

# UMBC | The Center for Well-Being





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**Need for Speed? Insights from a  
Permanent Off-Site Construction Project**

# PRESENTERS



**Tom Argasinski**  
Project Manager  
UMBC Facilities Management



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Senior Client Specialist  
MODLOGIQ



**Rod Frey, Jr.**  
Studio Director  
Gilbert Architects Inc.



**Stephen Chesko**  
Project Manager  
Whiting-Turner





# UMBC STRATEGIC PLAN

***“Promote the health and well-being of students as a foundation for academic and life success.”***





## Slide 4

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**GOO**

[@Brian Lundquist] can you make the quote pop  
Greg Oniskey, 2022-04-27T19:16:56.568

# NEW FACILITY WAS NEEDED

***A new facility, as well as a unique approach, was needed!***

- University Health Services
- Health Promotion
- The Counseling Center
- Spirituality & Meditation
- Student Conduct & Community Standards





# UNIQUE APPROACH WAS NEEDED

## Identifying a need

- Lack of adjacency
- Inconvenient locations
- Aging facilities

## Hurdles to clear

- Funding
- Facilities master plan
- Swing space/In-person services
- Schedule



# BUILDING GOALS

- **Co-locating** campus health services and counseling into the same building
- Moving existing departments and units out of the deteriorating **Student Development and Success Center**
- Providing convenient access to health and wellbeing services to **all students**, regardless if they live on campus or commute to campus
- Locating a new facility **near, but not within**, existing residential facilities
- Providing growth for Counseling and University Health Services to expand their **outreach** and mission
- Providing sufficient space to meet current and future needs in alignment with enrollment growth projections
- Communicating symbolically the **importance of health and well-being**, especially mental health, through building location, architectural expression and functional layout of interior spaces
- Offering solutions that are **fiscally responsible** and deliver a permanent building **as quickly as possible**



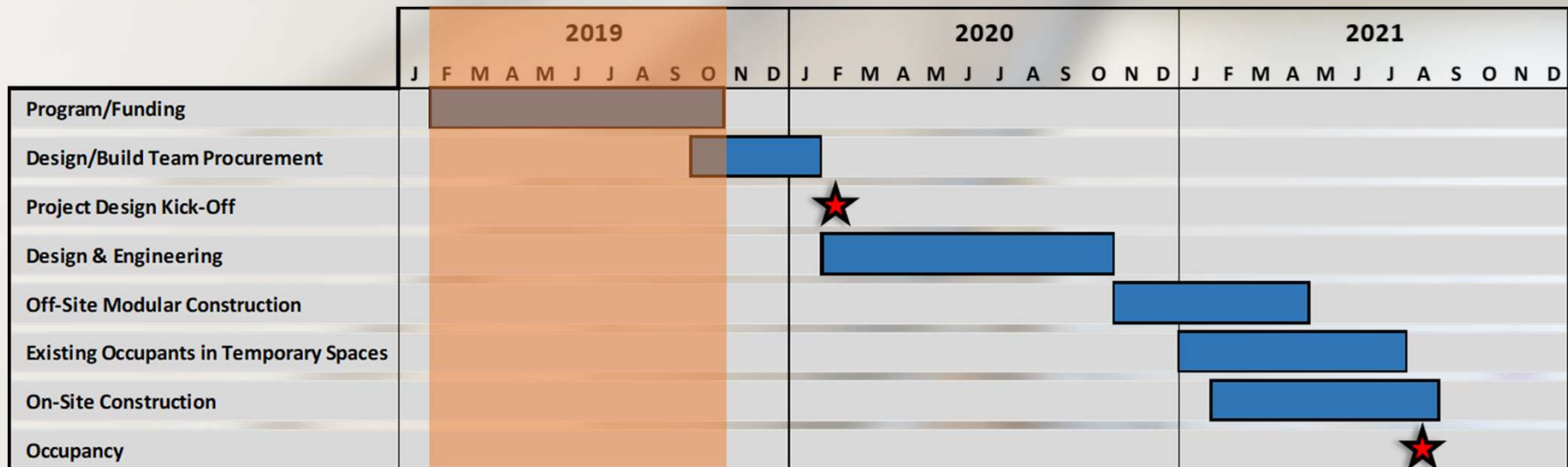
# LOCATION CONSIDERATIONS

- Adjacent to both residential and academic precincts
- Construction impact



# SCHEDULE REQUIREMENTS

## Project planning





# VIABLE DELIVERY METHODS

- **Open Book Design-Build**
- **Permanent Modular Construction**



# DESIGN-BUILD APPROACH

- Select team via QBS
- Simplified single procurement
- Regulatory approval process
- Single contract Open Book
- Precedent among USM institutions





# OFF-SITE CONSTRUCTION

- Fall 2021 opening
- 20%-30% schedule reduction
- Reduced labor costs
- Least impact to campus



