Nashville Flood 2010

Emergency Slope Repairs

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Are you ready?
Photo: Warner Riker

15 - 18 inches of rain

18 fatalities

>$224 M in damage

Photo: Vanessa Bateman

May 2, 2010
Pedestrian Bridge - Franklin TN
Photo: Vanessa Bateman

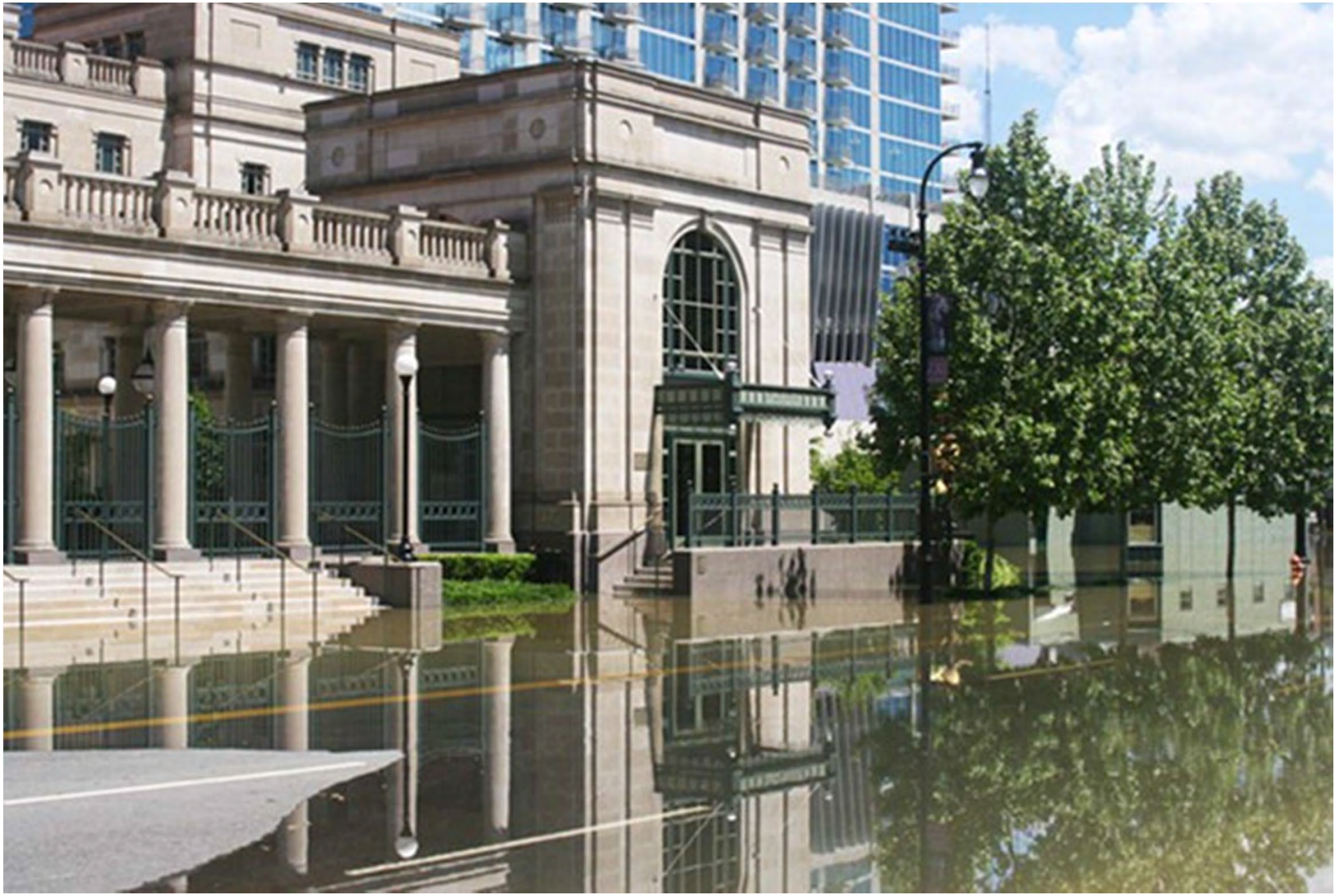
View of Downtown Nashville

