

**ADDENDUM #1**

**New York City Department of Transportation**

**Advanced Bridge Monitoring Technology: Remote Monitoring Services  
of Three Scour-Critical Bridges that cross over the Bronx River,  
Located in the Bronx**

**Contract No. HBPK17K**

**PIN: 84110BXBR503**

**E-PIN: 84110M0009**

**Refer to Page GR-6 of the RFP**

**1. DELETE: Page GR-6 of the RFP.**

**REPLACE With: Revised Page GR-6R attached.**

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**New York City Department of Transportation**

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of Three Scour-Critical Bridges that cross over the Bronx River,  
Located in the Bronx**

**Contract No. HBPk17K**

**PIN: 84110BXBR503**

**E-PIN: 84110M0009**

**55 Water Street, Ground Floor New York, NY 10041**

**Proposal Due Date has been extended from 01/21/11 to  
01/28/11**

**Attach to Contract Document**

**This Addendum is Hereby Made Part of the Contract Documents**

**NOTICE TO ALL PROPOSERS**

**This contract will be subject to the NYC's Wireless Network.**

**Attached please find:**

- 1. Addendum #1**
- 2. Questions and Answers**
- 3. GR-6R**
- 4. NYCWiN Hardware and Software Standards**
- 5. Photographs of the Three Bridges**
- 6. Pre-Proposal Sign-In Sheets**
- 7. Acknowledgement Receipt of Addendum #1**

**NO FURTHER TEXT ON THIS PAGE**

## ADDENDUM #1

### New York City Department of Transportation

#### Advanced Bridge Monitoring Technology: Remote Monitoring Services of Three Scour-Critical Bridges that cross over the Bronx River, Located in the Bronx

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#### Questions and Answers:

Q1. Is there electrical power (110V) available on each of the three bridges?

**A1. One or more of the bridges does not have an obvious source of power readily available. Consultant should proposed best method to provide continuous power to the system.**

Q2. Do we have to provide battery backup for the system and if so, for how long?

**A2. The system should have continuous power available. Any loss of power to the system or backup should be addressed immediately.**

Q3. Will the pictures of the three bridges shown during the presentation be available for general use?

**A3. Yes, the pictures of the three bridges shown during the presentation are attached here in this addendum. Additionally, the videos will be made available upon request. Appointments for request and to review the materials must be made to the Authorized Agency Contact Person. Vendors are encouraged to visit the three bridges and take their own pictures.**

Q4. Page 4 of the RFP states that there is a Disadvantaged Business Enterprise (DBE) utilization goal of 18% for this contract. Is the 18% DBE goal for the value of the entire contract, or does this goal only apply to the engineering fee, exclusive of direct expenses?

**A4. The 18% DBE goal is for the value of the entire contract**

Q5. Page SR-1 of the RFP states that "the Monitoring System Vendor shall report to and be directed by the Contractor." Would NYCDOT consider allowing the Monitoring System Vendor to report to the engineering consultant firm?

**A5. The engineering consultant firm is the Contractor.**

Q6. Are the Procedural Forms (Forms 1P, 2P, and 3P) required from the subconsultant firms?

**A6. Yes.**

Q7. Is the Buy America Certification required to be included in our proposal? If so, is it required from the subconsultant firms or from the prime firm only?

**A7. The Buy America Certification is required by the prime firm.**

Q8. Is the Confirmation of Vendex Compliance form required to be included in our proposal, or would we only submit that upon selection for this project?

**A8. Vendex documentation must be submitted upon selection for this project in accordance with the Vendex requirements.**

Q9. Is the "Disclosure of Lobbying Activities" form required from subconsultants and vendor firms, or from the prime only?

**A9. The Disclosure of Lobbying Activities form shall be submitted by the Prime Consultant.**

Q10. Do vendors need to provide the same information as subconsultants – resumes, project experience, forms, etc, or is this information only required from subconsultants?

**A10. All technical proposal forms shall be submitted for the prime and its sub-consultants (separate sheets can be used).**

Q11. Will the software developed for the project Website (page SR-3 of the RFP) be transferred for use by NYCDOT at the end of the contract, or will only the data be transferred to DOT at that time

**A11. Since the Vendor is now required to use the secure DoITT Wireless network, it is in the Best interest of the City that the Web page be hosted on NYC servers instead of the Vendors server. Both the software and data generated will be transferred to the City when the contract has expired. The selected vendor will be provided access to members of our IT departments to handle details of the web page.**

Q12. Will the repair and/or replacement of vandalized equipment be covered by the Contingency Funds?