# CONDITIONS OF SATISFACTION

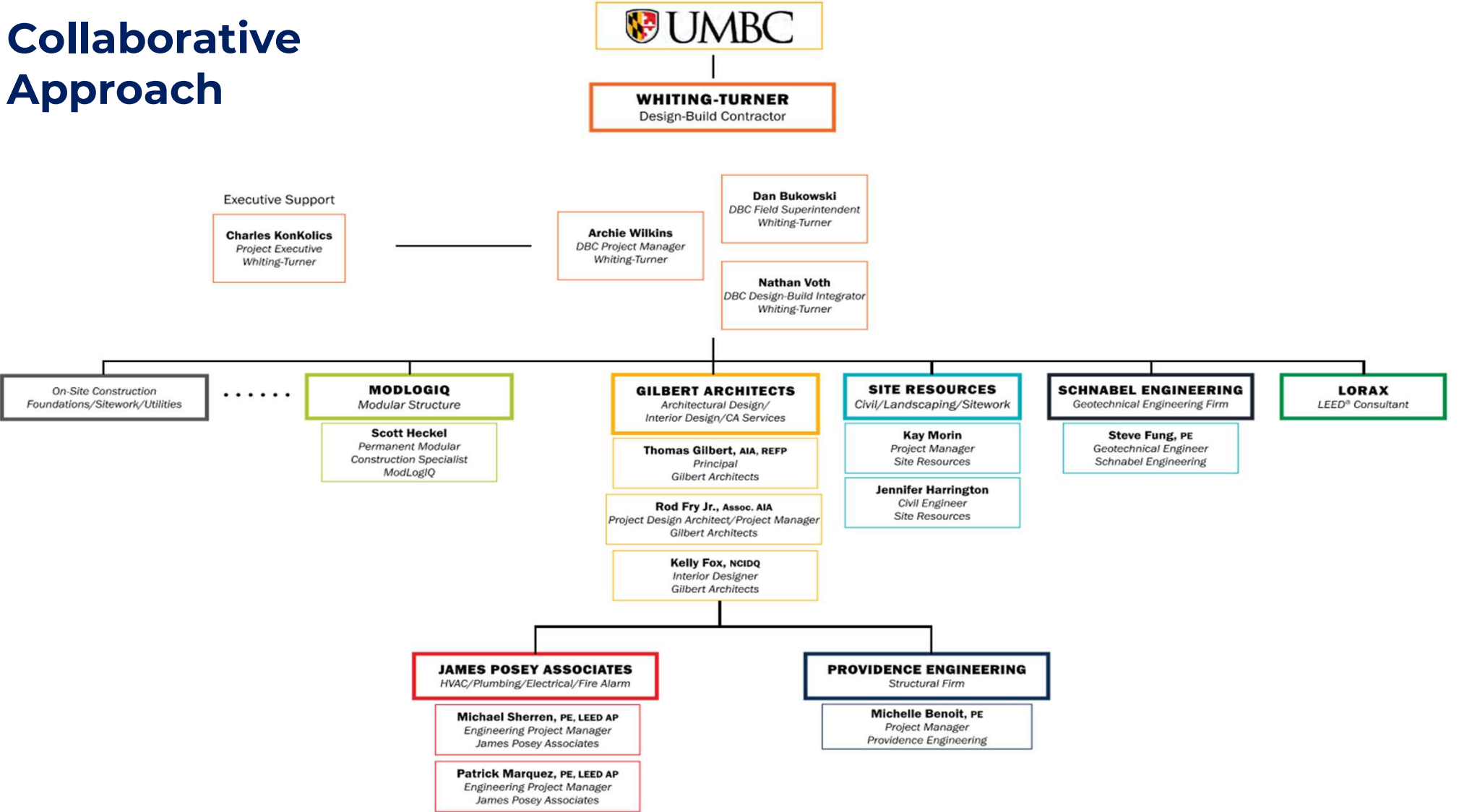
## Project Goals

- Deliver project on a **proscribed budget**
- **Bring units together** in a properly located modern facility
- **Minimize construction impact** on campus community
- Deliver building by **Fall 2021** (18 months construction)
- ***Finally get rid of those trailers!!!***





# Collaborative Approach



# THE CENTER FOR WELL-BEING

- Architectural style to reflect a unified campus
- Scale to complement adjacent buildings
- Main entrance facing center of campus



The image displays two floor plans for the COAA Connect Spring 2022 event. The left floor plan is a detailed layout of the main building, featuring a central gathering space, conference room, and various support rooms. The right floor plan shows a grid of rooms numbered 1-01 to 1-22, likely representing a secondary building or a specific section of the main building.

**Left Floor Plan Labels:**

- GATHERING STORAGE
- STORAGE
- MP GROUP MEETING ROOM
- STAIR #2
- MECHANICAL
- ELECTRICAL
- EMERGENCY ELECTRICAL ROOM
- SCCS STAFF OFFICE
- SCCS DIRECTOR'S OFFICE
- SCCS STAFF OFFICE
- SCCS MANAGERIAL OFFICE
- SCCS MANAGERIAL OFFICE
- SCCS RECEPTION
- SCCS WAITING
- RECORDS STORAGE
- RECYCLE
- SCCS STORAGE
- MIND SPA
- CORRIDOR
- LARGE MEETING ROOM
- STORAGE
- REMOTE TESTIMONY
- ASSIST DIR OF HEALTH PROMOTIONS
- GENERAL STORAGE
- STAFF SUPPORT ROOM
- HP STOR
- HEALTH PROMOTIONS
- STUDENT
- INFORMAL MEETING LOUNGE
- HP STAFF OFFICE
- HP STAFF OFFICE
- HP STAFF OFFICE
- VESTIBULE
- MAIN LOBBY
- STAIR #1
- VENDING
- ALL GENDER RESTROOM
- ALL GENDER RESTROOM
- ALL GENDER RESTROOM
- ELEV
- ELEC
- FOOT WASH
- CONFERENCE ROOM
- GATHERING SPACE
- SPRITUAL ADVISING SHARED OFFICE
- STORAGE

