

# Recommendation Report

Wednesday, August 01, 2007

LOG:h-0551\*

**Log Number** H-0551

**IssueDate** 7/24/1990

COVINGTON TN

4/1/1989

ABOUT 8:15 P.M. CENTRAL STANDARD TIME, APRIL 1, 1989, AN 85. 5-FOOT SECTION OF THE 4,201-FOOT-LONG NORTHBOUND U.S. ROUTE 51 BRIDGE OVER THE HATCHIE RIVER FELL ABOUT 20 FEET INTO THE 24-FOOT-DEEP RAIN-SWOLLEN RIVER AFTER TWO PILE-SUPPORTED COLUMN BENTS SUPPORTING THREE BRIDGE SPANS COLLAPSED. WITNESS REPORTS AND PHYSICAL EVIDENCE INDICATE THAT THE SOUTHERN COLUMN BENT (70) AND THE TWO SPANS THAT IT SUPPORTED FELL QUICKLY, CAUSING FOUR PASSENGER CARS AND ONE TRACTOR-SEMITRAILER TO PLUNGE INTO THE RIVER. THE ADJACENT COLUMN BENT (71) AND THE SPAN THAT IT WAS SUPPORTING THEN COLLAPSED ON TOP OF THE VEHICLES. THE RIVER HAD APPARENTLY BEEN AT FLOOD STAGE SINCE NOVEMBER 1988. ALL EIGHT VEHICLE OCCUPANTS DIED AS A RESULT OF THE COLLAPSE. (COVINGTON, TENNESSEE)

**Recommendation #** H-90-056 **Overall Status** CAA **Priority** CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL HIGHWAY ADMINISTRATION: MODIFY THE NATIONAL BRIDGE INSPECTION STANDARDS TO REQUIRE FOLLOW-UP OR DIVER INSPECTIONS OF THOSE BRIDGES WITH UNDER WATER MEMBERS THAT CANNOT BE EXAMINED VISUALLY OR BY FEEL DURING SCHEDULED BRIDGE INSPECTIONS BECAUSE OF EXCESSIVE WATER DEPTH OR TURBIDITY.

FHWA	Closed - Acceptable Action	6/11/1993
------	----------------------------	-----------

**Recommendation #** H-90-057 **Overall Status** CAA **Priority** CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL HIGHWAY ADMINISTRATION: REQUIRE STATES TO DEVELOP AND MAINTAIN CHANNEL PROFILE RECORDS FOR BRIDGES OVER WATER AND TO EVALUATE THE CHANNEL PROFILE RECORDS TO DETERMINE THE EFFECTS OF CHANNEL CHANGES BRIDGES.

FHWA	Closed - Acceptable Action	11/28/1990
------	----------------------------	------------

**Recommendation #** H-90-058 **Overall Status** CUA **Priority** CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL HIGHWAY ADMINISTRATION: MODIFY THE NATIONAL BRIDGE INSPECTION STANDARDS TO REQUIRE QUALIFICATIONS FOR PERSONNEL WHO EVALUATE BRIDGE INSPECTION REPORTS.

FHWA	Closed - Unacceptable Action	6/11/1993
------	------------------------------	-----------

**Recommendation #** H-90-059 **Overall Status** CAA **Priority** CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL HIGHWAY ADMINISTRATION: REQUIRE STATES TO DEVELOP A CRUCIAL ELEMENT CHECKLIST FOR EACH BRIDGE BASED ON THE BRIDGE DESIGN AND AS-BUILT PLANS OR AVAILABLE BRIDGE DATA. THE LIST SHOULD IDENTIFY BRIDGE ELEMENTS OR CONDITIONS THAT WHEN DAMAGED, EXPOSED, CORRODED, OR DEFORMED WOULD INDEPENDENTLY CAUSE A SUDDEN UNEXPECTED COLLAPSE OF A SECTION OF THE BRIDGE. THIS LIST SHOULD THEN BECOME PART OF EACH BRIDGE INSPECTION REPORT. FURTHER, REQUIRE THE STATES TO IMMEDIATELY CLOSE THE BRIDGE OR PERFORM NEEDED REPAIRS WHEN AN INSPECTOR DISCOVERS THE DETERIORATION OF A BRIDGE ELEMENT CONTAINED IN THE CRUCIAL ELEMENT CHECKLIST.

