Metalico Aluminum Recovery, Inc.
6223 Thompson Rd. • Syracuse, NY 13206
P.O. Box 88 • East Syracuse, NY 13057
(315) 463-9500 • FAX (315) 463-9290
Facility # 7102372

September 22, 2008

OVERNIGHT DELIVERY

Stephen C. Condon, Senior Engineering Geologist
New York State Department of Environmental Conservation
Bureau of Hazardous Waste & Radiation Management, 9th Floor
Division of Solid & Hazardous Materials
625 Broadway
Albany, New York 12233-7258

Re: *Former Roth Bros Smelting Corp. Site*
6223 Thompson Road, DeWitt, New York
Consent Order C7-0001-94-10

Dear Mr. Condon:

In my letter to you of June 20, 2008, we reported on the results of the annual inspection of the asphalt cover on the corrective action management unit (CAMU) at the referenced site. As noted in that letter, the report did not cover the break that had been previously noted in the eastern asphalt area adjacent to the CAMU cover. That was the subject of a report prepared by O'Brien & Gere Engineers, Inc. and we have enclosed a copy of that report for your review.

As you can see, O'Brien & Gere has proposed a repair option that we would like to implement with a full reservation of rights. However, we would like the benefit of your review and approval before we proceed. Please feel free to contact Doug Crawford at O'Brien & Gere directly (315-437-6100) on this.

Sincerely yours,

Dennis Flanagan
Director of Operations
Metalico Aluminum Recovery, Inc.

Enclosure
cc: Mary Jane Peachey, NYSDEC Region 7 (w/enclosure)
Margaret Sheen, Esq. (w/enclosure)

Wabash Alloys, L.L.C. (c/o Doreen Simmons, Esq.) (w/enclosure)(overnight delivery)
Thompson Corners, LLC (c/o Philip Gitlen, Esq.) (w/enclosure)(overnight delivery)
Douglas Crawford, P.E., O'Brien & Gere Engineers (w/o enclosure)

Job No. 156.41935

REPORT

Former Roth Bros. Smelting Corporation Site Corrective Action Management Unit (CAMU) aluation of Asphalt Break in Area Adjacent to CAMU

Douglas M. Crawford, P.E.
O'Brien & Gere Engineers, Inc.

June 2008

O'BRIEN & GERE

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List of Attachments

1. Soil Profiles and SLOPE/W Runs

List of Exhibits

A. Partial Topographic Survey of CAMU Area
B. Detailed Topographic Survey of Missing Pavement Area
C. May 30, 2008 Letter from Thompson Corners, LLC to NYSDEC Region 7 on Wastewater Separation
D. Site Photos
E. O&M Plan 2.0

1. Introduction

This report presents the results of O'Brien & Gere's evaluation of the failure of an area of asphalt that is adjacent to the eastern edge of the Corrective Action Management Unit (CAMU) that was created at the former Roth Bros. Smelting Corp. facility at 6223 Thompson Road, East Syracuse, New York (the "Site"). The report presents potential causes of the failure, an evaluation of methods of repair, and a recommended method of repair.

2. Site Background and CAMU Construction

It is understood that between October 1994 and June 1995, remedial actions were undertaken at the Site to address excavation and off-site disposal of PCB-contaminated soils, and treatment and remediation of lead and other heavy metal contaminants on the Site. In general, remedial actions included excavation and disposal of soil with PCB concentrations greater than 50 parts per million (ppm), grading and covering of soil with total lead concentrations less than 825 ppm, and ex-situ stabilization of soil with total lead concentrations greater than 825 ppm. The ex-situ stabilization included excavation of the soil, stabilization with a polysilicate/portland cement mixture, and placement of the soil in a CAMU.

The treated material in the CAMU was then covered with 3 inches of compacted select granular fill, 3 inches of asphaltic concrete binder, and 2 inches of asphaltic wear surface. The edges of the CAMU on the East and North sides were reportedly finished by filling with gravel at slopes as steep as 1 vertical to 1 horizontal (1V:1H) from the edge of the CAMU to meet existing grade.

The details of the CAMU remediation are set forth in a report by H&A of New York and IT Corporation entitled Final Engineering Report, Corrective Measures Implementation, Roth Bros. Smelting Corporation, East Syracuse, New York (July 1995)(referred to herein as the "Final Engineering Report").

In April 2006, Metalico Syracuse Realty, Inc. (MSR) purchased a portion of the Site that includes what is referred to as Plant No. 2 and the area of the CAMU. Metalico Aluminum Recovery, Inc. (MARI) currently operates a metal recycling operation on the MSR property.

The MSR property consisting of 22.405 +/- acres is shown on a map prepared by Ianuzi & Romans Land Surveying, P.C. (dated December 5, 2007) (the "Survey"). The Survey also shows the area of the CAMU. The CAMU is also shown in Figure 6 of the Final Engineering Report and there is a certification on page 11 of the report that states, "the treated material was placed within the CAMU limits as illustrated in Figure 6."

According to Mr. Burt Coleman of MARI, at least 3-5 years ago, a 10 ft by 3 ft area of pavement on the eastern edge of the CAMU in an area adjacent to a former CSX railroad siding was observed to be missing.

A partial topographic survey of the CAMU area in the vicinity of the missing pavement was created on March 19, 2008 by Ianuzi and Romans Land Surveying, P.C. and a copy is attached as Exhibit A. On April 16, 2008, a detailed topographic survey of the missing pavement area was prepared and a copy is attached as Exhibit B.

