

Niagara Gorge Corridor

***Robert Moses Parkway Removal
Main Street to Findlay Drive
Niagara Falls, NY***

Design Report/ Environmental Assessment

Appendix K - Asbestos Abatement Report

PIN 5761.90

July 2016

In cooperation with:

**New York State Department of Transportation
New York Power Authority
USA Niagara Development Corporation
The City of Niagara Falls, NY**



Technical Memorandum

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Date: May 28, 2015

Subject: Contract No. D003554
Robert Moses Parkway North Corridor Project
BIN 1068229 and BIN 1039539
Asbestos Assessment Preliminary Investigation and Sampling Plan

Architecture
Civil
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Engineering

Watts Architecture & Engineering (Watts) has prepared this technical memorandum for the asbestos assessment preliminary investigation for BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road) and BIN 1039539 (Robert Moses Parkway over Whirlpool Bridge) as part of the Design of the Niagara River Gorge – Robert Moses Parkway North Segment Corridor Project, from Niagara Street to Findlay Drive, in the City of Niagara Falls, Niagara County, New York. The location of the two bridges are shown on Figure 1 in Attachment A.

The proposed project will involve removing portions of the Robert Moses Parkway North Segment; re-establishing a new roadway along Whirlpool Street and a variety of trails within Robert Moses Park; and providing new access connections to and from Whirlpool Street. The project will also reconstruct portions of First, Second and Third Streets and add/improve circulation and parking at various locations.

I - Methodology

An Asbestos Assessment consists of a review of record plans and previous environmental inspections of the existing bridges and a site inspection of the bridges located in the project corridor. This assessment was completed in general accordance with NYSDOT's The Environmental Manual (TEM), Section 4.4.19 Asbestos Management (updated March 2013) and the project scope.

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II - Review of Record Plans

Bridge folders for BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road) and BIN 1309539 (Robert Moses Parkway over Whirlpool Bridge) were reviewed on May 6th, 2015 at the NYSDOT's Buffalo regional office. Review of the record plans identified both known and suspect asbestos-containing materials (ACM). The following materials were either suspect ACM or are identified as ACM as a result of the review of the record plans:

- A. BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road)
1. **Bridge paint** – The Bridge Paint Asbestos Testing Bulk Sample Summary Table that was located within the bridge folder shows that 2004 laboratory testing results (PLM and TEM methods) of the gray bridge paint identified the paint as non-ACM.
 2. **Bituminous coating** – The circa 1965 as-built plans indicate that a bituminous coating was installed on the wing wall, slabs, and fascia safety walk concrete.
 3. **Joint caulk** – The circa 1965 as-built plans indicate that caulking was installed over the pre-moulded bituminous joint.
 4. **Pre-moulded bituminous joint material** – The circa 1965 as-built plans indicate that a pre-moulded bituminous joint material was utilized on the structure.
 5. **Railing post pad** – The circa 1965 as-built plans indicate that pads were installed beneath the railing posts.
 6. **Diluted tack coat and waterproofing membrane** – The 2012 record plans indicate the installation of a waterproof membrane and diluted tack coat beneath the roadway surface.
 7. **Railing post caulk** – Various photographs reviewed within the Bridge Inspection Report show caulk that is present around the perimeter of the railing posts.
 8. **Bearing pads** – Various photographs reviewed within the Bridge Inspection Report show bearing pads that are present beneath the bearing plates.
- B. BIN 1039539 (Robert Moses Parkway over Whirlpool Bridge)
1. **Bridge paint** – The Bridge Paint Asbestos Testing Bulk Sample Summary Table that was located within the bridge folder shows that 2004 laboratory testing results (PLM and TEM methods) of the green/brown bridge paint identified the paint as non-ACM.
 2. **Pre-moulded bituminous joint material** – The circa 1962 as-built plans indicate that a pre-moulded bituminous joint material was utilized on the structure.
 3. **Compressed asbestos sheet packing** – The circa 1962 as-built plans indicate that compressed asbestos sheet packing was installed between the road surface and the abutment.

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4. **Bearing pads** – Various photographs reviewed within the Bridge Inspection Report show bearing pads that are present beneath the bearing plates.

