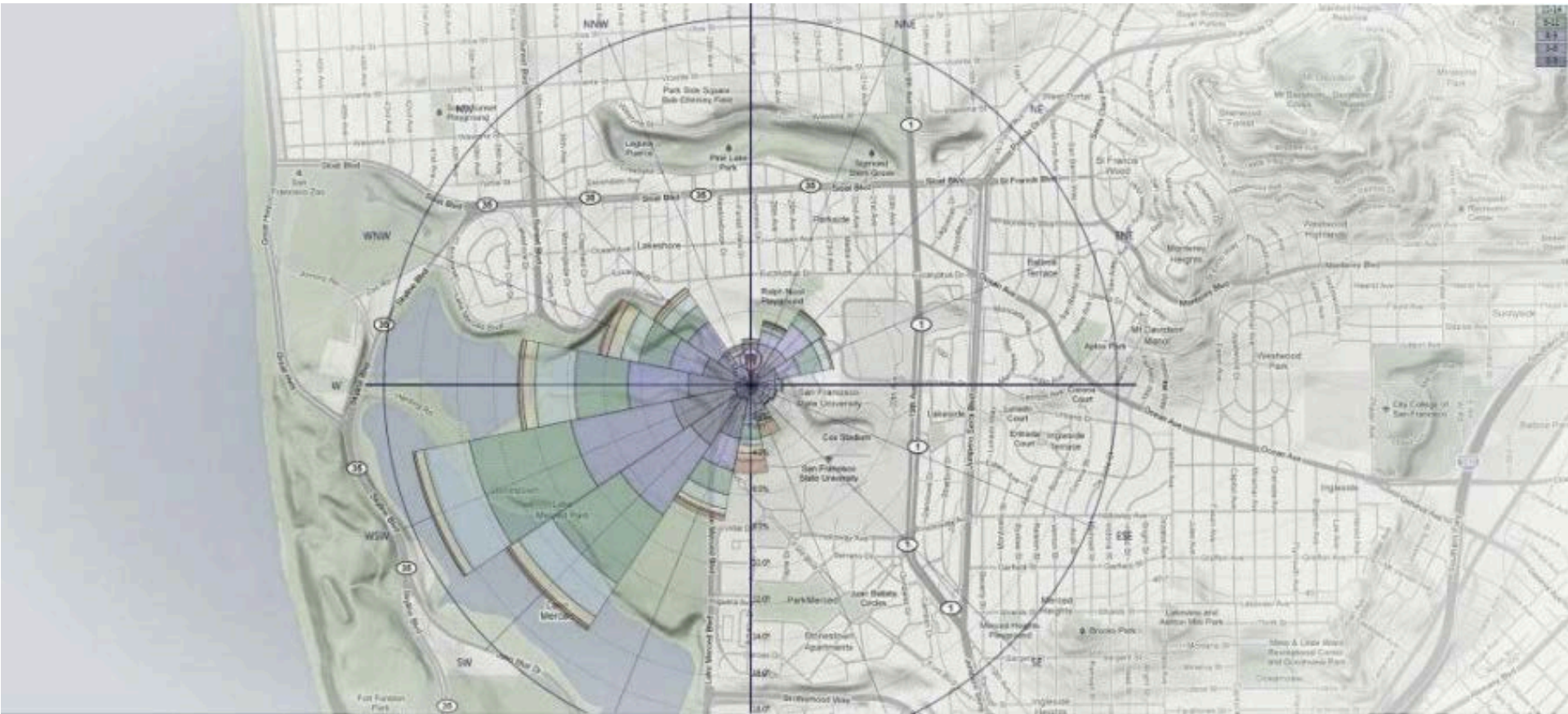
A

Site_Location



A

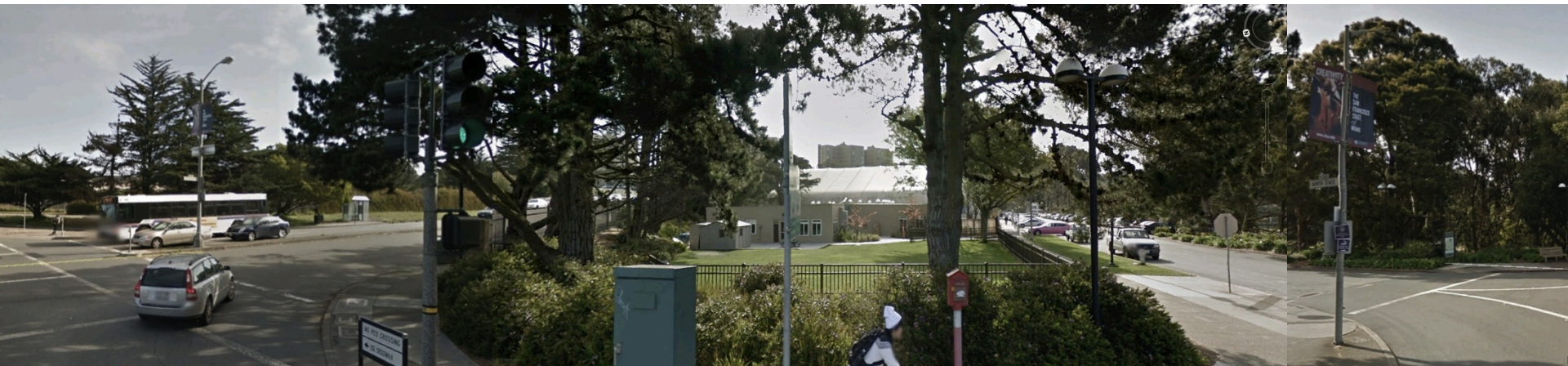
Site_Conditions



1. Seismic Challenges 2. Strong Winds 3. Average Temperature 69'

A

Site_Views



View Towards Site



View Towards Lake

Decision Matrix

TEAM		RANKING EACH CONCEPT (1-10)			
CRITERIA	IMPORTANCE FACTOR (1-10)	SKELETON		GATEWAY	
		STEEL	CONCRETE	STEEL	CONCRETE
Design/Aesthetic	10	9	8	8	7
Strength of Concept/Biomimicry	6	8	8	6	6
Functionality/Space Efficiency	10	7	7	8	8
Constructability/Schedule	8	9	7	8	7
Cost	8	8	7	8	7
Sustainability [Materials]	8	8	6	8	6
RANKING (%)		68.00%	59.67%	64.67%	57.67%

OWNER: MICHAEL		RANKING EACH CONCEPT (1-10)			
CRITERIA	IMPORTANCE FACTOR (1-10)	SKELETON		GATEWAY	
		STEEL	CONCRETE	STEEL	CONCRETE
Design/Aesthetic	10	10	7	8	6
Strength of Concept/Biomimicry	9	9	7	6	6
Functionality/Space Efficiency	7	8	8	8	8
Constructability/Schedule	8	10	6	7	6
Cost	7	10	9	10	9
Sustainability [Materials]	7	7	6	7	6
RANKING (%)		75.00%	60.00%	64.67%	57.33%

OWNER: MARIA		RANKING EACH CONCEPT (1-10)			
CRITERIA	IMPORTANCE FACTOR (1-10)	SKELETON		GATEWAY	
		STEEL	CONCRETE	STEEL	CONCRETE
Design/Aesthetic	10	9	8	10	9
Strength of Concept/Biomimicry	9	8	8	6	6
Functionality/Space Efficiency	7	9	9	8	8
Constructability/Schedule	9	8	7	10	8
Cost	8	9	10	9	10
Sustainability [Materials]	8	7	6	7	6
RANKING (%)		70.00%	67.00%	70.67%	66.33%

Decision Matrix



A

- + Innovative Design
- Poor Floor Plans

E

- + Exposed Structure
- Curved Columns

C

- + More Consistent Construction
- Expensive Fabrication

- + Great Floor Plans + Big Atrium
- Less Innovative Design

- + Better + Easier Structural Grid
- Tilted Facade

- + More Consistent Construction
- Curtain Wall Cost + Installation

Decision Matrix_Combined Fusion



A

- + Innovative Design
- Poor Floor Plans

E

- + Exposed Structure
- Curved Columns

C

- + More Consistent Construction
- Expensive Fabrication

- + Great Floor Plans + Big Atrium
- Less Innovative Design

- + Better + Easier Structural Grid
- Tilted Facade

- + Efficient Space Layout
- Curtain Wall Cost + Installation

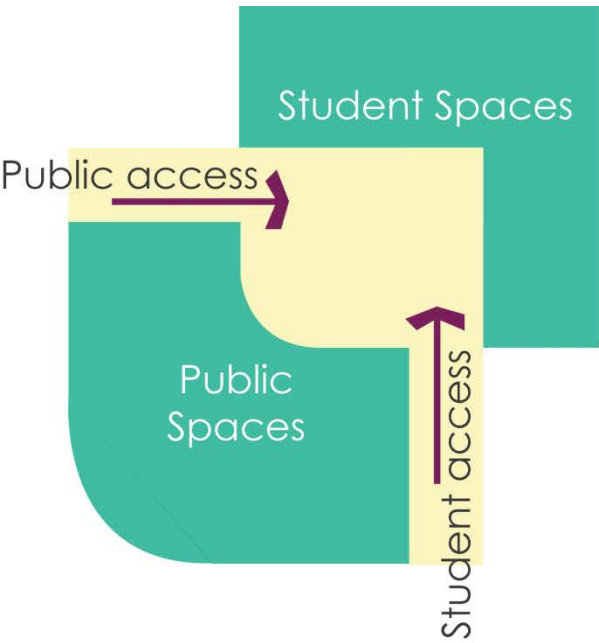


BIG IDEA: Gateway

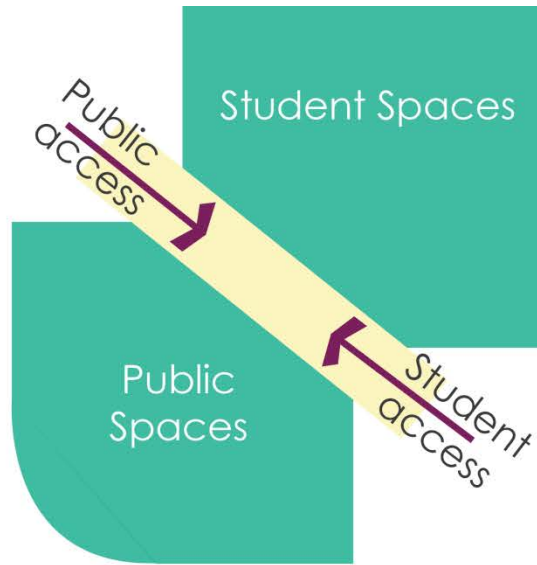


A

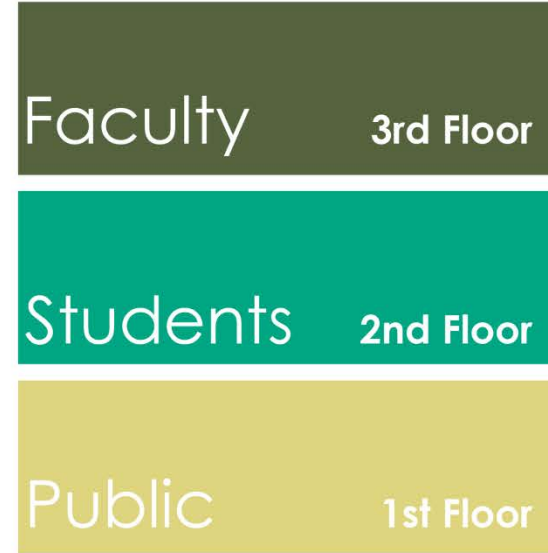
Concept Development



First Floor Diagram



Second Floor Diagram



Section Diagram

A

Site_Analysis



A

Site_Analysis



A

Biomimicry_Integration



[coral reef]

movement from ocean waves

[Rounded Facade]

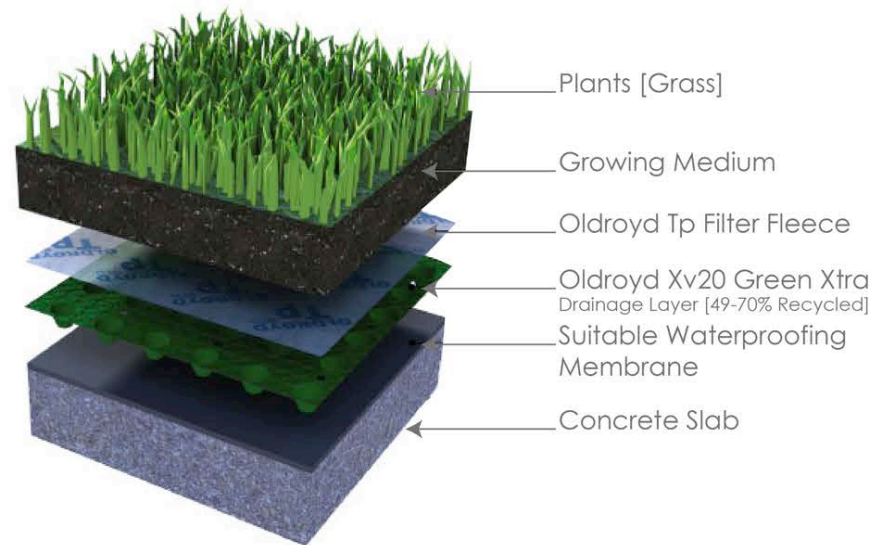
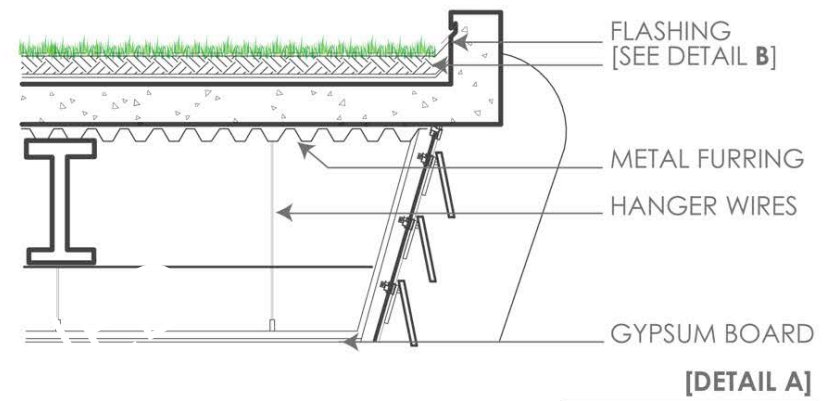
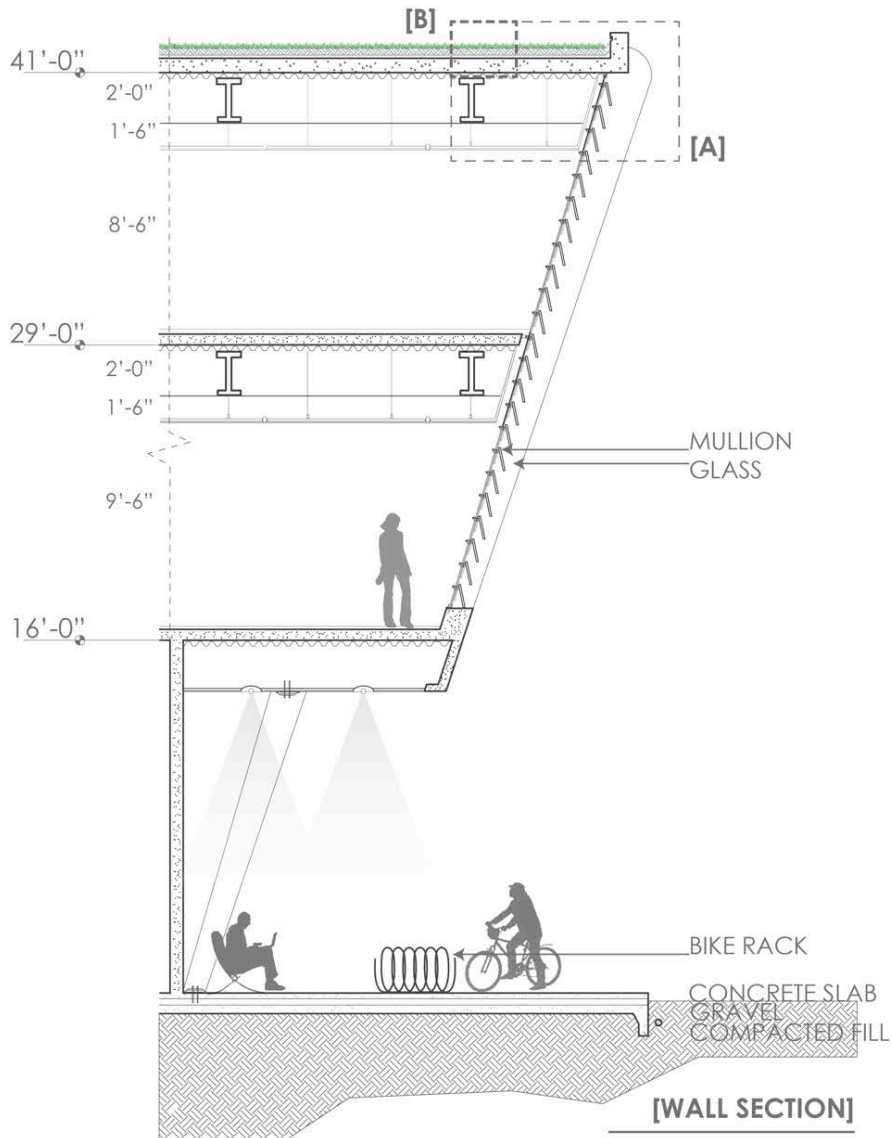
movement from site winds

A

Biomimicry_Facade



A Biomimicry_Detailed Wall Section



[DETAIL B]

Team Process_Two Interaction Stories

1. TILTED FACADE

A

- + Innovative Design
- Hard to Integrate

E

- + Exposed Structure
- Tilted Columns

C

- + Project Value
- Expensive Maintenance + Installation

C

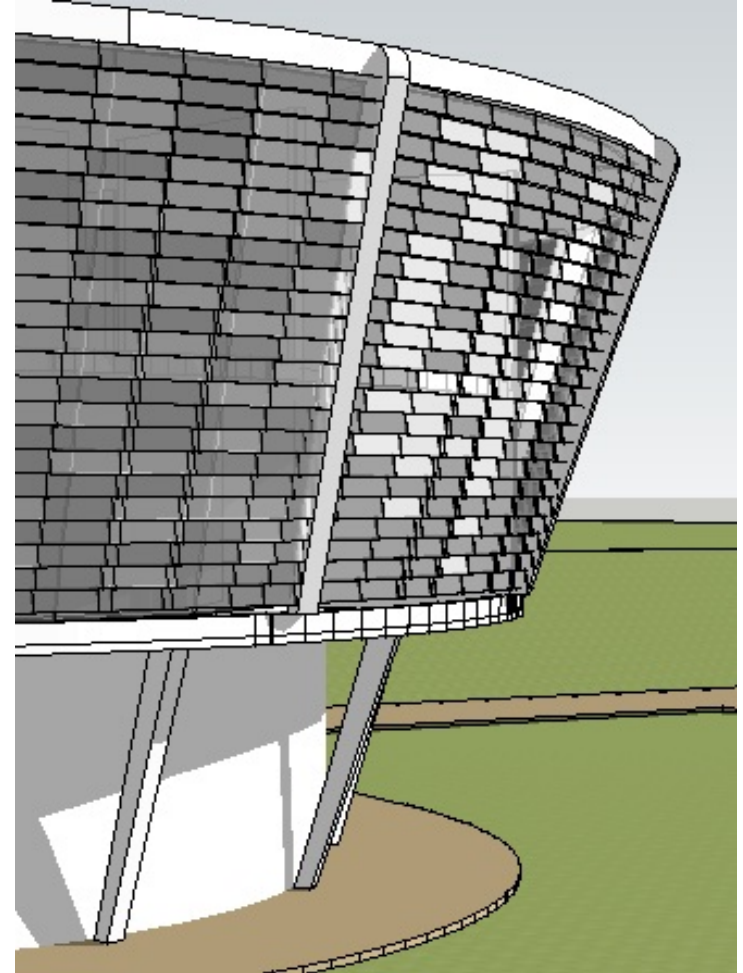
Critical Construction Zone

Target Values

- Enhance views to the lake
- Improve day lighting

Challenges to Achievement

- Trapezoidal shaped panes
- Tilted panels + 25% install cost



C

Curtain Wall Discussion

Current Design

Mullion Length: 594 ft

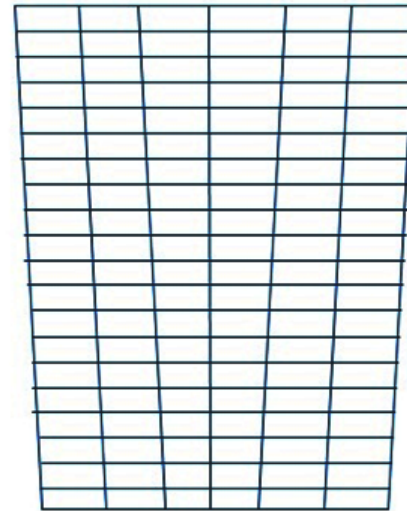
Cost: \$463,000

Proposed Design

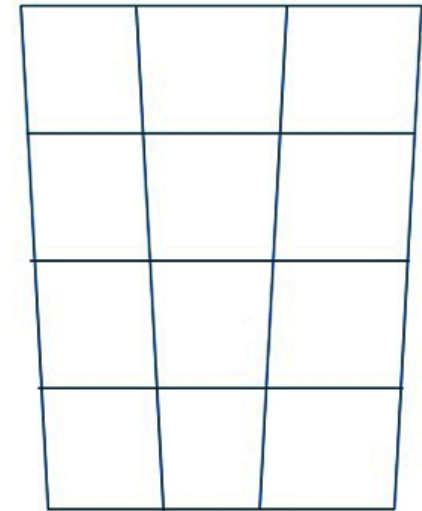
Mullion Length: 193 ft

Cost: \$150,000

Savings: \$313,000



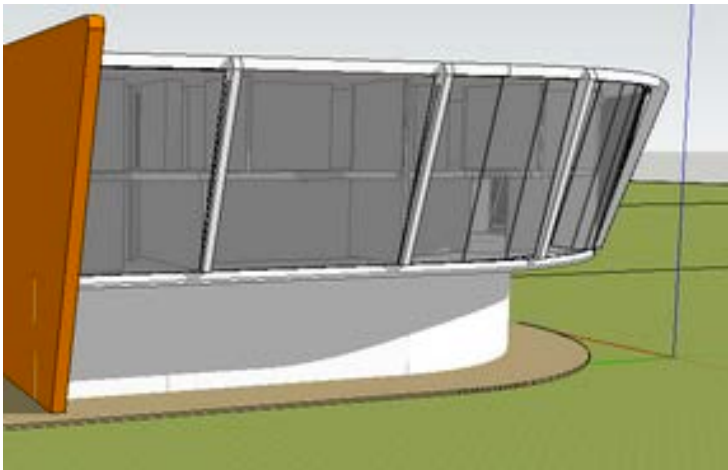
Current



Proposed

Current: 163 panes of glass/section

Proposed: 12 panes of glass/section



Team Process_Two Interaction Stories

2. TWO-STORY AUDITORIUM

A

- + Bigger Space Layout
- Eliminates Square Footage from 2nd Floor

E

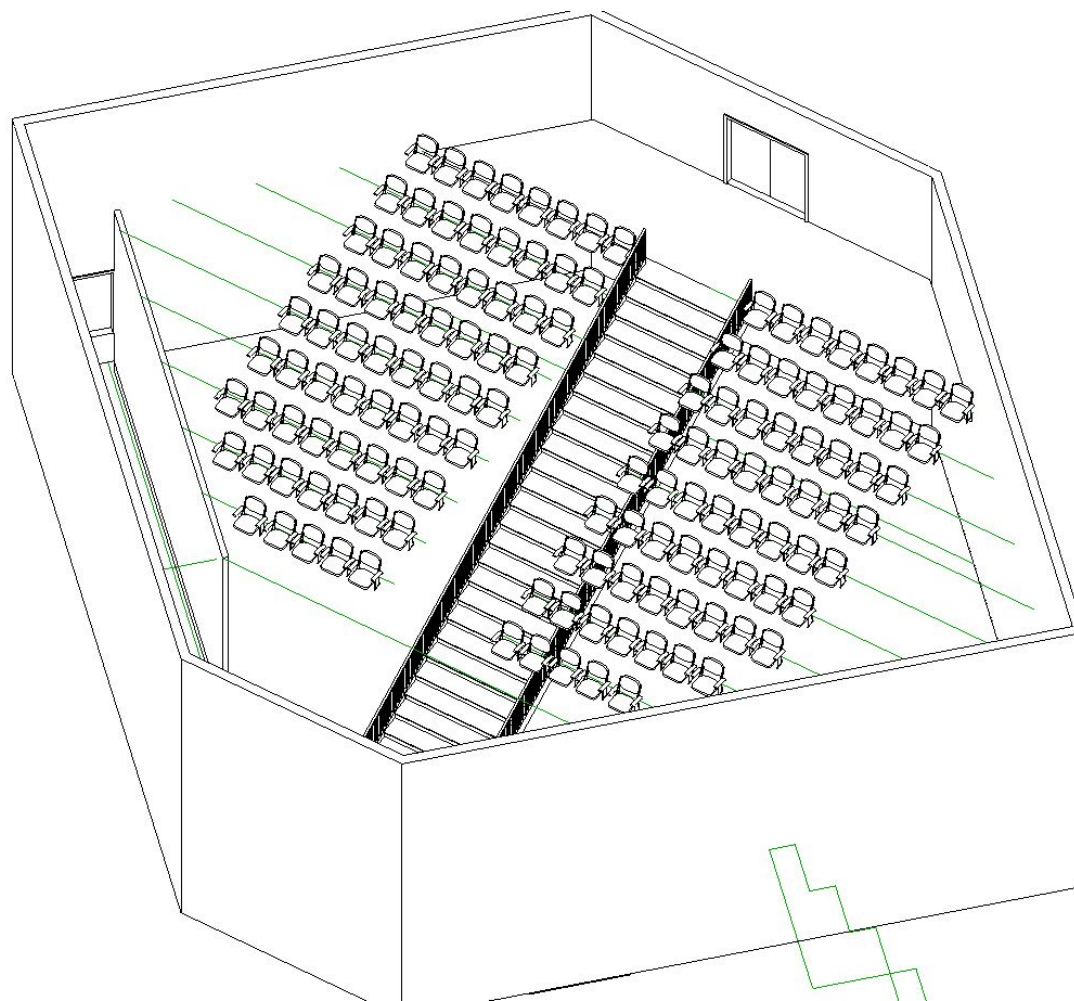
- + No height restrictions for beam depth
- More cantilevers from space loss

C

- + Project Value
- Expensive Maintenance + Installation

C

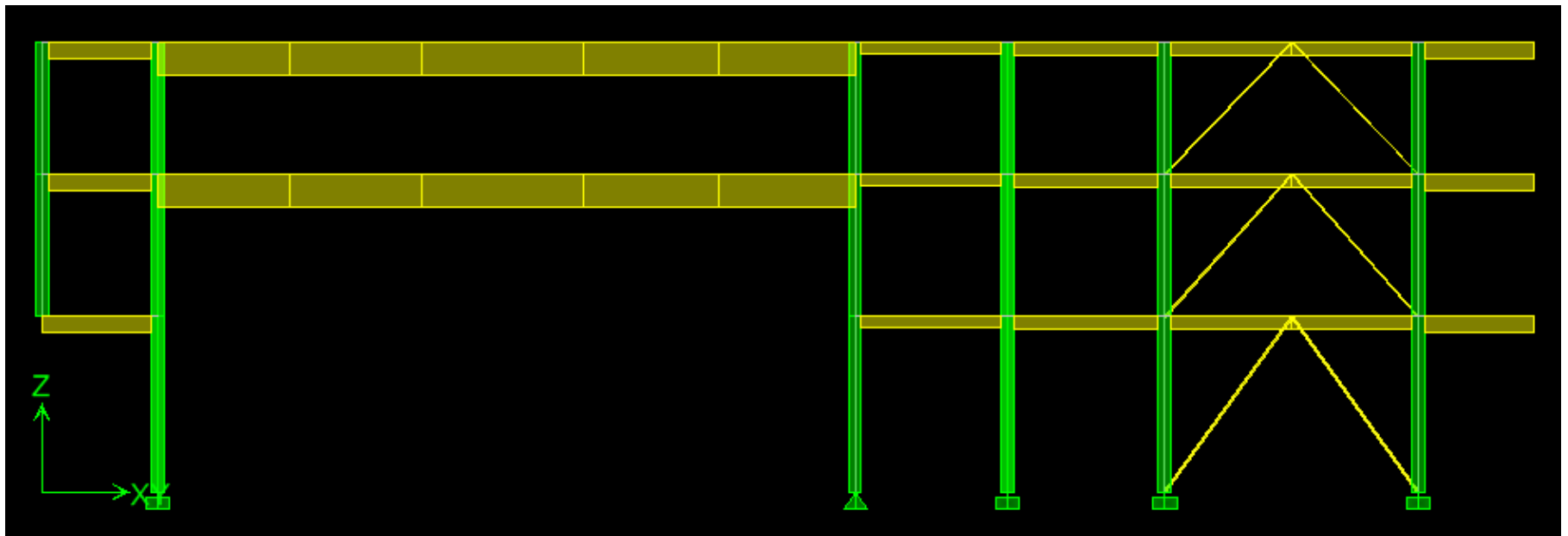
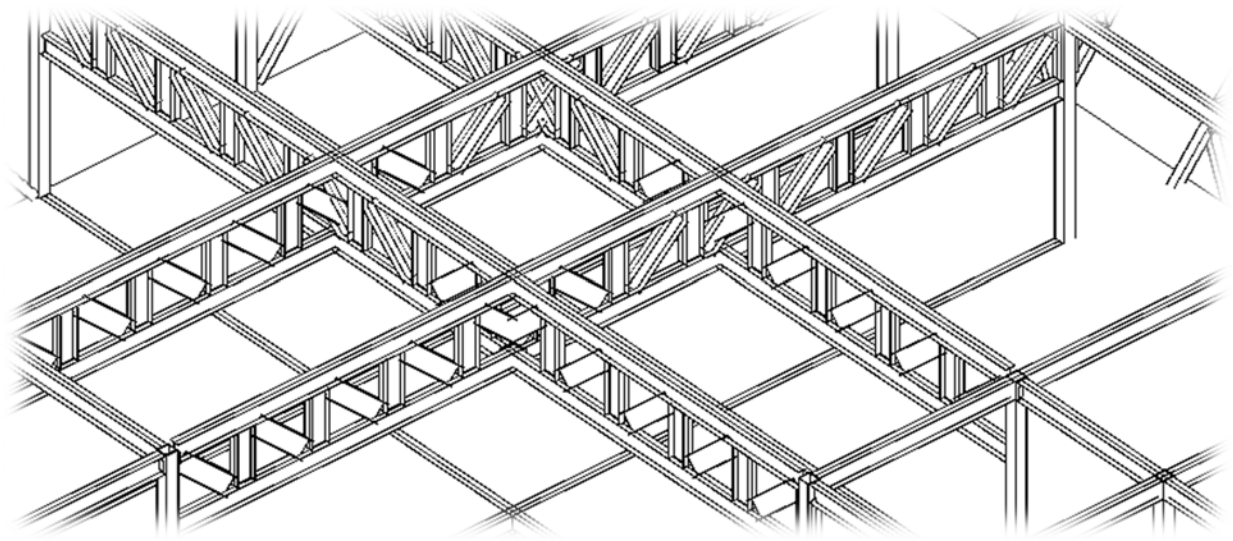
Auditorium