3. Summary of Investigation

As part of its investigation, O'Brien & Gere reviewed the following documents:

- July 20, 1994 New York State Department of Environmental Conservation (NYSDEC) Statement of Basis for the CAMU;
- July 1995 Final Engineering Report by H & A of New York and IT Corporation;
- June 1997 NYSDEC-approved Operation and Maintenance Plan for the CAMU prepared by Malcolm Pirnie, Inc.;
- January 10, 2007 letter from NYSDEC, requesting testing be undertaken in the area of the seep;
- June 7, 2007 report to NYSDEC by Hazard Evaluations, Inc. (HEI) on the results of the seep testing;
- July 11, 2007 letter from NYSDEC, requiring supplemental testing in the area of the seep;
- October 22, 2007 report to NYSDEC by HEI on the results of the supplemental seep sampling;
- June 2006/December 2006, June 2007 and December 2007 CAMU Groundwater Performance Monitoring Reports by HEI

Construction records for the CAMU were not available to review.

A site visit was conducted on March 12, 2008 by Mr. Stephen Anagnost, Mr. David Farber, and Ms. Stephanie Cacace of O'Brien & Gere, and Mr. Burt Coleman of MARI to evaluate existing site conditions. At the time of the site visit, the area of missing pavement was approximately 10 ft long by 3 ft wide. Mr. Coleman noted that the area of missing pavement has been unchanged for at least the last 3-5 years.

The slope of the CAMU edge was steepest in the area of the missing pavement. The pavement on the CAMU edge to the south of the area was cracked, but still intact. There was growth of vegetation at the edge of the CAMU with some growth through the pavement. Vegetation growth through the pavement extended from the edges of the pavement onto the CAMU in some areas. In some areas, the edge of pavement was obscured by vegetation.

The exposed slope material in the area of missing pavement was gravelly and could not be penetrated more than ½ inch by a probe. Seeps were observed on the exposed slope, and are shown as main seepage, medium seepage and minor seepage on the survey in Exhibit B.

A 21-in storm water culvert discharges from Outfall 002 to a drainage swale east of and adjacent to the paved slope. Storm water flows north through the culvert and the drainage swale where it is again picked up by a culvert. Water levels in the swale fluctuate with seasonal conditions. Based on the April 16, 2008 Ianuzi survey, there was less than 1 ft of water in the drainage swale east of the missing pavement.

Based on our field observations, it appears that the amount of water present at any given time in the drainage swale adjacent to the missing pavement is largely affected by the flow discharge from the 21-in culvert and is not significantly influenced by seepage from the area of missing pavement. A

wastewater flow separation project was completed in May of 2008 whereby flows from what was formerly Plant 1 of the former Roth Bros. Smelting Corp site have been re-directed away from Outfall 002 to an outfall that is covered by a separate SPDES permit issued to the current owner of the former Plant No. 1 property. A copy of the May 30, 2008 letter to the Region 7 Office of NYSDEC from Thompson Corners, LLC, confirming the completion of the wastewater flow separation work is attached as Exhibit C.

Dated photos of the missing pavement area and drainage swale are attached in Exhibit D.

D. JAMES BRANG
"Member"

THOMPSON CORNERS, LLC
7050 Cedar Bay Road, Fayetteville, NY 13066
(315) 446-7876 ph. (315) 446-8197 fx.
Brangco@Juno.com

May 30, 2008

Sandra Lizlovs, PE
NYSDEC
Division of Water, Region 7
615 Erie Boulevard West
Syracuse, NY 13204-2400

Re: Permit Modification
SPDES Permit No. NY 0110311
6223 Thompson Road
Town of Dewitt, New York

Dear Ms. Lizlovs:

Thompson Corners has completed the modification to the above referenced SPDES permit, redirecting Plant 1 contributions to Outfall 002 to Outfall 004 per our letter dated March 31, 2008.