III - Field Inspection Findings

BIN 1068229 and BIN 1039539 were inspected in the field on May 20th, 2015. A New York State Department of Labor (NYSDOL) licensed asbestos inspector from Watts performed the field investigation to identify suspect asbestos-containing materials that might be disturbed during removal of the bridges.

The following list summarizes the findings from the field inspection:

- A. BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road)
 1. **Bridge paint** – The grey bridge paint that was identified during the record plan review was not observed. The beige/tan bridge paint that was observed during the field inspection appeared to be relatively new and was likely applied on top of or as a replacement for the grey bridge paint.
 2. **Bituminous coating** – Black waterproof coating was observed on the backside of the exposed portion of the northeast concrete wing wall. It is presumed that this material is the bituminous coating that was identified in the record plans.
 3. **Joint caulk** – The joint caulk that was identified in the record plans was not observed during the field inspection.
 4. **Pre-moulded bituminous joint material** – The pre-moulded bituminous joint material that was identified in the record plans was not observed in the field.
 5. **Railing post pad** – The railing pads that were identified in the record plans were observed along the western railing only. The eastern railing is a different type of railing that does not appear to have pads installed beneath the railing posts. The holes where the original eastern railing posts were mounted within the concrete were observed during the bridge assessment and it appears that the pad associated with the former posts has been removed.
 6. **Waterproofing membrane and diluted tack coat** – The waterproof membrane and diluted tack coat that was identified in the records plans was not accessible or observed in the field.
 7. **Railing post caulk** – The railing post caulk that was identified in the bridge inspection report photographs was observed associated with the western railing only. The eastern railing is a different type of railing that does not have caulk associated with the railing posts. The holes where the original eastern railing posts were mounted within the concrete were observed during the bridge assessment and it appears that all of the caulk associated with the former posts has been removed.

8. **Bearing pads** – The bearing pads that were observed in the bridge inspection report photographs were not accessible. Less than a few inches of vertical space is available between the metal underside of the bridge and the concrete and stone associated with the abutment. Due to deterioration of the metal bearing plates, it was not discernable if bearing pads are present.
9. **Cementitious drain pipe** – Ten cementitious drain pipes that appear to be constructed out of transite were observed within the northeastern and southeastern wing walls approximately six inches above grade along the Sewer Treatment Access Road.
10. **Abutment masonry stone pointing** – The abutment masonry stones have been repointed. The cementitious material could potentially contain asbestos.
11. **Abutment wing wall caulk** – Caulking is located between the abutment and wing wall.
12. **Joint filler between abutment and wing wall** – There is joint filler present beneath the caulk and located between the abutment and wing wall.
13. **Caulk on old deck / sewer conduit** – Caulking is sporadically located on the old deck/sewer conduit located along the western side of the bridge.
14. **Sealant/tar on old deck sewer conduit** – Sealant/tar is sporadically located on the old deck/sewer conduit located along the western side of the bridge.

B. BIN 1039539 (Robert Moses Parkway over Whirlpool Bridge)

1. **Bridge paint** – The green/brown bridge paint that was identified during the record plan review was not observed. The beige/tan bridge paint that was observed during the field inspection appeared to be relatively new and was likely applied on top of or as a replacement for the green/brown bridge paint.
2. **Pre-moulded bituminous joint material** – The pre-moulded bituminous joint material that was identified in the record plans was not observed in the field.
3. **Compressed asbestos sheet packing** – The compressed asbestos sheet packing that was identified in the record plans was not observed in the field.
4. **Bearing pads** – Bearing pads were observed during the field inspection at the abutments and the piers.
5. **Masonry coating** – The concrete bearing pedestals of the abutment appear to be covered with a masonry coating.
6. **Joint filler between abutment and wing wall** – There is joint filler present beneath the caulk and located between the abutment and wing wall.
7. **Caulk on deck** – Caulking is located around the perimeter of a concrete pad associated with a sewer utility manhole that is located on the south side of the western approach.
8. **Caulk at base of pier** – Caulking is located between the base of the piers and the concrete base pads.

9. **Joint filler at base of pier** – There is joint filler present beneath the caulk and located between the base of the piers and the concrete base pads.

