

IMPLEMENTING PLANS OF ACTION

MDOT Bureau of Bridges and Structures

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Bridge Safety Inspection Engineer

SCOUR PLAN OF ACTION IMPLEMENTATION

01/13/2005

Updated NBIS rule enacted that pertains to Scour POA implementation

01/13/2006

FHWA's Target date for implementing requirements of updated NBIS

02/14/2008

MDOT receives letter from FHWA notifying them of Non-Compliance

07/17/2008

MDOT sent Letter to all Local Agencies requesting evaluation of item 113.

12/31/2009

Deadline for All Bridges over Water to be Evaluated for Scour

12/31/2010

Deadline for all Scour Critical Bridges to have Scour POA's Implemented

02/01/2011

**FHWA implemented the 23 Metrics
Metric 18: Inspection Procedures – Scour**

03/2015

OAG Finding Scour Plan of Actions did not contain all recommended information.

06/02/2015

MDOT provided guidance for management of bridges vulnerable to scour

03/2016

MDOT updated MiSIM Chapter 6, and updated the MiBRIDGE Scour POA.



Metric #18: Inspection procedures – Scour Critical Bridges

2013 Compliance (C): All of the following must be met for C:

- All bridges over water have a documented scour evaluation.
- All bridges that are scour critical, scour vulnerable, or have unknown foundations have a scour POA prepared to monitor and/or address critical findings.
- All bridges are monitored in accordance with the POA, as appropriate.

2017 Compliance (C): All of the following must be met for C:

- All bridges over water have a scour evaluation as indicated by NBI scour coding.
- All sampled bridges have a documented scour evaluation assessing scour vulnerability.
- All sampled bridges that are scour critical or with unknown foundations have a scour POA.
- All sampled bridges **subject to a triggering event** are **monitored** in accordance with the POA.

Metric #18: Compliance Criteria Evaluation

- All bridges over water have a scour evaluation as indicated by NBI scour coding.

Metric 18 – Inspection procedures – Scour Critical Bridges					MAR18
Bridges Evaluated for Scour					PY2017 NBIP Review
State: Michigan			Date of report: May 24, 2016		
Bridges Evaluated for Scour		✓	✗	Trend*	%
Compliance Deficiencies Identified					
Has bridge been evaluated for scour?	Previously identified, unresolved bridges - Item 113 = 6 or T	7,873	0	✓	100%
	Newly identified bridges*** - Item 113 = 6 or T		0		
	Previous year - Item 113 = 6 or T	7,795	1		99.987%

Bridges requiring POAs - Item 113 = 2, 3, U	
Newly identified bridges***	13
Previously identified bridges	1,613
Total	1,626
*** Since previous year	

Item 113 Code	Most Recent	Previous Year
0	0	0
1	0	0
2	22	0
3	1,209	17
4	115	1,242
5	2,593	116
6	3	2,564
7	3	1
8	254	241
9	3,240	3,176
U	42	42
T	395	397
N	0	0
Over Water	0	0
	7,873	

Metric #18: Compliance Criteria Evaluation

- All sampled bridges have a documented scour evaluation assessing scour vulnerability.
- All sampled bridges that are scour critical or with unknown foundations have a scour POA.

