

# STATUS UPDATE

## Regional Class Research Vessels



Presented by Demian Bailey 04/20/2022

# 3 Vessel Build under NSF MREFC Funding



*R/V Taani*



*R/V Narragansett Dawn*



*R/V Gilbert R Mason*

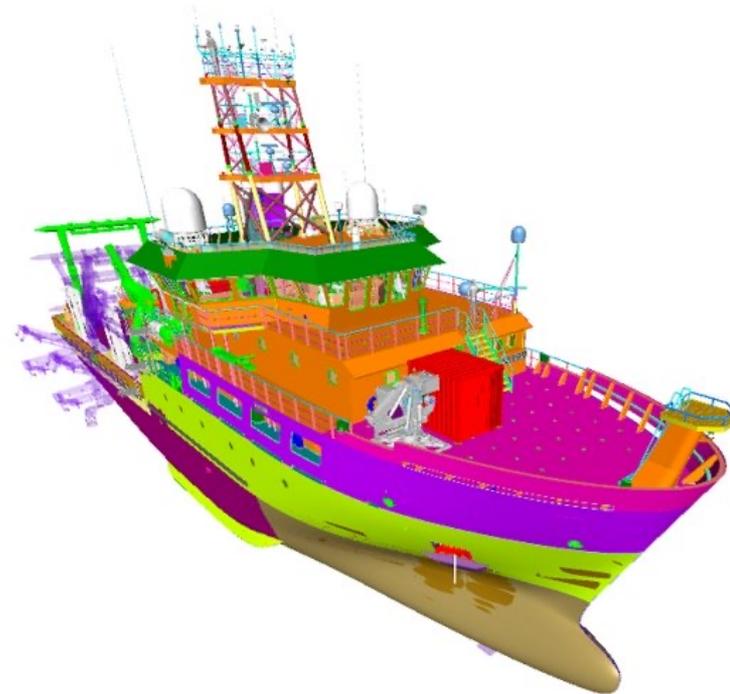


# RCRV PARTICULARS

- Length overall .....199 ft
- Beam ..... 41 ft
- Draft @ amidships .....12.5 ft
- Regulatory Tonnage ...1549 GT
- Cruise speed .....11 kt
- Max speed .....13 kt
- Range .....5400 nm @ 12 kt
- Endurance .....21 days min.
- Dynamic Positioning.....ABS DP-1
- Science/Tech Berths .....16
- Crew Berths .....13
- Retractable Centerboard (drop keel)
- A-frame dimensions ....25'H x 20'W
- Multibeam SONAR....EM304, 2040
- Number winches .....3
- Ice Class .....ABS C0

## Major Challenges

- Design Requirements: Many of the same systems as larger vessels. Added 12'
- Engineering & Modeling: Original engineering firm left early in project
- GIS Capacity / Performance Limits: Little experience with gov't contract req's
- 7 Hurricanes in 2020: multiple small force majeure events
- COVID 19: High absentee rates and engineering inefficiencies
- Acquisition by Bollinger in early 2021: progress delayed before during & after
- Hurricane Ida in 2021: 6 months with no progress on the critical path



# RCRV MREFC Project Milestones

- Complete Design Transfer (OSU to shipyard) ✓
- Begin Construction (Keel laying) ✓
- Launch and Final Outfitting
- Shipyard/Builders Trials
- Delivery for Preliminary Acceptance (by OSU)
- End of Warranty Period - (Final Acceptance Construction Complete)
- Science Trials (Transition to Operations)
- NSF Inspection
- Acceptance as UNOLS vessel

PHASE III

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PHASE IV

# Challenges 2021

- Shipyard has New Ownership
  - **Bollinger Houma Shipyard**
  - Bollinger is the largest privately owned yard in the country
  - Long history of successful projects for the USCG and USN
  - OSU has seen marked improvement
    - Safety
    - Management
    - Customer