IV - Utility Findings

A sewer utility is located along the western side of BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road). One manhole structure is located on the northwest quadrant and one manhole structure is located on the southwest quadrant. A sewer utility may connect these two manhole structures within the adjacent concrete bridge structure.

There is a sewer manhole located within the roadway surface of the southern approach on the western side of BIN 1039539.

During final roadway design, any underground utilities that will be impacted should be contacted by the designer to confirm their knowledge with regards to the presence of asbestos within their utility conduits. If there are additional utility lines with suspect ACM identified during the construction period, it is recommended that representative samples be collected and analyzed for asbestos.

V - Conclusions and Recommendations

ACMs and suspect ACMs were identified by the review of the record plans and additional suspect ACMs were identified during the bridge inspections. It is recommended that representative samples of the suspect materials identified by the investigation be collected prior to construction and analyzed for asbestos content. Refer to the "Sampling Plan" section below. These suspect materials include:

A. BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road)

- Beige/tan paint
- Bituminous coating/waterproof coating
- Joint caulk
- Pre-moulded bituminous joint material
- Railing post pad
- Waterproofing membrane and diluted tack coat
- Railing post caulk
- Bearing pads
- Cementitious drain pipe
- Abutment masonry stone pointing
- Abutment/wing wall caulk
- Joint filler

- Caulk on old deck/sewer conduit
- Sealant/tar on old deck/sewer conduit

B. BIN 1039539 (Robert Moses Parkway over Whirlpool Bridge)

- Green/brown paint
- Pre-moulded bituminous joint material
- Compressed asbestos sheet packing
- Bearing pads
- Masonry coating
- Joint filler between abutment and wing wall
- Caulk on deck
- Caulk at base of pier
- Joint filler at base of pier

Refer to Attachment B for photographs depicting some of the identified suspect ACM to be sampled. Until sampled and analyzed, these materials should be assumed to be asbestos-containing. The quantities of these suspect materials will be estimated at a later date if the analytical results indicate them to be ACM.

Any removal/disturbance of asbestos-containing materials will need to be performed by a New York State licensed asbestos abatement contractor. It is recommended that Blanket Variance 14 be utilized for the removal of the identified asbestos-containing materials whenever possible.

If any additional suspect materials are observed during construction, the Construction Inspector/Engineer in Charge should be notified immediately. Representative samples of the suspect materials should be collected and analyzed for asbestos content in accordance with NYSDOT procedures.

VI - Sampling Plan

This preliminary assessment has recommended asbestos sampling and testing of twenty-three (23) suspect ACMs associated with the two bridges. Some of the suspect materials that should be sampled are also depicted in the photographs provided in Attachment B.

**SUMMARY OF FINDINGS AND RECOMMENDED MATERIALS TO BE SAMPLED
 BIN 1068229 and BIN 1039539**

SUSPECT MATERIAL	LOCATION	PROPOSED NUMBER OF SAMPLES
Beige/tan paint	BIN 1068229 – underside of bridge	3
Bituminous coating/waterproof coating	BIN 1068229 – backside of abutment	3
Joint caulk	BIN 1068229 – within the pre-moulded bituminous joint (not observed during site visit)	3
Pre-moulded bituminous joint material	BIN 1068229 – expansion joints (not observed during site visit)	3
Railing post pad	BIN 1068229 – beneath railing posts along western side of bridge	3
Waterproofing membrane and diluted tack coat	BIN 1068229 – beneath roadway (not observed during site visit)	3
Railing post caulk	BIN 1068229 – beneath railing posts along western side of bridge	3
Bearing pads	BIN 1068229 – bridge abutments	3
Cementitious drain pipe	BIN 1068229 – base of eastern wing walls	3
Abutment masonry stone pointing	BIN 1068229 – abutments	3
Abutment/wing wall caulk	BIN 1068229 – between abutment and wing wall	3
Joint filler	BIN 1068229 – between abutment and wing wall	3
Caulk on old deck/sewer conduit	BIN 1068229 – along western side of bridge	3
Sealant/tar on old deck/sewer conduit	BIN 1068229 – along western side of bridge	3
Green/brown paint	BIN 1039539 – underside of bridge	3
Pre-moulded bituminous joint material	BIN 1039539 – expansion joints (not observed during site visit)	3
Compressed asbestos sheet packing	BIN 1039539 – beneath approach roadway (not overserved during site visit)	3
Bearing pads	BIN 1039539 – bridge abutments	3
Masonry coating	BIN 1039539 – bridge abutments	3