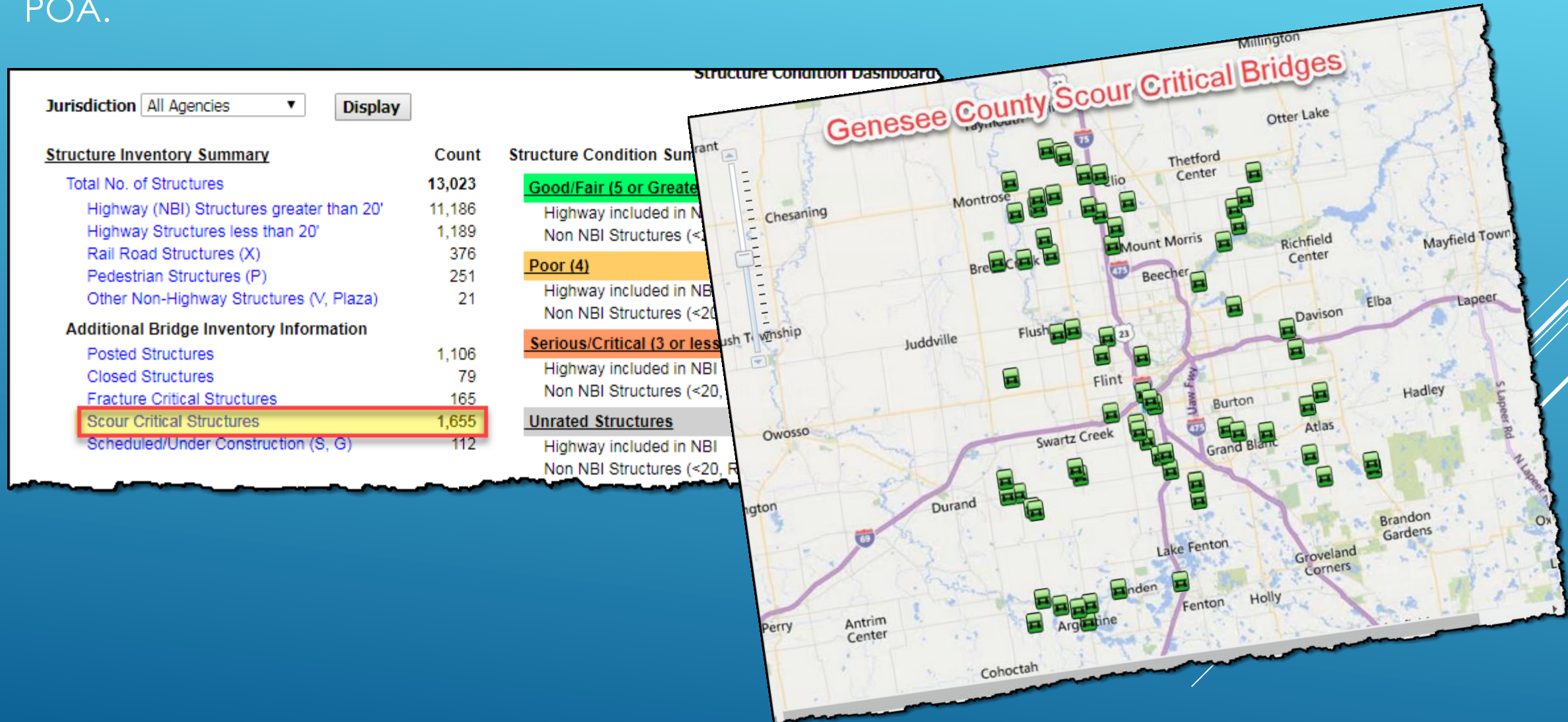
Waterway Data: 57%

Scour Evaluations: 84%



Metric #18: Compliance Criteria Evaluation

- All sampled bridges subject to a triggering event are monitored in accordance with the POA.



IMPLEMENTING PLANS OF ACTION

MDOT Bay Region

Chad Skrocki, P.E.

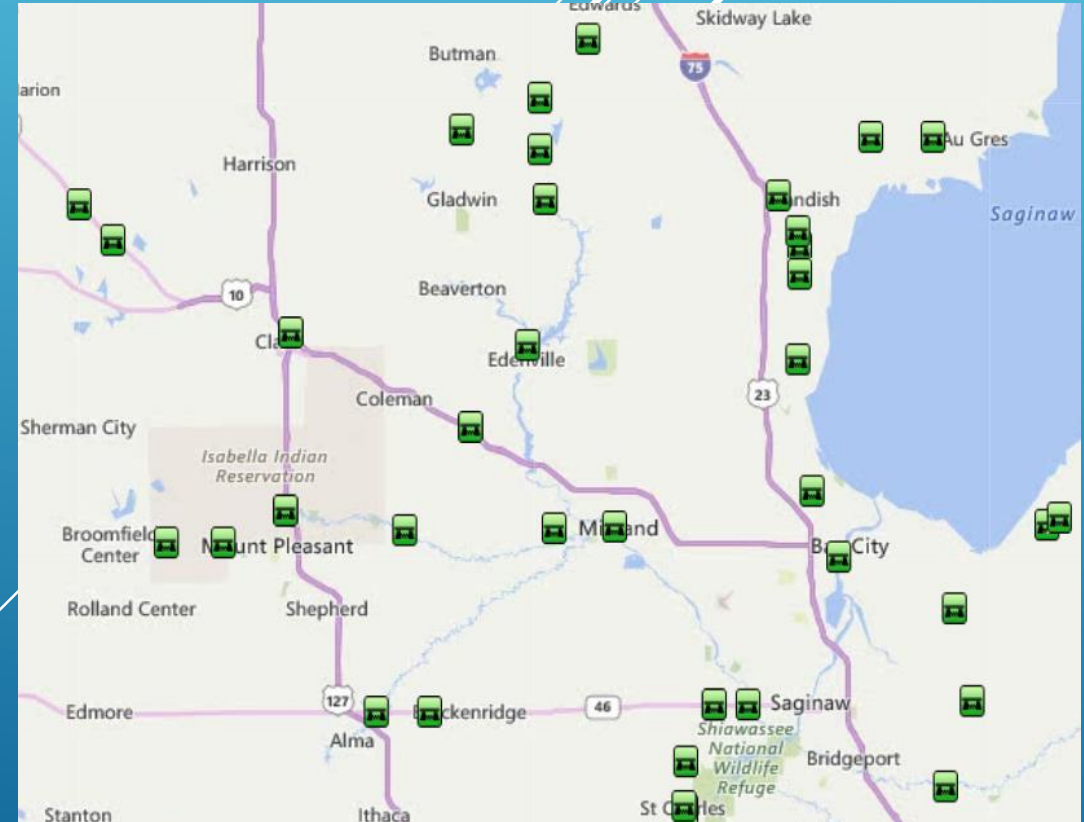
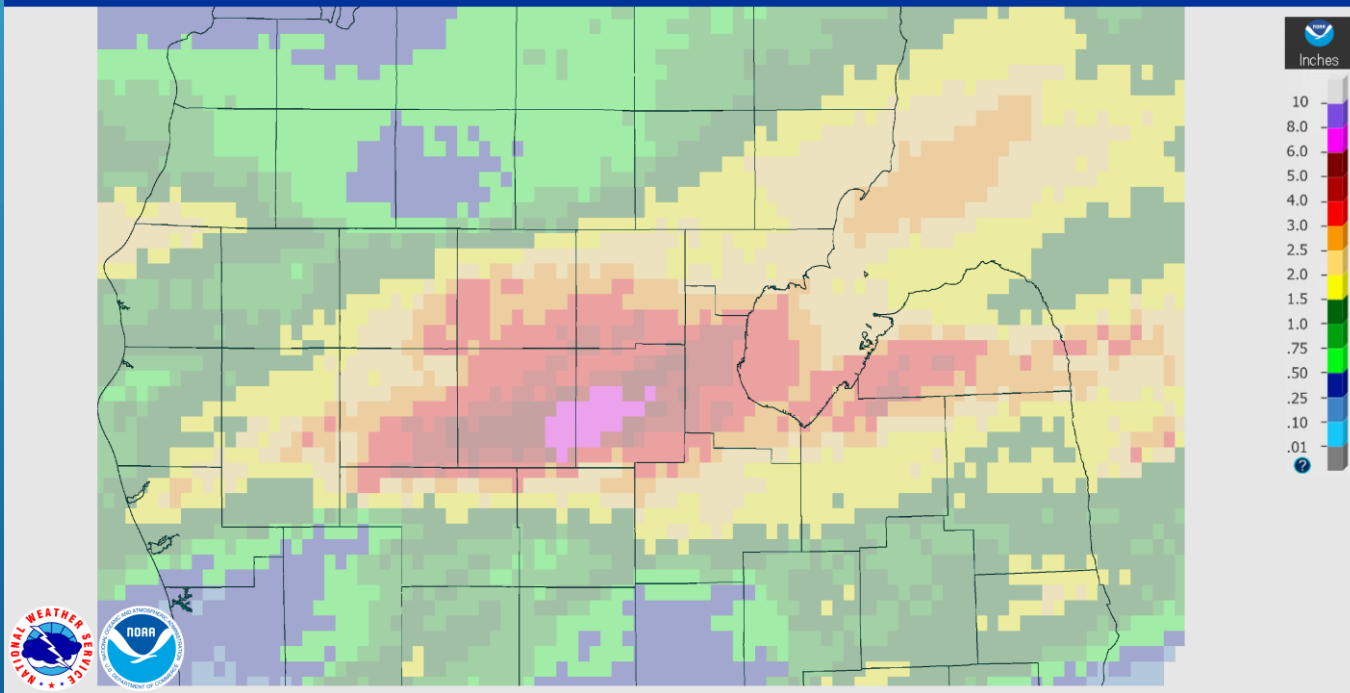
Bridge Inspection Engineer

