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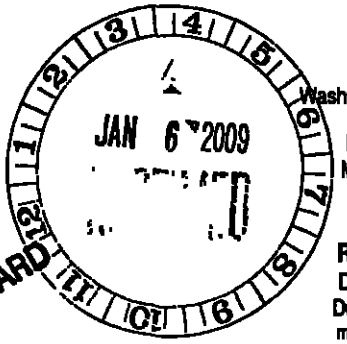


January 6, 2009

BY HAND DELIVERY

Anne K Quinlan
Secretary
Surface Transportation Board
295 E Street, SW
Washington, DC 20423-0001

224298

Re Docket No. AB 167 (Sub-No. 1189X)
Consolidated Rail Corporation—Abandonment
Exemption -- in Hudson County, New Jersey

224299

Docket No AB 55 (Sub-No 686X)
CSX Transportation, Inc —Discontinuance
Exemption—in Hudson County, New Jersey

224300

Docket No AB 290 (Sub-No 306X)
Norfolk Southern Railway Company—
Discontinuance Exemption—in Hudson
County, New Jersey

Dear Secretary Quinlan

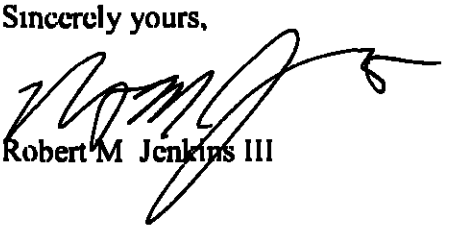
Enclosed for filing with the Board are the original and ten copies of combined Notices of Exemption responding to the above-described abandonment (Consolidated Rail Corporation) and discontinuance of service (CSX Transportation, Inc and Norfolk Southern Railway Company), which are submitted pursuant to 49 C F R §1152 50, together with a single check in the amount of $11,100 to cover the filing fee ($3,700 for each of these three Notices of Exemption) Three copies on compact disks are included as well *See* 49 C F R §1104 3(b)(1)

Conrail previously filed in this proceeding, on March 6, 2008, an Environmental and Historical Report, along with copies of letters to governmental agencies and officials and responses from those agencies, in accordance with 49 C F R §§1105 7, 1105 8, and 1152 50(d)(1) Conrail is further filing with this combined Notices of Exemption a Supplemental Environmental and Historical Report, along with copies of agency correspondence Conrail has received since March 6, 2008

In addition, Conrail is filing the original and ten copies of "Comments of Consolidated Rail Corporation on Issues Raised by Pre-Filing Correspondence," and "Motion to Stay Effective Date of Petition for Exemption and to Waive Pre-Filing Notification Requirements "

Please date-stamp the enclosed extra copies of the pleadings and return them to our representative

Sincerely yours,



Robert M Jenkins III

RMJ/bs

Enclosures

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC 20423

STB NO. AB 167 (SUB-NO. 1189X) 224298

CONSOLIDATED RAIL CORPORATION – ABANDONMENT EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

STB NO. AB 55 (SUB-NO. 686X) 224299

CSX TRANSPORTATION, INC. – DISCONTINUANCE EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

STB NO AB 290 (SUB-NO. 306X) 224300

NORFOLK SOUTHERN RAILWAY COMPANY – DISCONTINUANCE EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

VERIFIED NOTICES OF EXEMPTION

Consolidated Rail Corporation ("Conrail") hereby files its Verified Notice of Exemption pursuant to 49 C.F.R. 1152.50 to abandon property, described below, that the Board has determined is part of a line of railroad subject to the Board's abandonment authority. CSX Transportation, Inc. ("CSXT") and Norfolk Southern Railway Company ("NS") hereby file their Verified Notices of Exemption pursuant to 49 C.F.R. 1152.50 to discontinue service over the same property. A map showing the location of the property and more specifically describing the portion to be abandoned is attached hereto as Exhibit A.

Name - Harsimus Branch

Location. City of Jersey City, Hudson County, New Jersey

Description of Track Rail right-of-way running from CP Waldo (Milepost 0 00) in the City of Jersey City to a point east of Washington Street (Milepost 1.36), which traverses United States Postal Service Zip Codes 07302, 07306, and 07310 (According to the Board, the Milepost at CP Waldo is 2 54 and the Milepost at a point near Marin Boulevard is 1 30 The Board has not assigned a Milepost number to the point east of Washington Street See *City of Jersey City, Et Al —Pet for Dec Order.* STB Fin Dkt No 34818 (served Aug 8, 2007), slip op at 1)

Length of Track 1.36 miles±

2 Applicants certify that (a) no local or overhead traffic has moved over the property for at least two years, (b) any overhead traffic that has or could move over the property can be rerouted, and (c) no formal complaint filed by a user of rail service on the property (or a state or local government entity acting on behalf of such user) regarding cessation of service over the property either is pending before the Board or any United States District Court or has been decided in favor of a complainant within the last two years

3 The proposed consummation date of the abandonment is July 6, 2009

4 The exact names of the applicants are Consolidated Rail Corporation, CSX Transportation, Inc , and Norfolk Southern Railway Company ("Applicants")

5 Applicants are common carriers by railroad subject to Subtitle IV, Part A, of Title 49, United States Code, and are not a part of any other railroad system

6 The relief Applicants seek is abandonment of and discontinuance of service over the above-described property that the Board has determined is part of a line of railroad

7. Applicants' representatives to whom correspondence relating to this matter should be addressed are John K Enright, Associate General Counsel, Consolidated Rail Corporation, 1717 Arch Street, 32nd Floor, Philadelphia, PA 19103, Telephone (215) 209-5012, and Robert M Jenkins III, Mayer Brown LLP, 1909 K Street, NW, Washington, DC 20006, Telephone (202) 263-3261

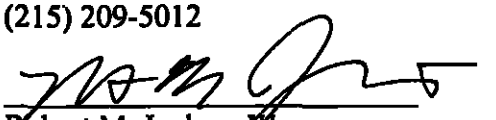
8 Possible public uses that have been suggested for the property include public park use, public trail use, and light rail use. The property east of Milepost 0 18 has previously been sold to various private and public development entities See *City of Jersey City, Et Al—Petition for Declaratory Order,* STB Fin Dkt No 34818 (served August 9, 2007), slip op at 4-5

9 Applicants acknowledge that the Board must require provisions for protection of the interests of employees as a condition of any abandonment and that it may not in the exercise of its exemption authority relieve a rail carrier from an obligation to protect the interests of employees See 49 U S C 10903(b)(2) and 10502(g), as amended Applicants believe that the appropriate level of labor protection to be imposed is that contained in the conditions set forth in Oregon Short Line Railroad Company – Abandonment – Goshen, 360 I C C 91 (1979)

10 On March 6, 2008, Applicants filed with the Board an Environmental and Historic Report in conformance with 49 C F.R. 1105 7 and 1105 8 Attached as Exhibit B is a Supplemental Environmental and Historic Report providing additional environmental and historic preservation information with respect to possible indirect impacts arising from reuse of the property (Conrail does not concede that such indirect impacts would be caused by the proposed undertaking within the meaning of either the National Environmental Policy Act or the National Historic Preservation Act)

11. Counsel for Conrail has filed a motion, attached hereto as Exhibit C, to stay the effective date of these Notices of Exemption for 180 days and to waive the pre-filing notification requirements of 49 C F R §§ 1105 7 and 1105 8, for the reasons set forth in the motion Counsel for Conrail certifies that Conrail has sent the letters required by 49 C F R 1152 50(d)(1) to the agencies and entities specified (copies of which are attached hereto as Exhibit D), that Conrail has served copies of these Notices of Exemption, including the Supplemental Environmental and Historic Report, on all of the agencies and entities specified in 49 C F R 1105.7(b) and 1105 8(c), and that Conrail has served the Notices of Exemption, including the Supplemental Environmental and Historic Report, on the parties on the service list in these proceedings Counsel for Conrail also certifies that the requirements of 49 C F R 1105 12 have been fulfilled by the publishing of a notice on January 2 in the *Star-Ledger*, a newspaper of general circulation in Hudson County, New Jersey A copy of the text of this notice is attached hereto as Exhibit E.

John K Enright
Associate General Counsel
CONSOLIDATED RAIL CORPORATION
1717 Arch Street, 32nd Floor
Philadelphia, PA 19103
(215) 209-5012



Robert M. Jenkins III
Kathryn Kusske Floyd
MAYER BROWN LLP
1909 K Street, NW
Washington, DC 20006
(202) 263-3261

DATE. January 6, 2009

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF PHILADELPHIA

Jonathan M Broder, being duly sworn, makes oath and says that he is Vice President – General Counsel and Corporate Secretary of Consolidated Rail Corporation, that he has been authorized by proper corporate action of Consolidated Rail Corporation to verify and file with the Surface Transportation Board the foregoing Notices of Exemption, that he has general knowledge of the facts and matters relied upon in such Notices, and that all representations set forth therein are true and correct to the best of his knowledge, information and belief

Jonathan M Broder

Sworn To and subscribed Before Me This

5th Day of January, 2009

Robert B. D'Zuro
Notary Public

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
ROBERT B D'ZURO, Notary Public
City of Philadelphia, Phila County
My Commission Expires September 18, 2012

CERTIFICATE OF SERVICE

I hereby certify that on January 6, 2009, I caused a copy of the foregoing "Verified Notices of Exemption" to be served by first class mail (except where otherwise indicated) on those appearing on the attached Service List

Robert M. Jenkins III

SERVICE LIST

Charles H. Montagne (By Overnight Mail)
426 NW 162nd Street
Seattle, Washington 98177

Stephen D Marks, Director
Hudson County Planning Division
Justice Brennan Court House
583 Newark Avenue
Jersey City, NJ 07306

Bradley M Campbell, Commissioner
State Historic Preservation Office
NJ Department of Environmental Protection
401 East State Street
P O Box 404
Trenton, NJ 08625-0404

Mayor Jerramiah T Healy
City Hall
280 Grove Street
Jersey City, NJ 07302

Michael D Selender
Vice President
Jersey City Landmarks Conservancy
P O Box 68
Jersey City, NJ 07303-0068

Ron Emrich
Executive Director
Preservation New Jersey
30 S Warren Street
Trenton, NJ 08608

Valerio Luccio
Civic JC
P O Box 248
Jersey City, NJ 07303-0248

Eric Fleming
President
Harsimus Cove Association
P O Box 101
Jersey City, NJ 07302

Jennifer Greely
President
Hamilton Park Neighborhood Association
22 West Hamilton Place
Jersey City, NJ 07302

Jill Edelman
President
Powerhouse Arts District Neighborhood Assoc.
140 Bay Street, Unit 6J
Jersey City, NJ 07302

Robert Crow
President
The Village Neighborhood Association
365 Second Street
Jersey City, NJ 07302

Dan Webber
Vice-President
Van Vorst Park Association
289 Varick Street
Jersey City, NJ 07302

Gretchen Scheiman
President
Historic Paulus Hook Association
121 Grand Street
Jersey City, NJ 07302

Robert Vivien
President
Newport Neighborhood Association
40 Newport Parkway #604
Jersey City, NJ 07310

Dolores P. Newman
NJ Committee for the East Coast Greenway
P O Box 10505
New Brunswick, NJ 08906

Gregory A. Remaud
Conservation Director
NY/NJ Baykeeper
52 West Front Street
Keyport, NJ 07735

Sam Pesin
President
Friends of Liberty State Park
75-135 Liberty Avenue
Jersey City, NJ 07306

Daniel D Saunders
Deputy State Historic Preservation Officer
State Historic Preservation Office
NJ Department of Environmental Protection
P O Box 404
Trenton, NJ 08625-0404

Fritz Kahn
1920 N Street, NW
8th Floor
Washington, DC 20036-1601

Daniel H Frohwirth
Jersey City Landmarks Conservancy
30 Montgomery Street
Suite 820
Jersey City, NJ 07302

EXHIBIT A


Begin Milepost 0.00
HARSIMUS BRANCH
LINE CODE 1420
End Milepost 1.36
LIBERTY
STATE PARK
CONRAIL
Morris Canal Basin
Harsimus Cove
Castle Point
NEW YORK
HUDSON
Res No 2
Res No 3
Montgomery Park
Lafayette Park
Sewage Disposal
Toilgate
Ellis I
JERSEY CITY, N.J.—N.Y.
N4037 5—W7400/7 5
1967
PHOTOREVISED 1981
DMA 6165 II NE-SERIES V822
ANTICIPATED LINE ABANDONMENT
HARSIMUS BRANCH
ANTICIPATED ABANDONMENT
EXHIBIT "A"
1 of 2
SCALE 1 24000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

Jersey City, New Jersey

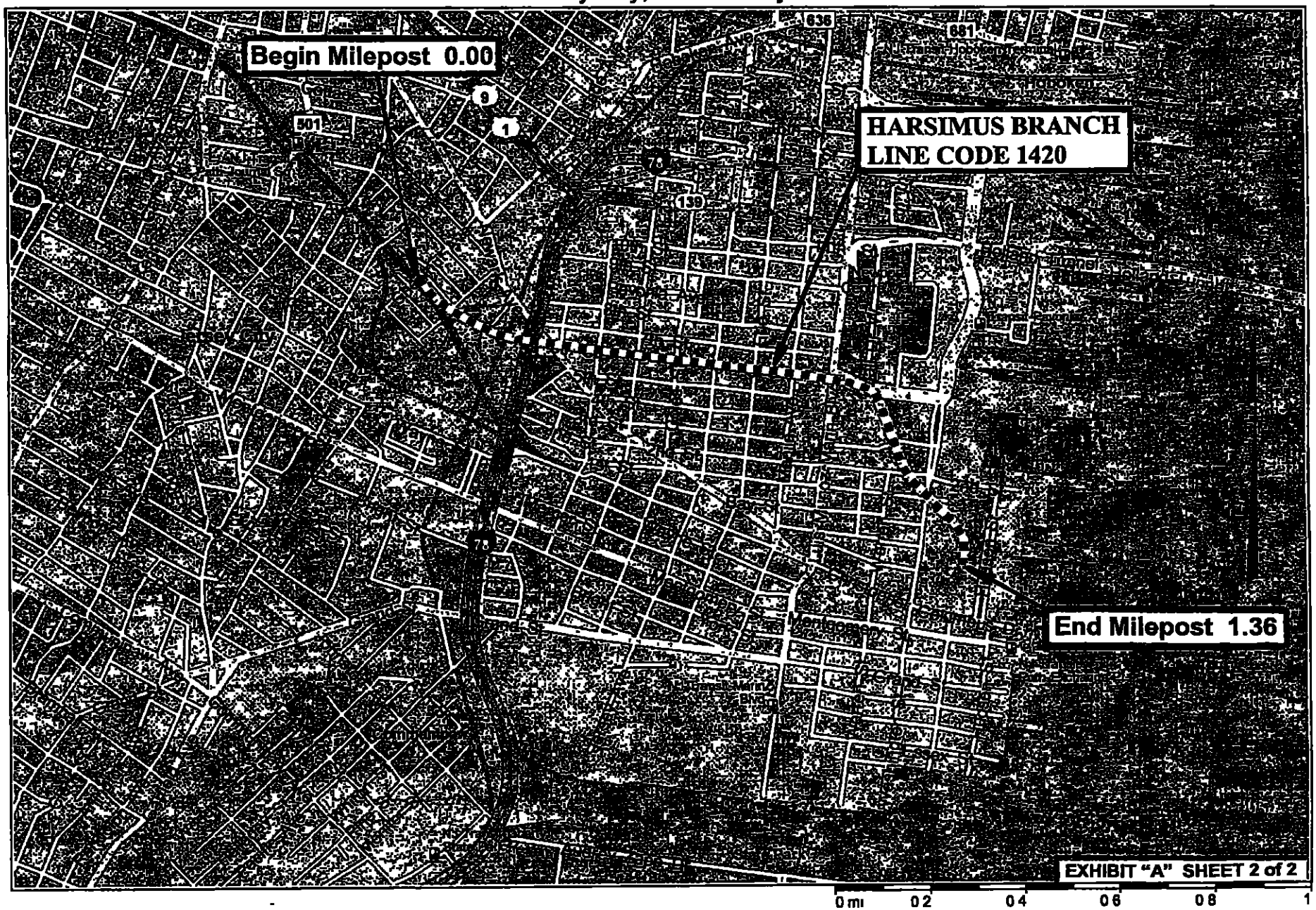


EXHIBIT B

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC 20423

STB NO. AB 167 (SUB-NO. 1189X)

CONSOLIDATED RAIL CORPORATION – ABANDONMENT EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

STB NO. AB 55 (SUB-NO. 686X)

CSX TRANSPORTATION, INC. – DISCONTINUANCE EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

STB NO AB 290 (SUB-NO. 306X)

NORFOLK SOUTHERN RAILWAY COMPANY – DISCONTINUANCE EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

NOTICES OF EXEMPTION

SUPPLEMENTAL ENVIRONMENTAL AND HISTORIC REPORT

Consolidated Rail Corporation ("Conrail") submits this Supplemental Environmental and Historic Report in accordance with 49 C.F R §§ 1105 7 and 1105 8 [1] Conrail previously submitted an Environmental and Historic Report in these proceedings on March 6, 2008 The March 6 Report focused on the direct effects of the abandonment itself. There are none, because the line the Board has determined is a line of railroad ("Harsimus Branch") has been out of service for many years and all of the track and track structure has been removed

---

[1] Conrail, CSX Transportation, Inc ("CSXT"), and Norfolk Southern Railway Company ("NS") have filed combined Verified Notices of Exemption for abandonment (Conrail) and discontinuance of service (CSXT and NS)

As required by 49 C F R § 1105 7(c), Applicants consulted with all appropriate agencies in preparing the March 6 Report, and both that consultation and the March 6 Report itself generated comments from several parties about potential indirect effects of the abandonment [2] In particular, some parties contended that the Environmental and Historic Report should address the indirect environmental and historic effects of potential reuse of part of the Harsimus Branch known as the Sixth Street Embankment Also, questions were raised about whether the Hudson Street Industrial Track should have been included in the proceeding at all.

Applicants delayed filing their Notices of Exemption in order to address the concerns that had been raised. Applicants first determined that there was no need to seek abandonment of the Hudson Street Industrial Track in this proceeding No party raised any issue concerning that track, which has been replaced by subsequent development, and which was always treated as spur track by Conrail

Applicants next determined that there is serious doubt about how the Sixth Street Embankment may be reused As set forth in more detail in the Area of Potential Effects ("APE") Report attached hereto as Appendix A, a number of potential uses have been proposed for the property, and active negotiations continue about the various possibilities Two possibilities, however, appear more likely than others One is that the Sixth Street Embankment will be acquired by the City and converted to a public park The other is that the current owners of the various properties making up the Embankment will be permitted to develop those properties for

[2] Conrail received most of those comments after it had filed the March 6 Report. Pursuant to 49 C F R. § 1105 7(d), all of the correspondence that Conrail received from agencies that were contacted in preparing the March 6 Report that were not attached to the March 6 Report are attached hereto as Appendix C, along with Conrail's responses Many of the comments filed by other parties directly with the Board raised legal issues, which Conrail addresses in "Comments of Consolidated Rail Corporation on Issues Raised by Pre-Filing Correspondence," accompanying the Verified Notices of Exemption

residential housing Conrail does not believe or concede that either of those reuse possibilities is reasonably foreseeable within the meaning of either the National Environmental Policy Act ("NEPA") or the National Historic Preservation Act ("NHPA") Moreover, in light of the need for the current owners to obtain approval from the Jersey City Historic Preservation Commission for any demolition of the Embankments necessary for the construction of residential housing, and the need for the City to authorize condemnation and appropriate the necessary funds for the development of a park, Conrail does not believe or concede that the abandonment undertaking proposed here could properly be held the proximate cause, within the meaning of NEPA or the NHPA, of any impacts resulting from the City's park proposal or the current owners' residential housing proposal. Applicants determined nevertheless to address those proposals in the APE Report and in this Supplemental Environmental and Historic Report

ENVIRONMENTAL

1. **Proposed Action and Alternatives.** As described in the March 6 Report, the proposed action is abandonment and discontinuance of part of a line of railroad known as the Harsimus Branch, running from Milepost 0.00 to Milepost 1 36 in the City of Jersey City, Hudson County, New Jersey The STB in Decisions served August 9 and December 19, 2007, in Finance Docket No. 34818 (2007 Decisions), determined that the part of the Harsimus Branch running from Milepost 0 00 to Milepost 0 88 constituted a line of railroad requiring abandonment authority from the STB [3] The STB was not asked to determine, and did not

[3] There was some confusion in the record in Finance Docket No. 34818 concerning the appropriate milepost numbers for the Harsimus Branch Conrail has used milepost numbers that correspond by length and direction to the station and bridge numbers on the valuation maps (V-1.01, ST-1 and ST-2) for the Harsimus Branch Originally, the Harsimus Branch ran from Milepost 0 00 at CP Waldo to Milepost 1 48 on the Hudson River. Before Conrail acquired the line, however, a large parcel next to the Hudson River had already been sold off for development Thus, Conrail is seeking here to abandon only the property from Milepost 0 00 to

determine, that the remainder of the Harsimus Branch required abandonment authority, however, to avoid any debate about that issue, Conrail is seeking abandonment of all of Harsimus Branch property that Conrail was deeded that could be claimed to be a line of railroad

There is no realistic alternative to abandonment The right-of-way has not been used for rail service for many years, all of the track and track structure has long been removed, and there are no shippers currently or potentially interested in rail service

This history of the Harsimus Branch and the current status of the realty underlying the right-of-way is set forth in the STB's 2007 Decisions and the attached APE Report All traces of the track east of Milepost 0 88 (Marin Boulevard, a/k/a Henderson Street) have been eliminated by extensive development of the properties for retail, residential, and commercial projects. Thus, abandonment of the right-of-way will have no impact, environmental or otherwise, east of Milepost 0 88 Similarly, abandonment of the right-of-way will have no impact on the property that is still owned by Conrail, between Milepost 0 00 and Milepost 0 18, because Conrail has no current plans for that property Abandonment of the right-of-way between Milepost 0 18 and 0 88 will have not direct impact on the property, but it will allow the property to be developed by the City of Jersey City, if the City follows through with its announced plans to condemn the property for park or trail use and complies with state and local historic preservation requirements Alternatively, if the City does not condemn the property, it may be developed for residential housing by its current owners, assuming they are able to obtain the necessary development permits and approval from the Jersey City Historical Preservation Commission

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1 36 that Conrail was deeded According to the Board, the Milepost at CP Waldo is 2 54 and the Milepost at a point near Marin Boulevard (which Conrail has designated as Milepost 0 88) is 1 30 The Board has not assigned a Milepost number to the point east of Washington Street that Conrail has designated as Milepost 1 36. See *City of Jersey City, Et Al —Pet for Dec Order,* STB Fin Dkt No 34818 (served Aug 8, 2007), slip op at 1.

2. **Transportation System.** As discussed in the March 6 Report, the abandonment of the unused right-of-way will have no impact on regional or local transportation systems or patterns From the standpoint of possible indirect impact, if the City acquires the Embankment property for a park, there will be temporary dislocation of local traffic in connection with the construction of stairways, ramps, railings, bridges, and walkways for the park If the City does not acquire the property for a park, and the current owners obtain the necessary permits and approvals to develop the property for residential housing, there will be temporary disruption of local traffic in connection with the preparation of the site and the construction of the housing Any such temporary disruption would be subject to local traffic ordinances and construction permitting requirements. The construction of additional housing could marginally increase the amount of homeowners' automobile traffic in the area, but the number of additional residences is small in relation to the overall number of residences in the area, and the normal local planning and zoning process takes account of traffic impacts

The City and others contend that demolition of the Embankments could adversely affect transportation because the property would not be available for possible light rail use But, for the reasons discussed in the APE Report, it is not reasonably foreseeable that the property would be *used for public transit Neither the City nor any transit agency has identified any funding or* taken any concrete steps to implement such a plan

3. **Land Use.** The zoning for most of the parcels of land between Milepost 0 18 and 0 88 is consistent with either park use by the City or the type of residential housing planned for those parcels by their owners One parcel (Block 446, Lot 18A, abutting the New Jersey Turnpike) must be rezoned for the type of housing/commercial building planned there, in the event the City does not condemn the property for park use In addition, because the Sixth Street

Embankment has been designated an historic landmark, the current owners must obtain the approval of the City of Jersey City Historic Preservation Commission before they can demolish the embankment structures to prepare the site for residential construction.

The Harsimus Branch is entirely contained within an urban area By letter dated February 26, 2008, the Natural Resources Conservation Service of the U S Department of Agriculture confirmed that there is no prime farmland in the vicinity of the Harsimus Branch and, accordingly, the proposed undertaking will have no effect on any prime agricultural land

Regarding the Coastal Zone Management Act, by letter dated March 4, 2008, the Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection requested further information concerning the abandonment, particularly regarding how it would affect the Hudson River Waterfront Walkway and perpendicular access to the Walkway Conrail responded by letter dated March 26, 2008, observing that the abandonment itself would not involve any type of activity and would have no effect on the Hudson River Waterfront Walkway or perpendicular access to the Walkway Conrail also does not believe that either possible park use or possible residential housing use of the Embankment property will have any effect on land or water uses within the meaning of the Coastal Zone Management Act Nevertheless, Conrail is re-notifying the New Jersey Department of Environmental Regulation to inquire whether it has any additional comments in light of this Supplemental Environmental and Historical Report.

Regarding alternative public uses, the City has indicated its interest in acquiring the Embankment property for a park. As noted in the March 6 Report, the City and others have also suggested that the property could be used as a corridor for light rail use or as part of the proposed "East Coast Greenway " As discussed in the APE report, the current owners have made

proposals to the City for combining such public uses with private development, contingent upon the City's cooperation regarding changes in zoning and permitting required for the private development None of those proposals as yet has been accepted by the City

4. **Energy.** As discussed in the March 6 Report, abandonment of the right-of-way would have no energy impacts, because the Harsimus Branch has long been out of service From the standpoint of possible indirect impact, as discussed above, if the City were to construct a park or the current owners were to construct residential housing on the parcels between Milepost 0 18 and 0.88, there may be temporary disruptions of local traffic during some phases of construction, and some additional fuel use will be attributable to trucks and other equipment used during construction No long-term indirect energy effects are foreseeable

5. **Air.** As discussed in the March 6 Report, abandonment of the right-of-way would have neither negative nor positive impacts on air quality, because the Harsimus Branch has long been out of service

From the standpoint of possible indirect impact, the City has suggested that construction of residential housing could have a temporary indirect impact on air quality, due to dust from construction activities Any such impact, however, would be temporary Moreover, it would be required to be mitigated pursuant to a Health and Safety Plan (N J A C 7 26E-1 9) under the oversight of the New Jersey Department of Environmental Protection ("NJDEP")

The type of dust involved here is not out of the ordinary for construction projects in Jersey City As the City itself has pointed out, in November 1998, Dresdner Robin, an environmental consultant for the Jersey City Redevelopment Agency (the "JCRA"), prepared a report concerning the environmental condition of the Embankment Properties A copy of the body of that report is attached hereto as Appendix B It was prepared after all rail activity had

ceased on the Harsimus Branch and all track and track structure had been removed At that time, the JCRA had plans to demolish the Embankments and to construct housing on the property as part of a redevelopment project

As noted in its report, Dresdner Robin collected samples from soil borings in each embankment as part of a geotechnical and environmental investigation to determine the cost of demolition of the embankments and the options for reuse or disposal of the soil used to fill the embankments Dresdner Robin states in the report that no volatile organic compounds, pesticides or PCBs were detected in the soil and that the semi-volatile organic compounds that were detected in excess of NJDEP cleanup standards are classified as nonhazardous waste Dresdner concluded that the fill material could be recycled or disposed of at a landfill Dresdner further concluded that the material could also be used at other city project sites as subsurface fill material with appropriate engineering controls and maintenance This type of "historic fill" is present in many properties in Jersey City and elsewhere in Hudson County, and handling the material has become a routine component of Hudson County real estate development

NJDEP permits historic fill to be excavated and disposed of, or to be left in place with appropriate engineering and institutional controls, in accordance with NJDEP's Technical Requirements for Site Remediation, N J A C. 7.26E As with the excavation of any contaminated material, the work is performed by licensed professionals under the oversight of NJDEP and in accordance with a Health and Safety Plan A Health and Safety Plan (N J A C. 7 26E-1.9) governs the proper handling and safety procedures, including dust control and, where deemed appropriate by NJDEP, air monitoring to ensure that acceptable air quality is maintained during the course of work Disposal of the material is also overseen by NJDEP pursuant to New Jersey's solid waste law and its technical regulations

6. **Noise.** As discussed in the March 6 Report, abandonment of the Harsimus Branch would have no direct noise or vibration effects From the standpoint of possible indirect impact, there may be an increase in noise and vibration arising from construction activity if the City were to construct a park or the current owners of the Embankment parcels were to construct residential housing Such effects would be temporary Furthermore, the effects would be subject to the same controls under local ordinances as any other urban construction activity

7. **Safety.** As discussed in the March 6 Report, there would be no public health and safety impacts resulting from abandonment of the Harsimus Branch From the standpoint of possible indirect impact, if the Embankment properties were partially or completely demolished, there could be temporary impacts, as discussed above, from dust from historic fill being excavated and transported from the site A Health and Safety Plan, including dust control, would govern the proper handling and safety procedures, with oversight by NJDEP

8. **Biological Resources.** As discussed in the March 6 Report, there would be no impact on endangered species, critical habitat, wildlife sanctuary or refuge, or national or state park resulting from abandonment of the Harsimus Branch By letter dated March 6, 2008, the U S Fish and Wildlife Service ("FSW") referred Conrail to an FSW website to determine whether any federally listed species were in the area Conrail responded by letter dated March 11, 2008, that the Indiana bat ("Potential") and Peregrine Falcon ("Extant") were species identified on the FSW website as within the limits of the abandonment Conrail received a call from the FSW on April 10, 2008, informing Conrail that the Indiana bat was being removed from the federal list and that the FSW did not see the need to comment further on Conrail's abandonment undertaking.

Conrail does not believe that either possible park use or possible residential housing use of the Embankment property will have any effect on federally listed species Nevertheless, Conrail is re-notifying the FSW to determine whether the FSW has any additional comments in light of this Supplemental Environmental and Historical Report.

9. Water. As discussed in the March 6 Report, there is no inconsistency between Conrail's abandonment of the Harsimus Branch and any applicable water quality standards, and no requirement for water-related permits Conrail is also unaware of any indirect impact on water quality or any water-related permit requirements that would result from reuse of the Embankment properties for a park or residential housing Any construction activity between Milepost 0.18 and 0 88 would be over half a mile from the Hudson River, and there are no wetlands involved. Nevertheless, Applicants are re-notifying NJDEP, the U S. Army Corps of Engineers, and the U S. Environmental Protection Agency to determine whether they have any views in this regard Conrail has already had correspondence with the U S Environmental Protection Agency about the lack of direct effects from the abandonment In the event of a park or residential housing construction, as with any construction project involving soil excavation, provision would need to be made for silt control The Health and Safety Plan for any such project would include such mitigation, with oversight by NJDEP

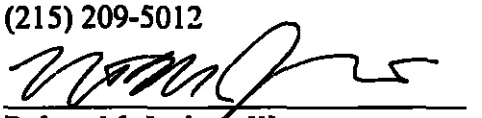
10. Mitigation. As discussed in the March 6 Report, there are no direct environmental effects resulting from the abandonment of the Harsimus Branch Any possible indirect effects resulting from the demolition and construction involved in building a park or residential housing would be temporary Furthermore, state and local environmental, construction, and traffic permitting requirements and plans would ameliorate any such effects

HISTORIC

Conrail received a significant number of comments on its March 6 Report concerning historic preservation issues. Attached to this Supplemental Environmental and Historic Report as Appendix A is an APE Report prepared for Conrail by Richard Grubb & Associates, Inc , a New Jersey consulting firm that specializes in cultural resources investigations involving railroad undertakings The Principal Investigators assigned to the project exceed the National Park Service's *Professional Qualifications Standards* for Historians, Architectural Historians, and Archaeologists The APE Report provides considerable supplemental detail regarding every category of historic preservation information required by 49 C F.R § 1105 8(d)(1)-(8) and covered by the March 6 Report It also responds to most of the historic preservation concerns expressed in the comments Conrail received.[4]

Respectfully submitted,

John K. Enright
Associate General Counsel
CONSOLIDATED RAIL CORPORATION
1717 Arch Street, 32nd Floor
Philadelphia, PA 19103
(215) 209-5012



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Dated January 6, 2009

[4] Conrail responds to the legal issues raised by some commenters in its "Comments of Consolidated Rail Corporation on Issues Raised by Pre-Filing Correspondence," accompanying the Notices of Exemption

COLOR PAGES INCLUDED

APPENDIX A

Area of Potential Effects Report and Proposed Methodology for Section 106 Consultation

Conrail Harsimus Branch Abandonment (STB Docket No. AB 167 (Sub-No. 1189X))

City of Jersey City,
Hudson County, New Jersey

September 2008

RICHARD GRUBB & ASSOCIATES, INC.
Cultural Resource Consultants

Area of Potential Effects Report
and Proposed Methodology for
Section 106 Consultation
Conrail Harsimus Branch Abandonment
(STB Docket No. AB 167 (Sub No. 1189X))
City of Jersey City, Hudson County
New Jersey

September 2008

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INTRODUCTION

Consolidated Rail Corporation (Conrail), CSX Transportation, Inc (CSXT), and Norfolk Southern Railway Company (NS) are requesting approval from the Surface Transportation Board (STB) to abandon and discontinue freight service on a railroad right-of-way known as the Harsimus Branch, Milepost 0.00+- to Milepost 1 36+-, in the City of Jersey City, Hudson County, New Jersey (Figure 1) The abandonment itself will have no direct impact on historic properties in the right-of-way or in the surrounding area However, possible actions by third parties after the abandonment is approved may be regarded as reasonably foreseeable and potentially causing indirect changes to historic properties This report has been prepared to delineate the Area of Potential Effects (APE) for a cultural resources investigation in compliance with Section 106 of the National Historic Preservation Act of 1966 The report also outlines a proposed methodology for conducting the investigation, recommends consulting and interested parties, and suggests a public participation plan to initiate Section 106 consultation among Conrail, the STB, the New Jersey Historic Preservation Office (HPO), and other consulting parties

THE HARSIMUS BRANCH

In a decision issued August 9, 2007, in Docket No 34818, the STB held that part of the Harsimus Branch running between Waldo Avenue and Marin Boulevard constituted a line of railroad requiring abandonment authorization As described in the STB's decision, the Harsimus Branch ran from a main-line connection at Waldo Avenue into Harsimus Cove Yard on the Hudson River (There was some debate in the decision about the applicable milepost numbers For convenience, we use here milepost numbers for the right-of-way drawn from the historic Valuation Maps) The City of Jersey City and others sought a declaratory order from the Board only for the part of the Harsimus Branch running between Waldo Avenue and Marin Boulevard, but the City claimed that the entire Harsimus Branch was a line of railroad requiring abandonment authorization Accordingly, Conrail is seeking abandonment authority for all of the Harsimus Branch right-of-way that it ever owned

The Harsimus Branch right-of-way extends through a highly developed, urban landscape characterized by passenger and freight rail lines, modern highway viaducts, contemporary single-story commercial and industrial buildings, warehouses, a cemetery, parking lots, public parks, athletic fields, attached and detached town homes, civic and religious buildings, and multi-story residential and business structures ranging in age from the mid-nineteenth century to the present day. The western end of the right-of-way begins at Milepost 0 00 inside the Bergen Cut, a 40-foot deep channel cut through a ridge of trap rock on the western side of Jersey City The track (no longer

extant) originally descended along a gentle gradient to the edge of Bergen Hill where an under-grade viaduct (dismantled) and a series of stone-lined embankments carried the elevated line over the lower flats and streets down to the Jersey City waterfront

The Harsimus Branch has been out of service since 1992 Bridges that once formed the viaduct and connecting links between the stone embankments were removed beginning in 1994 Only the viaduct abutments, piers, and embankment segments, located on the middle and western part of the right-of-way, remain standing All other railroad-related resources such as bridges, culverts, stations, interlocking towers, signals, bulkheads, and other structures no longer survive

Most of the property underlying the right-of-way has been sold for development Conrail owns the fee interest only in the western part of the right-of-way, from Milepost 0 00 to 0 18 The fee interest in the middle part of the right-of-way between Milepost 0 18 and 0 88 is divided into eight parcels owned by eight limited liability companies (LLCs) controlled by SLH Properties (SLH) The fee interest in the easternmost part of the right-of-way between Milepost 0 88 and 1 36 is owned by several different entities That part of the right-of-way has been completely transformed by modern urban renewal and development of retail, residential, and hotel properties No trace of the right-of-way remains

As a result of the STB's August 2007 decision, development of the eight parcels in the middle of the Harsimus Branch right-of-way cannot proceed until the STB authorizes abandonment of the right-of-way Once abandonment is authorized, the Mayor of the City of Jersey City has announced his intention to seek acquisition of those parcels for public use under 49 U S C 10905, under N J S A 48 12-125 1, or by eminent domain In September 2004, the City adopted an ordinance authorizing acquisition of those parcels for park and trail use. If funding becomes available and the necessary transit agencies are interested, the Mayor has also expressed an interest in using part of the right of way for light transit

