TENNESSEE DEPARTMENT OF TRANSPORTATION
ASBESTOS SURVEY REPORT

Bridge 16I00240030 (16-SR055-14.77L)
SR-55 South Bound Over I-24, LM 14.77
Coffee County
TDOT Project No.: 16S055-S1-005, PIN: 134889.00

TriAD Project No. PROJ-038302 TDOT W013

Prepared by

TriAD
ENVIRONMENTAL CONSULTANTS

04/17/24

David Espy

David Espy
Tennessee Asbestos Inspector Accreditation No: A-I-55949-135643

TABLE OF CONTENTS

Page

TABLE OF CONTENTS CONTINUED

TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the findings of an inspection for asbestos-containing materials (ACM) completed on the bridge identified in Section 1.1. The inspection was completed by TriAD Environmental Consultants, Inc., (TriAD) in accordance with the requirements of the State of Tennessee, Department of Transportation Environmental Division (TDOT), Hazardous Materials Section.

1.1 TDOT Bridge Identification

The bridge is identified in the TDOT Project Management System as:

Bridge Number: 16I00240030
Route/Crossing: SR-55 South Bound / I-24
County: Coffee
TDOT PE-D.: 16S055-S1-005
TDOT PIN: 134889.00
Termini: SR-55 (McMinnville Highway), Bridge over I-24 LM 14.77 (TMA)

1.2 Bridge Description

Bridge Number 16I00240030 is located on State Route 55 south bound over Interstate 24 at LM 14.77 in Coffee County, Tennessee. The bridge is a 281-foot, two-lane, four-span bridge, constructed of concrete T-beams with a concrete deck and asphalt wearing surface. The bridge was constructed in 1966 and reconstructed in 1973. The location of the bridge is provided on the Bridge Vicinity Map in Figure 1.

2.0 ACM ASSESSMENT

Observed suspect ACM were categorized by homogeneous areas (HA), which are materials that appear similar throughout in terms of color, texture, and application date. Suspect ACM for each HA were physically assessed for friability and condition of material. Random samples of suspect ACM were collected from designated HAs and submitted to

an accredited laboratory for analysis. The laboratory results of the ACM sampling are included in Appendix A. Photographs showing the locations of the HAs are provided in Figure 2. Photographs of the HAs that were sampled are included in Appendix B.

2.1 Inspection Personnel

The sampling and field activities were performed on March 6, 2024, by Mr. David Espy an Accredited State of Tennessee Asbestos Inspector and Mr. Andy Watts an Environmental Consultant, both with TriAD. Copies of Mr. Espy's and TriAD's current accreditation from the State of Tennessee are included in Appendix C. This work was completed in accordance with TriAD's Health and Safety Plan and Job Safety Analysis (JSA). A copy of the JSA and the cover page for the Health and Safety Plan is included in Appendix D.

2.2 Visual Survey

The inspection began with a walk-through and visual survey of the bridge. The visual survey consisted of:

- Locating and confirming the structure to be sampled
- Sketching the structure and/or verifying the plans provided
- Taking general photos of the structure
- Locating and identifying suspect ACM to be sampled
- Determining accessible locations to collect samples

2.3 ACM Sampling of Bridge Components

Suspect ACM was sampled in accordance with United States Environmental Protection Agency (USEPA) regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP) and in general conformance with the protocols as outlined in USEPA regulation 40 CFR 763 Asbestos Hazard Emergency Response Act (AHERA). TriAD personnel made reasonable effort during the performance of this survey

to identify suspect ACM which may be encountered during future demolition or renovation activities. Suspect ACM samples collected for analysis were obtained by minimal destructive sampling techniques. Possible suspect ACM located in voids or concealed areas which were not accessible during the survey process are not included as part of this report. Should suspect materials other than those identified in this report be discovered during demolition or renovation activities, these materials should be assumed asbestos containing until laboratory confirmation of the presence or absence of asbestos content is made. Bridge components identified and sampled as homogenous areas are detailed below. Photographs of each HA are provided in Appendix B.

2.3.1 HA-01 Bent

The bents are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.2 HA-02 Bent Support Wall

The bent support wall is made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.3 HA-03 Sloping Wall

The sloping walls are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.4 HA-04 Concrete Guardrail

The guardrails are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.5 HA-05 Concrete Guardrail Coating

The concrete guardrails are coated with a thin black, light green, and yellowish textured material. Three samples of the coating were collected from this HA. A utility knife was used to collect these samples.

2.3.6 HA-06 Concrete Guardrail Support

The guardrail supports are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.7 HA-07 Black Tar on Top of Decking

There is black tar located on top of the decking. Three samples were collected from this HA. A utility knife was used to collect these samples.

2.3.8 HA-08 Abutment

The abutments are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.9 HA-09 Bottom of Decking

The bottom of the decking is made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.10 HA-10 Longitudinal Girder Coating

The longitudinal girders are coated with a thin light green and yellowish textured material. Three samples of the coating were collected from this HA. A utility knife was used to collect these samples.

2.3.11 HA-11 Longitudinal Girder

The longitudinal girders are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.12 HA-12 End Wall

The end walls are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.13 HA-13 End Wall Coating

The end walls are coated with a thin light green and yellowish textured material. Three samples of the coating were collected from this HA. A utility knife was used to collect these samples.

2.3.14 HA-14 Concrete Patching

Concrete patching was present in multiple locations on the bridge. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.15 HA-15 Sidewalk

The sidewalks are made of concrete. Three samples were collected from this HA. A hammer and chisel were used to collect these samples.

2.3.16 Utility Components

There are two 2-inch diameter metal utility conduits attached to bents. The conduits connect to lights installed on the bents on the bottom side of the bridge. One light is located on the northeast side of the bridge and one light is located on the southwest side.

2.3.17 Bridge Drainage System

No built-in drainage system was observed on this bridge.

3.0 ANALYTICAL PROCEDURES

The bulk samples were analyzed in the laboratory using Polarized Light Microscopy (PLM) coupled with dispersion staining (USEPA Method 600/R-93/116). PLM is an asbestos analytical method which identifies the specific asbestos minerals by their unique optical properties. The optical properties are a result of the mineral's chemical composition, physical atomic structure, and visual morphology. This is the USEPA-recommended method of analysis for asbestos identification in bulk samples.

The bulk samples collected for this inspection were analyzed by Frost Environmental Services, LLC, a laboratory that has received certification from the American Industrial Hygiene Association Laboratory Accreditation Program (Laboratory identification number 198214).

4.0 REGULATORY OVERVIEW

4.1 National Emission Standards for Hazardous Air Pollutants

The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) asbestos regulations (40 CFR 61, Subpart M) requires that all regulated asbestos-containing materials (RACM) be properly removed prior to any renovation or demolition activities that will disturb them. These regulations define RACM as:

(a) Friable asbestos material,

(b) Category I non-friable ACM that has become friable,

(c) Category I non-friable ACM that will be or has been subject to sanding, grinding, cutting, or abrading, or

(d) Category II non-friable ACM that has a high probability of becoming, or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

4.2 Definitions

Significant definitions related to regulation of asbestos under NESHAPS regulations (40 CFR Part 61, Subpart M, Section 61.141) include:

Friable asbestos material means any material containing more than one percent asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Nonfriable asbestos-containing material means any material containing more than one percent asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. EPA also defines two categories of non-friable ACM, Category I and Category II nonfriable ACM, which are described as follows:

> **Category I nonfriable ACM** means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos as determined using methods specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy.
>
> **Category II nonfriable ACM** means any material, excluding Category I nonfriable ACM, containing more than one percent asbestos as determined using methods specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations by this subpart.