http://kcame.org/wp-content/uploads/2010/05/Nashville-Flood-2010.jpe

Downtown Nashville Sunday Night

Inside the Opryland Hotel

LP Field



Schermerhorn Symphony Hall

Grand Old Opry

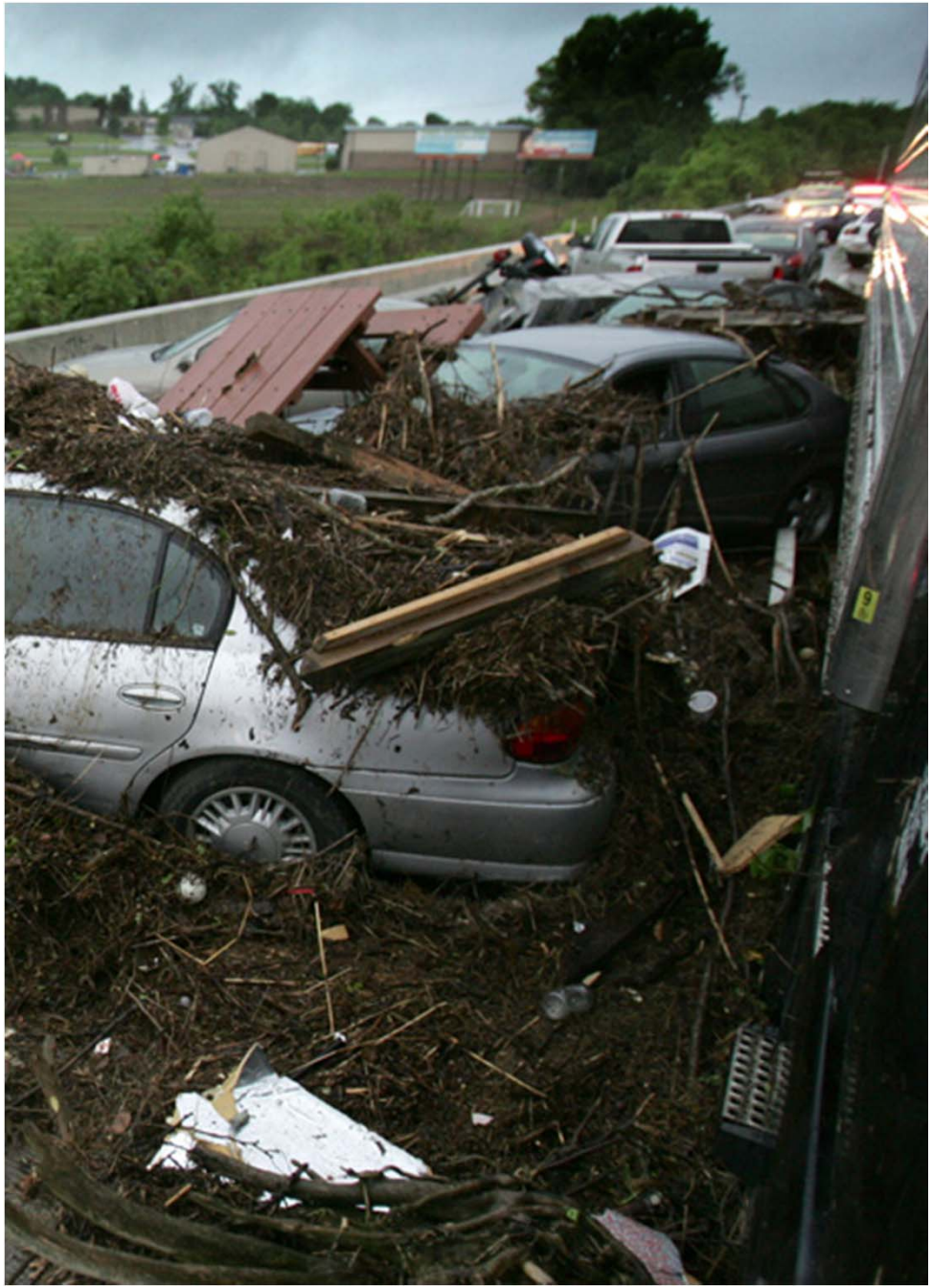
http://www.the9513.com/nashville-flood-relief-effort

NES Power Station

Photo: George Hornal

STANDING WATER
24W PAST HARDING
MERGE LEFT
W
24
58
6

How’s that plan now?