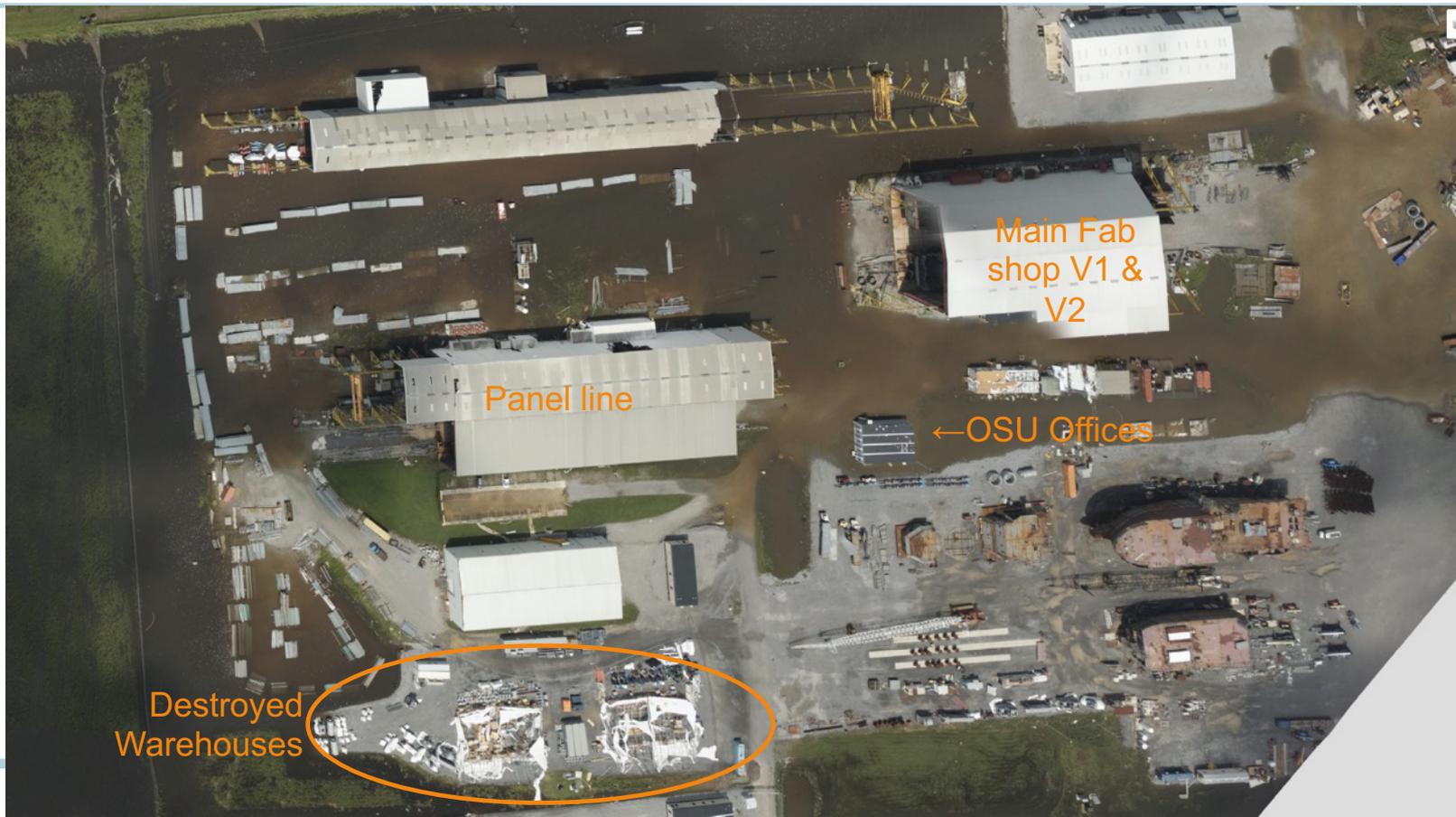
# 2021 Challenges- Houma LA

## Hurricane Ida

August 29, 2021

Sustained 130 kt  
Gusts 150 kt

Area  
Infrastructure  
Damage

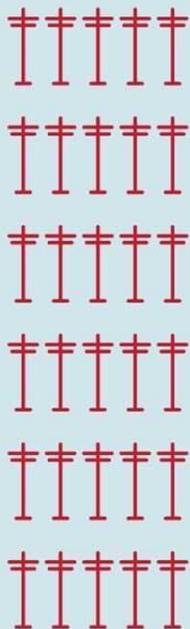


# Hurricane Ida



# Damaged Utility Pole Comparison: = 1,000 Poles

**IDA 2021**  
30,000+ poles