5.0 RESULTS OF ASBESTOS BULK SAMPLE ANALYSIS

A total of 45 samples were obtained from the bridge. Multiple samples of each HA were collected in accordance with TDOT requirements and delivered to the laboratory for visual observation and microscopic analysis. The samples were selected based on HAs of suspect materials, as described in Section 2.0.

Based on the analytical results, 25 of the samples collected contained greater than one percent (1%) asbestos. The material found to be positive for asbestos was the coating applied to multiple components of the bridge. A summary of the sampled material that was found to contain greater than one percent (1%) asbestos is presented in Table 2.

The analytical results of all the samples collected, along with the chain-of-custody records, are included in Appendix A. Photographs of examples of the HAs are included in Appendix B. A Bridge Vicinity Map is provided as Figure 1. A profile of the bridge with homogenous area sample locations is depicted on Figure 2.

6.0 QUALIFICATIONS

This report has been prepared on behalf of and exclusively for TDOT. The information presented in this report is based on information obtained during the site visit and from previous experience. If additional information becomes available which might impact our conclusions or recommendations, TriAD requests the opportunity to review the information, reassess the potential concerns, and modify opinions, if warranted. Use of

this report or reliance upon information contained in this report by any other party implies an agreement by that party to the same terms and conditions under which service was provided. Any party, other than TDOT, relying on this document is cautioned that all conclusions made, or decisions arrived at based on their review of this document are those solely of the third party, without warranty, guarantee, or promise by the author. These findings are relevant to the dates of our services and should not be relied upon to represent conditions at substantially earlier or later dates.

Tables

Table 1: Homogeneous Areas	
HA-01	Bent
HA-02	Bent Support Wall
HA-03	Sloping Wall
HA-04	Concrete Guardrail
HA-05	Concrete Guardrail Coating
HA-06	Concrete Guardrail Support
HA-07	Black Tar on Top of Decking
HA-08	Abutment
HA-09	Bottom of Decking
HA-10	Longitudinal Girder Coating
HA-11	Longitudinal Girder
HA-12	End Wall
HA-13	End Wall Coating
HA-14	Concrete Patching
HA-15	Sidewalk

Table 2: Materials Containing Asbestos					
Sample No.	**Material Description**	**Location**	**Quantity**	**Condition**	**% Asbestos and Type**
HA-01-01	Gray, Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Bent	Estimated 12,000 SF of Total Coating	Fair	3% Chrysotile; None Detected
HA-01-02	Gray, Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Bent		Fair	3% Chrysotile; None Detected
HA-01-03	Gray, Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Bent		Fair	3% Chrysotile; None Detected
HA-02-04	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Bent Support Wall		Fair	3% Chrysotile; None Detected
HA-02-05	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Bent Support Wall		Fair	3% Chrysotile; None Detected
HA-02-06	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Bent Support Wall		Fair	3% Chrysotile; None Detected
HA-04-10	Black, Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Concrete Guardrail		Poor	3% Chrysotile; None Detected
HA-04-11	Black, Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Concrete Guardrail		Poor	3% Chrysotile; None Detected
HA-04-12	Black, Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Concrete Guardrail		Poor	3% Chrysotile; None Detected
HA-05-13	Black, Light Green, Yellowish Coating	Concrete Guardrail Coating		Poor	3% Chrysotile

Table 2: Materials Containing Asbestos					
Sample No.	**Material Description**	**Location**	**Quantity**	**Condition**	**% Asbestos and Type**
HA-05-14	Black, Light Green, Yellowish Coating	Concrete Guardrail Coating	Estimated 12,000 SF of Total Coating	Poor	3% Chrysotile
HA-05-15	Black, Light Green, Yellowish Coating	Concrete Guardrail Coating		Poor	3% Chrysotile
HA-10-28	Light Green, Yellowish Coating	Longitudinal Girder Coating		Fair	3% Chrysotile
HA-10-29	Light Green, Yellowish Coating	Longitudinal Girder Coating		Fair	3% Chrysotile
HA-10-30	Light Green, Yellowish Coating	Longitudinal Girder Coating		Fair	3% Chrysotile
HA-11-31	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Longitudinal Girder		Fair	3% Chrysotile; None Detected
HA-11-32	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Longitudinal Girder		Fair	3% Chrysotile; None Detected
HA-11-33	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Longitudinal Girder		Fair	3% Chrysotile; None Detected
HA-12-34	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	End Wall		Poor	3% Chrysotile; None Detected
HA-12-35	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	End Wall		Poor	3% Chrysotile; None Detected
HA-12-36	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	End Wall		Poor	3% Chrysotile; None Detected
HA-13-37	Light Green, Yellowish Coating	End Wall Coating		Poor	3% Chrysotile

Table 2: Materials Containing Asbestos					
Sample No.	**Material Description**	**Location**	**Quantity**	**Condition**	**% Asbestos and Type**
HA-13-38	Light Green, Yellowish Coating	End Wall Coating	Estimated 12,000 SF of Total Coating	Poor	3% Chrysotile
HA-13-39	Light Green, Yellowish Coating	End Wall Coating		Poor	3% Chrysotile
HA-14-40	Light Green, Yellowish Coating; Tan and Gray Cementitious Material	Concrete Patching		Fair	3% Chrysotile; None Detected