**A12. The system should be designed with consideration for robust performance under environmental conditions, including potential attempts at vandalism.**

Q13. In order to maximize the available funds for bridge scour monitoring will the DOT be willing to provide 110 volt ac power at each monitoring location?

**A13. The consultant should determine the best power source.**

Q14. Which permits, specifically, will the consultant will be required to obtain. If unknown at this time can the costs for obtaining them be covered by the Contingency Funds?

**A14. All work permits applying in the area (a City Park) must be obtained by the consultant.**

Q15. Will professional liability insurance be required?

**A15. Yes. Liability insurance is covered in section 7.03 of Appendix A.**

Q16. The contract timeline is for 730 days. Does the schedule include the 1 year warranty period, in addition to the design, installation, and 30 day system operation test period, or can the warranty period extend beyond the 730 day contract period?

**A16. Within 730 days the Contractor is expected to:**

- a) Install the system;**
- b) Demonstrate that the system is operational;**
- c) Fully transfer the operation to City DOT employees trained by the Contractor to use it.**

**At the satisfactory conclusion of these steps, DOT will operate the system for 30 days without the Contractor's assistance. Successful conclusion of this test will be considered as the delivery of the system.**

**The 1 year Warrantee will run as of that date.**

Q17. The balance of the lump sum fee is defined to be payable after the successful "Start up" of the system (pg SR-7, Item 9). On pg SR-5, Item 6, it is stated that the 30 day operation test will begin after the "Start up". Please confirm that full lump sum payment will be due prior to the 30 day System operation test.

**A17. The initial (70%) lump sum can be due prior to the 30 days test.**

Q18. The bridges in question have multiple foundation locations (east and west banks, multiple spans) that may be subject to scour. Is the intent to install monitoring equipment at only one typical foundation location per bridge, or will each possible foundation scour location per bridge be required to be monitored for within the lump sum fee?

**A18. Based on engineering analysis by the consultant, a location can be considered scour-noncritical, but not an entire bridge.**

Q19. See pg GR-4, Item 13 - Will the monitoring equipment be required to feed back continuous (or intermittent) scour readings during dry seabed conditions (drought conditions), or will the readings be required only during periods of substantial river flow?

**A19. It is acceptable to associate the data flow to the conditions in the field.**

Q20. See pg GR-4, Item 10 - Beyond the 30 day system operation test, does the Contractor need to replace such "malfunctioning" sensors at their cost, or is cost covered by the Contingency funds (pg SR-7, Item 10)? Does such "malfunctioning" episodes include acts of vandalism?

**A20. Malfunctions due to equipment failure will be the responsibility of the contractor within the warrantee period.**

**Damage caused by vandalism will be reviewed in order to determine whether the original design was inadequately protected or the circumstances were unforeseeable.**

Q21. Is NYCDOT going to identify the power sources for each location?

**A21. The consultant should recommend the most suitable power source.**

Q22. Who is responsible for electric fees and monthly services throughout the project?

**A22. If there are any, they should be charged to the contract, subject to NYCDOT's review and approval.**

Q23. Can NYCDOT recommend any sensor equipment manufacturers that the City would entertain?

**A23. The bidders will be evaluated based on (among others) their familiarity with monitoring equipment.**

Q24. What's the response time for maintenance?

**A24. The City can respond to conditions requiring prompt interim action within 24 hours. The proposed monitoring is intended, among other benefits, to reduce or eliminate the need for such actions at the monitored locations.**

Q25. Do the project drawings need to be signed and sealed by a PE?

**A25. The Professional Engineer needs to be licensed in the State of New York. He/She will not only sign but also design and quality control.**

Q26. Please explain the finalization services on page GR-6, section IV, B3. Are they included in the bid lump sum?

**A26. Finalization Services includes contract closeout work as directed by the NYCDOT Engineer and it shall be paid from the negotiated contract price as per GR-6R Directive.**

Q27. How long does NYCDOT require data to be stored at the server?

**A27. The data will now be stored on a NYC server not at the Consultants server.**

Q28. Who is responsible for vandalism?

**A28. Field equipment should be protected and placed out of reach in a secured location.**

Q29. If the City's Wireless Network from Northrop Grumman fails, who is responsible?

**A29. The data retention in the field should be enough to allow back-up if the network fails. The NYCWiN Network is managed by the City.**

Q30. Are we responsible for paying Northrop Grumman for any services in regards to wireless network operation?

**A30. The only cost paid to Northrop Grumman will be for the hardware purchased. The selected Vendor will be allowed to consult with them or DoITT as needed to configure the system.**

Q31. Can NYCDOT extend the due date?