HIGH FLOW EVENTS / SCOUR INSPECTIONS

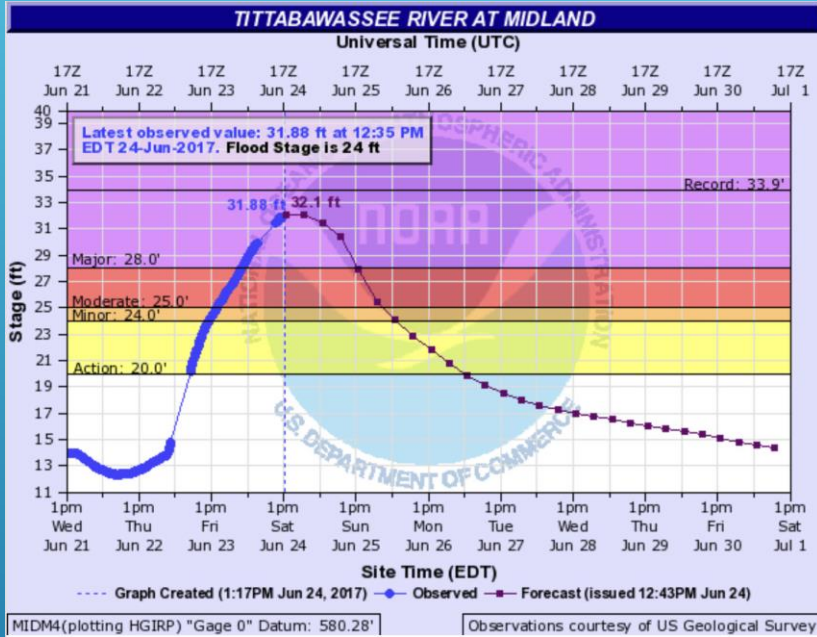
- June 23-26, 2017
- Scour critical bridges first