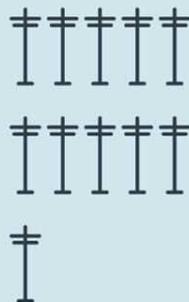
**KATRINA 2005**  
17,000+ poles



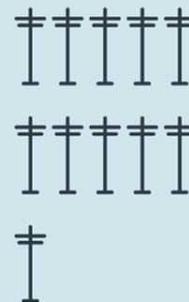
**LAURA 2020**  
14,000+ poles



**RITA 2005**  
11,000+ poles



**GUSTAV 2008**  
11,000+ poles



**ZETA 2020**  
2,000+ poles

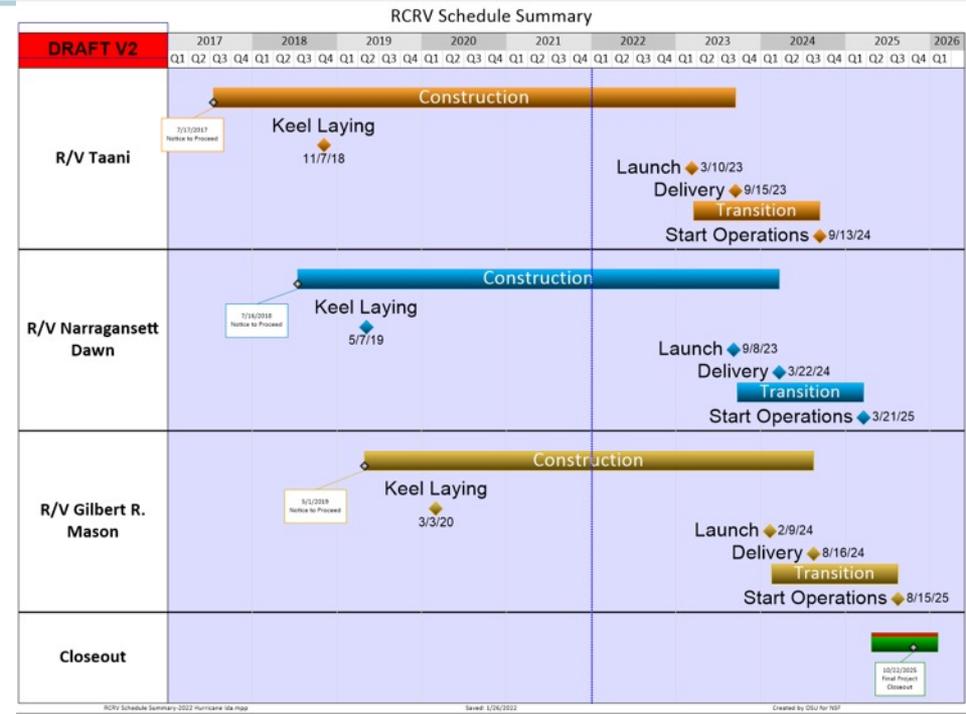
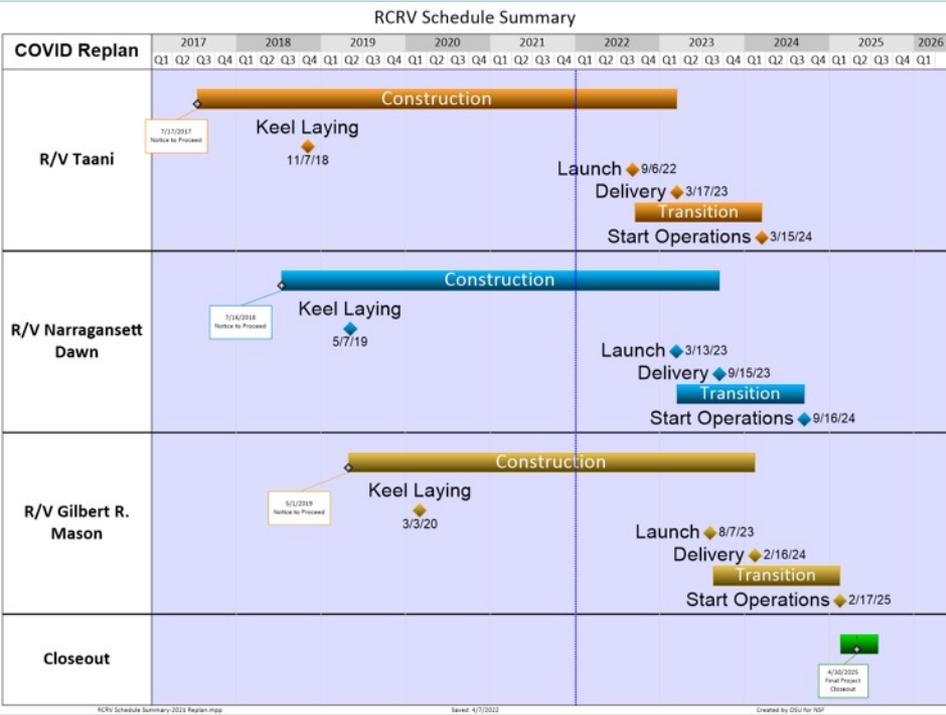