Figures

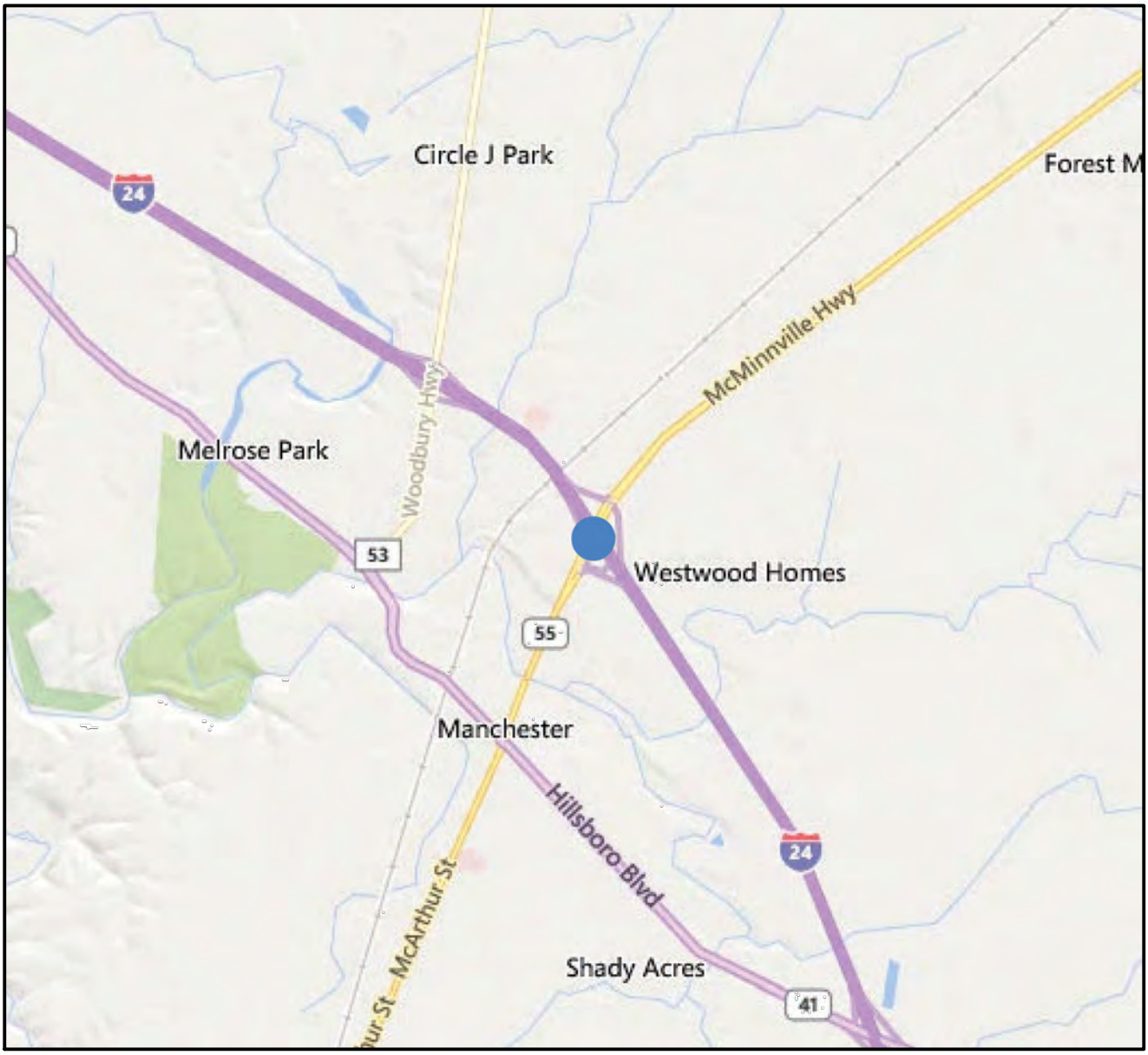

FIGURE 1
BRIDGE VICINITY MAP

BRIDGE NO.: 16I00240030
PIN NO.: 134889.00
STATE ROUTE 55 SB OVER INTERSTATE 24
LM 14.77
COFFEE COUNTY, TENNESSEE

SCALE: N.T.S.	DR ALW	CHK DME	REV JMP

PREPARED BY:

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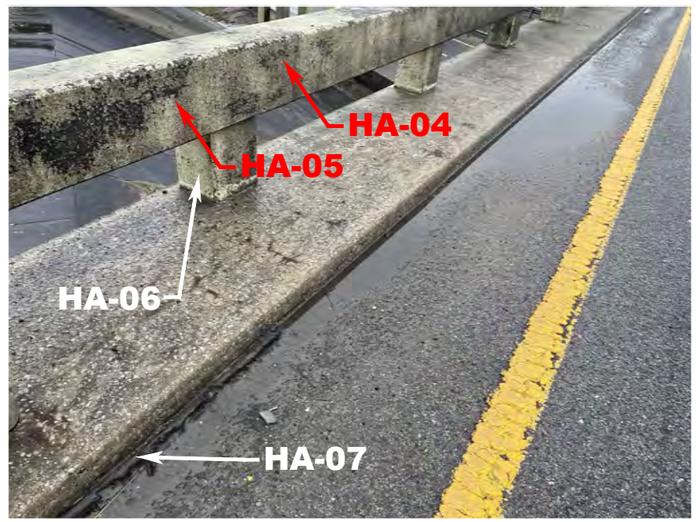
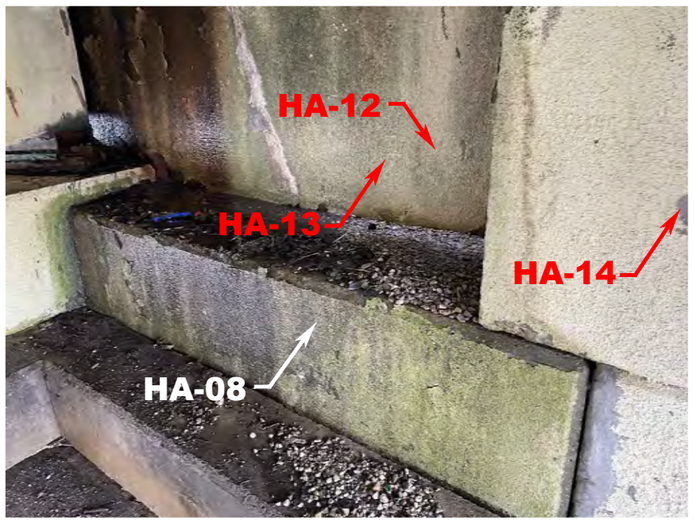
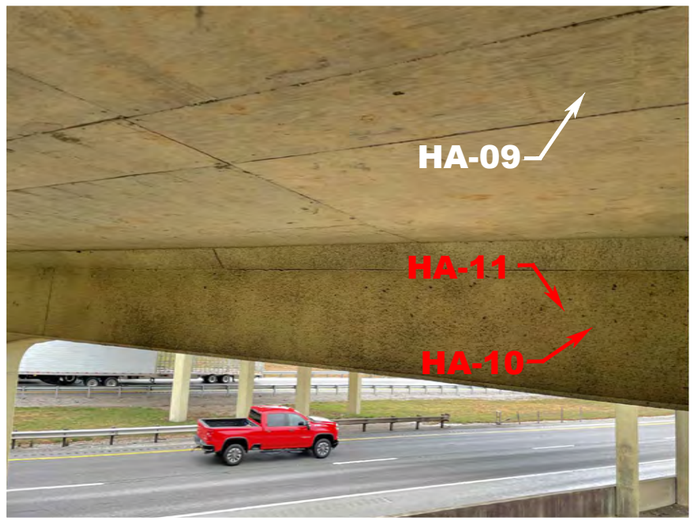
615-889-6888 fax 615-889-4004

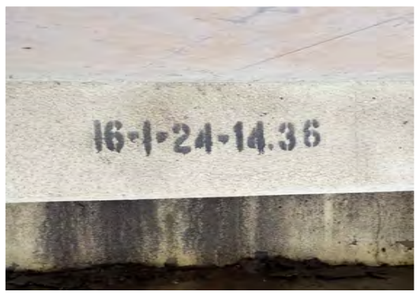
PROJ: 038302 TDOT W013	DATE: 03-11-24	SHEET 1 OF 1