June 23, 2017 1-Day Observed Precipitation

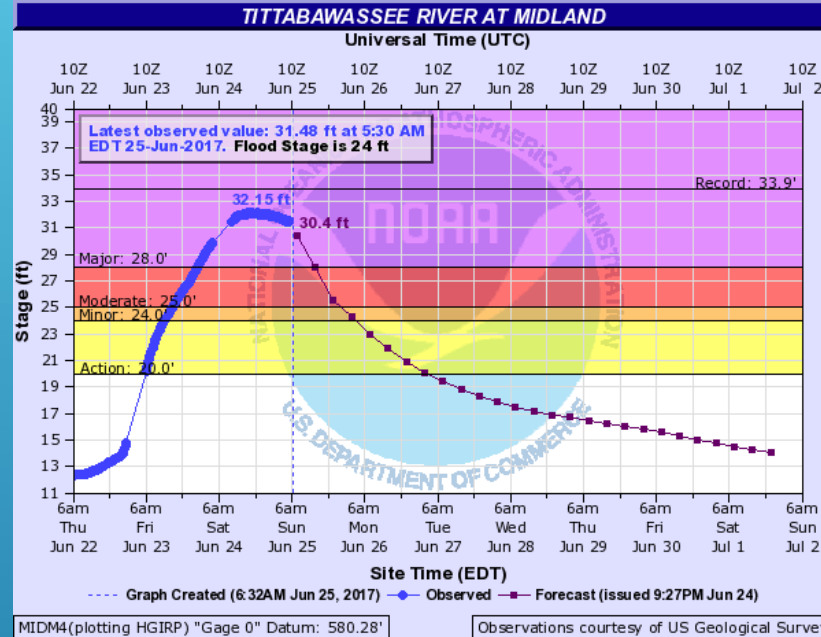
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Valid on: June 23, 2017 12:00 UTC