SLH has submitted a number of proposals to the City that would permit the eight parcels to be developed and used for park, trail, and transit purposes, while maintaining the embankments largely intact These alternatives are not based on current zoning requirements and require the agreement of the City and other agencies in order to be implemented To date, however, the City has not accepted any of these proposals Absent the City's agreement to one of these alternative proposals, or the City's acquisition of the properties by eminent domain or purchase, SLH has pursued development approvals that would allow economic development of the properties consistent with local land use requirements The embankments and bridge piers on those eight parcels would be

demolished. On the westernmost parcel (Block 446, Lot 18A) abutting the New Jersey Turnpike, a four-story mixed-use building (upper three floors residential, ground floor commercial) would be constructed, consistent with zoning standards Contextually sensitive three-story town homes would be built on six of the parcels (Block 247, Lot 50A, Block 280, Lots 50A & B-1, Block 317 5, Lot 50A, Block 354 1, Lot 50A, Block 389.1, Lot 50, Block 415, Lot 50). On the easternmost parcel (Block 212, Lot M) adjoining a baseball field and Bed, Bath, and Beyond retail store, a ten-story apartment building would be constructed SLH has received a number of development approvals, however SLH has not received all of the permits that would be required to proceed with its plans once abandonment is authorized

Given the significant uncertainties surrounding development of the eight middle parcels, it might well be concluded that no particular change in historical properties is reasonably foreseeable as an indirect consequence of the STB's approval of Conrail's abandonment of its right-of-way Two potential indirect outcomes, however, are arguably sufficiently foreseeable to be considered in connection with the abandonment undertaking (1) the City's plans to acquire and develop the parcels for park and trail use and (2) SLH's plans to develop the parcels for residential use Accordingly, the limits of the APE for the Harsimus Branch investigation is being drawn to accommodate the possible indirect effects stemming from these two potential outcomes No reasonably foreseeable change will occur to the first part of the right-of-way that is still owned by Conrail, because Conrail has no specific plans for disposition or development of that property, and the City has not claimed that it plans to acquire the property by condemnation or otherwise Similarly, no reasonably foreseeable change will occur to the easternmost part of the right-of-way that has already been developed Nevertheless, to ensure a broad scope for Section 106 purposes, the entirety of the right-of-way is proposed to be included in the APE

AREA OF POTENTIAL EFFECTS

The APE is defined in 36 CFR 800 16(d) as follows

> The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist The area of potential effects is influenced by the scale and nature of the undertaking and may be different for different kinds of effects cause[d] by the undertaking

Included within the APE are those locations where an undertaking may result in disturbance of the ground, from which elements of the undertaking may be visible from public areas, and where the activity may result in changes in traffic patterns, land use, or public access The APE for archaeology and architecture are different as a result of this definition

APE-Archaeology

The APE-Archaeology includes the area that could be physically impacted by an undertaking Specifically, the APE-Archaeology includes the potential limits of disturbance within the entire length and width of the right-of-way proposed for abandonment (Figure 2)

APE-Architecture

The APE-Architecture includes the entire area of the APE-Archaeology and the area in which the project may directly or indirectly cause changes in the character or use of historic properties (Figure 3) As a general matter, the APE-Architecture encompasses land adjacent to and in the immediate vicinity of the Harsimus Branch right-of-way However, the potential visibility of a possible 110-foot apartment building, as permitted by local zoning, on the easternmost embankment parcel requires a broader APE in the vicinity of that building Three techniques have been employed to delineate the APE-Architecture electronic viewshed mapping, computer-generated building simulations, and field reconnaissance

The western end of the APE-Architecture encompasses the parcel between Milepost 0 00 and 0 18 that is still owned by Conrail It begins at the bottom of the 40-foot deep Bergen Cut, which is currently utilized by the Port Authority Trans Hudson (PATH) transit system Resources located on the north rim of the Bergen Cut, immediately above the Harsimus Branch, are less than 50 years of age, resources located on the south rim are approximately 75 feet away from the Branch and are largely less than 50 years of age Because above-ground resources on both rims of the Bergen Cut are located high above the Harsimus Branch, are largely less than 50 years of age, and are beyond the reach of direct or indirect effects from the proposed undertaking, the APE-Architecture has been confined to the area enclosed by the walls of the Bergen Cut The remainder of the western end of the APE-Architecture follows the contours of the properties that are immediately adjacent to the right-of-way between Milepost 0 00 and 0 18 (see Figure 3)

The eastern end of the Harsimus Branch beyond Milepost 0.88 (Mann Boulevard) no longer exists, and the area has been largely developed with modern commercial and residential buildings Because it adjoins the eligible Warehouse Historic District, the eastern end of the APE-Architecture takes in

a portion of the eligible Warehouse Historic District, as well as existing property boundaries immediately surrounding the location of the old right-of-way (see Figure 3)

As discussed above, one potential indirect effect of the undertaking that might be evaluated as reasonably foreseeable is that the City would acquire the eight parcels in the middle of the right-of-way for park and trail use. The Mayor's suggestion that the parcels might ultimately be developed for mass transit as well is too speculative to warrant consideration here, since no concrete steps has been undertaken in furtherance of that concept. If the City were to decide not to acquire those parcels, another indirect effect of the undertaking that might be viewed as reasonably foreseeable is that such parcels would be privately developed by SLH consistent with local zoning requirements

The City's announced plans for park and trail use are expected to have limited physical impact on the embankments and limited visual effect on surrounding properties Those plans include the construction of pedestrian bridges between the embankments, ramps and stairs leading up to the embankments, and fencing, plantings, and walkways on top of the embankments

SLH's plans to demolish the embankments and remaining bridge piers on the eight parcels and replace them with residential housing would have a physical impact on the embankments and a limited visual effect on surrounding properties The housing that would be built on most of the parcels would consist of contextually sensitive three-story townhouses along Sixth Street and one four-story brick mixed-use commercial and apartment building on the westernmost parcel fronting on Newark Avenue Thus, the APE-Architecture for most of the middle section would encompass a one-half block deep buffer along Fifth and Sixth Streets and a slightly wider buffer around the proposed four-story building near Newark Avenue

Zoning regulations for the easternmost block (Block 212) permit construction of a 110-foot high building, which would be visible over a broader area, accordingly, the APE-Architecture is expanded around that block to take into account possible visual effects within a one-half mile buffer zone Computer generated modeling was primarily used to determine the extent of the visibility of a 110-foot high building (approximately ten stories) A conservative average height of three stories (33 feet) was used to simulate the rest of the buildings in the half-mile buffer zone Digital elevation models were layered over aerial photographs. The areas in which buildings would obstruct views of the proposed ten-story building from all public spaces (streets, parks, surface parking lots) were filled with a dark blue crosshatch The electronic viewshed map for the ten-story building appears in Figure 4. This computer-generated viewshed map was checked using computer-generated simulations of actual building heights created through Google Earth The simulation allows for a

virtual model of the proposed building to be inserted into the database of existing building heights in Google Earth, then viewed from any point within the half-mile buffer zone When compared against the viewshed map, the viewshed map was found to be accurate in regard to the elimination of sightlines due to the heights of interceding buildings Figure 5 depicts a computer-generated "bird's eye view" of the proposed building within the larger cityscape

Both computer models were also checked in the field and found to accurately reflect conditions on the ground Because the modeling and field checking indicate that a portion of the ten-story building may be visible from parts of Hamilton Park in the wintertime (when trees have lost their leaves), the APE-Architecture includes a discontiguous section embracing the whole of this public area Photographs of the APE-Architecture are shown on Plates 1 through 103 and identified with numeric locators on Figures 7 through 7E in Appendix B

PROPOSED CULTURAL RESOURCES INVESTIGATION METHODOLOGY

Conrail proposes to conduct a Cultural Resources Investigation through its contractor, Richard Grubb & Associates (RGA), in order to provide the STB with information needed for the agency to comply with Section 106 of the National Historic Preservation Act RGA's investigation will conform with all requirements of the HPO for such studies The purpose of the Cultural Resources Investigation is to determine if significant historic and/or archaeological resources are contained within the APE and to assess National Register eligibility and effects of the abandonment The investigation is anticipated to have three components (1) background and historical research, (2) an architectural survey, and (3) an archeological survey RGA will conduct a Phase IA archeological survey and intensive-level architectural survey to identify all buildings, structures, and objects of local, state or national significance that appear to meet at least one of the National Register Criteria All resources more than 50 years of age will be documented on the appropriate HPO survey forms The Principal Investigators for this project exceed the National Park Service's *Professional Qualifications Standards* for both Historians, Architectural Historians, and Archaeologists

1 Background and Historical Research

The background and historical research will be performed at an early stage of the Cultural Resources Investigation. A search of existing literature and map sources will provide a comprehensive overview of the prehistoric and historic development of the local area and region There is no shortage of information concerning the history of Jersey City and the Harsimus Branch Specifically, the investigation will examine previous cultural resource reports conducted in the vicinity of the APE, as well as National Register Nominations, Historic American Buildings Surveys, Historic American

Engineering Records, HPO files, New Jersey State Museum site files, and local or county inventories of historic/cultural resources Primary sources to be consulted include historic photographs, maps, atlases, plat plans, Sanborn fire insurance maps, city directories, and numerous available railroad records Examples of such records include, but are not limited to the New Jersey Secretary of State's Transportation Corporation Records, the 1910-1911 New Jersey Revaluation Field Notebooks, the 1916-1925 Interstate Commerce Commission Valuation Records, the New Jersey Public Utility Tax Bureau's Railroad Company Annual Reports and Plan Files, the Penn-Central Corporation's Predecessor Company Records, the Stevens Family Papers, and a multitude of newspapers, periodicals, and secondary works pertaining to railroads and the history of railroading in New Jersey

Known Resources

Twelve properties in the APE-Architecture are presently eligible for or listed in the New Jersey and/or National Register of Historic Places (Figure 6) They include

- Pennsylvania Railroad (New York to Philadelphia) Historic District (Multiple SHPO Opinions, eastern boundary undefined)
- New Jersey Railroad Bergen Cut Historic District (SHPO Opinion 5/21/1999, eastern boundary undefined)
- Public School No 5, 182-196 Merseles St (SHPO Opinion 2/28/1991)
- Pennsylvania Railroad Harsimus Branch Embankment (SR 12/29/1999, DOE 3/16/2000, COE 6/9/1999)
- St Anthony's Polish Roman Catholic Church and School Complex (SHPO Opinion 4/13/1994)
- St Anthony of Padua Roman Catholic Church (SR 12/24/2003, NR 3/22/2004)
- Hamilton Park Historic District (SR: 4/27/1978, NR 1/25/1979)
- Harsimus Cove Historic District (SR 10/15/1987, NR 12/9/1987)
- 88-92 Erie Street, Albaniel Dye & Chemical Co (SHPO Opinion 7/2/1980, DOE 8/27/1980)
- Warehouse Historic District (SHPO Opinion 2/28/1991)
- Hudson & Manhattan Railroad Powerhouse (COE 10/7/1999, NR 11/23/2001)
- Great Atlantic & Pacific Tea Company Warehouse (SR· 6/2/1978, NR 6/2/1978, NHL ID No 1504)

Summary descriptions of the important characteristics and historical significance of these properties are set forth in Appendix A

2 Architectural Survey

The SR-listed Pennsylvania Railroad Harsimus Branch Embankment encompasses the six elevated parcels in the middle of the Harsimus Branch between Brunswick Street and Marin Boulevard (Milepost 0.36 to 0 88) RGA will conduct an architectural survey of the parts of the Harsimus Branch right-of-way located outside of the boundaries of the Embankment structure The survey will evaluate National Register eligibility of the Harsimus Branch both individually and as a possible contributing resource to known historic districts, including the New Jersey Railroad Bergen Cut Historic District, and the Pennsylvania Railroad (New York to Philadelphia) Historic District

The individually eligible Public School No 5, the listed St Anthony of Padua Roman Catholic Church, the individually eligible St Anthony's School Complex, the individually eligible building at 88-92 Erie Street (Albaniel Dye & Chemical Co building), and portions of the listed Hamilton Park Historic District and the listed Harsimus Cove Historic District all fall with the APE-Architecture They are good examples of well-established, well-documented, and well-preserved historic properties As such, the public school, the church, the church school, the dye and chemical building, and those district buildings that fall within the APE-Architecture will not be resurveyed as part of this undertaking, but the potential effects of the City's park/trail plans and SLH's housing development plans on these buildings will be assessed Also, because possible project impacts include the demolition of the stone embankments within the Harsimus Branch right-of-way and construction of residential housing between or near the Hamilton Park Historic District and the Harsimus Cove Historic District, this investigation will evaluate the eligibility of the Harsimus Branch right-of-way as a possible contributing resource to both districts and assess project effects on both districts Three additional previously identified historic properties lie within the APE-Architecture at its easternmost end the eligible Warehouse Historic District, the listed Hudson & Manhattan Railroad Powerhouse, and the listed Great Atlantic & Pacific Tea Company Warehouse Project effects on these properties, if any, will be assessed

The APE-Architecture includes a number of un-surveyed resources more than 50 years of age They include commercial, retail, and industrial buildings, parks and monuments, numerous residential buildings, and railroad resources dating primarily from the late nineteenth- and mid-twentieth-centuries Of particular note are an active freight line at the western end of the APE-Architecture historically associated with the New Jersey Junction Railroad (part of the New York Central system) and the National Docks & New Jersey Junction Connecting Railway Company (part of the Lehigh

Valley system); the Jersey City Cemetery on the corner of Waldo Avenue and Newark Avenue, the Mary Benson Memorial (1907) and the V F W Monument (circa 1945) at Mary Benson Park, the Holy Rosary Roman Catholic Church and Parish House (1903) on Sixth Street, its affiliated school buildings (1938 & 1953) on Brunswick Street, the Fifth Ward Savings Bank (1925) on Manila Avenue (formerly Grove Street), the St Anthony's School (1917) on Eighth Street, and several blocks of brick flats (circa 1890) on Manila Avenue (formerly Grove Street) and Marin Boulevard These and other resources more than 50 years of age will be documented on appropriate HPO Survey Forms and evaluated for individual eligibility and as possible contributing resources to larger historic districts

The New Jersey Turnpike, which crosses over the project area, is more than 50 years of age, but the HPO formally found it not eligible for listing in the New Jersey or National Registers in 2006

3 Archaeology Survey

Due to the physical and historical complexities of this urban setting, RGA will conduct a Phase IA archaeological survey at this time If the potential for significant archaeological resources are identified during the Phase IA survey, a Phase IB survey may be recommended

The Phase IA archaeological survey will include a review of archaeological site files and previous cultural resources survey reports, and it will assess the potential for significant prehistoric and historic resources The potential for prehistoric resources is expected to be low due to disturbances associated with previous land use in the project area An assessment of potential for historic resources will be derived from a thorough review of atlases and maps and a site visit to observe existing conditions An assessment will be made of impacts to archaeological resources that may potentially contribute to the Pennsylvania Railroad Harsimus Branch Embankment or any historic district in the vicinity It is believed that the eastern end of the Embankment was constructed around timber trestle work that supported the original train operations over that portion of the Harsimus Branch Accordingly historic archaeological potential is considered moderate to high

For the archaeological survey, RGA will conduct a thorough pedestrian survey of the APE-Archaeology to assess the potential for significant archaeological resources and document disturbances that have impacted areas of archaeological sensitivity Field observations will be recorded via field notes and digital photography Known archaeological site locations, if any, and historic maps will be closely reviewed prior to the pedestrian survey If the potential exists for significant cultural resources, further investigation, or Phase IB-level archaeological testing, will be required by the HPO to determine the presence or absence and preliminary extent of cultural

deposits, and whether those deposits may be considered potentially eligible for the National Register of Historic Places

PROPOSED PUBLIC PARTICIPATION PLAN

Soliciting the views of the public and those groups/individuals with interests in historic preservation is a valued part of the Section 106 process and helps in the identification and evaluation of historic properties that might be affected by the proposed undertaking Conrail's plans to abandon the Harsimus Branch have already attracted a great deal of public comment This information will be collected and reviewed during the Cultural Resources Investigation Copies of the draft Cultural Resources Report will be circulated to all Consulting Parties and local preservation groups/individuals with an identified interest in historic preservation for their review and comment Responses to the report will be attached to the final documentation

It is anticipated that community involvement through public forums or other venues will be coordinated by the STB, in consultation with the HPO and Conrail Notification of time, place, and content of the meeting(s) will be sent to property owners, officials, and interested parties Documentation of the notifications and responses to the public meetings will become part of the final Cultural Resources Report

Recommended Consulting Parties

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Recommended Interested Parties

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APPENDIX A—SUMMARY DESCRIPTIONS OF KNOWN HISTORIC PROPERTIES

Pennsylvania Railroad (New York to Philadelphia) Historic District

The Pennsylvania Railroad (PRR) [New York to Philadelphia] Historic District (PRRHD) is eligible under Criterion A for its association in the areas of transportation, engineering and commerce and under Criterion C for engineering features, including cuts, embankments, over-grade and under-grade bridges, culverts, stations, interlocking towers, and overhead catenary system The district comprises several segments constructed at different times by different corporate entities with varying recommended periods of significance The segment between Newark and Jersey City was originally built by the New Jersey Railroad (NJRR) between 1832 and 1838, folded into the United New Jersey Railroad and Canal Company (UNJRRCC) in 1867, and leased to the PRR in 1871 On June 29, 2007, the HPO formally determined that the period of significance for the entire PRR (New York to Philadelphia) Historic District extends from 1863 to 1957 It also noted that the period of significance will increase annually, maintaining the 50-year cut-off date, until the historic district is no longer significant under Criteria A and C The HPO letter did not differentiate between the Jersey City-to-Newark segment and other sections of the eligible rail corridor The eastern boundary of the eligible rail corridor has not been formally identified

New Jersey Railroad Bergen Cut Historic District

Six previously identified resources comprise the New Jersey Railroad Bergen Cut Historic District the contributing Bergen Cut, the contributing elevated right-of-way between the Hackensack River and the area west of Tonnelle Avenue, the contributing PATH Bridge over Wallis Avenue, the key contributing Wittpenn (NJ Route 7) Bridge over the Hackensack River, the key contributing Pennsylvania Railroad Hartsimus Branch (now Conrail/CSX) Bridge over the Hackensack River, and the key contributing Pennsylvania Railroad (now PATH) Bridge over the Hackensack River Built under the auspices of the NJRR and completed in 1838, the Bergen Cut was a significant engineering accomplishment for its time and provided the first and only practical rail route through the Bergen Hill until the completion of the Erie Tunnel in 1861 (The Bergen Cut should not be confused with the "Bergen Arches," also known as "Erie Cut," which was not constructed by the Erie Railroad in Jersey City until after the turn of the Twentieth Century) The District is eligible for listing in the New Jersey and National Registers under Criteria A and C Its period of significance begins in 1832, when the NJRR was incorporated, and ends in 1937 The district boundaries as currently defined extend from the westernmost limits of the approach spans of the key contributing Hackensack River lift bridges to the easternmost limits of the Bergen Cut, which has not been formally located The approximate boundaries nearest to the APE are delineated on Figure 6

Public School No 5, 182-196 Merseles St

Constructed in 1915 following designs prepared by Jersey City architect John Rowland, the four-story brick and stone building is an intact and representative example of the monumental late-Classical Revival-style institutional buildings erected throughout the city during the early twentieth century. The SHPO Opinion of Eligibility does not identify the eligibility criteria or a period of significance Based on the supporting documentation, Public School No 5 is architecturally significant and meets Criterion C The building has been additionally recommended eligible under Criterion C as part of a thematic historic district based on the work of John Rowland Rowland was the architect for the Jersey City Board of Education from 1900 to 1945 The SHPO Opinion is silent on the issue of a thematic district The resource boundary is delineated on Figure 6

Pennsylvania Railroad Harsimus Branch Embankment

Constructed in the period 1901-1905, the Pennsylvania Railroad Harsimus Branch Embankment comprises six stone and earthen segments of the former elevated freight line and yard tracks first conceived by the UNJRRCC in the 1860s and completed by the PRR in the mid-1870s after its lease of the UNJRRCC The elevated portions originally passed over timber trestlework Later, iron deck trusses and finally deck plate girders were substituted for the trestle at its western end Portions of the eastern end of the trestle were filled in and may have been encased within the retaining walls, that form the stone embankments that are present today The embankment is listed on the New Jersey Register of Historic Places under Criterion A for its associations with transportation, community planning and development, and politics/government, and under Criterion B for its associations with James J Ferris, superintending engineer. Its established period of significance extends from 1867 to 1949 The embankment structure consists of the surviving elevated portions of the Harsimus Branch extending along Sixth Street between Marin Boulevard and Brunswick Street The boundaries of the structure are delineated on Figure 6

St. Anthony's Polish Roman Catholic Church and School Complex

St. Anthony's Polish Roman Catholic Church (1890-94) and combined Parochial School and Convent (1899) are discontiguous contributing resources of the St Anthony's Polish Roman Catholic Church and School Complex The complex is eligible under Criterion C as an example of Victorian Gothic architecture The resource boundaries are limited to the two lots currently occupied by the buildings and are delineated on Figure 6 The original HPO Opinion of Eligibility does not identify a period of significance for either resource (see below)

St Anthony of Padua Roman Catholic Church

The St Anthony of Padua Roman Catholic Church (see above), the oldest Polish church and parish in New Jersey, is individually listed on the New Jersey and National Registers under Criterion A for its associations with European Ethnic Heritage and the Polish community of Jersey City The church is also listed under Criterion C in the areas of architecture and art as an example of both the Victorian Gothic and Byzantine-styles and for its surviving collection of ethnic art, stained glass windows, and mosaics The period of significance extends from the building's construction in 1892 to the last major period of alterations in 1940 The property's boundary includes the lot on which it stands and is delineated on Figure 6 The Church is also a key contributing resource to the St Anthony's Polish Roman Catholic Church and School Complex (see above)

Hamilton Park Historic District

The Hamilton Park Historic District gains its distinction from its intact collection of row houses and its mid- nineteenth century residential square Some 518 buildings made up the original district when it was nominated to the New Jersey and National Registers in 1977, they consist largely of residential properties A small number are mixed-use, commercial, and institutional in nature The district features a wide range of architectural styles, including the Greek Revival, Gothic Revival, Romanesque Revival, and Renaissance Revival Most are constructed in brick, a few are faced with brownstone Many include decorative masonry details and iron work The district is significant in the areas of architecture, landscape architecture, and religion Although the original National Register Nomination does not identify the specific criteria under which the district was listed, it emphasizes the preservation and structural qualities of the resources and is therefore assumed to be eligible under Criterion C for embodying the distinctive characteristics of a type, period, and/or method of construction, and a significant and distinguishable entity Based on dates referenced in the Nomination Form, the period of significance is assumed to extend from circa 1835 to circa 1875, when the majority of the buildings were constructed In 1982 the Hamilton Park Historic District was extended northward with the inclusion of seven new buildings and four vacant lots The boundaries of both the original district and the extension are delineated on Figure 6

Harsimus Cove Historic District

The Harsimus Cove Historic District is an example of a middle- and working-class urban residential neighborhood created during the second half of the nineteenth century Some 431 buildings make up the district and consist primarily of well-preserved Italianate-style brick town houses of three stories A few wood frame buildings remain, and several churches and civic structures make up the rest of the district. Other represented styles include the Greek Revival, Gothic Revival, Romanesque Revival, Renaissance Revival, and Beaux Arts The Harsimus Cove Historic District is significant

under Criterion A in the areas of Industry, Politics/Government, and Social Humanism, and under Criterion C in the area of architecture for its distinct and intact collection of buildings The National Register Nomination identified the district's period of significance as extending from the mid-nineteenth century (circa 1850) to approximately 1926 The district boundaries are delineated on Figure 6

88-92 Erie Street, Albaniel Dye & Chemical Co

Built around 1906 by the firm of Herman Kreither & Hubbard to house the Albaniel Dye & Chemical Co , the five-story Romanesque-style structure includes brick bearing walls and elaborate terra cotta decorative elements It represents the only industrial building in what is otherwise a residential area The property is eligible under Criterion C for architecture and is a key contributing resource to the Harsimus Cove Historic District The resource boundaries comprise the building lot and are delineated on Figure 6 A formal period of significance has not been established for this historic property

Warehouse Historic District

The Warehouse Historic District is an historically significant and virtually intact manufacturing and distribution center with ties to the development of Jersey City and the Port of New York Its proximity to Harsimus Yard helped fuel the district's development, which is also linked to many early industries in Jersey City Buildings are located along narrow streets and include examples of industrial architecture, including many of reinforced concrete and structural steel The District is eligible for inclusion in the New Jersey and National Registers under Criteria A and C District boundaries vary, depending on the map consulted For the purposes of this investigation, the boundary has been drawn to encompass the largest mapped area and is delineated on Figure 6

Hudson & Manhattan Railroad Powerhouse

Listed on the National Register of Historic Places under Criteria A, B, and C for its significance in architecture, engineering, and transportation history, and for its associations with William Gibbs McAdoo, the Hudson & Manhattan Railroad Powerhouse is a large-scale example of industrial Romanesque Revival architecture The coal-fired powerhouse was a technological wonder of its day and the centerpiece for the first electrically powered trans-Hudson rapid transit rail system nicknamed the "Hudson Tubes" The Powerhouse is also a key contributing resource to the Warehouse Historic District Its period of significance extends from 1906 to 1929, and its boundaries are delineated on Figure 6

Great Atlantic & Pacific Tea Company Warehouse

Between 1900 and 1929, the nine-story, reinforced concrete structure formed part of a larger manufacturing and distribution center for the Great Atlantic & Pacific Tea Company (A&P) This historically important retail chain had its origins in the area and grew to become the nation's largest by the mid-twentieth century. The building retains a high level of integrity and is significant in the areas of commerce and architecture It is also a key contributing resource to the Warehouse Historic District and a National Historic Landmark Property boundaries are delineated on Figure 6

APPENDIX B: FIGURES AND PLATES

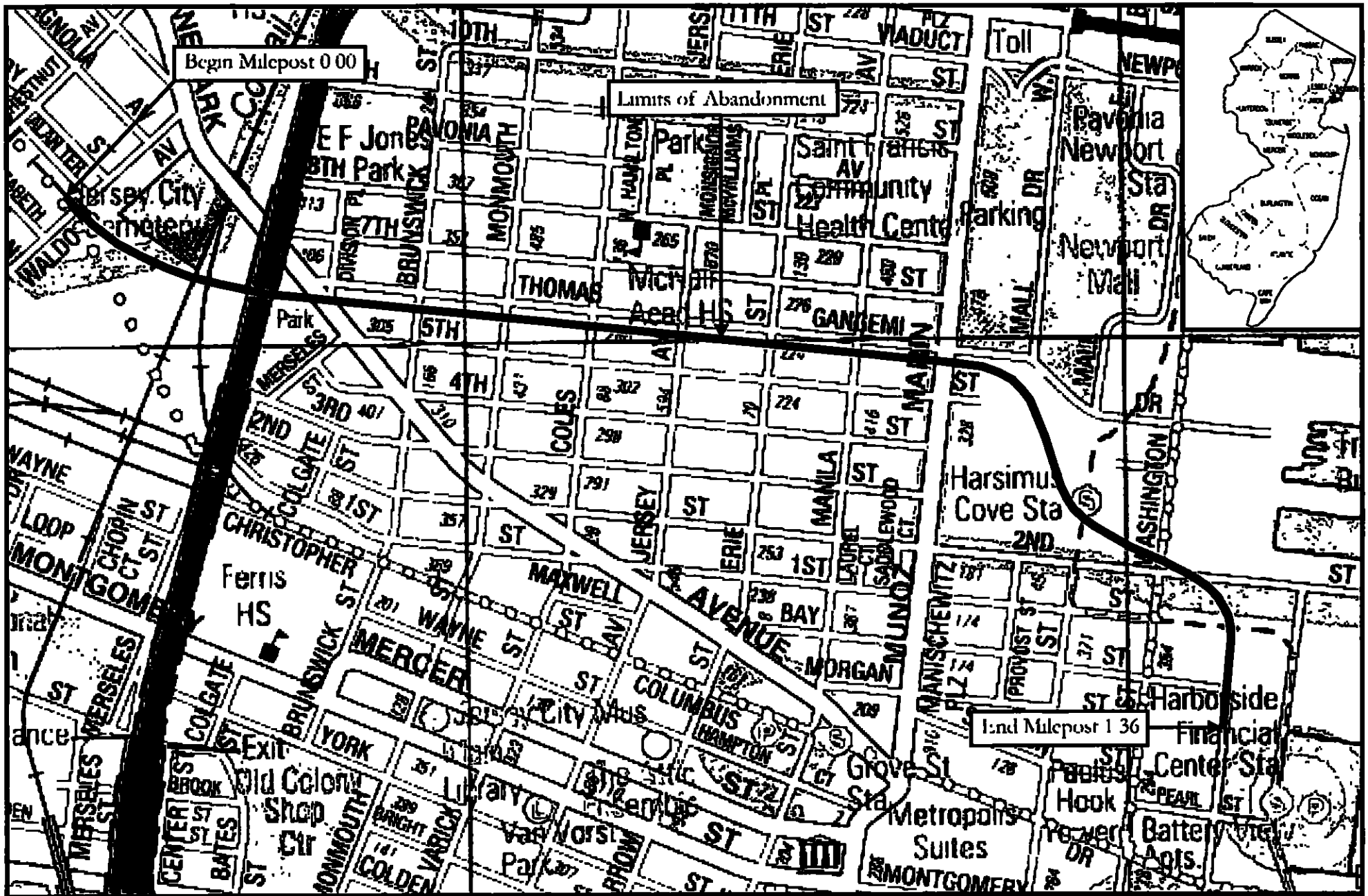


Figure 1:
Limits of Abandonment
(from 2004 Hagstrom Map Company, Inc , Street Map of Hudson County, New Jersey)

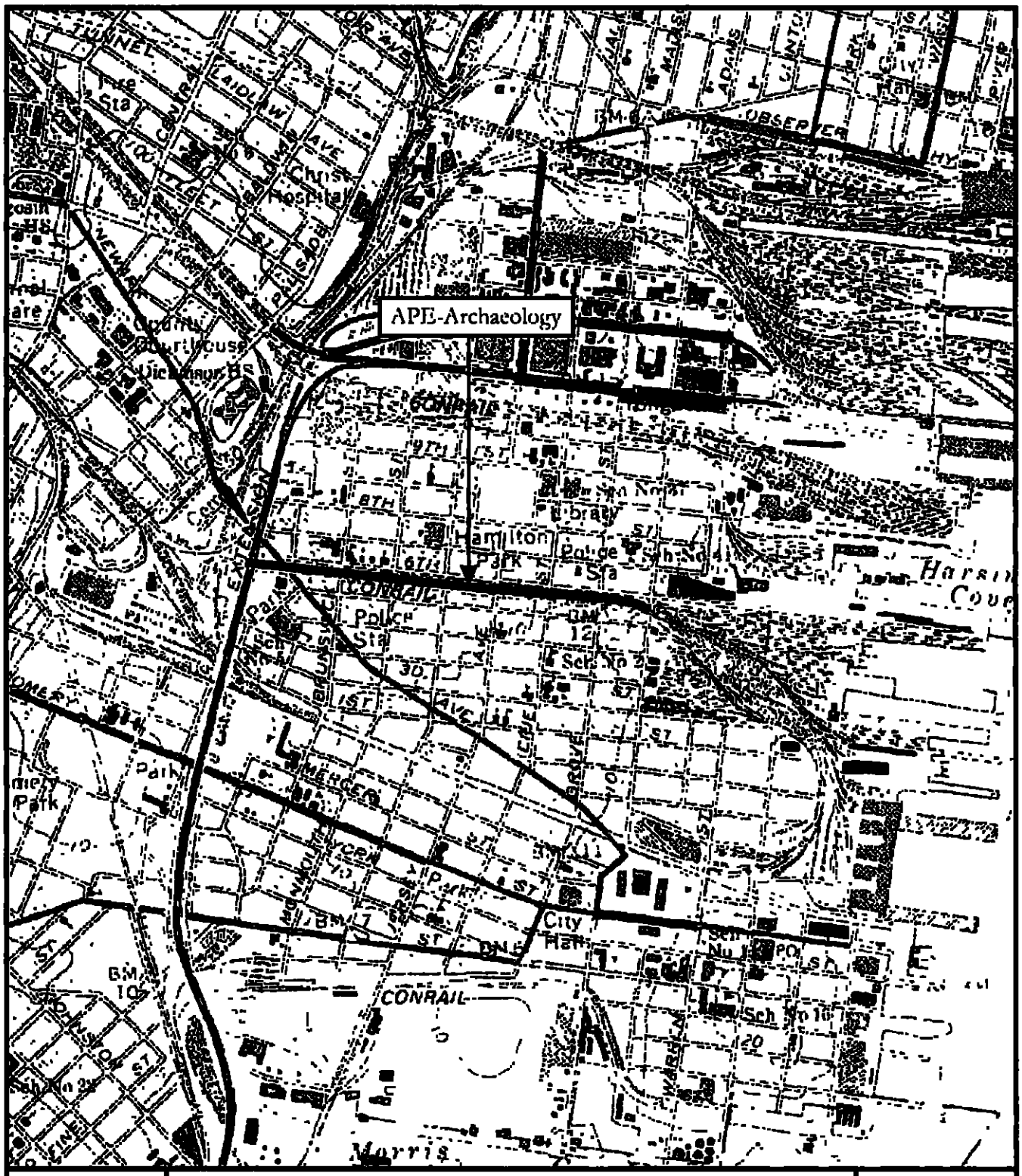


Figure 2:

APE-Archaeology
(from USGS 7.5' Quadrangle Jersey City, NJ-NY 1967
[photorevised 1987])

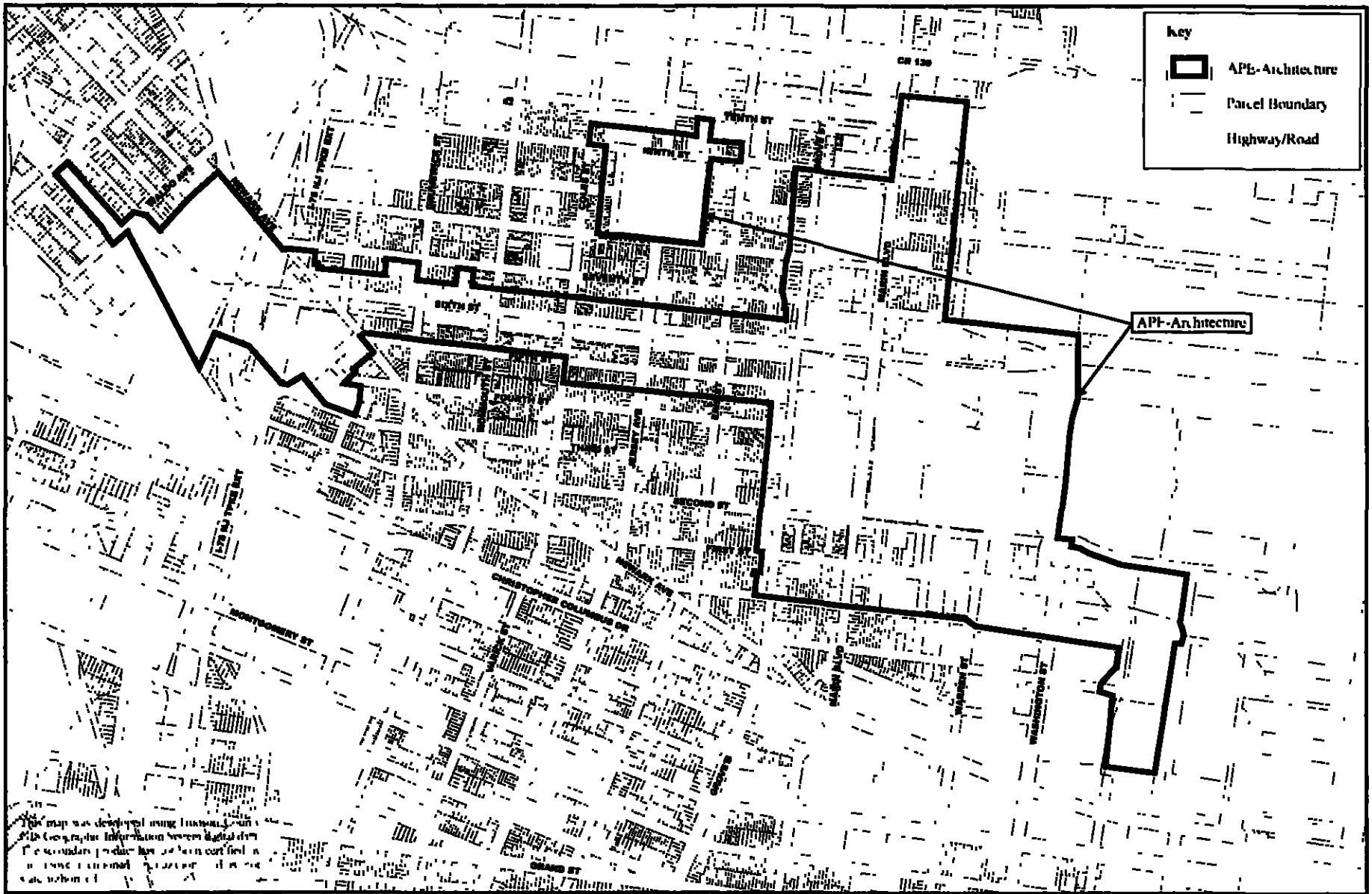


Figure 3
APE Architecture from GIS Parcel Data for Jersey City Hudson County Division of Planning