E

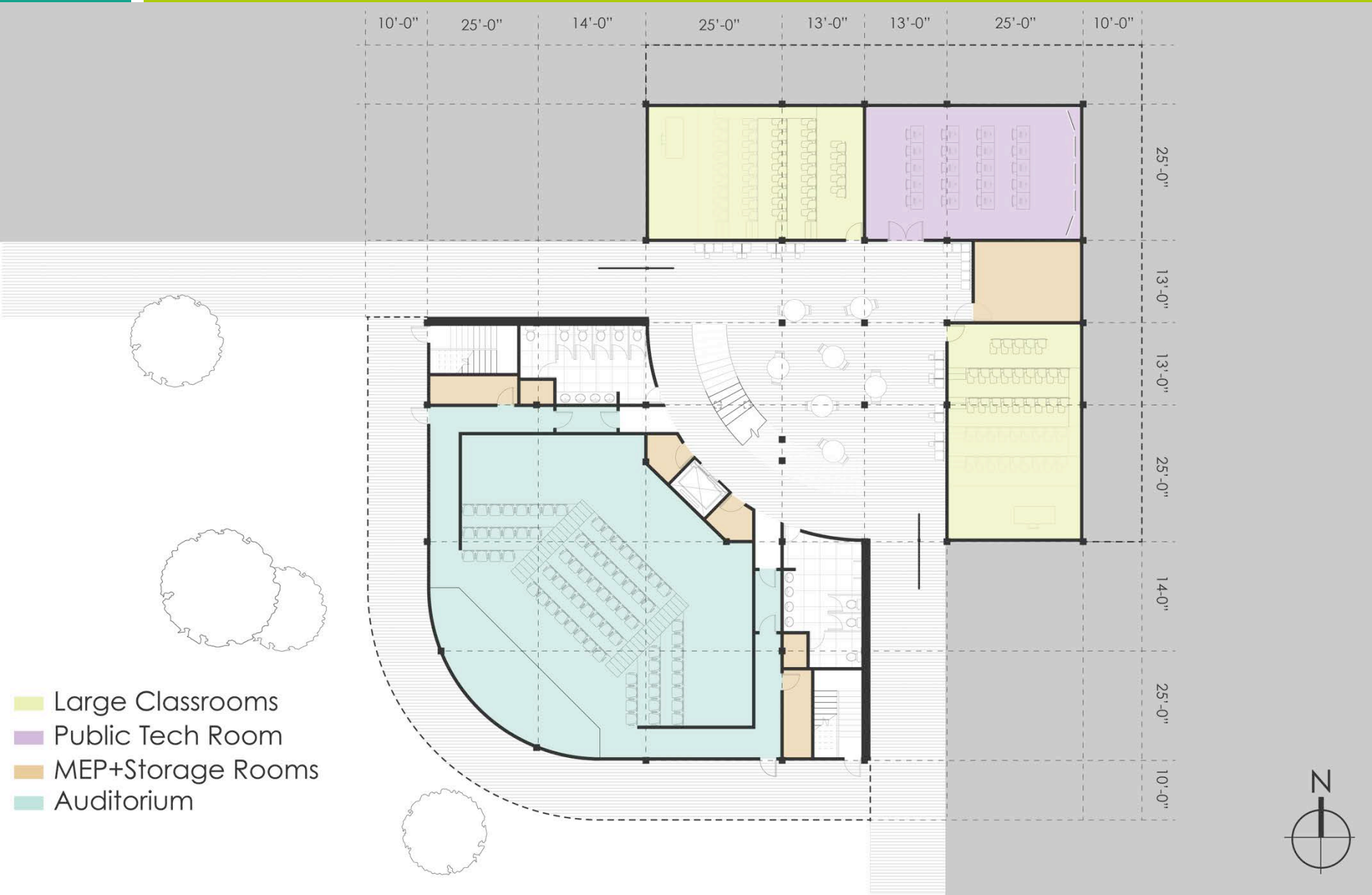
Truss vs. Deep Beam

- 62 ft span
- MEP floor sandwich
- Aesthetic Appeal
- Cost Effectiveness



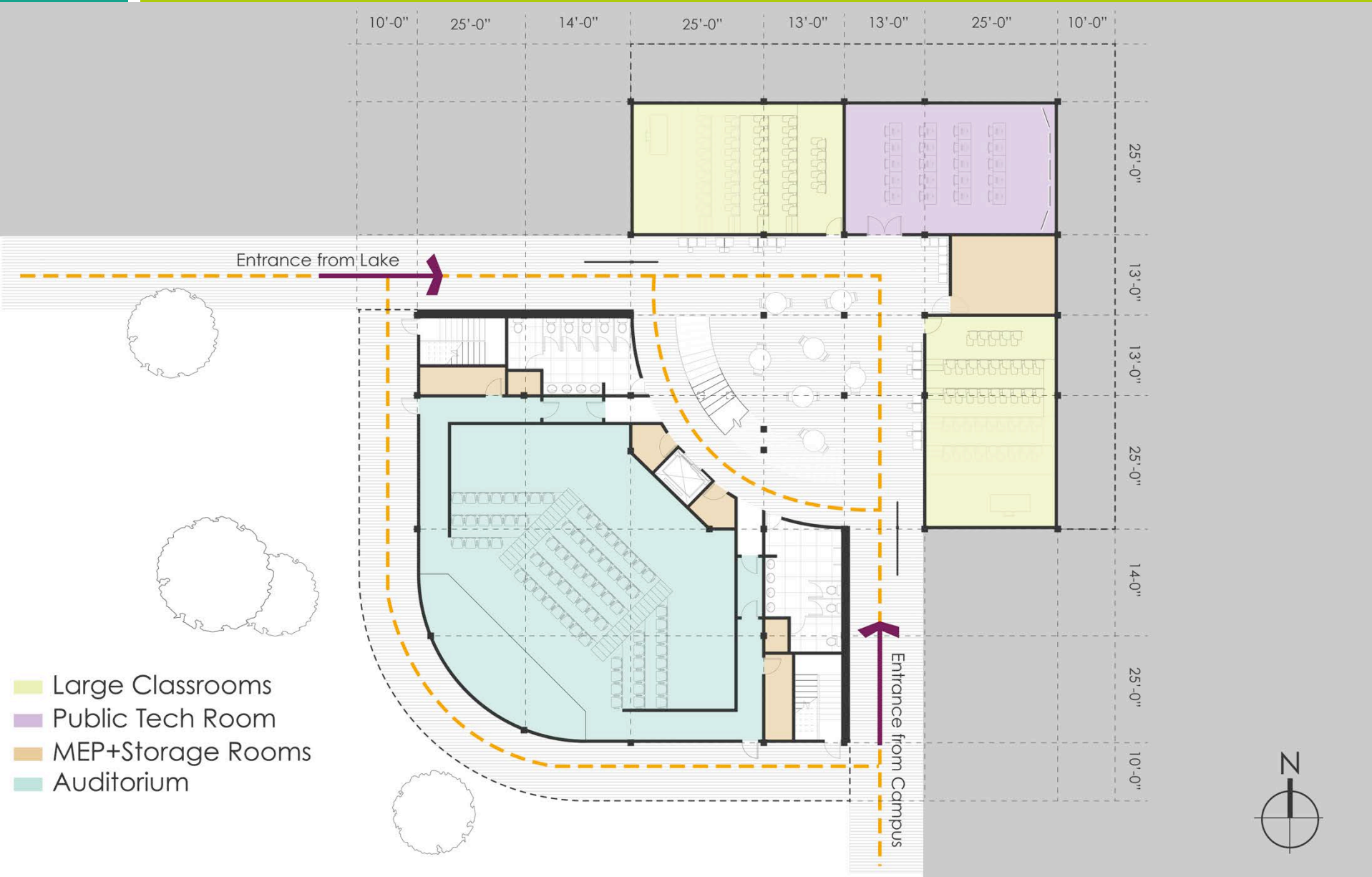
A

First Floor Plan



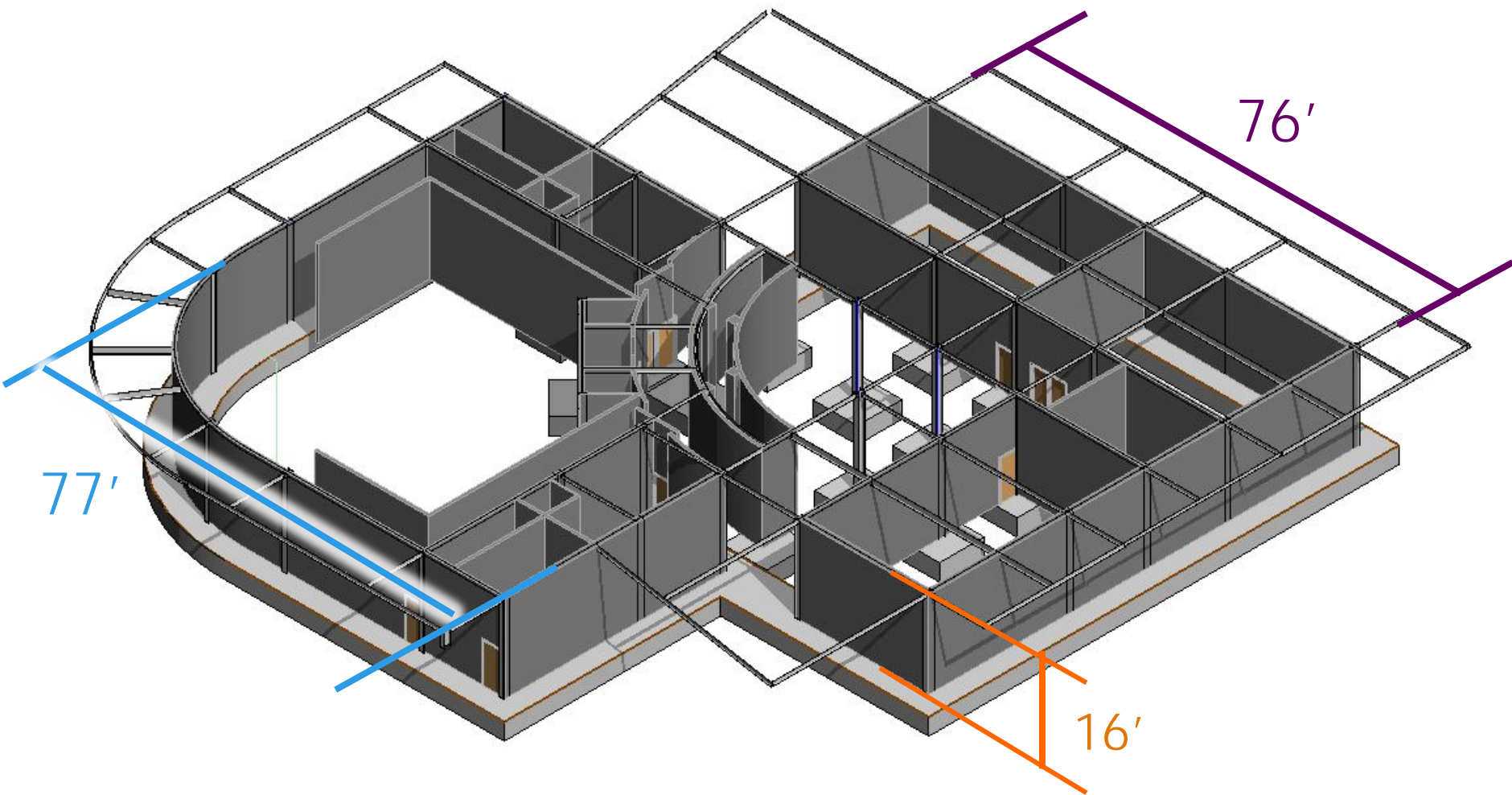
A

First Floor Plan_Circulation



E

1st Floor – Gravity System

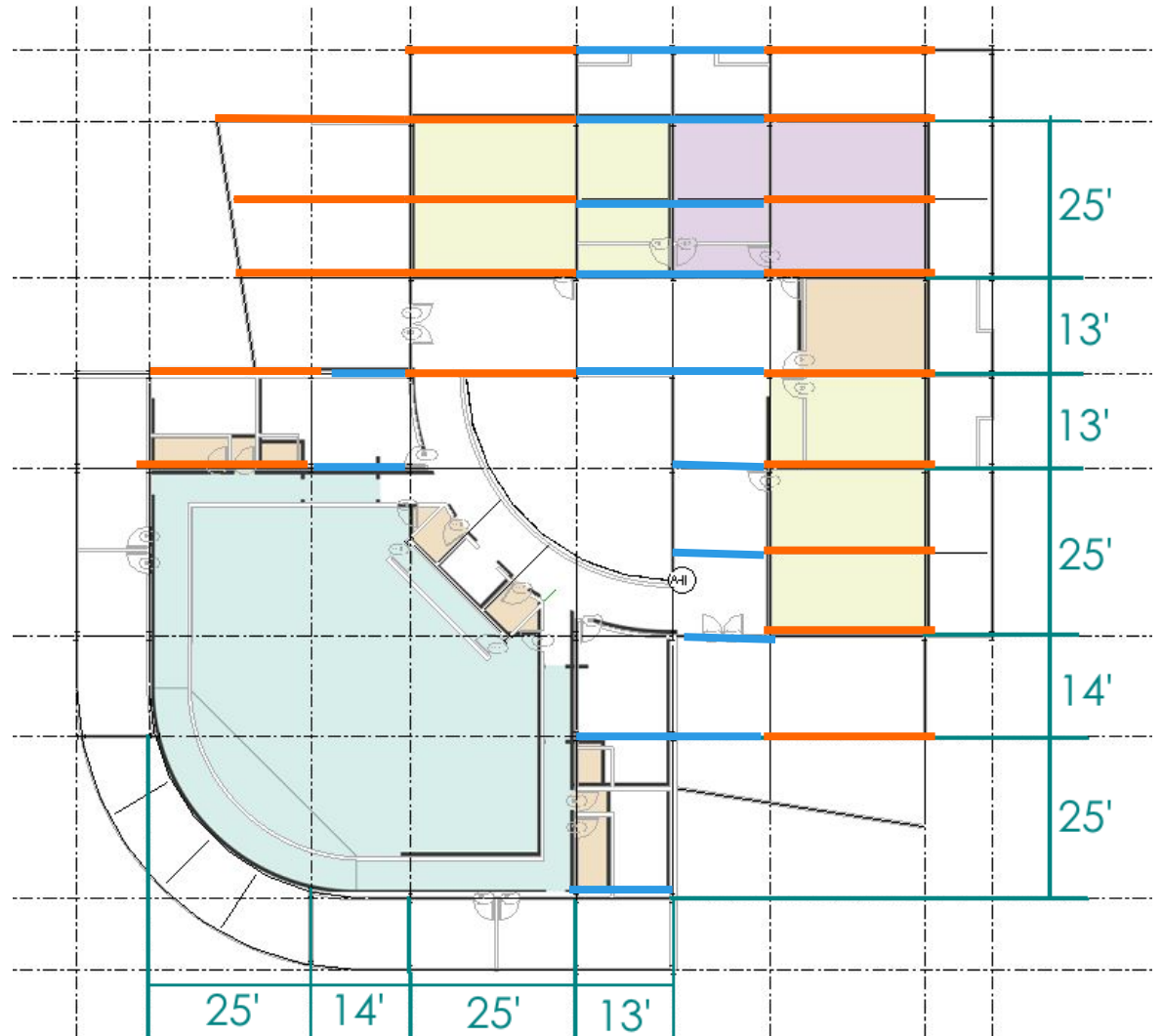


E

1st Floor – Typical SizesFraming Beams

W14 x 22

W12 x 16

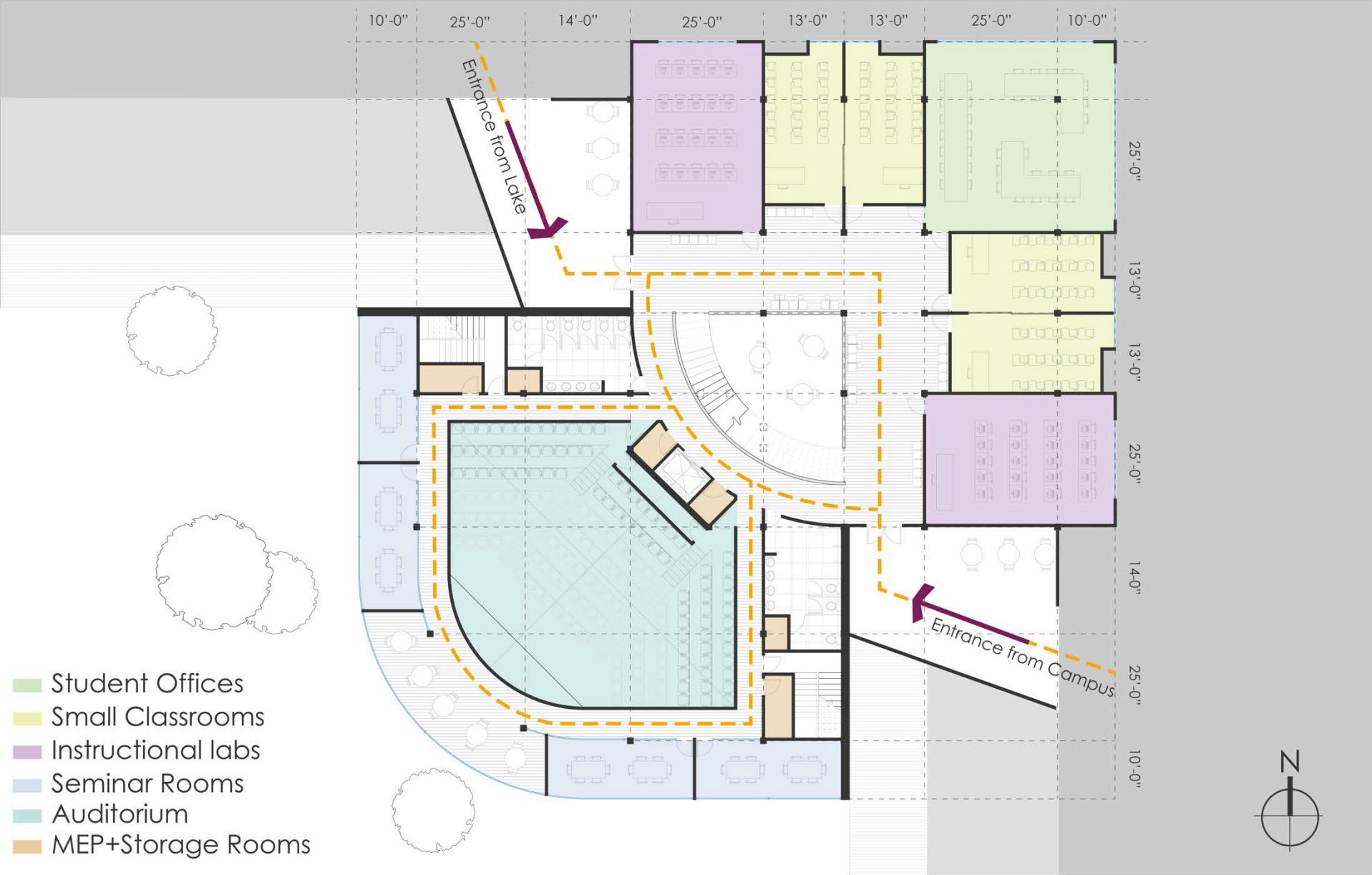
3" Composite
Steel Deck

A

Second Floor Plan

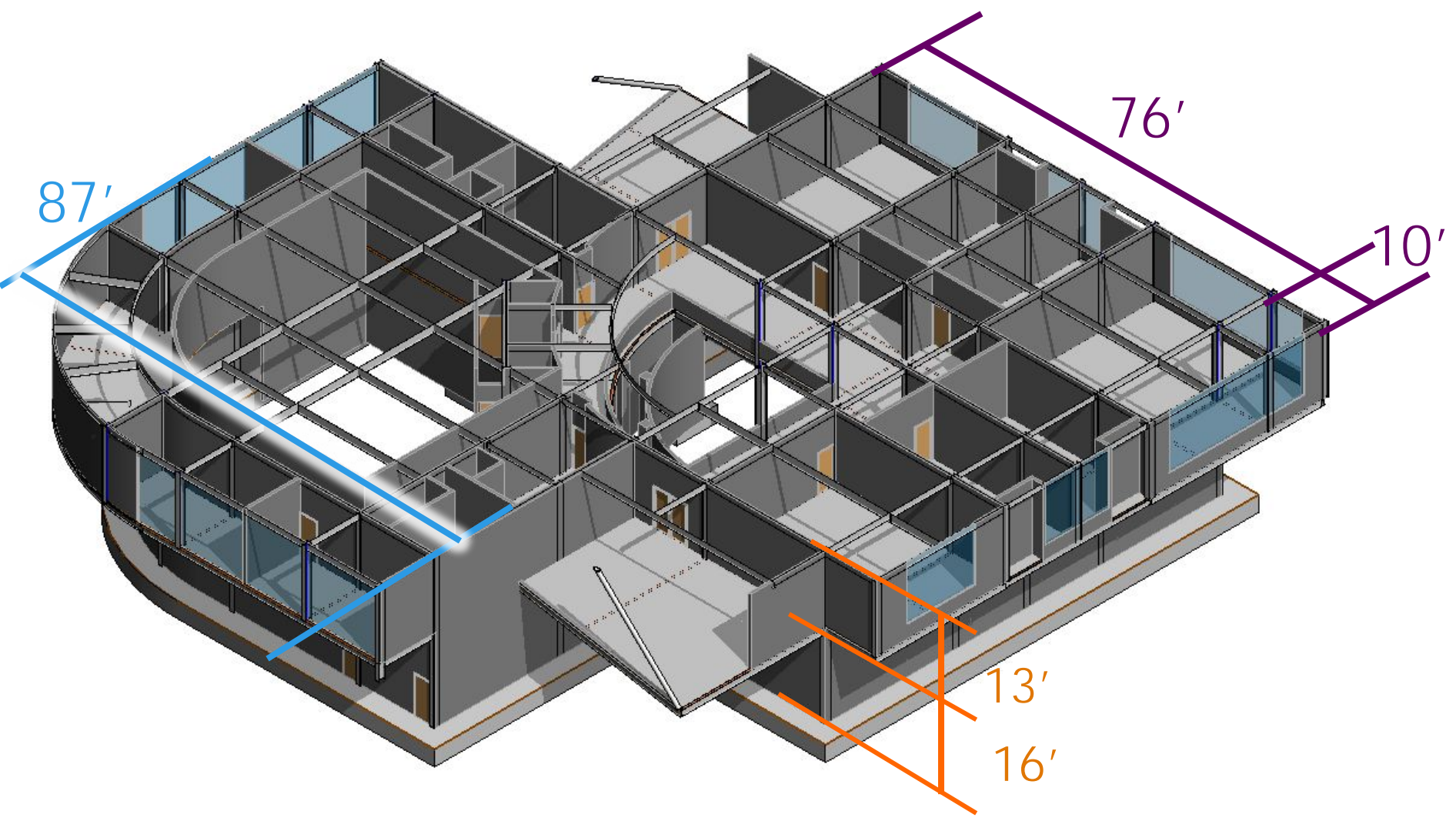


A Second Floor Plan_Circulation



E

2nd Story – Gravity System



E

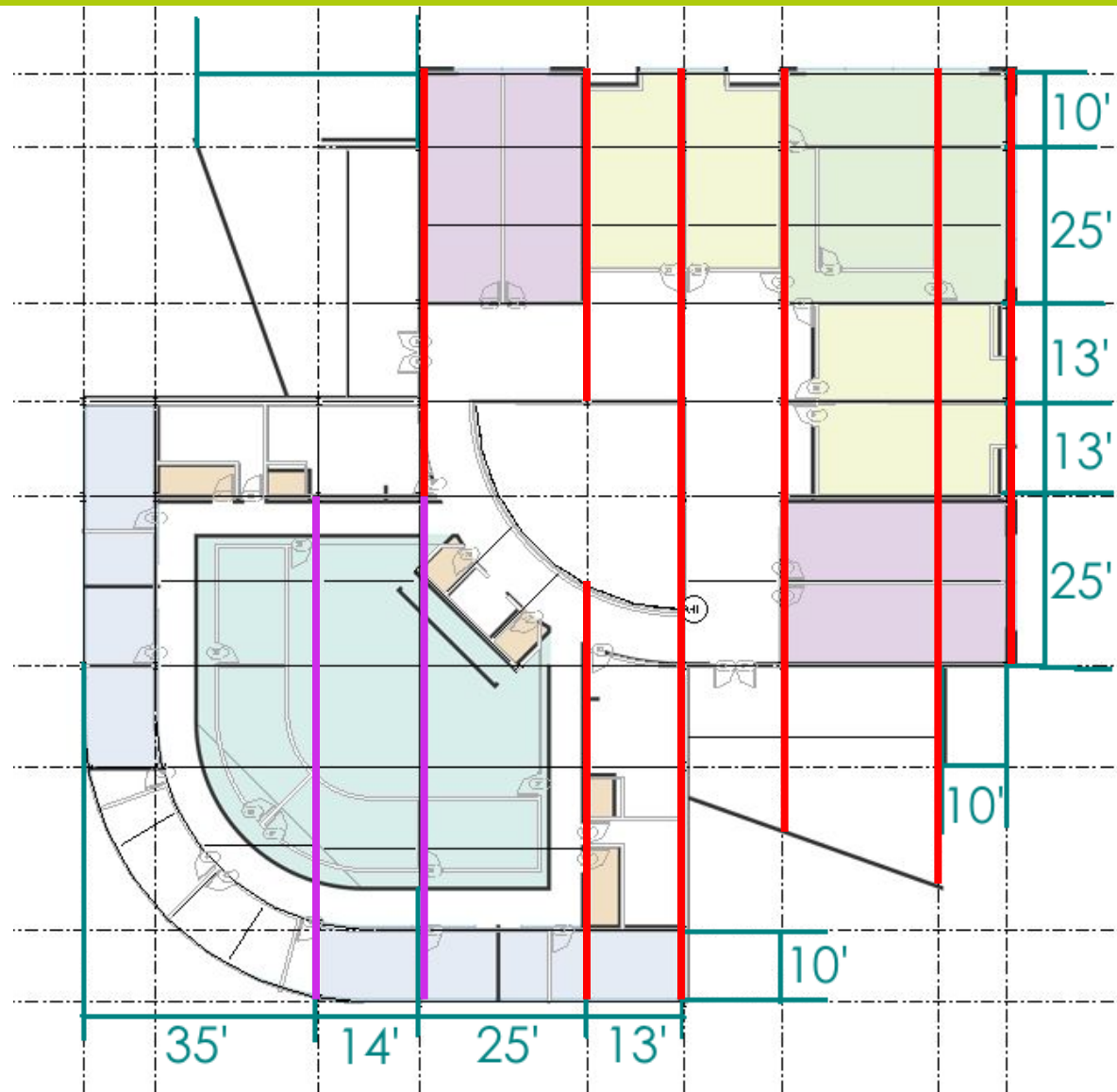
2nd Floor – Typical Sizes

Framing Girders

W18 x 35

W36 x 132

3" Composite Steel Deck



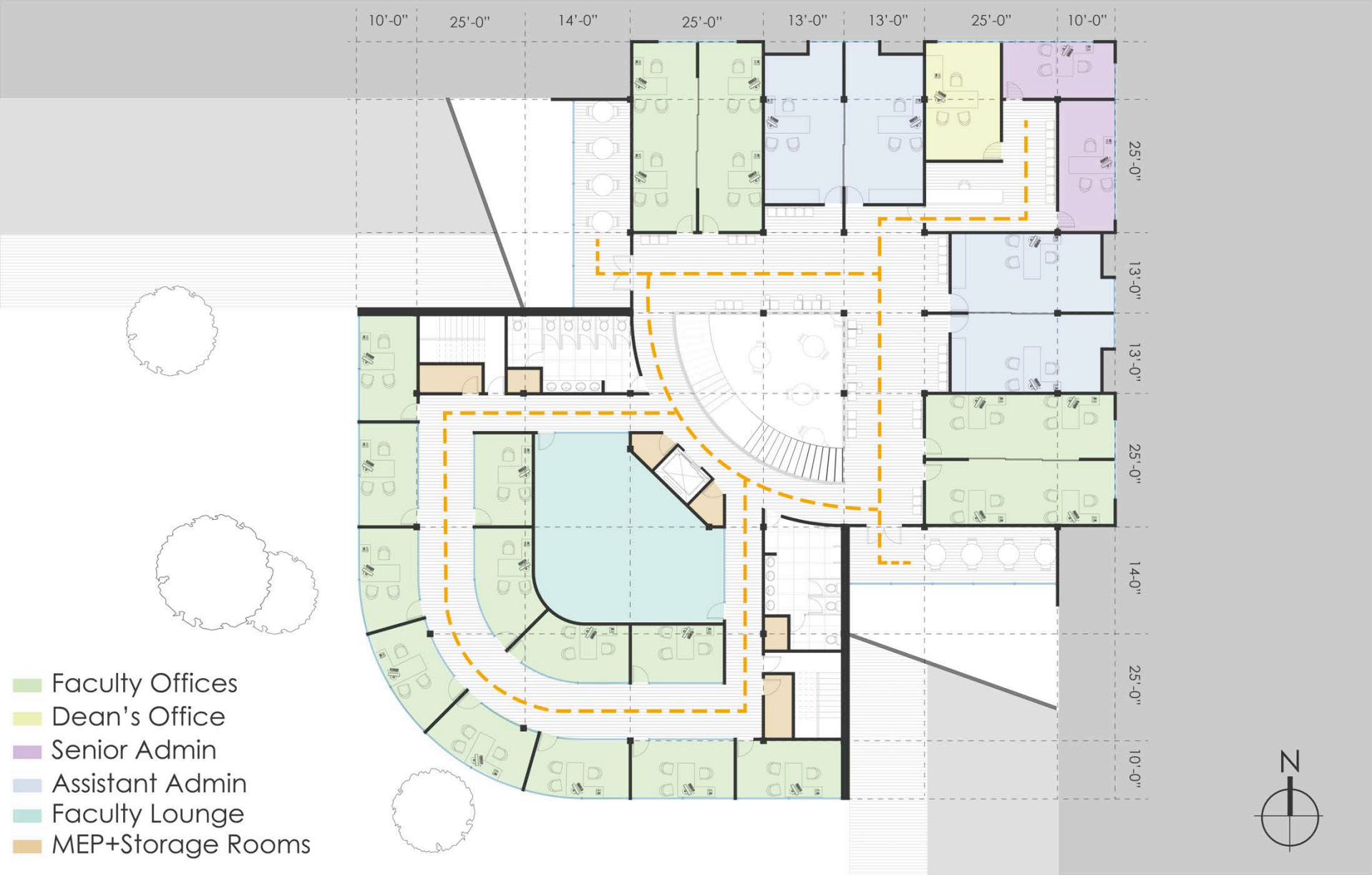
A

Third Floor Plan



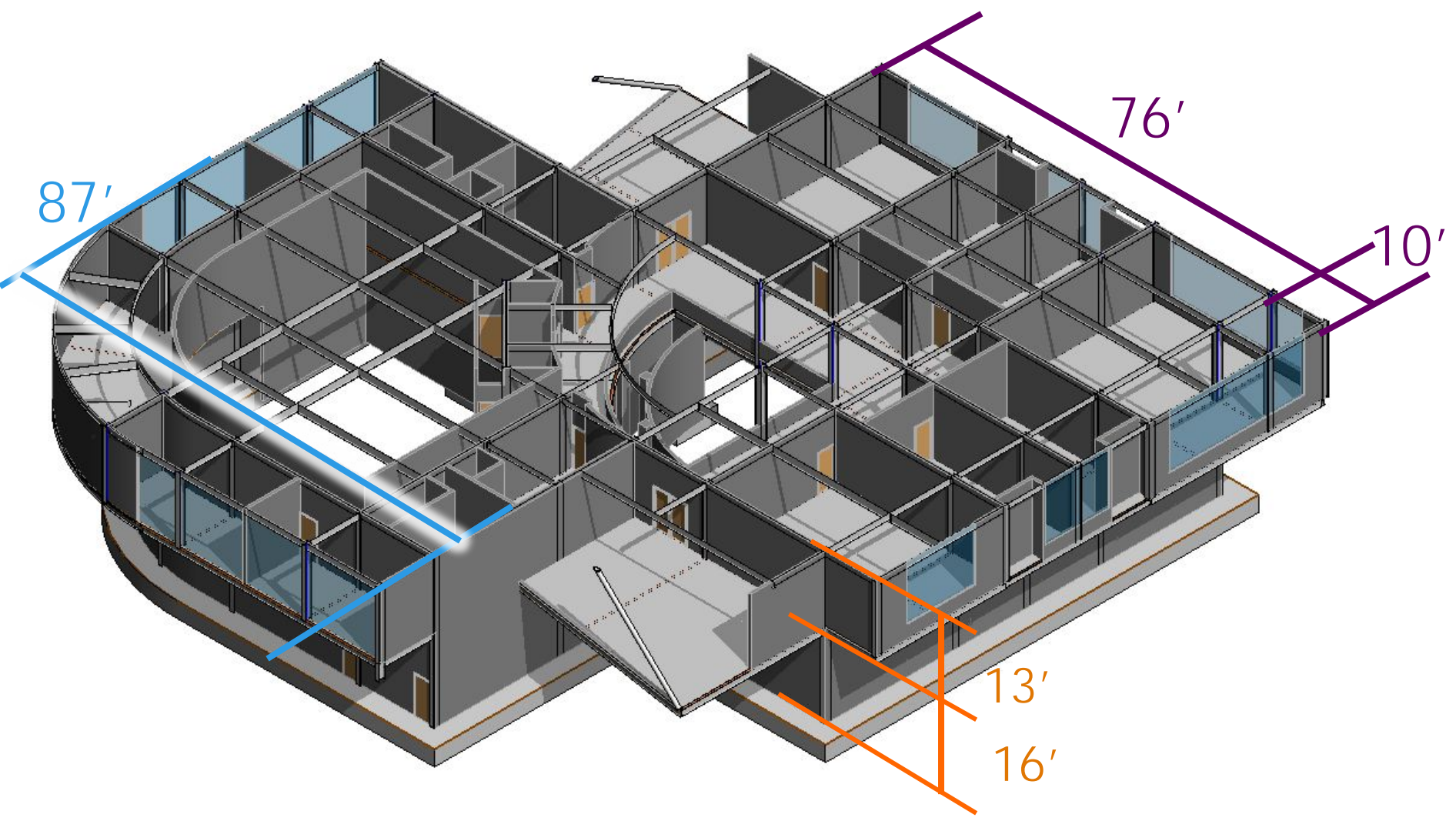
A

Third Floor Plan_Circulation



E

2nd Story – Gravity System



E

3rd Floor – Typical Sizes

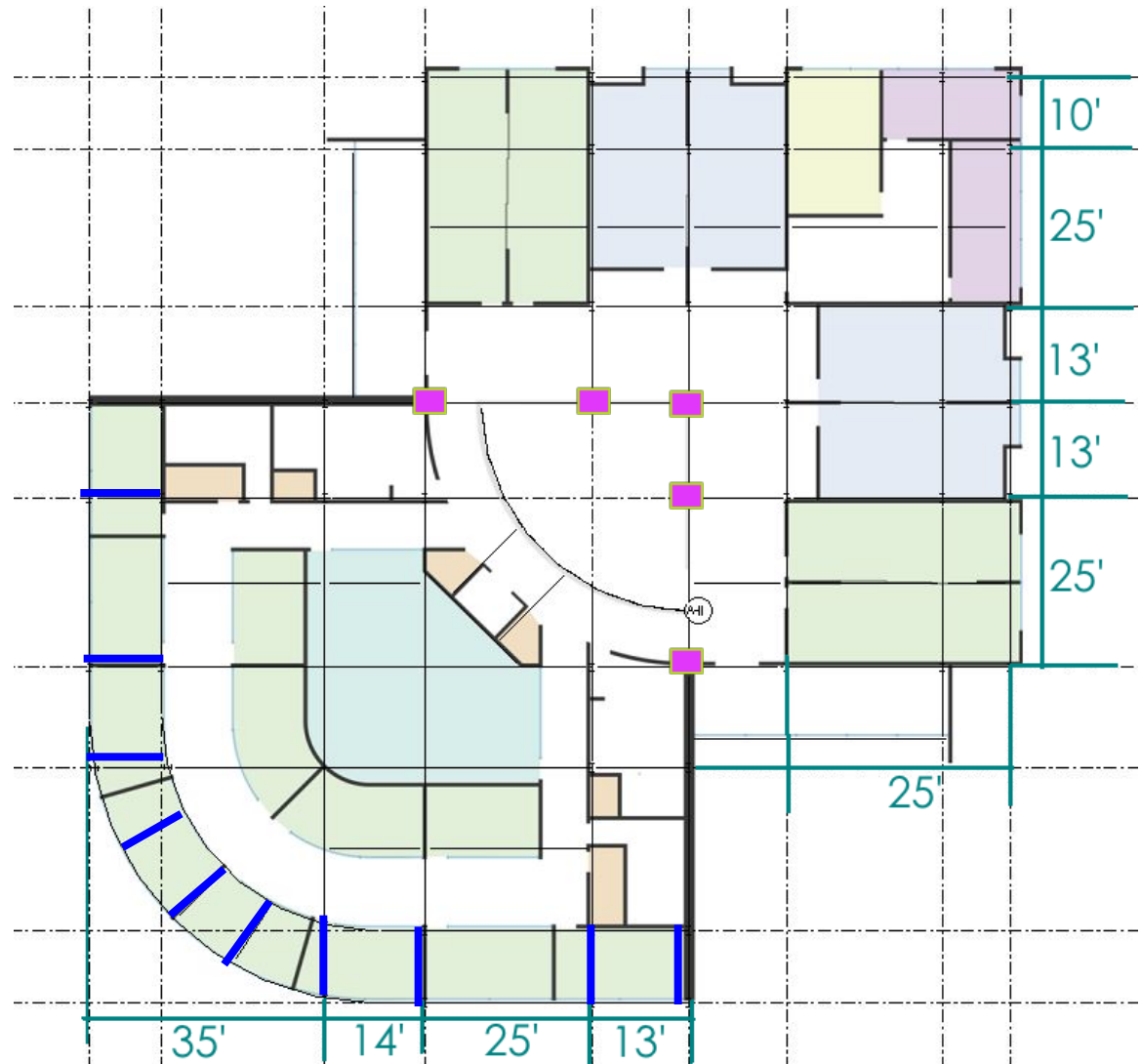