**Right Floor Plan Labels:**

- 1-01
- 1-02
- 1-03
- 1-04
- 1-05
- 1-06
- 1-07
- 1-08
- 1-09
- 1-10
- 1-11
- 1-12
- 1-13
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- 1-20
- 1-21
- 1-22
- 1-23

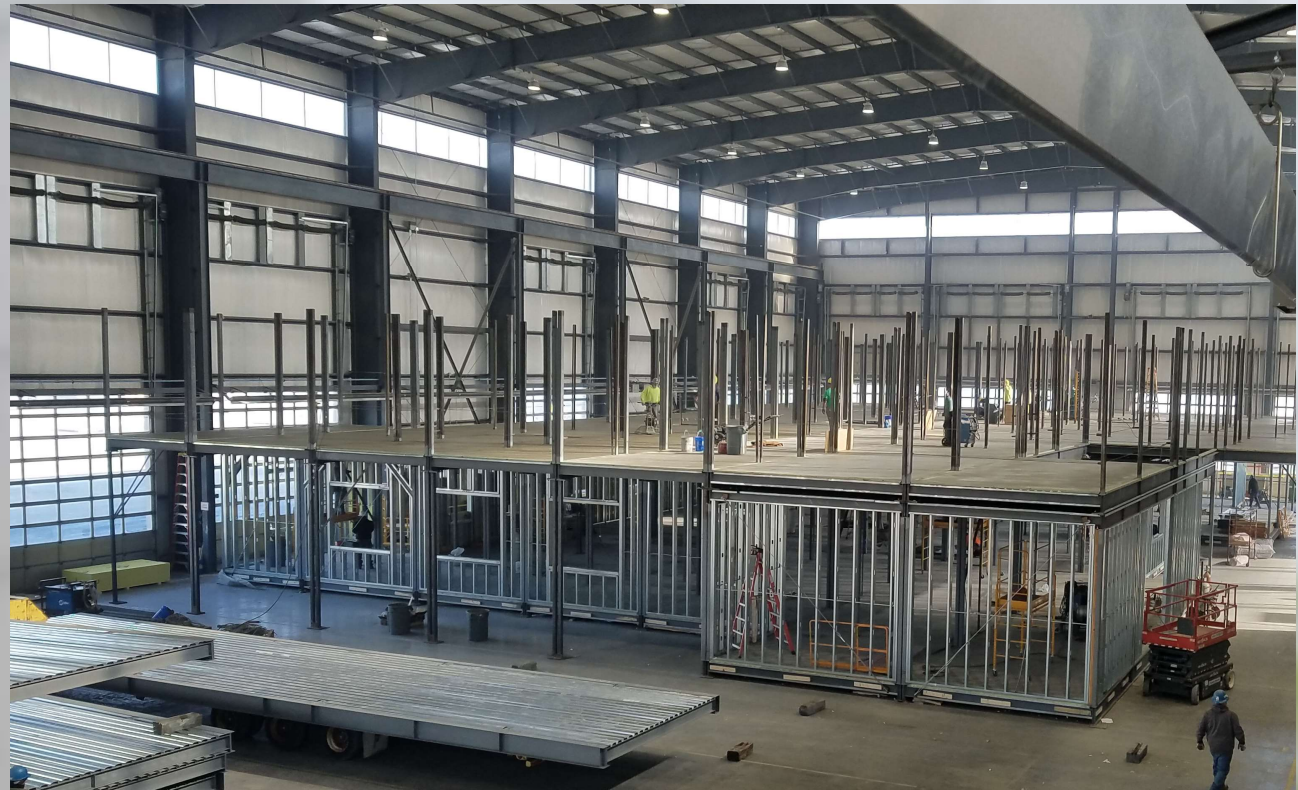


# DESIGN / MODULAR APPROACH – 2<sup>nd</sup> FLOOR



# STEEL FRAMING

- **Structural and light gauge framing**
- **Poured concrete**
- **Conventional approach**