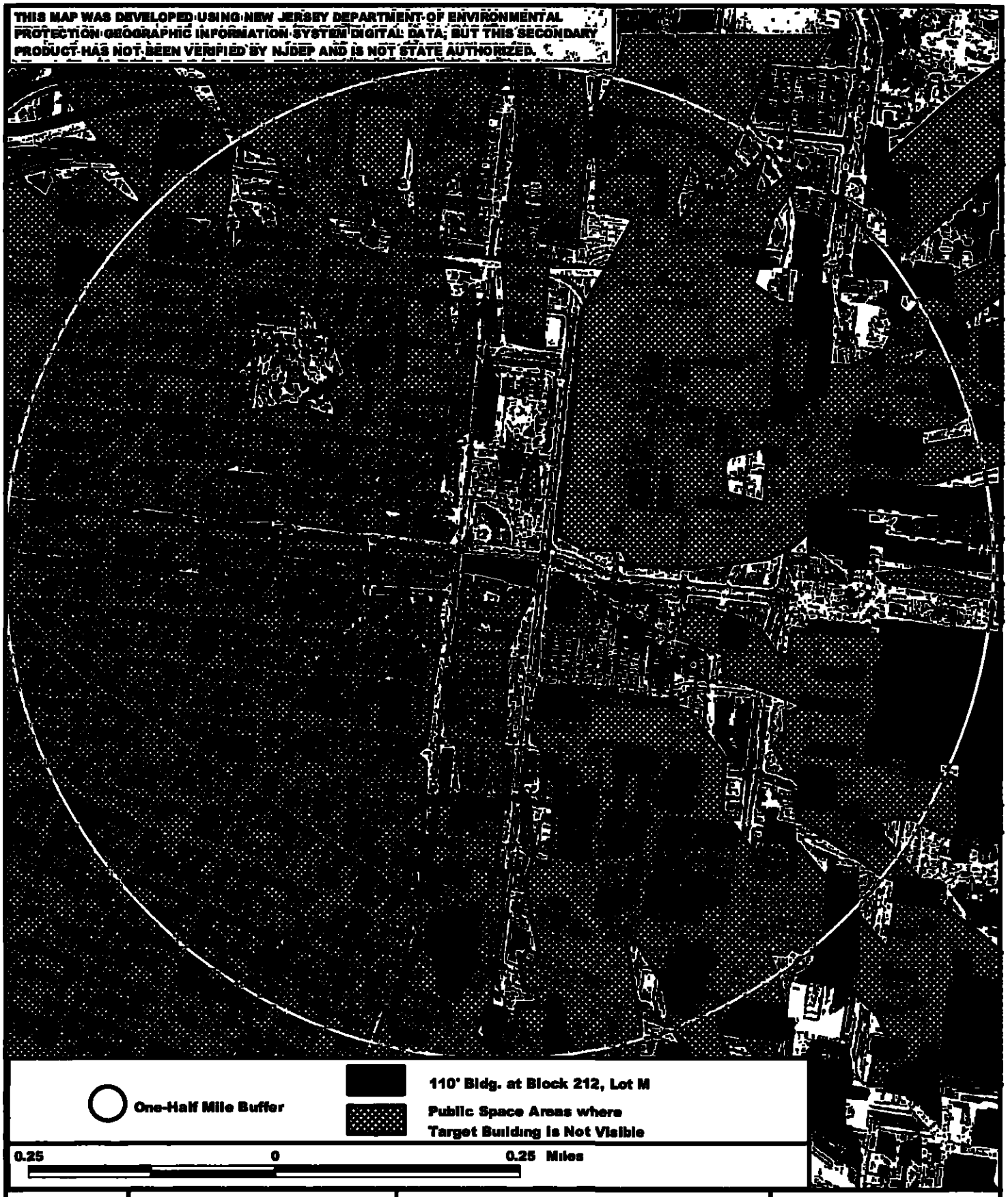


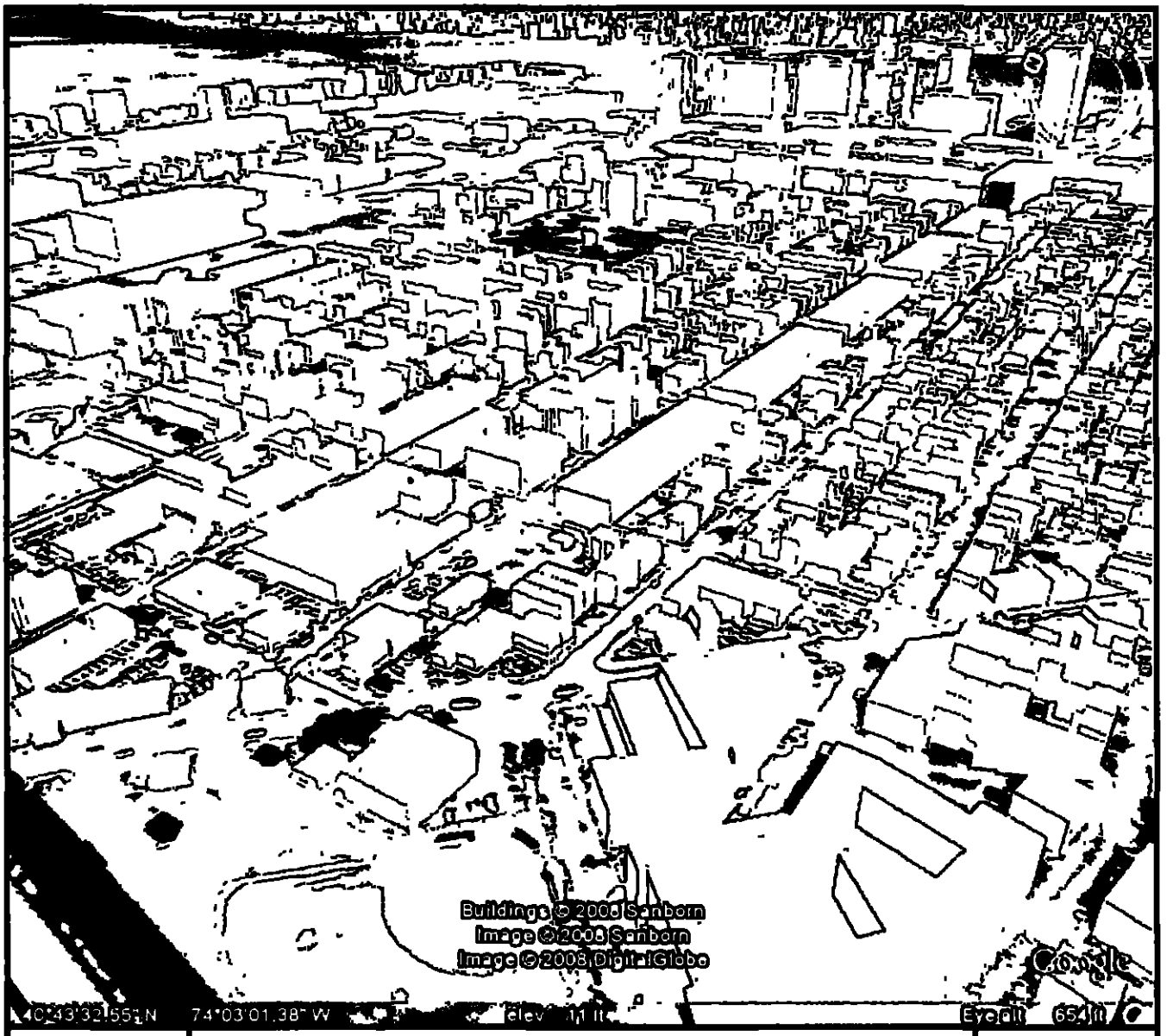
Figure 4:
Computer generated viewshed map within one-half mile buffer around proposed 10-story building

Prepared for Richard Grubb and Associates, Inc

Building Location (NAD 83)
Lat
Long

VIEWSHED
Based on 110' Target Building

Block 212, Lot M
Jersey City, New Jersey



RGA

Figure 5:
Computer simulated birdseye view of Jersey City depicting possible 110-foot building (red) within the context of the larger cityscape. The computer program allows the building to be viewed from any point in Jersey City (From Google Earth)

Scaled to Actual Building Heights

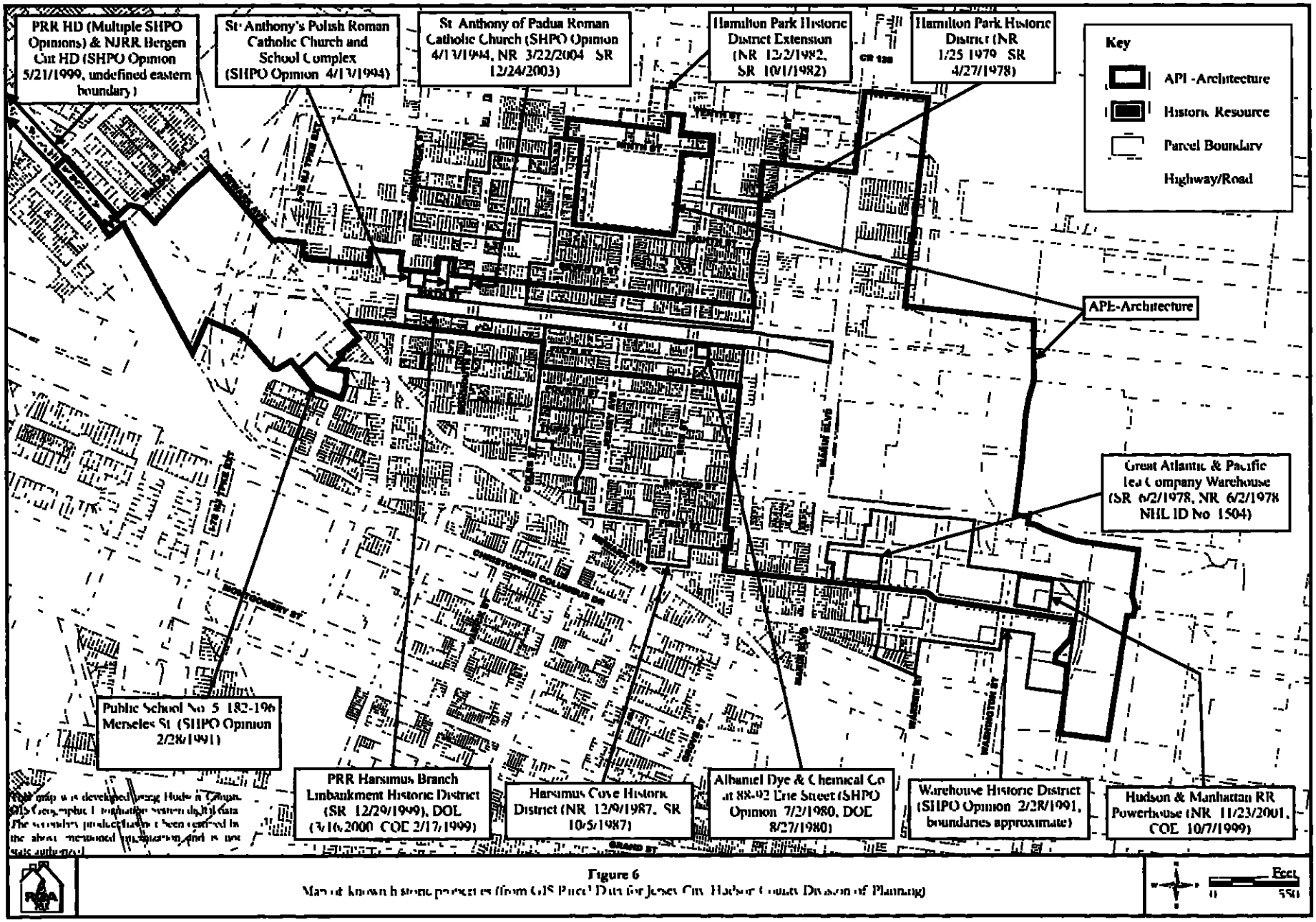
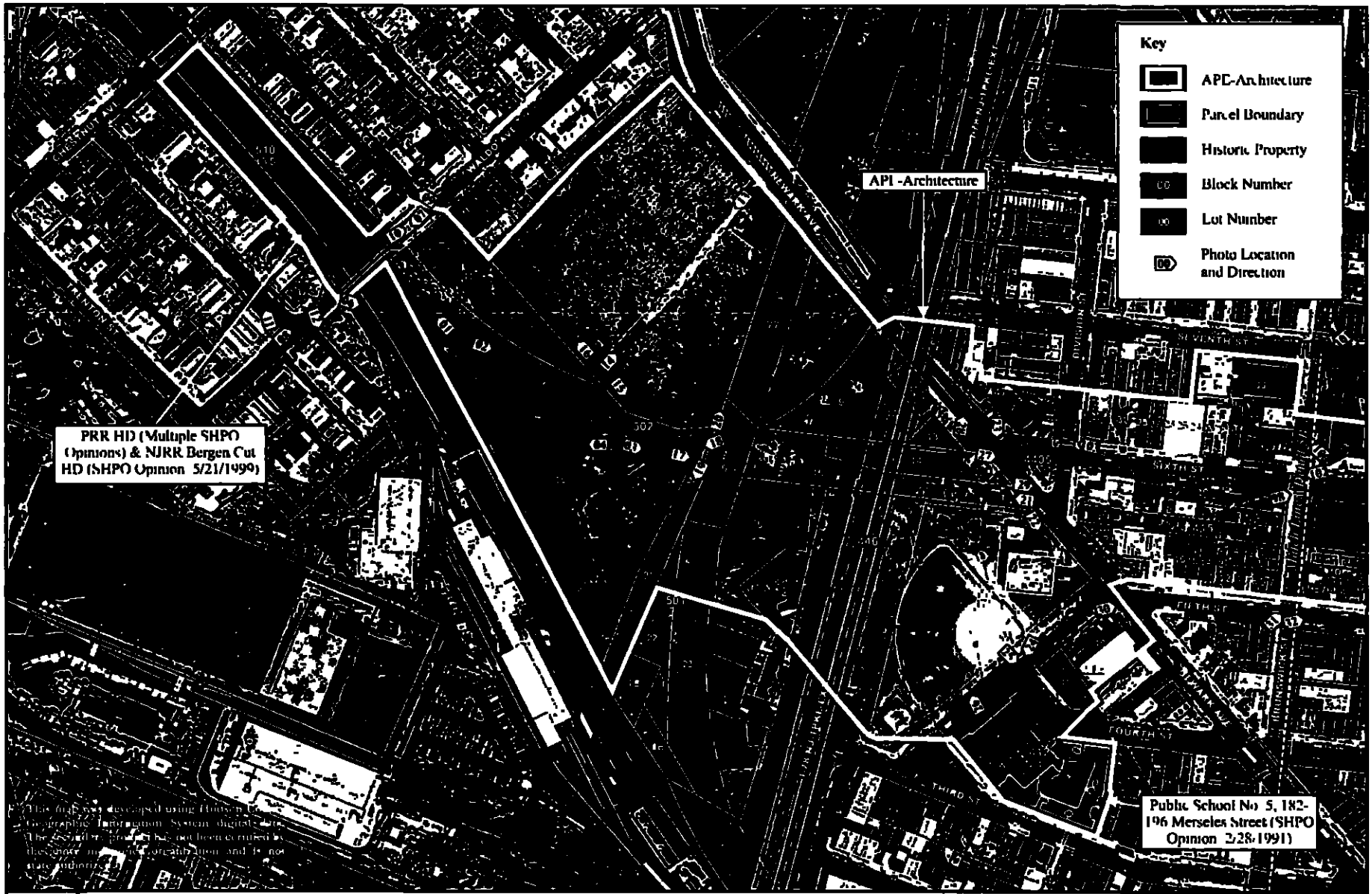


Figure 6
Map of known historic properties (from GIS Parcel Data for Jersey City, Hudson County Division of Planning)

Figure 7
Photo Location Key Map
(from U.S.G.S. New Jersey Digital Ortho Quarter Quad Aerial Photography, 2012. Tile Numbers Knolls 10, 11, 13, 14, and 15)



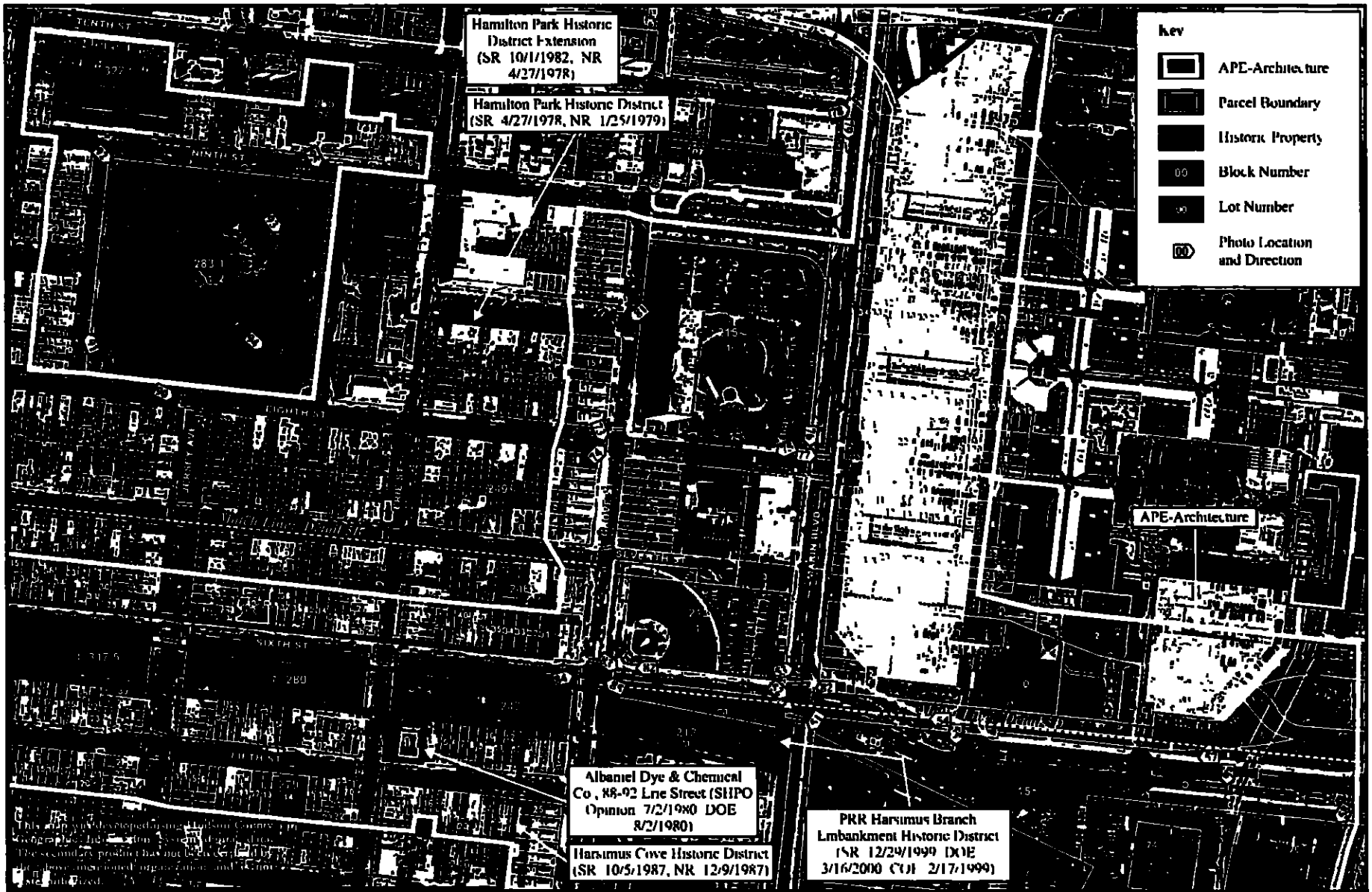
Detail 7A.
Photo Locations and Directions (Plates 1-30, 98, 100-104)
from USGS New Jersey Digital Ortho Quarter Quad Aerial Photography 2002 Tile Numbers K6[illegible], 10, 11, 13, 14, and 15)

Feet
0 175

Detail 7B

Photo Locations and Directions (Plates 13 to 16 99/06 99)

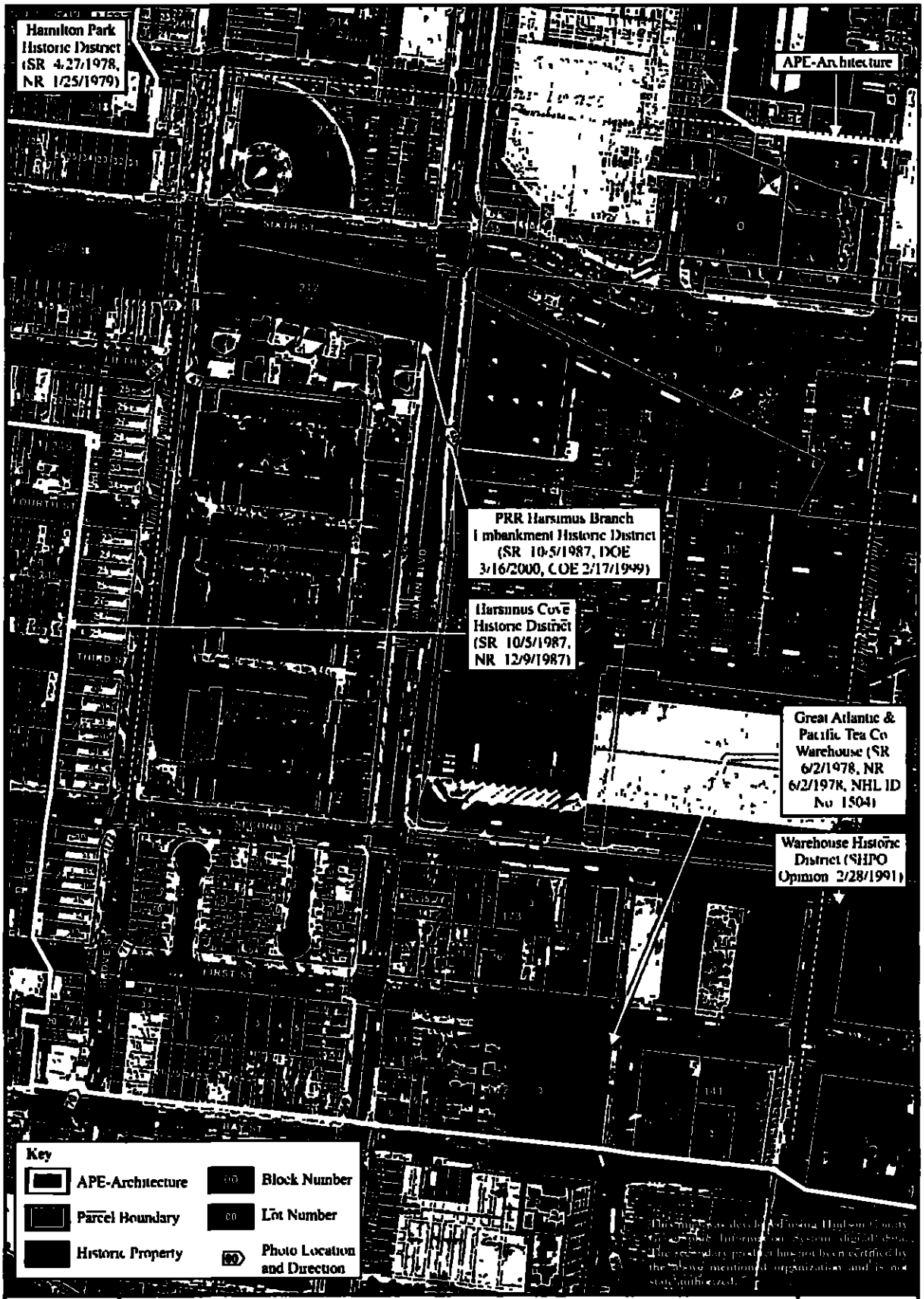
(from USGS New Jersey Digital Ortho Quarter Quad Aerial Photographs 2002 File Numbers k649, 10 11 13, 14 and 15)



Detail 7C

Photo Locations and Directions Plates 51-58, 73-85, 90-95)

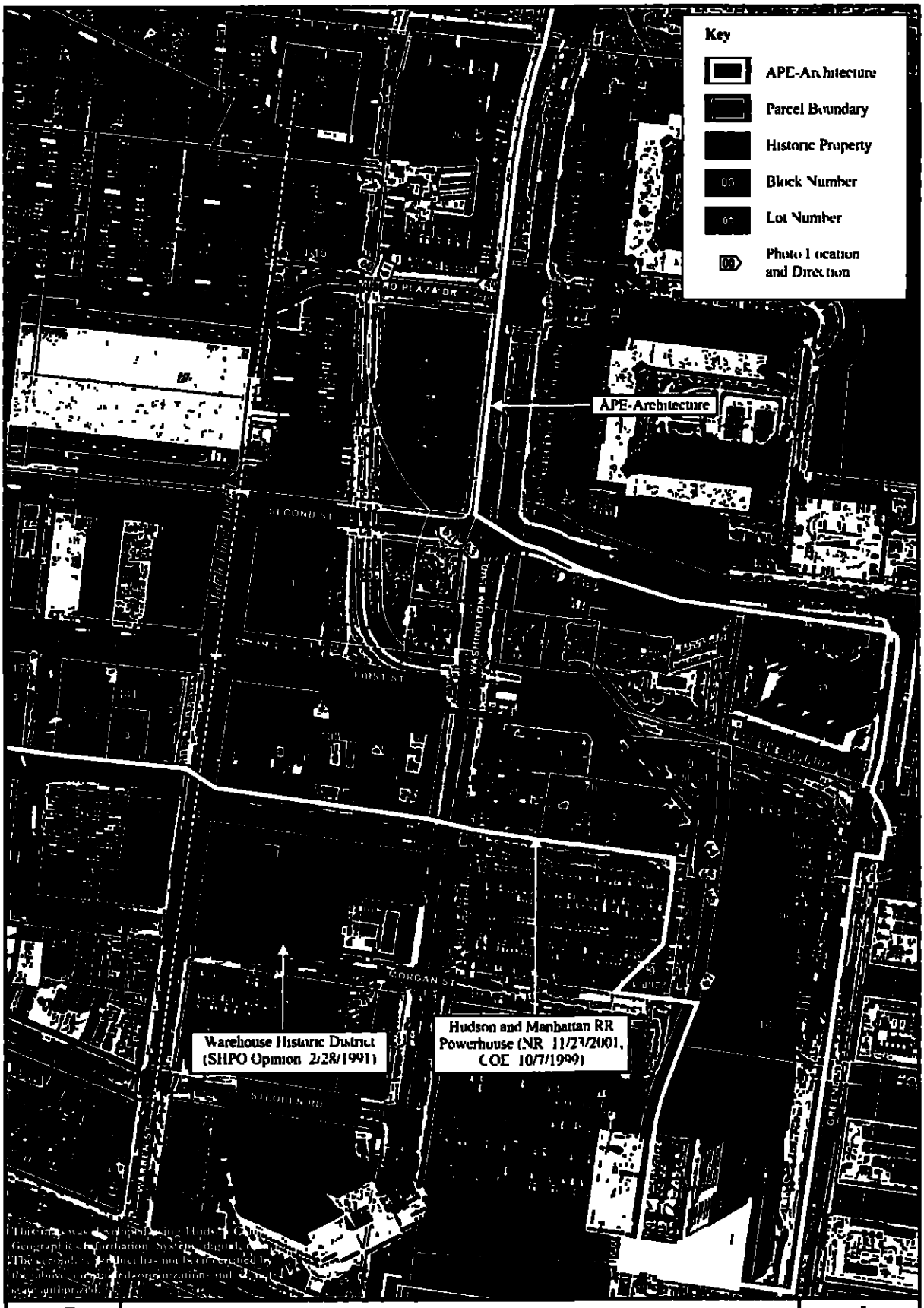
(from USGS New Jersey Digital Ortho Quarter Quad Aerial Photographs, 2002 File Numbers k6d9; 10, 11, 13, 14, and 15)



Detail 7D

Photo Locations and Directions (Plates 47-50, 68-72)
from USGS New Jersey Digital Ortho Quarter Quad Aerial Photographs, 2002 Tile Numbers k6a9, 10 11 13 14 and 15

1 cm = 160 feet



Detail 7E

Photo Locations and Directions (Plates 59-67)
(from USGS New Jersey Digital Ortho Quarter Quad Aerial Photographs, 2002 File Numbers Ko19, 10 11, 13 14 and 15

Feet
0 170

Plate:
1

Photo View:
West

Photographer:
Philip A Hayden

Date:
May 20, 2008

Overview, Harsimus Branch right-of-way in vicinity of milepost 0.00, near its former connection with PRR main line. Circa 1945 Waldo Avenue footbridge appears overhead. Note exposed rock wall of Bergen Cut at left

Plate:
2

Photo View:
East

Photographer:
Philip A Hayden

Date:
May 20, 2008

Overview, Harsimus Branch right-of-way near the eastern end of the Bergen Cut. The Jersey City Cemetery is located to the left, the PATH tracks are located to the right

Plate
3

Photo View
East

Photographer:
Philip A
Hayden

Date
May 20, 2008

Overview, Harsimus Branch right-of-way near eastern edge of Bergen Hill Note New Jersey Turnpike Extension viaduct behind trees at right The single rail in center foreground is a remnant of the Penn-Central connecting tract

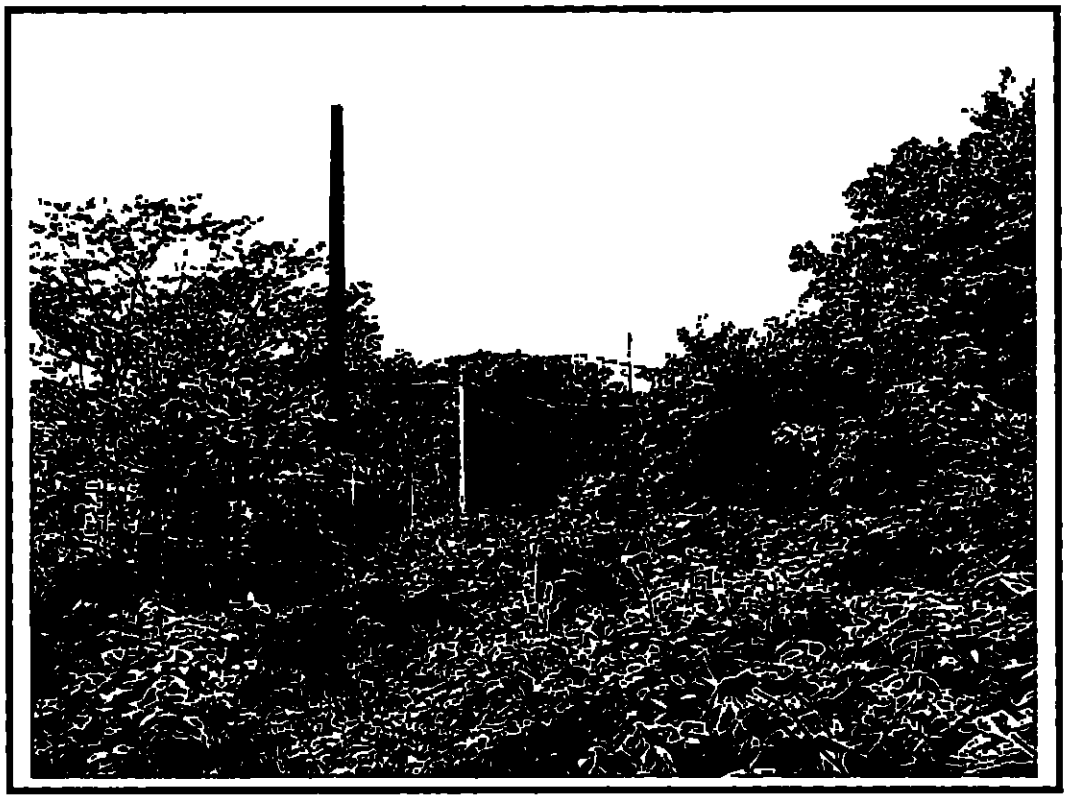


Plate
4

Photo View
Southwest

Photographer
Philip A
Hayden

Date
May20, 2008

Overview, Harsimus Branch right-of-way with modern PATH equipment cabinets visible behind trees at left and new housing on the south rim of the Bergen Cut, visible in center, background

Plate
5

Photo View:
Northwest

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview, north wall and rim of the Bergen Cut near Milepost 0.00, depicting the approximate location of the former connection of the Harsimus Branch with the PRR main line. Note remains of overhead electrified catenary system

Plate
6

Photo View:
East

Photographer:
Philip A
Hayden

Date
May 20, 2008

Overview, eastern end of Bergen Cut from the south rim with the Jersey City and Manhattan skylines visible in distance. The Bergen Cut drops down 40 feet at left

Plate:
7

Photo View:
South

Photographer
Philip A
Hayden

Date
May 20, 2008

Overview, north approach to circa 1945 Waldo Avenue footbridge over the Bergen Cut Buildings at right are circa 1960 residential units

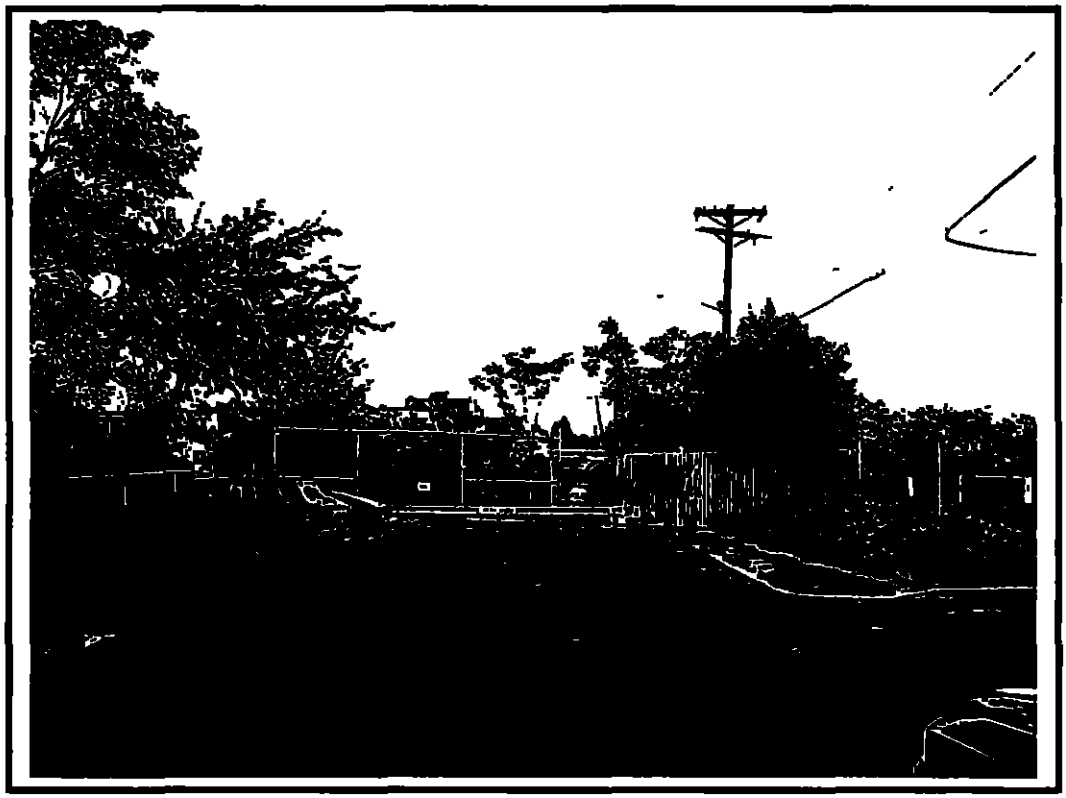


Plate:
8

Photo View:
North

Photographer.
Philip A
Hayden

Date:
May 20, 2008

Overview, south approach to circa 1945 Waldo Avenue footbridge over the Bergen Cut

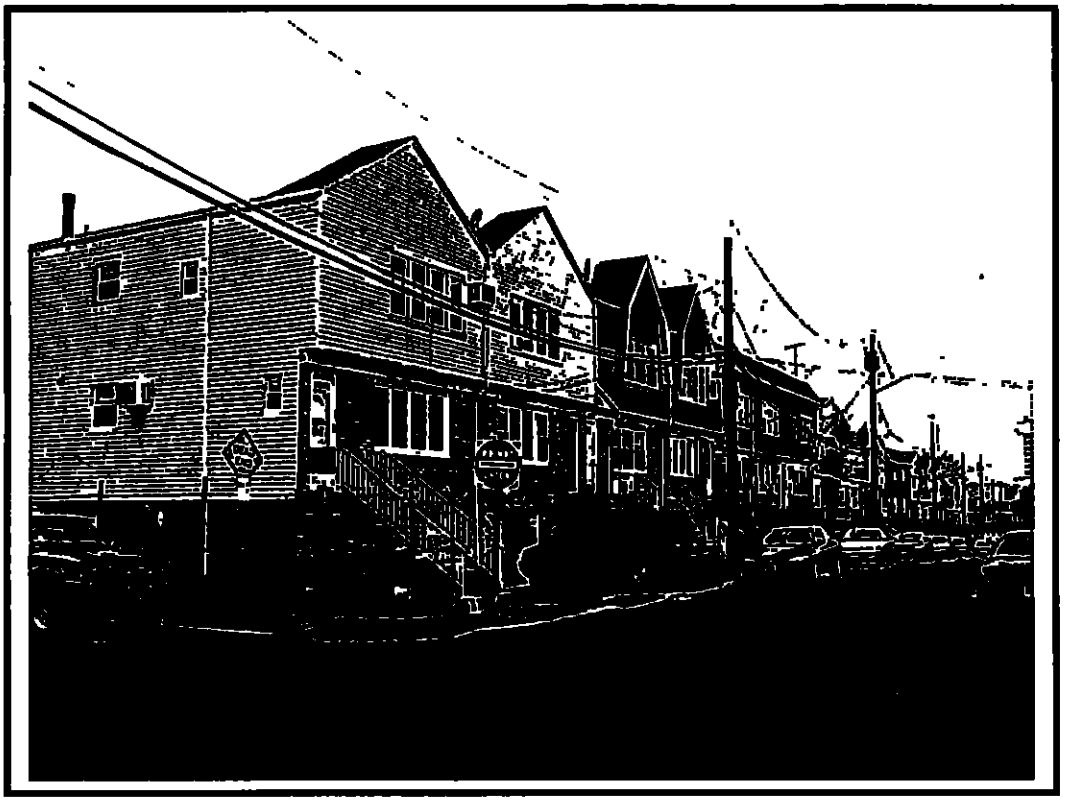


Plate
9

Photo View:
Southwest

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview, circa 1960s residential housing at the corner of Waldo Avenue and Alan Terrace The rear yards of these buildings abut the north rim of the Bergen Cut

Plate:
10

Photo View:
Northeast

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview, circa 1960s residential housing on Waldo Avenue near the north rim of the Bergen Cut

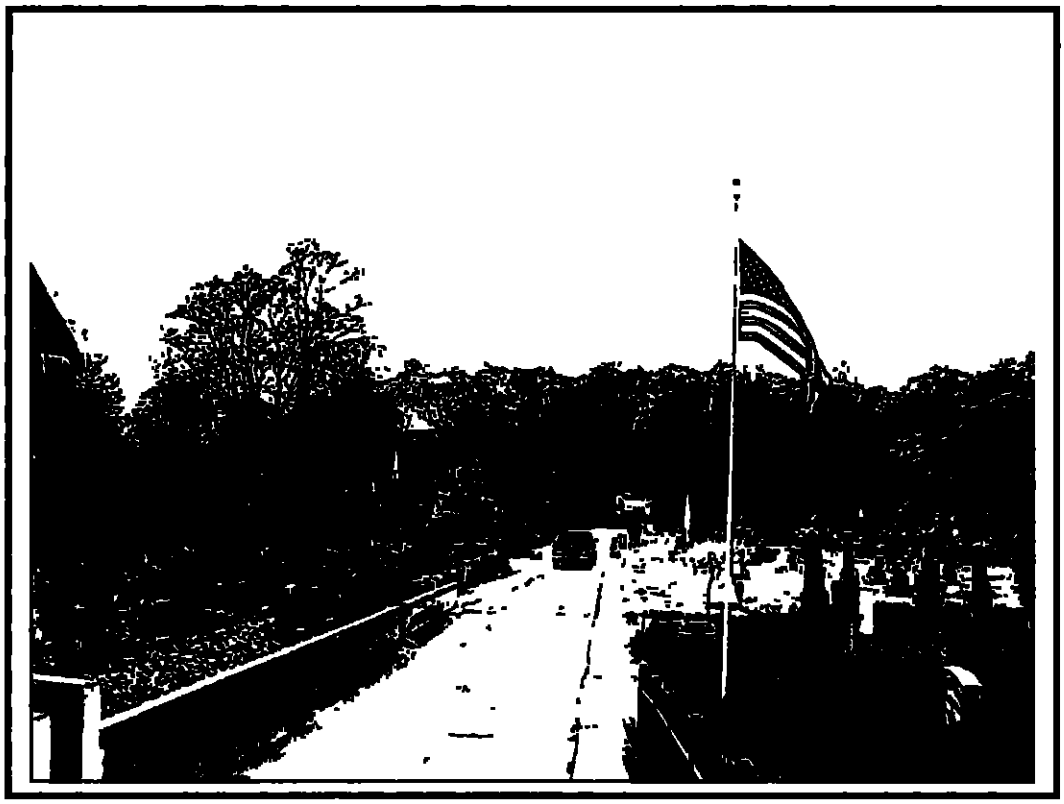


Plate:
13

Photo View:
South

Photographer.
Philip A
Hayden

Date:
May 20, 2008

Overview, Jersey City Cemetery from Newark Avenue Gate The tree line in the distance marks the edge of the Harsimus Branch right-of-way

Plate:
14

Photo View
North

Photographer
Philip A
Hayden

Date
May 20, 2008

Overview, Jersey City Cemetery from the south boundary line near the Harsimus Branch right-of-way, looking toward the Newark Avenue gatehouse (built 1916) (center, background)

Plate:
15

Photo View:
Southeast

Photographer:
Philip A Hayden

Date:
May 20, 2008

Overview, Jersey City Cemetery with tree line marking the edge of the Harsimus Branch right-of-way. Established in 1831, the Jersey City Cemetery contains stones dating between the last decades of the nineteenth century to the present day.