Framing Columns

W14 x 61

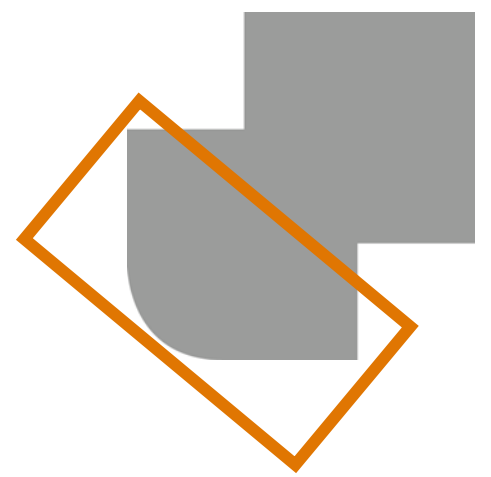
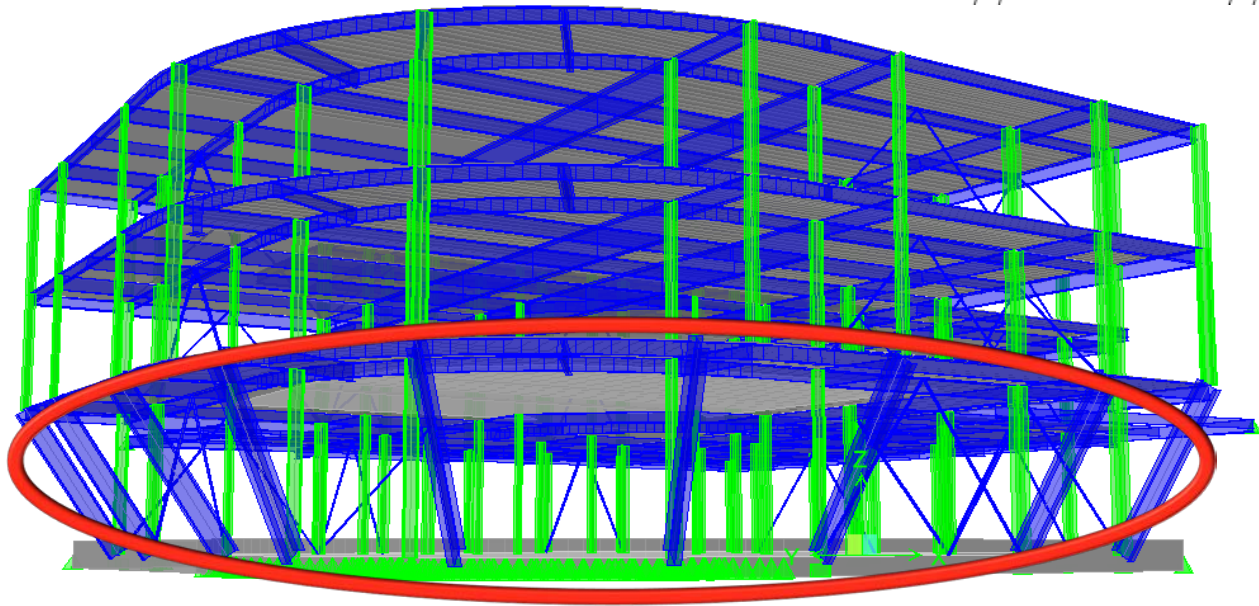
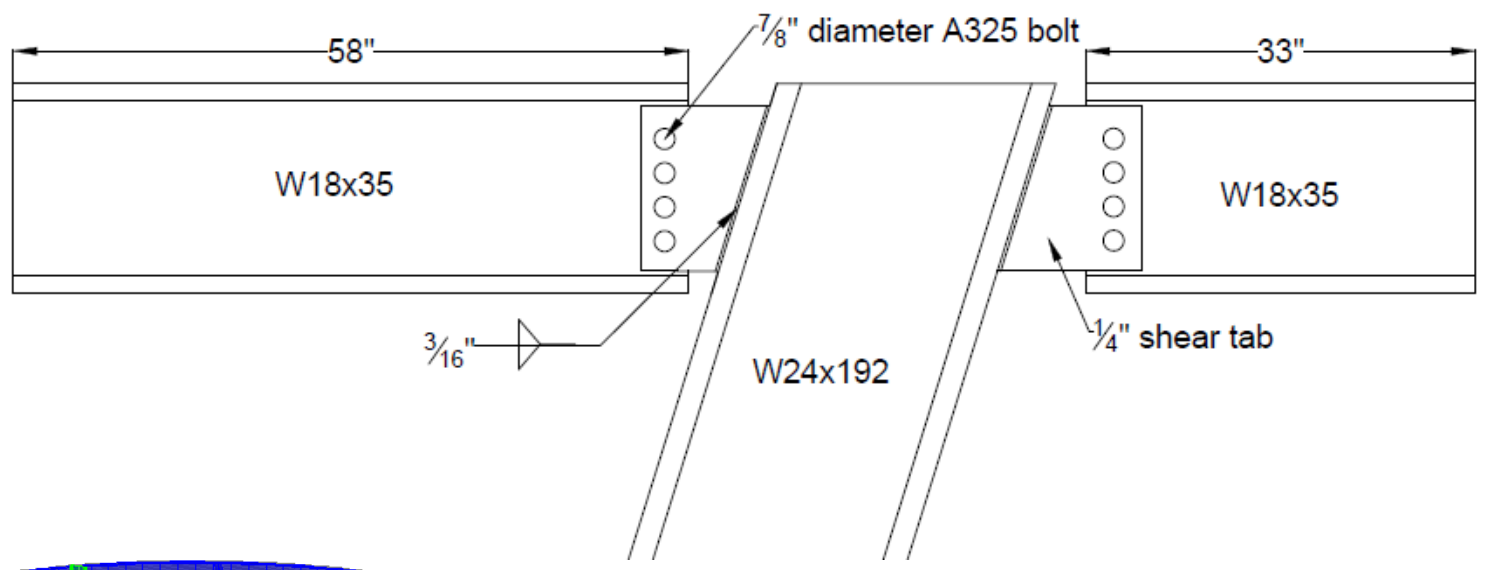
Cantilever Beams

W18 x 35

3" Composite
Steel Deck

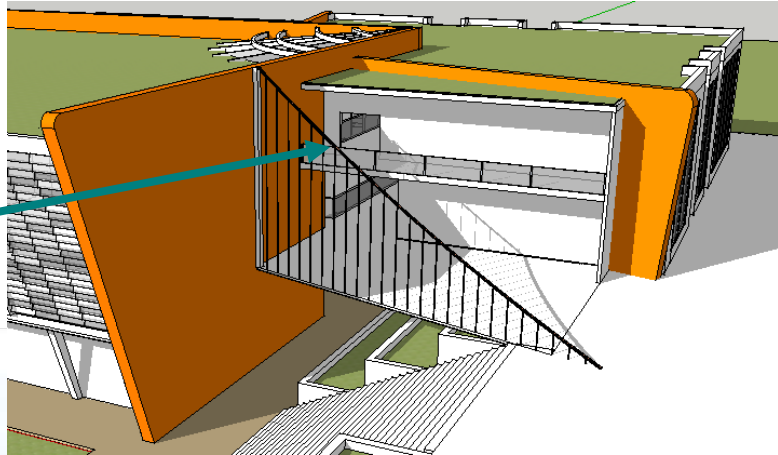


E Cantilever Solution – First Floor Brace



E Cantilever Solution – Tension Cable

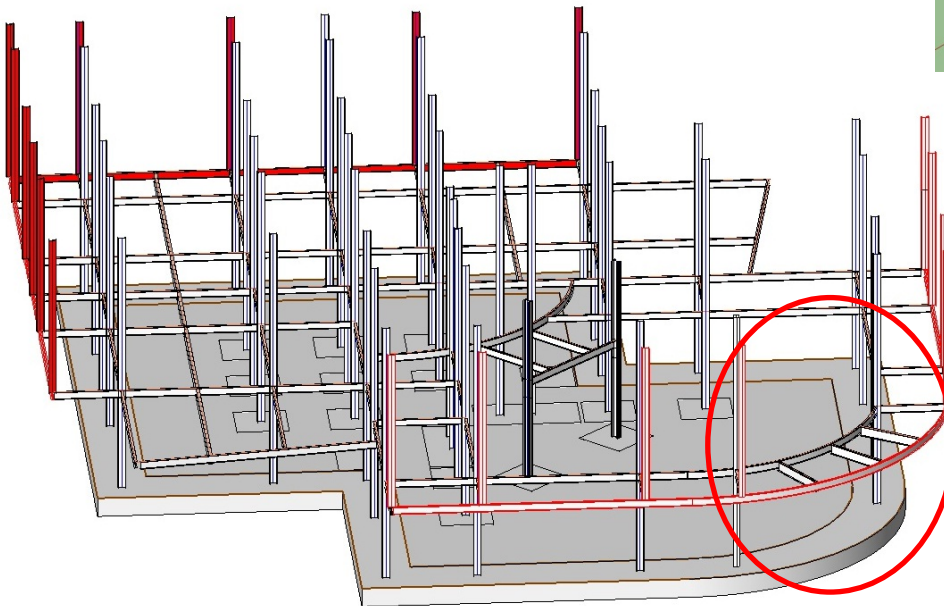
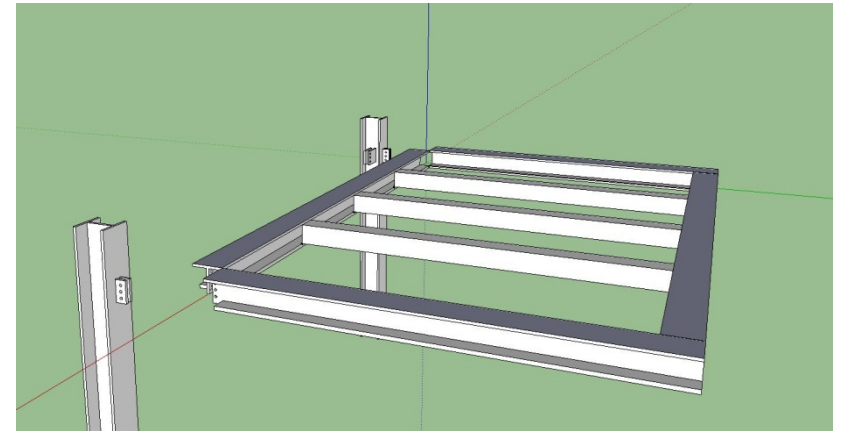
Tension Member



C

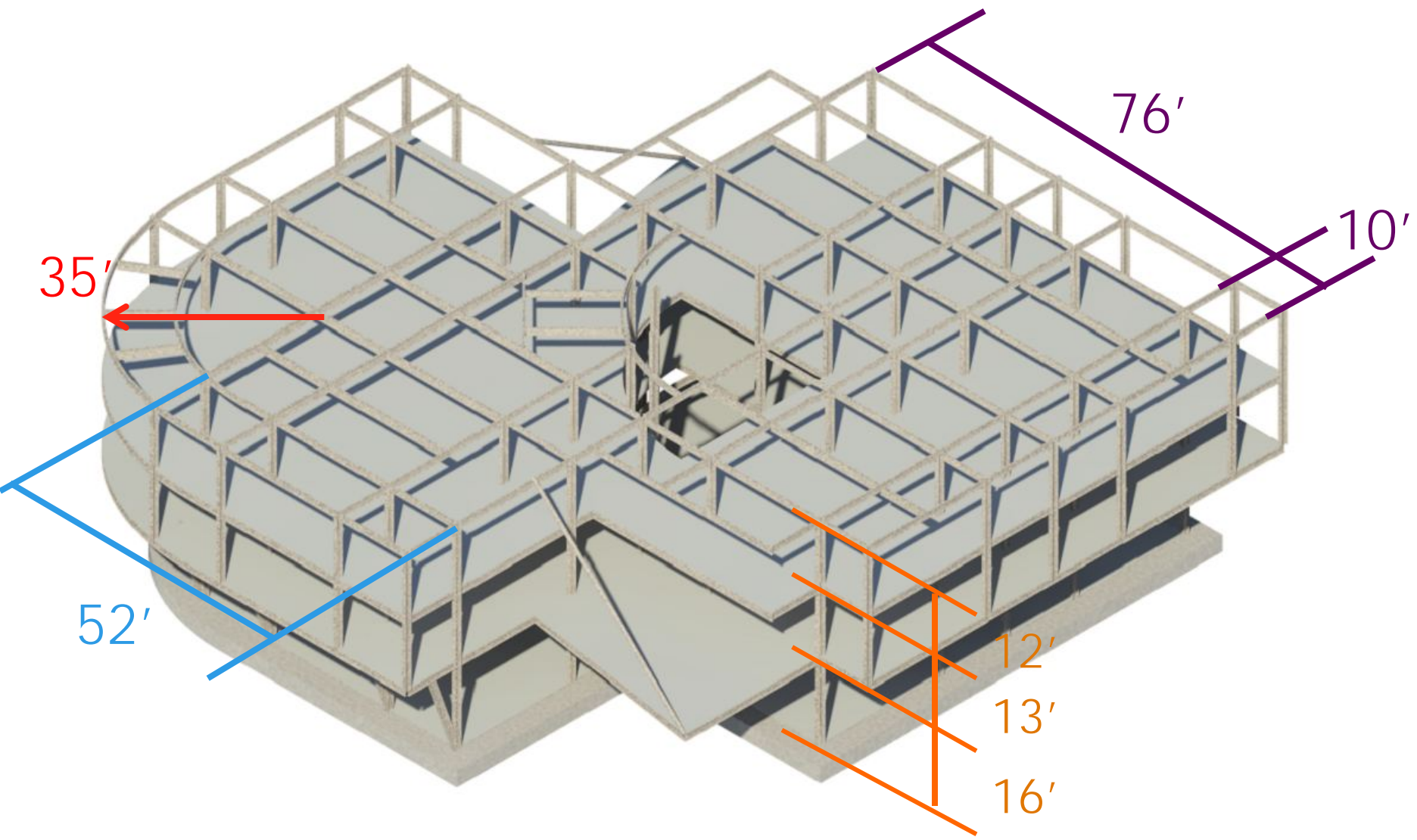
Off-site Prefabrication

- Pre assembled cantilever
 - Safer to install
 - Reduce time in critical path
 - Reduce work in critical construction zones

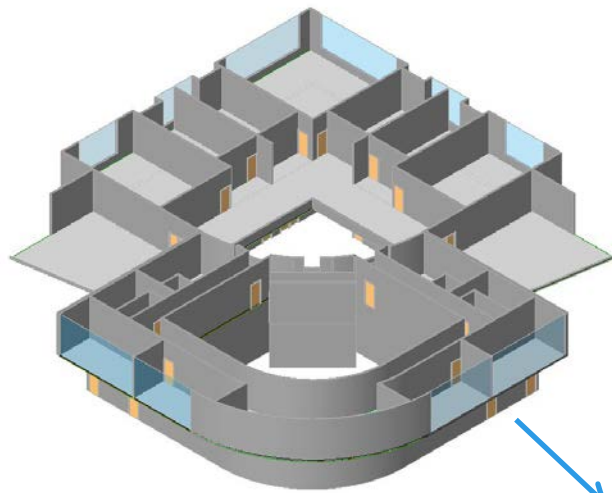


E

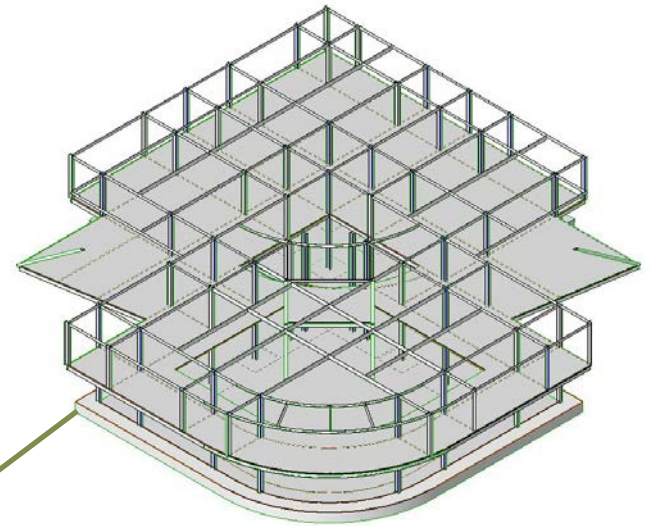
Structural Skeleton



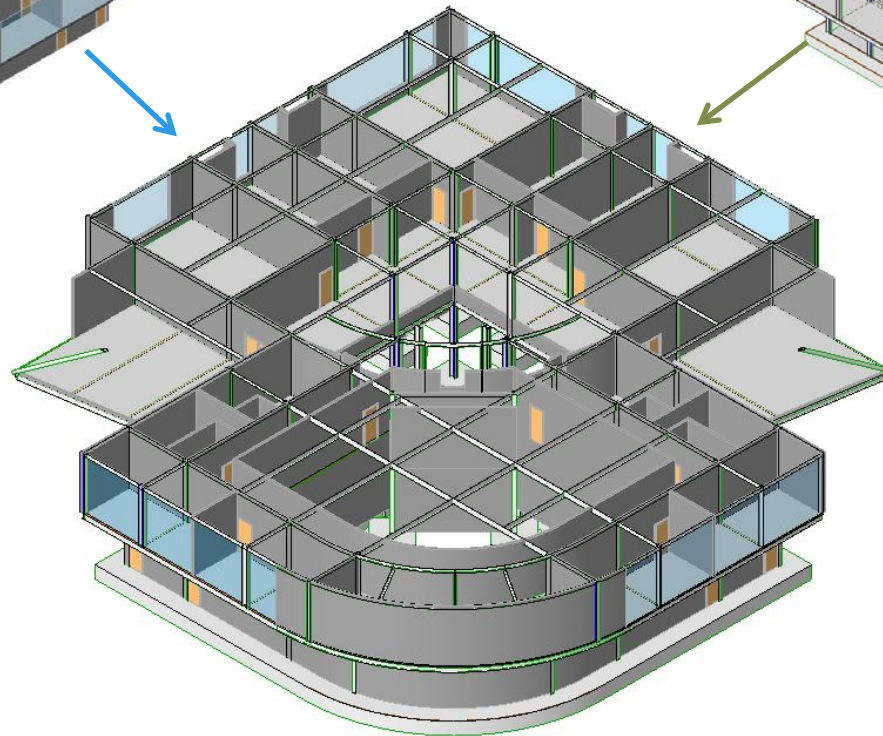
BIM Integration



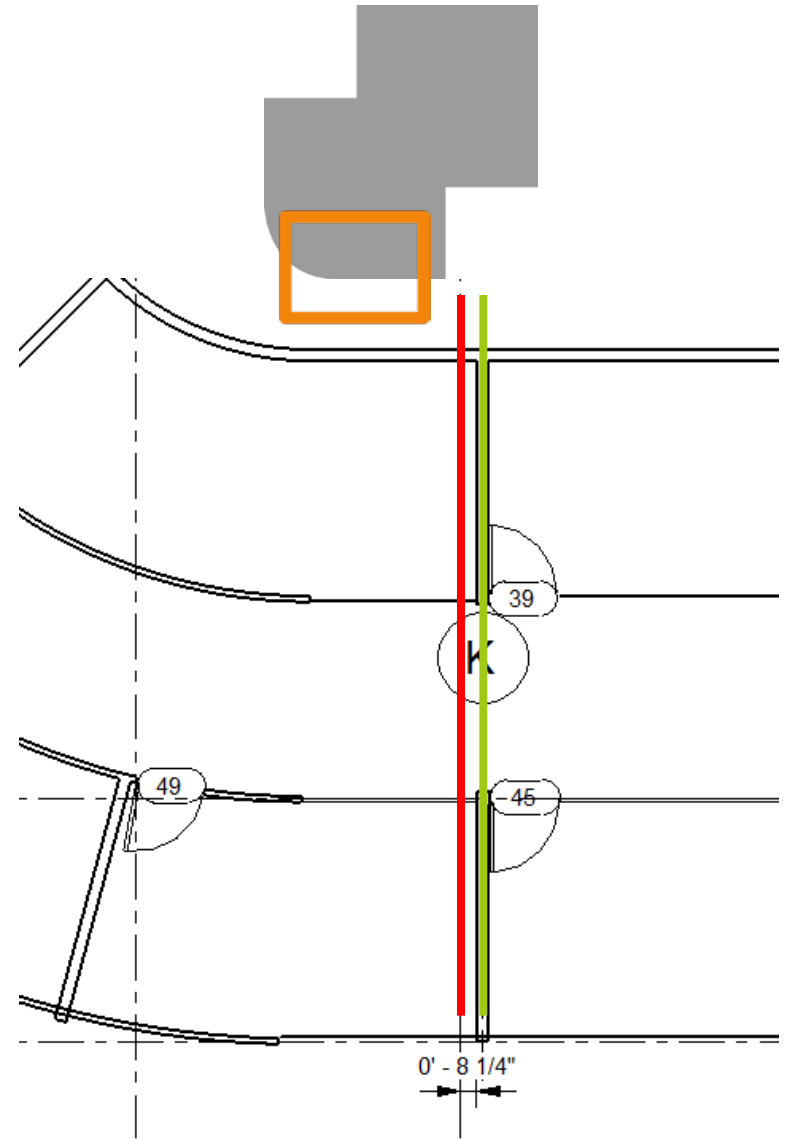
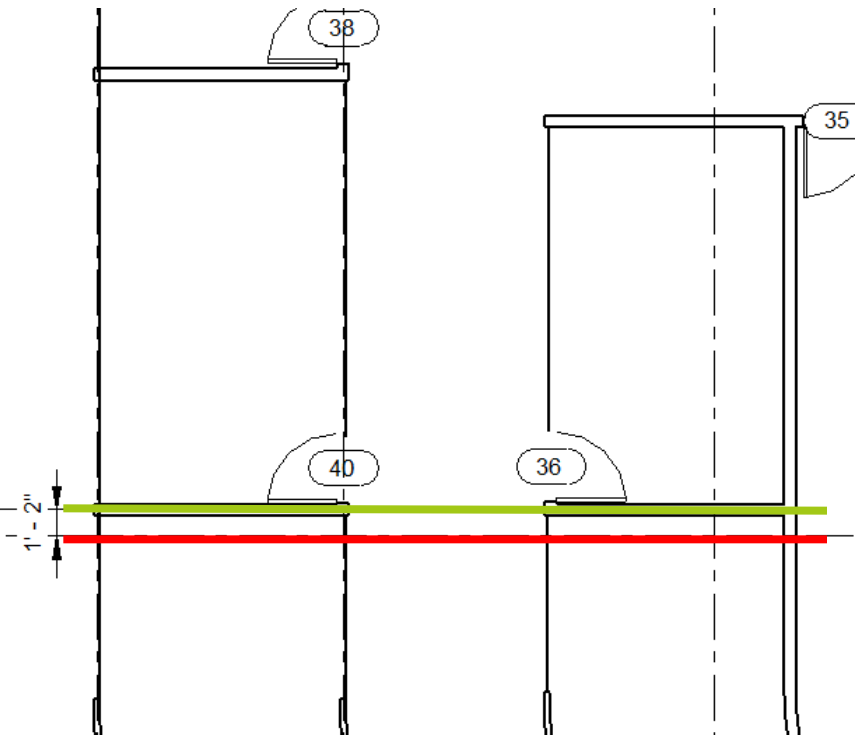
Architect



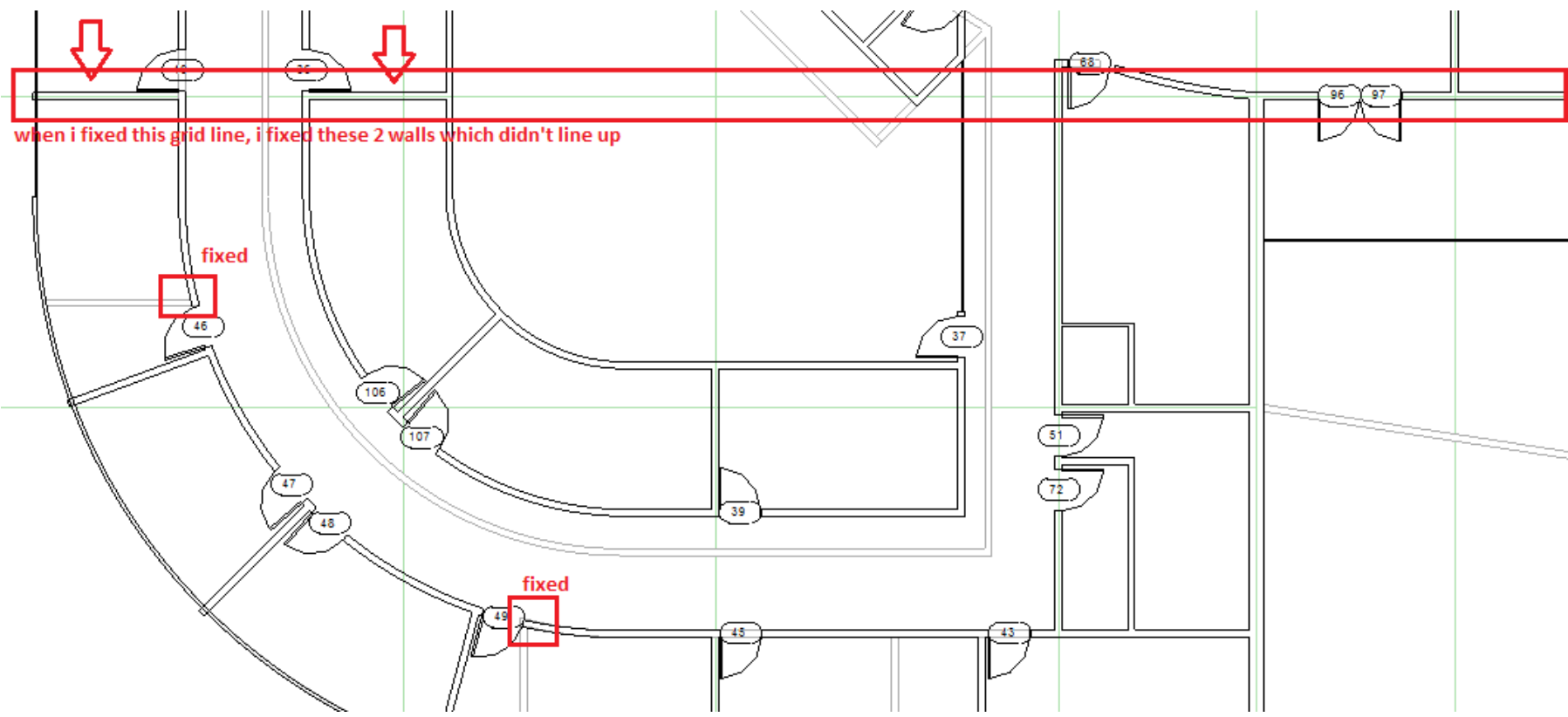
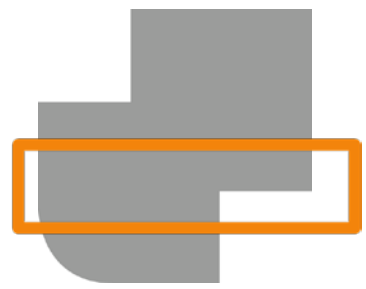
Engineer