**A31. Yes, the proposal due date is extended to January 28, 2011.**

## **SERVICES TO BE PERFORMED**

The engineering consulting firm shall provide qualified professional personnel on an as-needed basis as directed by the Department, to perform work related to the remote monitoring services described in the scope.

Services rendered under this contract will be administered by the Executive Director of the Inspection and Management Section, Division of Bridges, New York City Department of Transportation. No services shall be performed without prior approval of the Department. Based on the complexity of the work, the Department will have final authority on the level of personnel. The engineering consulting firm shall familiarize itself with the standard practices of the New York State Department of Transportation prior to beginning any of the work of this contract. All work required under this agreement shall be performed in accordance with these practices, standards, and criteria, and any special requirements, which include the New York State Department of Transportation Hydraulic Vulnerability Manual and any Directives of the New York City Department of Transportation. The engineering consulting firm shall perform the work in accordance with the diligence and skill expected of an engineering consulting firm with extensive experience in the performance of the work of the type described. The engineering consulting firm shall, at no additional cost to the City, provide all necessary safety training and personnel safety equipment for its employees performing work under this agreement.

## **PERSONNEL**

The successful contractor and team involved with the monitoring shall be adequately trained and made aware of their duties. The contractor must demonstrate and describe its ability to carryout all aspects of the project described herein.

## **IV. FEES AND PAYMENTS**

### **A. FEE**

The maximum fee payable for all services provided and expenses incurred hereunder shall not exceed \$\_\_\_\_\_. Said fee is a maximum amount only and does not represent a commitment or guarantee on the part of the City to pay such amount.

### **B. BASIS**

Payment for the services rendered herein shall be made on the following basis:

1. For Advanced Bridge Monitoring Services, payment shall be made on the basis of total direct technical field salaries, including applicable weekend/night work differential, times a technical field multiplier, plus direct reimbursement for principals' time, authorized overtime premium pay and certain out-of-pocket expenses.
2. For Material Testing Services, payment shall be made on the basis of direct reimbursement or out-of-pocket expenses.
3. For finalization Services, payment shall be made on the basis of total direct technical field salaries times a technical multiplier, plus certain out-of-pocket expenses.



Michael R. Bloomberg  
Mayor

**Information  
Technology &  
Telecommunications**

Carole Post  
Commissioner

# NYCWiN

## Hardware and Software Standards

### **NYCWiN Service**

NYCWiN (New York City's Wireless Network) is a DoITT managed and City-owned wireless broadband data network deployed throughout the five Boroughs of New York City for by public safety and public service agencies only. It utilizes a "cellular-like" based technology and provides wireless communications at street level to agency's backend systems by-way-of the City's internal network as it a City private closed network. The network provides for the secure data transfer of critical information to the City's back-end infrastructure. Utilizing NYCWiN broadband devices, City agencies are able to deploy mobile and fixed applications.



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Carole Post  
Commissioner



# NYCWiN Service Configurations

Connectivity onto NYCWiN is achieved through a NYCWiN modem (provided by NYC DoITT). There are three service configurations as follows.

1. Portable (Field)
  - Hardware available: PCMCIA and USB modems for use on laptops/tablets, and NYCWiN modem embedded tablets, such as Panasonic CF-19 and CF-U1; embedding in additional devices requires discussion with device manufacturer
2. Mobile (Vehicle)
  - Hardware available: Rugged In-vehicle modem
3. Fixed (Static, Remote Office):
  - Hardware available: Multiport Fixed Modem, Omni Directional Outdoor Modem

## NYCWiN Hardware Samples (with their associated interfaces)

PCMCIA Modem  
(PCMCIA Type-2)



USB Modem  
(USB 2.0)



Desktop Modem (USB  
2.0 or Ethernet; requires  
external power)



Rugged In-Vehicle  
(USB or Ethernet  
(10/100))



Panasonic CF-19  
(NYCWiN modem  
embedded)



Panasonic CF-U1  
(NYCWiN modem  
embedded)



Multiport Fixed Modem  
(NYCWiN modem  
embedded; it provides 4  
Ethernet 10/100 and 2 USB  
2.0 and 4 serial interfaces)



Rugged Omni  
Directional Outdoor  
Modem (NYCWiN  
modem embedded)



## Software Requirements for laptops and tablets

- Operating System: Windows XP
- Modem Authentication: NYCWiN Access Manager (NAM) – performs two functions, (1) dials and establishes a wireless connection and (2) creates a secure tunnel with our VPN client software, called NetMotion Mobility XE.
  - Minimum of 128Mbps RAM
  - .Net framework version 3.5

## Remote Office Configuration

### Required Features for Remote Office Solution

- PPPoE
- NAT
- VPN Pass-through
- Firewall or Access Control Lists
- 10/100Mbps Interface (not exceed 1000Mbps)
- Full Duplex

### Required Features for Remote Office Solution - Advanced

- PPPoE
- NAT
- VPN Pass-through
- Firewall or Access Control Lists
- 10/100/1000 Mbps Interface
- Full Duplex
- Routing Protocol: IGP/EIGRP
- IPSec
- GRE (Generic Routing Encapsulation)

- Recommended Router Models: below are a few models of compatible routers that have been deployed on NYCWiN. It is recommended that an application and architecture analysis be performed prior to selecting a router for any solution.