# Bollinger Houma Shipyard - IDA Response

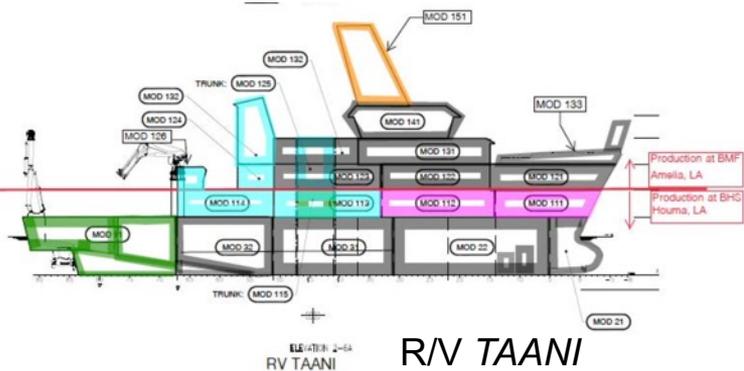
- Improving Storage
- Rapid upgrades to drainage and flood protection
- Community re-building projects
- Labor Force Support (with OSU support)



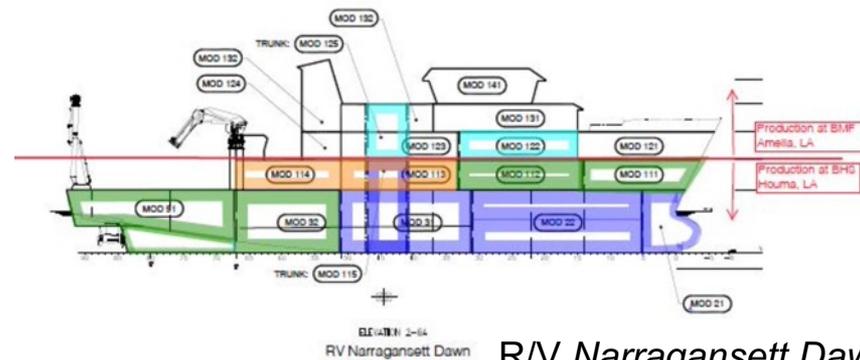
# Baseline Schedule Vs. Possible Ida Delay



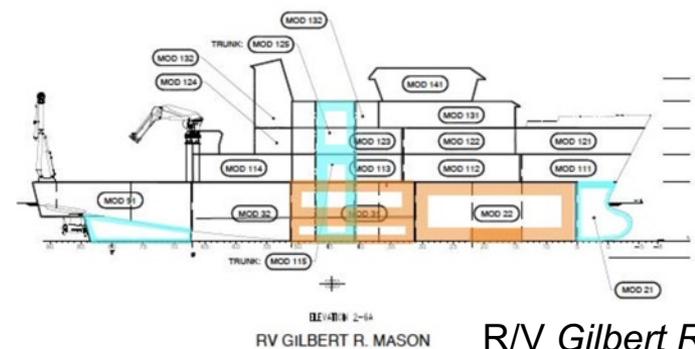
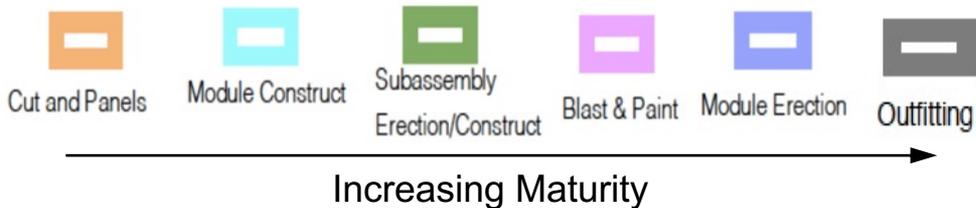
# Vessel Progress as of April 2022



