



July 24, 2015

South Carolina Department of Transportation
955 Park Street, Room 319
Columbia, South Carolina 29201

Attention: Trapp Harris, P.E.
HarrisMD@scdot.org

Reference: Lead-based Paint Assessment Report
Exit 218 Spruill Avenue On and Off-ramp
Structure# 101002600992
North Charleston, South Carolina
S&ME Project No. 1413-15-075

Dear Mr. Harris:

S&ME, Inc. (S&ME) is pleased to provide the enclosed report detailing our lead-based paint assessment for the referenced bridge, performed in general accordance with Work Order Number SME#3-18-37345 dated June 5, 2015, and Scope of Services dated May 26, 2015. The report includes the executive summary, project background, assessment procedures, findings and results, and conclusions and recommendations regarding the structure as related to the lead-based paint coatings.

This report is provided for the use of the South Carolina Department of Transportation and their assignees. Use of this report by any other parties will be at such party's sole risk and S&ME, Inc. disclaims liability for any such use or reliance by third parties. The results presented in this report are indicative of conditions only during the time of the assessment and of the specific areas referenced.

We appreciate the opportunity to provide you with our industrial hygiene services. If you have any questions concerning this report, please do not hesitate to call us at (843) 884-0005.

Sincerely,

S&ME, Inc.

Terry W. Richburg
Environmental Location Coordinator

James L. Killingsworth, CHMM
Environmental Area Manager, V.P.

Attachments


LEAD-BASED PAINT ASSESSMENT REPORT
EXIT 218 SPRUILL AVENUE ON AND OFF-RAMP
STRUCTURE# 101002600992
NORTH CHARLESTON, SOUTH CAROLINA
S&ME Project No. 1413-15-075

Prepared for:
South Carolina Department of Transportation
955 Park Street, Room 319
Columbia, South Carolina 29201
(803) 737-0766

Assessment Performed by:



William R. Seaborn
(SCDHEC Accreditation #BI-01317)



Date

Report Prepared by:



Terry W. Richburg
(SCDHEC Accreditation #MP-00110)



Date



620 Wando Park Boulevard
Mount Pleasant, South Carolina 29464
(843) 884-0005

July 24, 2015

	Yes, Lead Based Paint Was Found
✓	No, Lead-Based Paint Was Not Found

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EXECUTIVE SUMMARY

A lead-based paint assessment was conducted on July 10, 2015, of the Exit 218 Spruill Avenue on and off-ramp located in North Charleston, South Carolina (site location map provided in Appendix I). The purpose of the assessment was to identify lead-based paint coatings associated with the structure, prior to demolition activities. The structure is labeled with an identification number (101002600992) assigned by the owner.

The Exit 218 Spruill Avenue on/off-ramp is approximately 700 feet long and 20 feet wide. The roadway is comprised of concrete, situated on painted steel I-beams, on unpainted concrete bents. The paint coatings observed on the steel components appeared to be homogeneous.

The components were analyzed via direct read X-Ray Fluorescence (XRF) technology. For the purpose of this assessment, painted surfaces with lead concentrations meeting the SCDHEC disposal limit (0.7 mg/cm^2) are considered lead-based paint. Detectable levels of lead are applicable to the Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1926.62 (Lead in Construction).

Based on the assessment and testing performed on July 10, 2015 of the referenced structure, no painted components were identified to contain lead concentrations meeting the SCDHEC disposal limit. Low levels of lead were identified, which may be applicable to OSHA regulations 29 CFR 1926.62 (Lead in Construction). The OSHA does not recognize a threshold level of lead for definition purposes, only the concentration of airborne lead a worker is exposed.

Destructive actions to paint containing detectable levels of lead (e.g. paint preparation, component removal, demolition, sanding, grinding, burning, etc.) may require the contractor comply with the standards of the OSHA regulations 29 CFR 1926.62 (Lead in Construction), including but not limited to training, initial exposure monitoring, the use of personal protective equipment, and medical surveillance. The determination of OSHA applicability is the responsibility of the contractor and dependent upon the paint condition and the planned treatment of the finishes.

A copy of this report should be provided to the contractor(s) to assist in compliance with applicable State and Federal regulations.

1. BACKGROUND

S&ME was contracted to perform a lead-based paint assessment of the Exit 218 Spruill Avenue on and off-ramp is located in North Charleston, South Carolina. The assessment was subsequently performed on July 10, 2015. The purpose of the assessment was to identify lead-based paint coatings associated with the structure, prior to demolition activities. The structure is labeled with an identification number (101002600992) assigned by the owner.