Plate:
16

Photo View:
West

Photographer:
Philip A Hayden

Date
May 20, 2008

Overview, Jersey City Cemetery. The Harsimus Branch right-of-way is located behind the trees at left. The buildings visible in the upper right are the rear elevations of early twentieth-century flats fronting Waldo Avenue.

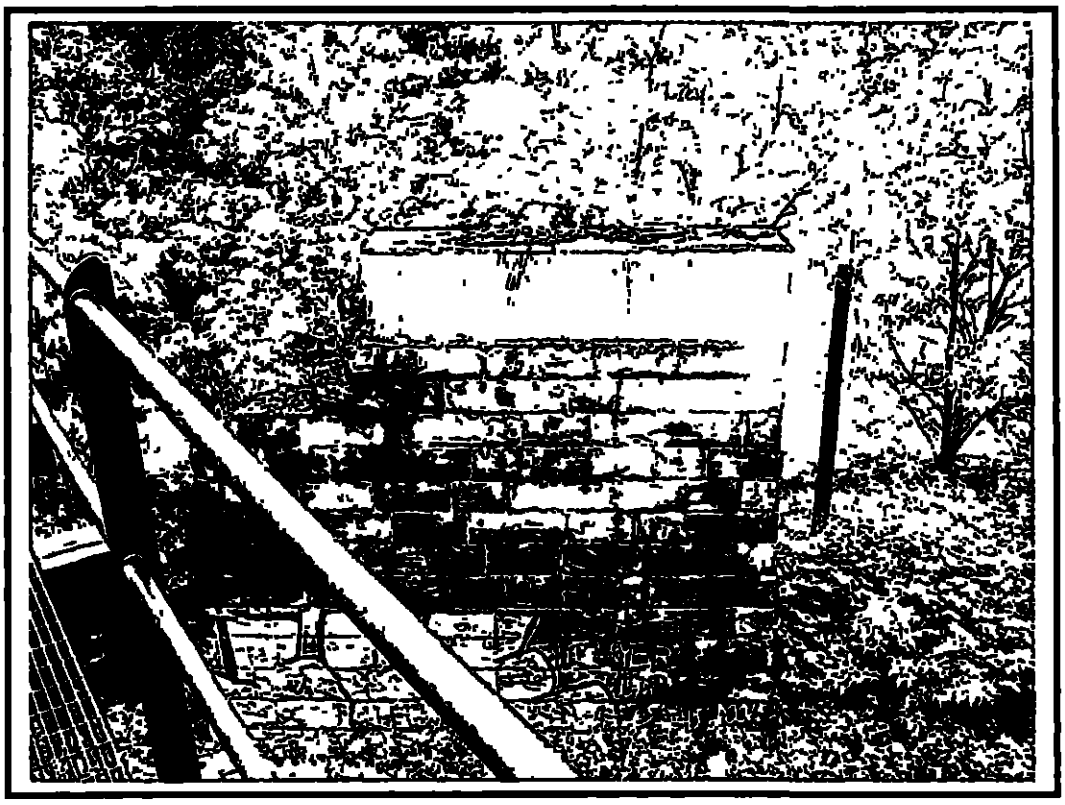


Plate:
17

Photo View:
East

Photographer:
Philip A Hayden

Date:
May 20, 2008

View of first Harsimus Branch pier from the eastern edge of the Bergen Hill The pier marks the beginning of the elevated western viaduct, which carried the Branch toward the Jersey City waterfront The circa 1968 Penn-Central connecting viaduct appears in left foreground

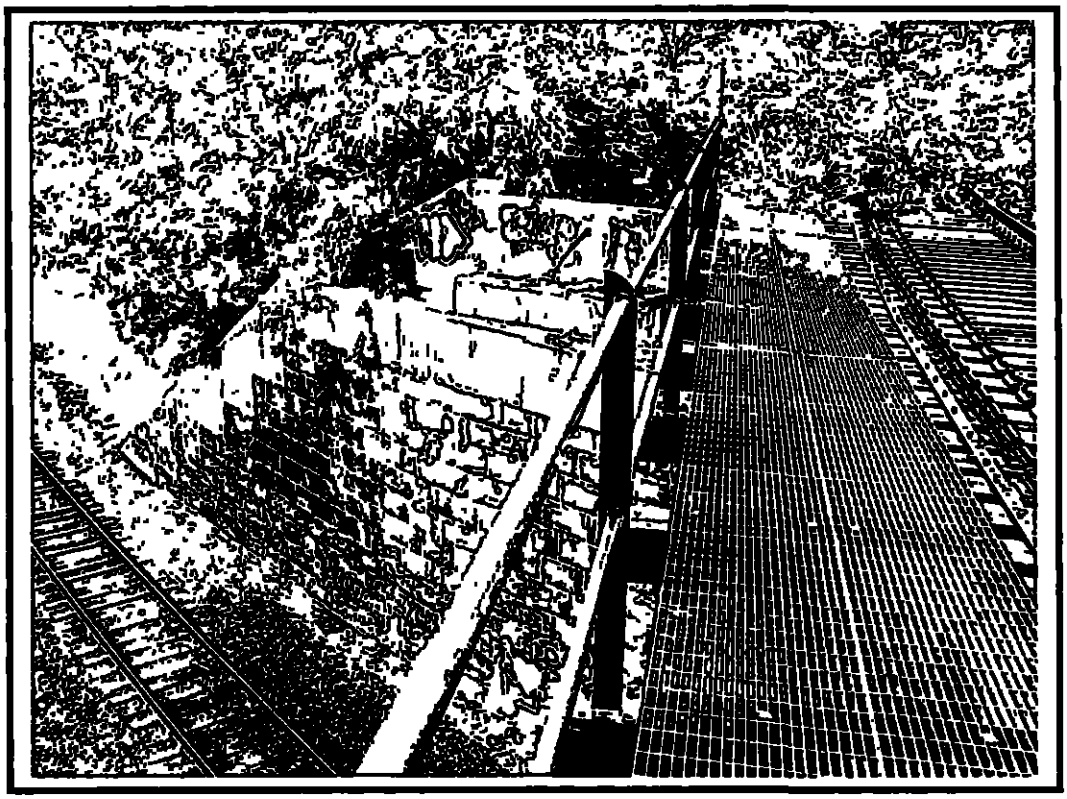


Plate:
18

Photo View
Southwest

Photographer.
Philip A Hayden

Date:
May 20, 2008

View of Harsimus Branch viaduct abutment at the edge of Bergen Hill The circa 1968 Penn-Central viaduct appears at right An active Conrail freight line—historically part of National Junction—passes below

Plate:
19

Photo View:
South

Photographer:
Philip A Hayden

Date:
May 20, 2008

Overview of railroad resources in the vicinity of the Harsimus Branch right-of-way, near the western end of the APE. The active Conrail freight line passes through National Junction and Waldo Tunnel, beneath the former PRR main line, the Hudson & Manhattan Railroad (PATH) tracks, and Waldo Yard

Plate:
20

Photo View:
North

Photographer
Philip A Hayden

Date:
May 20, 2008

Overview from the Harsimus Branch right-of-way looking down on the active Conrail freight line. The Penn-Central connecting viaduct appears in lower right corner, the modern Newark Avenue bridge crosses the track in the distance

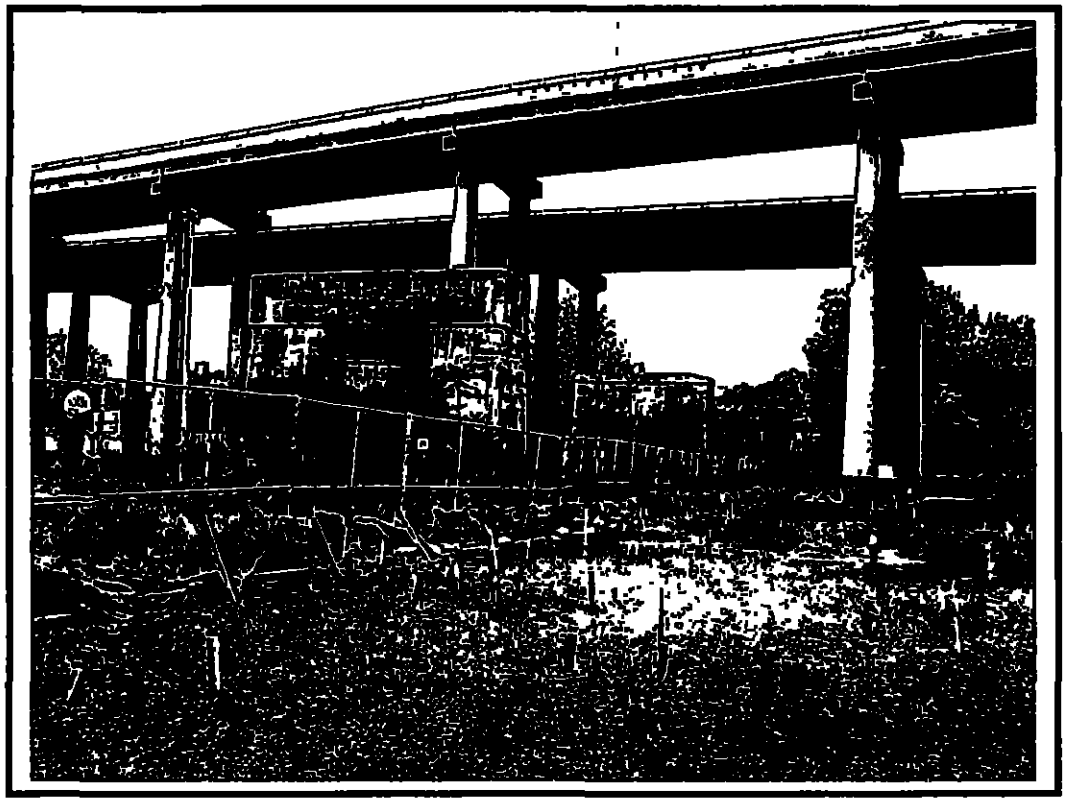


Plate
21

Photo View:
South west

Photographer:
Philip A Hayden

Date
May 20, 2008

Overview, Harsimus Branch right-of-way depicting a portion of Block 446, Lot 18A with stone and concrete piers The piers supported the former viaduct, which has been dismantled One proposal calls for constructing a 4-story building on this lot

Plate.
22

Photo View:
South

Photographer:
Philip A Hayden

Date:
May 20, 2008

Section of Mary Benson Park, depicting 1907 Mary Benson memorial (left) and circa 1945 V F W monument (right) The 1965 Jersey City Fire Department building appears in the background

Plate:
23

Photo View
South

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, viaduct piers of Harsimus Branch right-of-way (Block 446), depicting eligible Public School No 5 in background (left) Note the New Jersey Turnpike Extension at right

Plate:
24

Photo View:
South

Photographer:
Philip A
Hayden

Date.
July 14, 2008

Detail, eligible Public School No 5 (A K A Dr Michael Conti School) The façade fronts on Mary Benson Park

Plate:
25

Photo View:
East

Photographer:
Philip A Hayden

Date:
July 14, 2008

Detail, rear wing of the eligible Public School No 5 (A K A Dr Michael Conti School), from the corner of Merseles Street and Fourth Street

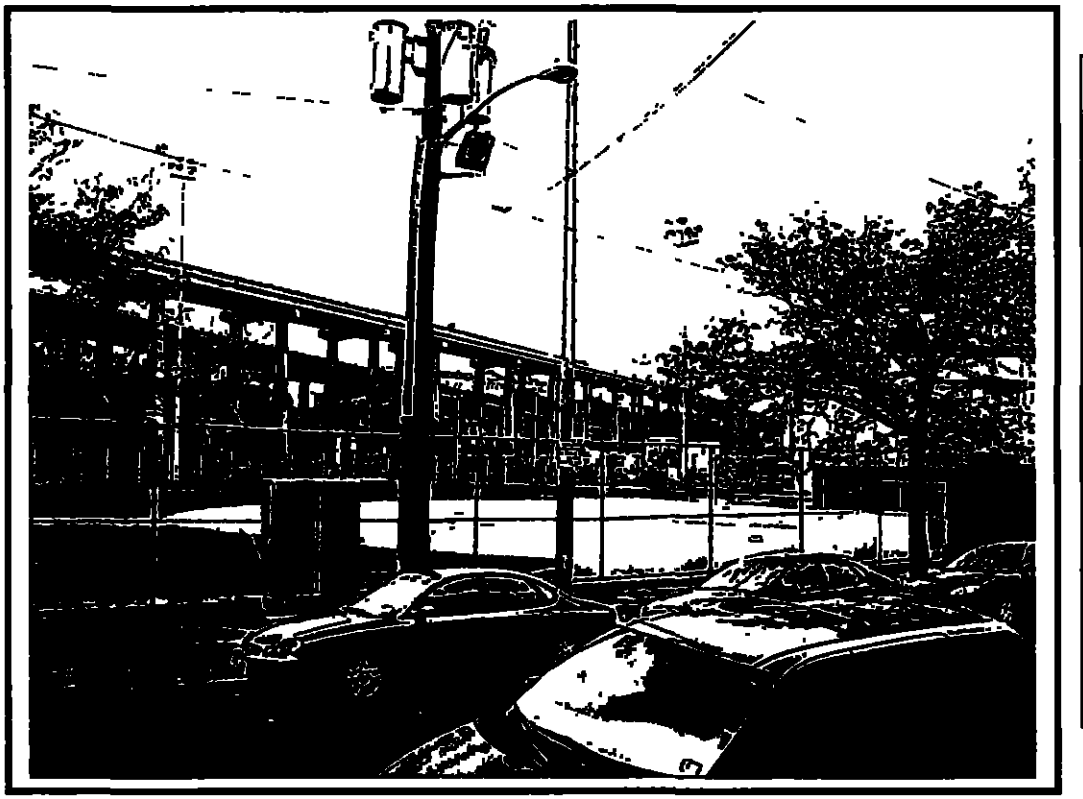


Plate.
26

Photo View:
North

Photographer:
Philip A Hayden

Date:
July 14, 2008

Overview of Mary Benson Park from the front steps of the eligible Public School No 5 (A K A Dr Michael Conti School) depicting the viaduct piers on the Harsimus Branch on Block 446 in background Note New Jersey Turnpike Extension in distance

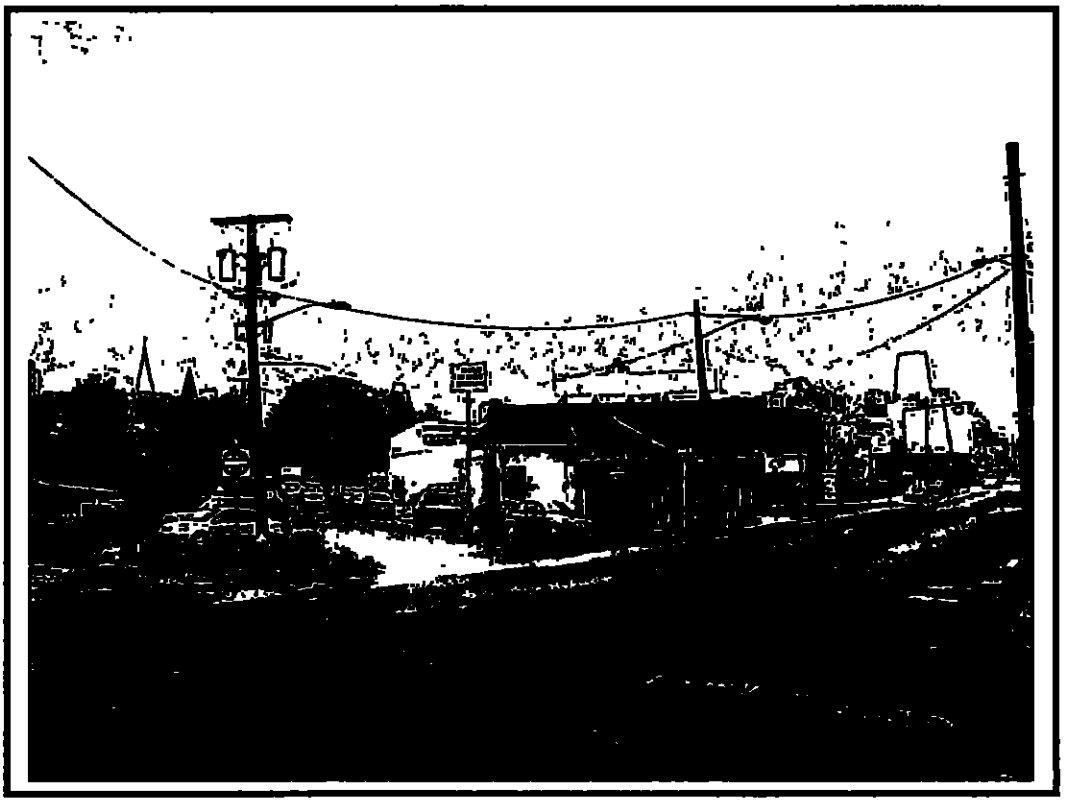


Plate:
27

Photo View:
East

Photographer:
Philip A Hayden

Date:
May 28, 2008

Overview of intersection of Newark Avenue (foreground) and Sixth Street. Note vacant lot at far left and stone viaduct pier and center, right

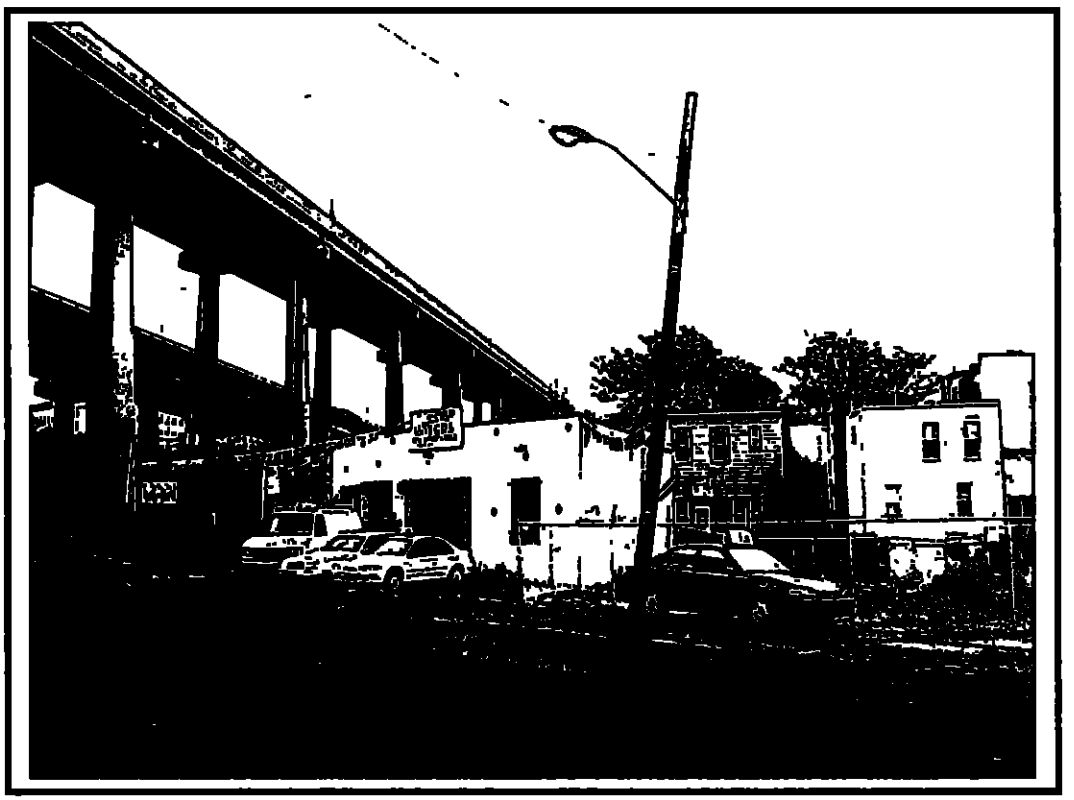


Plate:
28

Photo View:
North

Photographer:
Philip A Hayden

Date:
May 20, 2008

Commercial properties and vacant land on the north side of Newark Avenue, adjacent to the New Jersey Turnpike Extension

Plate
29

Photo View.
East

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview, intersection of Newark Avenue and Division Street, depicting a stone and concrete viaduct pier and the west boundary of Block 415, Lot 50 The commercial businesses appear to be less than 50 years of age

Plate
30

Photo View:
Northeast

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview, intersection of Newark Avenue and Fifth Street The block contains a mix of early- to mid twentieth-century commercial and residential structures and modern, contextually sensitive town houses (foreground)

Plate:
31

Photo View.
Northeast

Photographer:
Philip A
Hayden

Date·
May 20, 2008

Overview, intersection of Fifth Street and Brunswick Street with western edge of the SR-listed Harsimus Street Embankment Historic District at center left

Plate:
32

Photo View:
Northeast

Photographer:
Philip A
Hayden

Date:
May 20 2008

Overview of Fifth Street from the intersection of Brunswick Street. Buildings include a mix of late nineteenth- to mid twentieth-century commercial and residential structures

Plate
33

Photo View:
North

Photographer:
Philip A Hayden

Date:
May 20, 2008

Detail of typical residential properties on Fifth Street, between Brunswick Street and Monmouth Street, depicting an alley way with the top of the SR-listed Harsimus Branch embankment visible in the center background With few exceptions, the stone embankment structures are not visible from the public way along Fifth Street

Plate:
34

Photo View
Northwest

Photographer:
Philip A Hayden

Date:
May 20, 2008

Overview, Intersection of Fifth Street and Monmouth Street with SR-listed Harsimus Branch Embankment visible at right and the spire of the SR and NR-listed St Anthony of Padua Roman Catholic Church visible in background at far right

Plate
35

Photo View
Northeast

Photographer:
Philip A Hayden

Date:
May 20, 2008

View down Monmouth Street from the intersection of Fifth Street, depicting the SR-listed Harsimus Branch Embankment at center left. All former railroad bridges have been removed

Plate:
36

Photo View:
Northeast

Photographer:
Philip A Hayden

Date
May 20, 2008

View down Fifth Street from the intersection of Monmouth Street, looking toward Coles Street. Buildings in this block consist of a mix of contemporary structures (far left) and late nineteenth-century residences (center)

Plate:
37

Photo View:
Northwest

Photographer.
Philip A
Hayden

Date·
March 22, 2005

Overview, intersection of Fifth Street and Coles Street, depicting the SR-listed Harsimus Branch Embankment at center right The west boundary of the SR and NR-listed Harsimus Cove Historic District runs down the center of Coles Street

Plate·
38

Photo View:
Northeast

Photographer·
Philip A
Hayden

Date:
May 20, 2008

Overview, intersection of Fifth Street and Coles Street, depicting residential properties forming the western boundary of the SR and NR-listed Harsimus Cove Historic District Note the SR listed Harsimus Branch Embankment at left

Plate:
39

Photo View:
Northwest

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Typical detail, stone abutments and retaining walls forming the SR-listed Harsimus Branch Embankment at Coles Street Note the difference in stone types between the abutments and the retaining walls An alley at left extends behind residences along Fifth Street

Plate:
40

Photo View:
Northwest

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Typical detail, stone abutment and retaining walls at Coles Street and Sixth Street Note the city-owned strip of grass extending along the Embankment The four-story brick town homes at right mark the western boundary of the SR and NR-listed Hamilton Park Historic District The District's southern boundary extends down Sixth Street

Plate:
41

Photo View:
Northwest

Photographer:
Philip A
Hayden

Date
May 20, 2008

Overview, intersection of Fifth Street and Jersey Avenue, depicting buildings inside the SR and NR-listed Harsimus Cove Historic District. The SR-listed Harsimus Branch Embankment is visible at right. Note the decreased height of the stone abutments, caused by the descending grade to the waterfront.

Plate:
42

Photo View
Northeast

Photographer:
Philip A
Hayden

Date.
May 20, 2008

View of Jersey Avenue from the intersection of Fifth Street, depicting buildings inside the SR and NR-listed Harsimus Cove Historic District. The SR-listed Harsimus Branch Embankment is visible in the background at left.

Plate.
43

Photo View:
North

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Detail of alley between residential buildings on Fifth Street, between Jersey Avenue and Erie Street, inside the SR and NR-listed Harsimus Cove Historic District Note the SR-listed Harsimus Branch Embankment visible between buildings in distance Generally, the Embankment is not visible from Fifth Street

Plate
44

Photo View:
Northwest

Photographer:
Philip A
Hayden

Date.
May 20, 2008

Overview, intersection of Fifth Street and Erie Street, depicting typical buildings located inside the SR and NR listed Harsimus Cove Historic District The SR-listed Harsimus Branch Embankment is visible in the backgrond at right

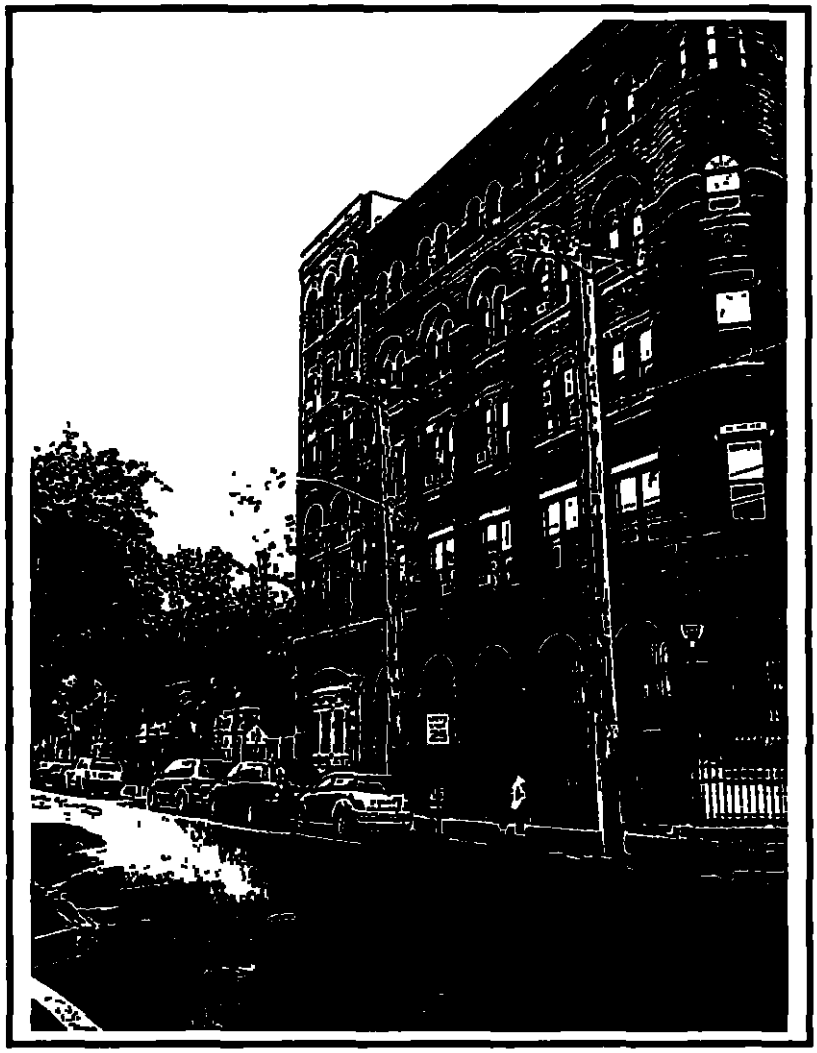


Plate:
45

Photo View:
Northeast

Photographer:
Philip A Hayden

Date:
May 20, 2008

Detail, west façade of the individually eligible building at 88-92 Erie Street (Albaniel Dye & Chemical Co.) The building is also a key contributing resource to the SR and NR-listed Harsimus Cove Historic District Note the SR-listed Harsimus Branch Embankment visible in the background at left

Plate
46

Photo View:
Northeast

Photographer:
Philip A Hayden

Date:
May 20, 2008

View looking down Fifth Street toward Manila Avenue (formerly Grove Street) from the intersection of Erie Street depicting the south façade of the individually eligible building at 88-92 Erie Street and other buildings inside the SR and NR-listed Harsimus Cove Historic District

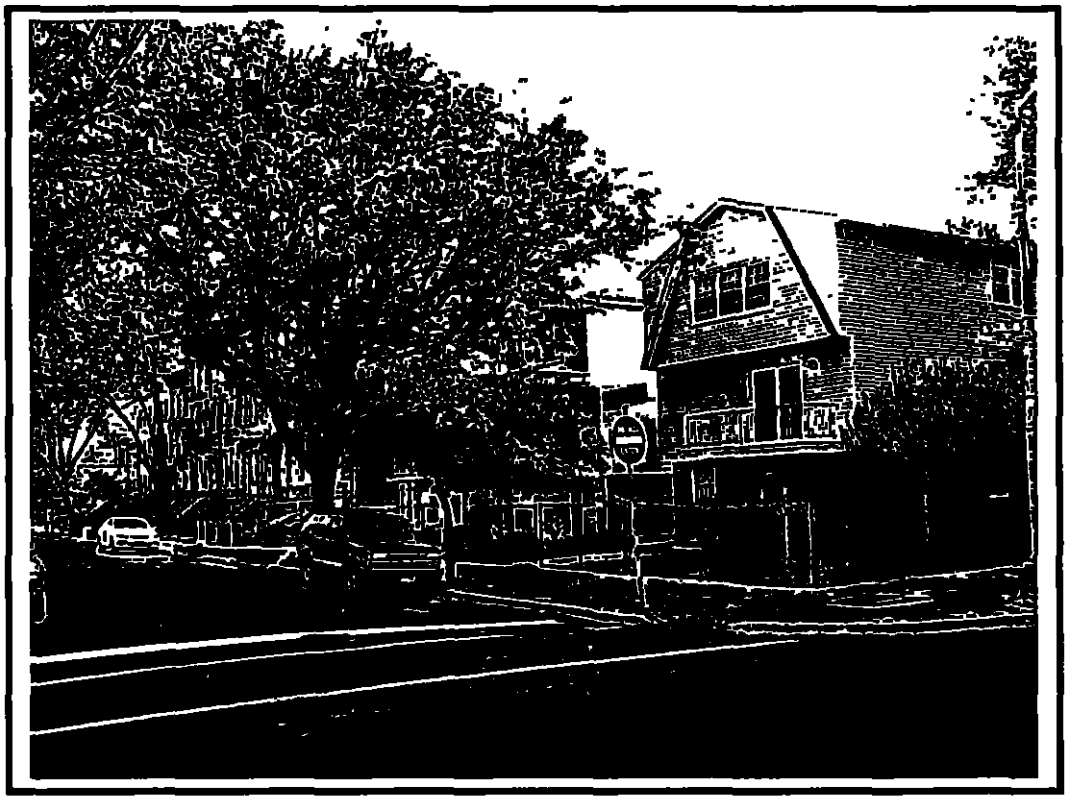


Plate:
47

Photo View:
Northwest

Photographer:
Philip A Hayden

Date:
May 20, 2008

View looking up Fifth Street from the intersection of Manila Avenue (formerly Grove Street) The eastern boundary of the SR and NR-listed Harsimus Cove Historic District runs along the near side of the three-story brick town homes at center left The three dwellings in the foreground are modern and lie outside the District

Plate
48

Photo View:
Northeast

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview, Manila Avenue (formerly Grove Street) from the intersection of Fifth Street, depicting modern residential housing The SR-listed Harsimus Branch Embankment is visible in the background at left

Plate:
49

Photo View.
East

Photographer:
Philip A
Hayden

Date·
May 20, 2008

View of portion of SR-listed Harsimus Branch Embankment on Block 212 from Manila Avenue (formerly Grove Street) Note modern housing at right

Plate:
50

Photo View:
Northeast

Photographer
Philip A
Hayden

Date:
May 20, 2008

Overview, Marin Boulevard, depicting modern housing at left and the eastern boundary of the SR-listed Harsimus Branch Embankment in the background at right

Plate.
51

Photo View.
Southwest

Photographer.
Philip A
Hayden

Date:
May 20, 2008

View of the eastern boundary of the SR-listed Harsimus Branch Embankment at Marin Boulevard Note the diminished height of the stone abutments

Plate:
52

Photo View:
Southeast

Photographer:
Glenn R
Modica

Date:
May 16, 2008

Overview, intersection of Sixth Street and Marin Boulevard, depicting a modern Bed, Bath and Beyond retail store and high-rise towers on the site of the former Harsimus Cove Freight Yards and the Harsimus Branch *right-of-way*