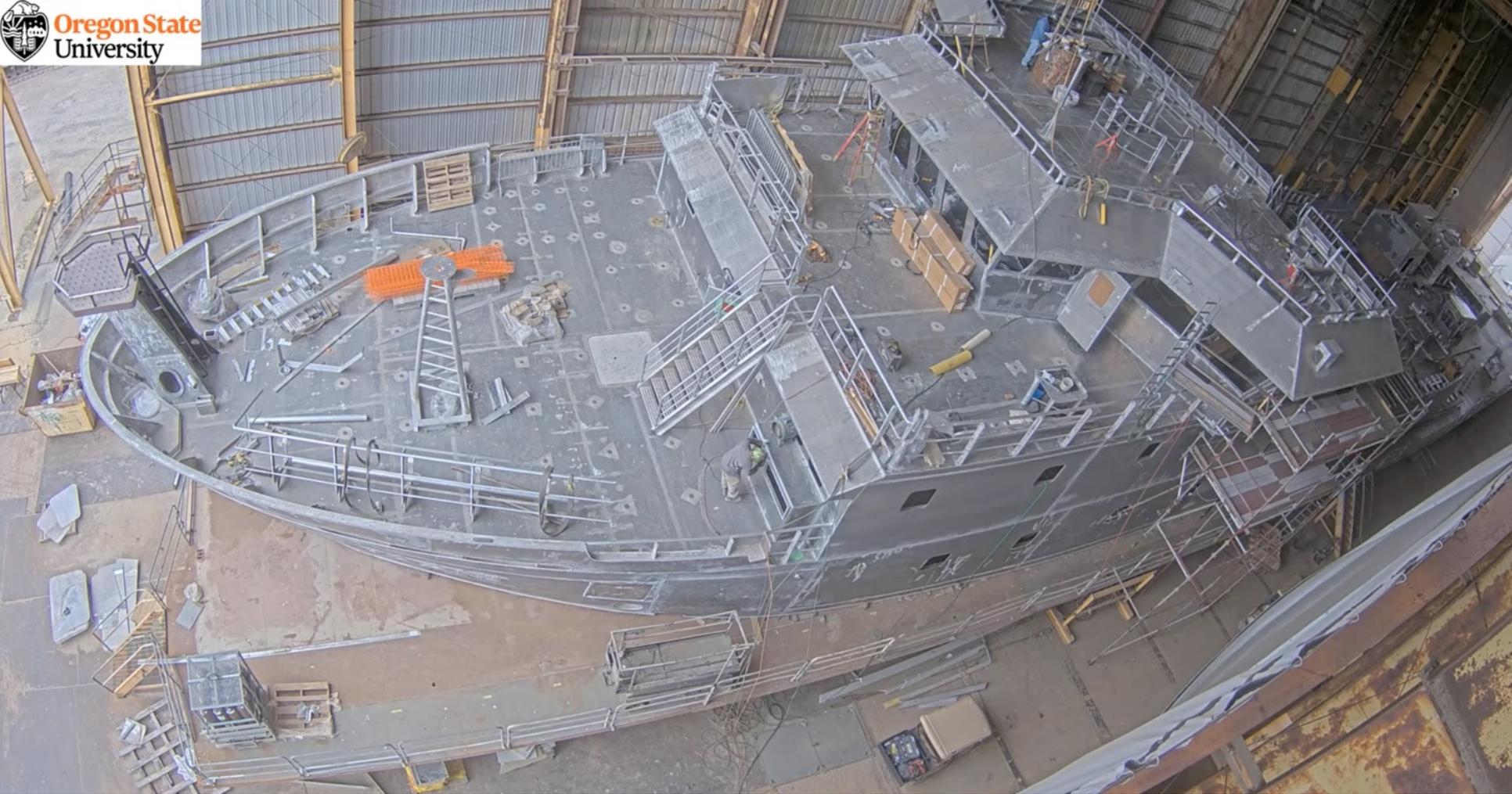
**RV TAANI**



**RV Narragansett Dawn**



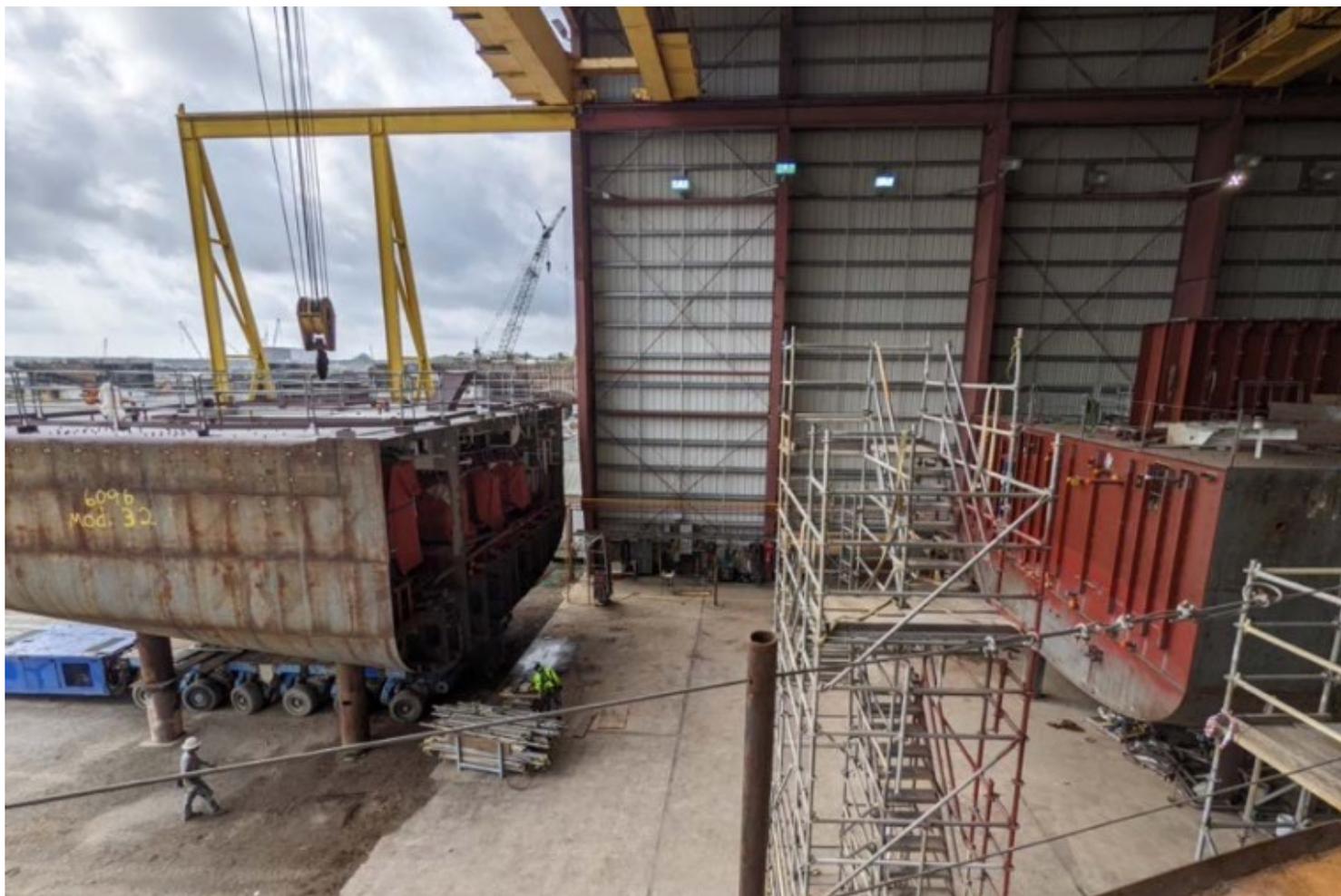
