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NC STATE COLLEGE OF DESIGN

03.23.2021

**NC STATE** Design



**COASTAL DYNAMICS DESIGN LAB**

NORTH CAROLINA STATE UNIVERSITY | COLLEGE OF DESIGN



An aerial photograph of a coastal area, likely a university campus or research facility. In the foreground, there's a large body of water with several boats and a bridge. To the left, a runway is visible. The background shows a mix of green fields, trees, and some industrial or commercial buildings. The overall scene is captured in a slightly desaturated, high-angle shot.

# MISSION

**ORGANIZE AND LEAD TRANSDICIPLINARY RESEARCH AND DESIGN  
TEAMS TO ADDRESS CRITICAL ECOLOGICAL AND COMMUNITY  
DEVELOPMENT CHALLENGES IN VULNERABLE SHORELINE  
COMMUNITIES AND COASTAL REGIONS.**



A composite image of three people at a panel discussion. On the left, a man with glasses and a grey jacket holds a microphone. In the center, a woman with long dark hair smiles while holding a microphone. On the right, a man with glasses and a mustache, wearing a grey sweater, is also holding a microphone. A Starbucks coffee cup is visible on the table in the foreground on the left. The background is a plain, light-colored wall.

# WORKING WITH PARTNERS

ENGAGING WITH ALLIED PROFESSIONS + PERSPECTIVES



A group of approximately 12 students are standing in a line on a paved area, likely a dock or waterfront. In the background, the masts and rigging of a large sailboat are visible against a cloudy sky. The students are dressed in casual summer attire, including t-shirts, tank tops, shorts, and jeans. The overall tone of the image is slightly muted, with a dark overlay that makes the white text stand out.