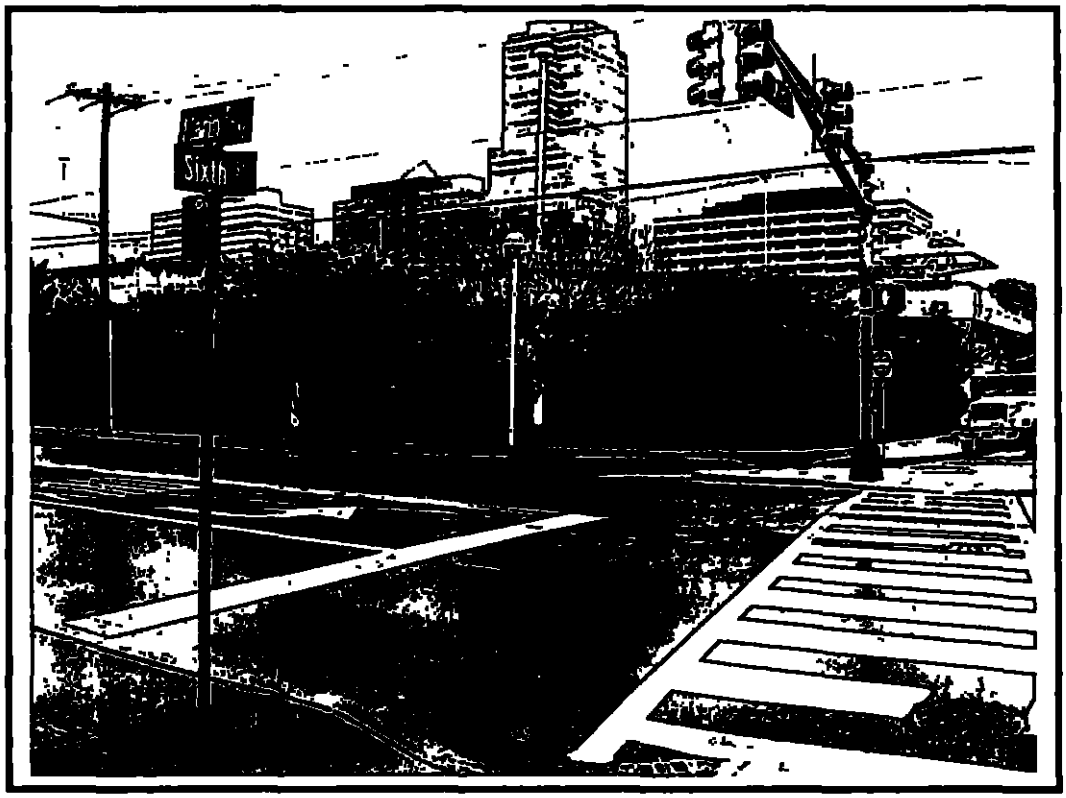


Plate:
53

Photo View:
Northeast

Photographer:
Glenn R
Modica

Date:
May 16, 2008

Overview, intersection of Marin Boulevard and Sixth Street, depicting the Newport Mall parking garage (foreground) and high-rise towers (background) that characterize the eastern end of the APE-Architecture

Plate
54

Photo View.
West

Photographer
Philip A
Hayden

Date
July 14, 2008

Overview of former Harsimus Yard from the intersection of Ganbemi Drive and Mall Drive, depicting the Bed, Bath, and Beyond retail store (left) and Harsimus Embankment (background center) Sixth Street recedes into the distance at center, right

Plate
55

Photo View:
South

Photographer
Philip A
Hayden

Date
July 14, 2008

Overview of former Harsimus Yard from the intersection of Ganbemi Drive and Mall Drive, depicting modern retail stores and a parking lot The eligible Warehouse Historic District is visible in background

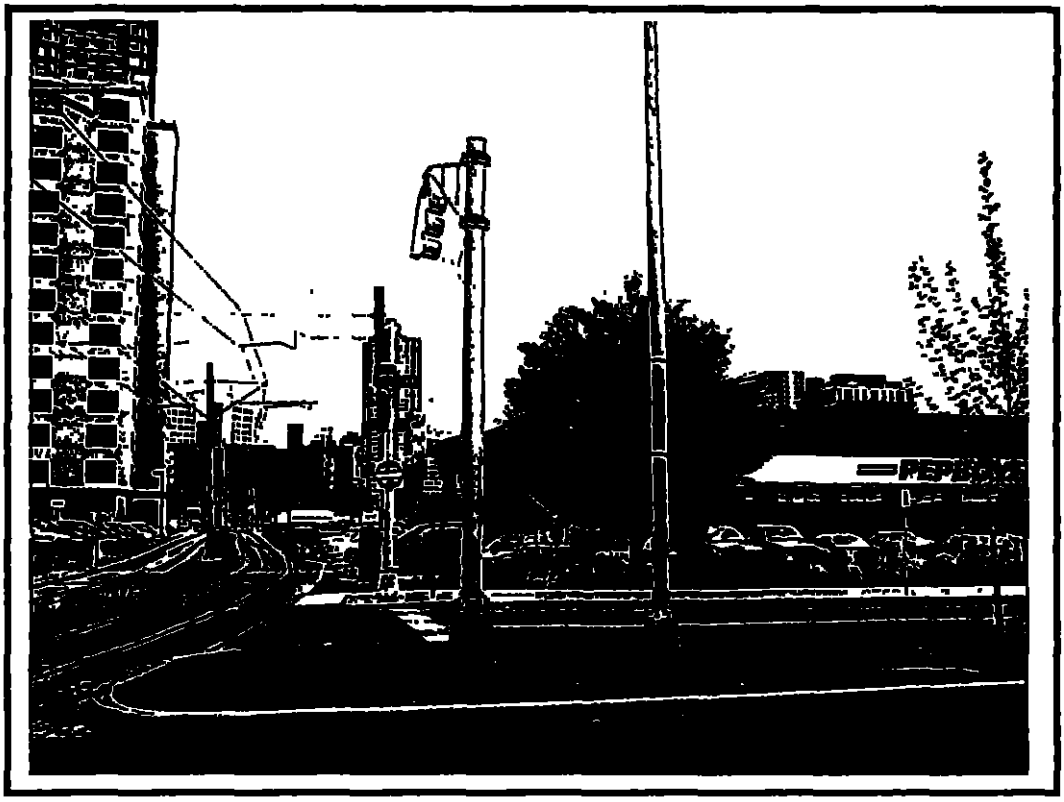


Plate:
56

Photo View:
South

Photographer:
Philip A Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from near the intersection of Ganbemi Drive and Washington Boulevard, depicting modern retail stores (right) and high rise hotels and residential towers (left) NJ Transit Light Rail line appears at left The eligible Warehouse Historic District is visible in distance

Plate
57

Photo View:
West

Photographer:
Philip A Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from the near the intersecuon of Ganbemi Drive and Washington Boulevard, depicting modern retails stores and parking lot at left

Plate.
58

Photo View
South

Photographer
Philip A
Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from the intersection of Ganbemi Drive and Washington Boulevard, depicting modern hotel and residential high rises along Washington Boulevard

Plate:
59

Photo View:
West

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from the intersection of Metro Plaza Drive and Washington Boulevard, depicting the entrance into the modern retail store parking lot

Plate
60

Photo View:
West

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from near the intersection of Metro Plaza Drive and Washington Boulevard, depicting the parking lot for modern retail shops The NJ Transit Light Rail line crosses in foreground

Plate
61

Photo View:
Southwest

Photographer.
Philip A
Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from near the intersection of Metro Plaza Drive and Washington Boulevard, depicting modern retails stores at right The NJ Transit Light Rail line (Harsimus Cove station appears at left The eligible Warehouse Historic District appears in background

Plate:
62

Photo View:
Northwest

Photographer:
Philip A
Hayden

Date
July 14, 2008

Overview, former Harsimus Yard from the intersection of Second Street and Washington Boulevard, depicting modern streets and buildings on the site of the former Harsimus Branch right-of-way

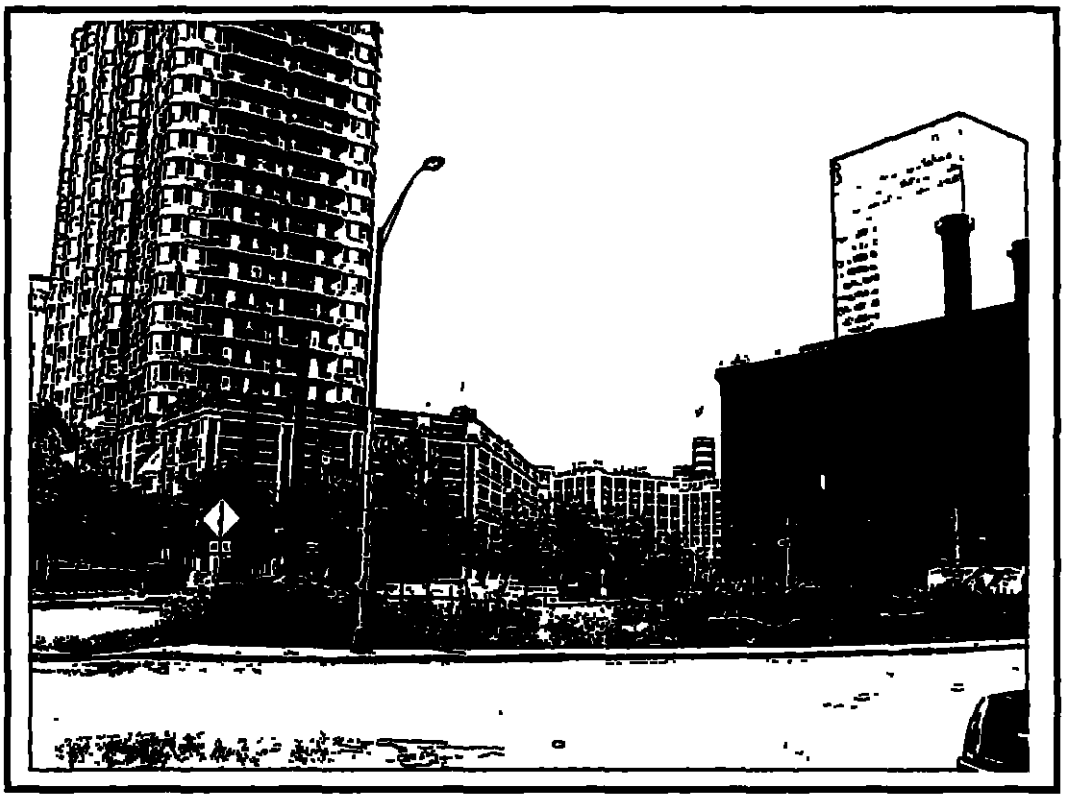


Plate:
63

Photo View:
Southeast

Photographer
Philip A
Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from the intersection of Second Street and Washington Boulevard, depicting vacant lots and modern high rises on sections of the former yard and the modern extension of Green Street running diagonally from left foreground to center background along the former Harsimus Branch right-of-way The NR-listed H&MRR Powerhouse appears at right

Plate:
64

Photo View:
Northwest

Photographer:
Philip A Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard from the intersection of the Green Street and Bay Street, depicting the NR-listed H&MRR Powerhouse at left and the extension of Green Street along the former Harsimus Branch right-of-way (right) The modern high rises in the background occupy portions of the former yard

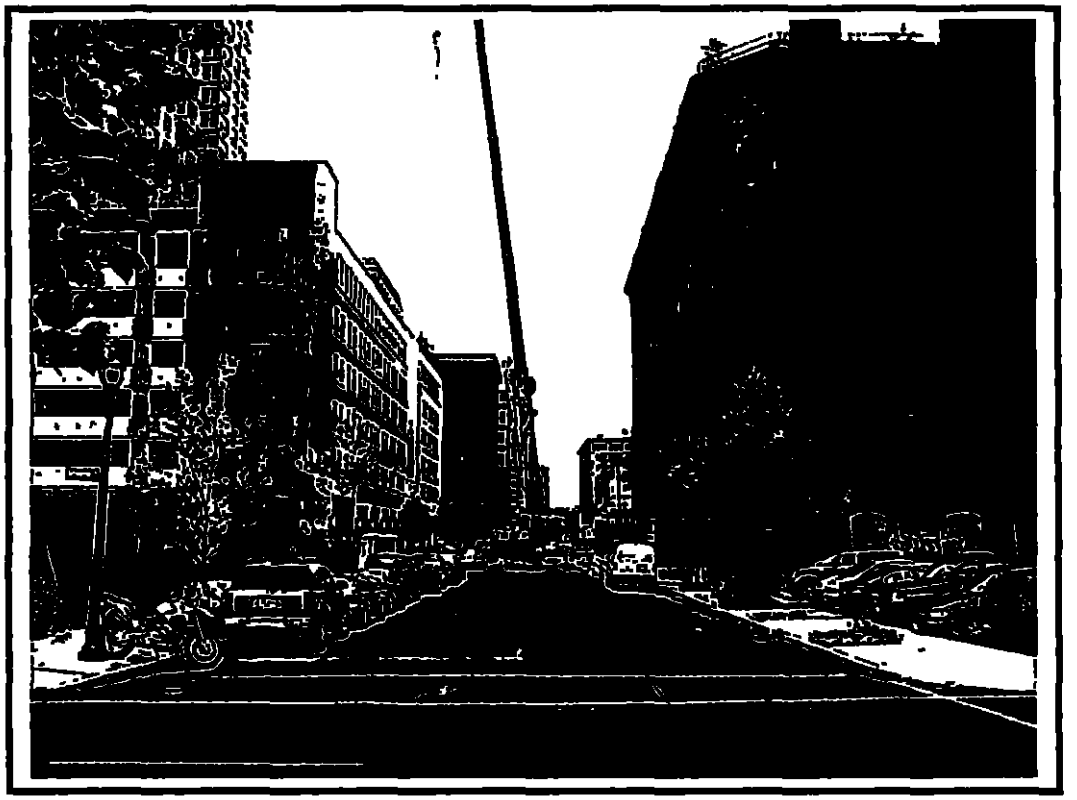


Plate:
65

Photo View:
West

Photographer:
Philip A Hayden

Date:
July 14, 2008

Overview of Bay Street from the intersection of Green Street, depicting the NR-lisred H&MRR Powerhouse (right) and the eligible Warehouse Historic District (background) The building at left is modern

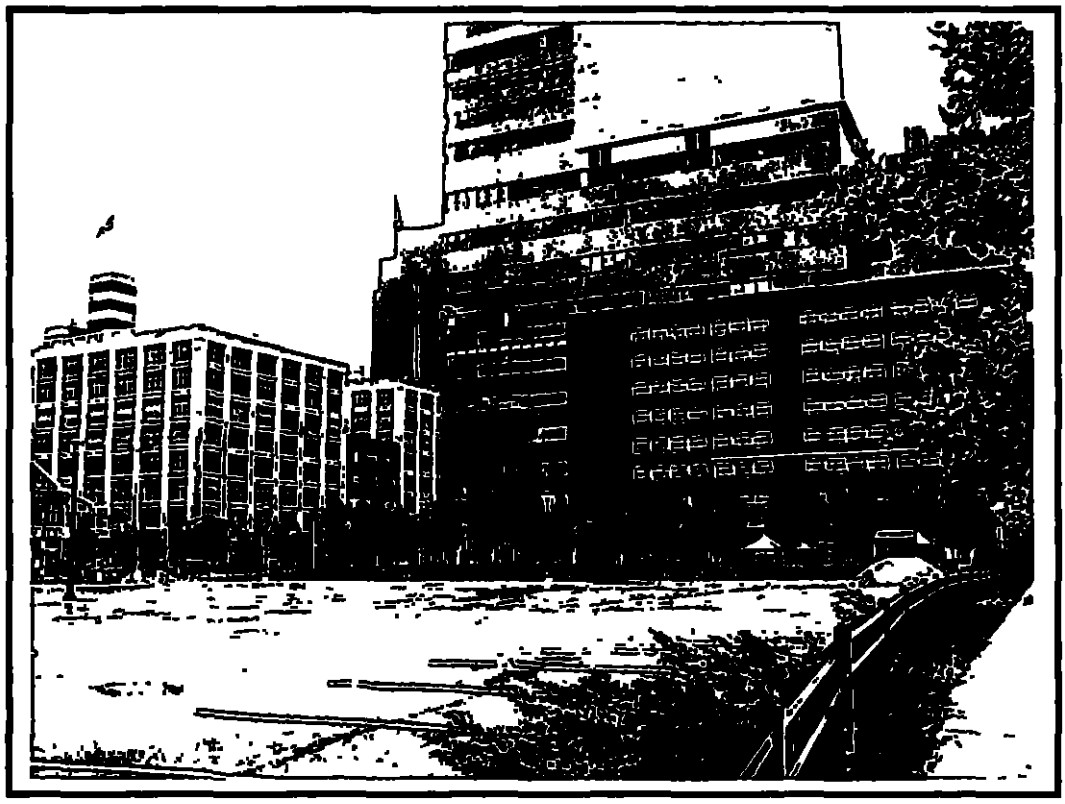


Plate:
66

Photo View:
South

Photographer
Philip A
Hayden

Date:
July 14, 2008

Overview, former Harsimus Yard and Harsimus Branch right-of-way from the intersection of Green Street and Bay Street, depicting a parking lot and modern retail and residential construction

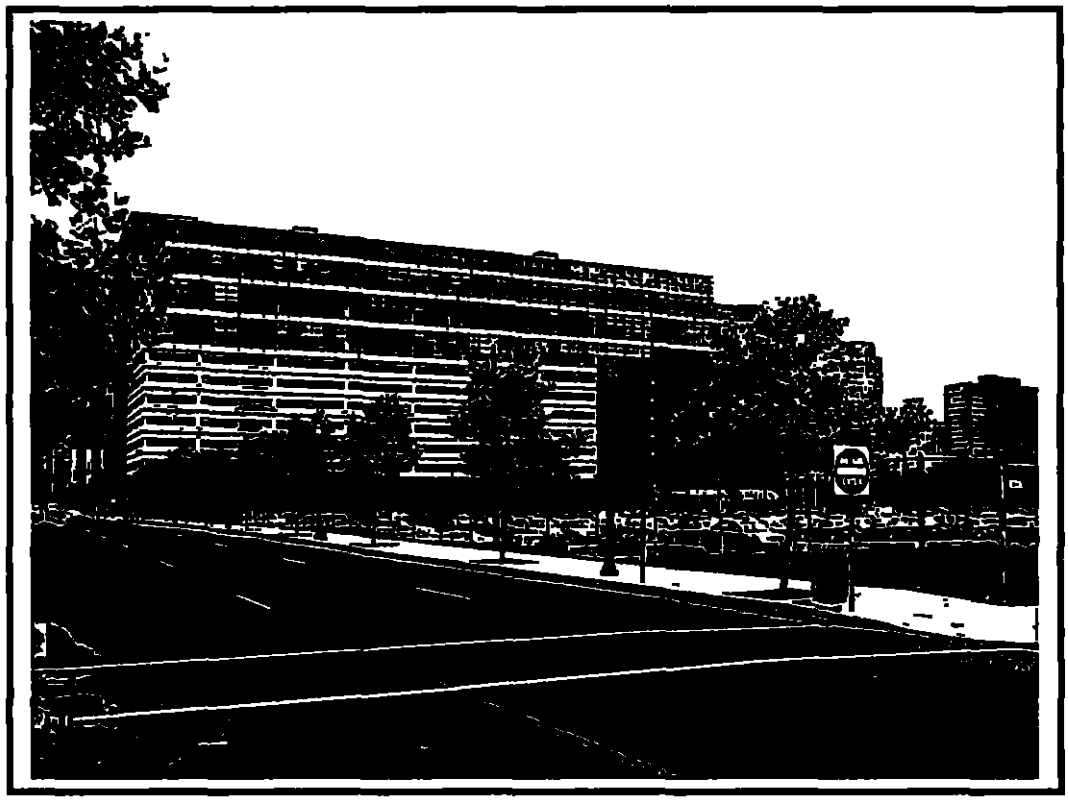


Plate:
67

Photo View:
North-west

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview of parking lots and modern retail and residential construction from the intersection of Green Street and Morgan Street, approximately at the location of Milepost 1 36 of the former Harsimus Branch right-of-way

Plate.
68

Photo View:
North

Photographer:
Philip A Hayden

Date:
July 14, 2008

Overview, eligible Warehouse Historic District from the intersection of Morgan Street and Provost Street The SR and NR-listed Great A & P Tea Company Warehouse appears in center background

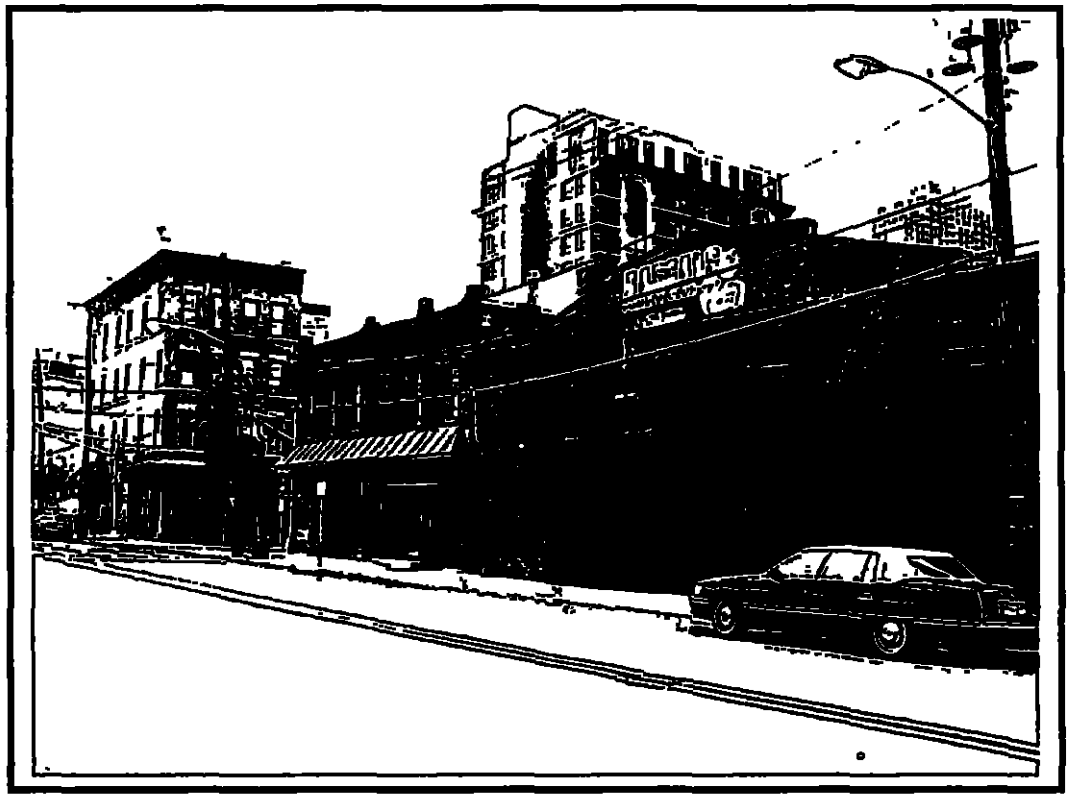


Plate:
69

Photo View
Northeast

Photographer
Philip A Hayden

Date:
July 14, 2008

Overview, east side of Marin Boulevard from the intersection of Bay Street depicting small grouping of late nineteenth- and early twentieth-century buildings within the viewshed

Plate:
70

Photo View:
North

Photographer:
Philip A
Hayden

Date.
July 14, 2008

Overview, Manila Avenue (formerly Grove Street) from the intersection of Bay Street Note circa 1890s brick flats on right and modern 11-story apartment building in background center

Plate:
71

Photo View:
Southwest

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Manila Avenue (formerly Grove Street) from the intersection of First Street, depicting block of late nineteenth- and early twentieth-century buildings

Plate:
72

Photo View:
North

Photographer
Philip A
Hayden

Date:
July 14, 2008

Detail, 11-story building at the corner of Manila Avenue (formerly Grove Street) and Second Street. Modern town homes line both sides of the street.

Plate:
73

Photo View:
South

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Manila Avenue from the intersection of Eight Street, depicting modern town houses (right) and a parking lot (left). Note 11-story building visible in center background.

Plate.
74

Photo View:
North

Photographer.
Philip A
Hayden

Date·
July 14, 2008

Overview, Manila Avenue (formerly Grove Street) from the intersection of Eighth Street, depicting modern 14-story apartment building

Plate:
75

Photo View·
Southwest

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Detail, St Anthony's School (built 1917) on Eighth Street between Manila Avenue (formerly Grove Street) and Marin Boulevard The school is surrounded by parking lots, play grounds, and modern buildings

Plate:
76

Photo View.
South

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Marin Boulevard from the intersection of Eighth Street The easternmost block of the Harsimus Embankment is located beneath the trees in the center background The parking garage for the Newport Mall extends along Marin Boulevard at far left

Plate
77

Photo View:
South

Photographer.
Philip A
Hayden

Date:
July 14, 2008

Detail, entrance to Newport Mall parking garage from the intersection of Marin Boulevard and Eighth Street The parking deck extends the length of Marin Boulevard between Sixth Street and Tenth Street

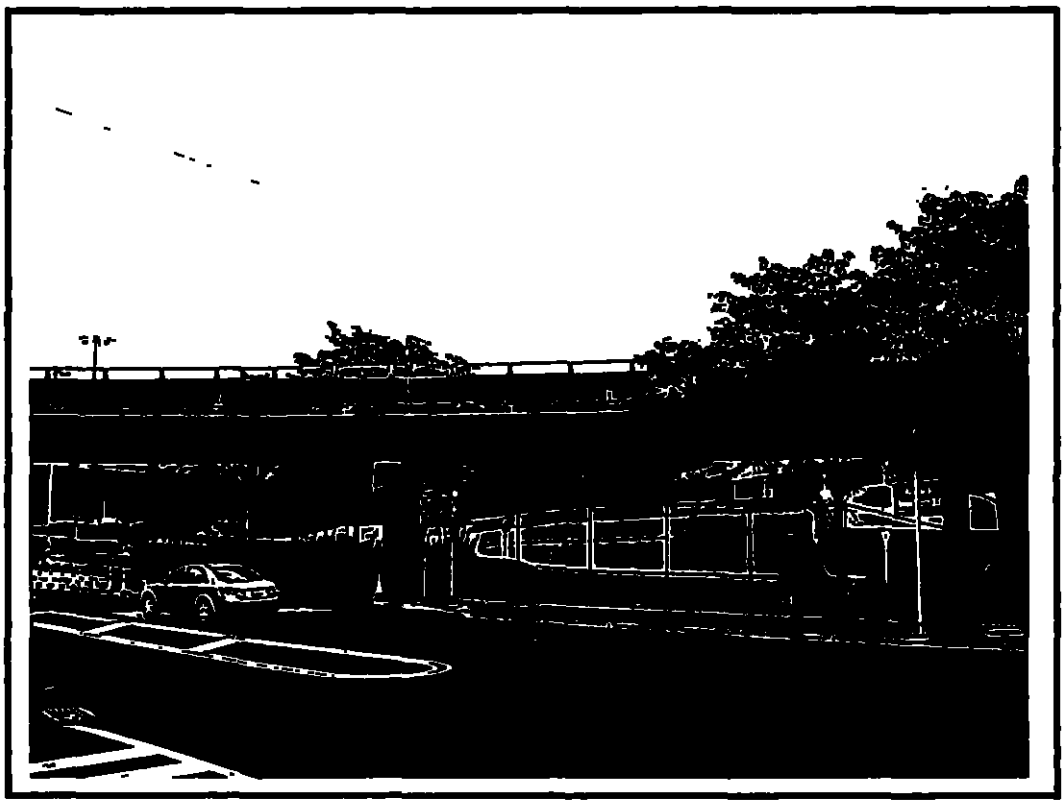


Plate:
78

Photo View:
Northeast

Photographer
Philip A
Hayden

Date:
July 14, 2008

Overview, entrance and exist ramps to Newport Mall parking garage from the intersection of Marin Boulevard (foreground) and Tenth Street

Plate:
79

Photo View:
South

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Marin Boulevard from the intersection of Tenth Street The parking garage for the Newport Mall extends along Marin Boulevard at far left

Plate:
80

Photo View
South

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Manila Avenue (formerly Grove Street) from the intersection of Ninth Street, depicting modern construction on both sides of the street

Plate:
81

Photo View:
Southwest

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Detail, former Fifth Ward Savings Bank (built 1925) at the intersection of Manila Avenue (formerly Grove Street) and Eighth Street

Plate:
82

Photo View
West

Photographer:
Philip A
Hayden

Date:
Mary 20, 2008

View looking up Sixth Street from Marin Boulevard toward Manila Avenue (formerly Grove Street) Note stepped terminus to SR-listed Harsimus Branch Embankment, visible at left

Plate·
83

Photo View:
Southeast

Photographer:
Philip A
Hayden

Date
May 20, 2008

View down Sixth Street from the intersection of Manila Avenue (formerly Grove Street), depicting the SR-listed Harsimus Branch Embankment

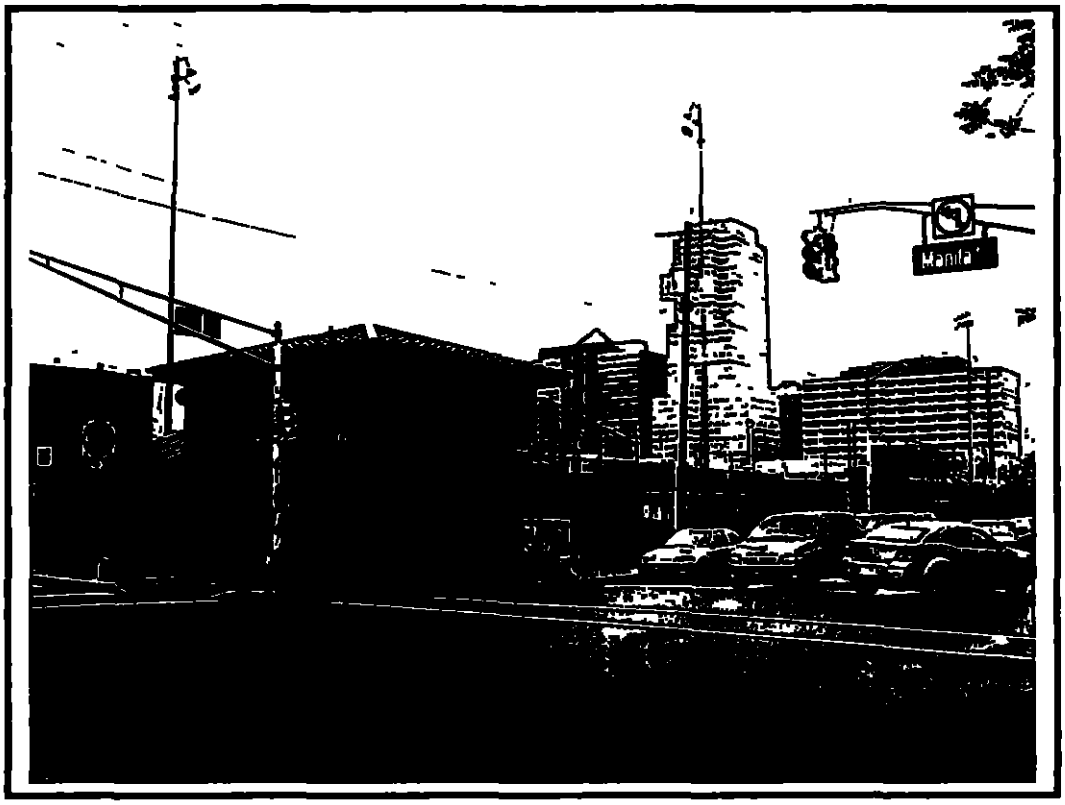


Plate:
84

Photo View:
Northeast

Photographer:
Philip A Hayden

Date.
May 20, 2008

View of modern Roberto Clemente Baseball Field at the intersection of Sixth Street and Manila Avenue (formerly Grove Street)

Plate
85

Photo View:
Northwest

Photographer:
Philip A Hayden

Date:
May 20, 2008

View looking up Sixth Street from the intersection of Manila Avenue (formerly Grove Street) toward Erie Street The block of four-story brick town homes marks the southeast corner of the SR and NR-listed Hamilton Park Historic District The two frame buildings in the right foreground are located outside the district boundary

Plate:
86

Photo View:
North

Photographer:
Glenn R
Modica

Date:
May 16, 2008

View looking up Erie Street near the intersection of Sixth Street, depicting the SR-listed Harsimus Branch Embankments (left and right) and the SR and NR-listed Hamilton Park Historic District (background)

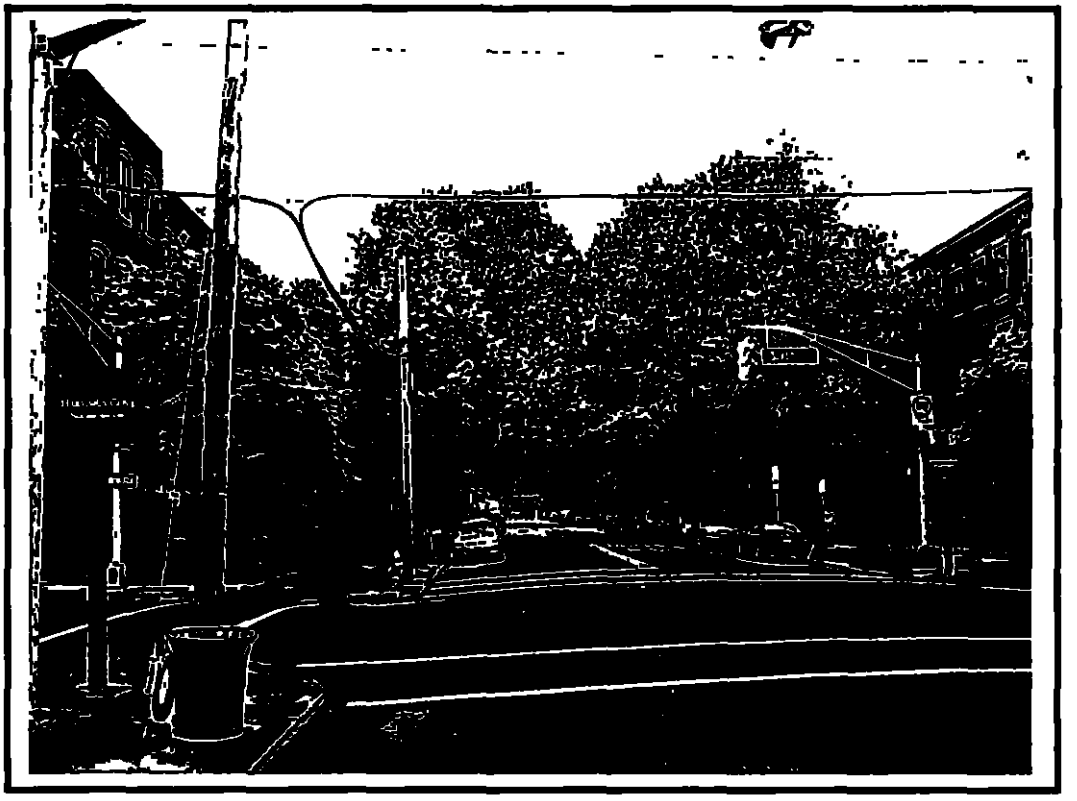


Plate.
87

Photo View:
North

Photographer.
Philip A
Hayden

Date:
March 20, 2008

View from the vicinity of the Harsimus Branch right of-way looking up Jersey Avenue from Sixth Street toward Hamilton Park, depicting the SR and NR-listed Hamilton Park Historic District

Plate:
88

Photo View:
South

Photographer
Philip A
Hayden

Date:
May 20, 2008

View looking down Jersey Avenue from Sixth Street toward Fifth Street, depicting the SR-listed Harsimus Branch Embankment in foreground (left and right) and the SR and NR-listed Harsimus Cove Historic District in the background

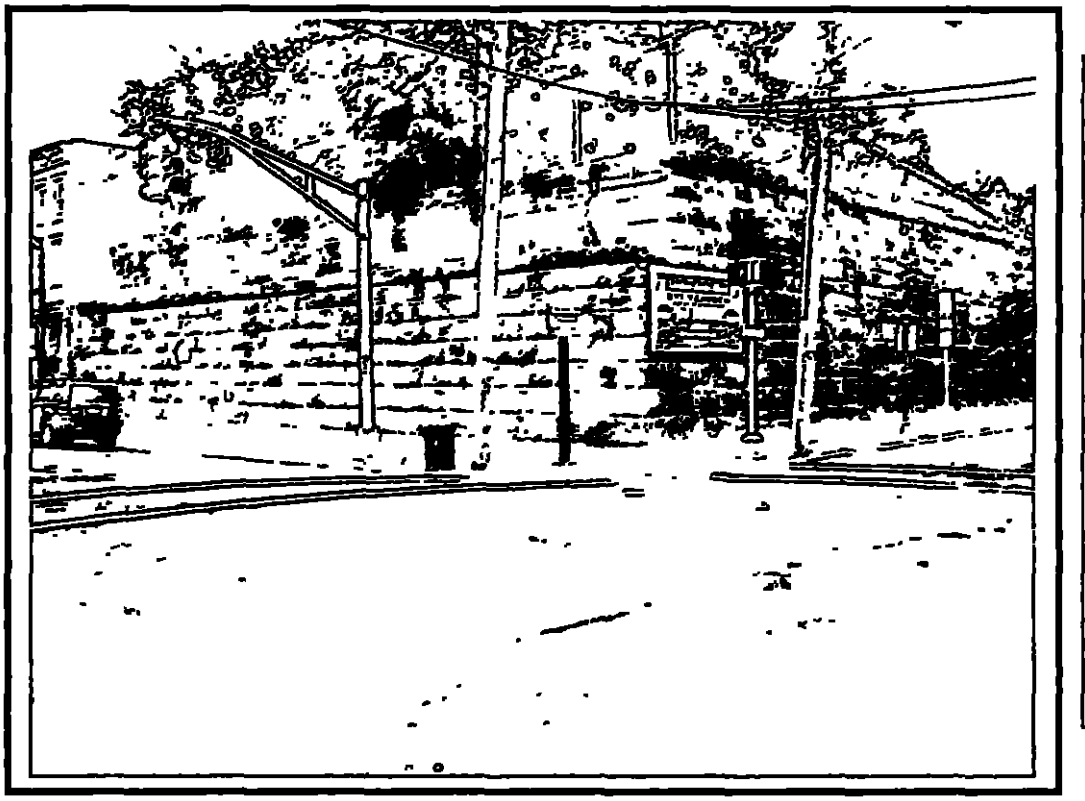


Plate:
89

Photo View:
Southwest

Photographer:
Glenn R
Modica

Date.
May 16, 2008

Typical detail, stone abutments and retaining walls of SR-listed Harsimus Branch Embankment at the corner of Jersey Avenue and Sixth Street

Plate:
90

Photo View:
Southeast

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Eighth Street from the intersection of Jersey Avenue looking toward location of possible 10-story building Hamilton Park is located at far left