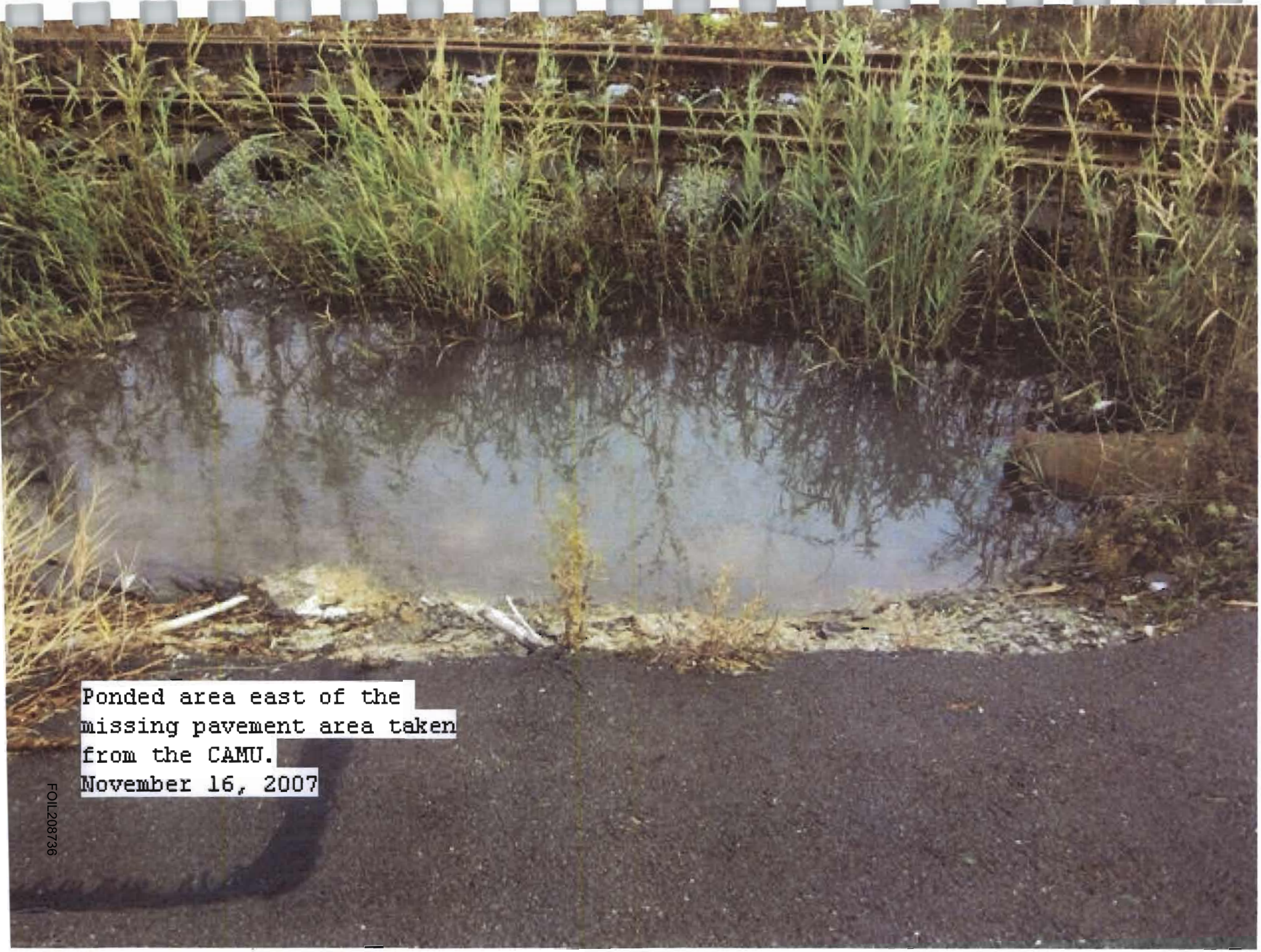
Should you have any questions or comments, please contact the undersigned or Donald J. Brang directly. Thank you in advance for your time and consideration.

Best regards,

Thompson Corners, LLC

D. James Brang

cc: Donald J. Brang, Thompson Corners, LLC
Brian H. Macrae, Synapse Risk Management
Burt Coleman – Metalico



Ponded area east of the missing pavement area taken from the CAMU.
November 16, 2007

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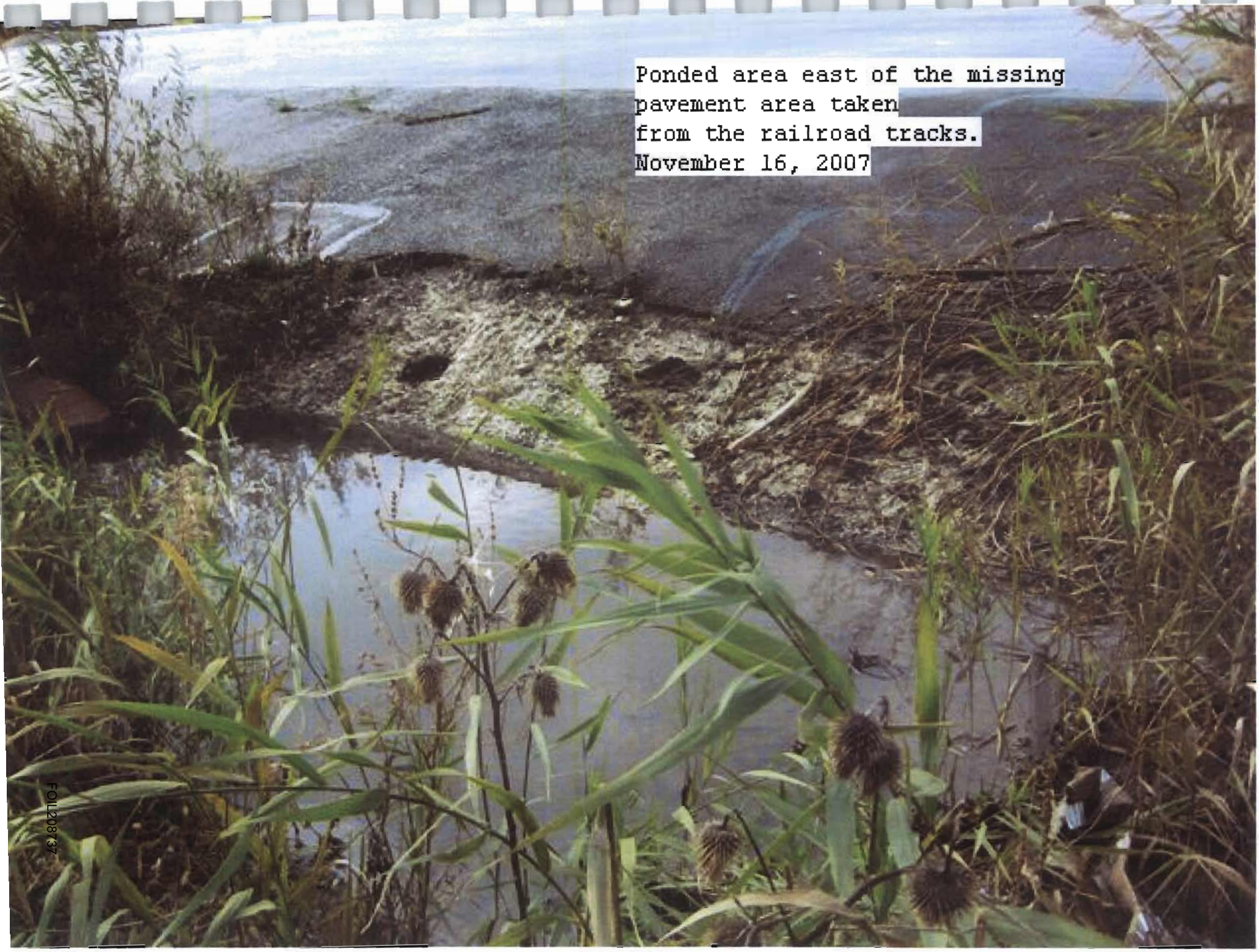
Ponded area east of the missing
pavement area taken
from the railroad tracks.
November 16, 2007