# EXTERIOR - CANTILEVER

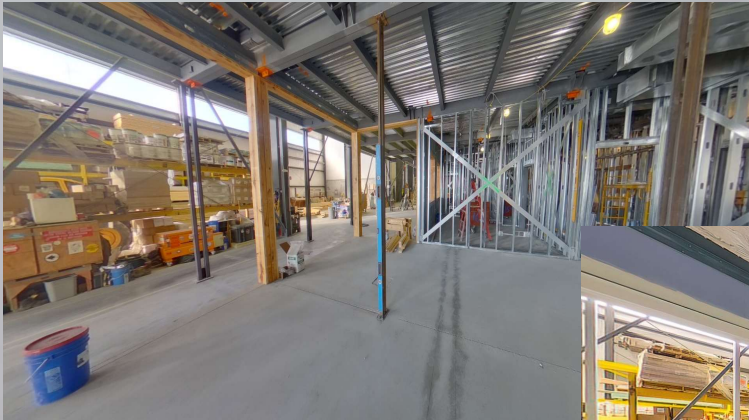
- **Post and beam construction**





# FRAMING TO FINISH/MEP TO COMPLETED

**Framing stage**



**Finish/MEP stage**



**Completed stage**



# MULTI-STORY LOBBY



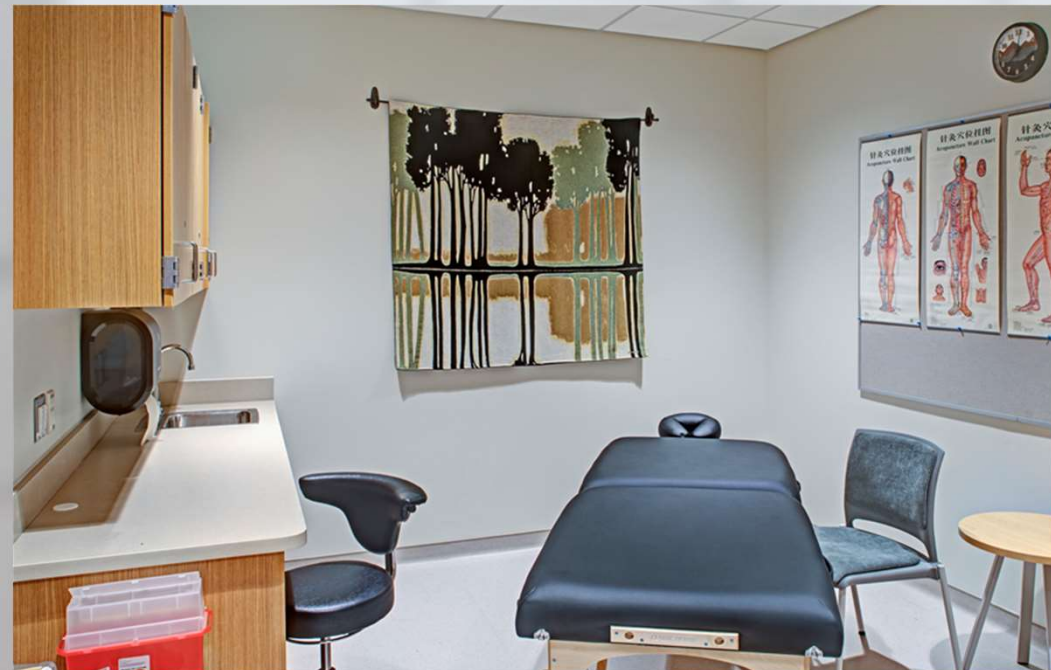
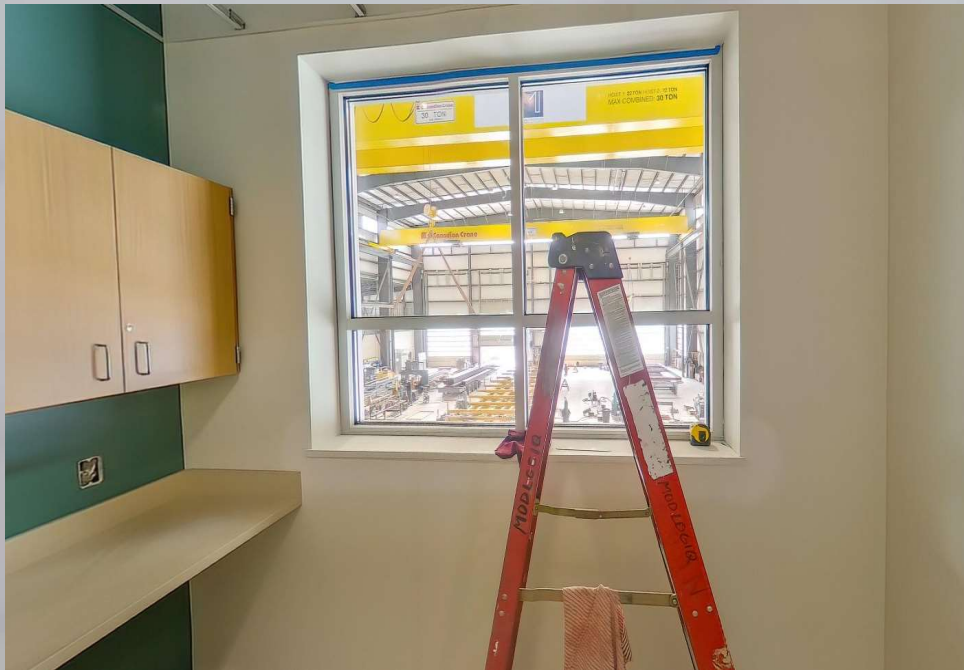
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# EXAM ROOM



# EXTERIOR – LIMITLESS OPTIONS





# LEED SILVER CERTIFICATION

**LEED for New Construction and Major Renovations**  
Project Checklist

Sustainable Sites		Possible Points: 26
Y	Prereq 1 Construction Activity Pollution Prevention	1
	Credit 1 Site Selection	1
	Credit 2 Development Density and Community Connectivity	5
	Credit 3 Brownfield Redevelopment	1
	Credit 4.1 Alternative Transportation—Public Transportation Access	6
	Credit 4.2 Alternative Transportation—Bicycle Storage and Changing Rooms	1
	Credit 4.3 Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
	Credit 4.4 Alternative Transportation—Parking Capacity	2
	Credit 5.1 Site Development—Protect or Restore Habitat	1
	Credit 5.2 Site Development—Maximize Open Space	1
	Credit 6.1 Stormwater Design—Quantity Control	1
	Credit 6.2 Stormwater Design—Quality Control	1
	Credit 7.1 Heat Island Effect—Non-roof	1
	Credit 7.2 Heat Island Effect—Roof	1
	Credit 8 Light Pollution Reduction	1