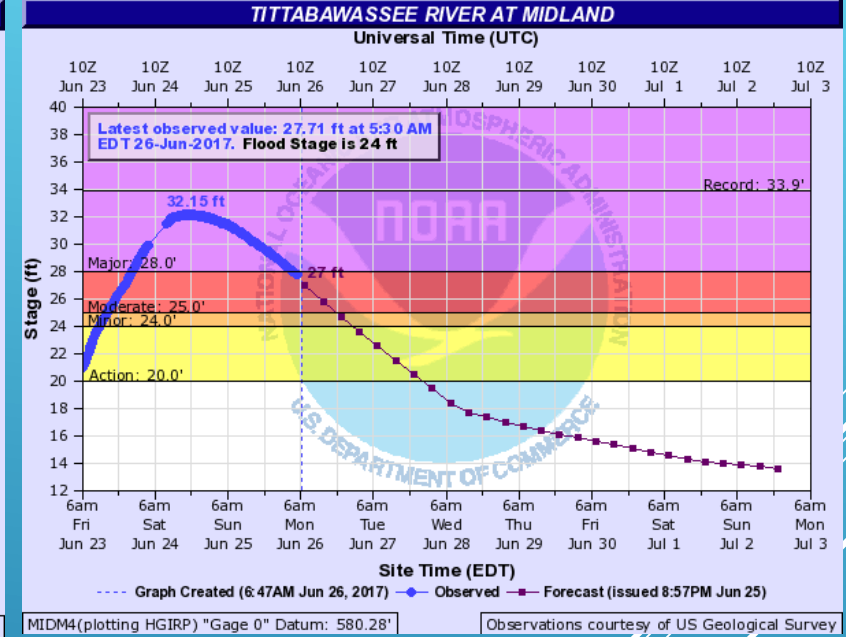
June 24, 2017



June 25, 2017



June 26, 2017



STREAM GAUGE – TITTABAWASSEE
RIVER SOUTH OF M-20

M-20 OVER NORTH BRANCH OF CHIPPEWA RIVER

Slide 8

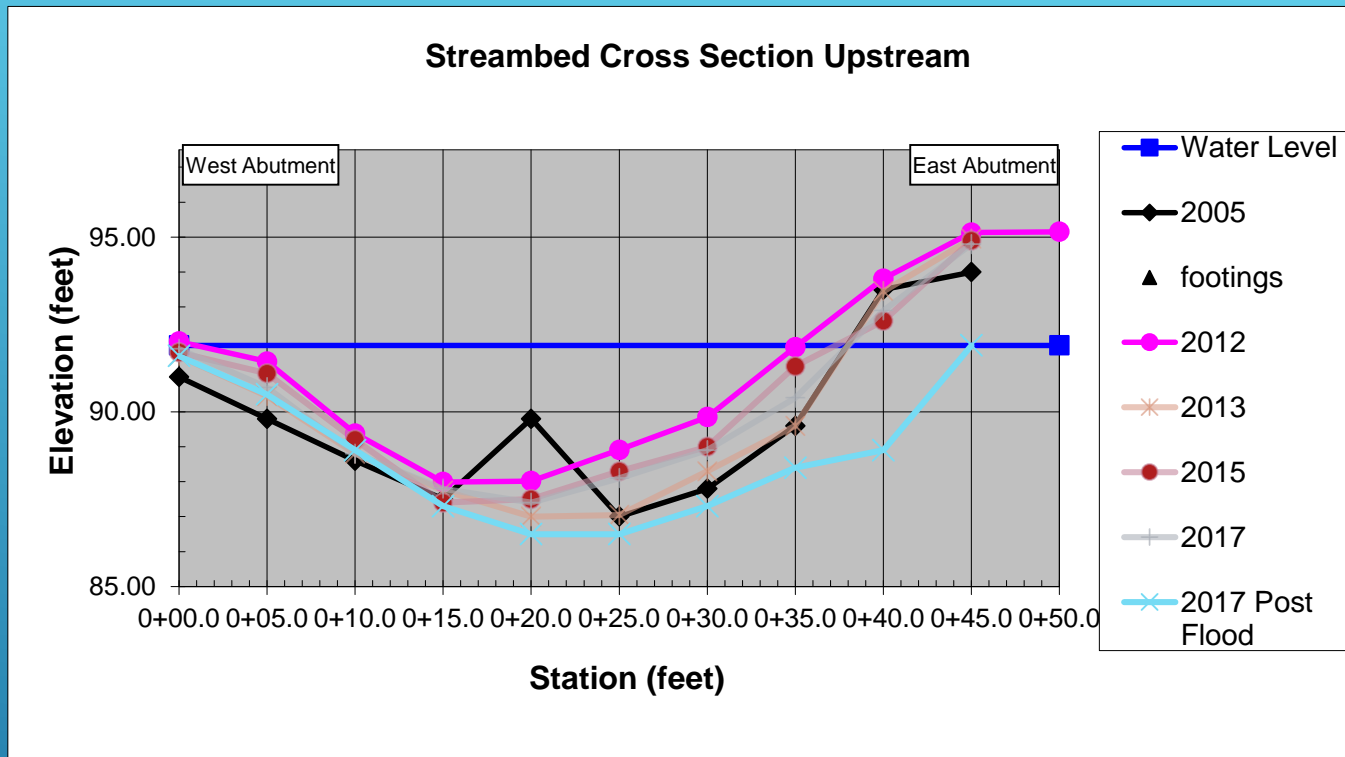




M-20 OVER NORTH BRANCH OF
CHIPPEWA RIVER