**RV Gilbert R. Mason**



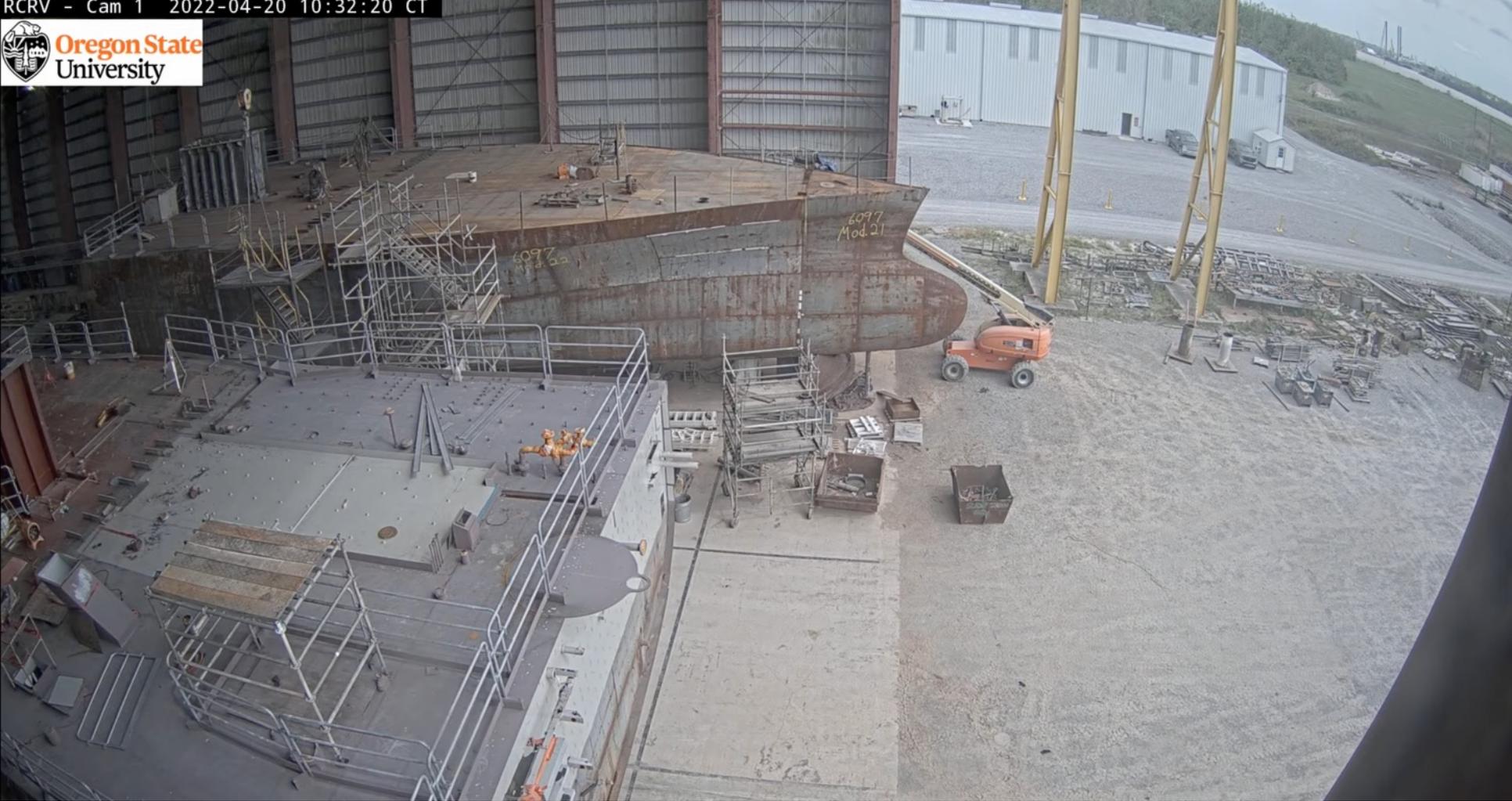
V1: Aluminum Superstructure as of 4/20/22