# WORKING WITH STUDENTS

BUILDING THE NEXT GENERATION OF LEADERS

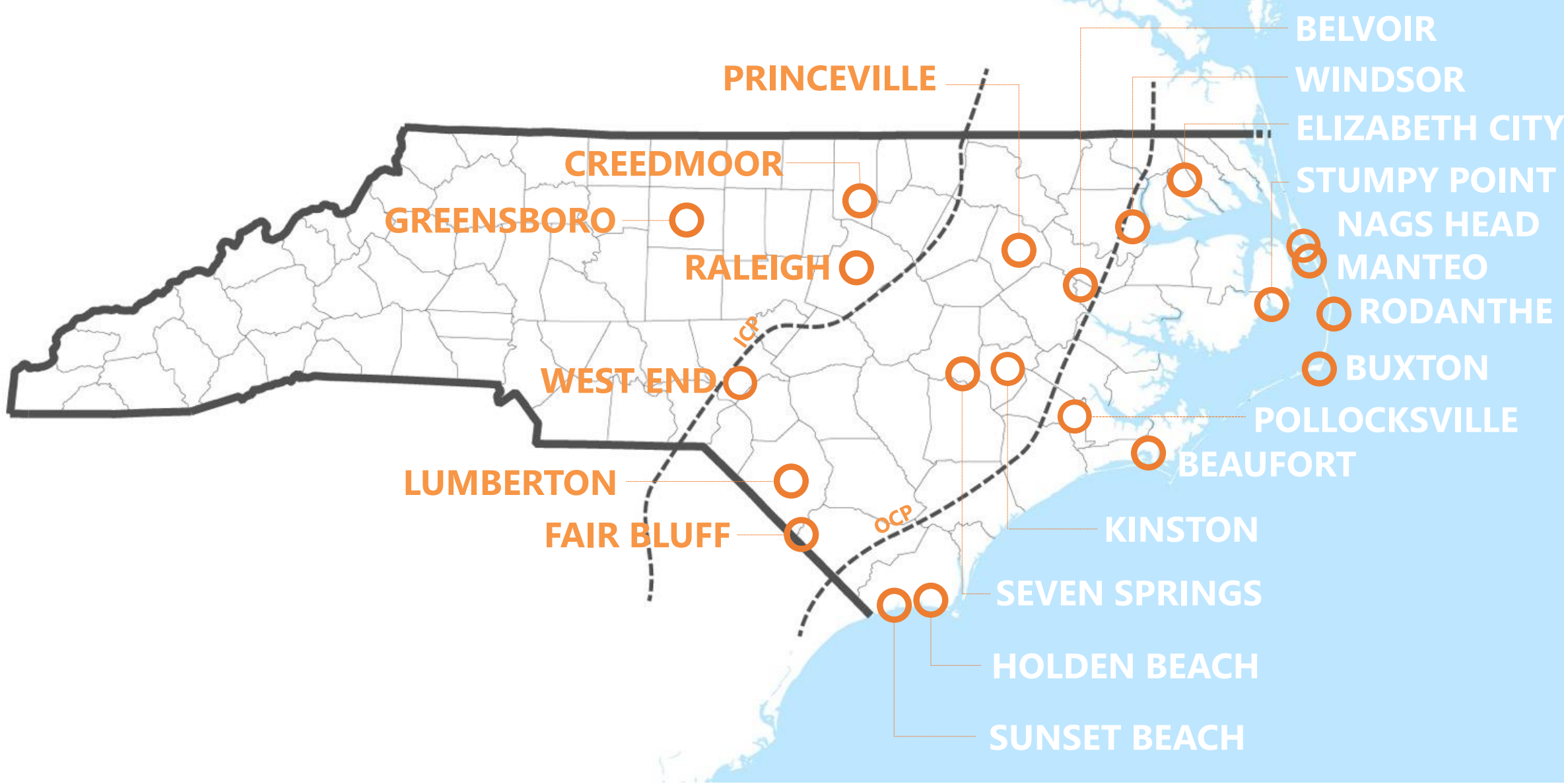




# WORKING WITH COMMUNITIES

EXTENDING RESEARCH INTO COMMUNITIES, FOR COMMUNITIES









POST-MATTHEW  
WORKSHOP  
(2017)



"HOMEPLACE"  
(2017)



ARCH + LAR  
STUDIO COURSE  
(2018)



ENVIROKIDS  
(2018)



"GREATER  
PRINCEVILLE"  
(2018)



MOBILE HISTORY  
MUSEUM  
(2019)



"PRINCEVILLE  
FLOODPRINT"  
(2020)

# TIMELINE OF PROJECTS + INITIATIVES

RESPONDING TO NEEDS



# OPPORTUNITIES FOR REPAIR, RECOVERY & RESILIENCE

STATISTICS: HAZARD MITIGATION GRANT PROGRAM  
IN LUMBERTON (HMGP FUNDED BY FEMA)