Water Efficiency		Possible Points: 10
Y	Prereq 1 Water Use Reduction—20% Reduction	2 to 4
	Credit 1 Water Efficient Landscaping	2
	Credit 2 Innovative Wastewater Technologies	2 to 4
	Credit 3 Water Use Reduction	2 to 4

Energy and Atmosphere		Possible Points: 35
Y	Prereq 1 Fundamental Commissioning of Building Energy Systems	1 to 19
Y	Prereq 2 Minimum Energy Performance	1 to 7
	Prereq 3 Fundamental Refrigerant Management	2
	Credit 1 Optimize Energy Performance	2
	Credit 2 On-Site Renewable Energy	3
	Credit 3 Enhanced Commissioning	2
	Credit 4 Enhanced Refrigerant Management	2
	Credit 5 Measurement and Verification	2
	Credit 6 Green Power	2

Materials and Resources		Possible Points: 14
Y	Prereq 1 Storage and Collection of Recyclables	1 to 3
	Credit 1.1 Building Reuse—Maintain Existing Walls, Floors, and Roof	1
	Credit 1.2 Building Reuse—Maintain 50% of Interior Non-Structural Elements	1 to 2
	Credit 2 Construction Waste Management	1 to 2
	Credit 3 Materials Reuse	1 to 2

Materials and Resources, Continued		Possible Points: 10
	Credit 4 Recycled Content	1
	Credit 5 Regional Materials	1
	Credit 6 Rapidly Renewable Materials	1
	Credit 7 Certified Wood	1

Indoor Environmental Quality		Possible Points: 10
Y	Prereq 1 Minimum Indoor Air Quality Performance	1
Y	Prereq 2 Environmental Tobacco Smoke (ETS) Control	1
	Credit 1 Outdoor Air Delivery Monitoring	1
	Credit 2 Increased Ventilation	1
	Credit 3.1 Construction IAQ Management Plan—During Construction	1
	Credit 3.2 Construction IAQ Management Plan—Before Occupancy	1
	Credit 4.1 Low-Emitting Materials—Adhesives and Sealants	1
	Credit 4.2 Low-Emitting Materials—Paints and Coatings	1
	Credit 4.3 Low-Emitting Materials—Flooring Systems	1
	Credit 4.4 Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	Credit 5 Indoor Chemical and Pollutant Source Control	1
	Credit 6.1 Controllability of Systems—Lighting	1
	Credit 6.2 Controllability of Systems—Thermal Comfort	1
	Credit 7.1 Thermal Comfort—Design	1
	Credit 7.2 Thermal Comfort—Verification	1
	Credit 8.1 Daylight and Views—Daylight	1
	Credit 8.2 Daylight and Views—Views	1

Innovation and Design Process		Possible Points: 6
	Credit 1.1 Innovation in Design: Specific Title	1
	Credit 1.2 Innovation in Design: Specific Title	1
	Credit 1.3 Innovation in Design: Specific Title	1
	Credit 1.4 Innovation in Design: Specific Title	1
	Credit 1.5 Innovation in Design: Specific Title	1
	Credit 2 LEED Accredited Professional	1

Regional Priority Credits		Possible Points: 4
	Credit 1.1 Regional Priority: Specific Credit	1
	Credit 1.2 Regional Priority: Specific Credit	1
	Credit 1.3 Regional Priority: Specific Credit	1
	Credit 1.4 Regional Priority: Specific Credit	1

Total		Possible Points: 110
	Certified 40 to 49 points	
	Silver 50 to 59 points	
	Gold 60 to 79 points	
	Platinum 80 to 110	