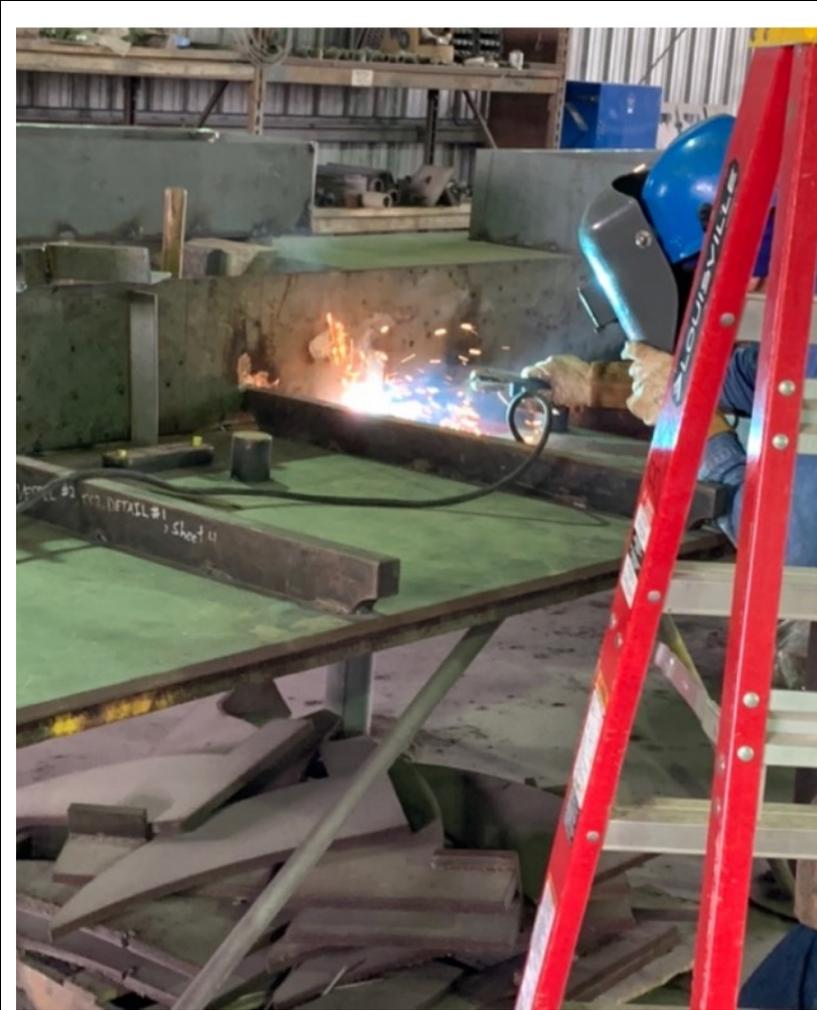
V1: Weighing Blue Drives before installation into Mod 32