HOMOGENEOUS AREAS



HA-01 – BENT
HA-02 – BENT SUPPORT WALL
HA-03 – SLOPING WALL
HA-04 – CONCRETE GUARDRAIL
HA-05 – CONCRETE GUARDRAIL COATING
HA-06 – CONCRETE GUARDRAIL SUPPORT
HA-07 – BLACK TAR ON TOP OF DECKING
HA-08 – ABUTMENT
HA-09 – BOTTOM OF DECKING
HA-10 – LONGITUDINAL GIRDER COATING
HA-11 – LONGITUDINAL GIRDER
HA-12 – END WALL
HA-13 – END WALL COATING
HA-14 – CONCRETE PATCHING
HA-15 – SIDE WALK

NOTES

1. HOMOGENEOUS AREA SAMPLE LOCATIONS ARE GENERALIZED; ACTUAL SAMPLES WERE COLLECTED FROM RANDOM LOCATIONS ACROSS THE STRUCTURE.
2. MATERIALS CONTAINING ASBESTOS ARE MARKED IN RED.

FIGURE 2
HOMOGENEOUS AREAS

BRIDGE NO.: 16100240030
PIN NO.: 134889.00
STATE ROUTE 55 SB OVER INTERSTATE 24
LM 14.77
COFFEE COUNTY, TENNESSEE

SCALE: N.T.S. | DR ALW | CHK DME | REV JMP

PREPARED BY:

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PROJ: 038302 TDOT W013 | DATE: 03-11-24 | SHEET 1 OF 1

Appendix A:
Laboratory Analysis Report

FROST ENVIRONMENTAL SERVICES, LLC
339 ROCKLAND ROAD, SUITE E, HENDERSONVILLE, TENNESSEE 37075
(615) 562-2669 office - (615) 473-9047 cell - email: lab@frostenvironmental.com

POLARIZED LIGHT MICROSCOPY (PLM)
LABORATORY ANALYSIS REPORT
(EPA/600/R-93/116 (JUNE 1993))

CLIENT: Triad Environmental
PROJECT: Proj-038302 W-013
LOCATION: Bridge#16I00240030 SB
Coffee County

Date Received: 3/7/2024
Date Analyzed: 3/12/2024
Date Reported: 3/12/2024

ANALYST: Codi Maddox *Codi Maddox*

Sample Number	Location	Material Description	Binder (Non-Fibrous) Material	Non-Asbestos Fiber	Asbestos Type & Percent
HA-01-01	Bent	Grey Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-01-02	Bent	Grey Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-01-03	Bent	Grey Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-02-04	Bent Support Wall	Light Green/Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-02-05	Bent Support Wall	Light Green/Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-02-06	Bent Support Wall	Light Green/Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-03-07	Sloping Wall	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-03-08	Sloping Wall	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-03-09	Sloping Wall	Tan & Grey Cementitious Material	100	None Detected	None Detected

Asbestos Containing Material (ACM) is defined as any material containing more than one percent asbestos.
Analysis was performed using EPA/600/R-93/116 (June 1993)), Test Method for the Determination of Asebstos in Bulk Building Materials.

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Sample Number	Location	Material Description	Binder (Non-Fibrous) Material	Non-Asbestos Fiber	Asbestos Type & Percent
HA-04-10	Concrete Guardrail	Black Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-04-11	Concrete Guardrail	Black Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-04-12	Concrete Guardrail	Black Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-05-13	Concrete Guardrail Coating	Black Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-05-14	Concrete Guardrail Coating	Black Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-05-15	Concrete Guardrail Coating	Black Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-06-16	Concrete Guardrail Support	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-06-17	Concrete Guardrail Support	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-06-18	Concrete Guardrail Support	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-07-19	Black Tar on Top of Decking	Black Tar	100	None Detected	None Detected
HA-07-20	Black Tar on Top of Decking	Black Tar	100	None Detected	None Detected
HA-07-21	Black Tar on Top of Decking	Black Tar	100	None Detected	None Detected
HA-08-22	Abutment	Tan & Grey Cementitious Material	100	None Detected	None Detected

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HA-08-23	Abutment	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-08-24	Abutment	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-09-25	Bottom of Decking	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-09-26	Bottom of Decking	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-09-27	Bottom of Decking	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-10-28	Longitudinal Girder Coating	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-10-29	Longitudinal Girder Coating	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-10-30	Longitudinal Girder Coating	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-11-31	Longitudinal Girder	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-11-32	Longitudinal Girder	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-11-33	Longitudinal Girder	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-12-34	End Wall	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected

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HA-12-35	End Wall	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-12-36	End Wall	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-13-37	End Wall Coating	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-13-38	End Wall Coating	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-13-39	End Wall Coating	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
HA-14-40	Concrete Patching	Light Green & Yellowish Coating	97	None Detected	3 Chrysotile
		Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-14-41	Concrete Patching	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-14-42	Concrete Patching	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-15-43	Sidewalk	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-15-44	Sidewalk	Tan & Grey Cementitious Material	100	None Detected	None Detected
HA-15-45	Sidewalk	Tan & Grey Cementitious Material	100	None Detected	None Detected

Asbestos Containing Material (ACM) is defined as any material containing more than one percent asbestos.
Analysis was performed using EPA/600/R-93/116 (June 1993)), Test Method for the Determination of Asebstos in Bulk Building Materials.

FROST ENVIRONMENTAL SERVICES, LLC

339 Rockland Road Suite E, Hendersonville, Tennessee 37075

(615) 562-2669 office • (615)-473-9047 cell • email info@frostenvironmental.com

CHAIN OF CUSTODY

PROJECT: PROJ-038302 W-013

Bridge No.: 16I00240030 SB

PROJECT LOCATION: Coffee County

Report To: David Espy

Company: Montrose Environmental Solutions

Address: 207 Donelson Pike
Nashville, TN 37214

Phone: (615) 889-6888

Email: despy@triadenv.com

Turnaround Time Requested: ____ 2-3 Hour ____ Same Day ____ 24 Hour ✓ 2-3 Day

Sample Number	Date Collected	Location	Analysis Requested	Volume
HA-01-01	3/6/24	bent	PLM	
HA-01-02	"	"	"	
HA-01-03	"	"	"	
HA-02-04	"	bent support wall	"	
HA-02-05	"	"	"	
HA-02-06	"	"	"	
HA-03-07	"	sloping wall	"	
HA-03-08	"	"	"	
HA-03-09	"	"	"	
HA-04-10	"	concrete guardrail	"	
HA-04-11	"	"	"	
HA-04-12	"	"	"	
HA-05-13	"	concrete guardrail coating ~~support~~	"	
HA-05-14	"	"	"	
HA-05-15	"	"	"	

RELINQUISHED BY _____ RECEIVED AT LAB BY: Cecil Meadows

DATE: _____ DATE: ~~3-7-24~~ 3-7-24

FROST ENVIRONMENTAL SERVICES, LLC
339 Rockland Road Suite E, Hendersonville, Tennessee 37075
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CHAIN OF CUSTODY