M-20 OVER NORTH BRANCH OF CHIPPEWA RIVER



M-20 OVER NORTH BRANCH OF CHIPPEWA RIVER

M-20 OVER TITTABAWASSEE RIVER



M-20 OVER TITTABAWASSEE RIVER



Estimating cover over footings

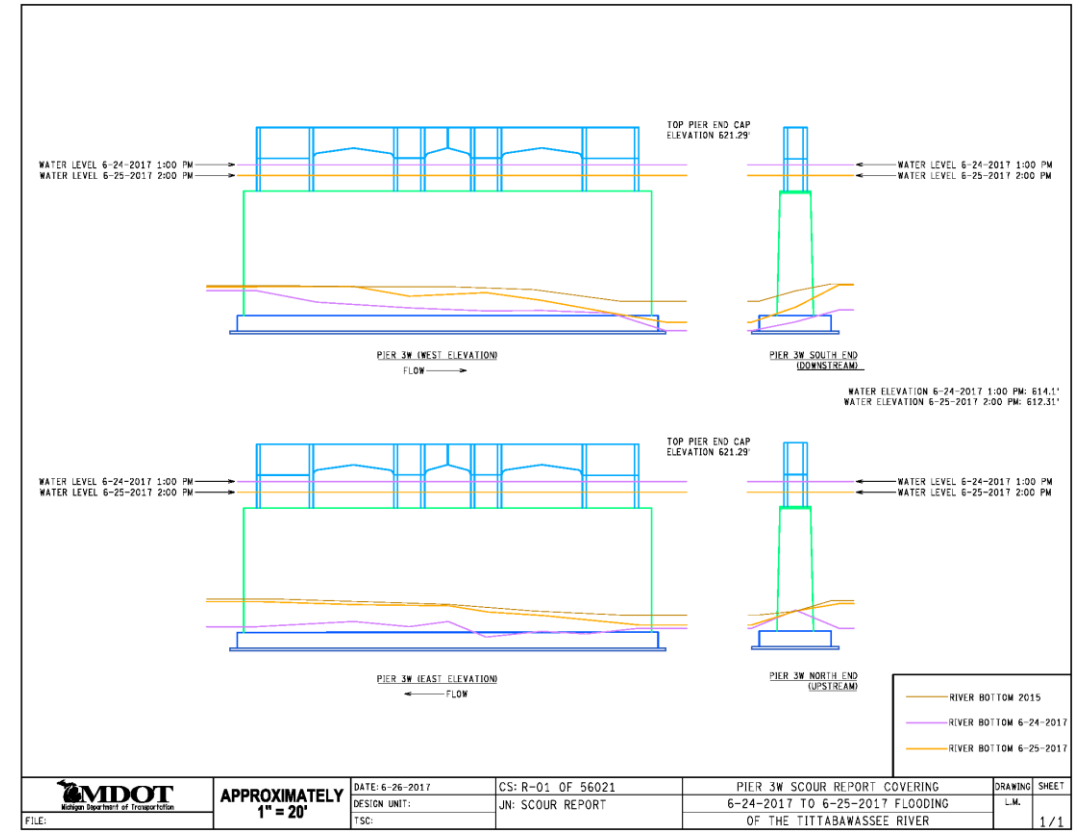
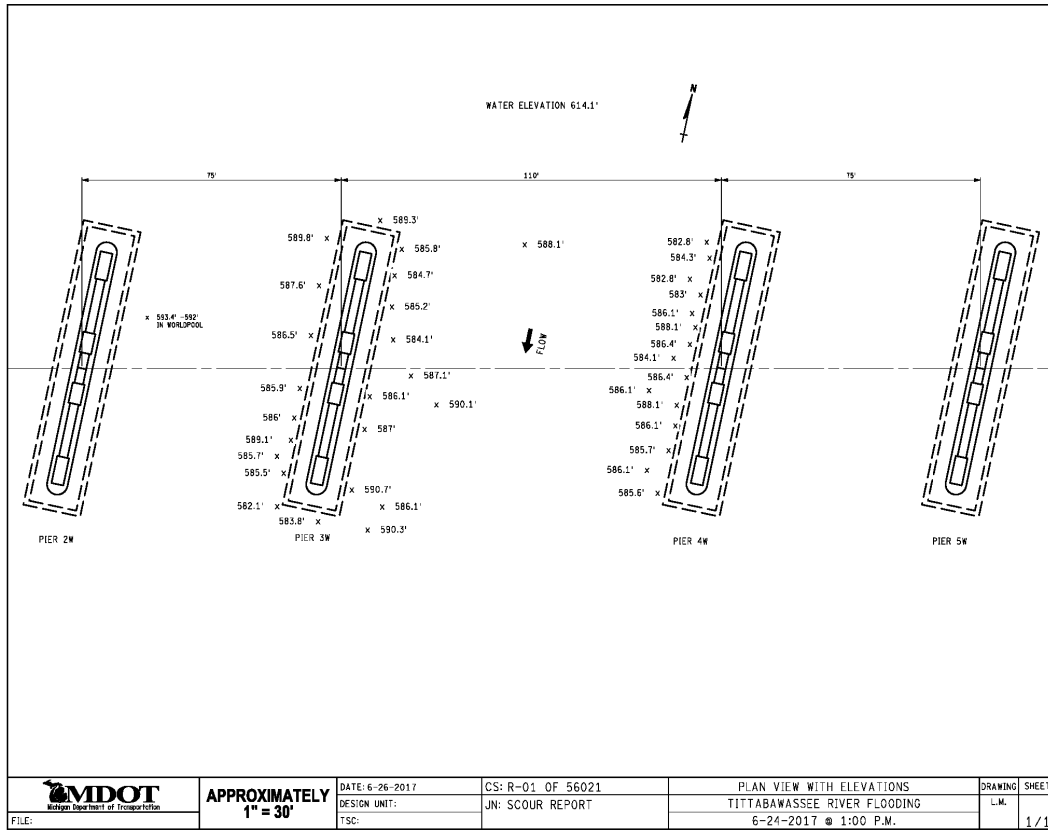
Pier 2-W, West Face