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SUSPECT MATERIAL	LOCATION	PROPOSED NUMBER OF SAMPLES
Joint filler between abutment and wing wall	BIN 1039539 – between abutment and wing wall	3
Caulk on deck	BIN 1039539 – southern approach western side	3
Caulk at base of pier	BIN 1039539 – base of piers	3
Joint filler at base of pier	BIN 1039539 – base of piers	3

Upon the NYSDOT's approval of this sampling plan, a New York State Certified Asbestos Building Inspector should collect representative samples of the suspect ACMs using accepted industry techniques as part of a future supplemental agreement.

For suspect ACM, the Occupational Safety and Health Administration (OSHA) requires that a minimum of three samples be collected from each homogeneous area of thermal system insulation (pipes, boilers, tanks, etc.) and three to seven samples of each homogeneous area of surfacing (sprayed-on or troweled-on plasters and fireproofing) depending on total square footage. All other materials, which are referred to as miscellaneous, must be identified by three or more samples in accordance with NYSDOT protocol.

Once collected, the samples will be delivered to a New York State Department of Health (NYSDOH) approved analytical laboratory. The lab should also be a participant in the National Voluntary Laboratory Approval Program (NVLAP), administered by the National Institute of Standards and Technology (NIST).

Friable materials are analyzed by Polarized Light Microscopy (PLM) following NYSDOH method 198.1. In addition, many of the materials to be sampled are classified as non-friable organically bound materials (NOBs). NOBs include, but are not limited to, asphalt roofing, roofing cement, bituminous coatings, Galbestos, caulk, glazing compound, vinyl flooring products and mastics. NOBs are analyzed using NYSDOH Method 198.6 which includes gravimetric reduction (GR), and then PLM under NYSDOH Method 198.1, Stratified Point Count for residues greater than 1% after GR. NOBs with results of less than 1% asbestos after PLM are further analyzed under NYSDOH Method 198.4 for Transmission Electron Microscopy (TEM).

If one analysis (PLM or TEM) is positive for any homogeneous material, that material must be considered to be ACM. If one sample of a homogeneous material is determined to be ACM, the remaining samples will not be analyzed. The results should be used to define the scope and estimated costs of any future asbestos abatement work on this project.