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Report To: David Espy
Company: Montrose Environmental Solutions
Address: 207 Donelson Pike
Nashville, TN 37214
Phone: (615) 889-6888
Email: despy@triadenv.com

Turnaround Time Requested: ____ 2-3 Hour ____ Same Day ____ 24 Hour ✓ 2-3 Day

Sample Number	Date Collected	Location	Analysis Requested	Volume
HA-06-16	3/6/24	concrete guardrail support	PLM	
HA-06-17	"	"	"	
HA-06-18	"	"	"	
HA-07-19	"	black tar on top of decking	"	
HA-07-20	"	"	"	
HA-07-21	"	"	"	
HA-08-22	"	abutment	"	
HA-08-23	"	"	"	
HA-08-24	"	"	"	
HA-09-25	"	bottom of decking	"	
HA-09-26	"	"	"	
HA-09-27	"	"	"	
HA-10-28	"	longitudinal girder coating	"	
HA-10-29	"	"	"	
HA-10-30	"	"	"	

RELINQUISHED BY: David Espy
DATE: 3/7/24

RECEIVED AT LAB BY: Cadi Medeiros
DATE: [redacted], 3.7.24

FROST ENVIRONMENTAL SERVICES, LLC
339 Rockland Road Suite E, Hendersonville, Tennessee 37075
(615) 562-2669 office › (615)-473-9047 cell › email info@frostenvironmental.com

CHAIN OF CUSTODY

PROJECT: PROJ-038302 W-013

Bridge No.: 16I00240030 SB

PROJECT LOCATION: Coffee County

Report To: David Espy
Company: Montrose Environmental Solutions
Address: 207 Donelson Pike
Nashville, TN 37214
Phone: (615) 889-6888
Email: despy@triadenv.com

Turnaround Time Requested: ____ 2-3 Hour ____ Same Day ____ 24 Hour ✓ 2-3 Day

Sample Number	Date Collected	Location	Analysis Requested	Volume
HA-11-31	3/6/24	longitudinal girder	PLM	
HA-11-32	"	"	"	
HA-11-33	"	"	"	
HA-12-34	"	end wall	"	
HA-12-35	"	"	"	
HA-12-36	"	"	"	
HA-13-37	"	end wall coating	"	
HA-13-38	"	"	"	
HA-13-39	"	"	"	
HA-14-40	"	concrete patching	"	
HA-14-41	"	"	"	
HA-14-42	"	"	"	
HA-15-43	"	side walk	"	
HA-15-44	"	"	"	
HA-15-45	"	"	"	

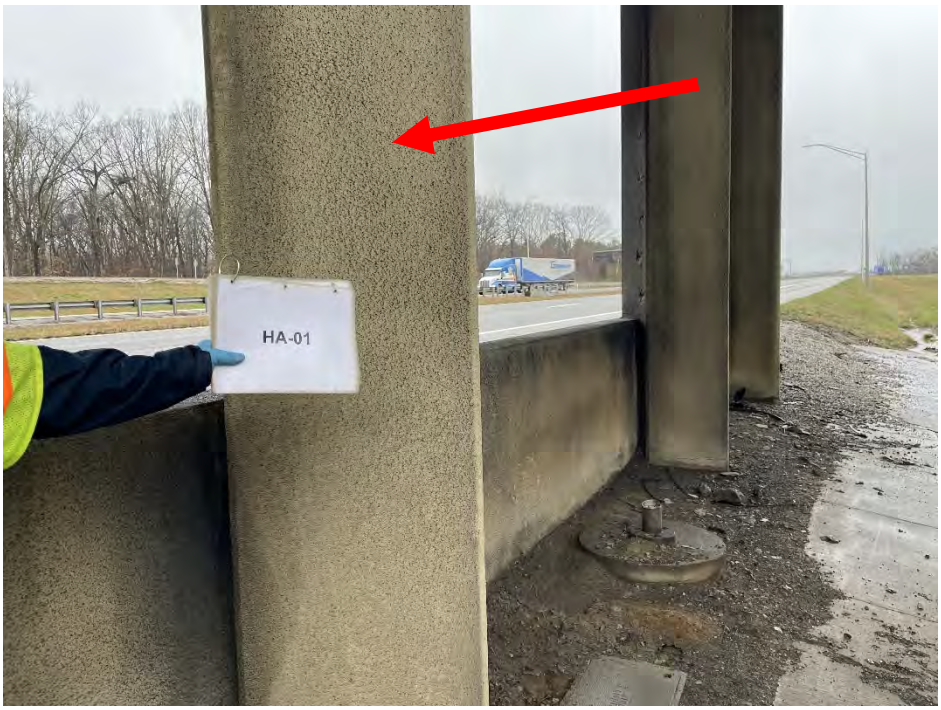
RELINQUISHED BY: David Espy
DATE: 3/7/24

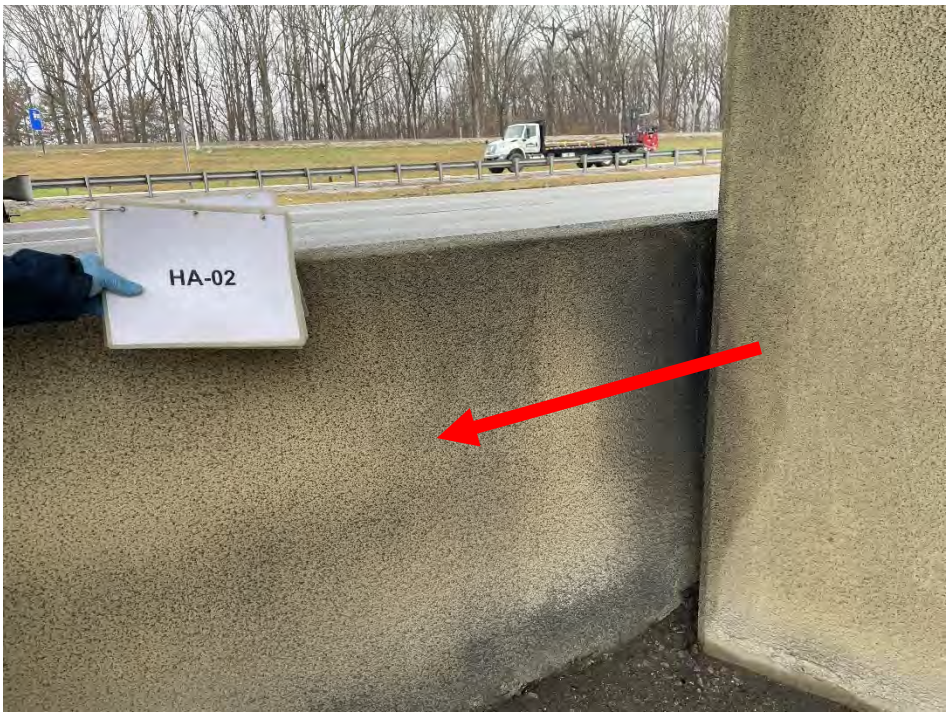
RECEIVED AT LAB BY: Cori Medlen
DATE: 3-7-24

Appendix B:
Asbestos Sampling Photographs

Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 1 – Top of Bridge Facing Southwest	

Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 2 – South Side of Bridge Facing Southwest	

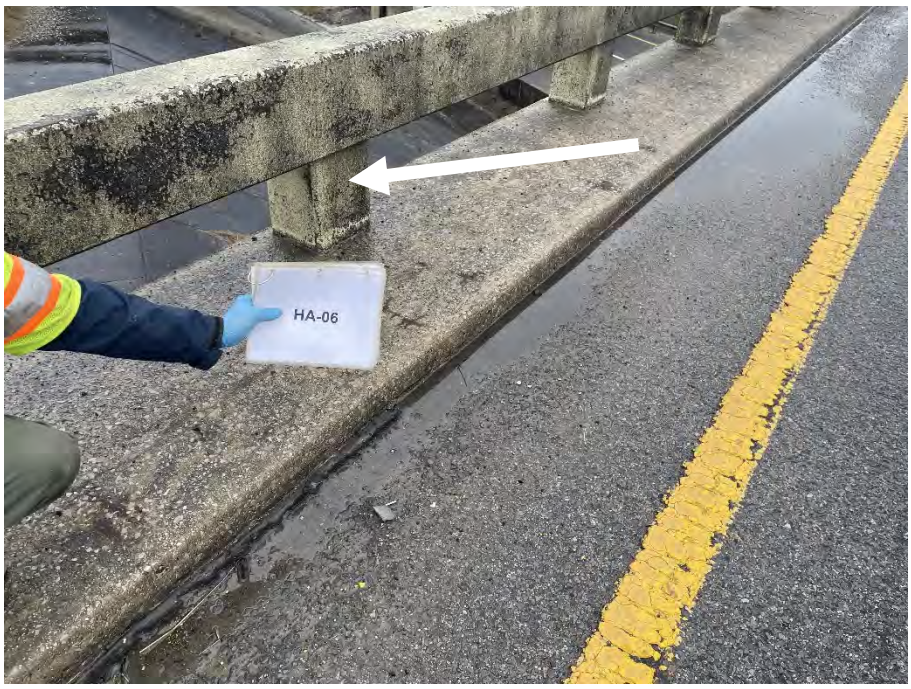
Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 3 – HA-01 Bent **This HA Contained 3% Chrysotile in the Coating Layer**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 4 – HA-02 Bent Support Wall **This HA Contained 3% Chrysotile in the Coating Layer**	

Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 5 – HA-03 Sloping Wall	

Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 6 – HA-04 Concrete Guardrail **This HA Contained 3% Chrysotile in the Coating Layer**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 7 – HA-05 Concrete Guardrail Coating **This HA Contained 3% Chrysotile**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 8 – HA-06 Concrete Guardrail Support	

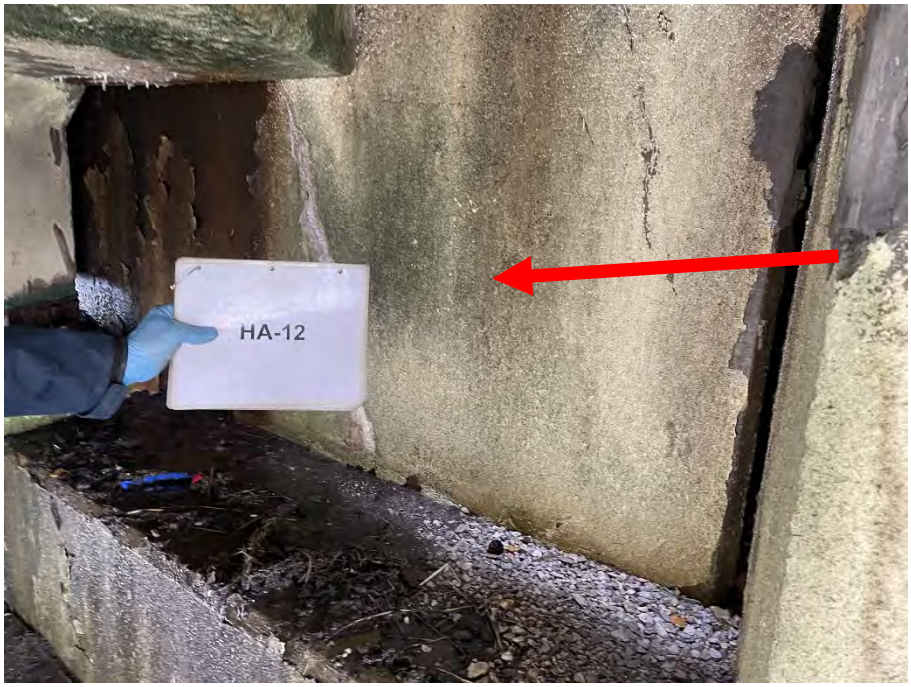
Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 9 – HA-07 Black Tar on Top of Decking	

Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 10 – HA-08 Abutment	

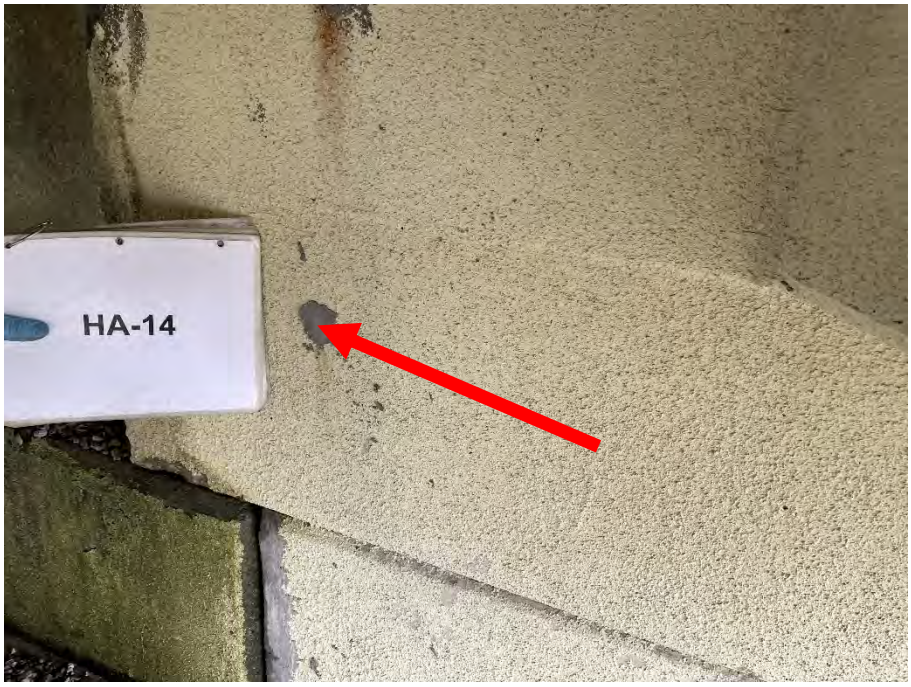
Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 11 – HA-09 Bottom of Decking	

Photographer: Andy Watts	
Date: 03/06/2024	
Description: Photograph 12 – HA-10 Longitudinal Girder Coating **This HA Contained 3% Chrysotile**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 13 – HA-11 Longitudinal Girder **This HA Contained 3% Chrysotile in the Coating Layer**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 14 – HA-12 End Wall **This HA Contained 3% Chrysotile in the Coating Layer**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 15 – HA-13 End Wall Coating **This HA Contained 3% Chrysotile**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 16 – HA-14 Concrete Patching **This HA Contained 3% Chrysotile in the Coating Layer**	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 17 – HA-15 Sidewalk	

Photographer: Andy Watts **Date:** 03/06/2024 **Description:** Photograph 18 – Utility Conduit on Bent	

Appendix C:
Asbestos Inspection Credentials

THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management
Toxic Substances Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the Company named below is hereby accreditted to offer and/or conduct Asbestos activities pursuant to Rule 1200-01-20:

TriAD Environmental Consultants

207 Donelson Pike Ste. 200 Nashville TN, 37214

to conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee. This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Type	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-5195-137059	July 01, 2023	July 31, 2024

Given under the Seal of the State of Tennessee in Nashville.