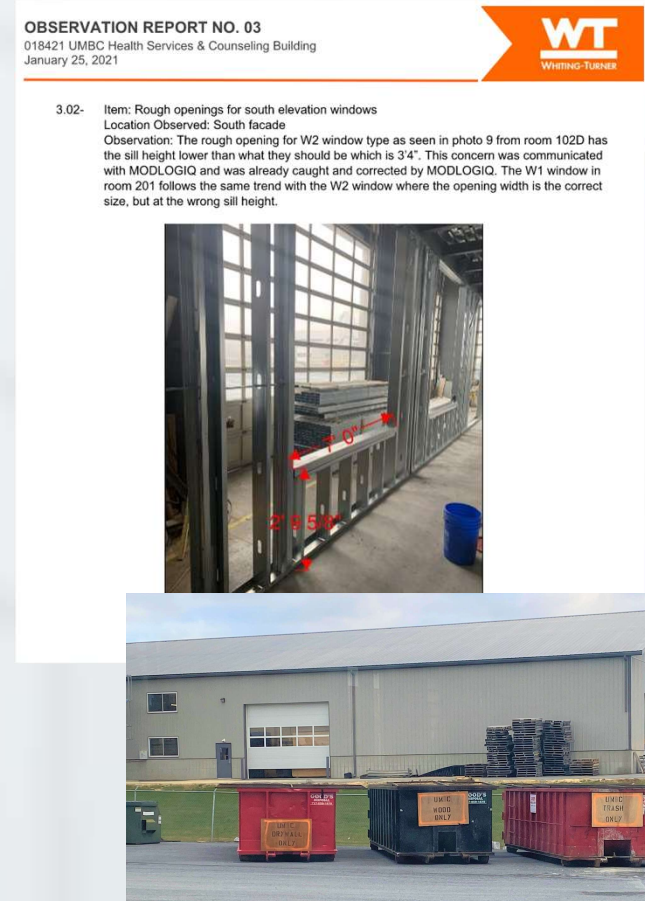


# TIME-LAPSE PROJECT VIDEO



# CONSTRUCTION CHALLENGES

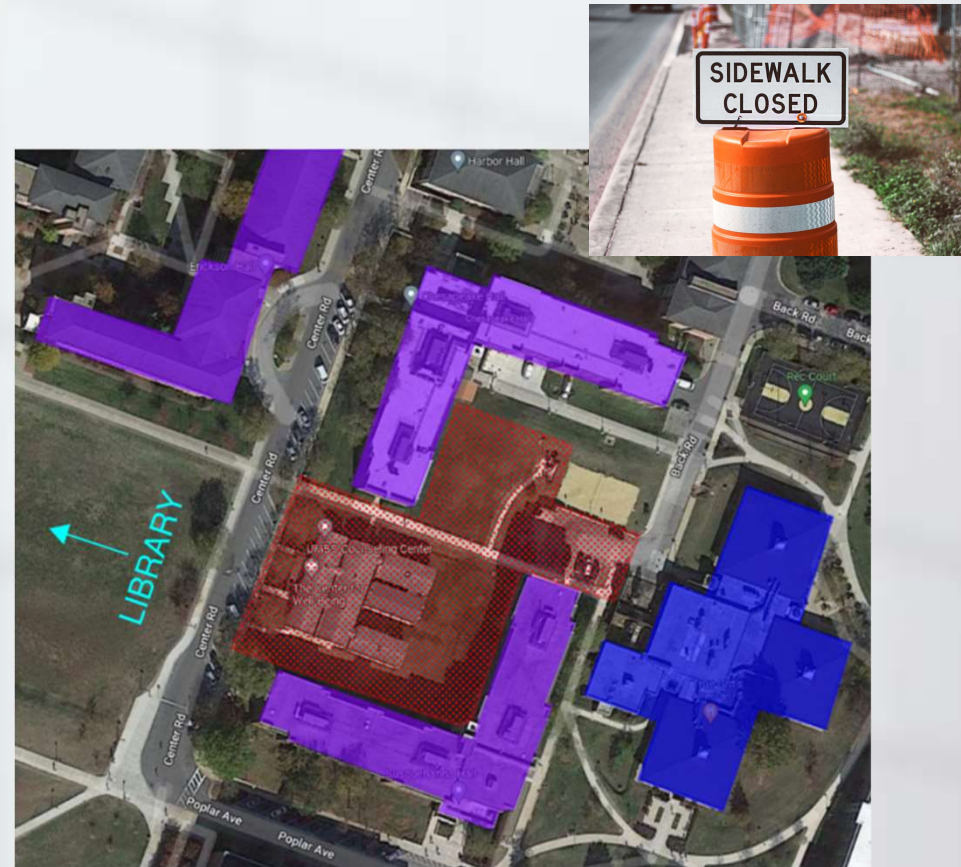
- **Challenges to Traditional Processes**
  - Subcontractor Bidding
  - Off-site Inspections
  - Extending On-Site Procedures
    - LEED
    - Quality Management
    - Safety
    - Insurance Coverages
  - Continuity with Contractors/Vendors