BIM Integration_Alignment Clashes



BIM Integration_Wall Thickness

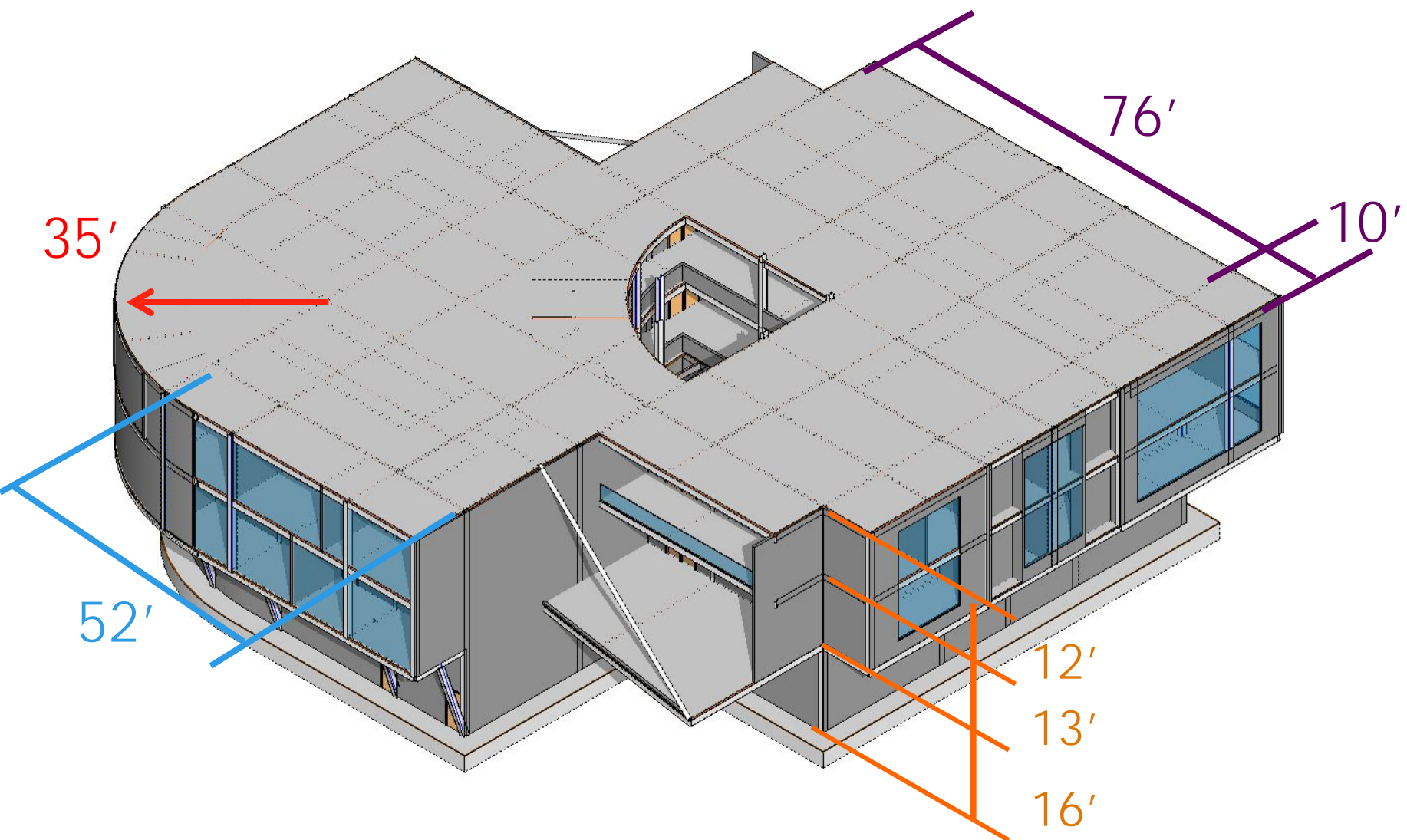


when i fixed this grid line, i fixed these 2 walls which didn't line up

fixed

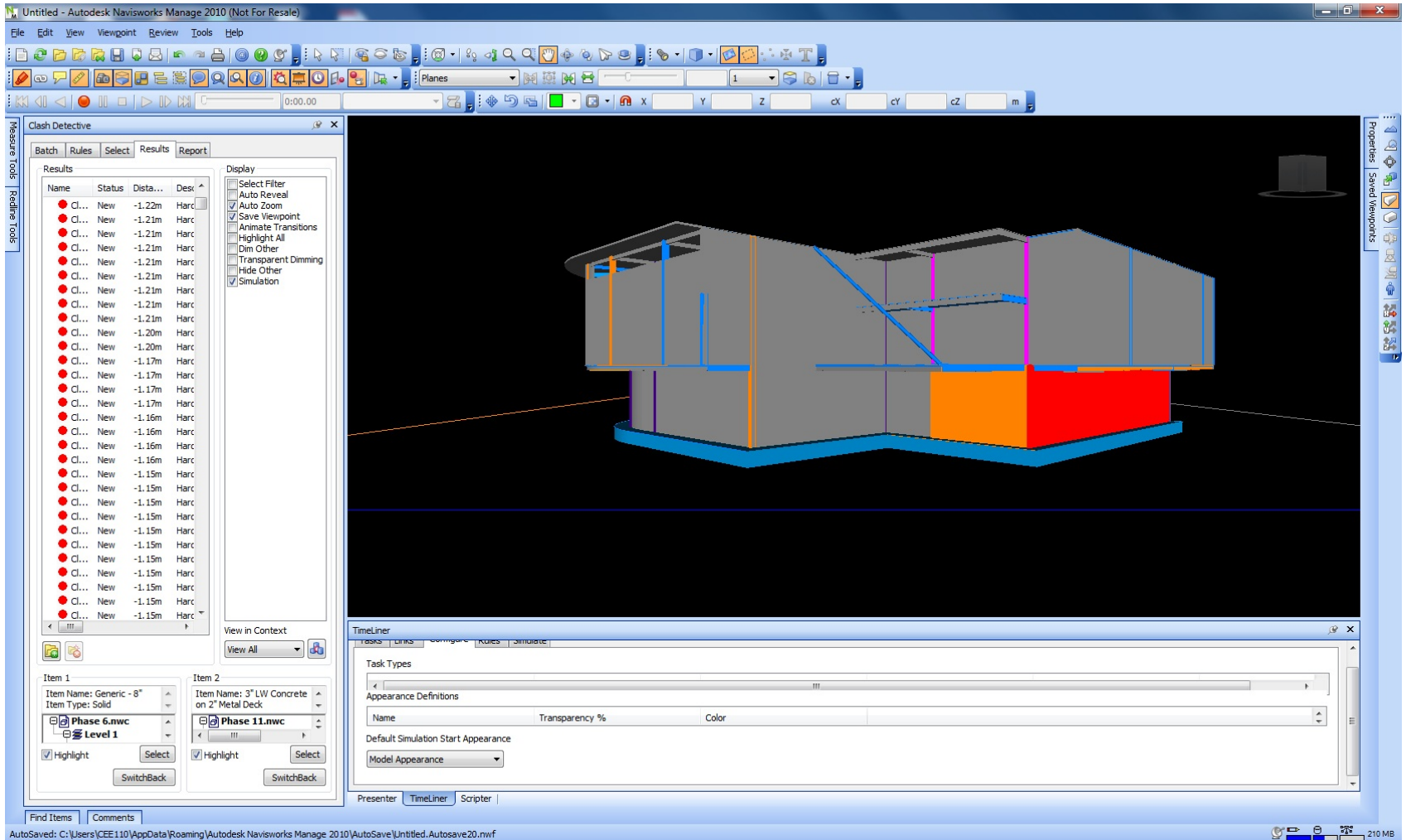
fixed

E Architecture/Structural Integration



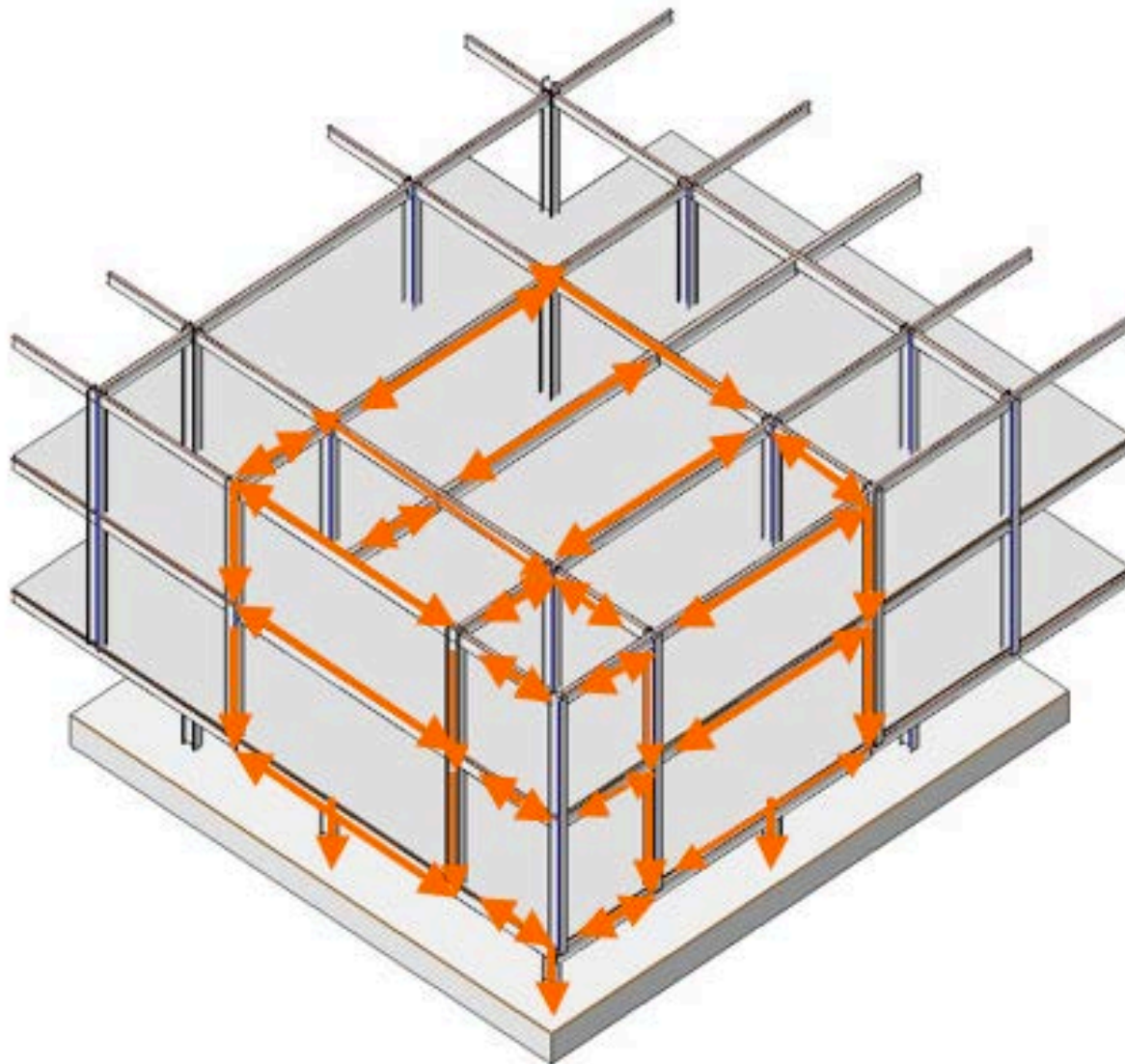
C

Clash Detection



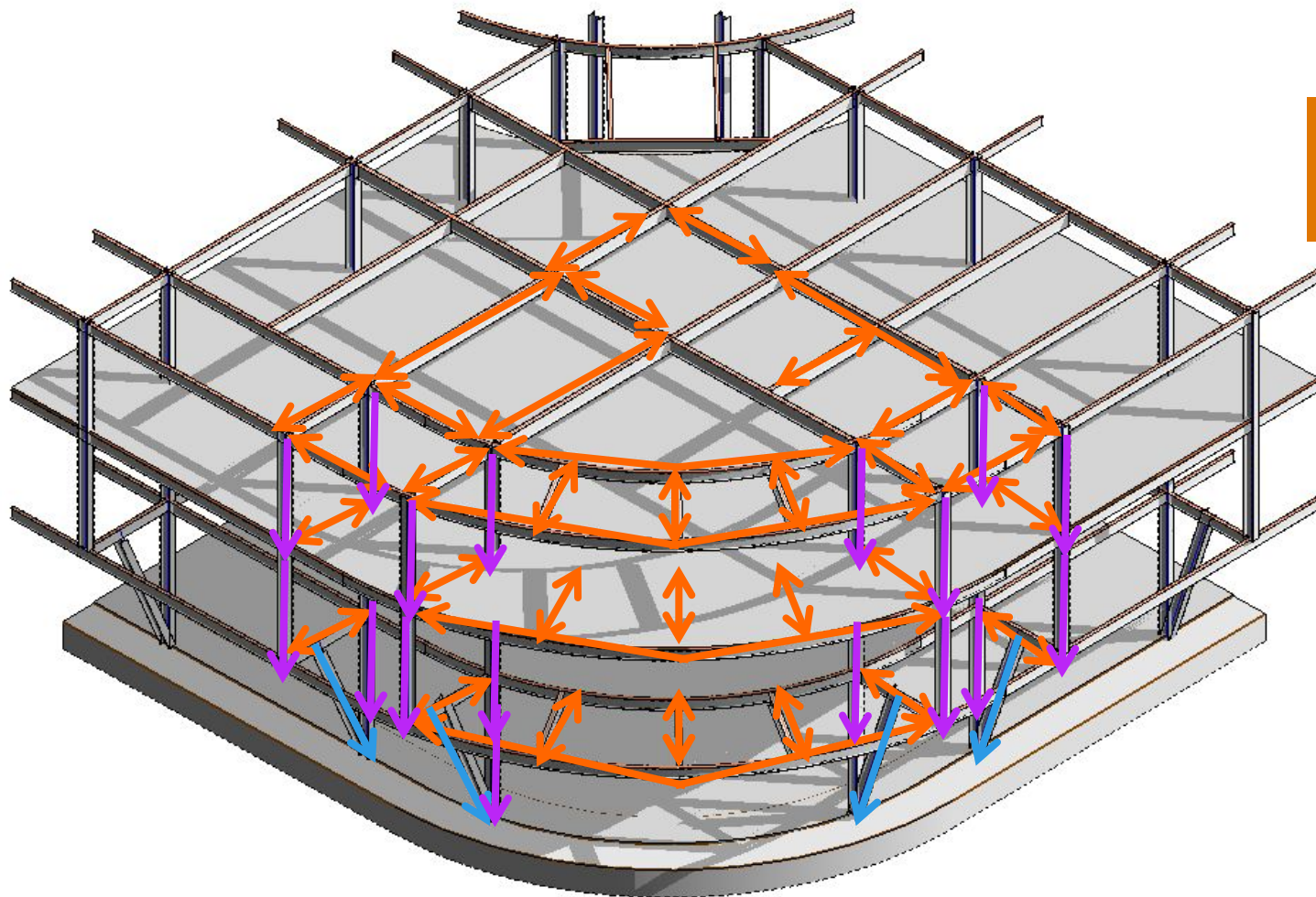
E

Gravity Load Path



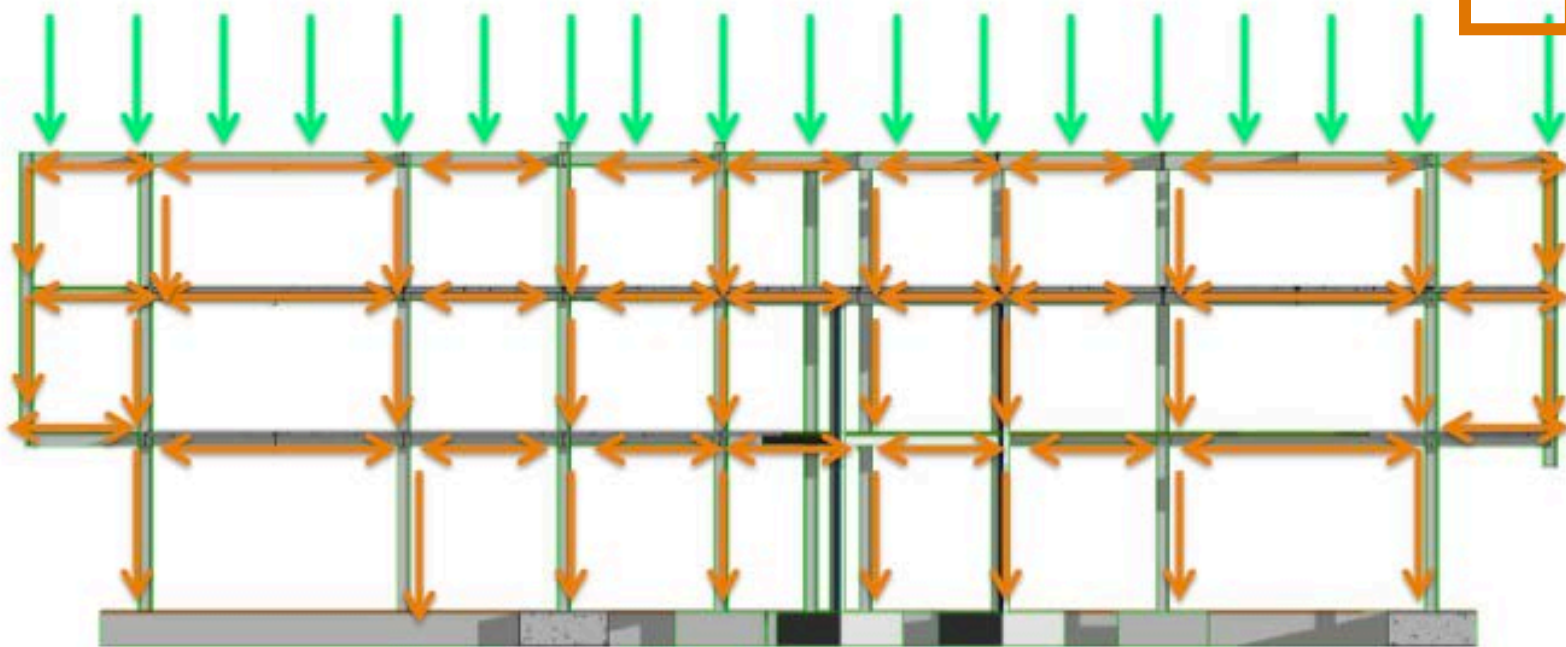
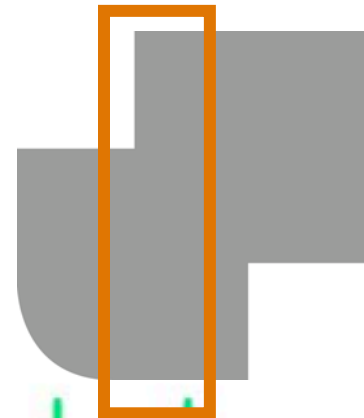
E

Gravity Load Path



E

Gravity Load Path



Design Loads & Soil Profile

GRAVITY LOADS

Floor	Dead Loads	Live Loads
First	75 psf	80 psf
Second	75 psf	80 psf
Third	85 psf	60 psf

SOIL CONDITIONS

- 3500 psf bearing capacity
Water table 14ft below grade

SEISMIC LOADS (governs over wind loads)

- Base Shear = 850 kips
- Site Class D

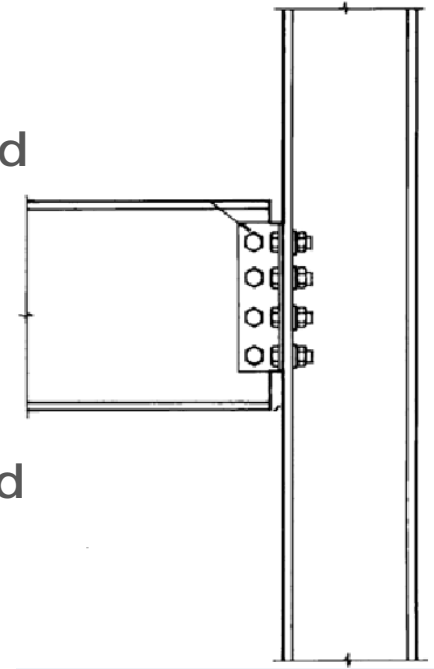
Typical Connections

□ Gravity Connections

- Use 7/8" diameter A325 bolts with threads included
- 1/4" shear plate

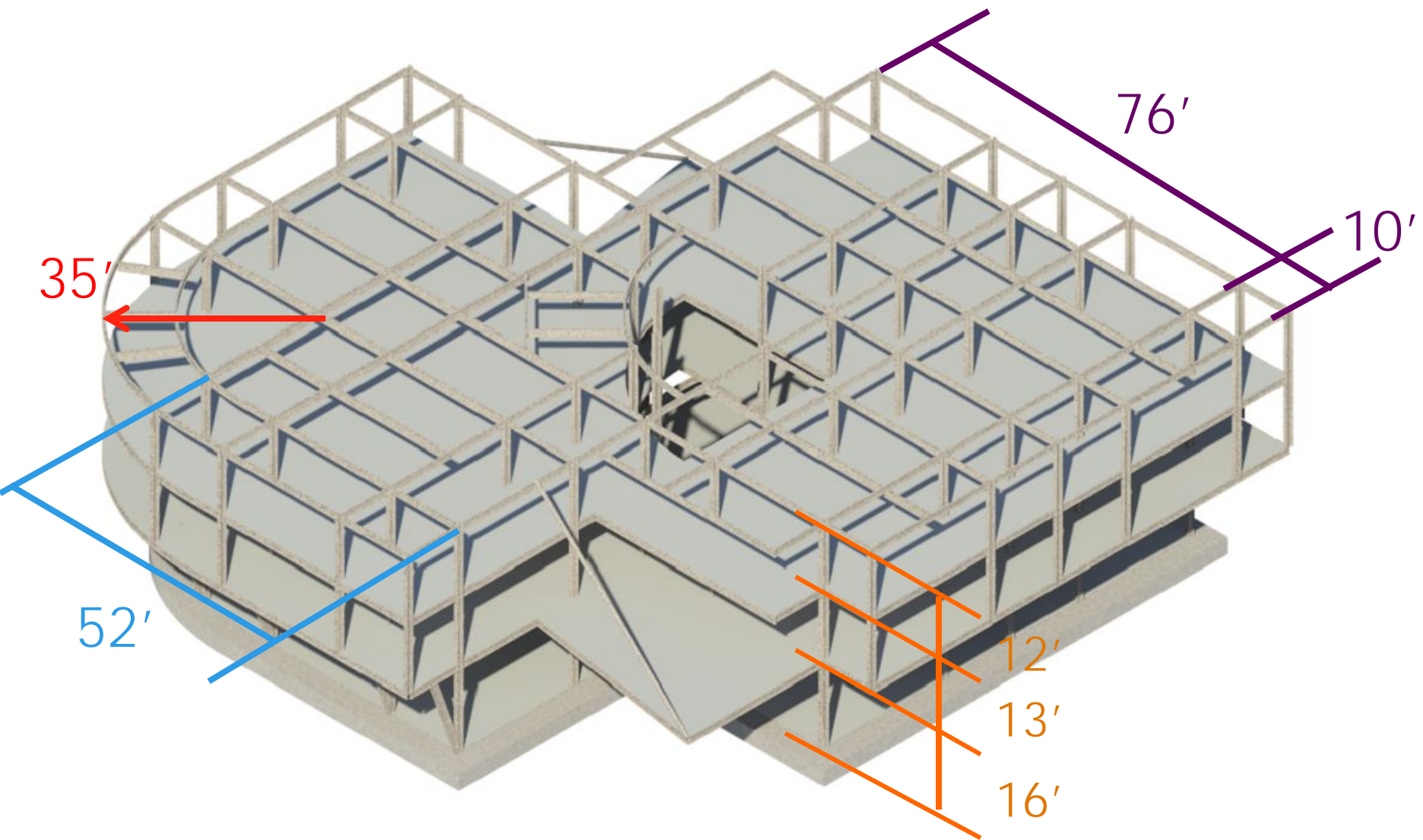
□ Moment Connections

- Use 7/8" diameter A325 Bolts with threads included
- Angled plate on top and bottom



E

Structural Skeleton



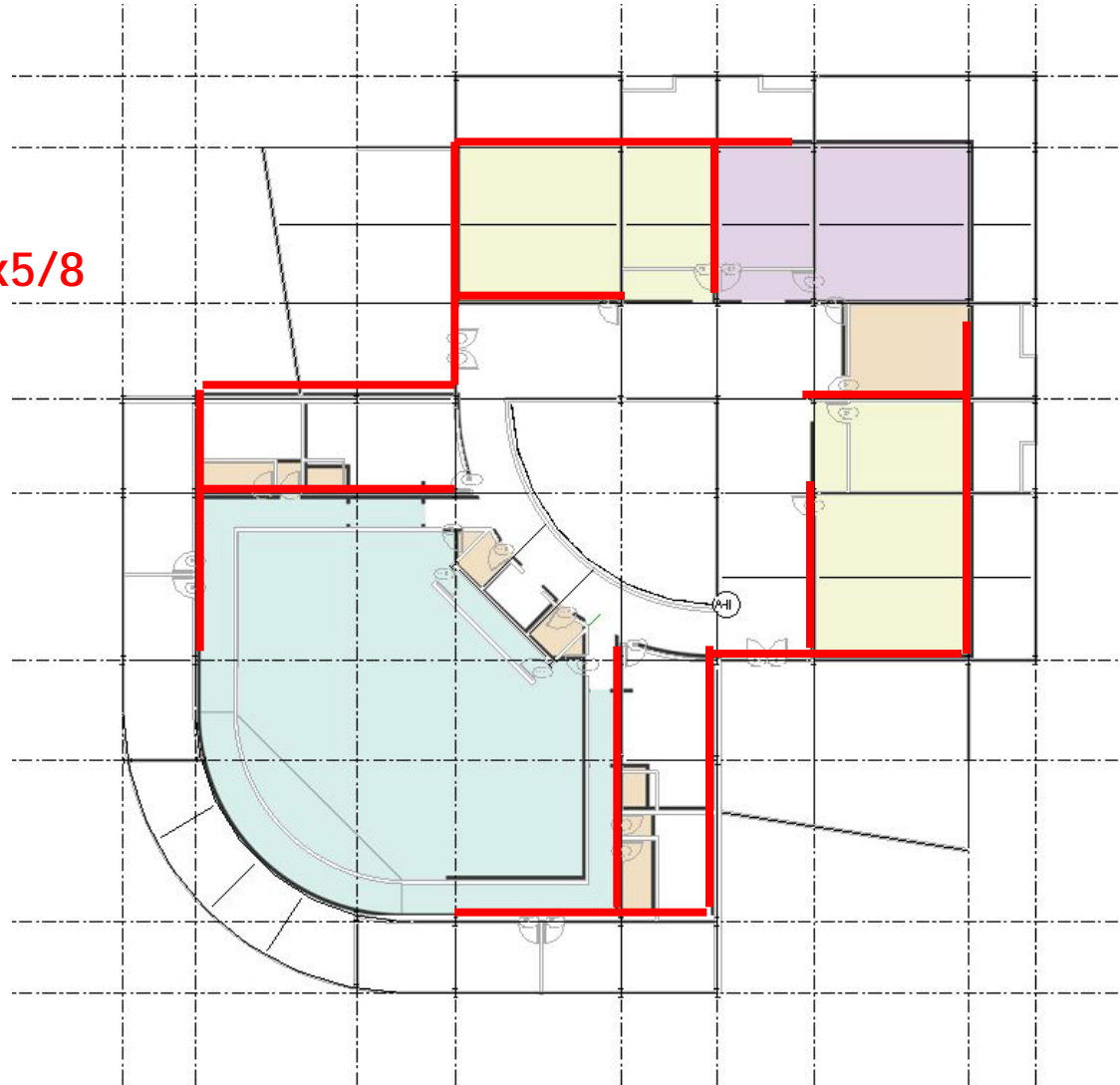
E



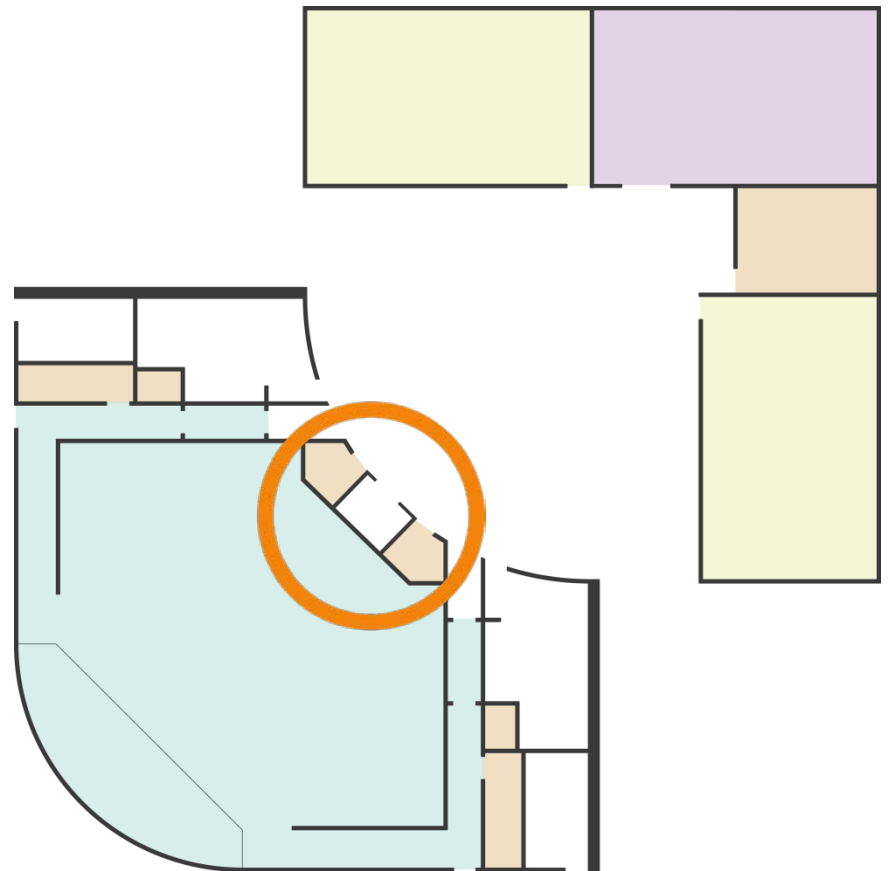
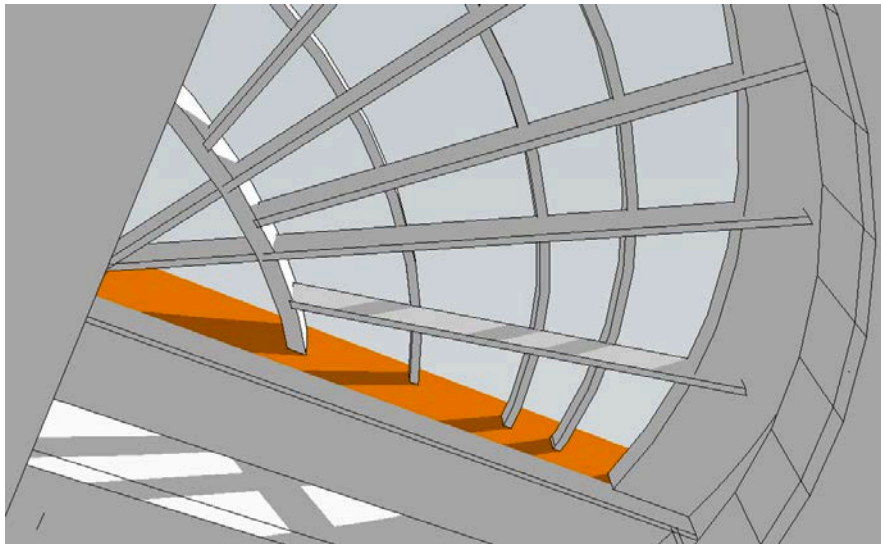
E

Lateral System – SMF

- SMF with ConX Technology
 - Max Beam: W30x116
 - Max Column: HSS16x16x5/8
 - Filled with concrete