Manufacturer	Part Number	Description	PPPoE	NAT	FW or ACL	IPSec	GRE	802.11
Cisco Systems	Depend On Features	Cisco 1800 Router series Cisco 800 Router series	X	X	X	X	X	X
Cisco Systems	C3200	Mobile Access Router	X	X	X	X	X	X
Netgear	WGR614	Wireless Router	X	X	X			X
Linksys	WRT54	Wireless Router	X	X	X			X

## Protocols Supported

NYCWiN is designed to support the following application protocols: SFTP, HTTP, HTTPS, SSH and SSL. This list is not all inclusive and other ports and protocols can be supported and will require that the agency work with DoITT to identify the protocol(s) accordingly.

### NYCWiN Bandwidth and Latency Considerations

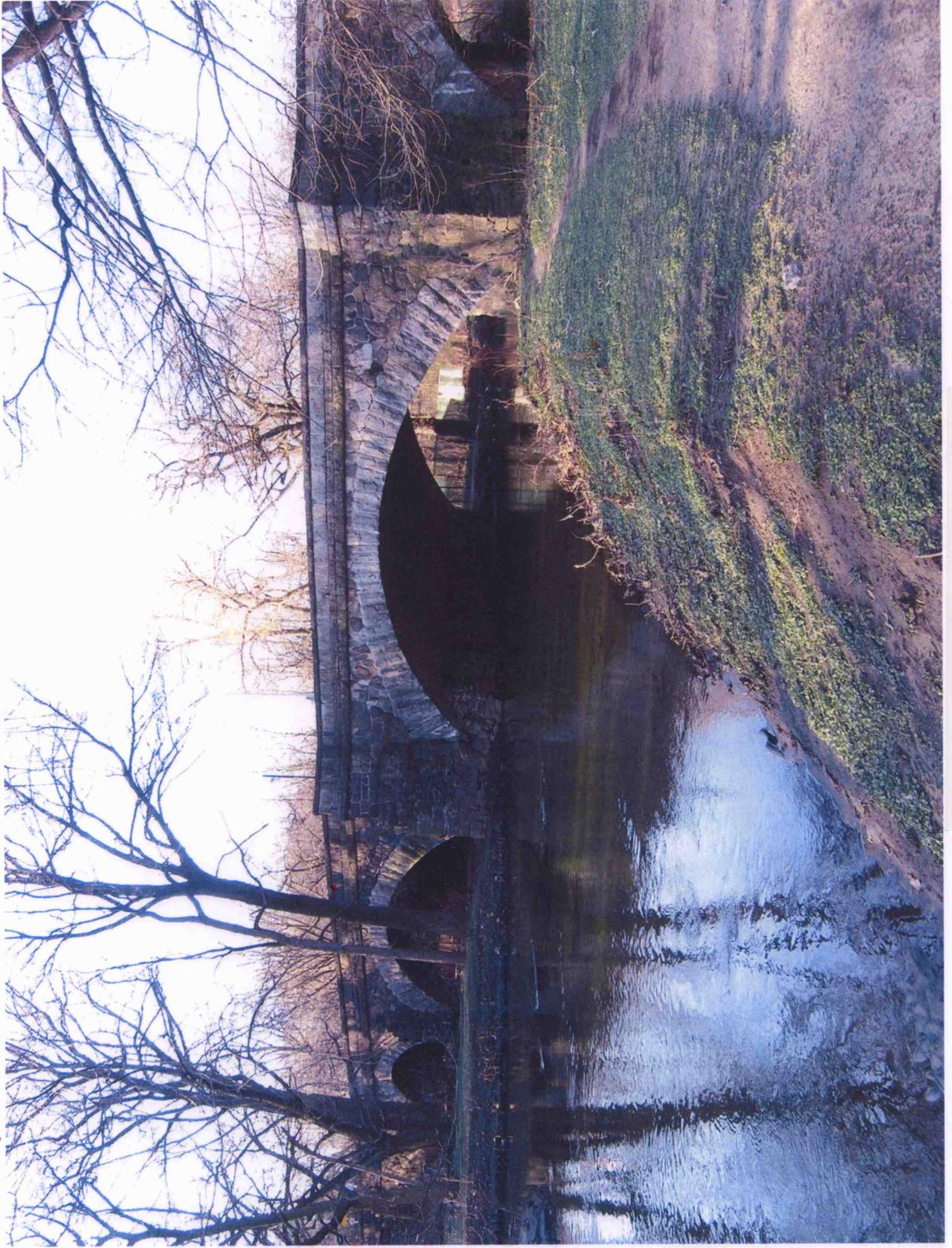
NYCWiN supports average download data transmission rates of up to 1.2 Mbps with uplinks of 425 kbps.