# CONSTRUCTION CHALLENGES

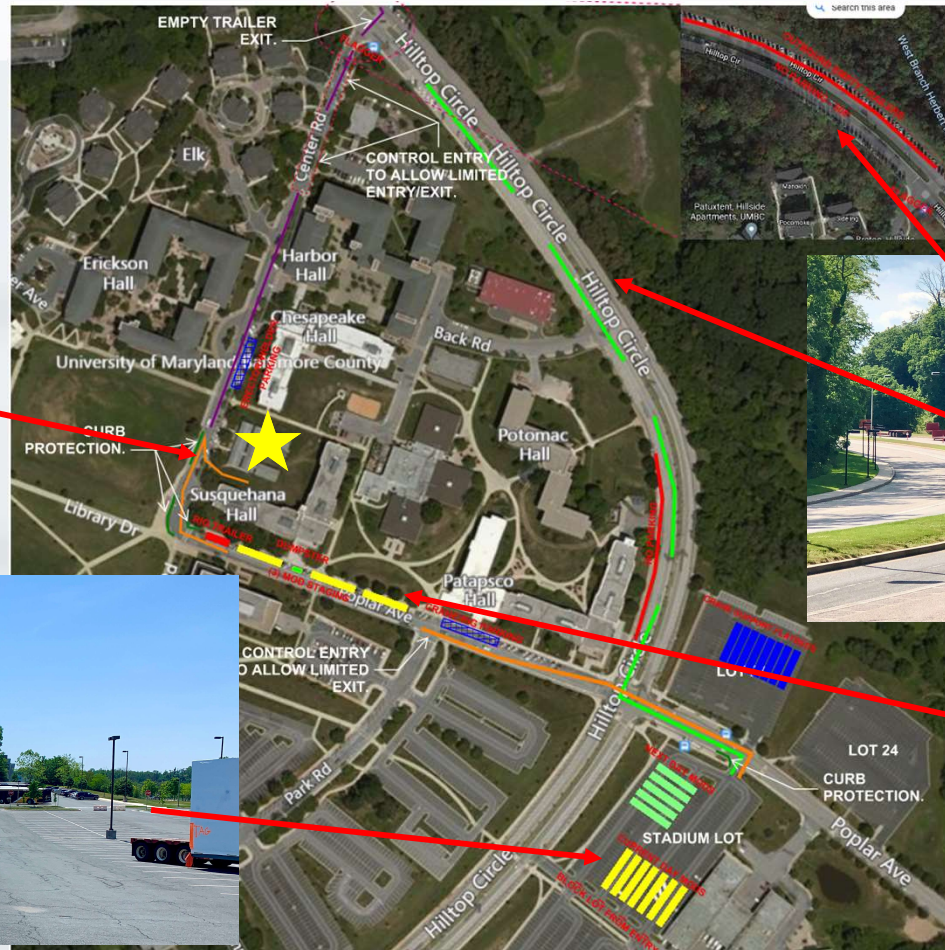
## Impacts to college campus

- Duration of Construction
- Logistics
- Module Delivery & Assembly





# CONSTRUCTION CHALLENGES



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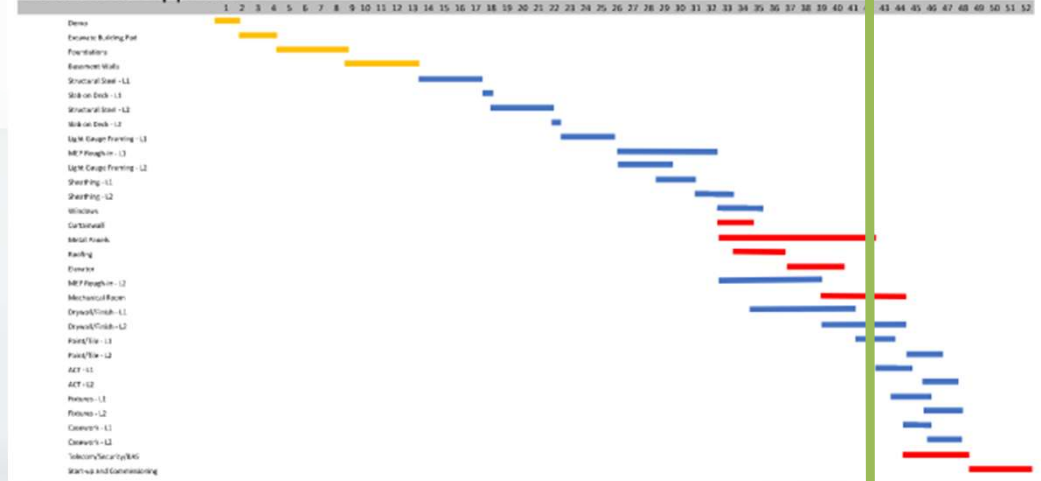
# SCHEDULE ANALYSIS

Campus Impact  
Shortened by **18 Weeks**

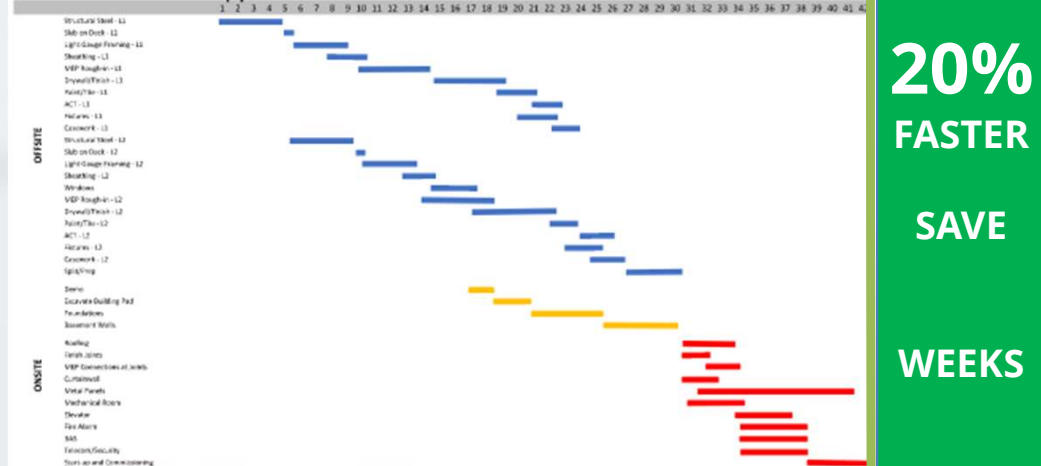
Construction Reduced  
by **10 Weeks**

**20%** Reduction from  
Traditional Construction

Traditional Approach



Off-Site Modular Approach



**20%  
FASTER  
SAVE  
WEEKS**

# SCHEDULE ANALYSIS

MONTHS

1 2 3 4 5 6 7 8 9 10 11 12 13 14

William & Mary Integrated Wellness

ON-SITE

Goodwin House Health & Wellness

ON-SITE

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OFF-SITE

ON-SITE

14-WEEK REDUCTION  
OVERALL SCHEDULE

32-WEEK REDUCTION  
ON-SITE CONSTRUCTION IMPACT



# COST ANALYSIS

## Representative Project Comparison

- William & Mary Integrated Wellness Center
  - **\$550/SF** (escalated to 2021)
- Goodwin House Health & Wellness Center
  - **\$744/SF** (escalated to 2021)
- UMBC Center for Well-Being
  - **\$570/SF**