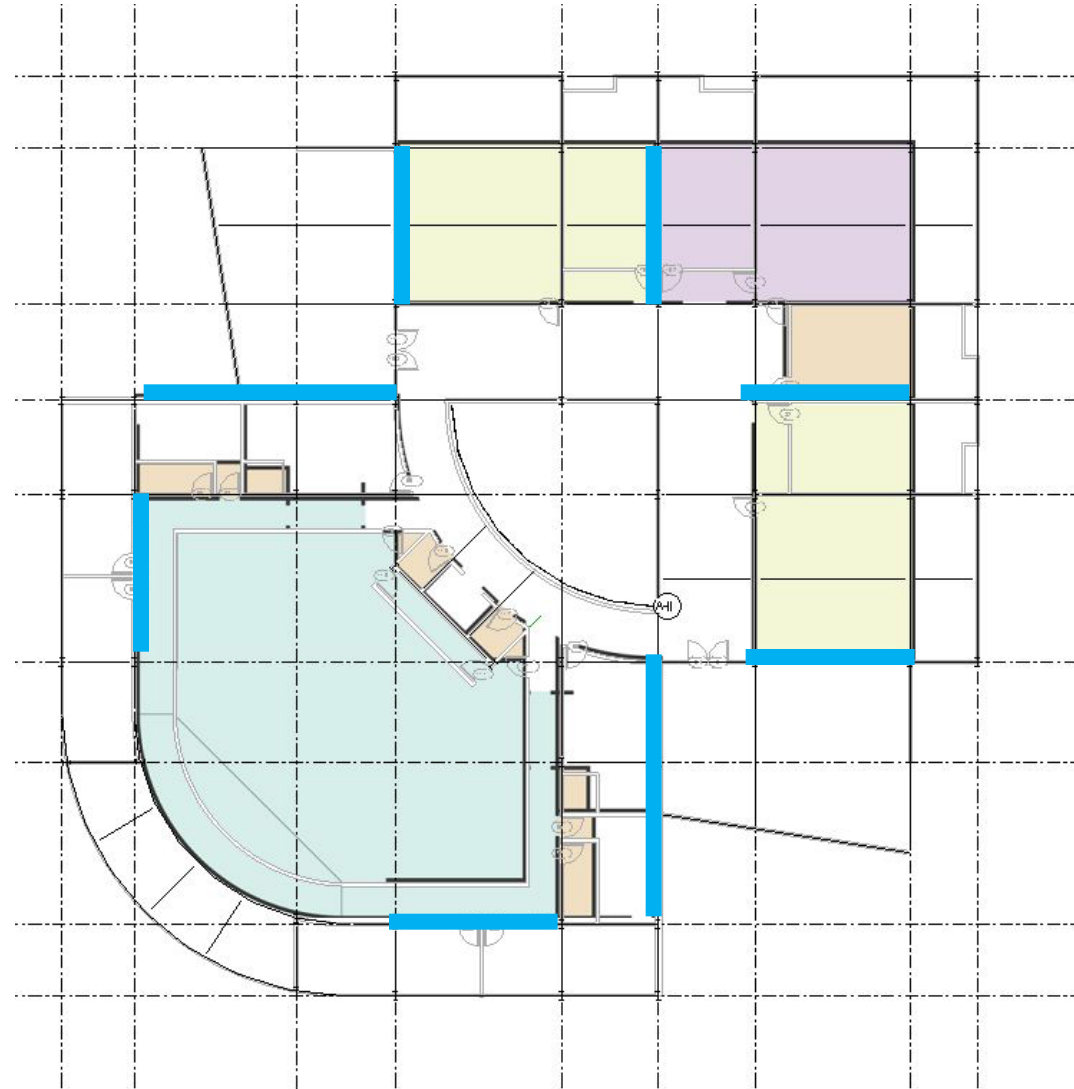
E Spring Quarter Introductions



E

Lateral System – BRBF

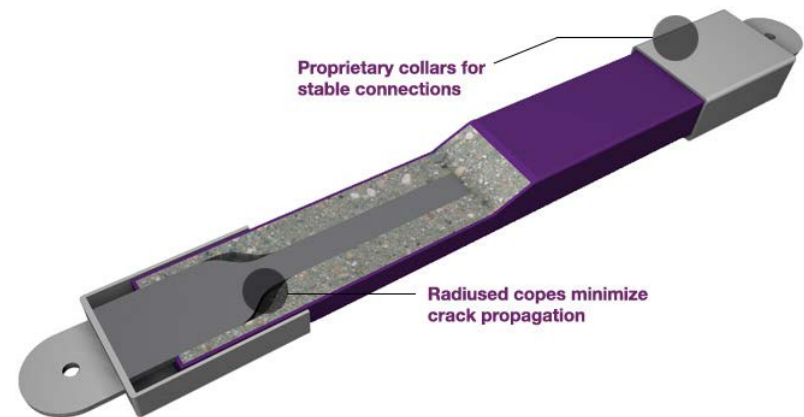
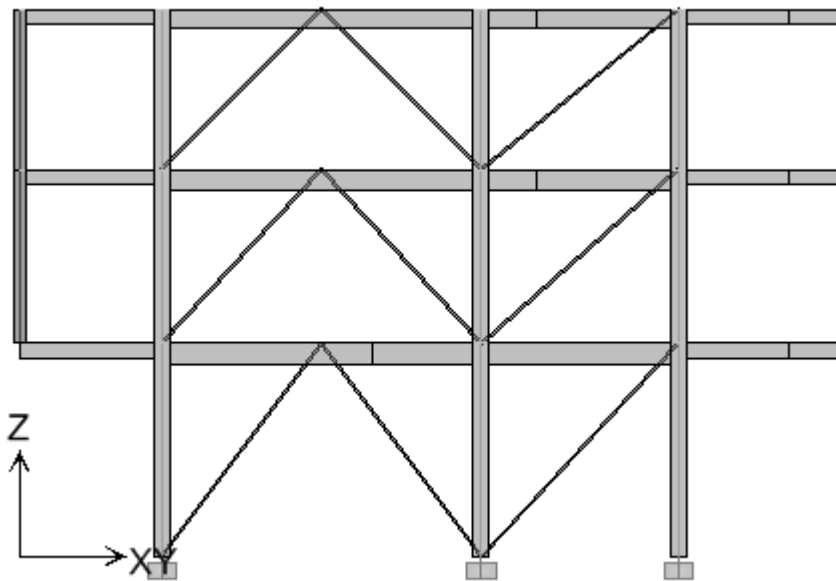
- ConX Advantages Lost
- BRBF
 - Fewer frames required
 - Largest beam: W18x71
 - Largest Column: W14x120
- Symmetry to reduce torsion



E

Lateral System – Why Choose BRBF?

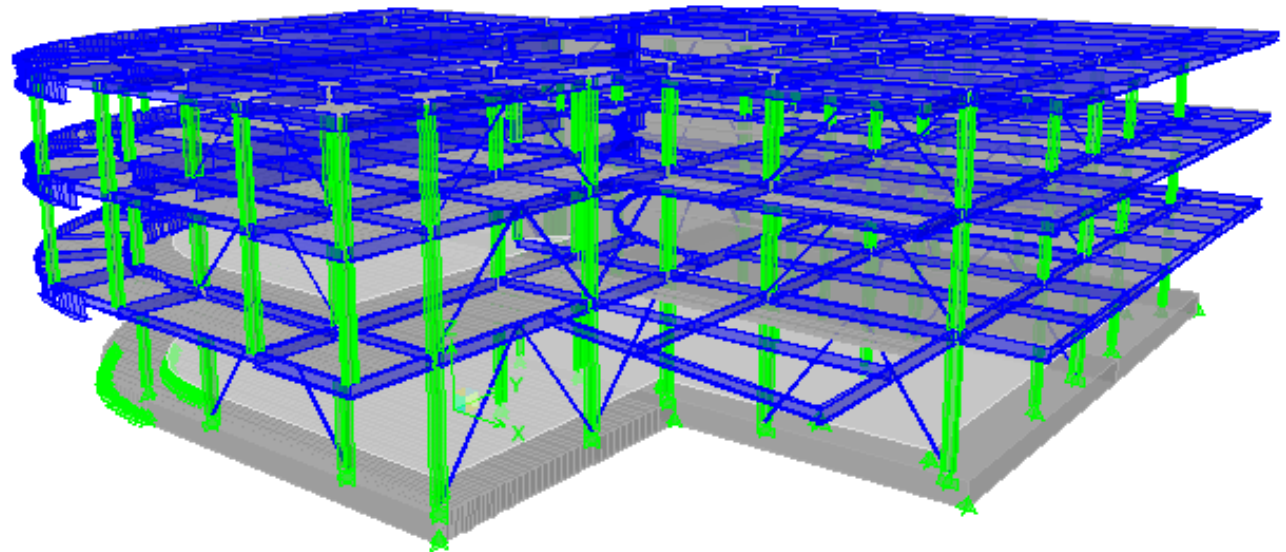
- ❑ ConX Advantages Lost with Radial and angled elements
- ❑ Member sizes much smaller and more cost efficient
- ❑ Braces act as structural fuses and can easily be replaced after damage



E



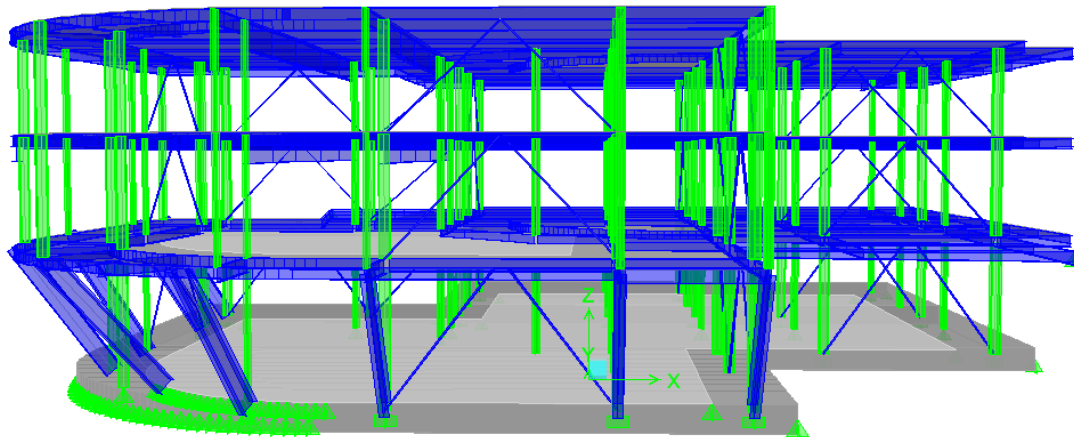
- ❑ Assumed Pinned at base
- ❑ Moment releases on all gravity frames
- ❑ Nonlinear hinges defined
- ❑ Rigid Diaphragms



E

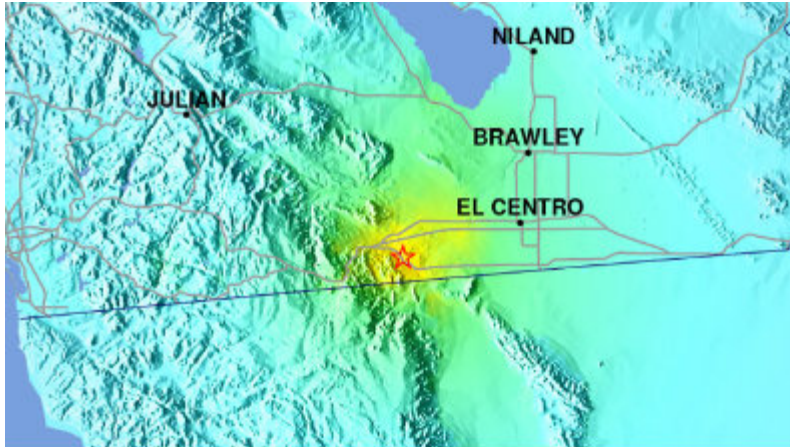
Loads

- Gravity Loads placed on diaphragms
- Equivalent Lateral Loads Procedure per ASCE 7-10
 - Lateral Loads placed directly on braced frames
 - Center of Rigidity – account for torsion effects
- No slant in ETABS model
 - Equivalent moment introduced at the top of 2nd and 3rd floors



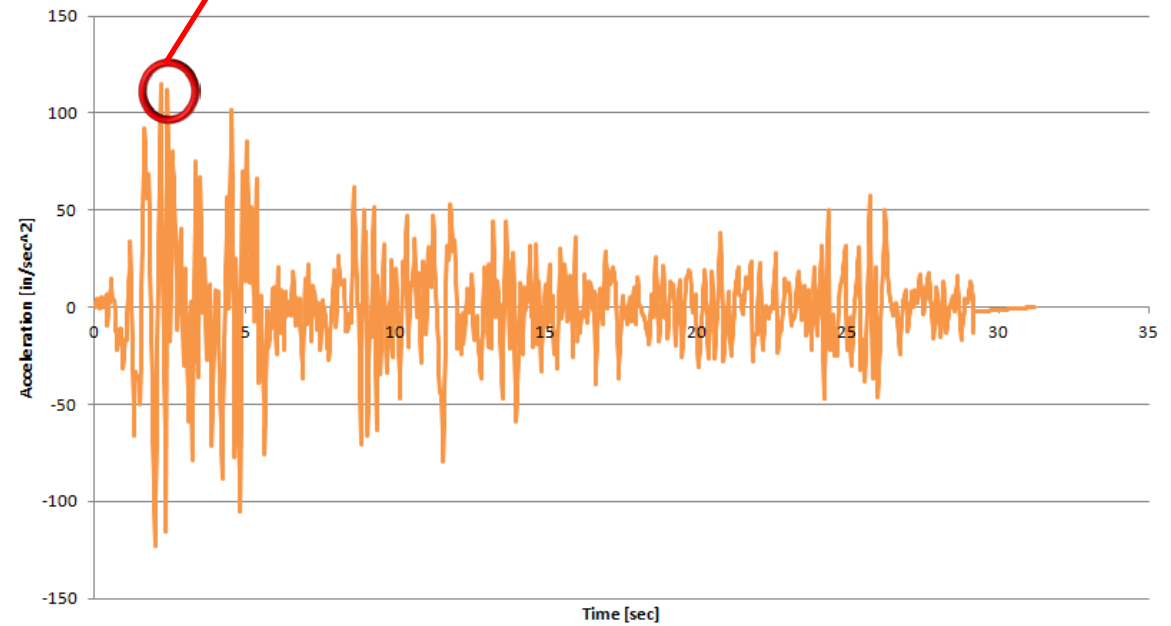
E

El Centro Ground Motion



Maximum at ~2.5 sec

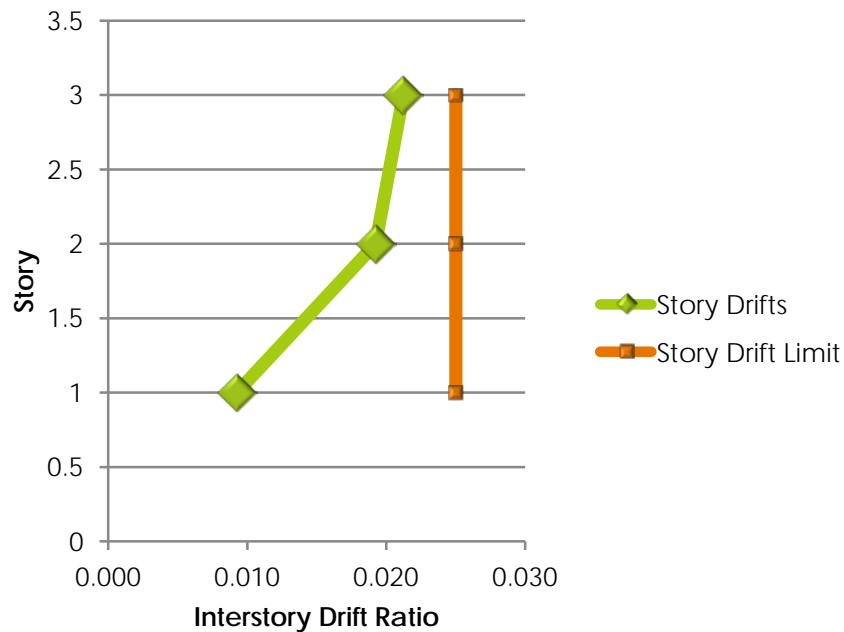
El Centro Ground Motion



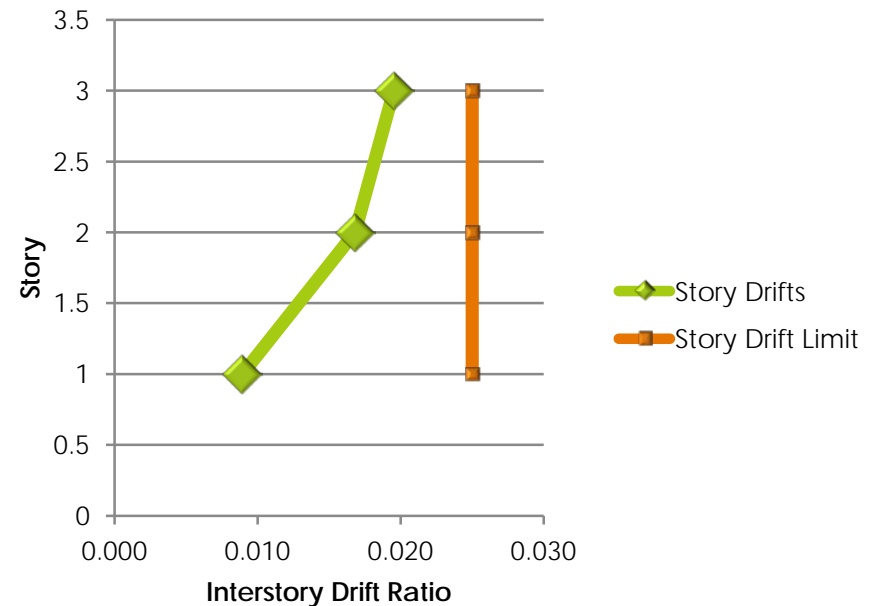
Deflection and Story Drift

Code Deflection Requirements

Story Drift Ratio: East-West



Story Drift Ratio: North-South



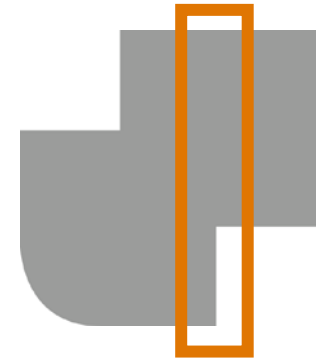
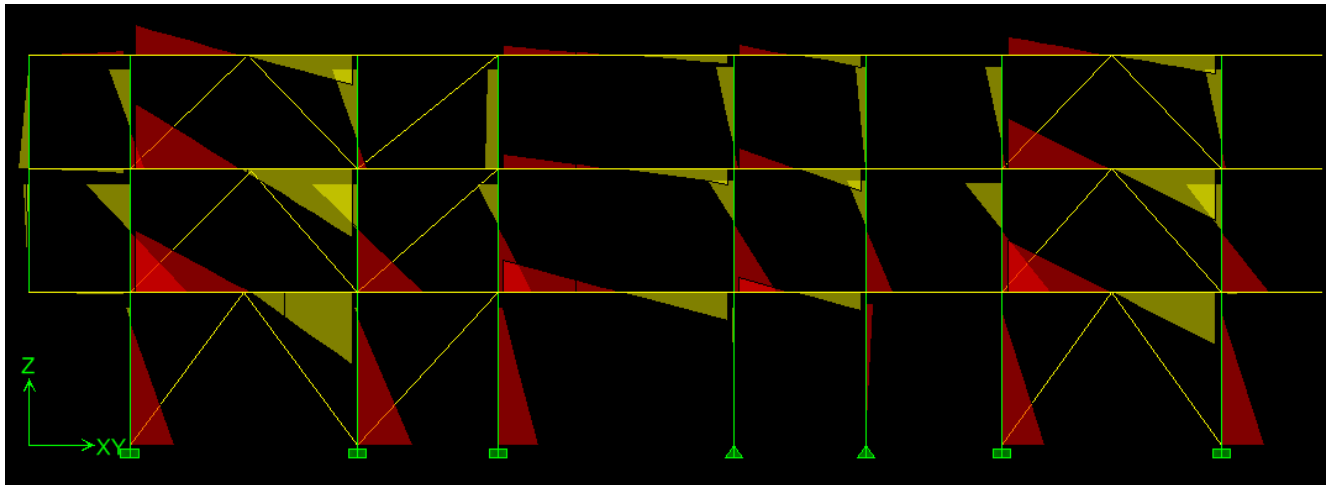
Story	Drift-X	Drift-X x C _d	Displacement
3	0.004247	0.021	7.83258
2	0.003847	0.019	4.77474
1	0.001848	0.009	1.77408

Story	Drift-X	Drift-X x C _d	Displacement
3	0.003903	0.020	7.14786
2	0.003363	0.017	4.3377
1	0.001786	0.009	1.71456

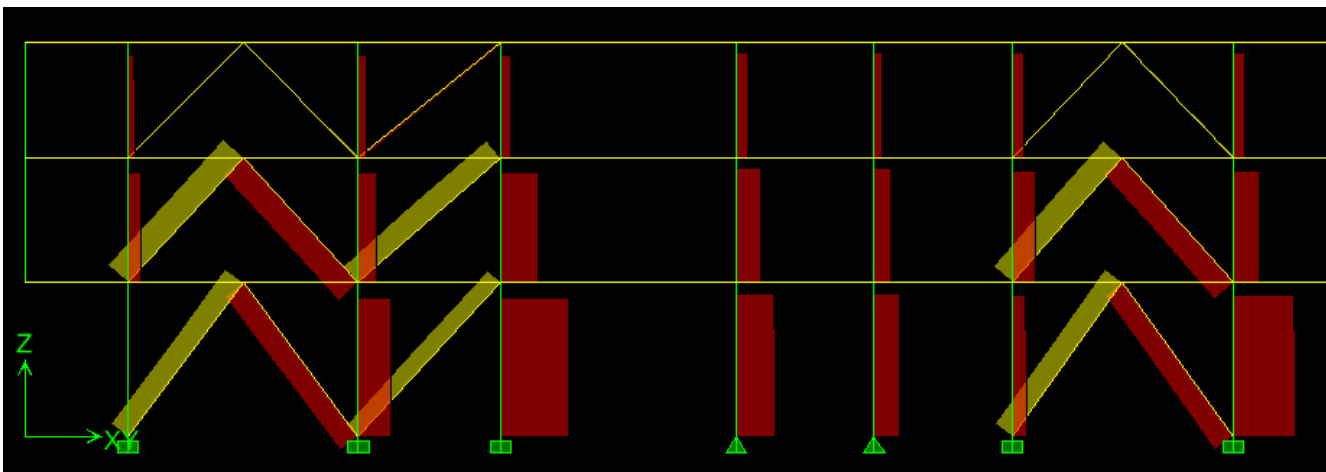
Note: Values obtained from ETABS analysis

E Member Stress Diagram example

□ Moment Forces

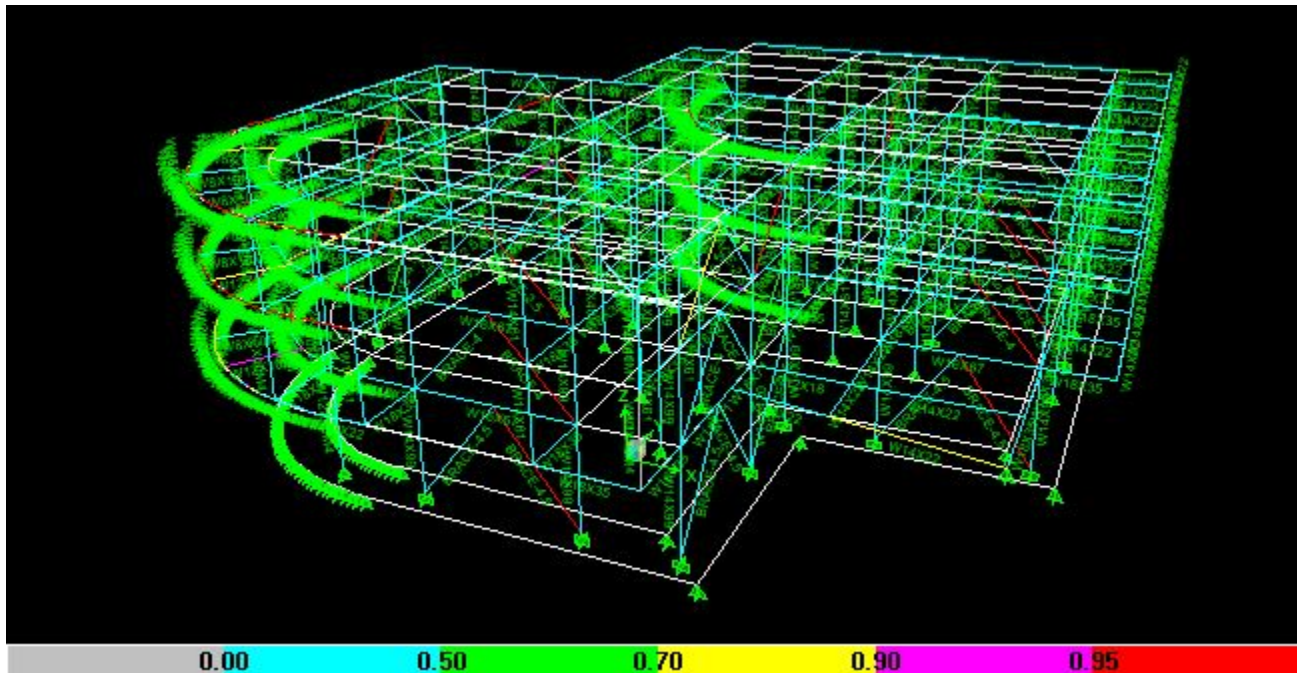


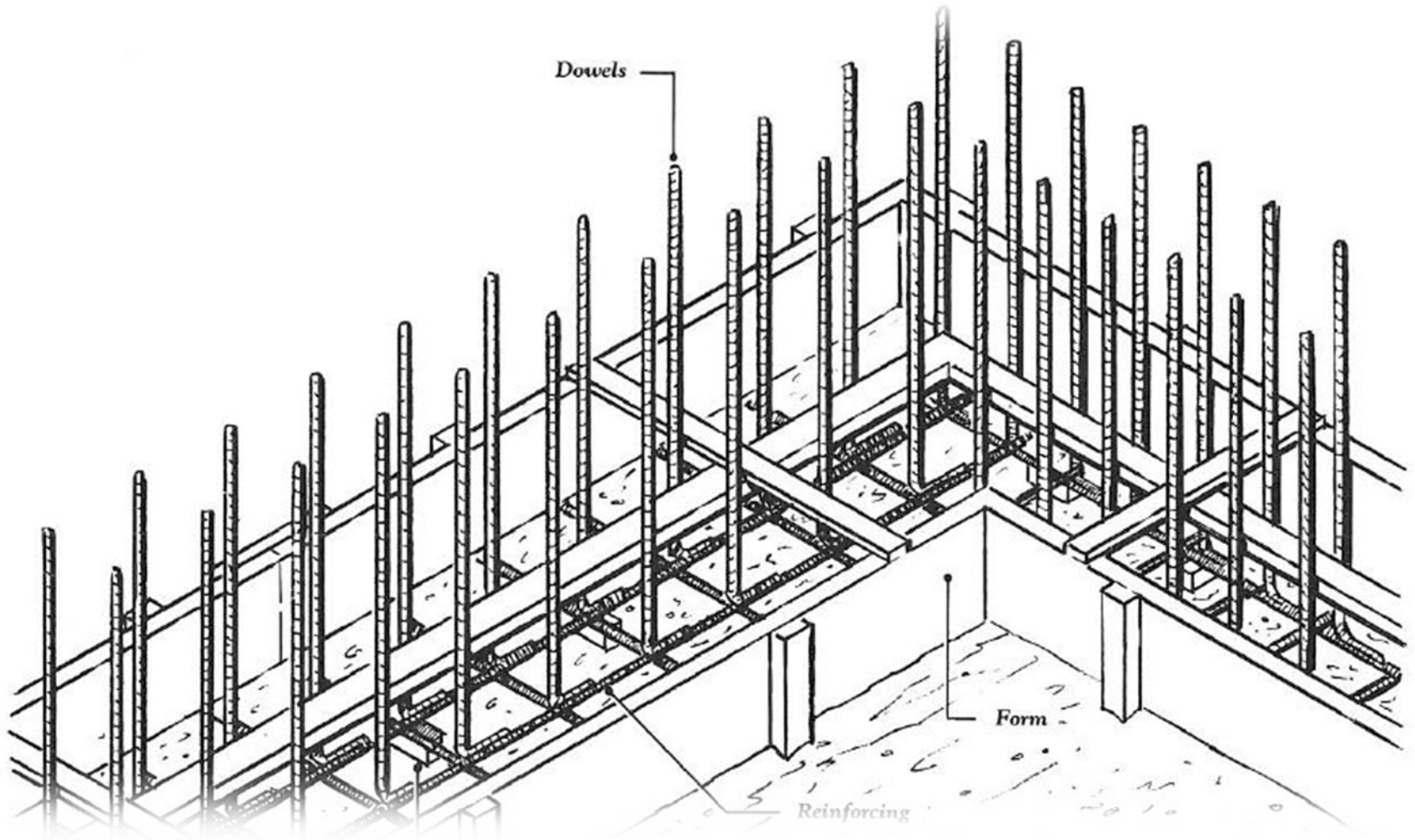
□ Axial Forces



E

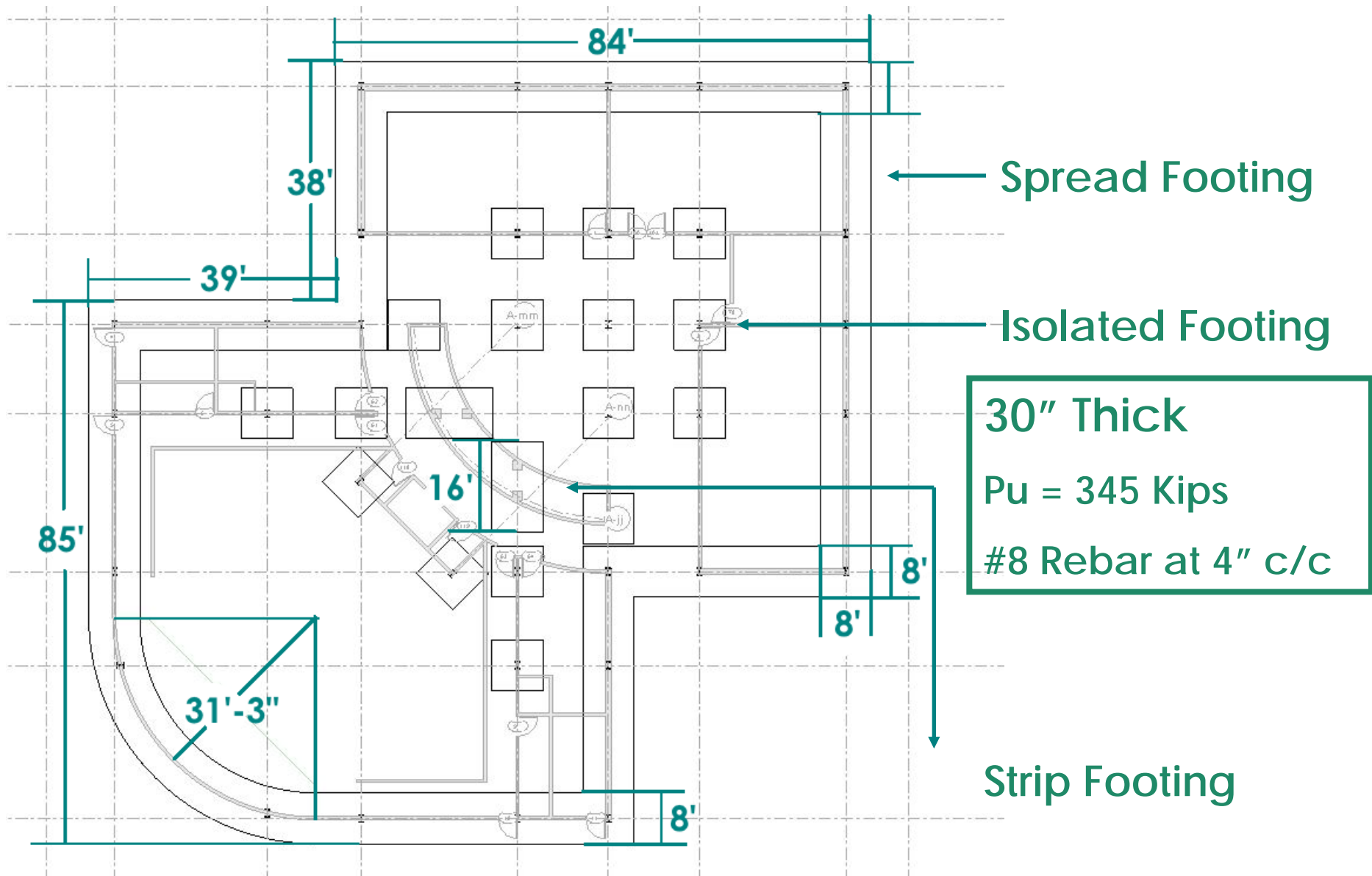
Steel Design Check





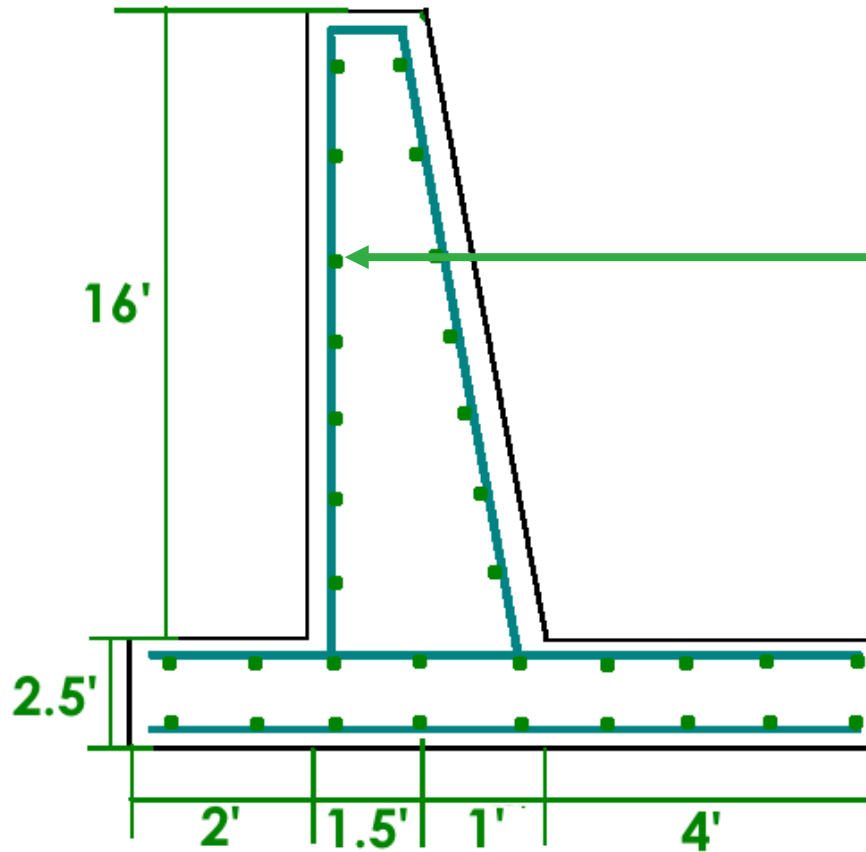
E

Foundation Footings



E

Retaining Wall



Reinforcement:
#6 at 6" c/c

Factors of Safety:

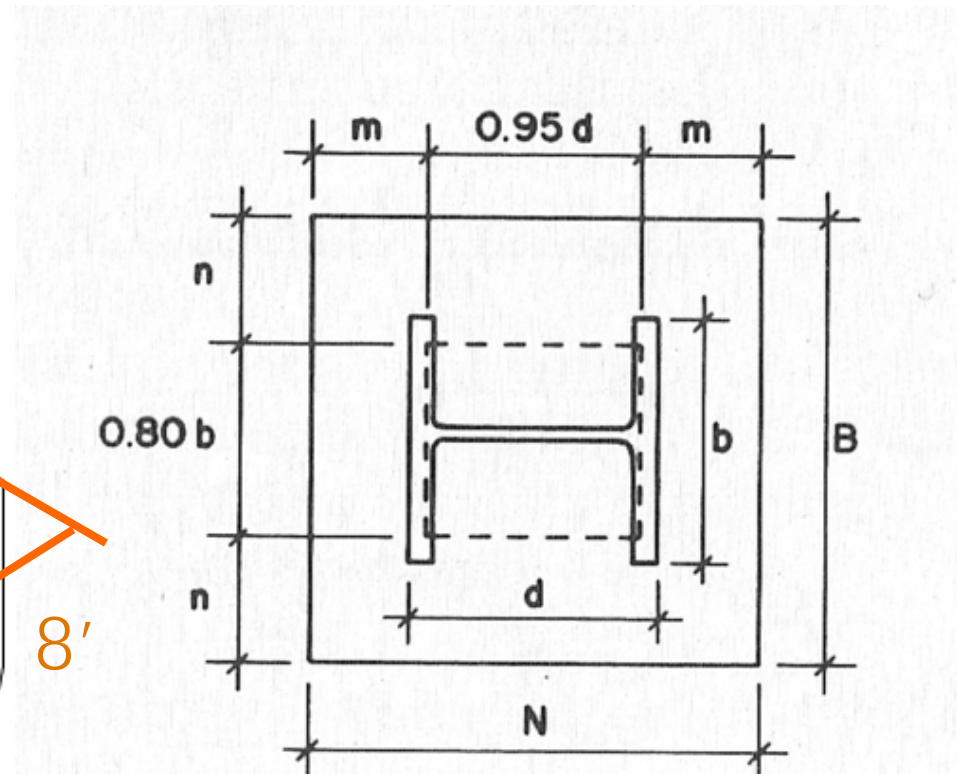
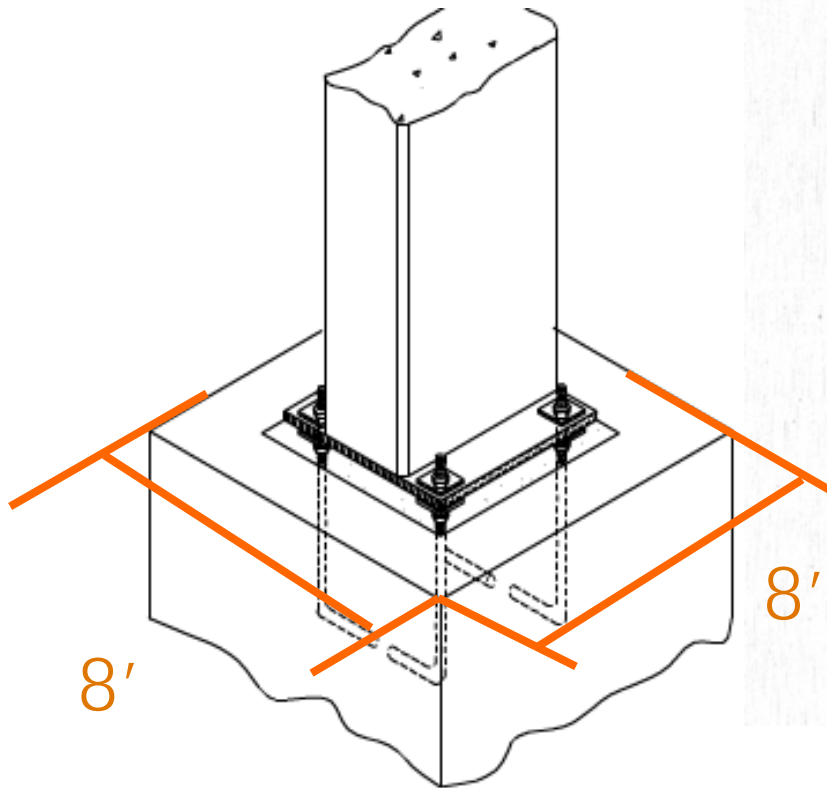
Overtuning = 2

Sliding = 1.5

Bearing Capacity = 3

E

Typical Column to Footing Connection

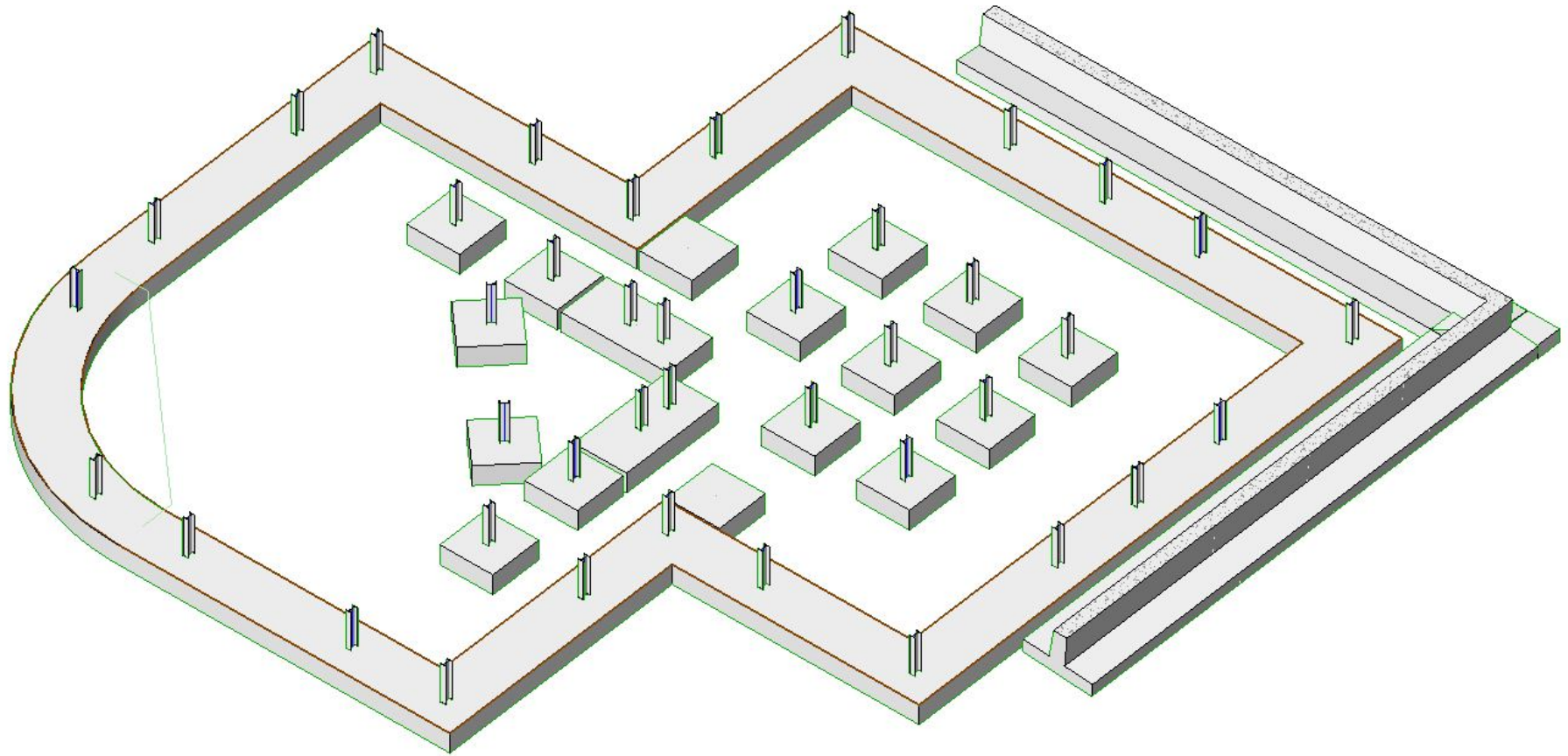


Typical Base Plate:

PL 1 x 15 x 15

E

3-D Foundation Schematic

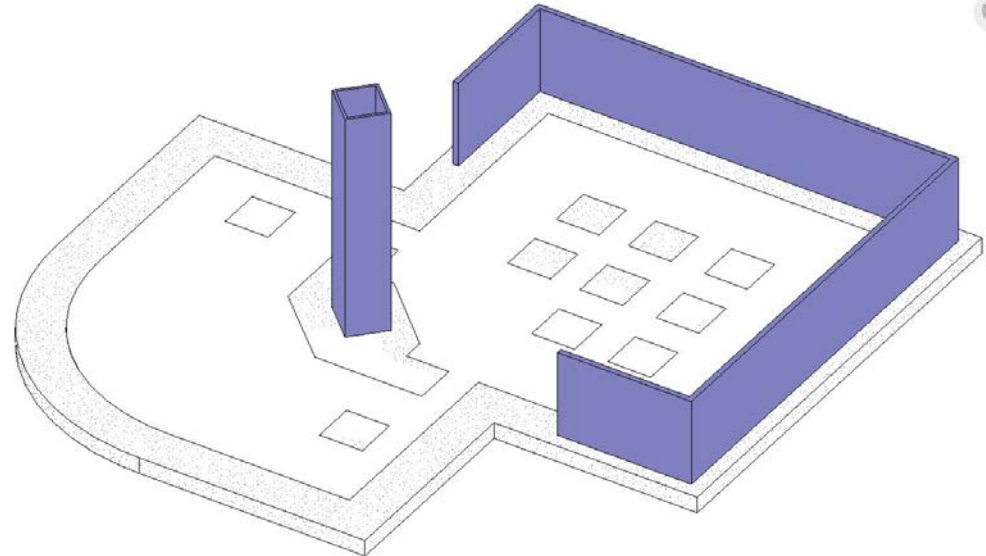
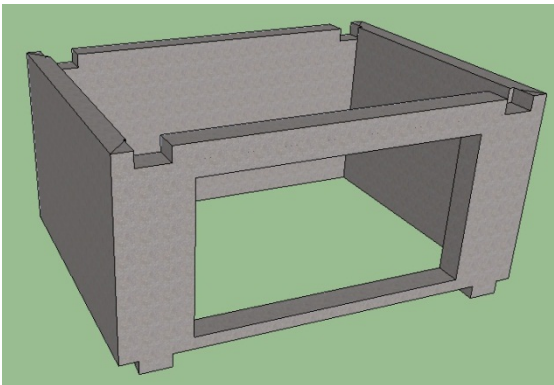


C

Precast Discussion

- Retaining Wall, on site
 - Connection
 - Over tuning moment
 - Outer wall

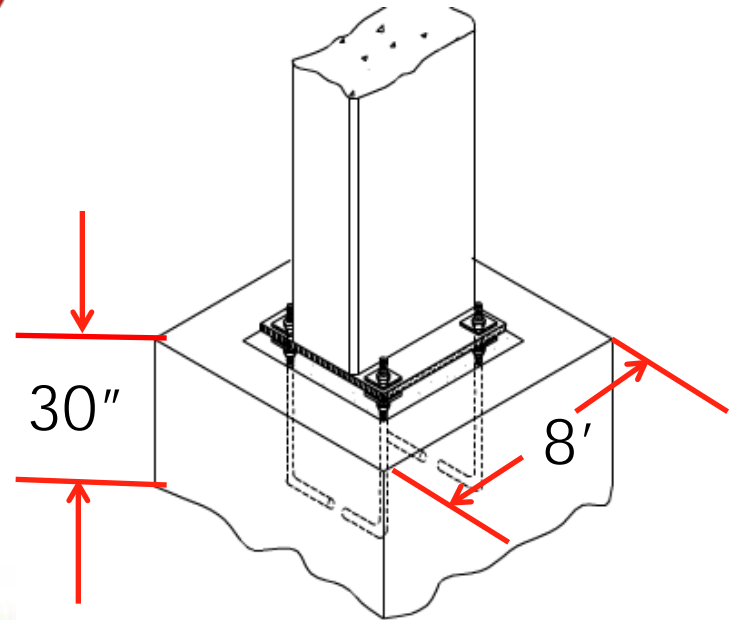
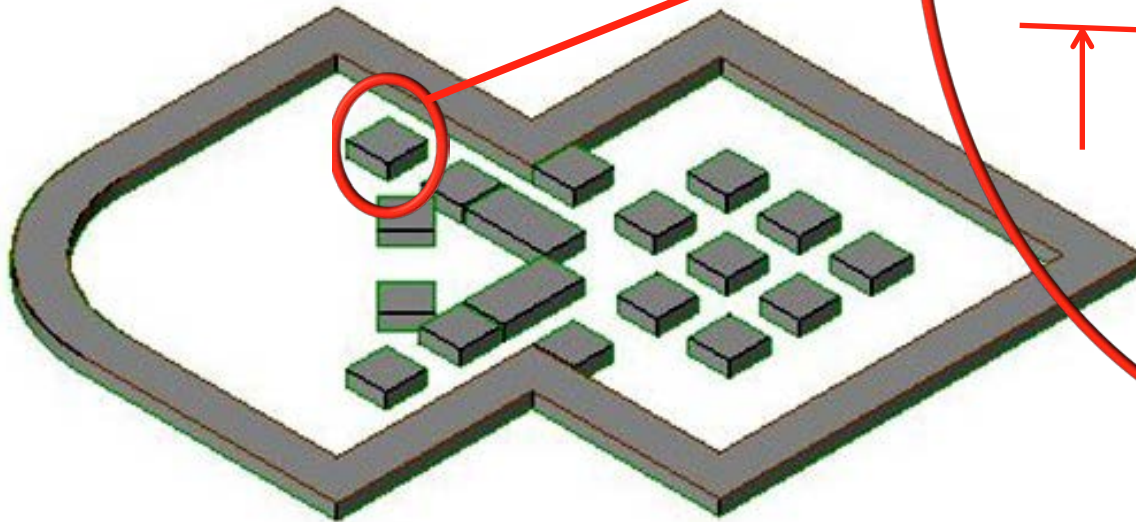
- Elevator shaft, precast
 - Safer to install
 - Avoid challenging forming
 - Time saving



C

Phase 3 – Foundations

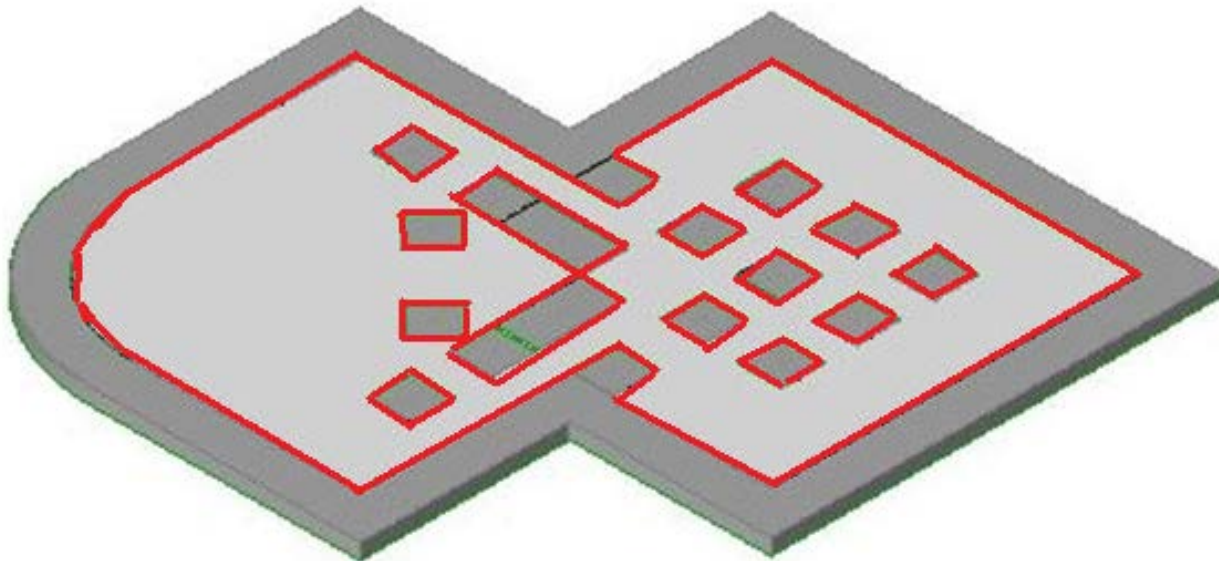
Phase 3 - Footings



C

Phase 4 – Slab on Grade

Phase 4 - Slab on Grade



1,020 Linear Ft of Formwork, 3' tall

C

Foundation Discussion

Comparison of Formwork Costs

Option	Formwork Area	Unit	Material & Installation	Cost	Labor Hours
Divided Pour	3140	SFCA	11.6	36424	270
One Pour	1089	SFCA	11.6	12632	94
Savings				23792	176

Cost of Foundations:

\$149,000

14% reduction in
original cost

Labor Hours for Foundations:

314

36% reduction in
Labor Hours

C

Foundation Discussion

CY of Concrete Poured:	
Column Footings:	213
Slab on Grade:	155
Wall Footings:	138
Total:	506

Concrete Pump Truck



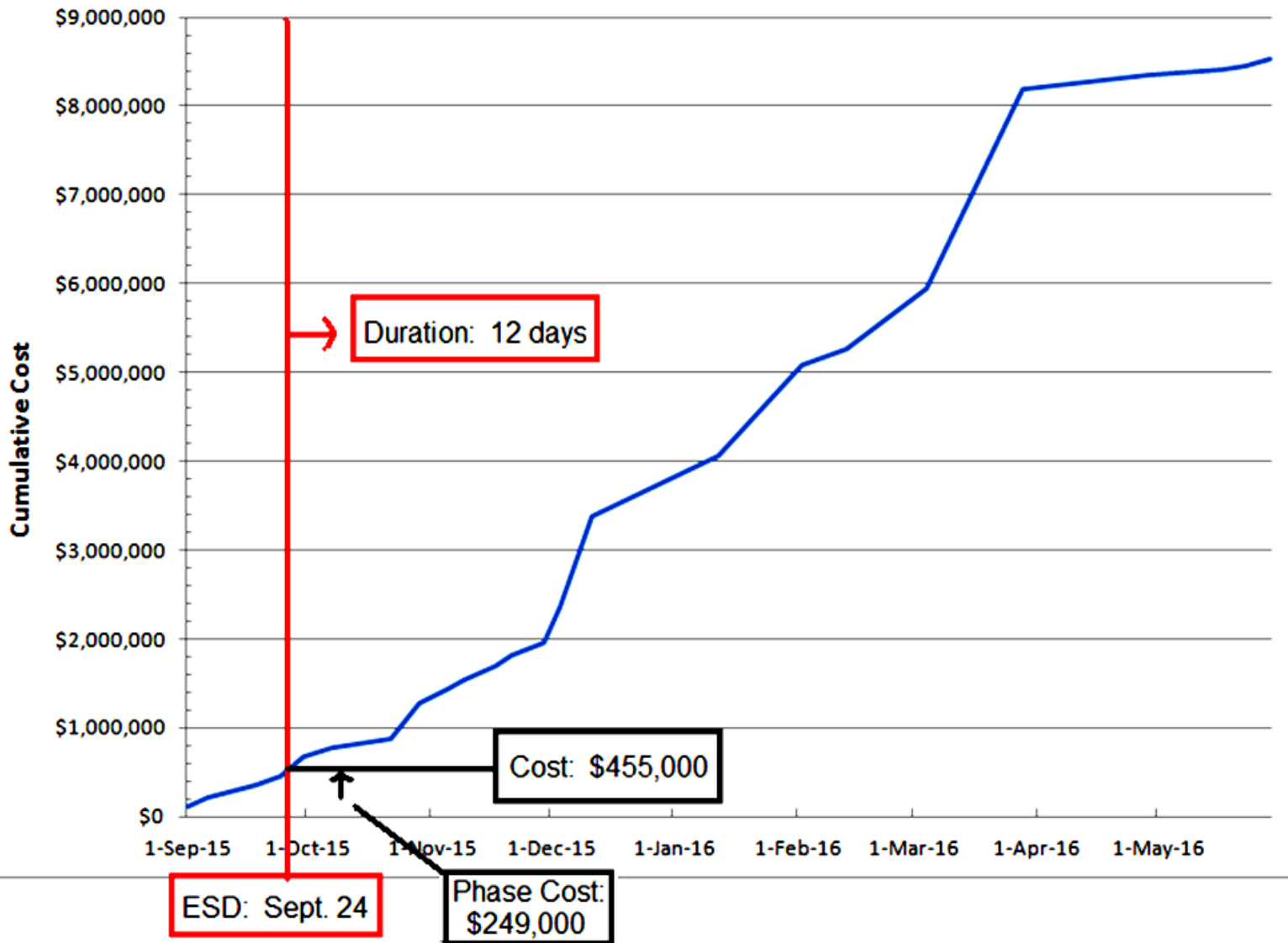
Output: 400 CY/day

03 31 05.70 Placing Concrete			Daily Crew	Labor Output	Hours	Unit	Material	2010 Bare Costs		Total
								Labor	Equipment	
0010	PLACING CONCRETE	R033105-70								
0020	Includes labor and equipment to place, strike off and consolidate									
	Foundation mats, over 20 C.Y., direct chute		C-6	350	.137			4.74	.17	4.91
	Pumped		C-20	400	.160			5.65	2	7.65
	With crane and bucket		C-7	300	.240			8.60	4.30	12.90

C

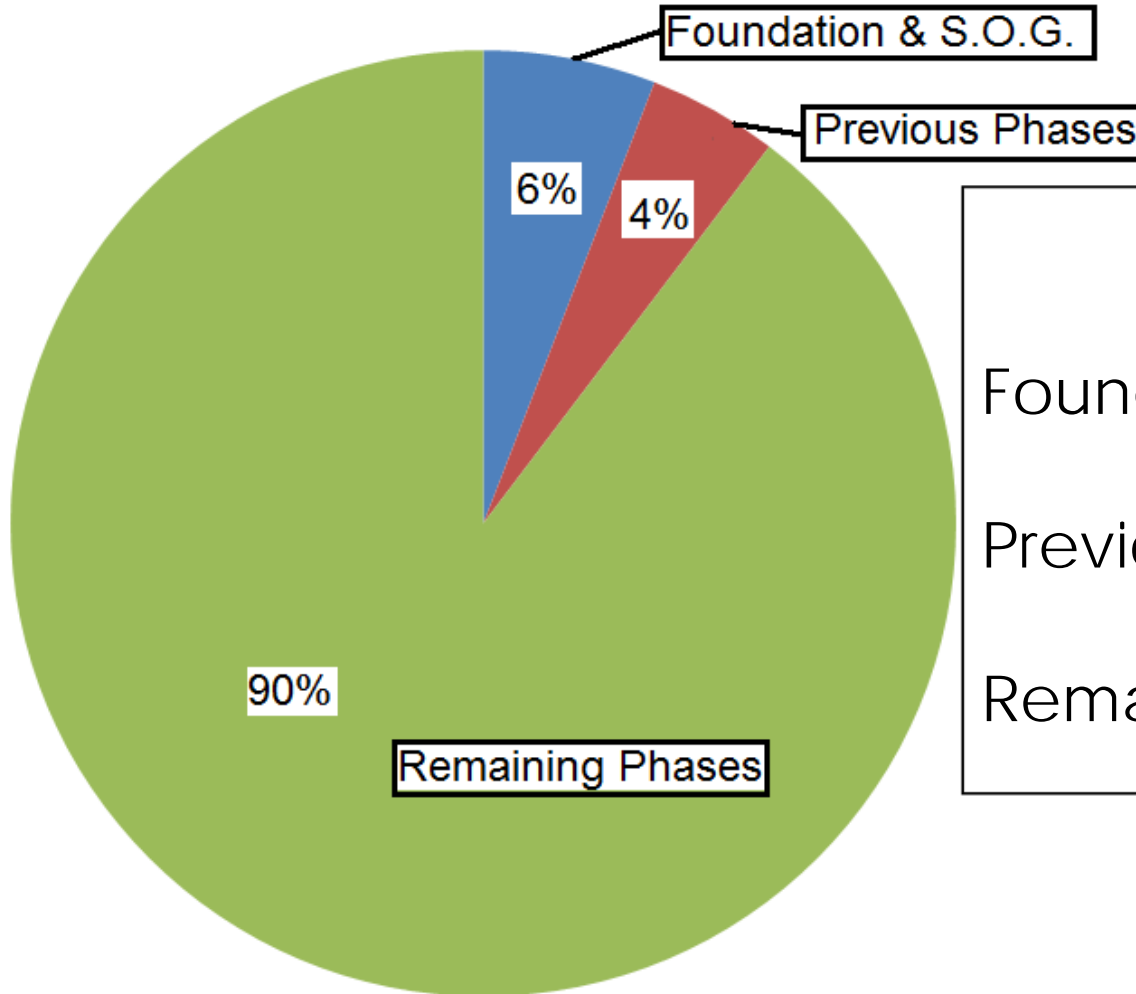
Cumulative Costs

Cumulative Costs - 2015



C Percent Complete by Labor Hours

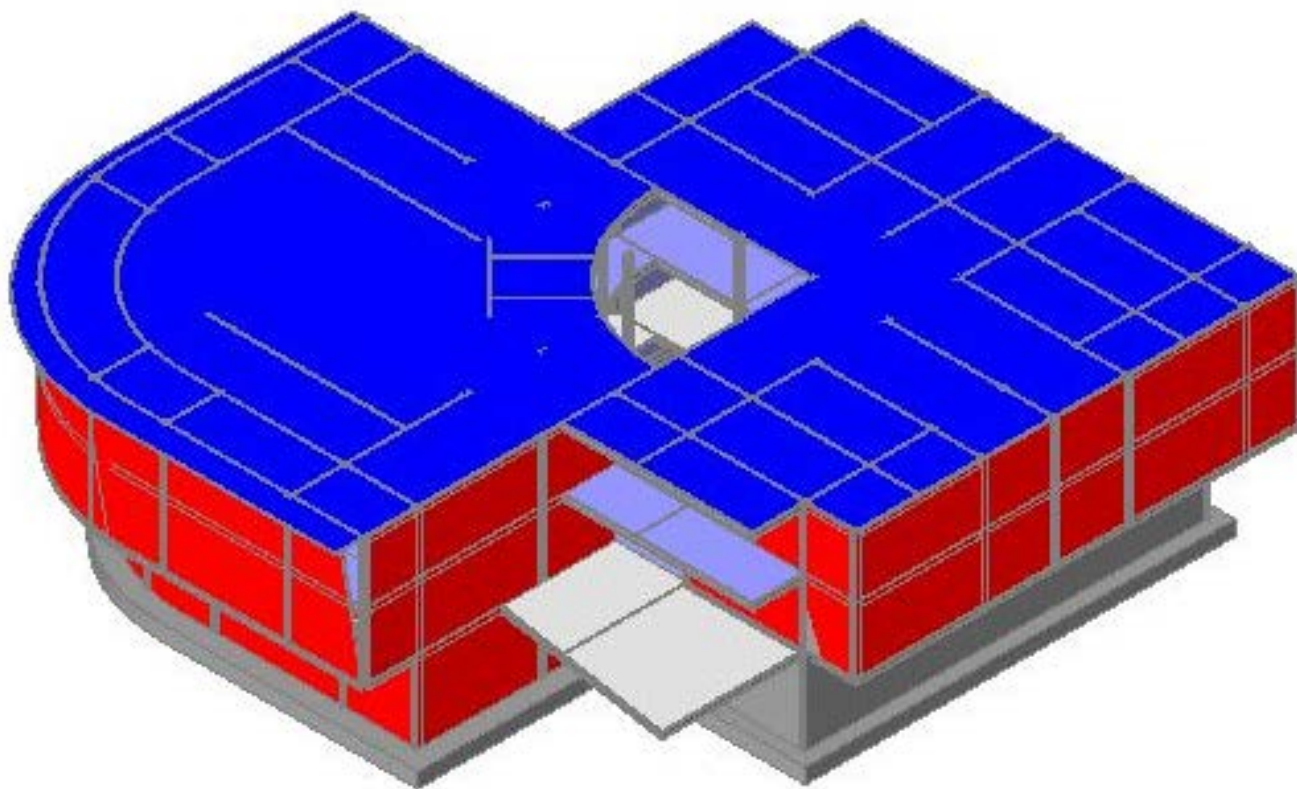
% Complete by Labor Hours Foundation & Slab on Grade



<u>Labor Hours</u>	
Foundation & S.O.G:	700
Previous Phases:	525
Remaining Phases:	11,000