This **13rd** Day of **June 2023**

Division of Solid Waste Management
Toxic Substance Program

THE STATE OF TENNESSEE

Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

David M Espy

DOB	Sex	HGT	WGT
18-Sep-1985	M	6' 0"	210

Discipline	Accreditation	Expiration
Inspector	A-I-55949-135643	May-31-2024
Management Planner	A-MP-55949-135644	Nov-30-2024
Project Monitor	A-PM-55949-132343	Sep-30-2024

Re-Accreditation

Asbestos Accreditation

Is hereby Accredited pursuant to Rule 1200-01-20 Asbestos Accreditation Requirements to perform Asbestos Activities associated with the Discipline(s) listed on the front of this card.

A false statement pertaining to accreditation(s) is subject to the penalties of perjury.

Date Issued: 11/21/2023

Note: In order for this Tennessee issued accreditation to remain valid through the expiration date, the individual must maintain current applicable accredited asbestos refresher training course(s)

THIS CARD IS NOT TO BE USED FOR ANY OTHER IDENTIFICATION PURPOSES. IF FOUND, RETURN TO:

Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor
Nashville TN 37243

CN-1324 (Rev 6/13) RDA-3078

Appendix D:
Health and Safety Plan and JSA

HEALTH AND SAFETY PLAN
TDOT PROJECT No. 16S055-S1-005

Project Location: Bridge No.: 16I00240029 and 16I00240030

Project Description: Asbestos Survey and Sampling

Project Date: 03/06/24

TDOT PIN: 134889.00

Project Personnel:

Title	Organization	Name	Phone Number
Project Manager – TDOT (TDOT PM)	Tennessee Dept. of Transportation	Kyle Kirschenmann	615-598-1522
Project Manager – TriAD (TriAD PM)	TriAD Environmental Consultants, Inc.	Jeff Postell	615-889-6888 615-417-8050
Project Safety and Health Manager (SHM)	TriAD Environmental Consultants, Inc.	Chris Scott	615-889-6888 615-417-6154
Site Safety and Health Officer (SSO)	TriAD Environmental Consultants, Inc.	David Espy	615-889-6888 229-347-0516
Emergency Coordinator (EC)	TriAD Environmental Consultants, Inc.	David Espy	615-889-6888 229-347-0516
OSHA Hotline			(800) 321-OSHA

Nearest Hospital: Unity Medical Center – Emergency Room

Hospital Phone Number: (931) 728-6354

Map to Hospital: See Attached Page

Health and Safety Plan: See Following Pages

SAFE WORK PERMIT- JSA AND DAILY FIELD REPORT

Site Name/ Work: Coffee County- Bridge No.: 16I00240029 and Bridge No.: 16I00240030		Date: 3/6/24
Time Permit Issued/Work Started: 8:40 AM / PM	Permit Expires/work stopped: 3:20 AM/PM	Issued To: David Espy
Job Description: Asbestos Survey		Weather: light rain 56°F

Section: 2 EMERGENCY PLANNING: DISCUSSION AT JOB SITE OR SAFETY TAILGATE MEETING

☑ Site Contact:	☑ Emergency Phone: **911**
☑ Evacuation Routes	☑ Alt. Site Emergency Phone: (931) 728-6354
☑ Staging Area	☑ First Aid/ CPR Trained
☑ Emergency Equipment Needed (Retrieval; SCBA; Radio; etc)	☑ Rescue Procedures Discussion

Additional Comments: **See Map to Hospital and Health and Safety Plan**

Section: 3 JOB SAFETY ANALYSIS

JOB STEPS / WORK ACTIVITIES	HAZARDS (LIST)
1. Asbestos Survey	3,5,6,8,11,12,13,15, 17
2.	
3.	
4	
5	
6	
7	
8	

SUPERVISOR SIGNATURE: David Espy

POTENTIAL HAZARDS

1. Fire / Explosion	5. Strain / Sprain	9. Thermal Burn	13. Chemical Contact
2. Pinch Points / Caught In	6. Struck By/Traffic Hazards	10. Overhead Work	14. Asphyxiation
3. Slip / Trip / Fall	7. Noise	11. Temperature Extremes	15. Biological Contact
4. Electric Shock	8. Cut / Laceration	12. Inhalation (Dust/ Vapor/ Fumes)	16. Key Procedure Applies
17. Asbestos Exposure	18. Other: Water Hazards	19. Other: (Specify)	

HAZARD MITIGATION For Corresponding Job Step

1. Wear proper PPE	6. Ensure good footing and **clear egress/ingress**
2. Understand the work plan	7. Practice good housekeeping
3. No solo lifting of greater than 50 pounds	8. Use proper tools for the task
4. Maintain awareness of surroundings	9. No smoking
5. Place Warning Signs	10. Other: (Specify)

JOB HAZARD REMINDERS (Check All That Apply)

Equipment Operation	Ergonomics/Exposures	Conditions	Other
☒ Motor Vehicle Operation	☒ Body Positioning	☒ Walking Surfaces	☐ Extension Cords / GFCI
☒ Ladders	☒ Cramped Conditions	☐ Water Hazards	☐ Housekeeping
☐ Heavy Equipment	☐ Elevated Work	☒ Sharp Edges	☐ Barricades
☐ Overhead Obstructions mark	☒ Heavy Lifting	☐ Lighting	☒ Adverse Weather
☐ Underground Utilities mark	☒ Heat Stress/Cold Stress	☐ Overhead Work	☐ Other
☒ Site Conditions (Slope, Stability)	☒ Physical Exertion	☒ Hand & Power Tools	☐
☐ Equipment Fueling	☒ Repetitive Motion	☐ Hot / Cold Liquids / Surfaces	☐
☒ Road Hazards use spotters	☒ Suitability for Work	☐ Other	☐
☐ Man Lifts	☒ Communications	☐	☐
☐ Other (Specify)	☒ Training	☐	☐
☐	☐ Other	☐	☐