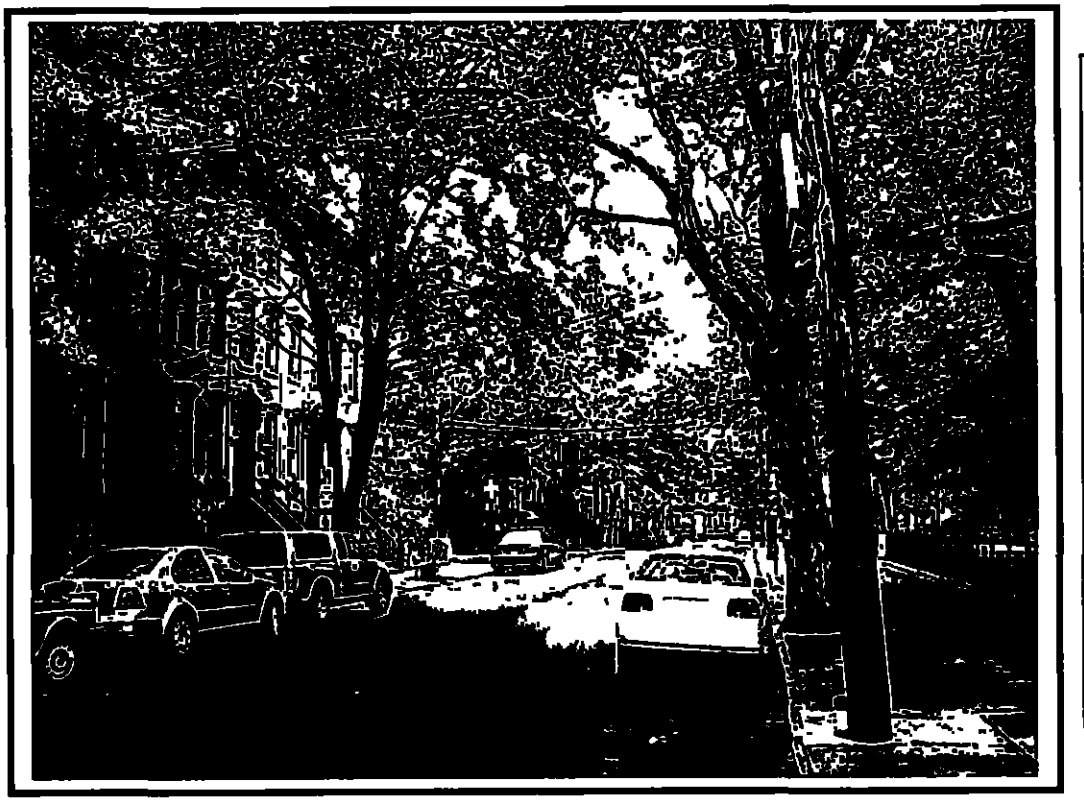


Plate:
91

Photo View:
North

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, West Hamilton Place from the intersection of Eighth Street, depicting typical late nineteenth-century town houses fronting on Hamilton Park (visible at right)

Plate:
92

Photo View.
Southeast

Photographer.
Philip A
Hayden

Date.
July 14, 2008

Overview, Hamilton Park from the intersection of West Hamilton Place and Ninth Street Mature deciduous trees screen much of the skyline during part of the year

Plate.
93

Photo View
Southeast

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Hamilton Park looking toward the location of the possible 10-story building Note modern 12-story building under construction on the east side of Hamilton Park, visible at left

Plate:
94

Photo View.
Southeast

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, Hamilton Park looking toward the intersection of McWilliams Street and Eighth Street and the site of the possible 10-story building in the background

Plate:
95

Photo View:
South

Photographer:
Philip A
Hayden

Date:
July 14, 2008

Overview, McWilliams Place from the intersection of Ninth Street, depicting Hamilton Square development under construction along the east side of Hamilton Park inside the listed Hamilton Park Historic District The large building is 12 stories tall

Plate:
96

Photo View:
Northeast

Photographer:
Glenn R
Modica

Date:
May 16, 2008

Overview, intersection of Sixth Street and Coles Street depicting typical residential and commercial buildings inside the SR and NR-listed Hamilton Park Historic District The SR-listed Harsimus Branch Embankment is located just beyond the picture frame at right

Plate:
97

Photo View:
Northwest

Photographer:
Glenn R
Modica

Date:
May 20, 2008

Overview, intersection of Sixth Street and Coles Street The block of two-story brick town homes at left marks the southwest corner of the Hamilton Park Historic District The four-story brick residence is outside the District boundary

Plate:
98

Photo View:
North

Photographer:
Glenn R
Modica

Date
May 16, 2008

Overview of Monmouth Street depicting the SR-listed Harsimus Branch Embankments in the foreground (left and right) and the SR and NR-listed St Anthony of Padua Roman Catholic Church in the background

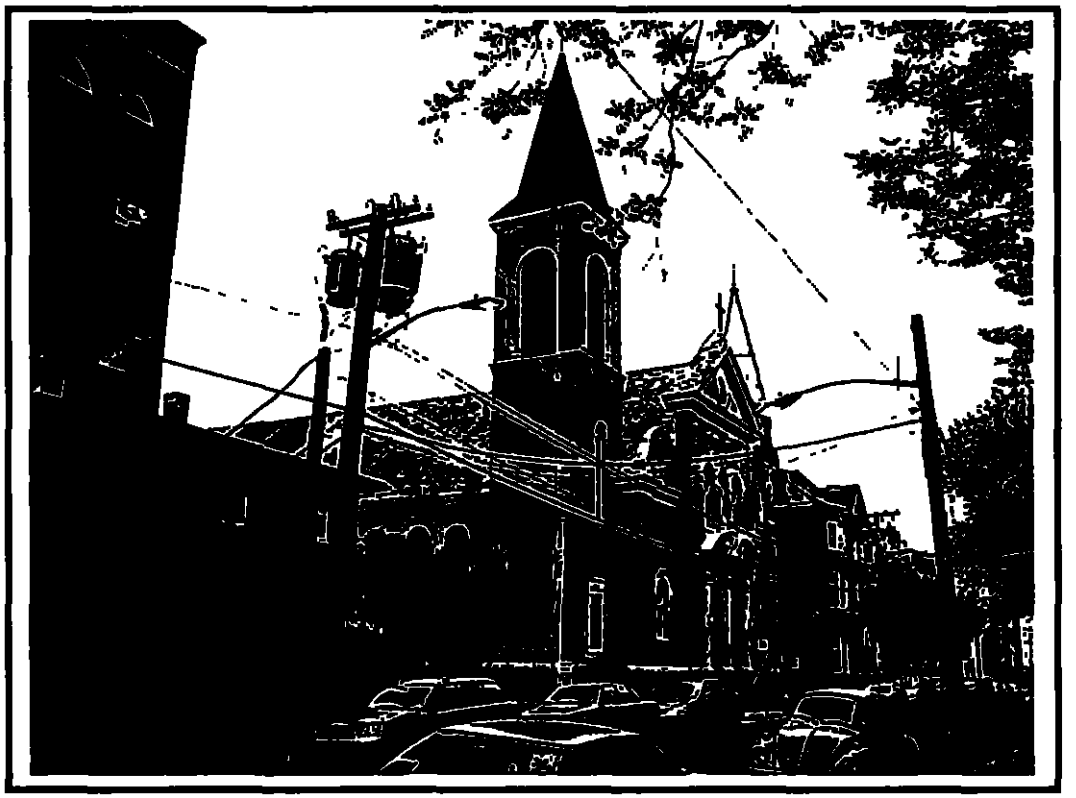


Plate.
99

Photo View:
Northeast

Photographer:
Philip A
Hayden

Date:
May 20, 2008

Overview of the unevaluated Holy Rosary Roman Catholic Church and Parish House (1903) on Sixth Street between Brunswick Street and Monmouth Street

Plate:
100

Photo View:
Northeast

Photographer.
Philip A
Hayden

Date:
May 20, 2008

Detail view of a 1953 unidentified building (foreground) and 1938 school building (background) on Brunswick Street Both are affiliated with the Holy Rosary Roman Catholic Church on Sixth Street

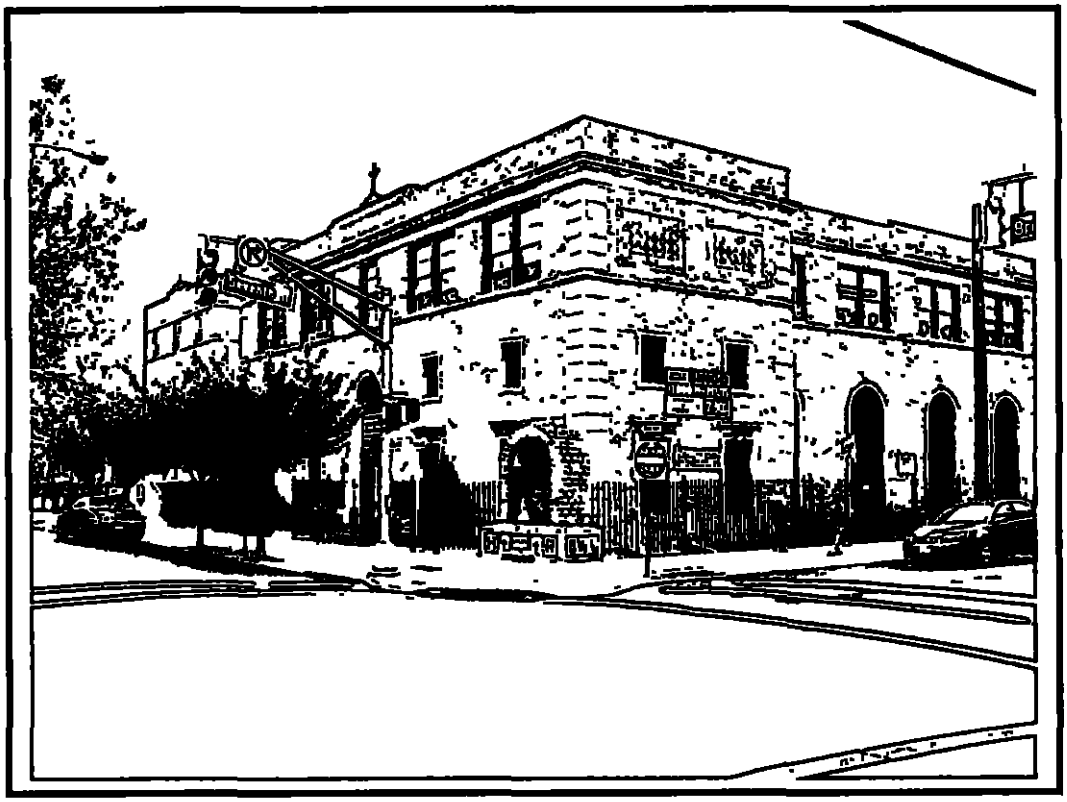


Plate:
101

Photo View:
Southwest

Photographer
Philip A
Hayden

Date:
May 20, 2008

Detail of 1938 school building from the intersection of Brunswick Street and Seventh Street

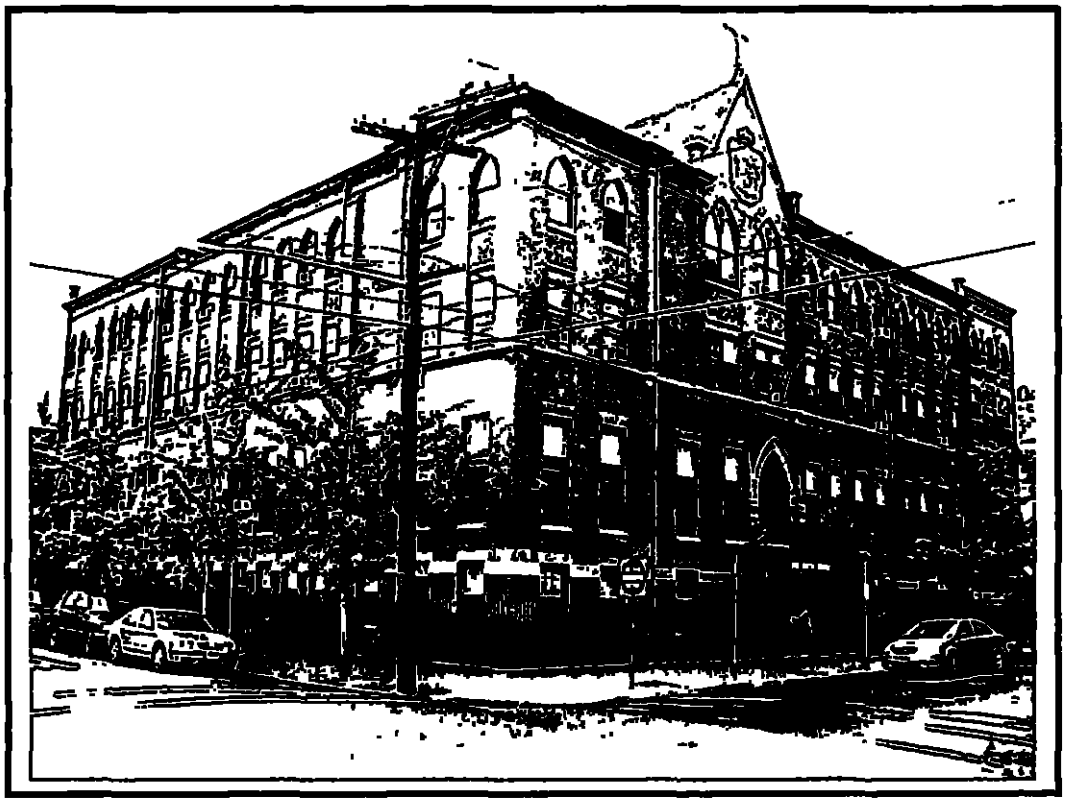


Plate
62

Photo View:
Northeast

Photographer:
Philip A Hayden

Date:
May 20, 2008

View of the 1899 St Anthony's School and Convent at the corner of Sixth Street and Brunswick Street The building is a contributing resource to the individually eligible St Anthony's Polish Roman Catholic Church and School Complex

Plate:
63

Photo View:
Northwest

Photographer:
Glenn R Modica

Date.
May 16, 2008

Overview, intersection of Sixth Street and Brunswick Street, depicting a parking lot and miscellaneous commercial buildings (at left) A 1953 brick building associated with the Holy Rosary Roman Catholic Church on Sixth Street appears at the far right

Plate:
102

Photo View:
Southwest

Photographer:
Glenn R
Modica

Date:
May 16, 2008

Overview, intersection of Sixth Street and Brunswick Street, depicting a vacant lot comprising Block 415, Lot 50 of the Harsimus Branch right-of-way Note the rear elevations of buildings fronting on Fifth Street

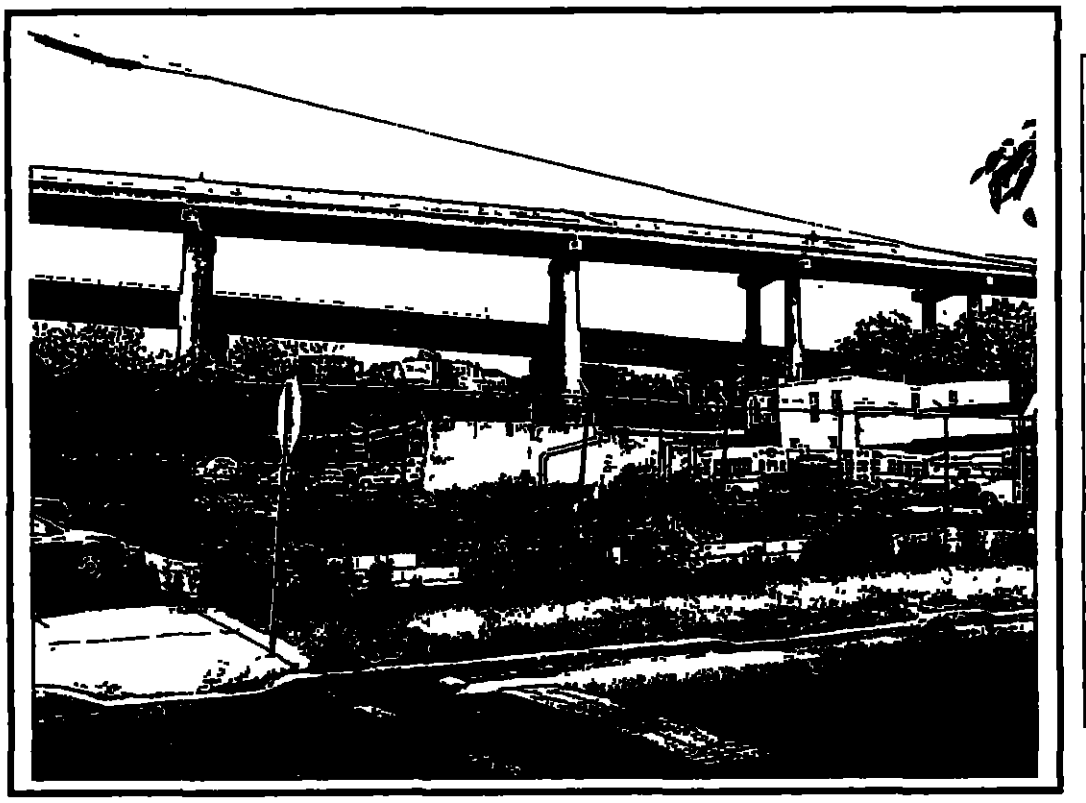


Plate:
103

Photo View:
Northwest

Photographer
Philip A
Hayden

Date:
May 20, 2008

Overview, Vacant lot at the intersection of Sixth Street and Division Street Note the New Jersey Turnpike Extension in the background

APPENDIX B

SUBSURFACE AND GEOTECHNICAL INVESTIGATION REPORT SIXTH STREET EMBANKMENT PROJECT JERSEY CITY, NEW JERSEY

Prepared for:

JERSEY CITY REDEVELOPMENT AGENCY

Prepared by:
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DRESDNER ROBIN

/disk #446-text.wpd

NOVEMBER 1998
SUBSURFACE AND GEOTECHNICAL INVESTIGATION REPORT
SIXTH STREET EMBANKMENT PROJECT
JERSEY CITY, NEW JERSEY

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SUBSURFACE AND GEOTECHNICAL INVESTIGATION REPORT
SIXTH STREET EMBANKMENT PROJECT
JERSEY CITY, NEW JERSEY

1.0 INTRODUCTION

This Subsurface Site Investigation (SI) and Geotechnical Report has been prepared for the Jersey City Redevelopment Agency (JCRA) property which consists of six former Conrail embankments (hereinafter the "Site") located along the south side of 6th Street between Luis Munoz Marin Boulevard (to the east) and Brunswick Avenue (to the west), in Jersey City, New Jersey. The investigation was conducted to obtain geotechnical and environmental data within and beneath the embankments. DRESDNER ROBIN conducted the investigation in accordance with the scope of work set forth in a proposal dated October 20, 1997 as modified at a meeting with JCRA on November 7, 1997

2.0 SITE DESCRIPTION

The Site consists of six former rail embankments situated within a predominantly residential area along 6th Street between Luis Munoz Marin Blvd. and Brunswick Ave. at Block 317, Lot 50.A, Block 280, Lot 50 A, Block 247, Lot 50.A, Block 354, Lot 50 A, Block 389.1, Lot 50, and Block 415, Lots 50PL and 52 in Jersey City, New Jersey. The embankments were constructed as filled structures confined by vertical cut stone retaining walls on all sides. The embankments, varying approximately 15 to 25 feet in height, 400 feet in length, and 90 to 100 feet wide, were built in the late 1800's The location of the Site relative to the region is shown on Figure 1. A site plan depicting the embankments and soil sampling locations (environmental and geotechnical) is presented as Figure 2.

3.0 SCOPE OF WORK

The investigation program was developed to obtain geotechnical and environmental data from each of the six rail embankment structures. The embankments are all inaccessible from ground level necessitating that equipment and personnel be lifted into place. Upon consultation with the JCRA it was determined to conduct the work in two phases. The environmental borings were obtained through the use of a truck mounted Geoprobe system lifted by crane onto each of the embankment areas. The geotechnical samples were collected from borings conducted at-grade immediately adjacent to the embankment walls

DRESDNER ROBIN conducted an environmental sampling program to assess the type and level of contamination associated with the embankments at the Site In conjunction with the environmental sampling program, DRESDNER ROBIN subcontracted MATRIX Environmental and Geotechnical Services, Inc. (MATRIX) to conduct a geotechnical investigation at the Site.

DRESDNER ROBIN

The Environmental Sampling Program consisted of collecting soil samples for analytical purposes from 2 shallow borings made in each embankment (See Figure 2) Continuous sampling was conducted through the embankment material up to 4 feet into the underlying fill/native soil. Three samples were collected at predetermined depths from each of the shallow borings and submitted for laboratory analysis for Target Compound List +30/Target Analyte List (TCL/TAL+30), Total Petroleum Hydrocarbons (TPH) and Hexavalent Chromium (Cr^{6+}) The sampling depths were staggered so as to provide a representative profile of the embankment material and the underlying native soil that will be impacted by the proposed site development.

The analyses were performed on standard turn-around basis by Envirotech Research, Inc of Edison, New Jersey; a New Jersey certified laboratory. The analytical results were compared with applicable NJDEP soil cleanup criteria to evaluate the management of the material during site development, including the potential for reuse on other city projects.

The geotechnical borings were advanced utilizing a Mobile B-57 truck mounted drill rig using hollow stem augers and split spoon samplers. Geotechnical borings were advanced adjacent to the six raised embankments to a depth of 24 feet below ground surface (bgs) see Figure 2. Standard split spoon sampling (five feet intervals) was conducted in each boring for geotechnical purposes. Geotechnical samples were collected for moisture content, grain size, and/or Atterberg limits on representative samples from each geotechnical boring

4.0 METHODS AND PROCEDURES

4.1 Environmental Investigation

A total of 12 soil borings were conducted in order to collect environmental data at the Site. Two soil borings were conducted on each of the six embankments. Soil samples were collected for laboratory analysis at staggered depths providing a representative profile of the embankment material and the underlying native soil. Drilling of the soil borings was performed by Summit Drilling Company Inc., a New Jersey licensed well driller. The soil boring locations are shown on Figure 2. A cross-section of the embankments showing the sample depths is presented as Figure 3. Drilling activities were conducted under the supervision of a DRESDNER ROBIN geologist. Drilling was conducted on December 3 through December 5, 1997. The soil borings were performed in accordance with the procedures and protocols detailed in the NJDEP Field Sampling Procedures Manual

A crane was used to lift the drilling equipment on top of each embankment. Soil borings were advanced using a pickup mounted Geoprobe System to a depth of 16 to 32 feet below the top of the embankments (up to four feet into the native soil). Continuous sampling was conducted through the embankment material and up to four feet within the native soil. Borings were advanced using a hydraulically driven core-barrel sampler. Three soil samples were collected per boring using a 4 foot stainless-steel core barrel with an acetate liner for sample recovery The

Geoprobe drilling tools were decontaminated before each use Upon opening the acetate liner, the soil was visually inspected for contamination and screened with an HNu photoionization detector (PID) for organic vapors. Soil samples submitted for VOC analysis were collected using the NJDEP required methanol preservation method.

Descriptions of the soil lithology and PID results were recorded in DRESDNER ROBIN boring logs (See Appendix 1). The soil lithology was classified using the modified Burmister Classification System for soil descriptions.

All soil samples were obtained in compliance with NJDEP-specified procedures (NJDEP Field Sampling Procedures Manual) and the investigation proposal dated October 20, 1997 as modified by a meeting between JCRA and DRESDNER ROBIN. The soil samples were retrieved daily by the laboratory courier. All soil samples were submitted for TCL+30/TAL, TPH, and Cr+6 analysis. A sampling summary table is included as Table 1: Aqueous quality assurance/quality control (QA/QC) field rinsate and trip blank samples were collected to demonstrate that the sampling protocols did not lend any uncertainty to the analytic findings with regard to handling practices or the type of materials used for sampling. Three duplicate and three field blank samples were collected and analyzed for the same parameters as the soil samples An analytical methods/quality assurance summary is provided in Table 2. Analyses were performed by Envirotech Research, Inc of Edison, New Jersey, a New Jersey certified laboratory.

4 2 Geotechnical Investigation

During the period November 24 through November 26, 1997, MATRIX conducted geotechnical investigations at the Site. A total of 11 soil borings were conducted alongside the embankments in order to obtain geotechnical information for the underlying soil. Boring location (B-1) was eliminated from the planned drilling program of 12 borings due to the presence of underground utility lines. The borings were conduced by Summit Drilling Co. in accordance with ASTM D-1586, Standard Method for Penetration Test and Split-Barrel Sampling of Soils. Two soil borings were advanced at street level adjacent to each of the elevated railroad embankments. Split spoon soil samples were taken at nominal intervals of five feet. The locations of the soil borings are shown on Figure 2. Representative soil samples were collected and tested in the MATRIX geotechnical laboratory for moisture content, grain size, and/or Atterberg limits. For more detailed information about the methodology used during the geotechnical investigation, See Appendix 4.

5.0 RESULTS

5.1 Environmental Investigation

5.1 1 Soil Characteristics

The geology within the six railroad embankments has been interpreted from the geologic information gathered during drilling activities. Soil boring logs are presented in Appendix 1. The fill materials within the embankment consist primarily of brown to red-brown silty sand mixed with minor amounts of gravel, cinders, and brick fragments. Based on visual and field screening observations, soil samples collected from the embankments did not indicate any physical evidence of contamination.

5.1.2 Soil Quality

Volatile Organic Compounds

The analytical results for all soil samples collected from the embankments during the environmental investigation indicate that the volatile organic compound (VOC) concentrations were all detected below the NJDEP residential direct contact soil cleanup criteria. The laboratory analytical results are summarized in Table 3. The laboratory data summary sheets are provided in Appendix 2. The complete laboratory report is provided as an Attachment.

Semivolatile Organic Compounds

All base neutral compound concentrations were detected below the NJDEP residential direct contact soil cleanup criteria with the exception of several polynuclear aromatic hydrocarbons (PAH) With the exception of soil sample locations SB-7, SB-8, and SB-10, PAH's were reported in exceedance of one or more of the NJDEP residential direct contact soil cleanup criteria in all soil samples collected from the embankments during the environmental investigation. The PAH's consisted of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(h)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene. PAH concentrations ranged from 720 to 12,000 ug/kg. Sampling results are presented in Table 4. The PAH concentrations in exceedance of the NJDEP criteria are presented on Figure 4. The laboratory data summary sheets are provided in Appendix 2. The complete laboratory report is provided as an Attachment.

Pesticides/ Polychlorinated Biphenyls

Pesticides/polychlorinated biphenyls (PCB) concentrations were not detected above the NJDEP residential direct contact soil cleanup criteria for any soil samples collected from the embankments during the environmental investigation. The laboratory analytical results are summarized in Table 5. The laboratory data summary sheets are provided in Appendix 2 A complete laboratory report is provided as an Attachment.

Inorganic Compounds

Inorganic compounds were detected below the NJDEP residential direct contact soil cleanup criteria except for lead, mercury, antimony and arsenic. Lead was detected above the NJDEP residential direct contact soil cleanup criteria (400 mg/kg) at soil boring locations SB-5 (10.5-11.0 feet; 1020 mg/kg), SB-7(1.5-2 0 feet; 509 mg/kg), SB-11 (3.0-3.5 feet; 569 mg/kg and 22.0-22.5 feet; 3340 mg/kg), and SB-12 (12.5-13.0 feet; 420 mg/kg). Mercury was detected above the residential direct contact soil cleanup criteria at SB-1(11.5-12.0; 15.9 mg/kg). Antimony was detected above the residential direct contact soil cleanup criteria at a concentration of 15.7 mg/kg at SB-4(1.5-2.0), and 33.2 mg/kg at SB-7(1.2-2). Arsenic was also detected above the residential direct contact soil cleanup criteria (20 mg/kg) at a concentrations of 23.5 mg/kg at SB-4(1.5-2), 24 5 mg/kg at SB-7(1.5-2), and 34.9 mg/kg at SB-11(3-3.5).

Sampling results are presented in Table 6. The metals concentrations in exceedance of the NJDEP residential direct contact cleanup criteria are shown on Figure 3. The laboratory data summary sheets are provided in Appendix 2 A complete laboratory report is provided as an Attachment.

Wet Chemistry (Chromium VI, Total Cyanide, and Total Petroleum Hydrocarbons)

Chromium VI (Cr^{6+}), Total Cyanide, and Total Petroleum Hydrocarbons (TPHC) concentrations were not detected above the NJDEP residential direct contact soil cleanup criteria in any soil samples collected from within embankments during the environmental investigation The laboratory analytical results are summarized in Table 7. The laboratory data summary sheets are provided in Appendix 2. The complete laboratory report is provided as an Attachment.

5.2 Geotechnical Investigation Results

The soil borings advanced during the geotechnical investigation revealed a subsoil profile consisting of a surface fill layer overlying native red brown and gray silty sands and gravels, and clayey silts. Fill is generally encountered to 2 5 feet below grade (bg) or less, except at B-6 where fill was measured at 7 feet bgs. Fill was not identified in borings B-2 and B-7. The fill material consist predominately of silty sands and gravel with small amounts of cinders, bricks and concrete fragments. The native soil generally consists of loose to very compact silty sands and gravels, and firm to very stiff clays and silts. Layers of fibrous peat and soft organic silt were revealed in the subsurface profile in four borings (B-8, B-8, B-11, and B-12) in the western portion of the site

The MATRIX report, evaluating the environmental characteristics of the embankment fill and native soil and the geotechnical properties of the native soils, is included as Appendix 3. The report discusses the suitability of the fill for possible reuse on or off the site, and addresses the following geotechnical issues.

- The type and engineering quality of the existing embankment materials and recommendations for reuse as structural fill.

- Recommendations for an appropriate type of building foundation system.
- Recommendations for foundation design, substructure wall design, and foundation installation criteria.
- Recommendations for slab support and underslab drainage requirements.
- Estimation of post-construction settlement of the recommended foundation system.
- Recommendations for management of groundwater during and after foundation and substructure construction.
- Recommendations for borrow material, if required, and material compaction and general earthwork construction procedures.

6.0 EMBANKMENT DEMOLITION COST ESTIMATE

The cost of embankment demolition can vary greatly depending on the availability of a reuse market for the soil and stone block materials of construction. As a result, timing and the availability of projects able to utilize contaminated fill materials will be a significant factor in the demolition cost of the embankment. To develop a range for likely costs, DRESDNER ROBIN has considered to disposal options: beneficial reuse and landfill disposal.

For quantity estimation purposes, DRESDNER ROBIN has assumed that the walls increase in thickness one foot horizontal per two feet vertical (2:1) from top to bottom, and that they extend a maximum eight feet below grade. Based on these assumptions and field measurements of the size of each embankment, the volumes of sandstone and soil to be removed calculate as follows:

Summary of Volume Calculations
(quantities in cubic yards)

Embankment	Sandstone Volume	Soil Volume	Total Volume
Brunswick St -Monmouth	12600	30000	42600
Monmouth Ave -Cole St.	11350	27625	38975
Cole St.-Jersey Ave.	10850	27250	38100
Jersey Ave.-Erie St.	9350	26000	35350
Erie St -Manila Ave	8100	23425	31525
Manila Ave.-Marin Blvd.	6775	20500	27275
West of Brunswick St [1]	225	0	225
Total all Embankments	59250	154800	214050

The calculations assume that all of the sandstone (including that which is below grade) will be removed and that all soil contained by the embankments (above grade only) will be removed These calculations are presented in Appendix 5

[1] Remaining portion of embankment wall west of Brunswick Street to be removed

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Disposal options of beneficial reuse, and landfill disposal are presented below to cover the range of costs that will be reflected in market timing. Based on the limited environmental investigation conducted by DRESDNER ROBIN, it is assumed that all of the soils from the embankment will be considered contaminated (non-hazardous ID-27 waste) and will require disposal in a permitted beneficial reuse area or landfill. DRESDNER ROBIN has also assumed that the volume of subsurface sandstone to be removed will not be replaced with clean fill and that building footings and sub-basement construction will occupy the excavated areas.

Removal Cost Factors

Embankment Removal/Excavation/ Loadout	$ 1,100,000
Hauling	
- 2 Mile	$ 1,995,000
- 5 Mile	$ 2,520,000
-10 Mile	$ 2,940,000
Disposal ID-27 @ $40/TN	$ 8,050,000
Disposal of Stone @ $ 10/CY	$ 600,000

As indicated by the above listed cost factors, removal of the embankment can range from approximately $3.0M to $9.7M Under the best possible circumstances a project seeking significant fill volumes may be willing to remove the embankment for the value of the fill.

7.0 CONCLUSIONS AND RECOMMENDATIONS

1. The analytical results for soil samples collected as part of the environmental investigation of the six embankments indicate that the concentrations of volatile organics, acid extractables, pesticides, PCBs, TPH, Cr^{6+} and cyanide in the fill materials are below the NJDEP residential direct contact soil cleanup criteria with the exception of several PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(h)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene) The concentrations of all metals were below the NJDEP residential direct contact soil cleanup criteria with the exception of lead, arsenic, mercury and antimony.

2. The analytical results for the soil samples collected of the embankment material indicate the soil cannot be reused as clean fill at other city projects due to the elevated concentrations of several PAHs and metals above the NJDEP residential direct contact soil cleanup criteria. The options for the final disposition of the soil in the embankments are recycling or disposal at a landfill, possibly as final cover at the landfill If the material is reused at other city projects, the material would most likely need to be used as subsurface fill material, covered with either clean fill or some other institutional control (buildings, asphalt or pavement) and a Declaration of Environmental Restrictions (DER) would be required for the location receiving the soil.

3. Refer to Appendix 4, MATRIX Environmental geotechnical evaluation for conclusions and recommendations regarding the geotechnical investigation.

4. Measurements and calculations of the embankments have estimated that the total volume of material to be removed is 59,250 cubic yards of sandstone and 154,800 cubic yards of soil. The results of the environmental investigation show that the soils in the embankments will most likely be classified as non-hazardous (ID-27) waste. This will prohibit reuse of these soils at other sites without appropriate engineering and institutional controls. Based on the calculated amounts of sandstone and soil and the necessity to dispose of the soils, the total estimated cost of demolition of the embankments will likely vary between $3.0M and $9.7M depending on the disposal option available for the soils.