NYCWiN supports applications with round trip latency requirements as defined from user application to the edge of Citynet, using 32 byte ICMP “pings”, and is specified as:

- 250 ms or less 50 percent of the time
- 500 ms or less 95 percent of the time

### *Bandwidth Impacts to Mobile Device Management Using NYCWIN*

- Because of the above bandwidth considerations, it is not recommended that an application or mobile device deployment be designed to use the NYCWiN network for mobile device remote management, patch and/or anti-virus administration as defined in the Citywide Mobile Device and IT Security Policies. Due to the size of the files transferred with these applications, a wired or wireless LAN network connection is generally more appropriate.
- In addition, the current NYCWiN offering does not host any application solutions for mobile device management, patch or anti-virus administration for the agencies or mobile device encryption. At this time, it is recommended the mobile device be completely managed within the agency’s domain by the appropriate agency IT staff. Future considerations for this type of device management are being evaluated on an application-by-application basis.



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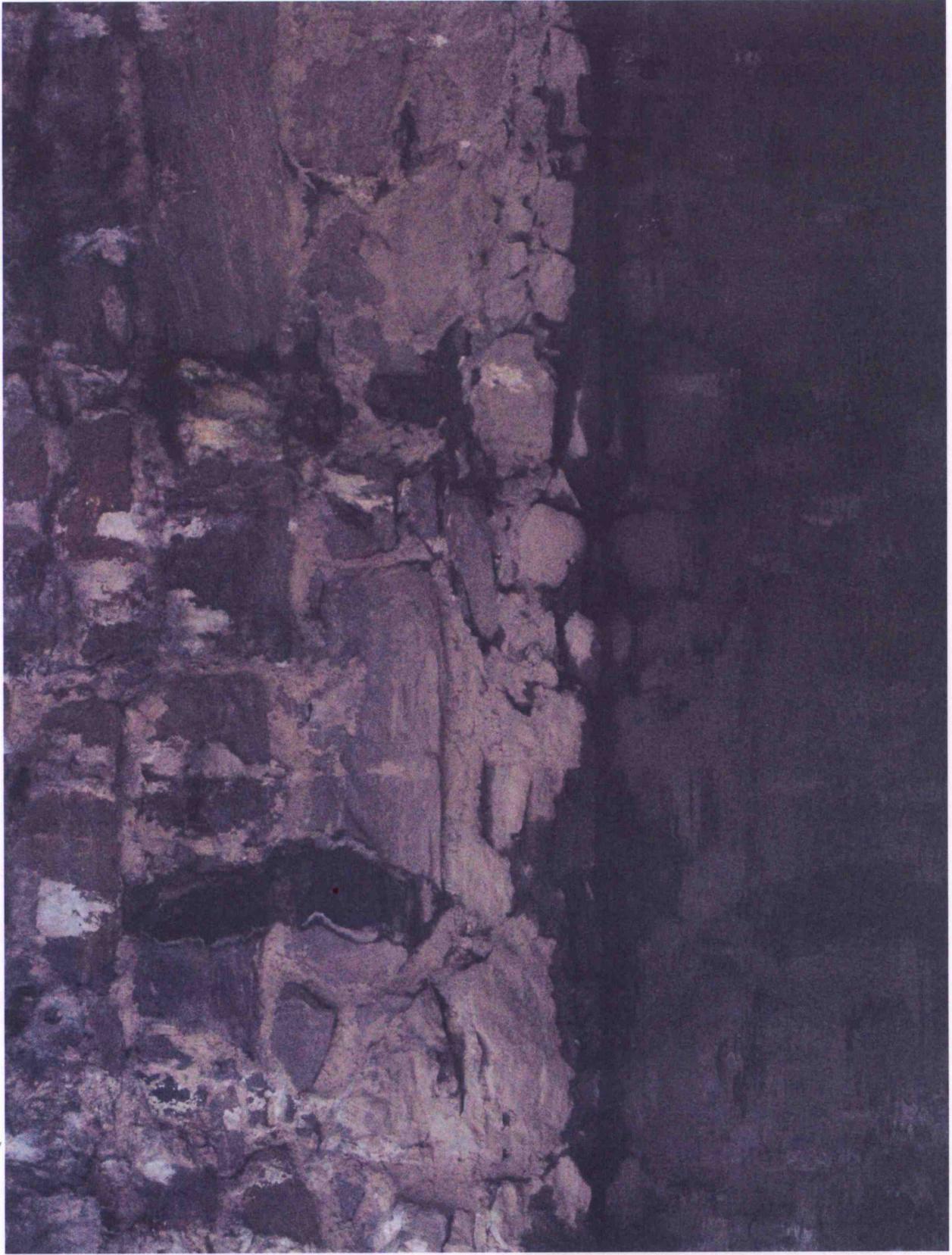
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2230250 03