Views of Interstate 24 - Nashville

Region 3 TDOT Office - the day after

Photo: George Hornal

Downed Power Tower

Photo: George Hornal

Damage to homes and scour of railroad embankment

Photo: George Hornal

Tanker Trucks in the flood water

Photo: George Hornal

Oil and Water

Photo: George Hornal

Bellvue Neighborhood

Photo: George Hornal

Expect to
deal
with the
unexpected

SKY5 HD

NewsChannel 5

WTVF-DT NASHVILLE, TN

300 foot waterfall

SKY5 HD

NewsChannel 5
WTVF-DT NASHVILLE, TN

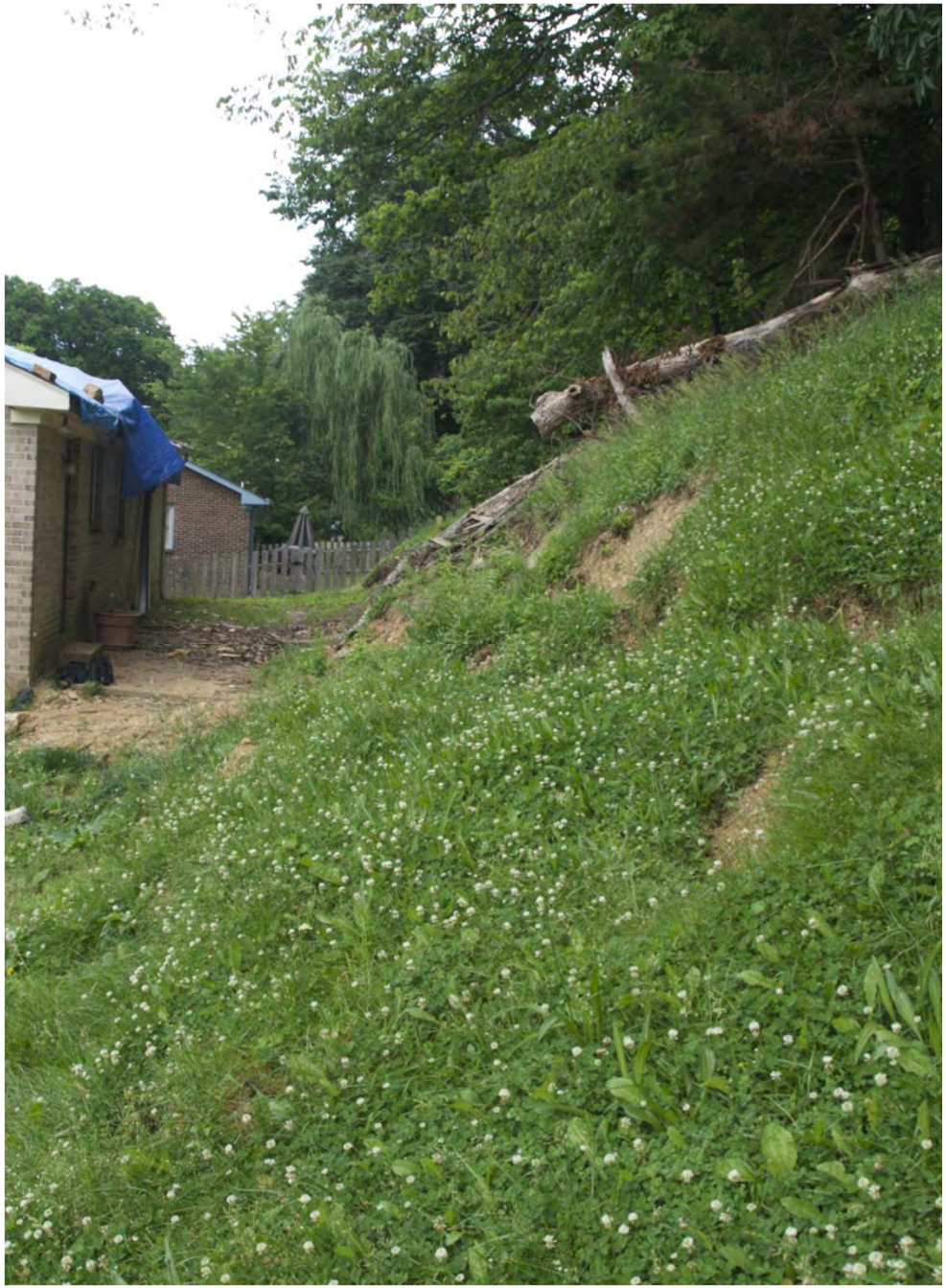
SKY5 HD
NewsChannel5
WTVF-DT NASHVILLE, TN