Pier 1-W, West Face

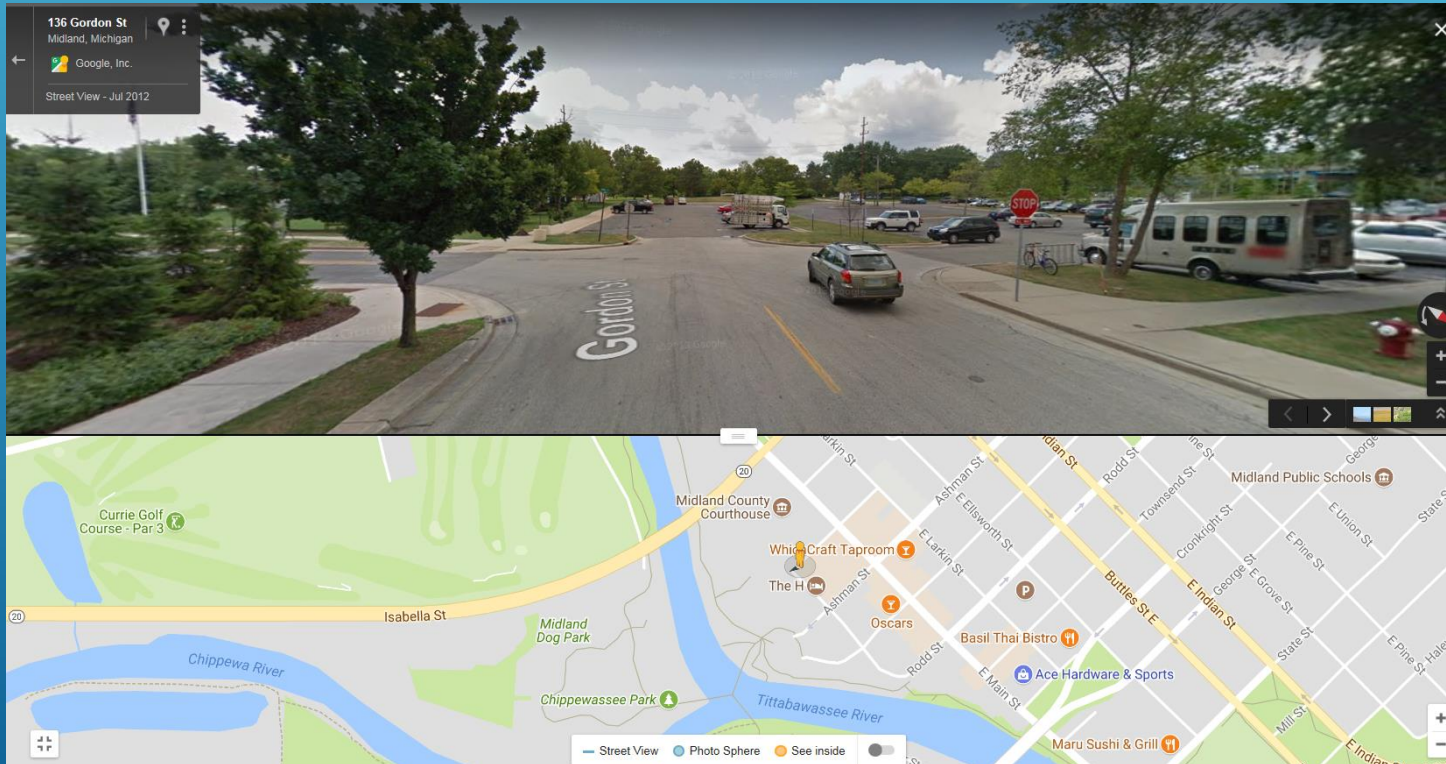


M-20 OVER TITTABAWASSEE RIVER
AFTER THE FLOOD

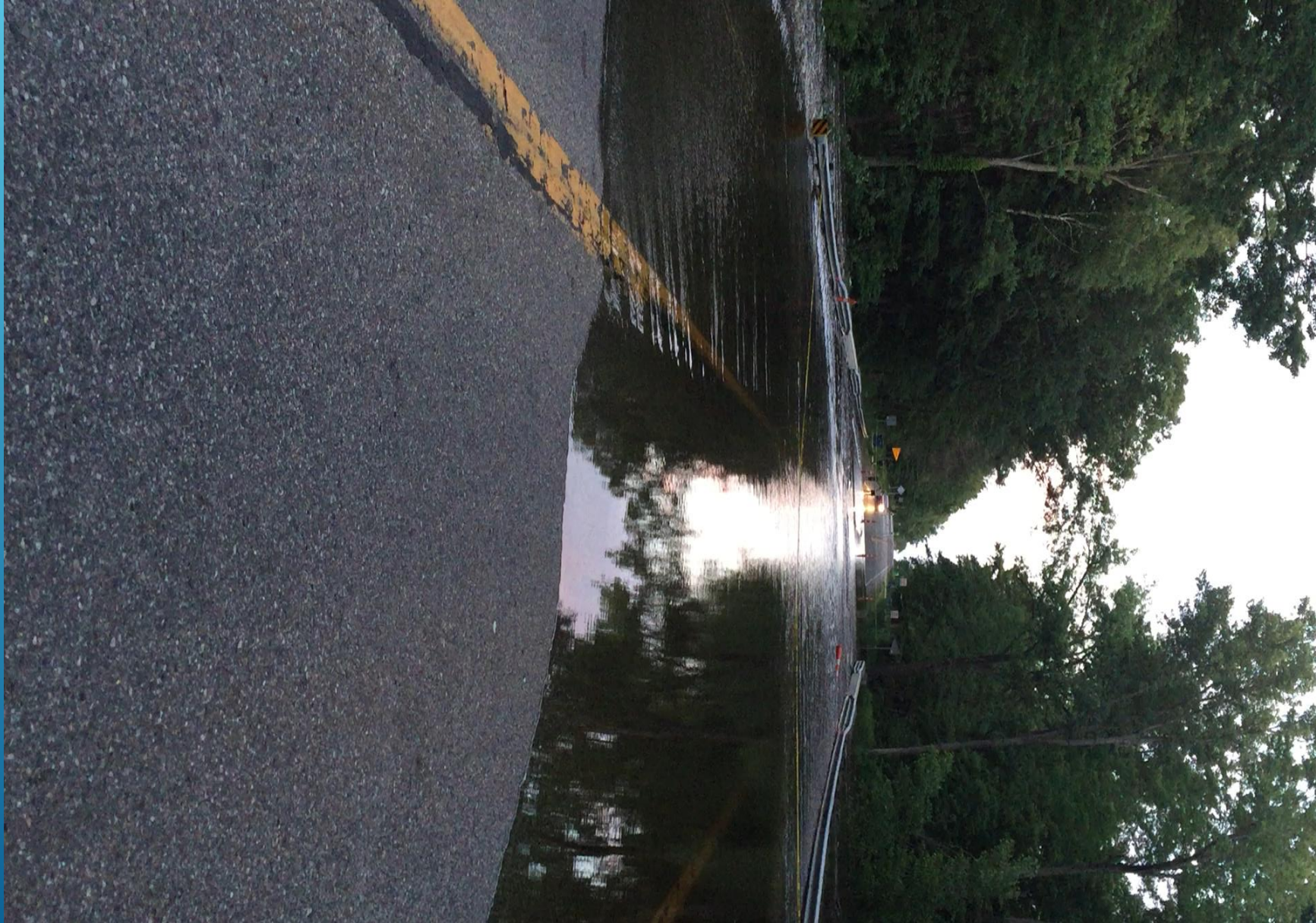


M-20 OVER TITTABAWASSEE RIVER STREAM BED ELEVATIONS

JUNE 24, 2017 – TITTABAWASSEE RIVER BEHIND THE H HOTEL (MIDLAND)