FHWA	Closed - Acceptable Action	6/11/1993
------	----------------------------	-----------

# Recommendation Report

Wednesday, August 01, 2007

LOG:h-0551\*

<b>Recommendation #</b>	<b>H-90-060</b>	<b>Overall Status</b>	<b>Priority</b>
-------------------------	-----------------	-----------------------	-----------------

CAA

CLASS II

THE NTSB RECOMMENDS THAT THE FEDERAL HIGHWAY ADMINISTRATION: REQUIRE THAT STATES REVIEW OVERWEIGHT VEHICLE TRAFFIC TO EVALUATE THE EFFECTS OF FREQUENT OVERWEIGHT LOADS ON UNPOSTED BRIDGES. REQUIRE THAT, BASED ON THESE EVALUATIONS, THE STATES LIMIT THE NUMBER OR SIZE OF OVERWEIGHT VEHICLES PERMITTED TO CROSS THOSE BRIDGES THAT MAY BE DAMAGED BECAUSE OF FREQUENT EXPOSURE TO HEAVY LOADS.

FHWA	Closed - Acceptable Action	6/11/1993
------	----------------------------	-----------

# Recommendation Report

Wednesday, August 01, 2007

LOG:h-0551\*

**Log Number** H-0551A

**IssueDate** 7/24/1990

COVINGTON TN

4/1/1989

ABOUT 8:15 P.M. CENTRAL STANDARD TIME, APRIL 1, 1989, AN 85. 5-FOOT SECTION OF THE 4,201-FOOT-LONG NORTHBOUND U.S. ROUTE 51 BRIDGE OVER THE HATCHIE RIVER FELL ABOUT 20 FEET INTO THE 24-FOOT-DEEP RAIN-SWOLLEN RIVER AFTER TWO PILE-SUPPORTED COLUMN BENTS SUPPORTING THREE BRIDGE SPANS COLLAPSED. WITNESS REPORTS AND PHYSICAL EVIDENCE INDICATE THAT THE SOUTHERN COLUMN BENT (70) AND THE TWO SPANS THAT IT SUPPORTED FELL QUICKLY, CAUSING FOUR PASSENGER CARS AND ONE TRACTOR-SEMITRAILER TO PLUNGE INTO THE RIVER. THE ADJACENT COLUMN BENT (71) AND THE SPAN THAT IT WAS SUPPORTING THEN COLLAPSED ON TOP OF THE VEHICLES. THE RIVER HAD APPARENTLY BEEN AT FLOOD STAGE SINCE NOVEMBER 1988. ALL EIGHT VEHICLE OCCUPANTS DIED AS A RESULT OF THE COLLAPSE. (COVINGTON TENNESSEE)

<b>Recommendation #</b>	H-90-061	<b>Overall Status</b>	CAA	<b>Priority</b>	CLASS II
-------------------------	----------	-----------------------	-----	-----------------	----------

THE NTSB RECOMMENDS THAT THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS: MODIFY SECTION 1.3.2, "HYDRAULIC STUDIES" OF THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES TO INCLUDE EVALUATIONS OF GEOMORPHIC CHANGES IN STREAMS CAUSED BY THE CONSTRUCTION OF A NEW BRIDGE AND THE EFFECTS OF THOSE CHANGES ON EXISTING STRUCTURES.