TABLE 1

SAMPLING SUMMARY TABLE
SIXTH STREET, JERSEY CITY, NEW JERSEY

BORING	SAMPLE NUMBER	MEDIUM	SAMPLE DEPTH (feet below top of embankment)	Analytical Parameters	Sampling Method
SB-1	SB1/1 5-2	Soil	1.5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB1/11 5-12	Soil	11 5-12	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB1/19 5-20	Soil	19.5-20	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-2	SB2/1 5-2	Soil	1 5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB2/15 5-16	Soil	15 5-16	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB2/19 5-20	Soil	19.5-20	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-3	SB3/1.5-2	Soil	1.5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB3/10-10 5	Soil	10-10 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB3/19.5-20	Soil	19.5-20	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-4	SB4/1.5-2	Soil	1 5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB4/14 5-15	Soil	14 5-15	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB4/23 5-24	Soil	23 5-24	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-5	SB5/1 5-2	Soil	1 5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB5/10 5-11	Soil	10.5-11	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB5/23 5-24	Soil	23.5-24	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-6	SB6/2.5-3	Soil	.2 5-3	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB6/12 5-13	Soil	12 5-13	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB6/23.5-24	Soil	23 5-24	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-7	SB7/1.5-2	Soil	1.5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB7/19 5-20	Soil	19 5-20	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB7/27 5-28	Soil	27.5-28	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-8	SB8/1 5-2	Soil	1 5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB8/15 5-16	Soil	15 5-16	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB8/27 5-28	Soil	27.5-28	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-9	SB9/1 5-2	Soil	1.5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB9/16-16.5	Soil	16-16 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB9/24-24.5	Soil	24-24.5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-10	SB10/1 5-2	Soil	1 5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB10/11-11 5	Soil	11-11 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB10/31 5-32	Soil	31 5-32	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
				TCL/TAL+30,TPH, Cr^{6+}	
SB-11	SB11/3-3 5	Soil	3-3 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB11/22-22 5	Soil	22-22 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB11/31-31 5	Soil	31-31 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
SB-12	SB12/1 5-2	Soil	1 5-2	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB12/12 5-13	Soil	12 5-13	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe
	SB12/31-31 5	Soil	31-31 5	TCL/TAL+30,TPH, Cr^{6+}	GeoProbe

TABLE 2

Analytical Methods/Quality Assurance Summary Table
Sixth Street Embankment Project
Jersey City, New Jersey

Matrix Type	# Sample	Field Blank/ Trip Blank	Analytical Parameters	Analytical Methods	MS/MSD	Duplicates	Split-Spoon	Performance Evaluation Samples	Sample Preservation	Sample Holding Time
Soil	36	Field Blanks:								
		FB12397 MEOH-12397 12/3/97	TCL/TAL+30, Cr^{6+}, TPH	See Appendix 3	None	Dup. (Dup Of SB2/15 5-16)	None	None	See Appendix 3	See Appendix 3
		FB12497 MEOH-FB 12/4/97	TCL/TAL+30, Cr^{6+}, TPH	See Appendix 3	None	Dup. 2 (Dup of SB9/1.5-2)	None	None	See Appendix 3	See Appendix 3
		FB125197 12/5/97	TCL/TAL+30, Cr^{6+}, TPH	See Appendix 3	None	Dup. 3 (Dup of SB-12/12.5-13)	None	None	See Appendix 3	See Appendix 3
		Trip Blanks.								
		MEOH-TB 34373 12/3/97	TCL VOA	See Appendix 3	None					
		MEOH-TB 34537 12/4/97	TCL VOA	See Appendix 3	None					
		MEOH-TB 34697 12/5/97	TCL VOA	See Appendix 3	None					

TABLE 3

Summary Analytical Results of Volatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB1-1.5-2	SB1-11.5-12	SB1-19.5-20	SB2-1.5-2	SB2-15.5-16	SB2-18.5-20	SB3-1.5-2.0	SB3-10-10.5	SB3-19.5-20	SB4-1.5-2.0
Lab Sample Number				34360	34361	34362	34363	34365	34364	34366	34367	34368	34370
Sampling Date				12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Units				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
VOLATILE COMPOUNDS (GCMS)													
Chloromethane	520 000	1 000 000	10,000	130 U	150 U	140 U	120 J	170 U	130 U	130 U	160 U	150 U	140 U
Bromomethane	70 000	1,000 000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
VinylChloride	2,000	7,000	10,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Chloroethane	NA	NA	NA	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
MethyleneChloride	40 000	210,000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Acetone	1 000 000	1 000,000	100,000	670 U	750 U	710 U	640 U	850 U	640 U	660 U	800 U	740 U	700 U
CarbonDisulfide	NA	NA	NA	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
1 1-Dichloroethene	8,000	150 000	10 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
1 1 Dichloroethane	870 000	1 000,000	10,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
trans-1,2-Dichloroethene	1 000 000	1 000 000	50,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
cis-1,2-Dichloroethene	79,000	1,000,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Chloroform	19 000	28,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
1,2-Dichloroethane	6 000	24,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
2 Butanone	1,000 000	1,000,000	50 000	670 U	750 U	710 U	640 U	850 U	640 U	660 U	800 U	740 U	700 U
1 1 1-Trichloroethane	210,000	1,000,000	50,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
CarbonTetrachloride	2,000	4 000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Bromodichloromethane	11 000	46,000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
1,2-Dichloropropane	10 000	43,000	NA	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
cis 1 3-Dichloropropene	4 000	6,000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Trichloroethene	23 000	84,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Dibromochloromethane	110,000	1,000,000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
1,1,2-Trichloroethane	22,000	420,000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Benzene	3,000	13,000	1,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
trans-1 3-Dichloropropene	4 000	5 000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Bromoform	86,000	370,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
4 Methyl-2-Pentanone	1 000,000	1 000,000	50,000	670 U	750 U	710 U	640 U	850 U	640 U	660 U	800 U	740 U	700 U
2-Hexanone	NA	NA	NA	670 U	750 U	710 U	640 U	850 U	640 U	660 U	800 U	740 U	700 U
Tetrachloroethene	4 000	8,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
1 1,2,2-Tetrachloroethane	34,000	70,000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Toluene	1,000,000	1,000 000	500,000	130 U	150 U	140 U	130 U	170 U	130 U	280	160 U	150 U	140 U
Chlorobenzene	37,000	680 000	1 000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Ethylbenzene	1,000 000	1,000,000	100 000	130 U	150 U	140 U	130 U	170 U	130 U	190	160 U	150 U	140 U
Styrene	23,000	97 000	100,000	130 U	150 U	140 U	130 U	170 U	130 U	130 U	160 U	150 U	140 U
Xylene (Total)	410,000	1,000,000	10,000	130 U	150 U	140 U	130 U	170 U	130 U	790	160 U	150 U	140 U
Total Confident Conc VOAs (s)				0	0	0	0	0	0	1270	0	0	0
Total Estimated Conc VOA TICs (s)				2700	3900	1800	1200	6800	920	11320	6300	2200	4900

Notes
* Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloropropene.
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
NR - Not analyzed.
Dup Duplicate sample of SB2-15 5-16
Dup2 Duplicate sample of SB1-1 5-2
Dup3 Duplicate sample of SB12-12 5-13

TABLE 3

Summary Analytical Results of Volatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB4-14.5-15	SB4-23.5-24	SB5-1.5-2	SB5-10.5-11	SB5-23.5-24	SB6-2.5-3	SB6-12.5-13	SB6-23.5-24	SB7-1.5-2	SB7-19.5-20	SB7-27.5-28
Lab Sample Number				34371	34372	34529	34530	34531	34532	34533	34534	34539	34540	34541
Sampling Date				12/03/97	12/03/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Units				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)											
VOLATILE COMPOUNDS (GC/MS)														
Chloromethane	520,000	1,000,000	10,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Bromomethane	70,000	1,000,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
VinylChloride	2,000	7,000	10,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Chloroethane	NA	NA	NA	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
MethyleneChloride	48,000	210,000	1,000	150 U	140 U	110 JB	100 JB	110 JB	100 JB	60 JB	120 JB	170 B	160 B	210 B
Acetone	1,000,000	1,000,000	100,000	750 U	710 U	700 U	710 U	670 U	600 U	630 U	650 U	660 U	600 U	710 U
CarbonDisulfide	NA	NA	NA	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
1,1-Dichloroethene	6,000	150,000	10,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
1,1-Dichloroethane	570,000	1,000,000	10,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
trans-1,2-Dichloroethene	1,000,000	1,000,000	60,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
cis-1,2-Dichloroethene	70,000	1,000,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Chloroform	10,000	20,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
1,2-Dichloroethane	6,000	24,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
2-Butanone	1,000,000	1,000,000	50,000	750 U	710 U	700 U	710 U	670 U	600 U	630 U	650 U	660 U	600 U	710 U
1,1,1-Trichloroethane	210,000	1,000,000	50,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
CarbonTetrachloride	2,000	4,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Bromodichloromethane	11,000	46,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
1,2-Dichloropropane	10,000	43,000	NA	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
cis-1,3-Dichloropropene	4,000	6,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Trichloroethene	23,000	64,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Dibromochloromethane	110,000	1,000,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
1,1,2-Trichloroethane	22,000	420,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Benzene	3,000	13,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
trans-1,3-Dichloropropene	4,000	5,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Bromoform	88,000	370,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
4-Methyl-2-Pentanone	1,000,000	1,000,000	60,000	750 U	710 U	700 U	710 U	670 U	600 U	630 U	650 U	660 U	600 U	710 U
2-Hexanone	NA	NA	NA	750 U	710 U	700 U	710 U	670 U	600 U	630 U	650 U	660 U	600 U	710 U
Tetrachloroethene	4,000	6,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
1,1,2,2-Tetrachloroethane	34,000	70,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Toluene	1,000,000	1,000,000	600,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	61 J	120 U	140 U
Chlorobenzene	37,000	680,000	1,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Ethylbenzene	1,000,000	1,000,000	100,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Styrene	23,000	97,000	100,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	130 U	130 U	120 U	140 U
Xylene(Total)	410,000	1,000,000	10,000	150 U	140 U	140 U	140 U	130 U	120 U	120 U	120 U	86 J	120 U	140 U
Total Confident Conc. VOAs (s)				0	0	0	0	0	0	0	0	0	0	0
Total Estimated Conc. VOA TICs (s)				7500	870	0	2400	1300	1200	600	5100	3600	1100	900

Notes

* Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloropropene

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. The indicates possible laboratory contamination of the environmental sample.

NR - Not analyzed

Dup Duplicate sample of SB2-15.5-16

Dup2 Duplicate sample of SB9-1.5-2

Dup3 Duplicate sample of SB12-12.5-13

TABLE 3

Summary Analytical Results of Volatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB8-1.5-2	SB8-15.5-16	SB8-27.5-28	SB9-1.5-2	SB9-16-16.5	SB9-24-24.5	SB10-1.5-2	10-11-11.5	B10-31.5-32	SB11-3-3.5	B11-22-22.5	B11-31-31.5
Lab Sample Number				34542	34543	34544	34545	34546	34547	34548	34549	34550	34693	34694	34695
Sampling Date				12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/05/97	12/05/97	12/05/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Units				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
VOLATILE COMPOUNDS (GC/MS)	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to *Ground Water* Soil Cleanup Criteria (ug/kg)												
Chloromethane	520 000	1,000,000	10,000	140 U	120 U	110 U	140 U	120 U	150 U	180 U	140 U	130 U	140 U	140 U	140 U
Bromomethane	79 000	1,000,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	180 U	140 U	130 U	140 U	140 U	140 U
VinylChloride	2,000	7,000	10,000	140 U	120 U	110 U	140 U	120 U	150 U	180 U	140 U	130 U	140 U	140 U	140 U
Chloroethane	NA	NA	NA	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
MethyleneChloride	49,000	210,000	1 000	170 B	180 B	180 B	180 B	140 B	180 B	200 B	200 B	210 B	170 B	230 B	170 B
Acetone	1,000 000	1,000,000	100,000	700 U	590 U	530 U	680 U	600 U	740 U	740 U	690 U	640 U	700 U	710 U	680 U
CarbonDisulfide	NA	NA	NA	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
1 1-Dichloroethene	6 000	150,000	10 000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
1 1-Dichloroethane	570,000	1 000,000	10 000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
trans-1 2 Dichloroethene	1,000,000	1 000,000	50,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
cis-1,2 Dichloroethene	79 000	1,000 000	1,000	140 U	120 U	110 U	140 U	120 U	160 U	150 U	140 U	130 U	140 U	140 U	140 U
Chloroform	19 000	28,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
1,2 Dichloroethane	6 000	24,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
2-Butanone	1 000 000	1 000 000	50,000	700 U	590 U	110 U	680 U	600 U	740 U	740 U	690 U	640 U	700 U	710 U	680 U
1 1 1-Trichloroethane	210,000	1 000,000	50,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
Carbon Tetrachloride	2,000	4 000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
Bromodichloromethane	11,000	46,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
1,2 Dichloropropane	10,000	43 000	NA	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
cis-1,3-Dichloropropene	4 000	5,000	1,000	140 U	120 U	110 U	140 U	120 U	160 U	150 U	140 U	130 U	140 U	140 U	140 U
Trichloroethene	23 000	84 000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
Dibromochloromethane	116 000	1,000,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
1 1,2-Trichloroethane	22,000	420 000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
Benzene	3,000	13 000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	190
trans-1 3-Dichloropropene	4,000	5 000	1 000	140 U	120 U	110 U	140 U	120 U	150 U	180 U	140 U	130 U	140 U	140 U	140 U
Bromoform	86 000	370 000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
4-Methyl-2-Pentanone	1,000,000	1,000,000	50,000	700 U	590 U	530 U	680 U	600 U	740 U	740 U	690 U	640 U	700 U	710 U	680 U
2-Hexanone	NA	NA	NA	700 U	590 U	530 U	680 U	600 U	740 U	740 U	690 U	640 U	700 U	710 U	680 U
Tetrachloroethene	4 000	8 000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
1 1 2,2-Tetrachloroethane	34,000	70,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
Toluene	1,000,000	1,000,000	800,000	280	120 U	110 U	140 U	120 U	150 U	160	140 U	130 U	140 U	140 U	370
Chlorobenzene	37,000	680,000	1,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	140 U
Ethylbenzene	1 000,000	1 000 000	100 000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	290
Styrene	23,000	97 000	100,000	140 U	120 U	110 U	140 U	120 U	150 U	150 U	140 U	130 U	140 U	140 U	87 J
Xylenes(Total)	410,000	1,000,000	10,000	230	120 U	110 U	140 U	120 U	150 U	330	140 U	130 U	140 U	140 U	970
Total Compound Conc. VOAs (s)				410	0	0	0	0	0	910	0	0	0	0	1820
Total Estimated Conc. VOA TICs (s)				1100	640	1300	1000	0	6700	640	4200	2400	0	2600	7640

Notes
* Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloroprop

U - The compound was not detected at the reported concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - This analyte was found in the laboratory blank as well as the sample.
This indicates possible laboratory contamination of the environmental sample

NR - Not analyzed.

Dup Duplicate sample of SB2-15.5-16
Dup2 Duplicate sample of SB9-1.5-2
Dup3 Duplicate sample of SB12-12.5-13

TABLE 3

Summary Analytical Results of Volatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City New Jersey

Sample ID / Sample Depth				SB12-1 5-2	SB12-12.5-13	SB12-31-31.5	Dup	Dup-2	Dup3
Lab Sample Number				34689	34690	34691	34366	34538	34692
Sampling Date				12/05/97	12/05/97	12/05/97	12/03/97	12/04/97	12/05/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				50.0	50.0	50.0	50.0	50.0	50.0
Units				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)						
VOLATILE COMPOUNDS (GC/MS)									
Chloromethane	520 000	1,900 000	10 000	140 U	120 U	130 U	140 U	150 U	120 U
Bromomethane	78 000	1 000,000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
VinylChloride	2,000	7,000	10 000	140 U	120 U	130 U	140 U	150 U	120 U
Chloroethane	NA	NA	NA	140 U	120 U	130 U	140 U	150 U	120 U
MethyleneChloride	49,000	210 000	1,000	230 B	110 JB	180 B	140 U	180 JB	240 B
Acetone	1,000,000	1,000,000	100,000	680 U	630 U	660 U	700 U	770 U	600 U
CarbonDisulfide	NA	NA	NA	130 J	120 U	130 U	140 U	180 U	120 U
1 1 Dichloroethene	8 000	150 000	19,000	140 U	120 U	130 U	140 U	150 U	120 U
1 1-Dichloroethane	570,000	1,000,000	18,000	140 U	120 U	130 U	140 U	150 U	120 U
trans-1,2-Dichloroethene	1,000,000	1 000,000	50,000	140 U	120 U	130 U	140 U	150 U	120 U
cis-1,2-Dichloroethene	78 000	1,000,000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
Chloroform	19,000	28,000	1 000	140 U	120 U	130 U	140 U	150 U	120 U
1,2-Dichloroethane	6 000	24 000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
2-Butanone	1,000,000	1,000,000	50,000	680 U	630 U	660 U	700 U	770 U	600 U
1 1 1-Trichloroethane	210 000	1,000 000	50,000	140 U	120 U	130 U	140 U	150 U	120 U
CarbonTetrachloride	2,000	4 000	1 000	140 U	120 U	130 U	140 U	150 U	120 U
Bromodichloromethane	11,000	46,000	1 000	140 U	120 U	130 U	140 U	150 U	120 U
1,2-Dichloropropane	10 000	43,000	NA	140 U	120 U	130 U	140 U	150 U	120 U
cis-1 3-Dichloropropene	4 000	5,000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
Trichloroethene	23,000	84,000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
Dibromochloromethane	110,000	1,000,000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
1 1,2-Trichloroethane	22,000	420 000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
Benzene	3,000	13,000	1 000	140 U	200	130 U	140 U	150 U	240
trans-1,3-Dichloropropene	4,000	5,000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
Bromoform	86,000	370 000	1,000	140 U	120 U	130 U	140 U	150 U	120 U
4-Methyl-2-Pentanone	1,000,000	1,000,000	50,000	680 U	630 U	660 U	700 U	770 U	600 U
2-Hexanone	NA	NA	NA	680 U	630 U	660 U	700 U	770 U	600 U
Tetrachloroethene	4 000	8 000	1 000	140 U	120 U	130 U	140 U	150 U	120 U
1,1 2,2-Tetrachloroethane	34 000	70,000	1 000	140 U	120 U	130 U	140 U	150 U	120 U
Toluene	1,000,000	1 000 000	900,000	140 U	84 J	130 U	140 U	150 U	100 J
Chlorobenzene	37 000	680 000	1 000	140 U	120 U	130 U	140 U	150 U	120 U
Ethylbenzene	1,000,000	1,000 000	100,000	140 U	87 J	130 U	140 U	150 U	82 J
Styrene	23 000	97 000	100,000	140 U	120 U	130 U	140 U	150 U	120 U
Xylene(Total)	410,000	1,000,000	10,000	140 U	87 J	73 J	140 U	81 J	100 J
Total Confident Conc. VOAs (s)				0	200	0	0	0	340
Total Estimated Conc. VOA TICs (s)				3800	750	0	5000	3100	0

Notes:

* Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloropropene

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample.

This indicates possible laboratory contamination of the environmental sample.

NR - Not analyzed

Dup Duplicate sample of SB2-15.5-16

Dup2 Duplicate sample of SB9-1.5-2

Dup3 Duplicate sample of SB12-12.5-13

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey.

ple ID / Sample Depth				SB1-1.5-2	SB1-11.5-12	SB1-18.5-20	SB2-1.5-2	SB2-15.5-20	SB2-19.5-20	SB3-1.5-2	SB3-10-10.5	SB3-18.5-20	SB4-1.5-2
Sample Number				34360	34361	34362	34363	34365	34364	34366	34367	34368	34370
pling Date				12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97
x				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
on Factor				1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
IVOLATILE COMPOUNDS (GC/MS)													
Phenol	10 000 000	10,000,000	50 000	390 U	750 U	400 U	380 U	430 U	400 U	44 J	400 U	400 U	380 U
2-Chlorophenol	280,000	5,200,000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
2-Methylphenol	2,800,000	10 000,000	NA	390 U	750 U	400 U	380 U	16 J	400 U	16 J	400 U	400 U	380 U
4-Methylphenol	2,800 000	10,000 000	NA	91 J	26 J	400 U	380 U	76 J	400 U	59 J	16 J	400 U	19 J
2-Nitrophenol	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	38
2,4-Dimethylphenol	1,100,000	10,000 000	10,000	12 J	750 U	400 U	380 U	14 J	400 U	380 U	400 U	400 U	380 U
2 4-Dichlorophenol	170 000	3 100,000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
4-Chloro-3-methylphenol	10 000,000	10,000 000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
2,4 5-Trichlorophenol	82,000	270,000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
2,4 5-Trichlorophenol	5,600,000	10 000 000	50,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
2,4-Dinitrophenol	110 000	2 100,000	10,000	780 U	1500 U	790 U	760 U	860 U	790 U	770 U	800 U	800 U	760 U
4-Nitrophenol	NA	NA	NA	780 U	1500 U	790 U	760 U	860 U	790 U	770 U	800 U	800 U	760 U
4 6 Dinitro-2-methylphenol	NA	NA	NA	780 U	1500 U	790 U	760 U	860 U	790 U	770 U	800 U	800 U	760 U
Pentachlorophenol	6 000	24,000	100 000	780 U	1500 U	790 U	760 U	860 U	790 U	770 U	800 U	800 U	760 U
bis(2-Chloroethyl)ether	650	3 000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
1 3-Dichlorobenzene	5 100,000	10,000,000	100 000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
1 4 Dichlorobenzene	570,000	10 000 000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	66 J	400 U	400 U	27 J
1 2-Dichlorobenzene	5,100 000	10 000,000	50 000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
bis(2-chloroisopropyl)ether	2,300 000	10,000 000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
N-Nitroso-di-n-propylamine	660	660	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Hexachloroethane	6 000	100,000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Nitrobenzene	28,000	520,000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Isophorone	1,100,000	10 000,000	50,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
bis(2-Chloroethoxy)methane	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
1,2,4 Trichlorobenzene	68,000	1,200 000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Naphthalene	230,000	4 200,000	100,000	400	1000	20 U	53	180	20 U	2300	41	20 U	470
4-Chloroaniline	230 000	4,200,000	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Hexachlorobutadiene	1,000	21,000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
2-Methylnaphthalene	NA	NA	NA	250 J	510 J	400 U	58 J	97 J	400 U	3000	34 J	400 U	500
Hexachlorocyclopentadiene	400,000	7 300 000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380
2-Chloronaphthalene	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380
2-Nitroaniline	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	
Dimethylphthalate	10 000 000	10 000,000	50 000	390 U	750 U	400 U	380 U	430 U	400 U	380 J	400 U	400 U	
Acenaphthylene	NA	NA	NA	140	140	20 U	87 J	380	20 U	420	220	20 U	150
2 6 Dinitrotoluene	1,000	4,000	10,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
3-Nitroaniline	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Acenaphthene	3 400 000	10,000,000	100,000	33	2000	20 U	19 U	280	20 U	370	150	20 U	52
Dibenzofuran	NA	NA	NA	850	1200	400 U	33 J	220 J	400 U	1600	100 J	400 U	410
2,4-Dinitrotoluene	1 000	4 000	10 000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Diethylphthalate	10 000 000	10 000,000	50 000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
4-Chlorophenyl-phenylether	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Fluorene	2,300 000	10,000,000	100 000	39	1600	20 U	15 J	300	20 U	240	160	20 U	65
4-Nitroaniline	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
N Nitrosodiphenylamine	140 000	600,000	100 000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
4-Bromophenyl-phenylether	NA	NA	NA	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Hexachlorobenzene	660	2,000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Phenanthrene	NA	NA	NA	880	15000	81 J	230	2800	20 U	4800	1700	20 U	1300
Anthracene	10 000 000	10,000 000	100 000	620	2800	20 U	9.2 J	630	20 U	1000	560	20 U	200
Carbazole	NA	NA	NA	260 J	1200	400 U	380 U	420 J	400 U	210 J	170 J	400 U	92 J
Di-n-butylphthalate	5,700 000	10 000,000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U

See footnotes on next page

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey.

ple ID / Sample Depth				SB1-1.5 2	SB1-11.5-12	SB1-19.5-20	SB2-1.5-2	SB2-15 5-20	SB2-18.5-20	SB3-1.5-2	SB3-10-10.5	SB3-18.5-20	SB4-1.5-2
Sample Number				34360	34361	34362	34363	34365	34364	34366	34367	34368	34370
pling Date				12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97
ix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
ion Factor				1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
IVOLATILE COMPOUNDS (GC/MS) (con t)													
Fluoranthene	2 300 000	10,000 000	100,000	1000	17000	20 U	110	4300	11 J	4200	3300	20 U	1300
Pyrene	1,700 000	10,000,000	100,000	610	15000	20 U	72	3300	9 1 J	2400	2700	20 U	760
Butylbenzylphthalate	1,100,000	10,000 000	100,000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
3,3 -Dichlorobenzidine	2,000	6,000	100,000	780 U	1500 U	790 U	760 U	860 U	790 U	770 U	800 U	800 U	760 U
Benzo(a)anthracene	900	4,000	500,000	500	6800	12 J	110	2100	20 U	1400	1700	20 U	480
Chrysene	9 000	40,000	500,000	580	7200	20 U	170	2300	20 U	2800	1700	20 U	1200
bis(2-Ethylhexyl)phthalate	49,000	210 000	100 000	390 U	750 U	400 U	380 U	110 JB	260 JB	280 JB	400 U	180 JB	190 JB
Di-n-octylphthalate	1 100,000	10,000,00	100 000	390 U	750 U	400 U	380 U	430 U	400 U	380 U	400 U	400 U	380 U
Benzo(b)fluoranthene	900	4,000	50 000	1700	8800	20 U	120	2700	20 U	3600	1800	20 U	1200
Benzo(k)fluoranthene	900	4,000	500 000	530	3000	20 U	19 J	1000	20 U	1000	760	20 U	340
Benzo(a)pyrene	660	660	100 000	170	7300	20 U	24	2100	20 U	720	1600	20 U	270
Indeno(1,2,3-cd)pyrene	900	4 000	500,000	240	4400	20 U	33	1200	20 U	580	766	20 U	270
Dibenz(a h)anthracene	660	660	100,000	100	670	20 U	15 J	310	20 U	190	200	20 U	94
Benzo(g h i)perylene	NA	NA	NA	140	4100	20 U	32	980	20 U	390	650	20 U	220
al Confident Conc. BNAs (s)				8532	99210	0	954	24860	0	31010	17991	0	9281
al Estimated Conc. BNA TICs (s)				12740	26900	0	5290	12220	0	45290	4910	0	17650

alues listed reflect the combined standards for the 2 4/2 6-Dinitrotoluene mixture
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria
The results is less than the quantitation limit but greater than zero
The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample.
This indicates possible laboratory contamination of the environmental sample.
NA Not available
NR - Not analyzed
Dup - Duplicate sample of SB2-15 5-16
Dup2 - Duplicate sample of SB9-1.5-2.
Dup3 - Duplicate sample of SB12-12 5-13
[ ] - Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey.

ple ID / Sample Depth Sample Number pling Date rix ion Factor s				SB4-14.5-15 34371 12/03/97 SOLID 1.0 ug/kg	SB4-23.5-24 34372 12/03/97 SOLID 1.0 ug/kg	SB5-1.5-2 34529 12/04/97 SOLID 1.0 ug/kg	SB5-10.5-11 34530 12/04/97 SOLID 1.0 ug/kg	SB5-23.5-24 34531 12/04/97 SOLID 1.0 ug/kg	SB6-2.5-3 34532 12/04/97 SOLID 1.0 ug/kg	SB6-12.5-13 34533 12/04/97 SOLID 5.0 ug/kg	SB6-23.5-24 34534 12/04/97 SOLID 1.0 ug/kg	SB7-1.5-2 34538 12/04/97 SOLID 1.0 ug/kg	SB7-18.5-20 34540 12/04/97 SOLID 1.0 ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
IVOLATILE COMPOUNDS (GC/MS)													
Phenol	10,000,000	10,000,000	50,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	11 J	390 U	380 U
2-Chlorophenol	280,000	5,200,000	10 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2-Methylphenol	2,800 000	10,000,000	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
4-Methylphenol	2,800,000	10,000,000	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	16 J	390 U	380 U
2-Nitrophenol	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380
2,4-Dimethylphenol	1,100,000	10,000,000	10,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2,4-Dichlorophenol	170,000	3 100 000	10 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
4 Chloro-3-methylphenol	10,000,000	10,000,000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2 4 6-Trichlorophenol	62,000	270,000	10,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2 4 5-Trichlorophenol	5 600 000	10,000,000	50,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2,4-Dinitrophenol	110,000	2 100,000	10,000	770 U	820 U	770 U	780 U	820 U	750 U	3800 U	770 U	780 U	770 U
4-Nitrophenol	NA	NA	NA	770 U	820 U	770 U	780 U	820 U	750 U	3800 U	770 U	780 U	770 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	770 U	820 U	770 U	780 U	820 U	750 U	3800 U	770 U	780 U	770 U
Pentachlorophenol	6,000	24,000	100 000	770 U	820 U	770 U	780 U	820 U	750 U	3800 U	770 U	780 U	770 U
bis(2-Chloroethyl)ether	660	3,000	10,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
1 3-Dichlorobenzene	5,100 000	10,000,000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
1 4-Dichlorobenzene	570,000	10,000 000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
1 2-Dichlorobenzene	6 100,000	10 000 000	50 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
bis(2-chloroisopropyl)ether	2,300 000	10,000 000	10 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
N-Nitroso-di-n-propylamine	660	660	10,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Hexachloroethane	8,000	100,000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Nitrobenzene	28,000	520 000	10 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Isophorone	1,100,000	10,000,000	50,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
bis(2-Chloroethoxy)methane	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
1 2,4-Trichlorobenzene	68 000	1 200,000	100 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Naphthalene	230 000	4,200,000	100,000	19 U	20 U	19 U	57	20 U	19 U	1000	820	290	19 U
4-Chloroaniline	230,000	4,200,000	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Hexachlorobutadiene	1 000	21 000	100 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2-Methylnaphthalene	NA	NA	NA	380 U	410 U	380 U	39 J	410 U	380 U	560 J	130 J	300 J	380 U
Hexachlorocyclopentadiene	400,000	7 300 000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2-Chloronaphthalene	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
2-Nitroaniline	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380
Dimethylphthalate	10,000,000	10,000,000	50,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	38(
Acenaphthylene	NA	NA	NA	19 U	20 U	14 J	97	20 U	19 U	110	31	99	19 U
2 6-Dinitrotoluene	1,000	4 000	10,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
3-Nitroaniline	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Acenaphthene	3,400 000	10,000,000	100 000	14 J	20 U	15 J	200	20 U	9 5 J	3300	300	19 U	19 U
Dibenzofuran	NA	NA	NA	380 U	410 U	9.8 J	100 J	410 U	380 U	2200	230 J	230 J	380 U
2 4-Dinitrotoluene	1,000	4 000	10,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Diethylphthalate	10 000,000	10,000,000	50,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
4-Chlorophenyl-phenylether	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Fluorene	2,300 000	10,000,000	100,000	9 0 J	20 U	16 J	190	20 U	8 4 J	3400	240	42	19 U
4-Nitroaniline	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
N-Nitrosodiphenylamine	140 000	600 000	100 000	380 U	410 U	380 U	390 U	410 U	380 U	79 J	380 U	390 U	380 U
4-Bromophenyl-phenylether	NA	NA	NA	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Hexachlorobenzene	660	2,000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Phenanthrene	NA	NA	NA	130	20 U	210	1600	20 U	120	26000	2200	850	19 U
Anthracene	10,000,000	10,000 000	100,000	30	20 U	47	520	20 U	25	8100	480	180	19 U
Carbazole	NA	NA	NA	14 J	410 U	19 J	150 J	410 U	380 U	3700	220 J	75 J	380 U
Di-n-butylphthalate	5 700 000	10 000 000	100 000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U

See footnotes on next page

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

mple ID / Sample Depth Sample Number mpling Date /ix tion Factor ts				SB4-14.5-15 34371 12/03/97 SOLID 1.0 ug/kg	SB4-23.5-24 34372 12/03/97 SOLID 1.0 ug/kg	SB5-1.5-2 34528 12/04/97 SOLID 1.0 ug/kg	SB5-10.5-11 34530 12/04/97 SOLID 1.0 ug/kg	SB5-23.5-24 34531 12/04/97 SOLID 1.0 ug/kg	SB6-2.5-3 34532 12/04/97 SOLID 1.0 ug/kg	SB6-12.5-13 34533 12/04/97 SOLID 5.0 ug/kg	SB6-23.5-24 34534 12/04/97 SOLID 1.0 ug/kg	SB7-1.5-2 34539- 12/04/97 SOLID 1.0 ug/kg	SB7-19.5-20 34540 12/04/97 SOLID 1.0 ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
MIVOLATILE COMPOUNDS (GC/MS) (con t)													
Fluoranthene	2,300,000	10 000,000	100,000	160	20 U	320	2600	20 U	160	26000	2200	750	25
Pyrene	1,700 000	10,000 000	100,000	150	20 U	340	2700	20 U	150	26000	2100	720	25
Butylbenzylphthalate	1,100 000	10,000 000	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
3 3 -Dichlorobenzidine	2,000	6,000	100,000	770 U	820 U	770 U	780 U	820 U	750 U	3900 U	770 U	780 U	770 U
Benzo(a)anthracene	900	4,000	500,000	79	20 U	190	1100	20 U	71	10000	850	290	22
Chrysene	9,000	40,000	500,000	80	20 U	230	1300	20 U	78	11000	980	730	13 J
bis(2-Ethylhexyl)phthalate	49,000	210,000	100,000	380 U	650 B	380 U	390 U	410 U	380 U	1900 U	2300	390 U	380 U
Di-n-octylphthalate	1,100,000	10 000,00	100,000	380 U	410 U	380 U	390 U	410 U	380 U	1900 U	380 U	390 U	380 U
Benzo(b)fluoranthene	900	4,000	50,000	95	20 U	280	1400	20 U	78	12000	1100	800	19 J
Benzo(k)fluoranthene	900	4,000	500,000	40	20 U	99	530	20 U	32	4600	420	270	8.9 J
Benzo(a)pyrene	660	660	100,000	79	20 U	210	1200	20 U	61	10000	850	200	15 J
Indeno(1 2,3-cd)pyrene	900	4,000	500 000	59	20 U	130	700	20 U	34	5900	450	170	19 U
Dibenz(a h)anthracene	660	660	100,000	15 J	20 U	35	180	20 U	19 U	1700	110	57	19 U
Benzo(g h i)perylene	NA	NA	NA	55	20 U	120	730	20 U	30	5100	440	140	19 U
al Confident Conc. BNAs (s)				958	0	2181	15304	0	838	158810	15361	5588	72
al Estimated Conc. BNA TICs (s)				0	0	0	2770	0	0	36800	9890	10550	0

alues listed reflect the combined standards for the 2,4/2,6-Dinitrotoluene mixture.
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria
The results is less than the quantitation limit but greater than zero.
The concentration given is an approximate value
B - The analyte was found in the laboratory blank as well as the sample
This indicates possible laboratory contamination of the environmental sample
NA Not available
NR - Not analyzed
Dup - Duplicate sample of SB2-15.5-16
up2 - Duplicate sample of SB9-1.5-2
up3 - Duplicate sample of SB12-12.5-13
- Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

ple ID / Sample Depth				SB7-27.5-28	SB8-1.5-2	SB8-16.5-16	SB8-27.5-28	SB9-1.5-2	SB9-16-16.5	SB9-24-24.5	SB10-1.5-2	SB10-11-11.5	SB10-31.5-32
Sample Number				34541	34542	34543	34544	34545	34546	34547	34548	34549	34550
pling Date				12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97
rix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
tion Factor				1.0	1.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0	1.0
s				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
MIVOLATILE COMPOUNDS (GC/MS)													
Phenol	10 000 000	10 000,000	50 000	57 J	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2-Chlorophenol	280 000	5,200,000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2 Methylphenol	2,800,000	10,000,000	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
4-Methylphenol	2,800,000	10,000,000	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400
2-Nitrophenol	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	40(
2,4-Dimethylphenol	1,100,000	10,000 000	10 000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400
2,4-Dichlorophenol	170,000	3,100,000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
4-Chloro-3-methylphenol	10,000,000	10 000 000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2,4 6-Trichlorophenol	62,000	270 000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2,4,5-Trichlorophenol	5,600 000	10 000,000	50,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2 4-Dinitrophenol	110 000	2,100 000	10,000	810 U	790 U	730 U	760 U	780 U	3700 U	820 U	810 U	790 U	790 U
4-Nitrophenol	NA	NA	NA	810 U	790 U	730 U	760 U	780 U	3700 U	820 U	810 U	790 U	790 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	810 U	790 U	730 U	760 U	780 U	3700 U	820 U	810 U	790 U	790 U
Pentachlorophenol	6,000	24,000	100,000	810 U	790 U	730 U	760 U	780 U	3700 U	820 U	810 U	790 U	790 U
bis(2-Chloroethyl)ether	660	3,000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
1,3-Dichlorobenzene	5,100,000	10,000,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
1 4-Dichlorobenzene	570,000	10 000,000	100 000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
1 2 Dichlorobenzene	5,100 000	10 000,000	50,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
bis(2-chloroisopropyl)ether	2,300 000	10,000,000	-10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
N Nitroso-di-n propylamine	660	660	10 000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Hexachloroethane	6 000	100 000	100 000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Nitrobenzene	28 000	520,000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Isophorone	1,100 000	10 000,000	50,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
bis(2-Chloroethoxy)methane	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
1 2,4-Trichlorobenzene	68,000	1,200,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Naphthalene	230 000	4,200,000	100,000	27	71	27	19 U	100	1300	180	33	20 U	20 U
4-Chloroaniline	230 000	4,200,000	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Hexachlorobutadiene	1,000	21,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2-Methylnaphthalene	NA	NA	NA	24 J	130 J	15 J	380 U	120 J	1000 J	140 J	64 J	390 U	400 U
Hexachlorocyclopentadiene	400,000	7,300,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2-Chloronaphthalene	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
2-Nitroaniline	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400
Dimethylphthalate	10 000 000	10,000,000	50,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	40(
Acenaphthylene	NA	NA	NA	33	11 J	13 J	19 U	20	87 J	78	23	20 U	20
2 6-Dinitrotoluene	1,000	4 000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
3 Nitroaniline	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Acenaphthene	3,400 000	10 000 000	100 000	9.3 J	20 U	57	19 U	94	4900	620	14 J	20 U	15 J
Obenzofuran	NA	NA	NA	34 J	59 J	31 J	380 U	130 J	2700	240 J	26 J	390 U	400 U
2 4-Dinitrotoluene	1,000	4,000	10,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Diethylphthalate	10,000,000	10,000,000	50,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
4-Chlorophenyl-phenylether	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Fluorene	2,300,000	10,000 000	100,000	24	20 U	57	19 U	92	3600	400	18 J	20 U	20 U
4-Nitroaniline	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
N-Nitrosodiphenylamine	140,000	600,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
4 Bromophenyl-phenylether	NA	NA	NA	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Hexachlorobenzene	660	2,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Phenanthrene	NA	NA	NA	280	270	600	12 J	1100	25000	3800	220	57	94
Anthracene	10,000,000	10,000,000	100,000	66	22	130	19 U	200	7700	1000	31	13 J	22
Carbazole	NA	NA	NA	26 J	18 J	58 J	380 U	150 J	2900	330 J	17 J	390 U	400 U
Di-n-butylphthalate	5 700 000	10 000,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U

See footnotes on next page.

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

ple ID / Sample Depth Sample Number pling Date rix tion Factor s				SB7-27.5-28 34541 12/04/97 SOLID 1.0 ug/kg	SB8-1.5-2 34542 12/04/97 SOLID 1.0 ug/kg	SB8-16.5-18 34543 12/04/97 SOLID 1.0 ug/kg	SB8-27.5-28 34544 12/04/97 SOLID 1.0 ug/kg	SB9-1.5-2 34545 12/04/97 SOLID 1.0 ug/kg	SB9-16-18.5 34546 12/04/97 SOLID 5.0 ug/kg	SB9-24-24.5 34547 12/04/97 SOLID 1.0 ug/kg	SB10-1.5-2 34548 12/04/97 SOLID 1.0 ug/kg	SB10-11-11.5 34549 12/04/97 SOLID 1.0 ug/kg	SB10-31.5-32 34550 12/04/97 SOLID 1.0 ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)										
MIVOLATILE COMPOUNDS (GC/MS) (cont.)													
Fluoranthene	2,300,000	10,000,000	100,000	340	110	590	38	980	22000	4300	180	83	140
Pyrene	1,700,000	10 000 000	100,000	330	81	580	42	890	23000	9800	170	81	140
Butylbenzylphthalate	1,100 000	10,000 000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
3,3'-Dichlorobenzidine	2,000	6,000	100,000	810 U	790 U	730 U	760 U	780 U	3700 U	820 U	810 U	790 U	790 U
Benzo(a)anthracene	900	4,000	500,000	230	40	230	21	400	8600	1900	82	40	70
Chrysene	9,000	40,000	500,000	290	120	250	12 J	650	8700	2100	140	38	85
bis(2-Ethylhexyl)phthalate	49,000	210,000	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	880	400 U	390 U	360 J
Di-n-octylphthalate	1,100,000	10 000,00	100,000	400 U	400 U	370 U	380 U	390 U	1900 U	410 U	400 U	390 U	400 U
Benzo(b)fluoranthene	900	4,000	50,000	340	94	280	17 J	670	9700	2300	120	49	88
Benzo(k)fluoranthene	900	4 000	500 000	140	36	100	18 U	200	3800	880	38	20 U	35
Benzo(a)pyrene	660	660	100,000	240	35	220	11 J	280	7700	1800	76	32	60
Indeno(1,2,3-cd)pyrene	900	4,000	500,000	130	26	100	19 U	170	3800	990	35	20 U	30
Dibenz(a,h)anthracene	660	660	100,000	42	10 J	44	19 U	58	830	230	20 U	20 U	20 U
Benzo(g,h,i)perylene	NA	NA	NA	99	27	110	19 U	130	3400	870	36	20 U	29
al Confident Conc BNAs (s)				2611	939	3395	101	6025	141830	27226	1184	371	794
al Estimated Conc BNA TICs (s)				430	1370	560	0	1210	30700	11780	0	0	0

alues listed reflect the combined standards for the 2,4/2,6-Dinitrotoluene mixture.
U - The compound was not detected at the indicated concentration
J - Data indicates the presence of a compound that meets the identification criteria
The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample.
This indicates possible laboratory contamination of the environmental sample.
NA Not available
NR - Not analyzed
Dup - Duplicate sample of SB2-15.5-16.
Dup2 - Duplicate sample of SB9-1.5-2
Dup3 - Duplicate sample of SB12-12.5-13.
[redacted] - Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria.