M-30 OVER CARROLL CREEK (NOT SCOUR CRITICAL)



US-10 OVER STURGEON CREEK

Thursday (June 22nd)



Friday (June 23rd)



US-10 OVER STURGEON CREEK

Thursday (June 22nd)

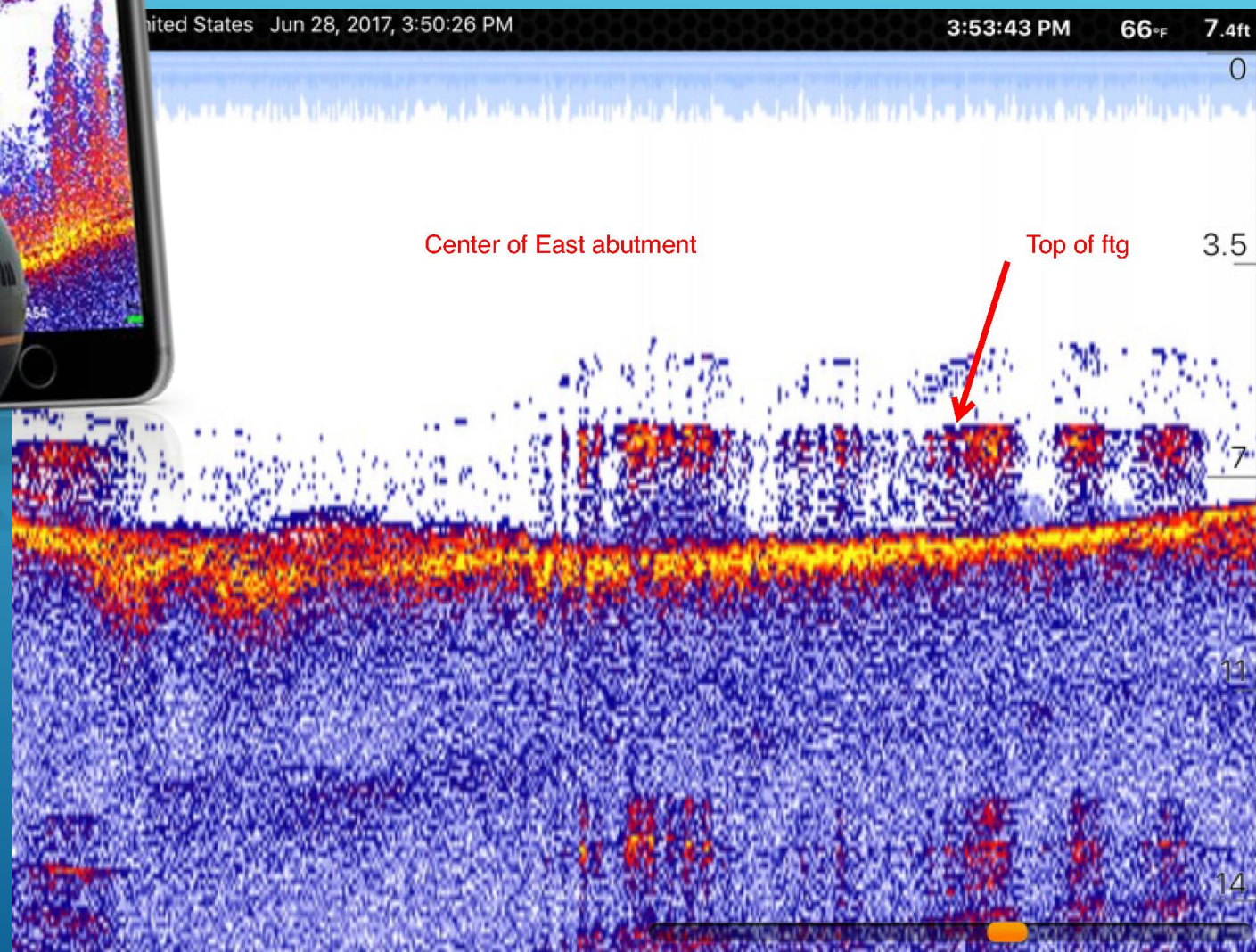


Friday (June 23rd)





DEEPER PRO+





ELEVATION MARKERS

- PAINTED ON THE MAJORITY OF THE SCOUR CRITICAL BRIDGES
- ACTUAL ELEVATIONS AT EACH SITE

Oil Change



Free Underbody Wash



QUICK LUBE AND CAR WASH?



QUESTIONS?