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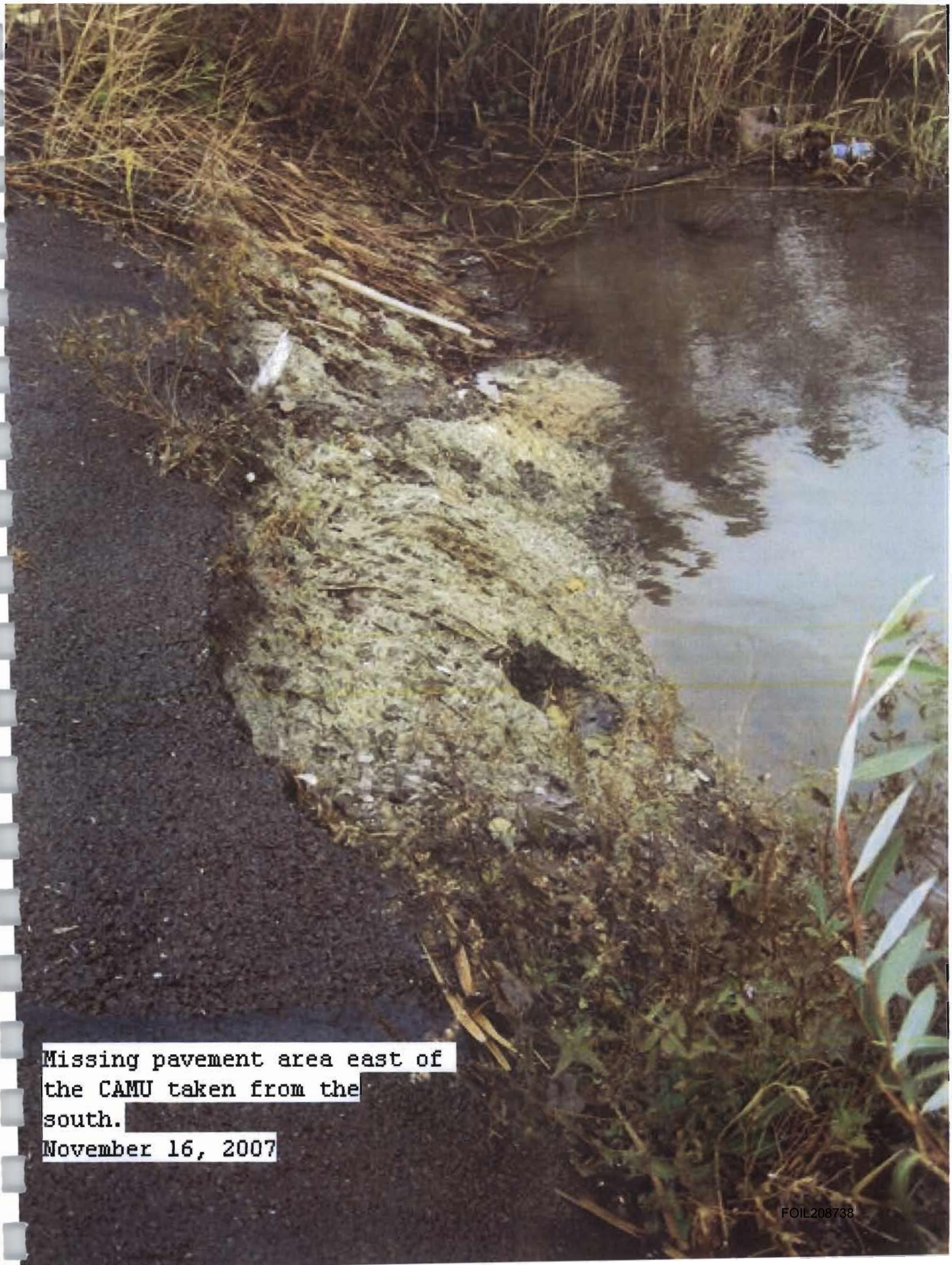


Missing pavement area east of the CAMU taken from the south.
November 16, 2007

Missing pavement area and pond east of the CAMU taken from railroad tracks.
May 1, 2008.