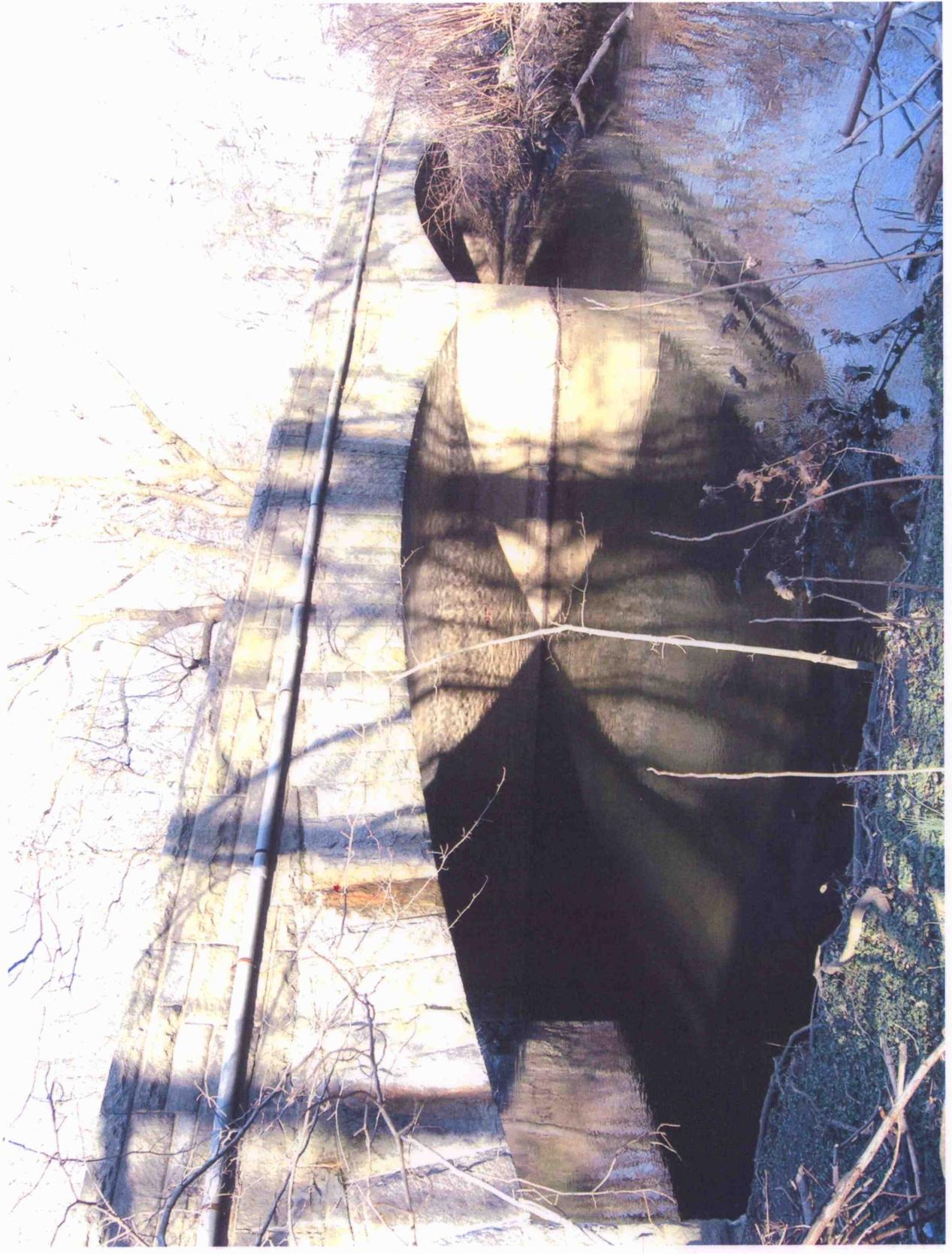
2230250 04



2230250 05



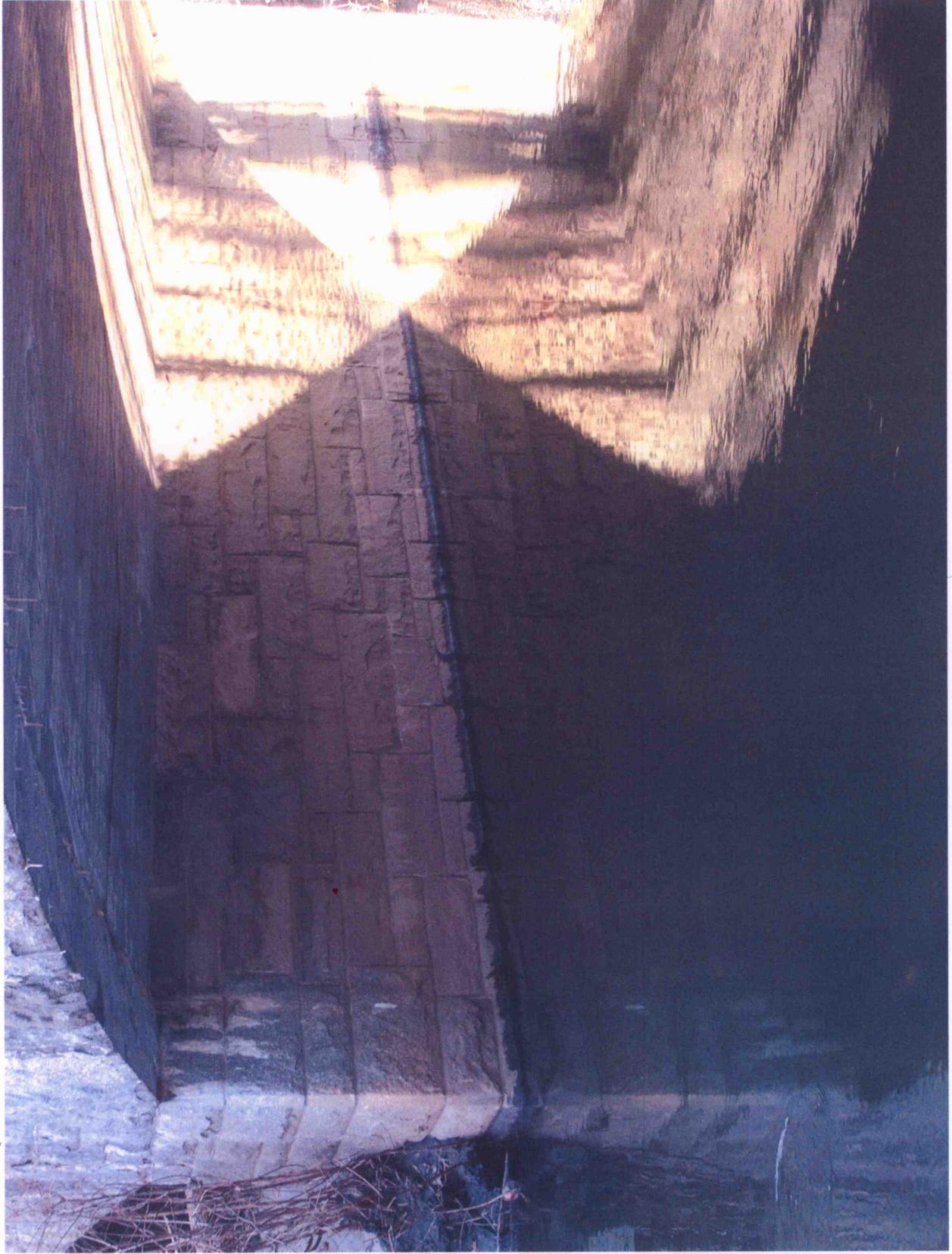
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