PPE REQUIREMENTS		HES EQUIPMENT			
Minimum: Hard Hat, Safety Vest, Safety Glasses, Steel Toed Shoes, Long Pants, Sleeved Shirt		Fire Extinguisher:	Y / N / N/R	Spill Response Mat'l.	Y / N / N/R
Other PPE Req'd: : **Gloves, Resp.**		Eyewash/Shower	Y / N / N/R	Air Monitoring:	Y / N / N/R
		First Aid Kit	Y / N / N/R	Other:	

SECTION 4	KEY PROCEDURES

CONTROL OF HAZARDOUS ENERGY (LOCKOUT/ TAGOUT) Needed ☐ Not Needed X

Individual Lockout ☐ Group Lockout ☐

Group Primary Authorized Employee: _____

Attach ~~Lockout List~~ or Machine Specific Procedure

HOT WORK PERMIT Needed ☐ Not Needed X

Type of Hot Work: Burning ☐ Welding ☐ Grinding ☐ | **Fire Watch Req'd.?** ☐ YES ☑ NO

Hot Work Permit Used: Client Permit ☐ Contractor Permit ☐

ELEVATED WORK OR EXCAVATION / TRENCH WORK

Personnel Working <3 Ft below ground level or > 6 Ft. Above Lower Level? ☐ YES ☑ NO

Protected By: Guardrail System: ☐ Personal Fall Arrest System: ☐ Other (Specify): ☐

Section: 5 **PERMIT-APPROVALS / EMPLOYEE SIGNATURES**

Signatures approve only work conducted under the requirements of this permit

Supervisor: David Espy Date: 3-6-24

Employee(s) /Contractor(s) Names (print): I have reviewed and understand and will follow all conditions of this completed permit and its attachments. I will report hazardous conditions identified on this job site to my supervisor and/or designee for necessary corrections.

1) David Espy	6)
2) Andy Watts	7)
3)	8)
4)	9)
5)	10)

Section: 6 **MEET and GREET Job Site Awareness**

Visitors and Additional Personnel) Names (print): All employees, visitors and contractors entering the area affected by this permit must meet and exchange information on the scope of work, hazards involved and intentions for the day. All persons on job sites must be aware of all work and the presence of all other persons on the site. Those not authorized on this permit above must list their name below acknowledging awareness of the task authorized by this permit. A representative, such as a contractor foreman, may acknowledge for the group.

Print Name and Company/Organization

1)
2)
3)
4)
5)
6)
7)
8)
9)
10)

Section: 7 **JOB COMPLETE OR PERMIT CLOSED**

Signature verifies closure of permit and completion of items checked below.

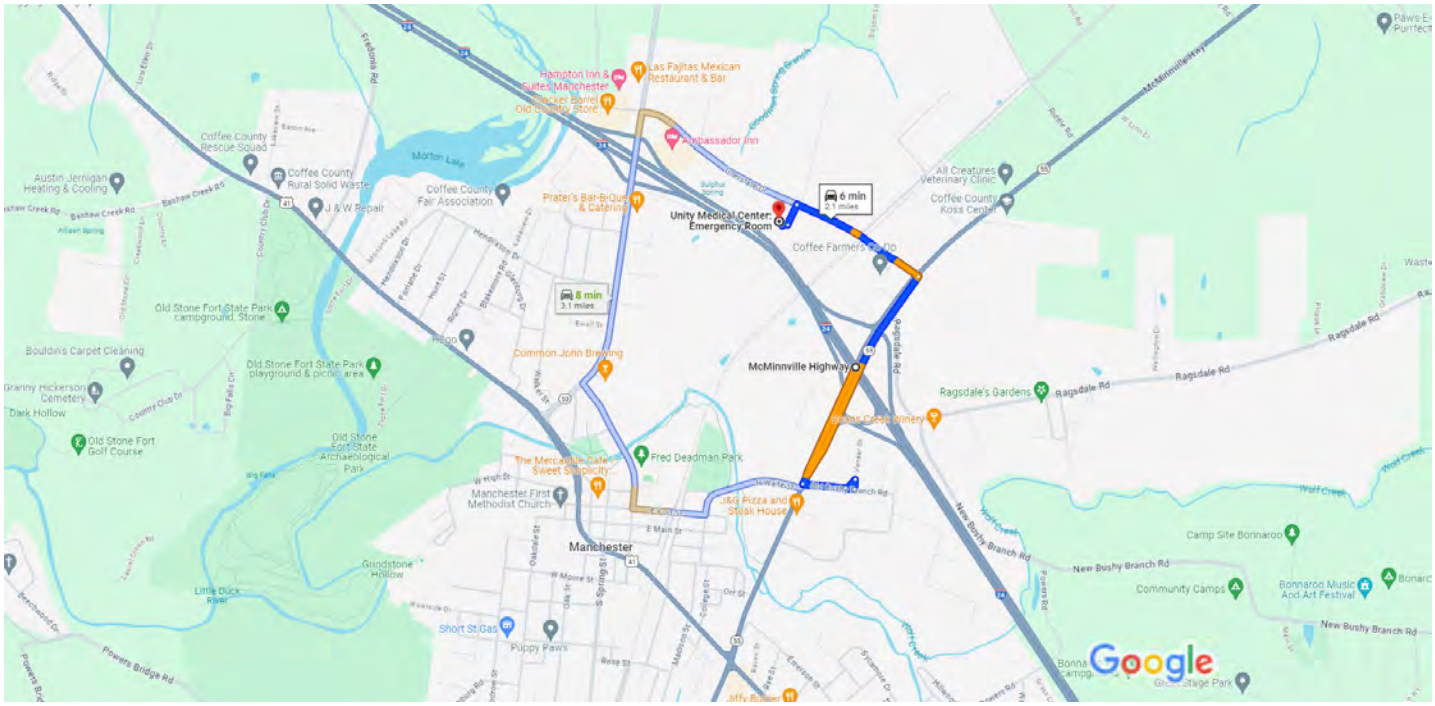
☑ Job Complete	☐ Job Not Complete
☑ Review work area to verify job site clean-up and safe condition	

Supervisor: David Espy Time: 3:20 PM

Google Maps

McMinnville Hwy, Manchester, TN 37355 to Unity Medical Center: Emergency Room, 481 Interstate Dr, Manchester, TN 37355

Drive 2.1 miles, 6 min



Map data ©2024 Google 200 m

McMinnville Hwy
Manchester, TN 37355

1. Head southwest on TN-55 W
   38 sec (0.4 mi)

Continue on Old Bushy Branch Rd to TN-55 E
1 min (0.4 mi)

2. Turn left onto Old Bushy Branch Rd
   0.2 mi
3. Turn left onto Veneer St
   164 ft
4. Sharp left to stay on Veneer St
   217 ft
5. Slight right onto Old Bushy Branch Rd
   0.1 mi
6. Turn right onto TN-55 E
   1 min (0.8 mi)

Continue on Interstate Dr to your destination
3 min (0.5 mi)

7. Turn left onto Interstate Dr

0.5 mi

8. Turn left

384 ft

9. Turn right

Destination will be on the right

102 ft

Unity Medical Center: Emergency Room
481 Interstate Dr, Manchester, TN 37355