The Exit 218 Spruill Avenue on/off-ramp is approximately 700 feet long and 20 feet wide. The roadway is comprised of concrete, situated on painted steel I-beams, situated on unpainted concrete bents. The paint coatings observed on the steel components appeared to be homogeneous.

The lead-based paint assessment was performed to identify lead-based paint finishes associated with the subject structure. The identification of these materials will aid in the compliance of occupational exposure (OSHA) and/or environmental releases of airborne lead dust in accordance with OSHA 29 CFR 1926.62 (Lead in Construction) and provide information to facilitate proper disposal of lead-based paint coated components and debris in accordance with the SCDHEC and the EPA.

2. ASSESSMENT PROCEDURES

Lead-based paint testing was performed on representative painted components associated with the referenced structure. The components were analyzed with a Niton XLP-302 XRF spectrum analyzer (serial #25910). The suspect painted finishes were selected based on the color of the topcoat and the underlying paint layers and/or the substrate on which it was applied. The possibility exists that lead-based paint finishes are present in those inaccessible areas such as between components. The SCDHEC defines a lead-based paint as any paint containing lead at concentrations equaling 0.7 mg/cm^2 or greater by XRF testing. For the purpose of the assessment, paint containing 0.7 mg/cm^2 or greater was considered lead-based paint due to the planned activities.

The OSHA does not recognize a threshold level of lead for definition purposes, only the airborne concentration of lead a worker is exposed. The current OSHA regulations recognize an airborne action level of 30 micrograms per cubic meter ($\mu\text{g/m}^3$) during an eight-hour day and a permissible exposure limit of $50 \mu\text{g/m}^3$.

3. FINDINGS AND RESULTS

Based on the assessment and testing performed on July 10, 2015 of the referenced structure (Structure# 101002600992), no painted components were identified to contain lead concentrations meeting the SCDHEC disposal limit of 0.7 mg/cm^2 via XRF

technology. Low levels of lead were identified, which may be applicable to OSHA regulations 29 CFR 1926.62 (Lead in Construction).

A location map is provided in Appendix I, and a diagram of the subject structure is provided in Appendix II. The summary of XRF readings is provided in Appendix III, and should be reviewed in full. Representative photographs of the structure are provided in Appendix IV.

4. CONCLUSIONS AND RECOMMENDATIONS

The lead-based paint assessment conducted on July 10, 2015 of the Exit 218 Spruill Avenue on/off-ramp (Structure# 101002600992) located in North Charleston, South Carolina did not identify the presence of lead-based paints applicable to SCDHEC disposal requirements, however low levels of lead were identified which may be applicable to OSHA regulations 29 CFR 1926.62 (Lead in Construction).