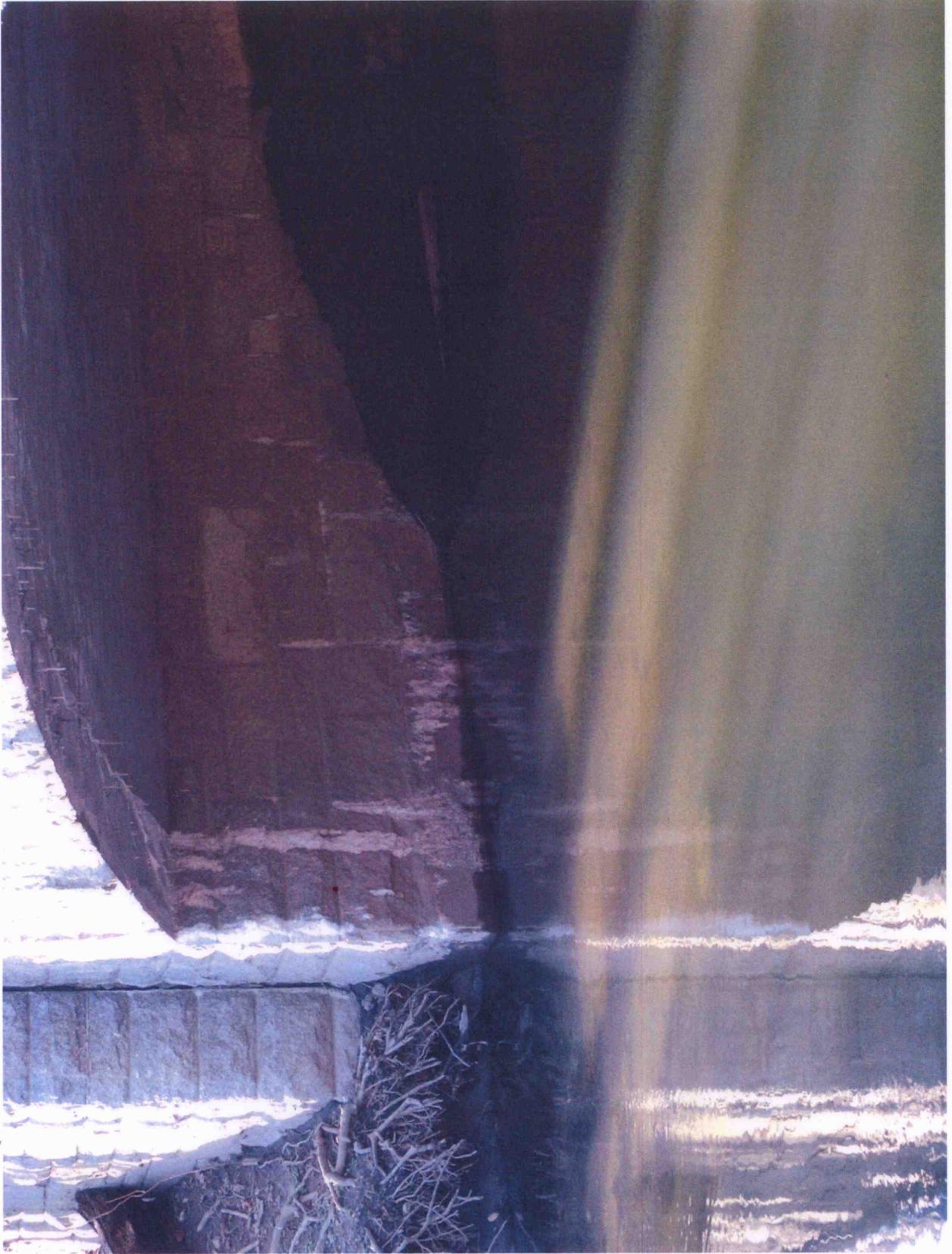
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Department of Transportation