FOIL208736

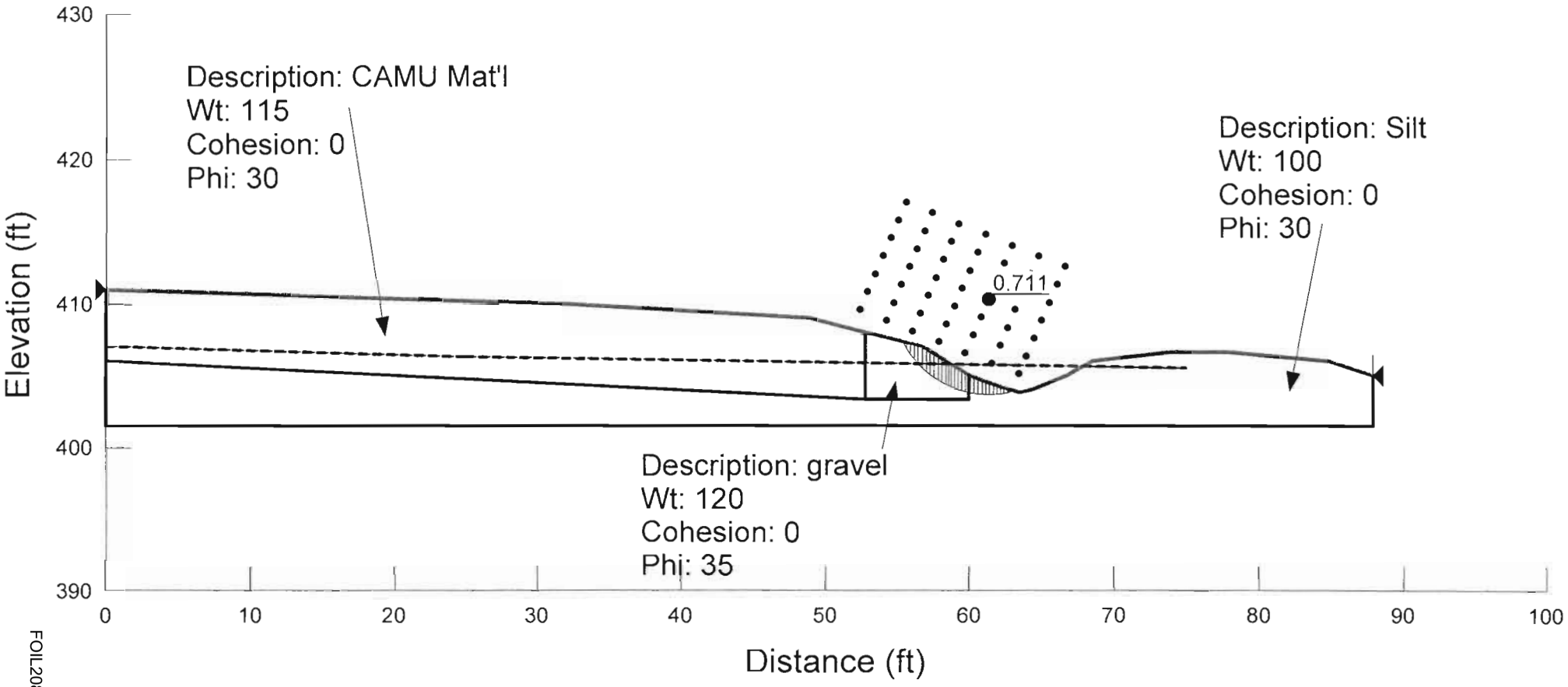
Missing pavement area and pond east of
the CAMU taken from railroad tracks.
May 1, 2008.

FOIL208740

Pond east of the missing pavement area showing 21-in culvert taken from north.
May 1, 2008.

FOIL208741

Metalico, Inc.
Slope Stability of CAMU Edge
5/5/08
High Water Condition



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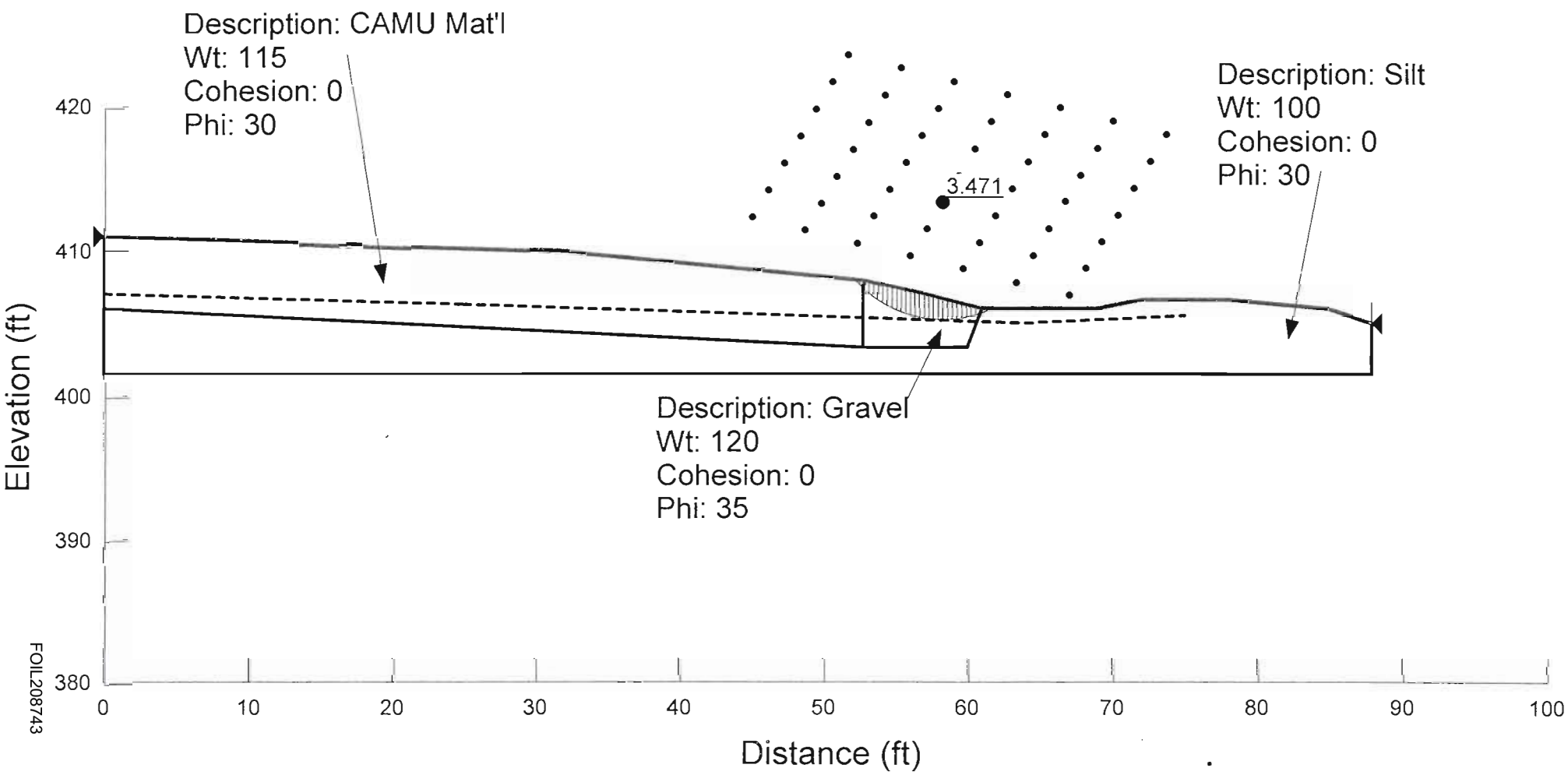
Metalico, Inc.
Slope Stability of CAMU Edge
5/7/08
Regraded Slope