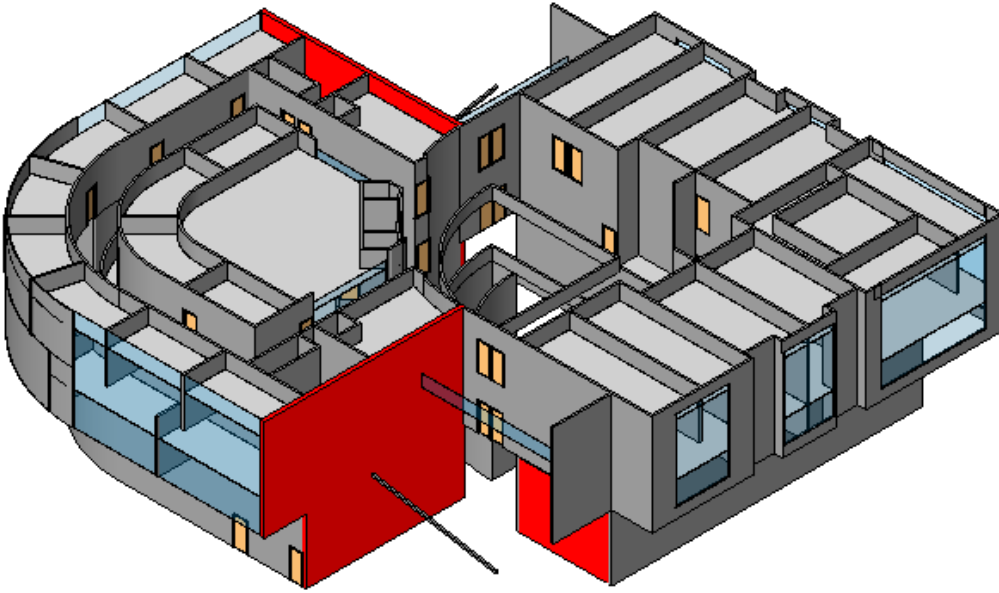
C

Phase 16 – Exterior Enclosure



C

Estimation Process



Wall Schedule		
Length	Type	Area
10' - 8 1/4"	Generic - 12"	267 SF
10' - 9"	Generic - 12"	269 SF
22' - 11 1/32"	Generic - 12"	355 SF
22' - 11 5/32"	Generic - 12"	355 SF
76' - 0"	Generic - 12"	1216 SF
76' - 0 1/2"	Generic - 12"	1233 SF
38' - 8 1/2"	Generic - 12"	1589 SF
38' - 9"	Generic - 12"	1603 SF
296' - 9 7/16"		6886 SF

Exterior Walls			Cost			Scheduling	
	Quantity	Unit	Materials	Labor	Total	Days	Lbr-Hrs
Stucco-12"	6886	SF	27843.68	57552.16	85395.83	3.8	688.6

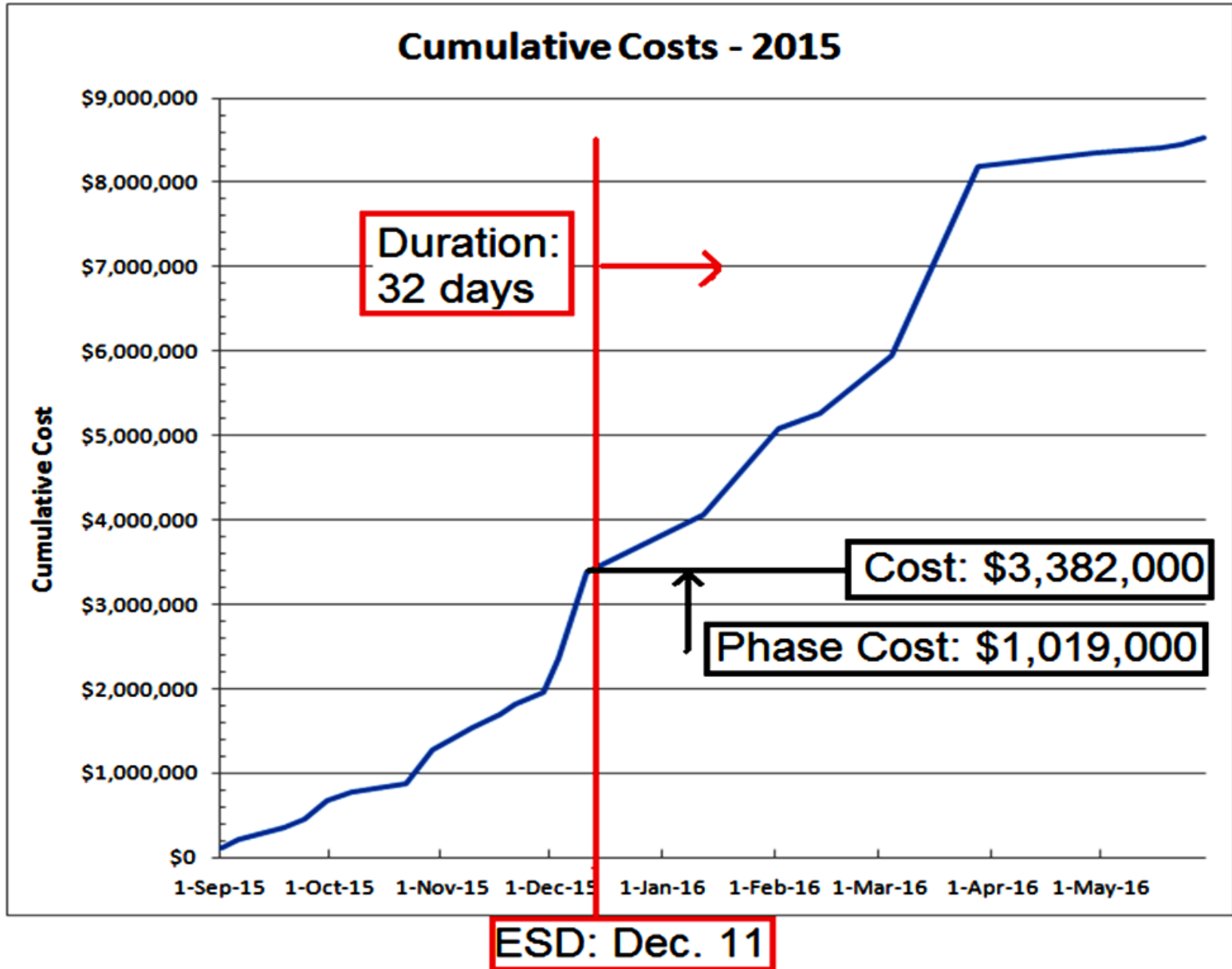
C Estimation Process Continued



Gateway: \$8.41 million

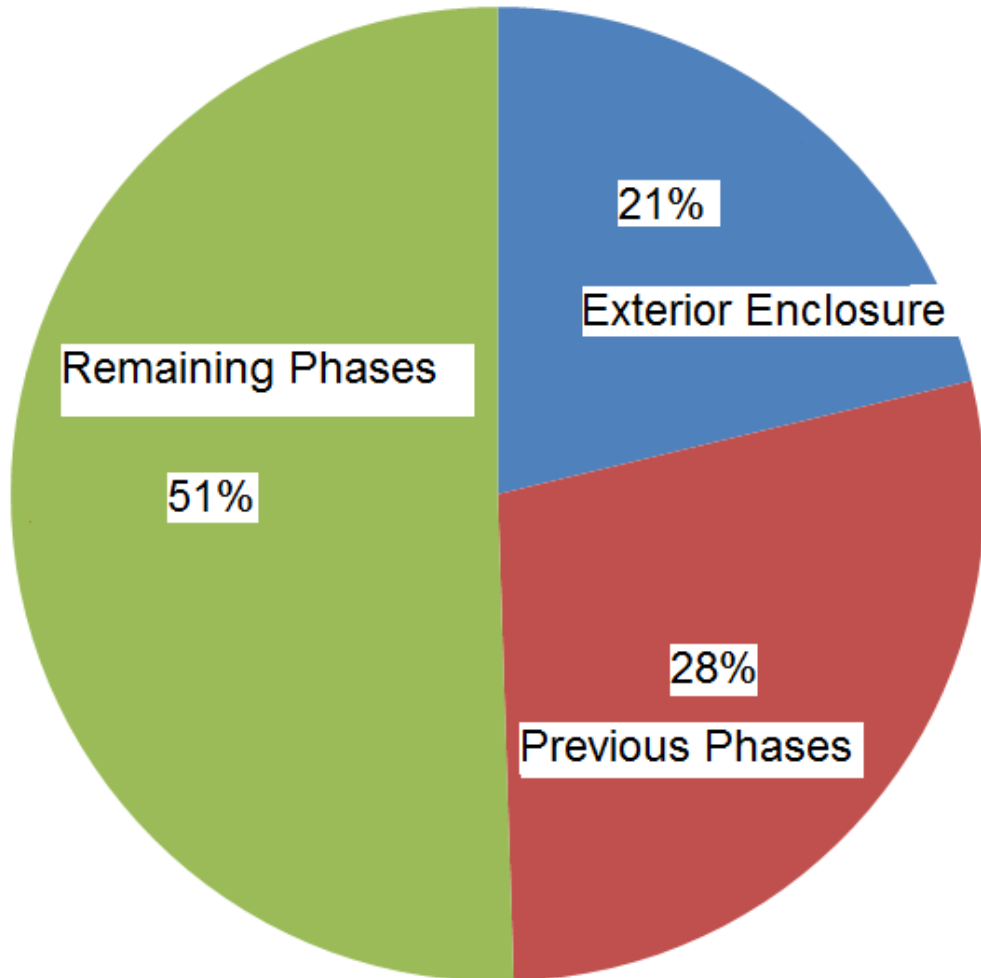
H17 fx =Ext!H21+Ext!H26										
	A	B	C	E	F	H	I	J	K	L
1	Phase	Activity (Node)	Early Start Date	Duration (days)	Labor Hours per Activity	2010 Cost	2015 Cost	Cumulative 2015 Cost	% Complete (Lbr-hrs)	% Complete Cumulative
3	1	Establishment	1-Sep-15	5.0	179	\$86,555	\$116,336	\$116,336	1.5%	1.5%
4	2	General Site Work	9-Sep-15	12.0	347	\$67,330	\$90,495	\$206,831	2.9%	4.4%
5	3	Foundations	25-Sep-15	6.0	314	\$110,758	\$148,866	\$355,697	2.6%	7.1%
6	4	Slab (1st floor)	25-Sep-15	6.0	384	\$73,898	\$99,324	\$455,021	3.2%	10.3%
7	5	Retaining Wall	5-Oct-15	7.0	280	\$157,659	\$211,904	\$666,925	2.4%	12.7%
8	6	Elevator	15-Oct-15	15.0	160	\$84,565	\$113,660	\$780,585	1.4%	14.1%
9	7	Stairwells		7.0	195	\$68,098	\$91,528	\$872,113	1.7%	15.7%
10	8	Columns		7.0	356	\$303,154	\$407,459	\$1,279,572	3.0%	18.7%
11	9	Lateral Bracing/Girders/Beams (1st floor)		4.0	133	\$110,353	\$148,322	\$1,427,893	1.1%	19.8%
12	10	Decking, composite floor (2nd floor)		8.0	73	\$84,215	\$113,191	\$1,541,084	0.6%	20.5%
13	11	Lateral Bracing/Girders/Beams (2nd floor)		4.0	133	\$110,353	\$148,322	\$1,689,405	1.1%	21.6%
14	12	Decking, composite floor (3rd floor)		8.0	80	\$92,573	\$124,424	\$1,813,829	0.7%	22.3%
15	14	Lateral Bracing/Girders/Beams (3rd floor)		4.0	133	\$110,353	\$148,322	\$1,962,151	1.1%	23.4%
16	15	Roof		8.0	575	\$298,556	\$401,278	\$2,363,429	4.9%	28.2%
17	16	Exterior Enclosure		32.0	2515	\$757,893	\$1,018,657	\$3,382,086	21.3%	49.5%
18	17	Electrical Conduit		21.0	504	\$510,000	\$685,473	\$4,067,559	4.3%	53.7%
19	18	Plumbing Rough-In (exterior walls)		11.0	264	\$760,750	\$1,022,497	\$5,090,055	2.2%	56.0%
20	19	Interior Wall Partitions		20.0	1203	\$131,994	\$177,408	\$5,267,463	10.2%	66.1%
21	20	Electrical Finish		24.0	1152	\$510,000	\$685,473	\$5,952,936	9.7%	75.9%
22	21	Mechanical System		32.0	1792	\$1,657,500	\$2,227,786	\$8,180,722	15.1%	91.0%
23	22	Finishes		18.0	506	\$123,923	\$166,560	\$8,347,282	4.3%	95.3%
24	23	Ceilings		9.0	414	\$45,564	\$61,240	\$8,408,523	3.5%	98.8%
25	25	LEED Improvements		6.0	96	\$24,207	\$32,536	\$8,441,058	0.8%	99.6%
26	26	Cleanup, Commissioning		4.0	48	\$63,750	\$85,684	\$8,526,742	0.4%	100.0%
27	Total			278	11836	\$6,343,999	\$8,526,742	\$8,526,742	1	1

C Cumulative Costs – Exterior Walls



C Exterior Enclosure Percent Complete

% Complete by Labor Hours Exterior Enclosure



<u>Labor Hours</u>	
Exterior Enclosure:	2,500
Previous Phases:	3,350
Remaining Phases:	6,000

C

Construction Schedule

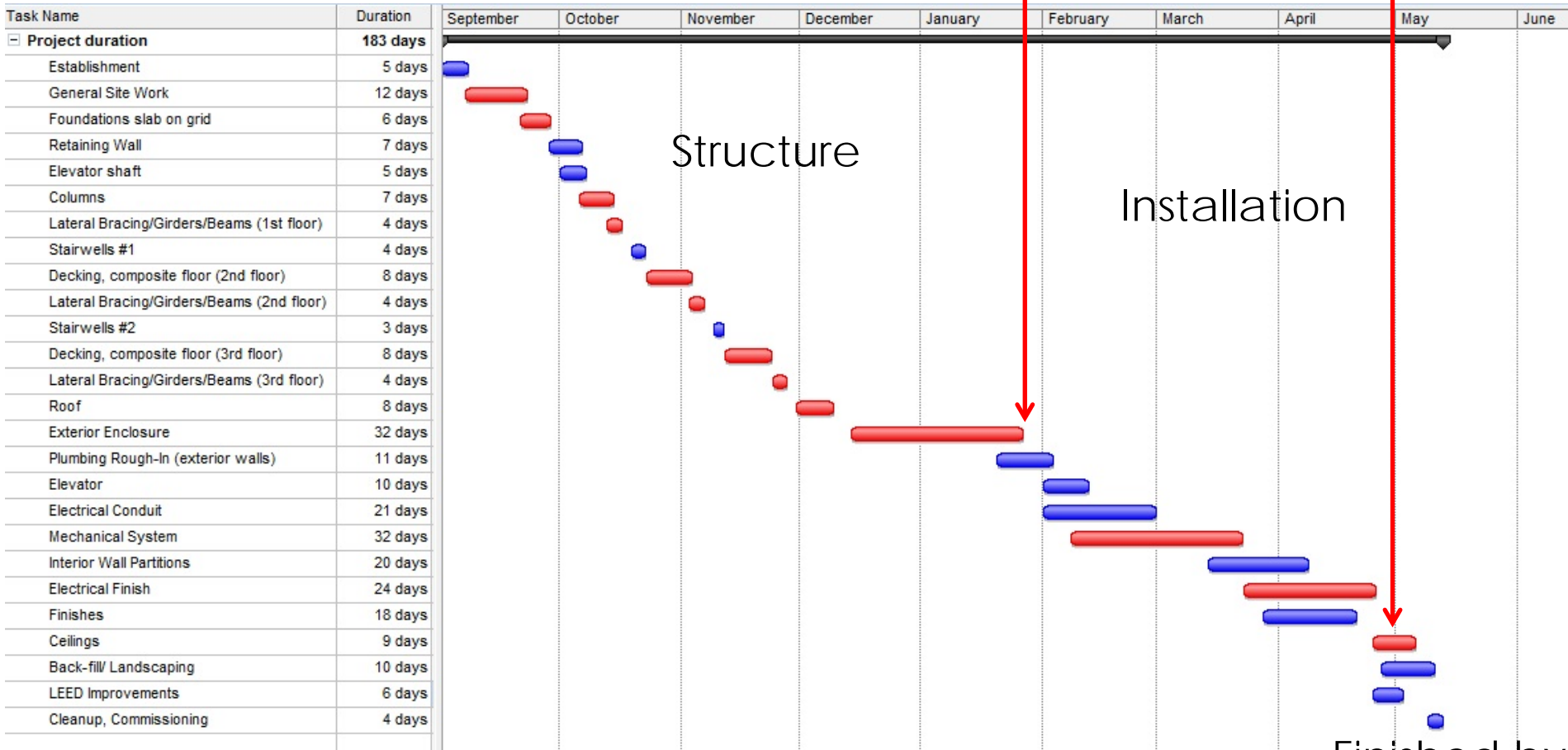
Computer Lab
Access
30 April

Exterior Closure

Structure

Installation

Finished by
12th of May



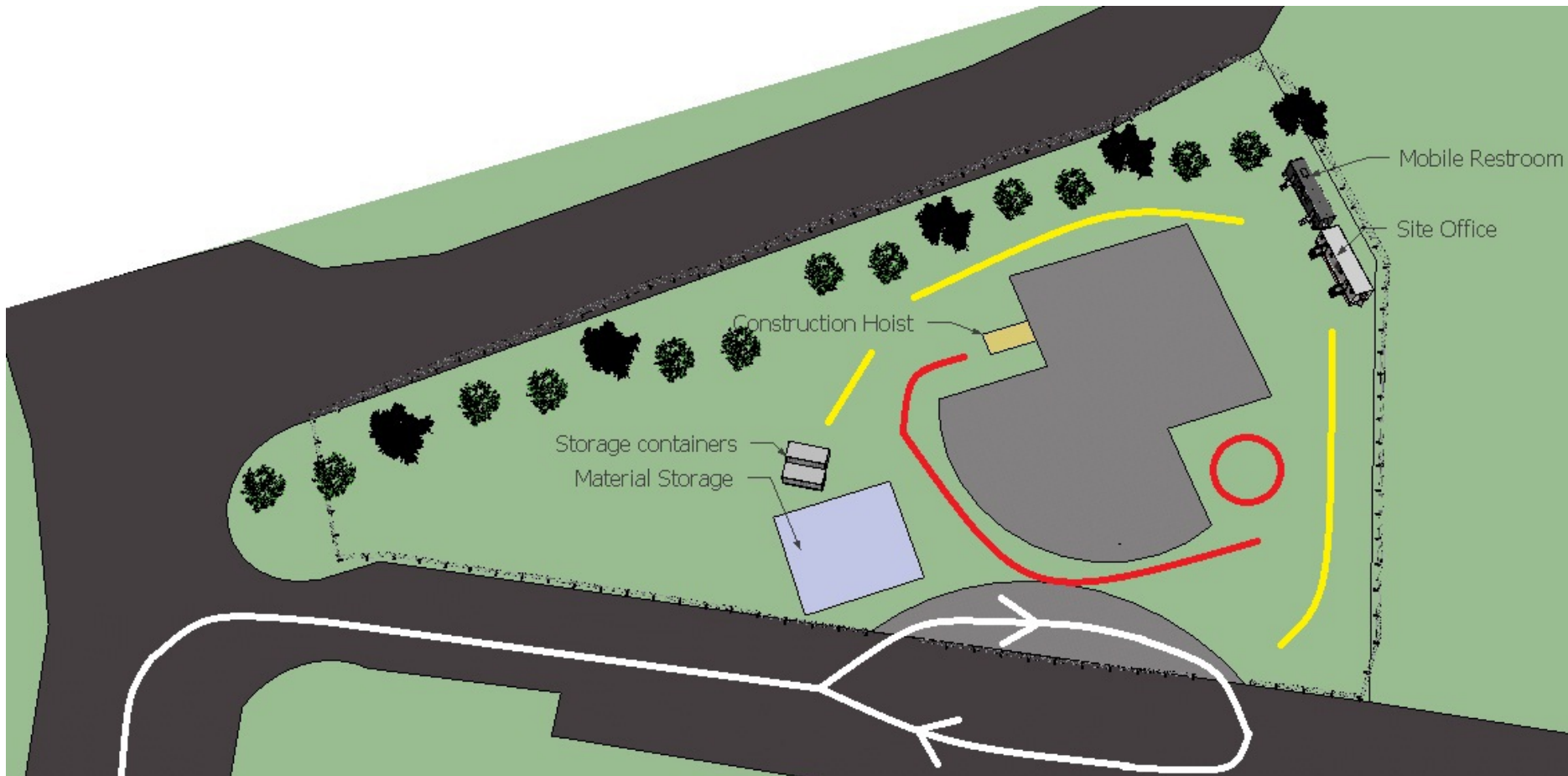
C

Site Plan For Construction

- Safety
- Just In Time

● Machinery

● Humans



C

Equipment Excavation

Excavators



- Weight 33 ton
- Bucket 2.2 CY



- Weight 6.8 ton
- Bucket 0.75 CY

Dump Truck



- Load capacity 14 ton

Wheel loaders



- Weight 12 ton
- Bucket 3.3 CY

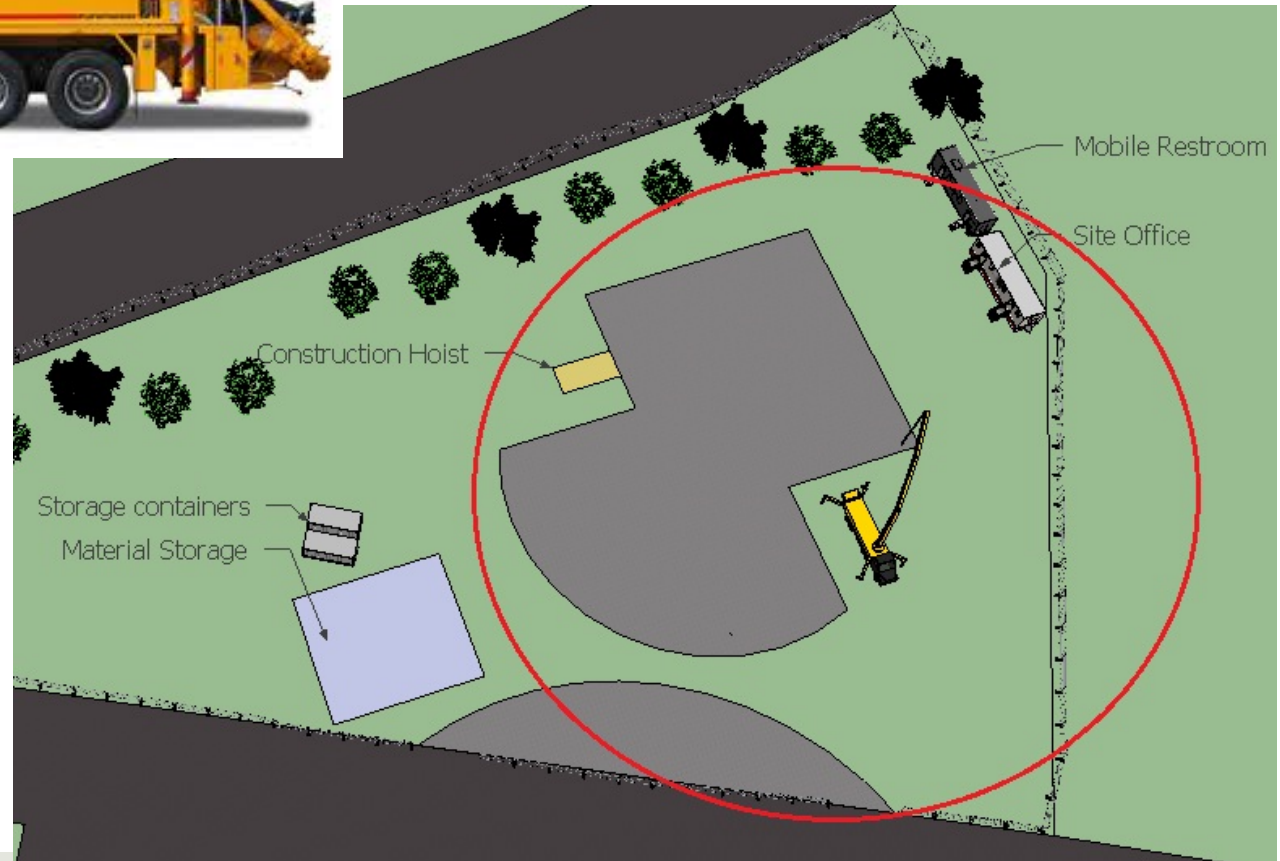
C

Equipment Foundation

Concrete Pump Truck

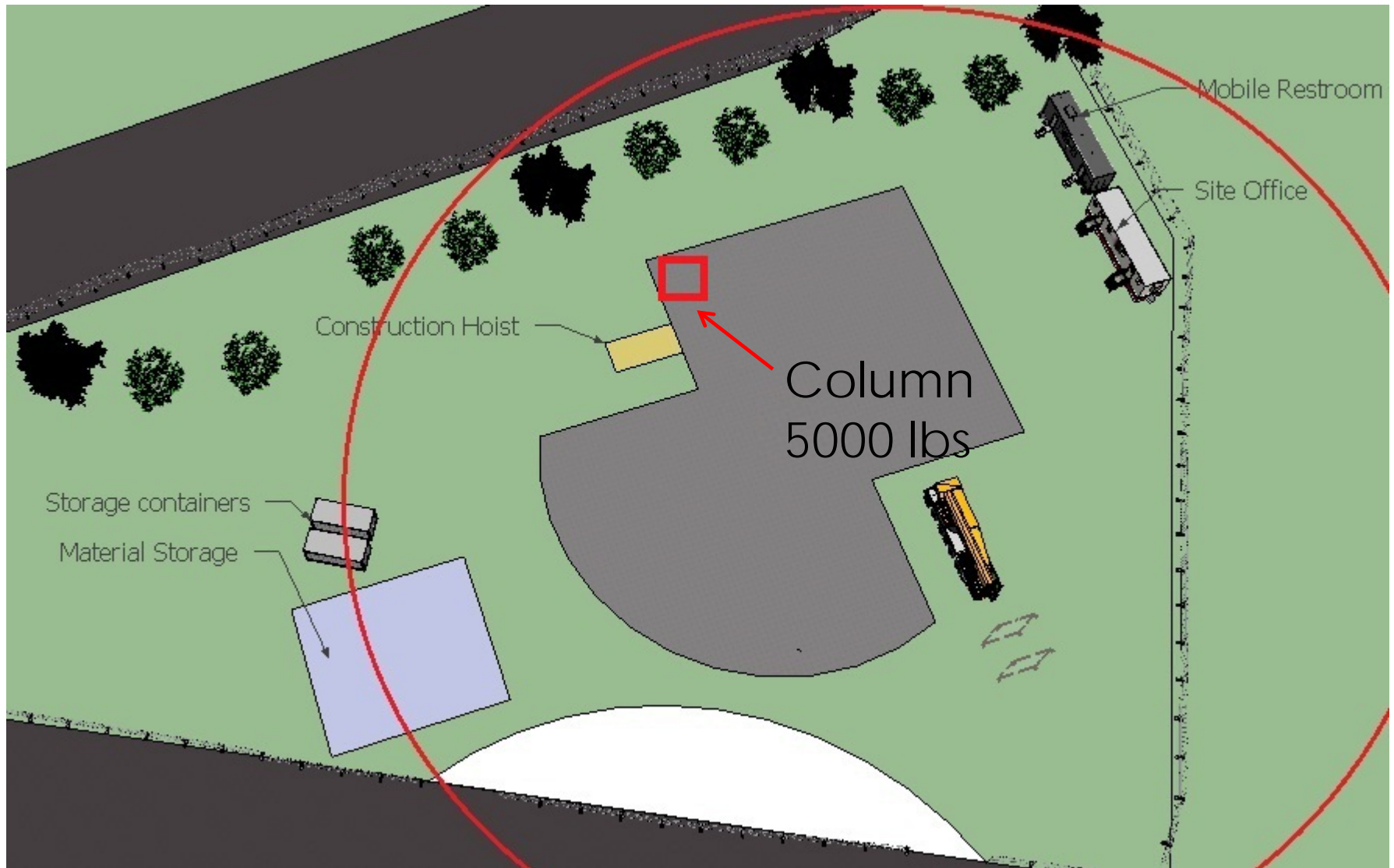


- Output 50 CY per hour
- Radius 140 foot



C

Equipment Challenging Lift



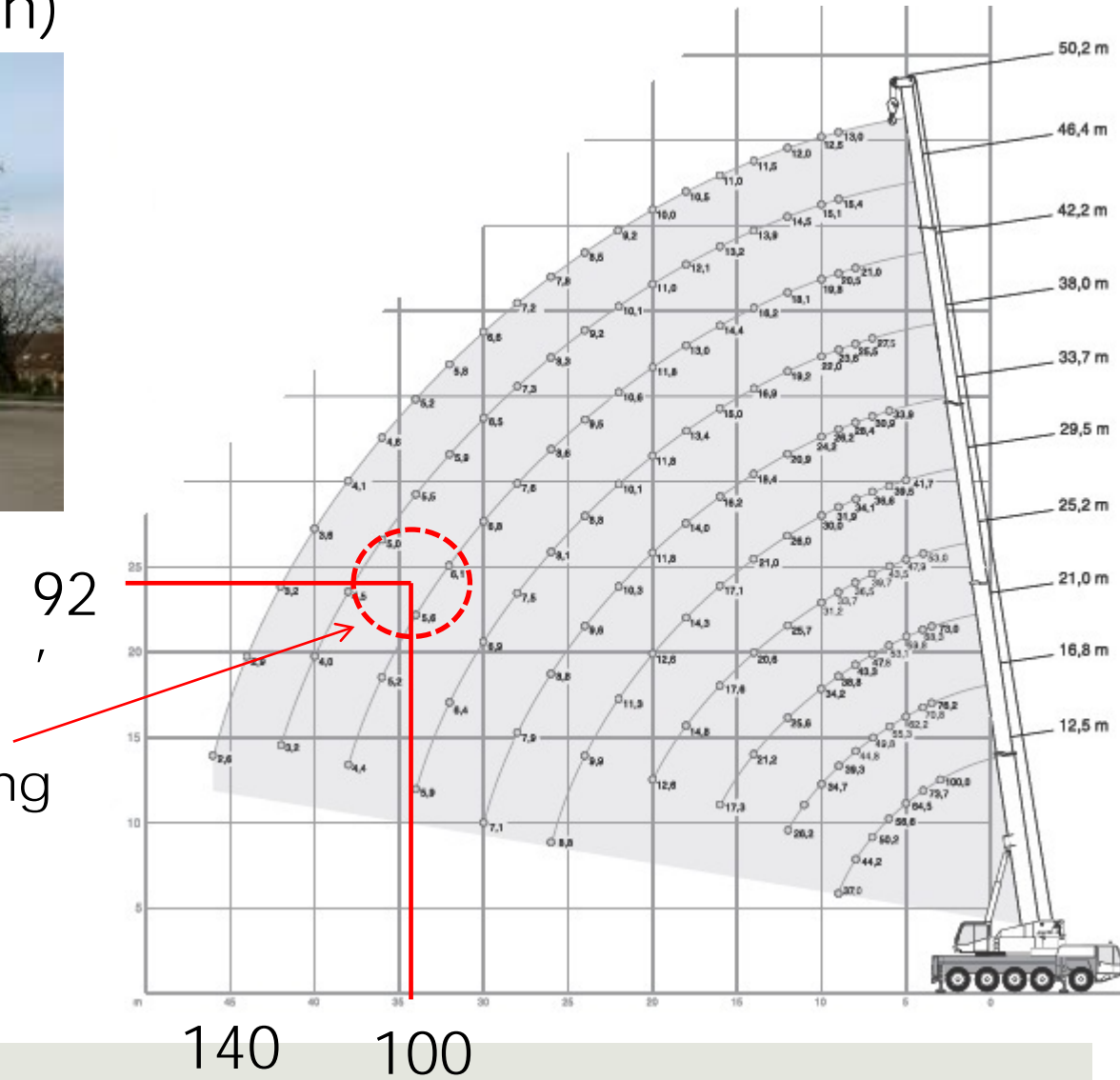
C

Equipment Mobile Crane

Mobile Crane (100ton)