JANETTE SADIK-KHAN, Commissioner

**ATTENDANCE SHEET - CONSULTANT FIRMS**

**DATE:** January 7, 2011 **TIME:** 10:00 AM **LOCATION:** 55 Water Street, Bid Room, Grd Floor

**CONTRACT #:** HBP17K **PIN #:** 84110BXBR503 **E-PIN #:** 84110M0009  
**CONTRACT DESCRIPTION:** Advanced Bridge Monitoring Technology: Remote Monitoring of Three Scour-Critical Bridges **SUBJECT:** Pre-Proposal Conference

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Department of Transportation

JANETTE SADIK-KHAN, Commissioner

Page 2  
PIN 84110BXBR502  
Consultant Firms

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THE CITY OF NEW YORK  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF BRIDGES

**ACKNOWLEDGEMENT RECEIPT OF ADDENDUM #1**

**Advanced Bridge Monitoring Technology: Remote Monitoring Services  
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Located in the Bronx**

**Contract No. HBPk17K**

**PIN: 84110BXBR503**

**E-PIN: 84110M0009**

**Addendum #1  
January 12, 2011**

I, \_\_\_\_\_

**(NAME AND TITLE)**

\_\_\_\_\_

**A duly authorized representative of**

**(NAME OF PROPOSERS)**

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**Acknowledge receipt of Addendum No. 1 dated January 12, 2011 for PIN:  
84110BXBR503, for which proposals will be received by 2:00 P.M. on  
January 28, 2011**