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4. Evaluation and Conclusions

To evaluate subsurface conditions in the seep area, a north-south section through the CAMU toward a railroad siding on the MSR property and an east-west section through the seep area were drawn using the topographic map and CAMU construction description. The slope stability analyses were conducted using the computer program SLOPE/W, which calculates the Factor of Safety of an earth slope. The hand drawn sections along with the SLOPE/W computer runs are included as Attachment 1.

The Factor of Safety is the ratio of the forces causing the slope to fail, to the forces resisting the slope failure. The east-west section through the failure area was inputted into SLOPE/W using soil strength parameters estimated from well logs MW-B-403 and MW-B-402, and the CAMU construction description. Well logs MW-B-403 and MW-B-402 were used to estimate soil strength parameters because they were the closest to the area of missing pavement and therefore assumed to be most representative of soil conditions in that area. Varying water table conditions were inputted to simulate seasonal water level fluctuations.

The slope stability analyses calculated that the existing slope is marginally stable (Factor of Safety of 1.0) with low water table conditions, and that failure would be surficial, which is similar to the observed pavement damage. According to the Naval Facilities Engineering Command (NAVFAC), a Factor of Safety of 1.5 is considered stable for static conditions.

The slope stability analyses also showed that the existing slope would have a Factor of Safety less than 1.0 with high water table conditions. Based on these analyses and our visual examination of the area, we believe that the pavement failure is a surficial slope failure. The small section of missing pavement is on the steepest slope adjacent to the CAMU.

If fine grained soils, such as the native silt found on the Site, were used in constructing the sloped perimeter of the CAMU, water may not freely drain and may become trapped under the sloped pavement area. The trapped water could expand with freezing temperatures and push up into the pavement, causing it to crack. Thaw cycles would decrease soil strength below the pavement, and damage the pavement further. The repeated cycles that occur could cause the pavement to fail as it did. The observed vegetation growth through the pavement would facilitate this process.

The CAMU construction description in the Final Engineering Report, however, states that gravel was used to create the edge slopes, and in fact, gravel was observed on the exposed slope. Given this, it is not likely that thaw cycles associated with fine grained soils caused the pavement failure.

The missing asphalt therefore appears to have been caused by the creation of a slope that was too steep to maintain stability of the asphalt.

5. Potential Methods of Repair

Methods of repair should address regrading of the slope and promoting drainage in the area of missing pavement. Two alternate methods of repair include:

1. Remove 6 – 12 in of existing slope material and replace with a 1-ft thick layer of medium to large gravel from the edge of remaining pavement area to the bottom of slope. Regrade to 1V: 2H slope or flatter and repave using procedures outlined in para 2.2 of the NYSDEC-approved O & M Manual for work on the adjacent CAMU (see copy attached in Exhibit E). The addition of granular material will add stability to the slope and promote drainage from the edge of the CAMU; or
2. Continue the existing 21-in storm culvert approximately 20 ft along the drainage swale. Regrade from the edge of the CAMU over the storm pipe and match grades on railroad side of swale. Repair the pavement as necessary using procedures outlined in para 2.2 of the referenced O & M Manual.

The estimated construction cost for either repair option is less than $5,000. The estimated cost for regrading the slope is approximately $2,000 and includes the following items:

- 1 day rental of excavator, concrete saw, and vibratory plate
- 3.5 ton of crushed stone
- 54 sq. ft of pavement
- 8 hr each for operator and laborer
- 2 hr for foreman

The estimated cost for extending the culvert and regrading over the pipe is approximately $3,000 and includes the following items:

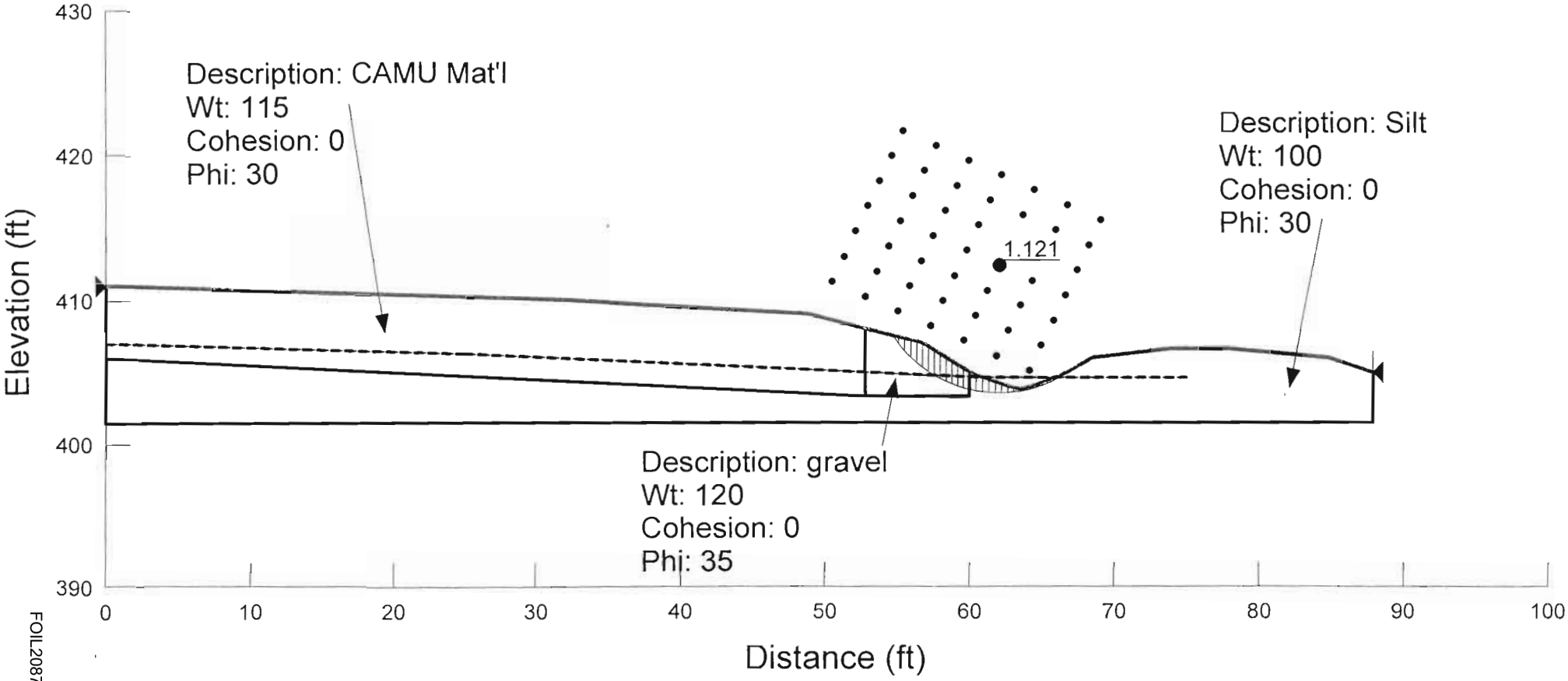
- 1 day rental of excavator, concrete saw, and vibratory plate
- 20 LF of 24 inch CMP Pipe
- 4.5 ton of crushed stone
- 54 sq. ft of pavement
- 8 hr each for operator and laborer
- 4 hr for foreman

6. Recommended Repair Option

O'Brien & Gere recommends extending the 21-in storm drain pipe approximately 20 ft north and regrading this slope off the eastern edge of the CAMU over the storm pipe to match grades on the railroad side of the swale. Extending the 21-in storm drain will convey water away from the toe of the slope in the critical area while still providing capacity to transmit surface water flow.

Regrading the slope over the pipe to meet grades on the railroad side of the swale will reduce slope grade to a stable configuration. Slope stability checks of the area calculate a Factor of Safety of 3.4 after regrading, even with high water table conditions.