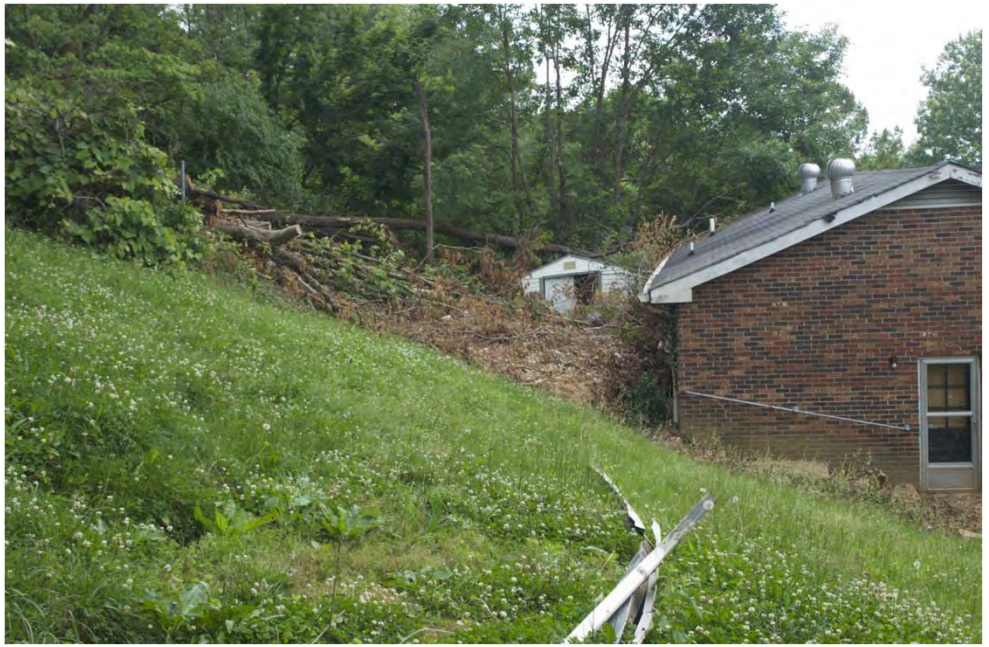
What happens after?

Photo: Vanessa Bateman

Local Mudslide

Photo: Vanessa Bateman





Local Slides in Colluvium

Photo: Vanessa Bateman

Mission Control

Apollo 13 Mission Control

Assessment teams

U.S. Department of Transportation
Federal Highway Administration

DETAILED DAMAGE INSPECTION REPORT

(Title 23, Federal-aid Highways)

Report Number: 51-19-81

Sheet: ____ of ____

FHWA Disaster Number:

Inspection Date: 5/4/2010

Federal-aid Route Number:

State: County:

Location (Name of Road and Milepost)
US 70 S

N 36-04-53 W 86-57.751

Description of Damage
- MUDSLIDE BLOCKING BOTH LANES

Cost Estimate

Emergency Repair

Description of Work to Date (Equipment, Labor, and Materials)	Unit	Unit Price	Quantity	Cost Completed	Cost Remaining
GUARDRAIL	ea		575		
TYPE 36 / TYPE 12	ea		1		
REMOVAL OF GUARDRAIL	ea		575		
CLEARING	ea				
~~DEBRIS REMOVAL~~ BY	ea				
ROAD CLEARING / DITCHING	ea				
~~SLOPE STABILIZATION~~	ea				
EXCAVATION	ea				
CLEARING / DITCHING	ea				
POTENTIAL EXCAVATION	ea				
SPRAY THERMO	ea				
TREE REMOVAL	ea				

Method
☐ Local Forces ☐ State Forces ☐ Contract

Subtotal
PE/CE
Emergency Repair Total

Permanent Restoration

	ea				
	ea				
	ea				
	ea				
	ea				
	ea				
	ea				
	ea				
	ea				
	ea				
	ea				
	ea				

Method

May 5, 2010

Awarded $13.7 M

On Call Contracts

Photo: Vanessa Bateman

Scoured Pavement

On-Call
Now we can fix it
Pavement scout repairs

May 21, 2010
Awarded
$8.5 M
On Call Resurfacing

On-Call

SR 6 Scour

Photo: Vanessa Bateman

SR 96 Scour

Photo: Vanessa Bateman

SR 840 - Williamson County

Photo: Vanessa Bateman

But - some things are too big...
Separate Contracts Needed

Six months to complete construction

Photo: George Hornal

>$10M ?