- Radius 140 foot
- Capacity at challenging point 11 000 lbs



C Equipment Material Handling

Telescoping boom

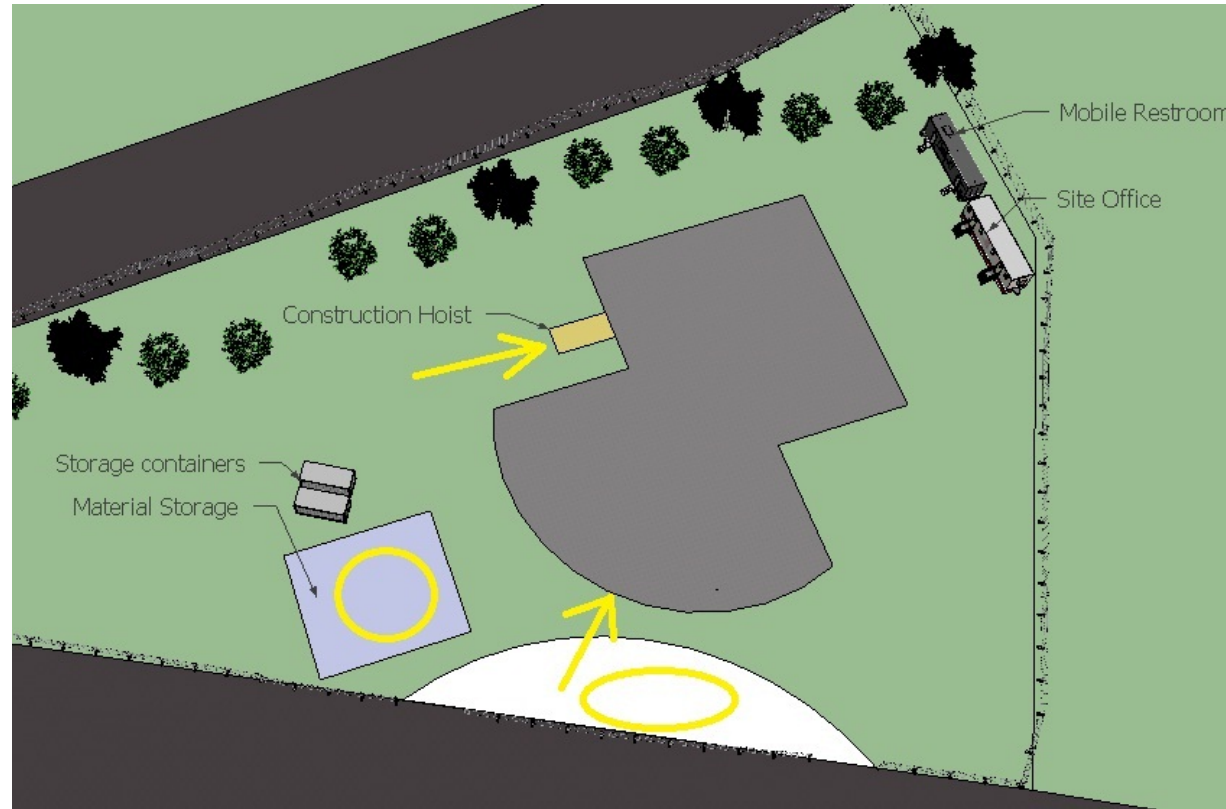


- Max. lift height 45ft
- Max. peak load 1000lbs

Construction Hoist



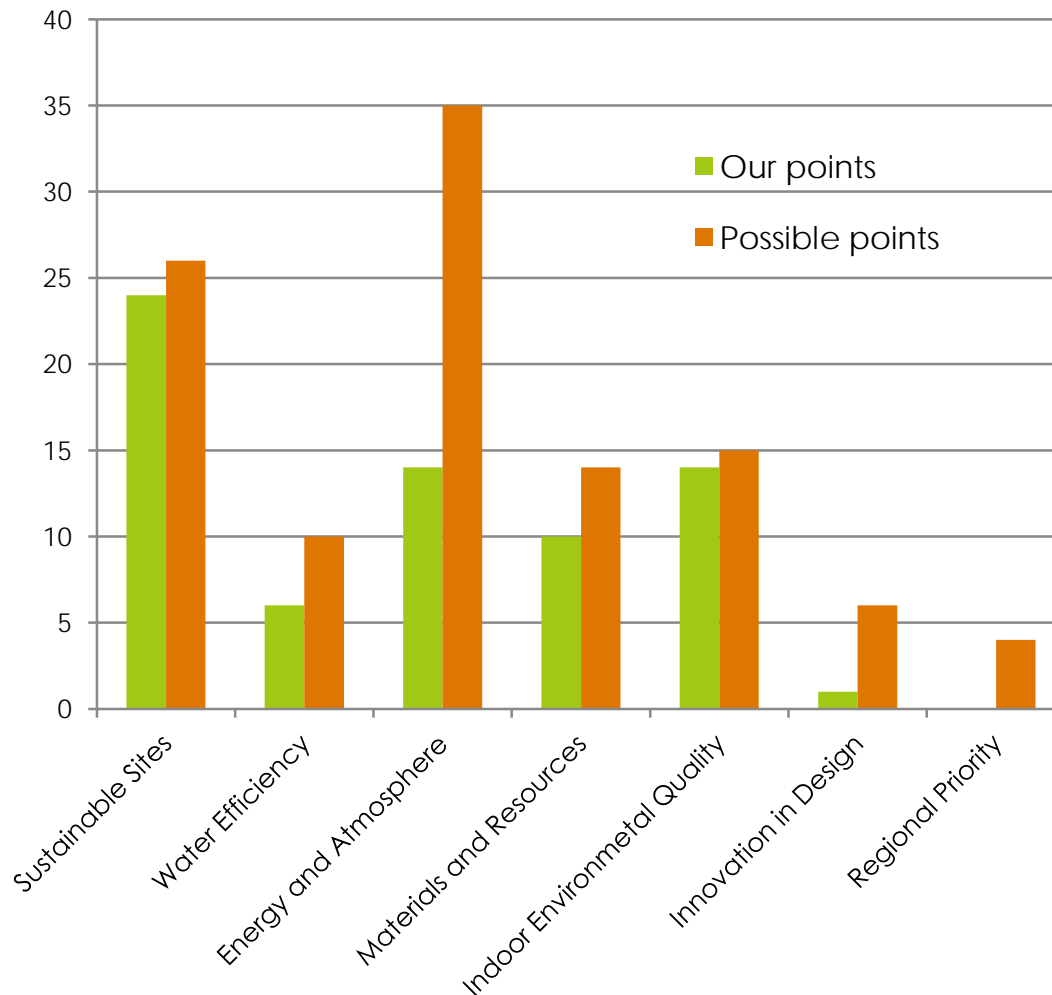
- Max. load 6000lbs



- Material pick-up and drop-off

LEED Gold Certificate

Our project reached 69 points



Challenges

- Cost limitation
- Innovative design
- Further reduction of energy costs

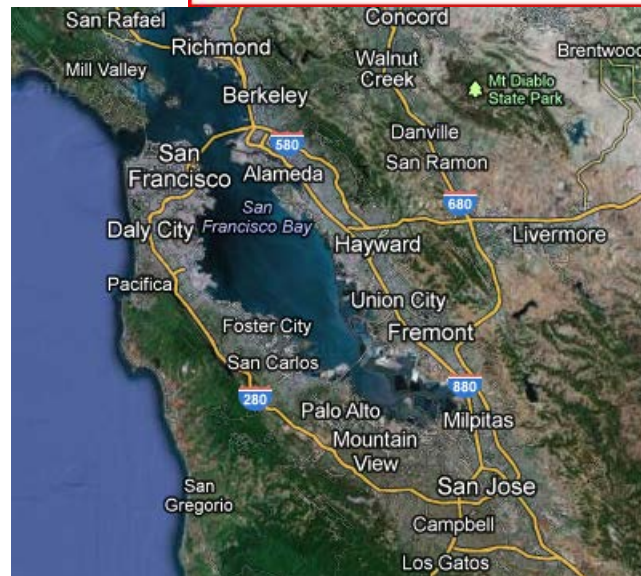
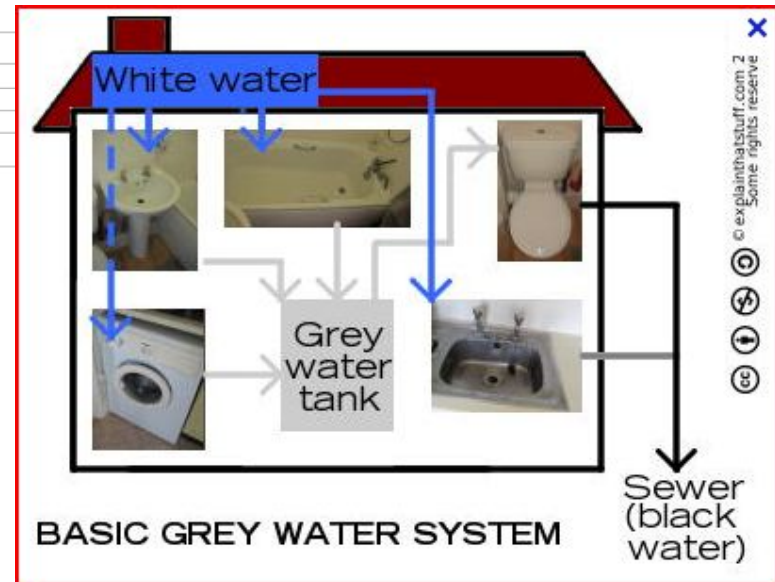
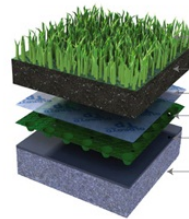
LEED Gold Achievements & Advantages

Water

- Wastewater
- Landscaping
- Water reduction

• Site Benefits

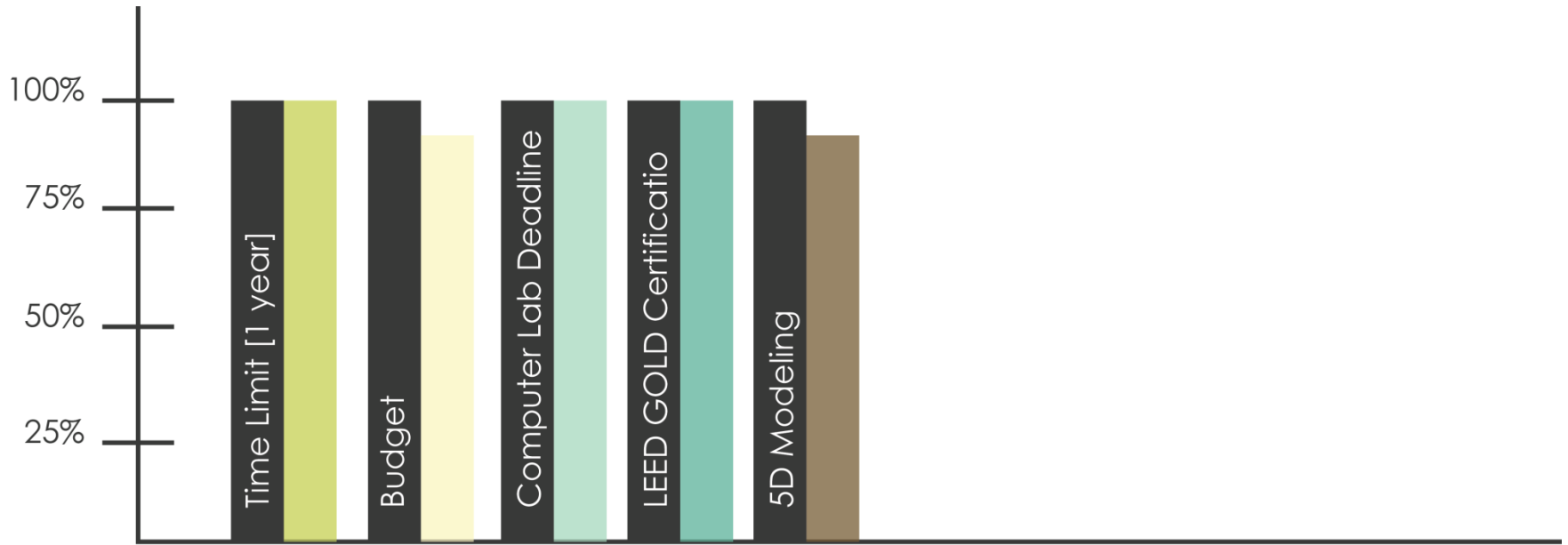
- Public transport
- Local labor and material
- Climate



Team Process_LEED Requirements

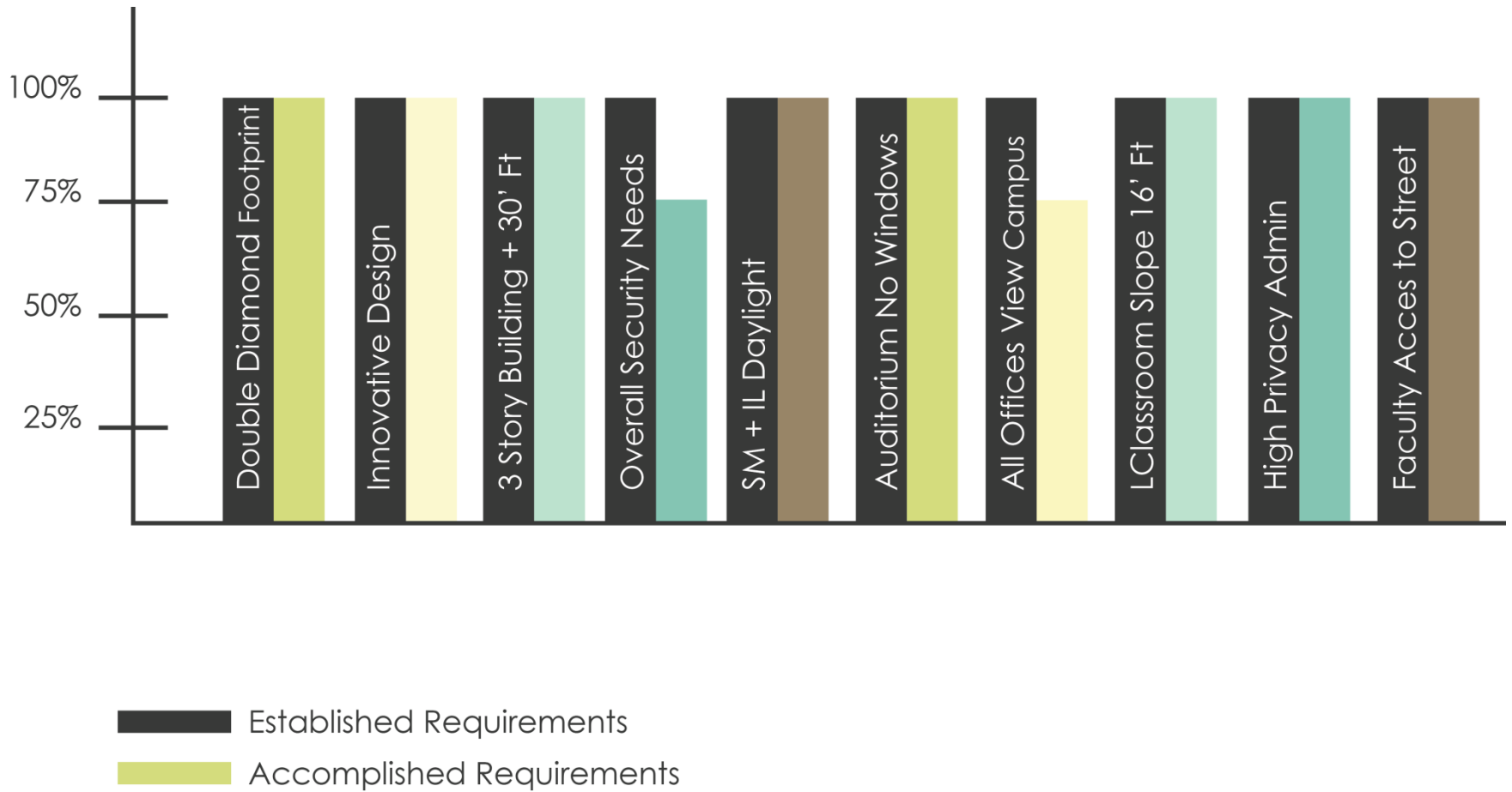
Leed 2009 Checklist for New Construction and Major Renovations						
Person In Charge		Title	Description	Points	Earned	Comments
	Sustainable Sites	Prerequisite 1	Construction Activity Pollution Preventions	Required		
Madeline		1 Credit 1	Site Selection	1	1	CHECKED
Madeline		2 Credit 2	Development Density and Community Connectivity	5	5	CHECKED
Madeline		3 Credit 3	Brownfield Redevelopment	1	1	CHECKED
Madeline		4 Credit 4.1	Alternative Transportation - Public Transportation Access	6	6	CHECKED
Madeline		5 Credit 4.2	Alternative Transportation - Bicycle Storage and Changing Rooms	1	1	CHECKED
Madeline		6 Credit 4.3	Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles	3	3	CHECKED
Madeline		7 Credit 4.4	Alternative Transportation - Parking Capacity	2	2	CHECKED
Madeline		8 Credit 5.1	Site Development - Protect or Restore Habitat	1	1	CHECKED
Madeline		9 Credit 5.2	Site Development - Maximize Open Space	1	1	CHECKED
Jennifer		10 Credit 6.1	Stormwater Design - Quantity Control	1	0	CHECKED
Jennifer		11 Credit 6.2	Stormwater Design - Quality Control	1	0	CHECKED
Jennifer		12 Credit 7.1	Heat Island Effect - Nonroof	1	1	CHECKED
Jennifer		13 Credit 7.2	Heat Island Effect - Roof	1	0	CHECKED, 1 if green
Jennifer		14 Credit 8	Light Pollution Reduction	1	1	CHECKED
		15	Site Master Plan	1	0	?
		16	Joint use of facilities	1	0	?
Jennifer	Water Efficiency	17 Prerequisite 1	Water Use Reduction	Required		CHECKED
Jennifer		18 Credit 1	Water Efficient Landscaping	2 to 4	2	CHECKED
Jennifer		19 Credit 2	Innovative Wastewater Technologies	2	2	CHECKED
Jennifer		20 Credit 3	Water Use Reduction	2 to 4	2	CHECKED
Jennifer	Energy & Atmosphere	21 Prerequisite 1	Fundamental Commissioning of Building Energy Systems	Required		CHECKED
Jennifer		22 Prerequisite 2	Minimum Energy Performance	Required		CHECKED
Dennis		23 Prerequisite 3	Fundamental Refrigerant Management	Required		CHECKED
Dennis		24 Credit 1	Optimize Energy Performance	1 to 19	6	CHECKED
Dennis		25 Credit 2	On-Site Renewable Energy	1 to 7	0	CHECKED

Team Process_Time + Cost Requirements



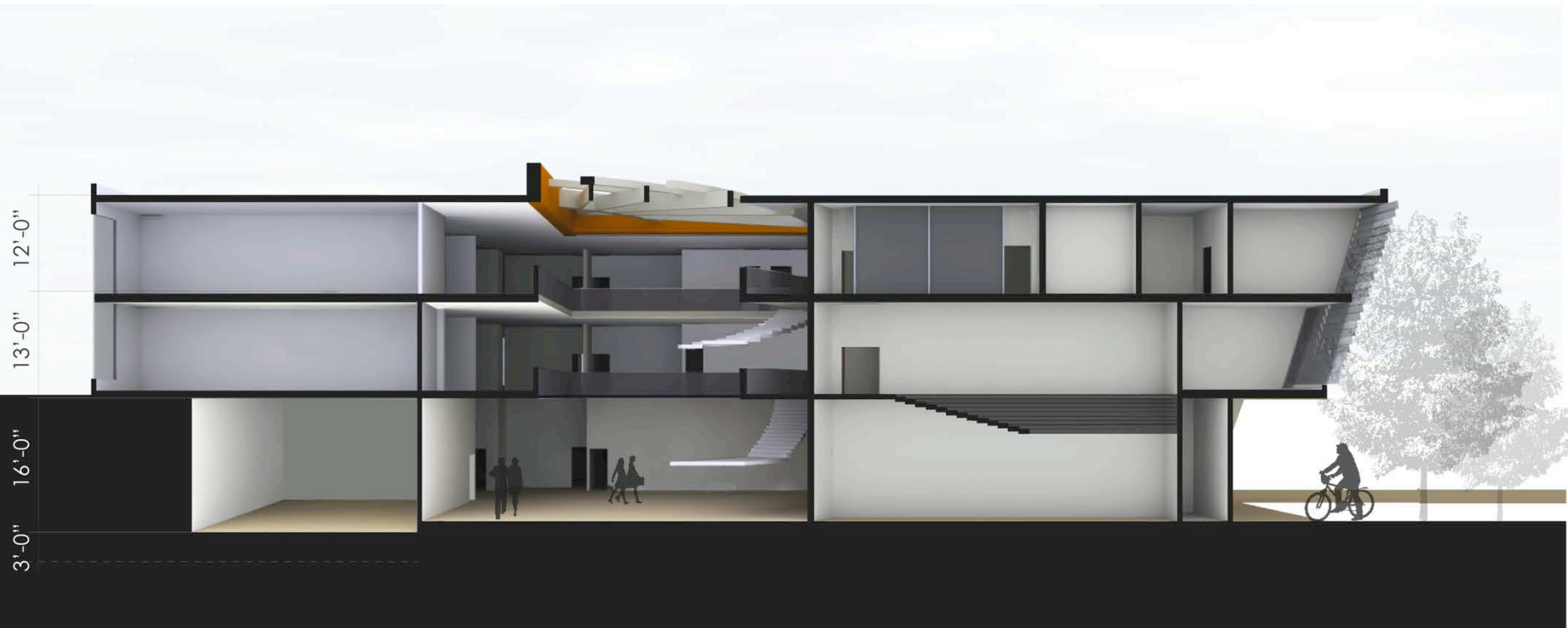
- Established Requirements
- Accomplished Requirements

Team Process_Functional Requirements



A

Section_Atrium



A

Section_Auditorium + Entrances



A

Elevations



[South + West Views]



[North + East Views]

A

1st + 2nd Floor Entrances_Public Connection

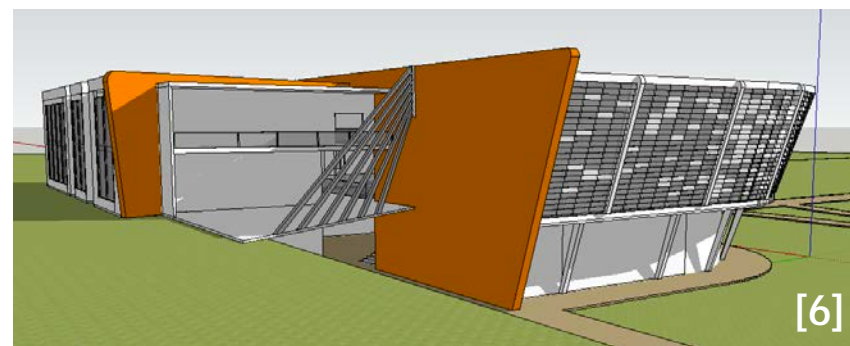
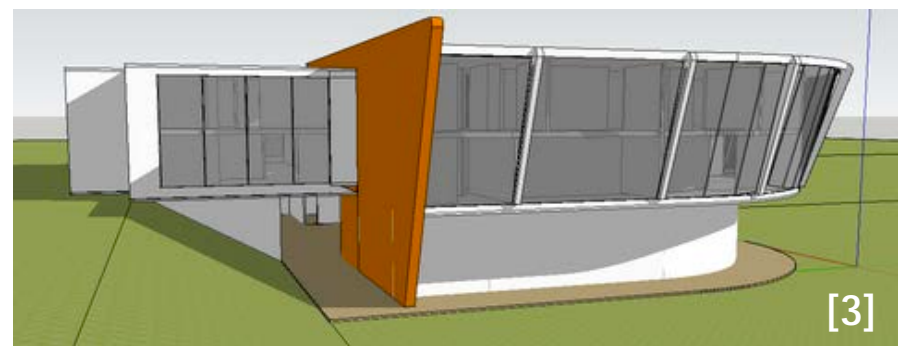
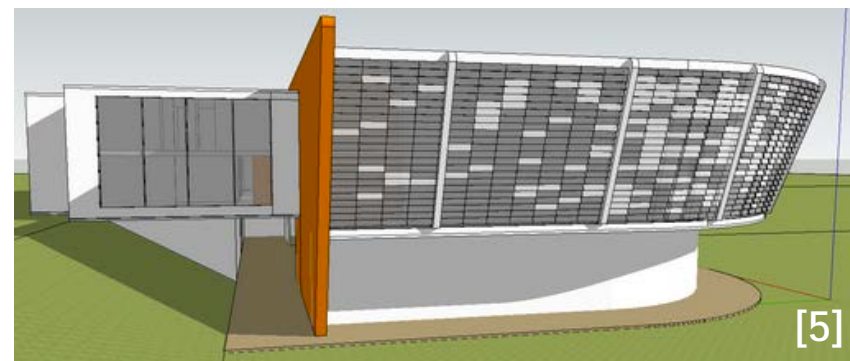
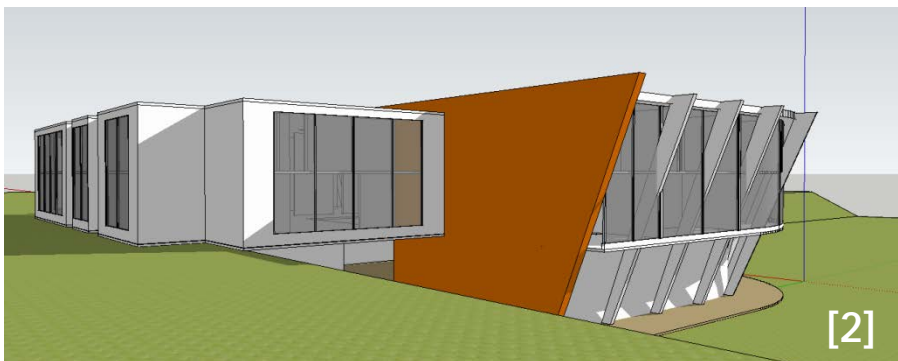
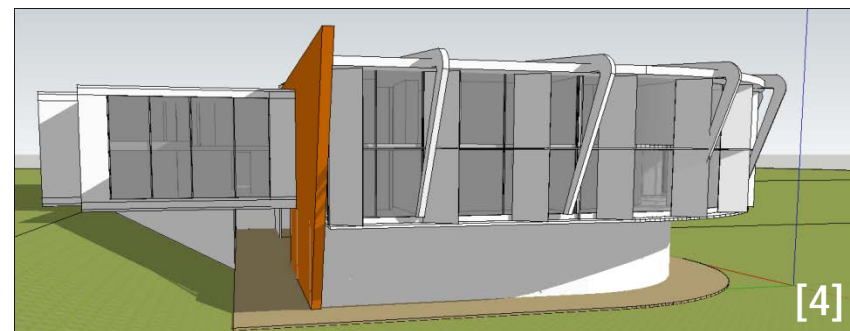
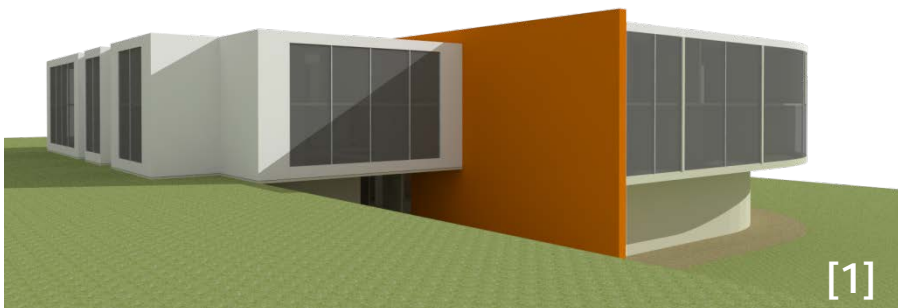


A

Atrium_Social Connection



Aesthetic Evolution



[Winter Quarter]

[Spring Quarter]

Team Process_Communication

1.



[Updates]

2.



[Files]

3.



[Meetings]

4.



[Owner Meetings]

5.



[Back-up]

Team Process_Meeting Agendas

MEETING MONDAY, March 19

Facilitator: Dennis

Meeting Minutes:

1. Announcements

~~Discuss the past few weeks~~

~~Presentation feedback~~

~~Team Process~~

~~Spring Quarter is here~~

~~Revit~~

2. Project Goals

Where you want to be

3. Vision

Help us see how to get there

4. Culture

Meet me

5. Survey

www.surveymonkey.com/s/SBYXH5Q



MEETING TUESDAY, APRIL 10

Facilitator: Jennifer

1. Announcements

a. Self Presentation Madeline

b. Stand-Up Report

2. Recap on CM/A Submeeting clarifications (Dennis's Slides)

a. E feedback on CM Slides.

i. 10 ft cantilever inside (walkway for auditorium)

ii. Curved beams for the curved sections of the Atrium and Building?

iii. irregular connections

iv. Finalize Retaining Wall/Simply Supported Concrete Wall

b. Incorporate more congregational space around the atrium. (Stairway around radius of atrium), may eliminate another stairway

c. Coffee Gathering/Couches Conversational Areas.

d. Make sure radial atrium beams connect to orthogonal grid.

e. Tilt in Column and Glass

f. Flexible panels that have change in angle and react to wind based on cardinal direction

i. Consider Maintenance Cost

ii. LEED-Consider Run-Off being used for harvest or landscaping, (Wind/Rain)

iii. Natural Ventilation purposes (GREEN)-reduce stagnant air.

iv. Kyle and Afan? From Arup.

3. ConXTech Integration? (Feasibility?)

4. MEP Issues

a. Remove Sink in Handicap Stall for 'MEP' location room.

5. 30 minute meeting with owners - SCHEDULE (Send Executive Summary)

6. LEED Updates

Team Process_Task List Production

5TH MEETING [MONDAY FEBRUARY 20, 2012]							
Who Acts	Task	Status	Due Date	For Whom	Time Allocated	Time Completed	Date of Completion
A	Cross section Auditorium+Large Classrooms	Complete	Feb.20	ALL	2	2	Feb.20
A	1st Concept Facade in Sketchup	Complete	Feb.20	ALL	3	3	Feb.20
E	Initial Shallow Foundation Design	Complete	Feb.24	E			
E	Initial Retaining Wall Design	Complete	Feb.24	ALL	2+		Feb.24
E	Concrete Special Moment Frame	Complete	Feb.23	C			
E	Post-Tensioned Slab Design (Preliminary)	Complete	Feb.29	E	2	1	Feb.29
MEP	Vent. Table	In Progress	Feb.24	MEP	5	1	
MEP	MEP Size Estimate	In Progress	Feb.24	MEP	2		
MEP	Heating/Cooling Loads	In Progress	Feb.24	MEP	2		
C	Auditorium Design	Complete	Feb.24	ALL	4	4	
C	Cost and time estimation			ALL			
ALL	Critique your own school	Complete	Feb.20	ALL	1	1	

TASKS FOR 3RD MEETING [TUESDAY APRIL 17, 2012]							
Who Acts	Task	Status	Due Date	For Whom	Time Allocated	Time Completed	Date of Completion
E	Retaining Wall Design	Complete	Thurs April 12	C			
E	Connection Design	In Progress		C			
A	Update floor plans [cantilevers +stairs]	Complete	Tues April 17	ALL	4+3.5+1	8.5	Tues April 17
A	Revit Model	Complete	Fri April 13	ALL	2+3+4	10	Fri April 13
A	Test Run Revit Model	Complete	Wed April 11	ALL	2	2	Wed April 11
A	Executive summary for owners	Complete	Wed April 11	ALL	3	3	Wed April 11
A	Fishbowl google doc	Complete	Wed April 11	ALL	2	2	Wed April 11
ALL	Schedule meeting w/ owners	Complete	Tues April 17	ALL	0.5	0.5	Thurs April 12
ALL	Test Run Revit Integration	In Progress	Wed April 11	ALL			
ALL	Generate Questions/PPT for Fishbowl	Complete	Wed April 11	ALL	3	3	Wed April 11
C	Continue construction sequence	In Progress	Wed April 11				
C	Estimate for tilted glass	In Progress					
C	Life Cycle of Building Components	In Progress	Tues April 17				

Pop_Introduction



Meeting Facilitation

Reinforce Personal Goals

Preview Slides

Social Connection

A screenshot of a GoToMeeting viewer window. The window title is "GoToMeeting Viewer" and it shows "Waiting to view Jennifer Ju's screen". There are five video thumbnails: Jennifer Ju (top left), Eric Tung (top middle), Jonathan Sweden (top right), Jennifer Ju (bottom left), and Madeline (bottom right). Below the thumbnails is a Citrix logo and a 3D architectural model of a building. The model is labeled "Architect" and "Engineer". To the right of the model is a toolbar with various drawing tools like "Shape Fill", "Shape Outline", "Shape Effects", "Find", "Replace", "Select", and "Editing".

POP = PEOPLE



Product

People

Organization

Process



Lesson's Learned

“Time zones are hard” – Eric Tung

“Define gridlines” – Jennifer Ju

“Situational Leadership” – Dennis Wolfe

“Teamwork” – Jonathan Isaksson

“Question the understood” – Madeline Campos