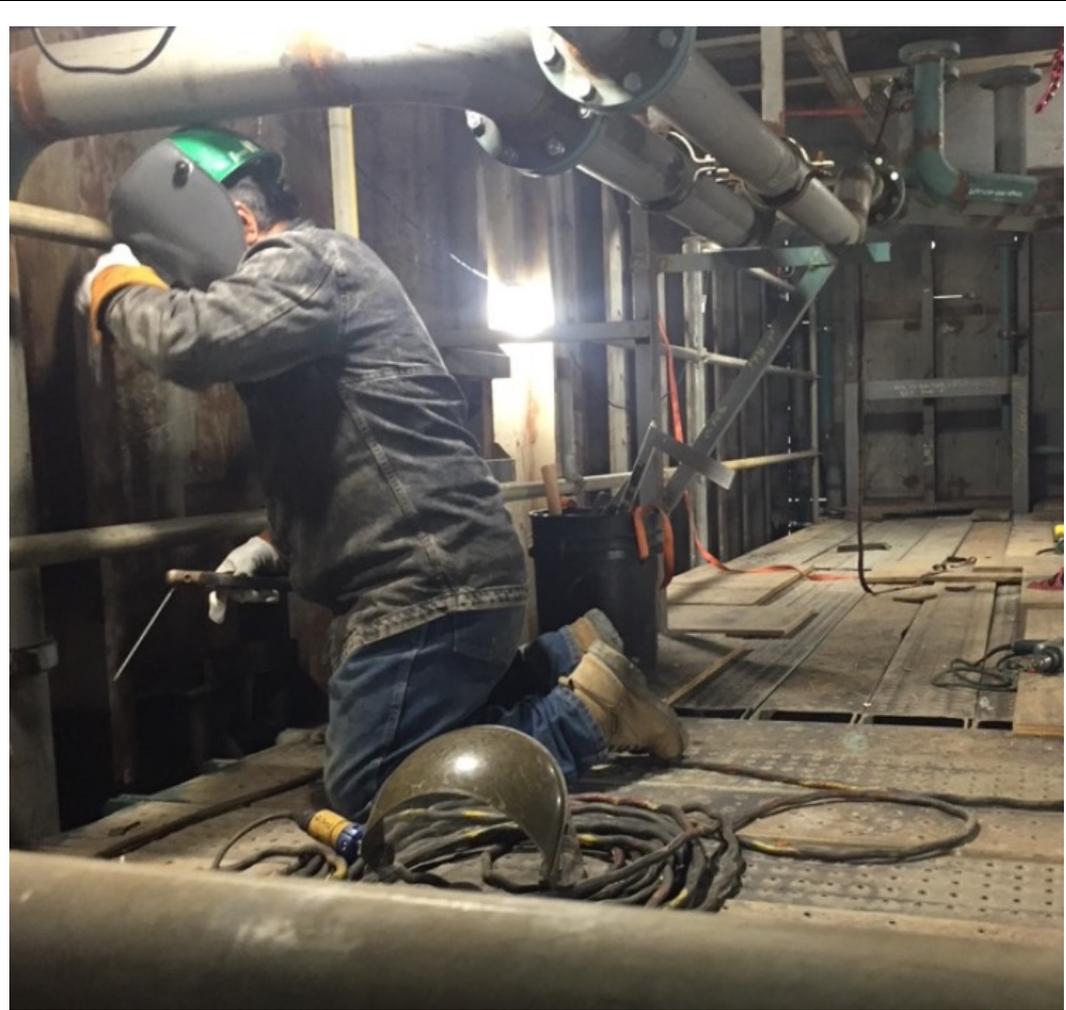
V1: Mod 32 (Engine room) being joined to "Supermod" (Mod 31-Auxilliary Machine Room)



V1: (foreground Mod32) V2: Background (bow)



V2: Sonar Box Fabrication



V2: Mod 31 Pipe Work



V3: Science LARS Static Test



V3: Small Boat LARS Static Test

## Phase IV – R-DESC

- CORIOLIX
  - Development and integration with CI and Sensors
  - Support for all three current OIs
- Cyber and Sensor Infrastructure
  - All three vessels sensor procurement
  - Configuration and system testing
  - R/V *Taani* full system bench test
- Outfitting procurement
- Larger RFP process
  - Accommodation Vans
  - Piston Coring Deployment and Recovery System
  - CMMS
- Collaboration with UNOLS/ARF working groups
  - R2R, MFP, ISC, CI/CS, Best Practices, etc.



# CONSTRUCTION UPDATE

## 2022





For outreach videos visit:  
[https://www.youtube.com/watch?v=bgiAU\\_b4RfY](https://www.youtube.com/watch?v=bgiAU_b4RfY)