SR 7 - Maury County

Photo: George Hornal

State Route 7 - Maury County

Photo: George Hornal

State Route 7 - Largest Landslide

Photo: George Hornal

SR 249 Mudslide

SR 249 Mudslide

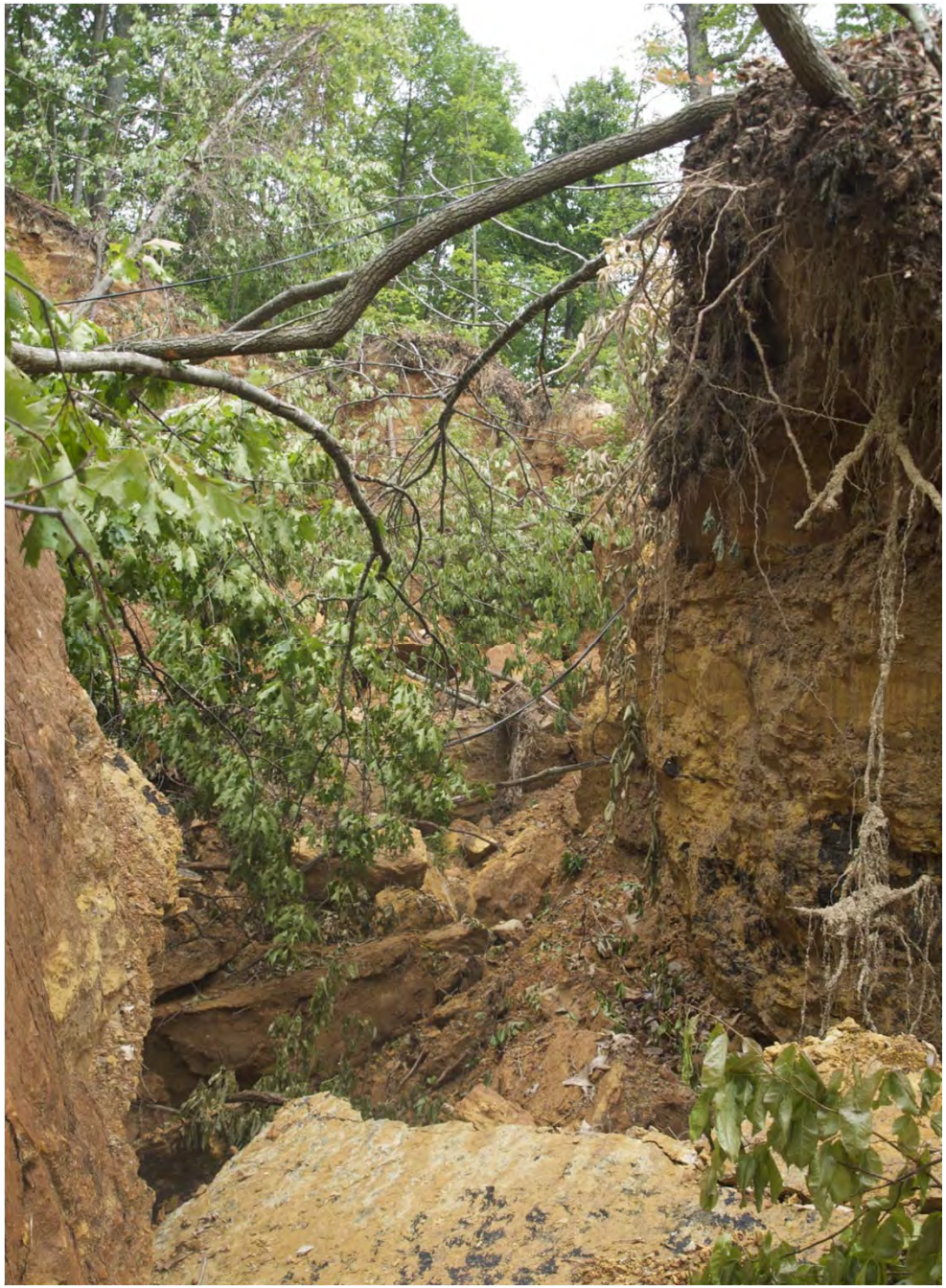
SR 96 Block Slide

Rockslide in horizontal rock

Photo: George Hornal

SR 96 Slide

Photo: George Hornal, Vanessa Batema



SR 96 Slide

Photo: Vanessa Bateman

I-24 Sinkhole

Consequences of the storm

Photo: Vanessa Bateman

I-24 Sinkhole - Grundy County

Photo: George Hornal

Complete in 4 days

Photo: Vanessa Bateman

Lessons learned

You can do things faster than you think you can
But EVERYONE has to cooperate
Photo: George Hornal

On-call contracts are necessary

Photo: Vanessa Bateman

You MUST have clear lines of communication
Photo: Vanessa Bateman

FHWA help is crucial

Photo: Vanessa Bateman

Your disaster plan isn't good enough

But, experienced staff will save your bacon

Questions?
TDOT