# Applicants in Lumberton from Hurricane Matthew:

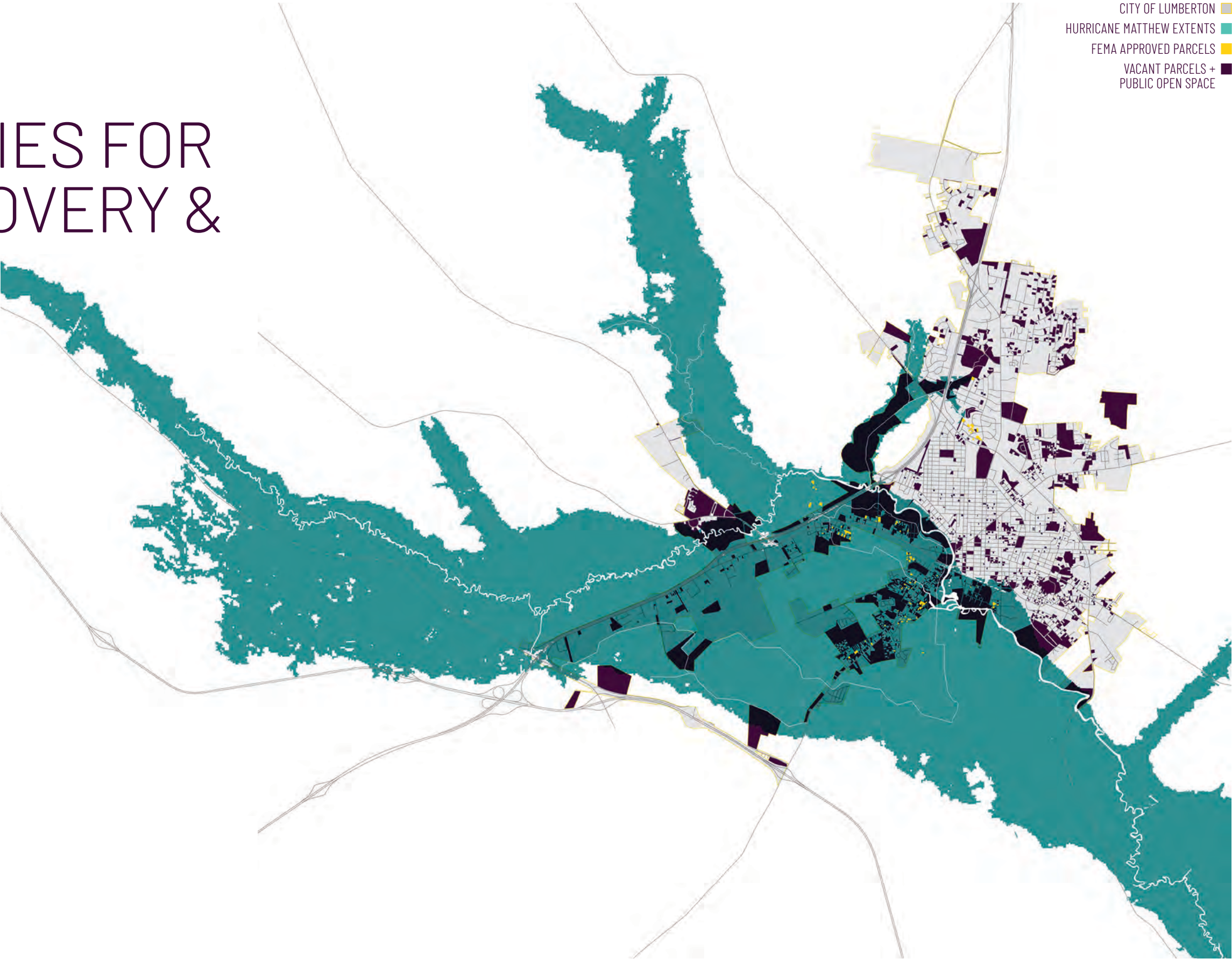
400+

# Approved Properties (Buyouts + Reconstructions + Elevations):

107

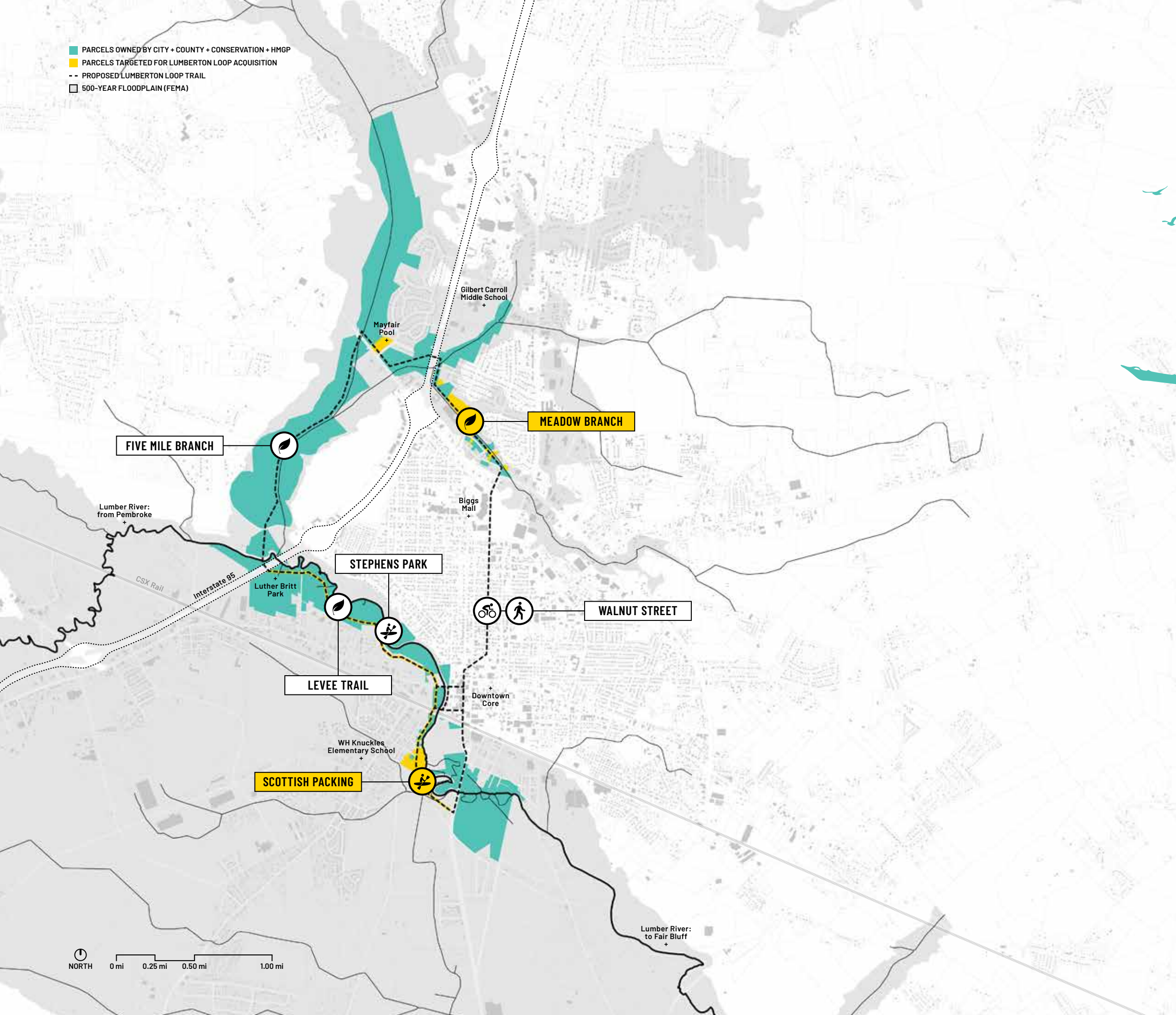
# Approved Properties that are Buyouts:

47





- PARCELS OWNED BY CITY + COUNTY + CONSERVATION + HMGP
- PARCELS TARGETED FOR LUMBERTON LOOP ACQUISITION
- PROPOSED LUMBERTON LOOP TRAIL
- 500-YEAR FLOODPLAIN (FEMA)

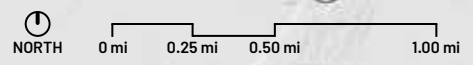


LUMBERTON LOOP: RECREATION AS MITIGATION

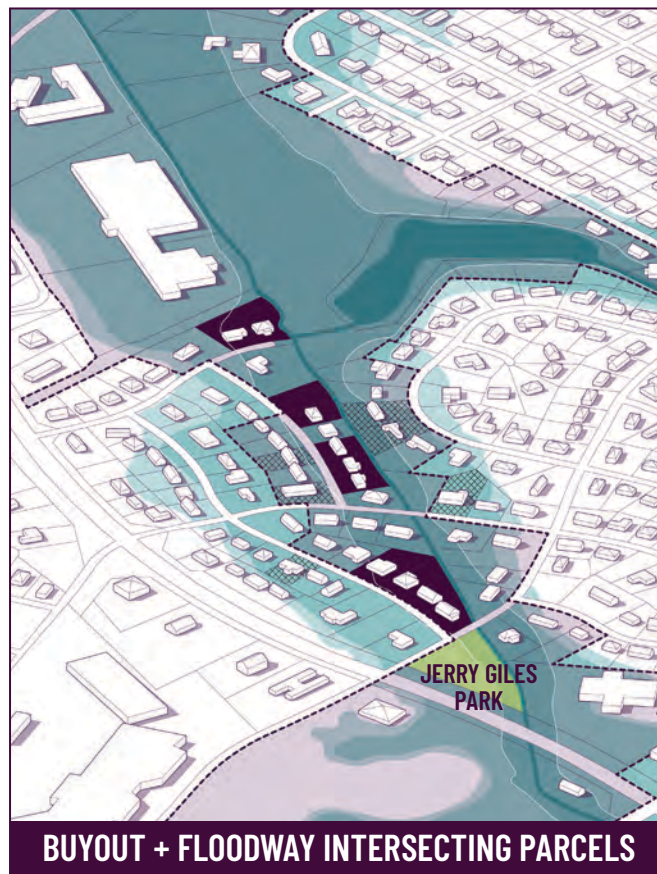
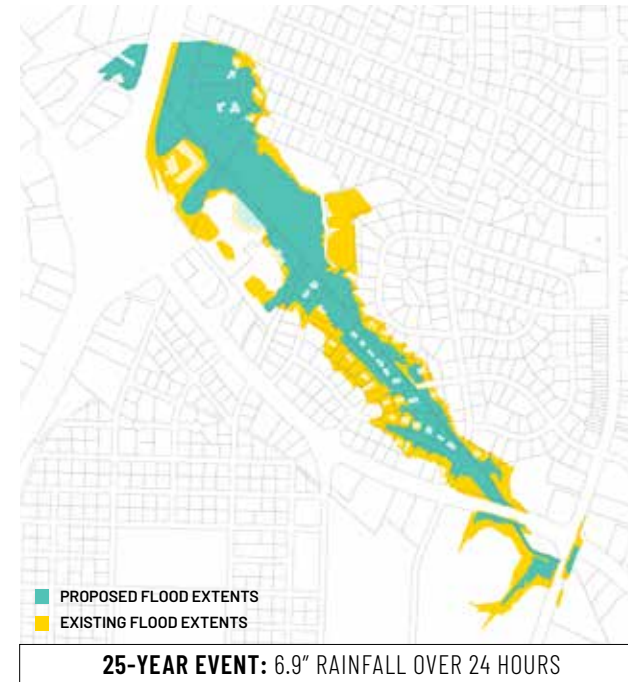
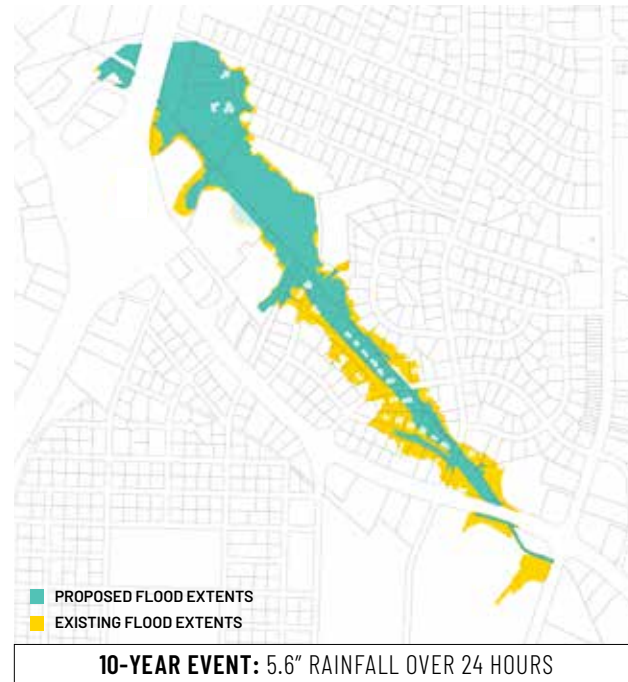
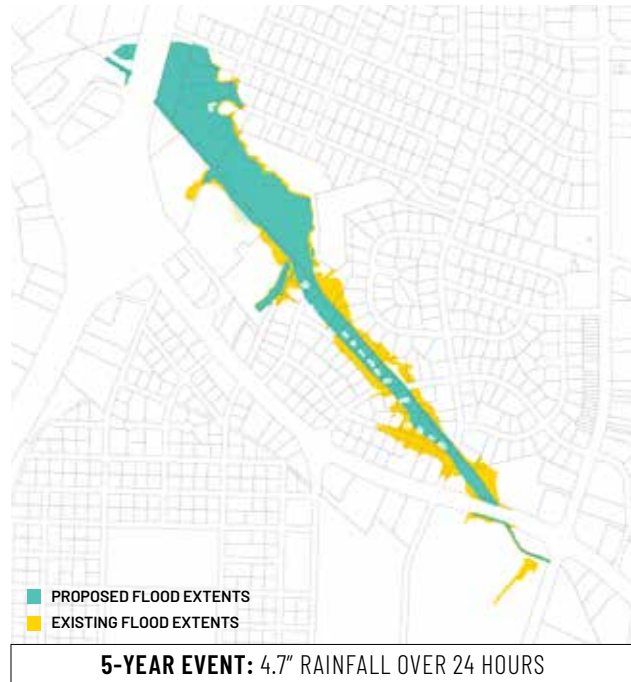
8.5+  
miles: trail