AMERICAN ASSOCIATION OF STATE HIGHWAY	Closed - Acceptable Action	1/2/1992
---------------------------------------	----------------------------	----------

<b>Recommendation #</b>	H-90-062	<b>Overall Status</b>	CAA	<b>Priority</b>	CLASS II
-------------------------	----------	-----------------------	-----	-----------------	----------

THE NTSB RECOMMENDS THAT THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS: MODIFY SECTION 2.3, "FREQUENCY AND LEVEL OF INSPECTION" OF THE MANUAL FOR MAINTENANCE INSPECTION OF BRIDGES TO INCLUDE A REQUIREMENT THAT BRIDGE INSPECTORS BE PROVIDED WITH AVAILABLE BRIDGE DESIGN OR AS-BUILT PLANS DURING ON-SITE BRIDGE INSPECTIONS.

AMERICAN ASSOCIATION OF STATE HIGHWAY	Closed - Acceptable Action	12/8/1994
---------------------------------------	----------------------------	-----------

<b>Recommendation #</b>	H-90-063	<b>Overall Status</b>	CAA	<b>Priority</b>	CLASS II
-------------------------	----------	-----------------------	-----	-----------------	----------

THE NTSB RECOMMENDS THAT THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS: MODIFY SECTION 4.6, "RATING OF BRIDGES, LIMITING VEHICLE WEIGHTS" OF THE MANUAL FOR MAINTENANCE INSPECTION OF BRIDGES TO DELETE THE SECTION WHICH EXEMPTS CERTAIN CONCRETE BRIDGES FROM LOAD POSTING.

AMERICAN ASSOCIATION OF STATE HIGHWAY	Closed - Acceptable Action	12/8/1994
---------------------------------------	----------------------------	-----------

# Recommendation Report

Wednesday, August 01, 2007

LOG:h-0551\*

**Log Number** H-0551B

**IssueDate** 7/24/1990

COVINGTON TN

4/1/1989

ABOUT 8:15 P.M. CENTRAL STANDARD TIME, APRIL 1, 1989, AN 85.5-FOOT SECTION OF THE 4,201-FOOT-LONG NORTHBOUND U.S. ROUTE 51 BRIDGE OVER THE HATCHIE RIVER FELL ABOUT 20 FEET INTO THE 24-FOOT-DEEP RAIN-SWOLLEN RIVER AFTER TWO PILE-SUPPORTED COLUMN BENTS SUPPORTING THREE BRIDGE SPANS COLLAPSED. WITNESS REPORTS AND PHYSICAL EVIDENCE INDICATE THAT THE SOUTHERN COLUMN BENT (70) AND THE TWO SPANS THAT IT SUPPORTED FELL QUICKLY, CAUSING FOUR PASSENGER CARS AND ONE TRACTOR-SEMITRAILER TO PLUNGE INTO THE RIVER. THE ADJACENT COLUMN BENT (71) AND THE SPAN THAT IT WAS SUPPORTING THEN COLLAPSED ON TOP OF THE VEHICLES. THE RIVER HAD APPARENTLY BEEN AT FLOOD STAGE SINCE NOVEMBER 1988. ALL EIGHT VEHICLE OCCUPANTS DIED AS A RESULT OF THE COLLAPSE. (COVINGTON, TENNESSEE)

**Recommendation #** H-90-064

**Overall Status**  
CR

**Priority**  
CLASS II

THE NTSB RECOMMENDS THAT THE TENNESSEE DEPARTMENT OF TRANSPORTATION: MODIFY TDOT BRIDGE RATING CRITERIA TO REMOVE THE REQUIREMENT THAT A STRUCTURE SHOW SOME SETTLEMENT OR LEANING BEFORE IT IS RATED CRITICAL.

TENNESSEE, DOT	Closed - Reconsidered	9/14/1992
----------------	-----------------------	-----------

**Recommendation #** H-90-065

**Overall Status**  
CAA

**Priority**  
CLASS II

THE NTSB RECOMMENDS THAT THE TENNESSEE DEPARTMENT OF TRANSPORTATION: MODIFY BRIDGE INSPECTION PROCEDURES TO PROVIDE INSPECTORS WITH AVAILABLE BRIDGE DESIGN OR AS-BUILT PLANS DURING ON-SITE BRIDGE INSPECTIONS.