Metalico, Inc.
Slope Stability of CAMU Edge
5/5/08
Low Water Condition



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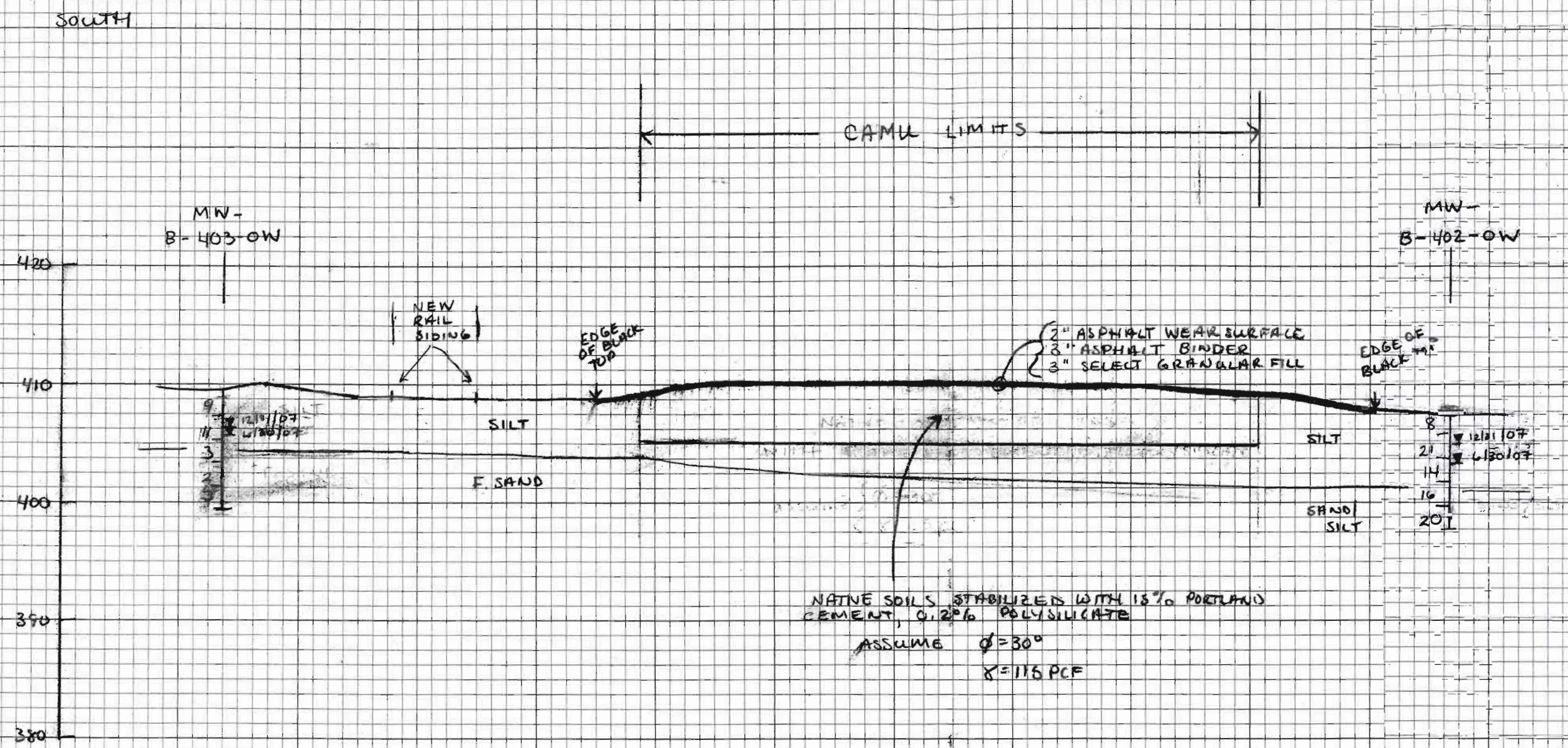


SECTION THRU CAMU EDGE

METALICO, INC.

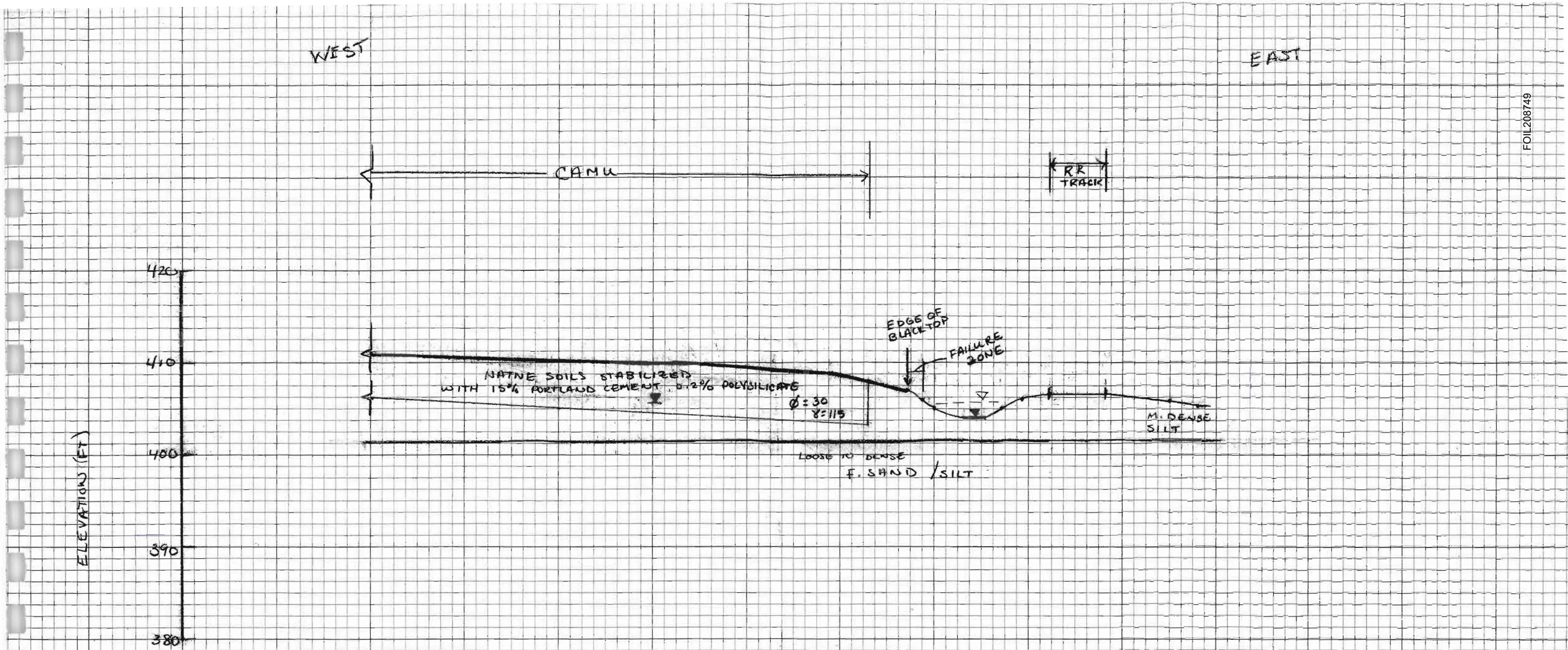
E. SYRACUSE, NY

JAC 3-20-08

1" = 10' V

1" = 30' H

FOIL208748



SCALE: 1" = 10'

SECTION THROUGH FAILURE ZONE
METALICO, INC.
E. SYRACUSE, NY
SAC 4-2-08

FOIL208749