**~10-week**  
schedule reduction

**\$335,000**  
in GC/GR savings

**2.5%**  
of project value

# COST ANALYSIS

## Key Take-Aways

- Subcontractor Bidding
- Projected Labor Rate Savings
- Schedule Reduction
  - Estimated 10-week schedule reduction translates to \$335,000 in GC/GR savings (2.5% of project value)

# HOW DID WE DO?

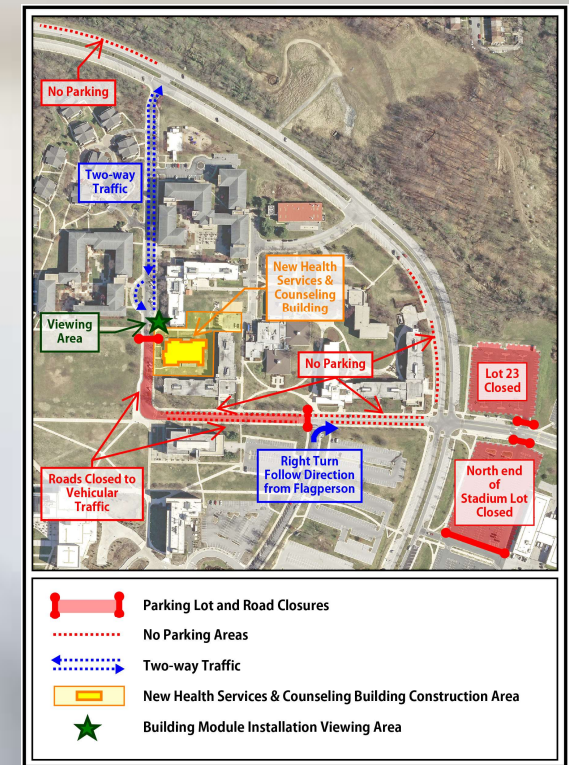
***UMBC's conditions of satisfaction were largely met by employing open book design-build and permanent modular construction***





# MINIMIZE CAMPUS IMPACT

- Construction traffic, road and sidewalk closures, noise, swing space & continuity of operations



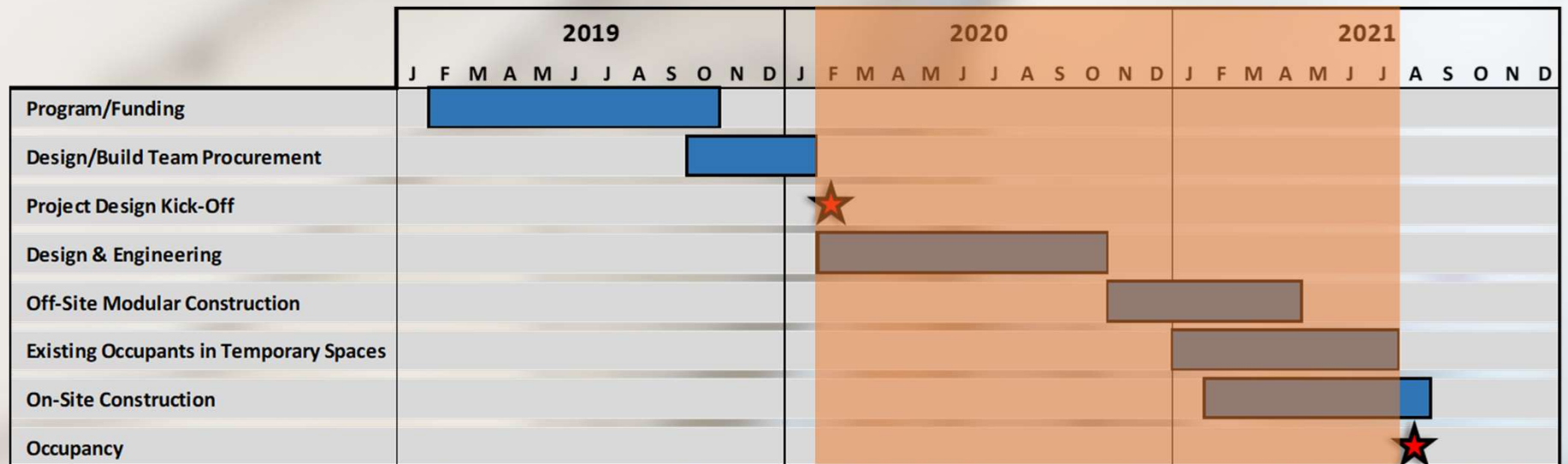
# DELIVER PROJECT ON BUDGET

- Prevailing wage rates
- Wage rates at modular builder facility
- Permanent modular logistics



# PROJECT COMPLETED ON TIME

18 months  
through  
substantial completion





# WOULD WE DO IT AGAIN?

- **CWB:** The right choice was confirmed by successful completion of the CWB
- **SHORT ANSWER:** ABSOLUTELY!
- **LONG ANSWER:** Each potential project would need to be analyzed to confirm the right approach



# Q&A



- Judges Choice Award
- 1<sup>st</sup> Place Permanent Healthcare
- Best in Show – Marketing
- 1<sup>st</sup> Place – Marketing - Multimedia

24,617 SF  
18 months  
\$17 million



# Q&A





# CONTACT



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