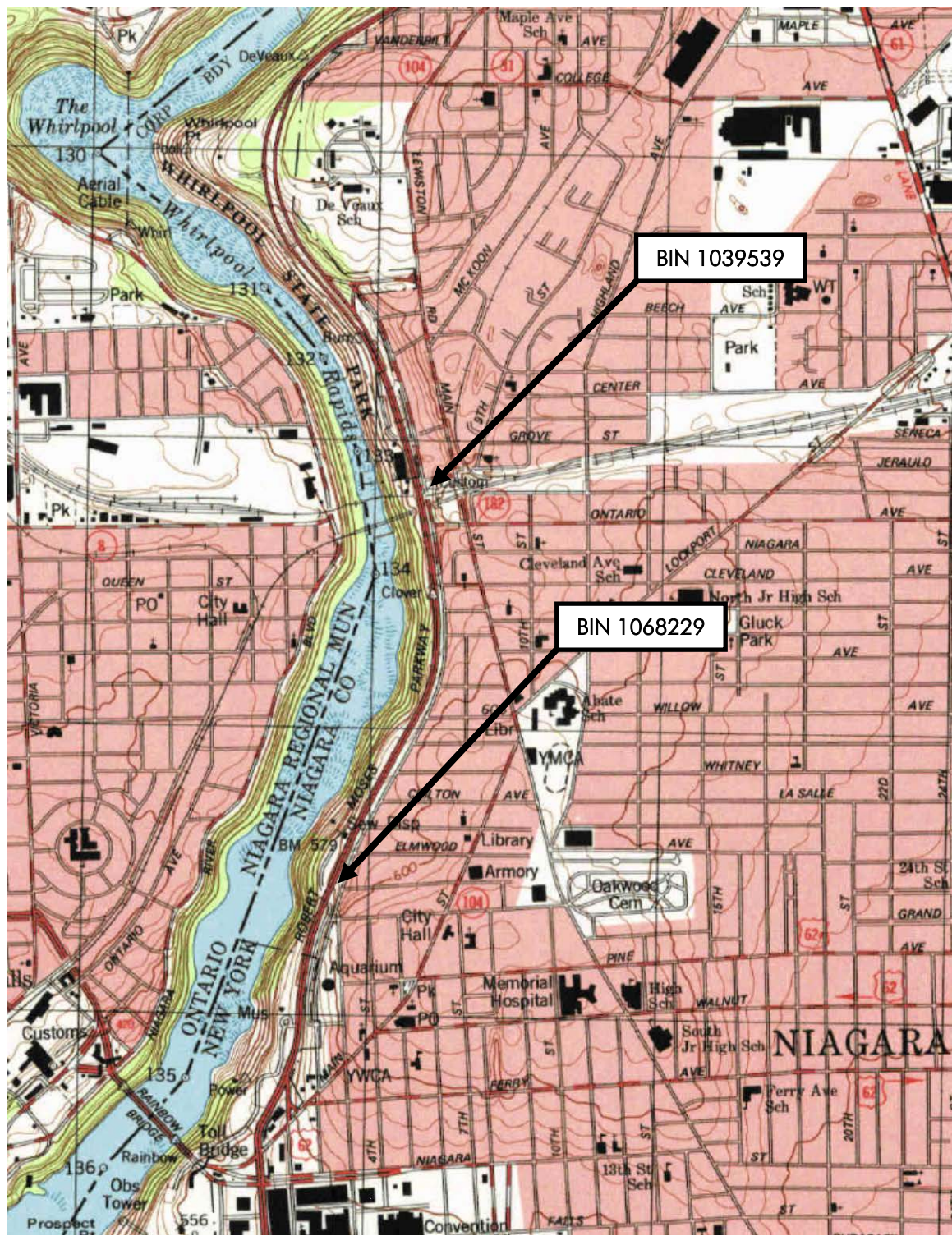
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ATTACHMENT A
BRIDGE LOCATION MAP

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\\Wattsfp1\projects2\2014\14113 Robert Moses Parkway Improvements, North\10. Env Data and Env Assessment\10.f. Asbestos-Lead-PCB Assessment\Preliminary Asbestos Assessment.v01.doc



SOURCE:
 USGS 7.5 x 15' QUADRANGLE
 "Niagara Falls, NY,"
 1995

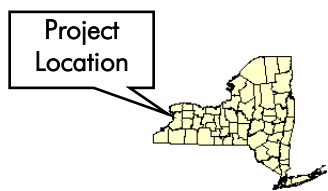


Figure 1 - Bridge Location Map

Robert Moses Parkway - North
 Niagara Street to Findlay Drive
 City of Niagara Falls,
 Niagara County, New York



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Not to Scale

May 2015

ATTACHMENT B
PHOTOGRAPHS OF SUSPECT ACM



Photo 1: BIN 1068229. View of beige/tan paint on underside of bridge and abutment masonry where pointing is located in between the stones.



Photo 2: BIN 1068229. View of waterproof coating on wing wall and caulk between abutment and wing wall. In addition, there is joint filler beneath the caulk.



Photo 3: BIN 1068229. View of railing post with the pad beneath the base and caulk around the perimeter of the base.



Photo 4: BIN 1068229. View of the cementitious drain pipe.



Photo 5: BIN 1039539. View of the underside of the bridge showing the beige/tan paint on the girders, the concrete abutment with masonry coating, and bearing pads.



Photo 6: BIN 1039539. View of the concrete abutment, one concrete bearing pad with masonry coating, and a bearing plate with bearing pad.



Photo 7: BIN 1039539. View of the caulk located between the base of the pier and the concrete base pad.