TENNESSEE, DOT	Closed - Acceptable Action	7/1/2004
----------------	----------------------------	----------

**Recommendation #** H-90-066

**Overall Status**  
CAA

**Priority**  
CLASS II

THE NTSB RECOMMENDS THAT THE TENNESSEE DEPARTMENT OF TRANSPORTATION: EXPAND TDOT BRIDGE INSPECTION CRITERIA TO REQUIRE THAT SUBMERGED BRIDGE ELEMENTS THAT CANNOT BE FULLY EXAMINED BY BRIDGE INSPECTORS DURING SCHEDULED INSPECTIONS RECEIVE FOLLOW-UP OR DIVER INSPECTIONS.

TENNESSEE, DOT	Closed - Acceptable Action	9/14/1992
----------------	----------------------------	-----------

**Recommendation #** H-90-067

**Overall Status**  
CAA

**Priority**  
CLASS II

THE NTSB RECOMMENDS THAT THE TENNESSEE DEPARTMENT OF TRANSPORTATION: ESTABLISH AN INTER-DISCIPLINARY TEAM OF GEOTECHNICAL, HYDRAULIC, AND STRUCTURAL ENGINEERS TO DEVELOP THE REPAIR AND REHABILITATION PROGRAMS FOR THOSE BRIDGES THAT ARE DETERMINED TO BE SCOUR-CRITICAL.

TENNESSEE, DOT	Closed - Acceptable Action	9/14/1992
----------------	----------------------------	-----------

**Recommendation #** H-90-068

**Overall Status**  
CAA

**Priority**  
CLASS II

THE NTSB RECOMMENDS THAT THE TENNESSEE DEPARTMENT OF TRANSPORTATION: IMMEDIATELY REPAIR THOSE BRIDGES DETERMINED TO HAVE EXPOSED FRICTION PILES.

TENNESSEE, DOT	Closed - Acceptable Action	9/14/1992
----------------	----------------------------	-----------



# Recommendation Report

Wednesday, August 01, 2007

LOG:h-0551\*

**Log Number** H-0551C

**IssueDate** 7/24/1990

COVINGTON TN

4/1/1989

ABOUT 8:15 P.M., CENTRAL STANDARD TIME, APRIL 1, 1989, AN 85. 5-FOOT SECTION OF THE 4,201-FOOT-LONG NORTHBOUND U.S. ROUTE 51 BRIDGE OVER THE HATCHIE RIVER FELL ABOUT 20 FEET INTO THE 24-FOOT-DEEP RAIN-SWOLLEN RIVER AFTER TWO-PILE-SUPPORTED COLUMN BENTS SUPPORTING THREE BRIDGE SPANS COLLAPSED. WITNESS REPORTS AND PHYSICAL EVIDENCE INDICATE THAT THE SOUTHERN COLUMN BENT (70) AND THE TWO SPANS THAT IT SUPPORTED FELL QUICKLY, CAUSING FOUR PASSENGER CARS AND ONE TRACTOR-SEMITRAILER TO PLUNGE INTO THE RIVER. THE ADJACENT COLUMN BENT (71) AND THE SPAN THAT IT WAS SUPPORTING THEN COLLAPSED ON TOP OF THE VEHICLES. THE RIVER HAD APPARENTLY BEEN AT FLOOD STAGE SINCE NOVEMBER 1988. ALL EIGHT VEHICLE OCCUPANTS DIED AS A RESULT OF THE COLLAPSE. (COVINGTON, TENNESSEE)

**Recommendation #** H-90-073

**Overall Status**

**Priority**

CAA

CLASS II

THE NTSB RECOMMENDS THAT THE STATE OF TENNESSEE: PROVIDE MAINTENANCE RESOURCES NECESSARY TO COMPLETE RECOMMENDED REPAIRS DEVELOPED AS A RESULT OF BRIDGE INSPECTIONS.

TENNESSEE, GOVERNOR

Closed - Acceptable Action

8/2/1994

---

**Total Number of Recommendations for Recommendation Report: 18**

---

**Selection for Report:**

**LOG:h-0551\***