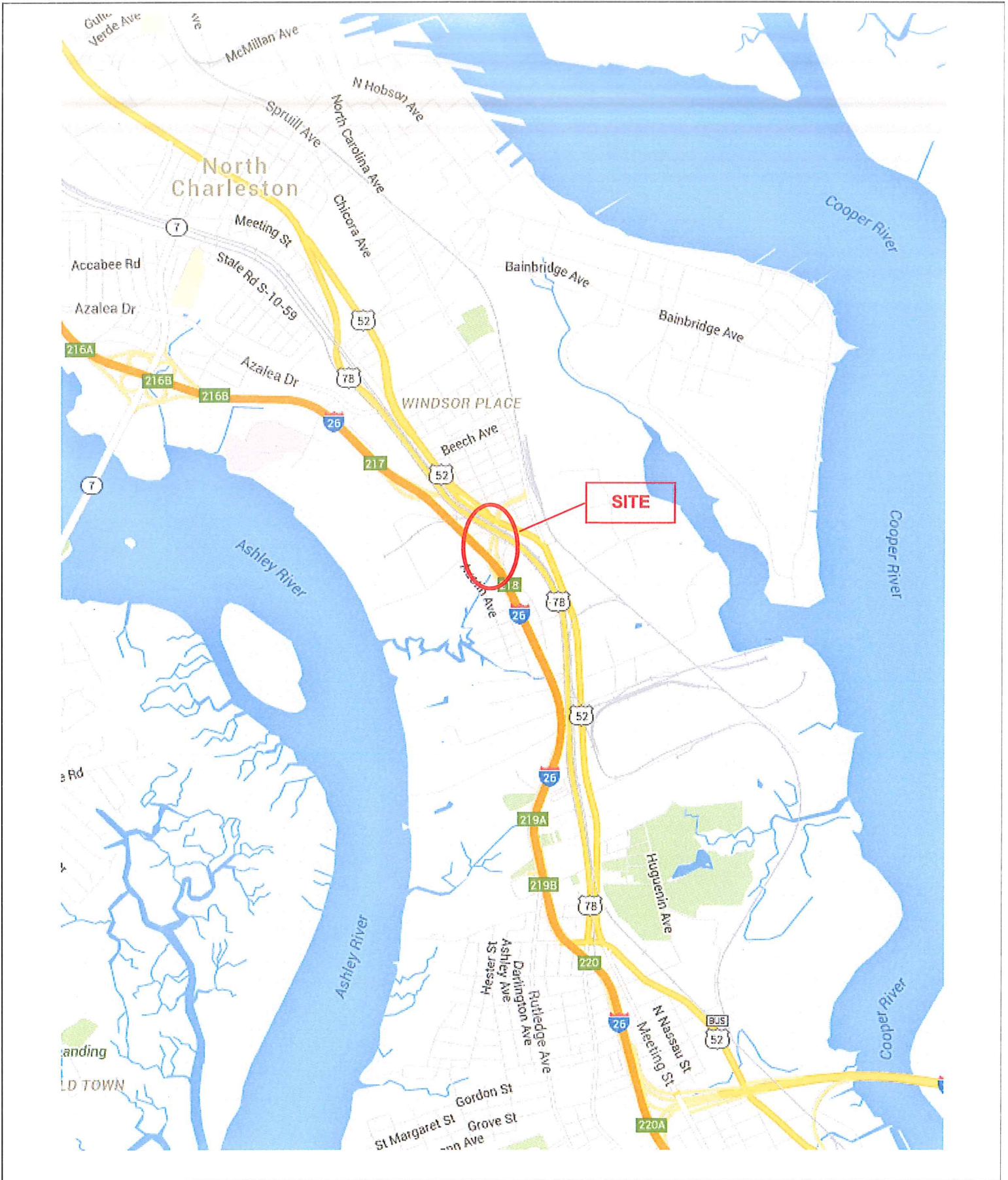
Destructive actions to paint containing detectable levels of lead (e.g. paint preparation, component removal, demolition, sanding, grinding, burning, etc.) may require the contractor comply with the standards of the OSHA regulations 29 CFR 1926.62 (Lead in Construction), including but not limited to training, initial exposure monitoring, the use of personal protective equipment, and medical surveillance. The determination of OSHA applicability is the responsibility of the contractor and dependent upon the paint condition and the planned treatment of the finishes.

Additionally, paint coatings may be present that may contain low levels of lead that cannot be detected by X-ray fluorescence which may be applicable to OSHA regulation 29 CFR 1926.62 (Lead in Construction). The quantities reported by XRF may be useful in determining the relative risk associated with various demolition tasks, i.e. the lower the level of lead found in the paint, the less likely disturbance will result in exposure in excess of the OSHA Action Limit.

A copy of this report should be provided to the contractor(s) to assist with applicable State and Federal regulations.