806+  
acres

99%  
floodplain



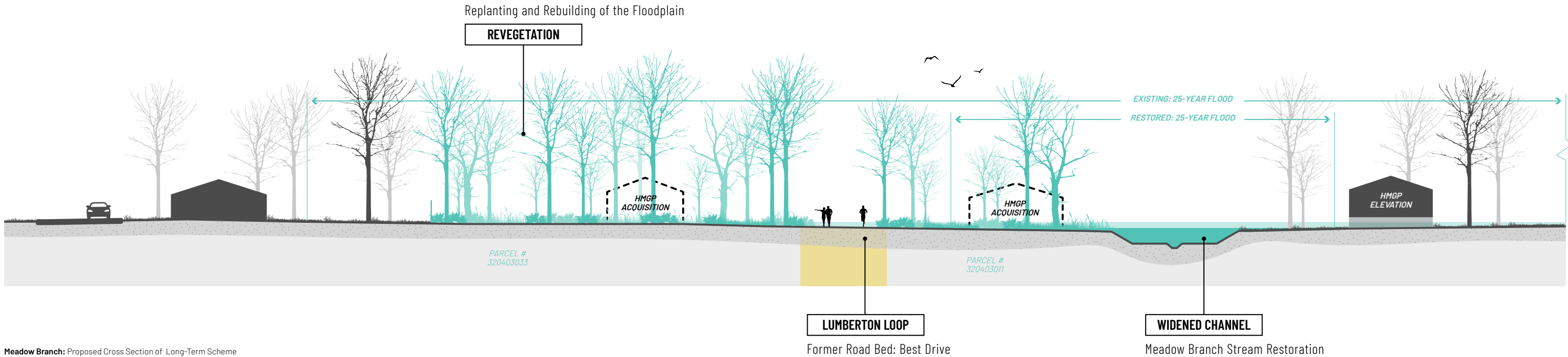






# LONG-TERM SCHEME

RESTORATION + RECREATION





# OUTCOMES

THROUGH INVOLVING DESIGN RESEARCHERS + LAND TRUSTS + LOCAL GOVERNMENTS

**\$250,000: NC Environmental Enhancement Grant.**

Acquisition, demolition, due diligence, and boat ramp construction at Scottish Packing.

**\$35,000: Duke Energy Foundation Grant.**

Acquisition and demolition at Scottish Packing.

**\$48,331: North Carolina Land and Water Fund Grant.**

Acquisition, restoration, and innovative stormwater construction at Scottish Packing.

**\$150,000: NC Environmental Enhancement Grant.**

Acquisition, demolition, and wetland construction at Meadow Branch.

**\$232,416: Tax Value of Donated Land.**

9.69 acres donated by a private owner to the City in support of the Floodprint plan.

**\$76,800. Value of In-Kind Services Committed.**

From the City of Lumberton Public Works Department for demolition at Scottish Packing.

**\$12,000. Value of In-Kind Services Committed.**

From the City of Lumberton Administration Department for administration of awarded grants.

Total Monetary Value of Outcomes from Lumberton Community Floodprint: \$804,547

Total Research Funds Contributed: \$144,104 **(5.6x multiplier)**

Total Monetary Value of Resources Provided to Lumberton Residents: \$948,651\*

\*Does not include submitted and pending FEMA BRIC grant application for \$2,623,670





WHAT DOES ALL OF THIS HAVE  
TO DO WITH RESILIENCY?



# RECOGNIZES A SENSE OF PLACE

SPECIFIC AND UNIQUE TO EACH AREA OF STUDY

# FILLS GAPS IN LOCAL CAPACITY

RURAL TOWNS = SMALL TAX BASE = SMALL STAFF

# BRINGS IN FLEXIBLE FUNDING STREAMS

PROPOSING WORK THAT NEEDS TO BE DONE RATHER THAN ONLY RESPONDING TO WHAT IS AVAILABLE

# ESTABLISHES TANGIBLE OUTCOMES AS THE STANDARD

EXTRACTIVE RESEARCH + PLANNING FATIGUE ARE REAL; ACTIONABLE OUTCOMES AGGREGATE TO BIG CHANGE