APPENDIX I

SITE LOCATION MAP



SCALE:	NTS
APPROVED BY:	TWR
DRAWN BY:	TWR
DATE:	JULY 24, 2015

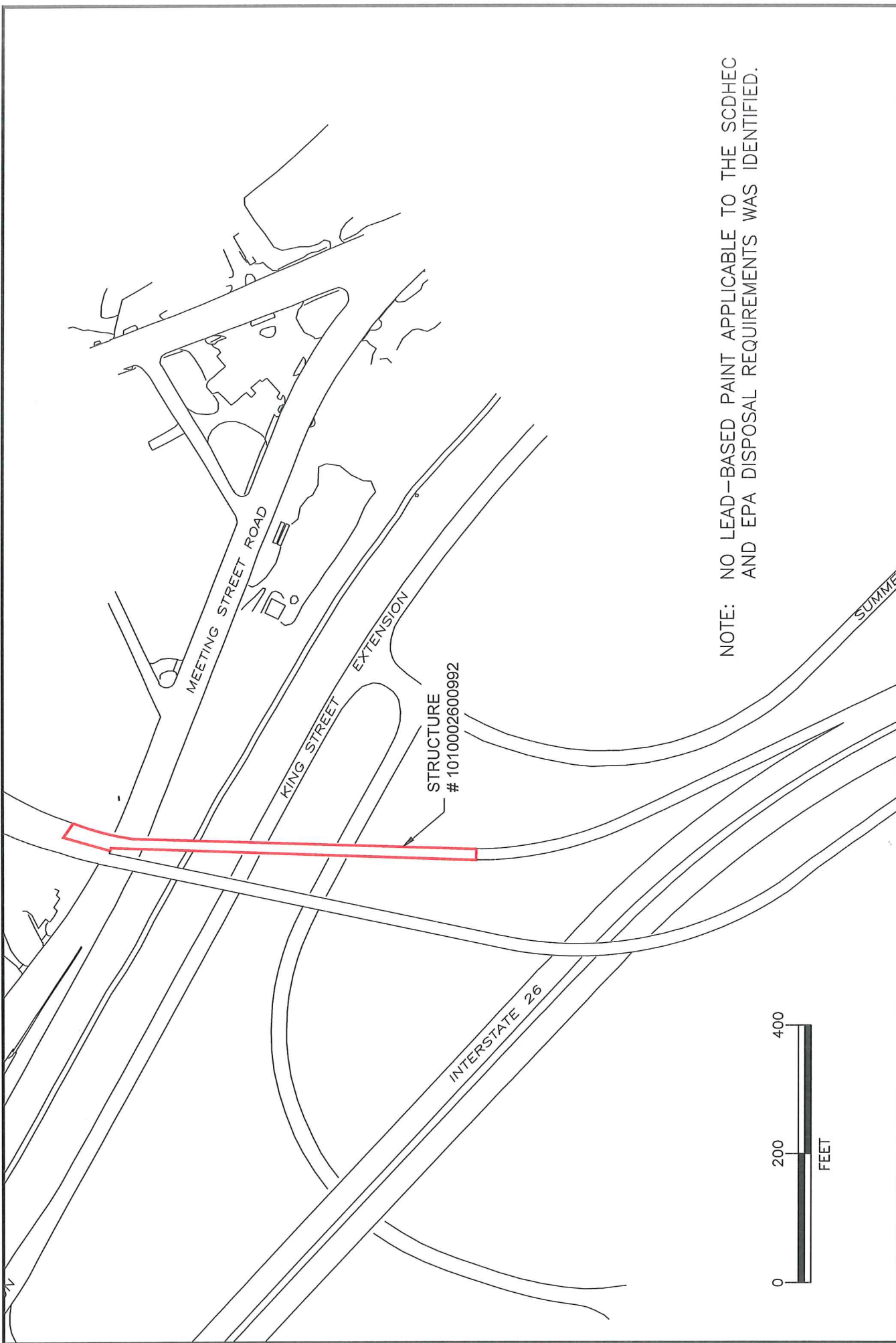


SITE LOCATION
 Exit 218 Spruill Avenue On and Off-Ramp
 Structure# 10100260092
 North Charleston, South Carolina
 S&ME Project No. 1413-15-075

FIGURE NO.
 1

APPENDIX II

DIAGRAM OF SUBJECT STRUCTURE



NOTE: NO LEAD-BASED PAINT APPLICABLE TO THE SCDHEC AND EPA DISPOSAL REQUIREMENTS WAS IDENTIFIED.

SCALE: AS SHOWN
 APPROVED BY: **TR**
 DRAWN BY: LAJ
 DATE: 7-24-2015
 PROJECT NO. 1413-15-075



LEAD-BASED PAINT ASSESSMENT
EXIT 218 SPRUILL AVENUE ON/OFF RAMP
 STRUCTURE 1010002600992
 NORTH CHARLESTON, SOUTH CAROLINA

FIGURE NO.
 1

APPENDIX III

SUMMARY OF XRF LEAD ANALYZER READINGS



XLN No.	Site	Structure	Component	Color	Type	Substrate	Condition	Results	Action Level	Lead	Units
1					SHUTTER_CAL					0.61	mg/cm ²
2							Calibrate			1.4	mg/cm ²
3							Calibrate			1.1	mg/cm ²
4							Calibrate			1	
5							Calibrate			1	mg/cm ²
6	101002600992	Horizontal Deck Support	I-Beam	White	Paint	Metal	Intact	Negative	0.7	0.02	mg/cm ²
7	101002600992	Horizontal Deck Support	I-Beam	White	Paint	Metal	Intact	Negative	0.7	0.02	mg/cm ²
8							Calibrate			1.3	mg/cm ²
9							Calibrate			1.1	mg/cm ²
10							Calibrate			1	mg/cm ²
11							Calibrate			1.1	mg/cm ²

mg/cm² = milligram per square centimeter

SCDHEC requires special disposal for paint containing lead 0.7 mg/cm² or greater

OSHA does not recognize a concentration of lead for definition purposes, only the airborne concentration a worker is exposed.

Lead = Paint Readings meeting SCDHEC disposal level of 0.7 mg/cm²

APPENDIX IV

PHOTOGRAPHS


Photo 1	
	
Date: 07-09-15	
Photographer: Seaborn	
Location/Orientation	ID label on exit ramp
Remarks	

Photo 2	
	
Date: 07-24-15	
Photographer: Richburg	
Location/Orientation	Structure# 101002600992
Remarks	Representative painted I-beams under bridge deck