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey.

ple ID / Sample Depth Sample Number pling Date ix ion Factor				SB11-3-3.5 34693 12/05/97 SOLID 1.0 ug/kg	SB11-22-22.5 34694 12/05/97 SOLID 1.0 ug/kg	SB11-31.5-32 34695 12/05/97 SOLID 1.0 ug/kg	SB12-1.5-2 34689 12/05/97 SOLID 1.0 ug/kg	SB12-12.5-13 34690 12/05/97 SOLID 1.0 ug/kg	SB12-31-31.5 34691 12/05/97 SOLID 1.0 ug/kg	Dup 34369 12/03/97 SOLID 1.0 ug/kg	Dup2 34538 12/04/97 SOLID 1.0 ug/kg	Dup3 34692 12/05/97 SOLID 1.0 ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)									
VOLATILE COMPOUNDS (GC/MS)												
Phenol	10,000,000	10,000,000	50,000	15 J	17 J	42 J	400 U	390 U	390 U	120 J	410 U	27 J
2-Chlorophenol	280,000	5,200 000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
2-Methylphenol	2,800,000	10,000,000	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
4-Methylphenol	2,800,000	10,000,000	NA	18 J	16 J	63 J	400 U	22 J	15 J	48 J	410 U	26 J
2 Nitrophenol	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	200 J	410 U	61 J
2 4-Dimethylphenol	1 100 000	10,000,000	10 000	9.3 J	420 U	410 U	400 U	8.2 J	390 U	410 U	410 U	360 U
2,4-Dichlorophenol	170,000	3 100 000	10 000	420 U	420 U	410 U	400 U	390 U	390 U	55 J	410 U	360 U
4-Chloro-3-methylphenol	10,000,000	10,000,000	100 000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
2 4 6-Trichlorophenol	62,000	270 000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
2 4,5-Trichlorophenol	5 600,000	10 000 000	50 000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
2,4-Dinitrophenol	110,000	2,100,000	10 000	840 U	830 U	830 U	790 U	770 U	780 U	820 U	810 U	730 U
4-Nitrophenol	NA	NA	NA	840 U	830 U	830 U	790 U	770 U	780 U	820 U	810 U	730 U
4 6-Dinitro-2-methylphenol	NA	NA	NA	840 U	830 U	830 U	790 U	770 U	780 U	820 U	810 U	730 U
Pentachlorophenol	8,000	24,000	100 000	840 U	830 U	830 U	790 U	770 U	780 U	820 U	810 U	730 U
bis(2-Chloroethyl)ether	660	3,000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	820 U	810 U	730 U
1 3-Dichlorobenzene	5,100 000	10 000 000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
1 4-Dichlorobenzene	570 000	10 000,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
1 2-Dichlorobenzene	5 100 000	10,000,000	50,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
bis(2-chloroisopropyl)ether	2,300,000	10,000,000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
N-Nitroso-di-n-propylamine	880	680	10,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Hexachloroethane	6,000	100,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Nitrobenzene	28 000	520 000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Isophorone	1 100,000	10,000,000	50,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
bis(2-Chloroethoxy)methane	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
1,2,4-Trichlorobenzene	66,000	1,200 000	100 000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Naphthalene	230 000	4,200 000	100,000	160	130	3000	120	130	51	410 U	410 U	360 U
4-Chloroaniline	230,000	4,200,000	NA	420 U	420 U	410 U	400 U	390 U	390 U	440	50	400
Hexachlorobutadiene	1 000	21 000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
2-Methylnaphthalene	NA	NA	NA	120 J	50 J	390 J	200 J	120 J	27 J	410 U	410 U	360 U
Hexachlorocyclopentadiene	400,000	7,300 000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	200 J	110 J	210 J
2-Chloronaphthalene	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
2-Nitroaniline	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Dimethylphthalate	10 000 000	10,000 000	50,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Acenaphthylene	NA	NA	NA	110	69	1000	20 U	55	27	410 U	410 U	360 U
2 6-Dinitrotoluene	1,000	4,000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	710	42	180
3-Nitroaniline	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Acenaphthene	3 400,000	10 000,000	100 000	650	95	360	20 U	500	51	410 U	410 U	360 U
Dibenzofuran	NA	NA	NA	400 J	72 J	590	90 J	320 J	45 J	430	12 J	610
2 4-Dinitrotoluene	1,000	4,000	10,000	420 U	420 U	410 U	400 U	390 U	390 U	350 J	38 J	400
Diethylphthalate	10,000,000	10 000,000	50,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
4-Chlorophenyl-phenylether	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Fluorene	2 300 000	10 000 000	100 000	540	100	970	20 U	400	54	410 U	410 U	360 U
4-Nitroaniline	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	470	14 J	840
N-Nitrosodiphenylamine	140,000	600,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
4 Bromophenyl-phenylether	NA	NA	NA	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Hexachlorobenzene	660	2,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	410 U	410 U	360 U
Phenanthrene	NA	NA	NA	6800	810	4400	490	3900	420	410 U	410 U	360 U
Anthracene	10,000,000	10 000,000	100,000	1600	190	1400	16 J	840	94	4400	300	4500
Carbazole	NA	NA	NA	450	81 J	270 J	15 J	350 J	42 J	930	38	1000
Di-n-butylphthalate	5,700,000	10,000,000	100 000	420 U	420 U	410 U	400 U	390 U	390 U	560	33 J	410

See footnotes on next page.

Table 4

Summary Analytical Results of Semivolatile Organic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

ple ID / Sample Depth Sample Number pling Date *ix tion Factor s				SB11-3-3.5 34693 12/05/97 SOLID 1.0 ug/kg	SB11-22-22.5 34694 12/05/97 SOLID 1.0 ug/kg	SB11-31.5-32 34695 12/05/97 SOLID 1.0 ug/kg	SB12-1.5-2 34689 12/05/97 SOLID 1.0 ug/kg	SB12-12.5-13 34690 12/05/97 SOLID 1.0 ug/kg	SB12-31-31.5 34691 12/05/97 SOLID 1.0 ug/kg	Dup 34388 12/03/97 SOLID 1.0 ug/kg	Dup2 34538 12/04/97 SOLID 1.0 ug/kg	Dup3 34692 12/05/97 SOLID 1.0 ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)									
SEMIVOLATILE COMPOUNDS (GC/MS) (con t)												
Fluoranthene	2,300,000	10,000,000	100,000	7300	1000	7700	220	4100	850	410 U	410 U	360 U
Pyrene	1,700,000	10,000,000	100,000	6300	910	7400	150	3600	470	7200	200	4700
Butylbenzylphthalate	1,100,000	10,000,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	6400	220	4200
3,3'-Dichlorobenzidine	2,000	6,000	100,000	840 U	830 U	830 U	790 U	770 U	780 U	410 U	410 U	360 U
Benzo(a)anthracene	900	4,000	500,000	3600	490	4200	82	1500	240	820 U	810 U	730 U
Chrysene	9,000	40,000	500,000	3000	530	5000	250	1700	280	3700	150	1900
bis(2-Ethylhexyl)phthalate	46,000	210,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	4100	250	2000
Di-n-octylphthalate	1,100,000	10,000,000	100,000	420 U	420 U	410 U	400 U	390 U	390 U	170 JB	410 U	200 J
Benzo(b)fluoranthene	900	4,000	50,000	3100	560	5100	200	1700	270	410 U	410 U	360 U
Benzo(k)fluoranthene	900	4,000	500,000	1100	220	2100	42	600	100	5800	290	2600
Benzo(a)pyrene	660	660	100,000	2800	350	7000	45	1300	200	2100	90	860
Indeno(1,2,3-cd)pyrene	900	4,000	500,000	1500	280	5000	70	820	130	4600	150	1800
Dibenz(a,h)anthracene	660	660	100,000	340	65	1200	28	200	34	2500	110	1100
Benzo(g,h,i)perylene	NA	NA	NA	1200	280	3900	68	830	130	620	47	260
al Confident Conc. BNAs (s)				39750	6159	85320	1766	21975	3101	2000	100	1000
al Estimated Conc. BNA TICs (s)				10800	4250	22170	14250	9700	1400	48960	2047	27800

alues listed reflect the combined standards for the 2,4/2,6-Dinitrotoluene mixture.
U - The compound was not detected at the indicated concentration
J - Data indicates the presence of a compound that meets the identification criteria
The results is less than the quantitation limit but greater than zero.
The concentration given is an approximate value
B The analyte was found in the laboratory blank as well as the sample
This indicates possible laboratory contamination of the environmental sample
NA Not available
R - Not analyzed
Dup - Duplicate sample of SB2-15.5-16
up2 - Duplicate sample of SB9-1.5-2
up3 - Duplicate sample of SB12-12.5-13
- Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria.

Table 5

Summary Analytical Results of Pesticides and Polychlorinated Biphenyl Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB1-1.5-2	SB1-11.5-12	SB1-19.5-20	SB2 1.5-2	SB2 18.5-19	SB2-19.5-20	SB3-1.5-2.0	SB3-10-10.5	SB3-19.5-20	SB4-1.5-2.0	SB4-14.5-15	SB4-23.5-24
Lab Sample Number				34360	34361	34362	34363	34365	34364	34366	34367	34368	34370	34371	34372
Sampling Date				12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0	1.0	1.0	1.0	1.0
Units				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)												
PESTICIDES/PCBs															
Aldrin	40	170	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
alpha BHC	NA	NA	NA	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
beta-BHC	NA	NA	NA	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
delta-BHC	NA	NA	NA	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
gamma-BHC(Lindane)	520	2,200	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Chlordane	NA	NA	NA	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
4,4-DDD	3,000	12,000	60,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	130	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
4,4-DDE	2,000	9,000	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	53	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
4,4'-DDT	2,000	9,000	500,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	540	4.0 U	4.0 U	14	3.8 U	4.1 U
Dieldrin	42	180	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
-- Endosulfan I	340,000	6,200,000	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
-- Endosulfan II	340,000	6,200,000	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Endosulfan sulfate	NA	NA	NA	3.9 U	5.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Endrin	17,000	310,000	50,000	8.0 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Endrin aldehyde	NA	NA	NA	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Endrin ketone	NA	NA	NA	7.4 U	10 U	4.0 U	3.8 U	5.2 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Heptachlor	150	650	50,000	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Heptachlor epoxide	NA	NA	NA	3.9 U	3.6 U	4.0 U	3.8 U	4.3 U	4.0 U	38 U	4.0 U	4.0 U	3.8 U	3.8 U	4.1 U
Methoxychlor	280,000	5,200,000	50,000	3.9 U	182 U	4.0 U	3.8 U	35 U	4.0 U	38 U	55 U	4.0 U	3.8 U	3.8 U	4.1 U
Toxaphene	100	280	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor-1016	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor-1221	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor 1232	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor 1242	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor-1248	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor-1254	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U
* Aroclor-1260	490	2,000	50,000	80 U	76 U	80 U	77 U	87 U	81 U	780 U	82 U	81 U	77 U	76 U	84 U

Notes:
* Values listed reflect the combined standards for "Total PCBs"
-- Soil Cleanup criteria is provided for "Endosulfan" without specification if it is for Endosulfan I or Endosulfan II
Dup Duplicate sample of SB2-15.5-16
Dup2 Duplicate sample of SB9-1.5-2
Dup3 Duplicate sample of SB12-12.5-13
U - The compound was not detected at the indicated concentration.
B - Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits.
NR - Not analyzed.
NA- Not available

Table 5

Summary Analytical Results of Pesticides and Polychlorinated Biphenyl Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB5-1.5-2	SB5-10.5-11	SB5-23.5-24	SB8-2.5-3	SB8-12.5-13	SB8-23.5-24	SB7-1.5-2	SB7-19.5-20	SB7-27.5-28	SB8-1.5-2	SB8-15.5-16	SB8-27.5-28
Lab Sample Number				34528	34530	34531	34532	34533	34534	34539	34540	34541	34542	34543	34544
Sampling Date				12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)												
PESTICIDES/PCBs															
Aldrin	40	170	50,000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.6 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
alpha BHC	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
beta-BHC	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
delta-BHC	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
gamma-BHC(Lindane)	520	2,200	50 000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Chlordane	NA	NA	NA	78 U	78 U	83 U	76 U	79 U	76 U	78 U	76 U	82 U	80 U	74 U	76 U
4,4 DDD	3 000	12,000	50 000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
4 4'-DDE	2,000	9,000	50,000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
4,4 -DDT	2,000	9,000	500,000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	6.4 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Dieldrin	42	180	50 000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
* Endosulfan I	340 000	6,200,000	50 000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
* Endosulfan II	340,000	6,200,000	50,000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Endosulfansulfate	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Endrin	17 000	310 000	50,000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Endrinaldehyde	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Endrinketone	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	6.5 U	3.8 U	4.0 U	4.2 U	3.7 U	3.8 U
Heptachlor	150	650	50,000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	7.7 U	3.8 U	4.0 U	4.5 U	3.7 U	3.8 U
Heptachlorepoxide	NA	NA	NA	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	3.9 U	3.8 U	4.0 U	4.0 U	3.7 U	3.8 U
Methoxychlor	280,000	5,200,000	50 000	3.8 U	3.9 U	4.1 U	3.8 U	3.9 U	3.8 U	28 U	3.8 U	4.0 U	13 U	3.7 U	3.8 U
Toxaphene	100	200	50 000	78 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
* Aroclor-1016	490	2,000	50,000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
* Aroclor-1221	490	2,000	50 000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
* Aroclor-1232	490	2,000	50 000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
* Aroclor-1242	490	2,000	50,000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
* Aroclor-1248	490	2,000	50,000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
Aroclor-1254	490	2,000	50,000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U
* Aroclor-1260	490	2,000	50,000	76 U	78 U	83 U	76 U	79 U	78 U	79 U	78 U	82 U	80 U	74 U	76 U

Notes
* Values listed reflect the combined standards for "Total PCBs"
** Soil Cleanup criteria is provided for "Endosulfan" without specification if it is to Endosulfan I or Endosulfan II
Dup Duplicate sample of SB2-15.5-16
Dup2 Duplicate sample of SB9-1.5-2
Dup3 Duplicate sample of SB13-12.5-13
U - The compound was not detected at the indicated concentration
B - Reported value is less than the Method Detection Limit, but greater than equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits.
NR - Not analyzed
NA - Not available

Table 5

Summary Analytical Results of Pesticides and Polychlorinated Biphenyl Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB9-1 5-2	SB9-16-16 5	SB9-24-24 5	SB10-1 5-2	SB10-11-11.5	SB10-31 5-32	SB11-3-3.5	SB11-22-22.5	SB11-31-31.5	SB12-1.5-2	SB12-12.5-13	SB12-31-31 5
Lab Sample Number				34545	34546	34547	34548	34549	34550	34803	34804	34805	34806	34809	34801
Sampling Date				12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/05/97	12/05/97	12/05/97	12/05/97	12/05/97	12/05/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				1 0	1 0		1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0
Units				ug/kg	ug/kg		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)												
PESTICIDES/PCBs															
Aldrin	40	170	50,000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
alpha-BHC	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
beta-BHC	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
delta-BHC	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
gamma-BHC(Lindane)	520	2,200	50,000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Chlordane	NA	NA	NA	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
4 4-DDD	3,000	12,000	50 000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
4 4'-DDE	2 000	9,000	50,000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
4 4-DDT	2 000	9,000	500 000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Dieldrin	42	180	50,000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
* Endosulfan I	340,000	6,200,000	50 000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
** Endosulfan II	340 000	6,200,000	50,000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Endosulfansulfate	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Endrin	17,000	310 000	50 000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Endrinaldehyde	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Endrinketone	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	4.2 U	3.9 U
Heptachlor	150	650	50,000	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Heptachlorepoxide	NA	NA	NA	3.9 U	3.7 U	NR	4.0 U	3.9 U	4.0 U	4.2 U	4.2 U	4.1 U	4.0 U	3.9 U	3.9 U
Methoxychlor	280 000	5,200,000	50,000	14 U	3.7 U	NR	16 U	3.9 U	4.0 U	23 U	4.2 U	40 U	4.0 U	34 U	3.9 U
Toxaphene	100	200	50,000	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
* Aroclor-1016	490	2,000	50 000	78 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
Aroclor 1221	490	2 000	50,000	78 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
* Aroclor 1232	490	2,000	50,000	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
Aroclor-1242	490	2,000	50,000	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
* Aroclor 1248	490	2 000	50,000	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	78 U
Aroclor 1254	490	2,000	50,000	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	79 U
Aroclor-1260	490	2,000	50,000	79 U	76 U	NR	82 U	80 U	80 U	85 U	84 U	84 U	81 U	78 U	79 U

Notes
* Values listed reflect the combined standards for "Total PCBs"
** Soil Cleanup criteria is provided for "Endosulfan" without specification if it is to Endosulfan I or Endosulfan II
Dup Duplicate sample of SB2 15.5-16
Dup2 Duplicate sample of SB9-1.5 2
Dup3 Duplicate sample of SB12-12 5-13
U - The compound was not detected at the indicated concentration
B - Reported value is less than the Method Detection Limit but greater than equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits.
NR - Not analyzed
NA Not available

Table 6

Summary Analytical Results of Pesticides and Polychlorinated Biphenyl Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				Dup	Dup-2	Dup3
Lab Sample Number				34369	34536	34882
Sampling Date				12/03/97	12/04/97	12/05/97
Matrix				SOLID	SOLID	SOLID
Dilution Factor				1.0	1.0	1.0
Units				ug/kg	ug/kg	ug/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)			
PESTICIDES/PCBs						
Aldrin	40	170	50,000	4.1 U	4.1 U	3.8 U
alpha BHC	NA	NA	NA	4.1 U	4.1 U	3.8 U
beta-BHC	NA	NA	NA	4.1 U	4.1 U	3.8 U
delta-BHC	NA	NA	NA	4.1 U	4.1 U	3.8 U
gamma-BHC(Lindane)	520	2,200	50,000	4.1 U	4.1 U	3.8 U
Chlordane	NA	NA	NA	83 U	82 U	74 U
4,4'-DDD	3,000	12,000	50,000	4.1 U	4.1 U	3.8 U
4,4'-DDE	2,000	9,000	50,000	4.1 U	4.1 U	3.8 U
4,4'-DDT	2,000	9,000	500,000	4.1 U	4.1 U	3.8 U
Dieldrin	42	180	50,000	4.1 U	4.1 U	3.8 U
* Endosulfan I	340,000	6,200,000	50,000	4.1 U	4.1 U	3.8 U
** Endosulfan II	340,000	6,200,000	50,000	4.1 U	4.1 U	3.8 U
Endosulfan sulfate	NA	NA	NA	4.1 U	4.1 U	3.8 U
Endrin	17,000	310,000	50,000	4.1 U	4.1 U	3.8 U
Endrin aldehyde	NA	NA	NA	4.1 U	4.1 U	3.8 U
Endrin ketone	NA	NA	NA	8.8 U	8.4 U	3.8 U
Heptachlor	150	650	50,000	4.1 U	4.7 U	3.8 U
Heptachlor epoxide	NA	NA	NA	4.1 U	4.1 U	3.8 U
Methoxychlor	280,000	5,200,000	50,000	80 U	25 U	24 U
Toxaphene	100	200	50,000	83 U	82 U	74 U
* Aroclor-1016	490	2,000	50,000	83 U	82 U	74 U
* Aroclor-1221	490	2,000	50,000	83 U	82 U	74 U
* Aroclor-1232	490	2,000	50,000	83 U	82 U	74 U
* Aroclor-1242	490	2,000	50,000	83 U	82 U	74 U
* Aroclor-1248	490	2,000	50,000	83 U	82 U	74 U
* Aroclor-1254	490	2,000	50,000	83 U	82 U	74 U
Aroclor-1260	490	2,000	50,000	83 U	82 U	74 U

Notes
* Values listed reflect the combined standards for "Total PCBs"
** Soil Cleanup criteria is provided for "Endosulfan" without specification if it is to Endosulfan I or Endosulfan II
Dup Duplicate sample of SB2 15.5-16
Dup2 Duplicate sample of SB9-1.5-2
Dup3 Duplicate sample of SB1Z 12.5-13
U - The compound was not detected at the indicated concentration
B Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits.
NR - Not analyzed.
NA - Not available

Table 6

Summary Analytical Results of Inorganic Compounds for Soil Samples Collected
South Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB1-1.5-2		SB1-11.5-12		SB1-19.5-20		SB2-1.5-2		SB2-15.5-16		SB2-19.5-20		SB3-1.5-2.0		SB3-10-10.5		SB3-19.5-20		SB4-1.5-2.0		SB4-14.5-15	
Lab Sample Number				34368		34381		34382		34383		34385		34384		34386		34387		34388		34378		34371	
Sampling Date				12/03/97		12/03/97		12/03/97		12/03/97		12/03/97		12/03/97		12/03/97		12/03/97		12/03/97		12/03/97		12/03/97	
Matrix				SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID	
Dilution Factor				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Units				mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)																						
METALS																									
Aluminum	NA	NA	NA	1620		5420		8630		2090		5270		8660		1000		9280		11800		847		8300	
Antimony	14	340	NA	4 6		0 85	U	1 1	U	1 1	U	1.2	U	1 1	U	8.9		1.0	U	1 1	U	15.7		1 1	U
Arsenic	20	20	NA	17.0		3.6		3.0		14 9		9.2		7.3		15.0		5.5		3 0		23.6		2 0	
Barium	700	47,000	NA	22.6	B	66.9		18.7	B	27 3	B	166		68 6		44 9		96.2		53 3		42.6	B	65 6	
Beryllium	1	1	NA	0.37	B	0.36	B	0 43	B	0 53		0 36	B	0 54		0 26	B	0 44	B	0.64		0 36	B	0.48	
Cadmium	1	100	NA	0.095	U	0.093	U	0 098	U	0 092	U	0 10	U	0 098	U	0 47	B	0 10	B	0 097	U	0 10	B	0 093	U
Calcium	NA	NA	NA	257	B	10600		906	B	1760		2310		1050	B	474	B	930	B	1560		707	B	3470	
Chromium	500	NA	NA	9.9		13.7		9 6		4 8		12 4		11.3		43.6		16.0		14.6		17 9		14 7	
Cobalt	NA	NA	NA	8.3	B	5 5	B	6 7	B	4 5	B	3.8	B	13.2		3 7	B	8.4	B	7.5	B	3.3	B	7 8	B
Copper	600	600	NA	105		20.3		15 6		73 0		41 1		18.7		221		58 0		13 9		88 7		28 5	
Iron	NA	NA	NA	42900		11800		17200		15800		13400		24100		40600		15800		17800		31800		15400	
Lead	400	800	NA	174		280		6 0		84.3		345		8.8		254		212		8.4		302		31 7	
Magnesium	NA	NA	NA	73.2	B	4410		3170		134	B	1390		3040		115	B	2840		3850		87 4	B	3180	
Manganese	NA	NA	NA	284		481		249		814		55.4		186		157		135		147		91 4		334	
Mercury	14	270	NA	0 16		15 9		0 020	U	0.09		3.1		0.020	U	0.24		1.3		0.02	B	0.23		0 06	
Nickel	250	2,400	NA	11.8		41.5		14 0		4.3	B	13.4		18 8		21 9		29 1		17 1		14 9		17 1	
Potassium	NA	NA	NA	381	U	674		732		287	B	712		418	B	348	U	1350		673		378	U	2580	
Selenium	63	3,100	NA	2 9		0.89	U	1 2	U	1 7		1 7		1.2	U	2 8		1 1	U	1 2	U	2 9		1 1	U
Silver	110	4,100	NA	0.33	U	0.29	U	0.34	U	0 32	U	0.36	U	0.34	U	0.30	U	0 31	U	0.34	U	0.32	U	0.33	U
Sodium	NA	NA	NA	181	U	150	B	102	U	125	B	176	B	103	U	99 4	B	142	B	162	B	162	B	148	B
Thallium	2	2	NA	1 1	U	0 89	U	1.2	U	1 1	U	1 2	U	1.2	U	1 0	U	1 1	U	1.2	U	1 1	U	1 1	U
Vanadium	370	7,100	NA	12.0		14 1		14 0		8 9	B	17.2		15.8		22 0		21 8		19 8		13 4		18.6	
Zinc	1,500	1,500	NA	43.2		68.0		41 4		366		179		51 8		144		156		43 4		40 0		47 4	

Notes:
Dup Duplicate sample of SB2-15.5-16
Dup2 Duplicate sample of SB9-1 5-2
Dup3 Duplicate sample of SB12-12.5-13

Qualifiers
U - The compound was not detected at the indicated concentration.
B - Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit
N - The spiked sample recovery is not within control limits.
NR - Not analyzed
NA - Not available

Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria.

Table 6

Summary Analytical Results of Inorganic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB4-33.5-34		SB5-1.5-3		SB5-10.5-11		SB5-23.5-24		SB6-2.5-3		SB6-12.5-13		SB6-23.5-24		SB7-1.5-2		SB7-18.5-20		SB7-27.5-28		SB8-1.5-2	
Lab Sample Number				34372		34529		34530		34531		34532		34533		34534		34539		34540		34541		34542	
Sampling Date				12/03/97		12/04/97		12/04/97		12/04/97		12/04/97		12/04/97		12/04/97		12/04/97		12/04/97		12/04/97		12/04/97	
Matrix				SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID	
Dilution Factor				NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Units				mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)																						
METALS																									
Aluminum	NA	NA	NA	7970		8520		7850		7340		7540		5790		8070		662		5660		5600		1050	
Antimony	14	340	NA	1.1	U	3.4		4.3		1.4	B	1.4	B	1.8	B	2.1	B	33.2		1.7	B	1.1	B	3.5	
Arsenic	20	20	NA	2.9		2.7		4.3		3.1		3.1		2.8		4.2		24.8		3.4		4.6		8.4	
Barium	700	47,000	NA	49.6	B	85.2		119		33.7	B	62.1		58.7		90.2		83.5		33.8	B	62.1		49.2	
Beryllium	1	1	NA	0.47	B	0.50		0.36	B	0.41	B	0.28	B	0.32	B	0.32	B	0.13	B	0.33	B	0.31	B	0.19	B
Cadmium	1	100	NA	0.100	U	0.30	B	0.14	U	0.15	U	0.14	U	0.14	U	0.18	B	0.13	U	0.14	U	0.15	U	0.14	U
Calcium	NA	NA	NA	1660		3320		10500		1360		683	B	10800		13000		157	B	1220		2620		488	B
Chromium	500	NA	NA	10.2		13.5		16.6		9.3		14.9		11.0		16.5		13.2		10.5		10.0		4.4	
Cobalt	NA	NA	NA	4.5	B	9.8	B	8.3	B	5.8	B	7.2	B	5.7	B	6.1	B	4.1	B	5.0	B	4.8	B	1.8	B
Copper	600	600	NA	13.7		73.5		36.4		13.3		18.2		27.4		26.2		88.1		14.7		25.5		36.0	
Iron	NA	NA	NA	13600		14200		16700		13700		13100		13100		13800		41600		14900		12200		14500	
Lead	400	800	NA	38.9		211		1020		17.2		39.6		58.0		142		509		35.3		201		88.4	
Magnesium	NA	NA	NA	2280		4420		3460		2060		2420		2450		3320		54.9	B	2450		2410		93.6	B
Manganese	NA	NA	NA	134		284		381		122		168		172		209		127		289		175		33.5	
Mercury	14	270	NA	0.09		0.92		1.1		0.04	B	0.05		0.13		0.27		0.21		0.03	B	0.51		0.10	
Nickel	250	2,400	NA	10.5		24.3		18.5		10.9		12.1		11.7		13.3		12.6		11.5		10.6		8.5	B
Potassium	NA	NA	NA	529	B	3580		2510		432	B	919	B	1380		1720		168	B	806	B	779	B	138	B
Selenium	63	3,100	NA	1.2	U	1.1	U	1.2	U	1.2	U	1.1	U	1.2	U	1.1	U	1.9		1.1	U	1.2	U	1.9	
Silver	110	4,100	NA	0.25	U	0.28	U	0.28	U	0.30	U	0.27	U	0.28	U	0.29	U	0.26	U	0.28	U	0.28	U	0.29	U
Sodium	NA	NA	NA	169	B	323	B	87.7	B	69.6	U	75.8	B	89.4	B	318	B	73.4	B	69.3	U	133	B	80.9	B
Thallium	2	2	NA	1.2	U	1.0	U	1.0	U	1.1	U	1.0	U	1.0	U	1.0	U	0.94	U	1.0	U	1.1	U	1.1	U
Vanadium	370	7,100	NA	12.6		20.5		22.2		11.0	B	16.6		15.0		16.5		16.6		12.0		13.3		10.1	B
Zinc	1,500	1,500	NA	44.9		379		135		59.0		49.3		56.0		178		31.3		44.0		98.2		160	

Notes

Dup Duplicate sample of SB2-15.5-16
Dup2 Duplicate sample of SB5-1.5-2
Dup3 Duplicate sample of SB12-12.5-13

Qualifiers

U - The compound was not detected at the indicated concentration
B - Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits
NR - Not analyzed
NA - Not available

Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria

Table 6

Summary Analytical Results of Inorganic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB8-15 5-16	SB8-27 5-28	SB9-1.5-2	SB9-16-16.5	SB9-24-24.5	SB10-1.5-2	SB10-11-11.5	SB10-31.5-32	SB11-3-3.5	SB11-22 22.5	SB11-31-31.5
Lab Sample Number				34543	34544	34545	34546	34547	34548	34549	34550	34693	34694	34695
Sampling Date				12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/05/97	12/05/97	12/05/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Units				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)											
METALS														
Aluminum	NA	NA	NA	7970	7000	1020	8730	3730	1380	6980	7480	7530	7650	7660
Antimony	14	340	NA	2.0 B	1.5 B	3.8	2.2 B	2.4	2.0 B	2.1 B	1.8 B	5.6	2.5	2.0 B
Arsenic	20	20	NA	2.7	3.5	10.5	2.7	6.6	6.1	2.7	6.6	24.8	11.4	6.4
Barium	700	47,000	NA	83.8	39.5 B	52.9	78.0	68.4	48.2 B	77.8	50.3	177	157	82.5
Beryllium	1	1	NA	0.31 B	0.37 B	0.22 B	0.34 B	0.30 B	0.17 B	0.48 B	0.30 B	0.82	0.38 B	0.48 B
Cadmium	1	100	NA	0.13 U	0.14 U	0.14 U	0.12 U	0.14 U	0.13 U	0.14 U	0.14 U	1.1 B	0.15 U	0.15 U
Calcium	NA	NA	NA	6390	2810	220 B	6530	10800	2140	7780	1260	2080	5790	10200
Chromium	500	NA	NA	15.7	9.3	5.4	17.7	8.7	4.5	18.5	12.8	17.5	35.8	18.3
Cobalt	NA	NA	NA	7.7 B	5.9 B	1.9 B	8.5 B	4.1 B	2.1 B	8.2 B	4.3 B	9.2 B	8.9 B	8.5 B
Copper	600	600	NA	24.9	13.0	138	36.7	51.5	58.2	14.8	34.2	68.8	53.1	49.7
Iron	NA	NA	NA	14200	13800	17300	18400	14800	10200	18100	15000	27400	17100	15800
Lead	400	800	NA	212	23.1	113	78.2	205	256	9.7	254	968	3340	201
Magnesium	NA	NA	NA	3440	2310	42.2 B	3760	1700	113 B	2810	2480	2780	2540	3560
Manganese	NA	NA	NA	342	384	48.3	335	181	30.3	380	121	395	252	335
Mercury	14	270	NA	0.48	0.03	0.13	0.37	0.36	0.09	0.08	0.55	0.62	2.6	1.8
Nickel	250	2,400	NA	15.4	11.3	6.6 B	17.8	10.0	22.5	61.8	11.2	40.1	14.1	12.8
Potassium	NA	NA	NA	2380	489 B	132 B	2380	576 B	167 B	2330	666 B	2330	752 B	1350
Selenium	63	3,100	NA	1.1 U	1.1 U	1.2 U	1.0 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 B	1.2 U	1.2 U
Silver	110	4,100	NA	0.27 U	0.28 U	0.28 U	0.25 U	0.40 B	0.29 U	0.29 U	0.29 U	0.31 U	0.34 B	0.30 U
Sodium	NA	NA	NA	61.1 B	65.1 U	65.2 U	58.0 U	65.4 B	130 B	126 B	67.5 U	99.6 B	91.8 B	124 B
Thallium	2	2	NA	0.96 U	1.0 U	1.0 U	0.91 U	0.98 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Vanadium	370	7,100	NA	22.2	11.2 B	9.8 B	21.3	11.8	10.9 B	19.6	18.4	24.8	18.7	23.8
Zinc	1,500	1,500	NA	58.7	44.1	20.8	78.4	99.4	287	36.5	102	831	274	599

Notes,
Dup Duplicate sample of SB2-15 5-16
Dup2 Duplicate sample of SB9-1 5-2
Dup3 Duplicate sample of SB12-12.5-13

Qualifiers
U - The compound was not detected at the indicated concentration.
B - Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits
NR - Not analyzed.
NA - Not available

Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria.

Table 6

Summary Analytical Results of Inorganic Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth *Lab Sample Number* Sampling Date Matrix Dilution Factor Units	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	SB12-1.5-2 34689 12/05/97 SOLID NA mg/kg	SB12-12.5-13 34690 12/05/97 SOLID NA mg/kg	SB12-31-31.5 34691 12/05/97 SOLID NA mg/kg	Dup 34388 12/03/97 SOLID NA mg/kg	Dup-2 34538 12/04/97 SOLID NA mg/kg	Dup3 34692 12/05/97 SOLID NA mg/kg
METALS									
Aluminum	NA	NA	NA	1470	4290	4490	3880	1720	4500
Antimony	14	340	NA	0.8 B	2.8 B	1.4 B	1.6 U	1.6 B	2.8 B
Arsenic	20	20	NA	11.1	6.9	5.0	11.3	10.5	11.3
Barium	700	47,000	NA	35.5 B	167	93.9	200	87.7	202
Beryllium	1	1	NA	0.18 B	0.26 B	0.26 B	0.29 B	0.34 B	0.19 B
Cadmium	1	100	NA	0.22 U	0.14 U	0.14 U	0.18 B	0.22 U	0.85 B
Calcium	NA	NA	NA	148 B	12500	16800	3030	903 B	14600
Chromium	500	NA	NA	9.4	10.7	8.8	10.7	5.4	14.6
Cobalt	NA	NA	NA	8.3 B	5.5 B	4.4 B	3.1 B	3.3 B	8.9 B
Copper	600	600	NA	251	84.4	71.9	37.1	155	63.4
Iron	NA	NA	NA	28400	13800	13200	14900	15800	29800
Lead	400	800	NA	328	428	152	658	58.5	593
Magnesium	NA	NA	NA	54.0 B	2170	1980	1130 B	62.1 B	1880
Manganese	NA	NA	NA	277	220	327	43.2	29.8	340
Mercury	14	270	NA	0.15	1.9	0.54	3.0	0.07	1.1
Nickel	250	2,400	NA	7.7 B	15.2	9.1 B	10.2	7.4 B	16.3
Potassium	NA	NA	NA	144 B	640 B	773 B	448 B	169 B	676 B
Selenium	63	3,100	NA	1.8 U	1.1 U	1.2 U	1.7	1.6 U	1.6 U
Silver	110	4,100	NA	0.43 U	0.26 U	0.26 U	0.37 B	0.44 U	0.40 U
Sodium	NA	NA	NA	102 U	181 B	119 B	181 B	104 U	133 B
Thallium	2	2	NA	1.5 U	1.0 U	1.0 U	1.1 U	1.6 U	1.5 U
Vanadium	370	7,100	NA	7.6 B	12.7	15.6	13.7	13.4 B	14.2 B
Zinc	1,500	1,500	NA	17.1	494	129	166	14.3	972

Notes

Dup Duplicate sample of SB2-15 5-16
Dup2 Duplicate sample of SB9-1.5-2
Dup3 Duplicate sample of SB12-12.5-13

Qualifiers

U - The compound was not detected at the indicated concentration.
B - Reported value is *less than the Method Detection Limit* but greater than or equal to the Instrument Detection Limit.
N - The spiked sample recovery is not within control limits.
NR - Not analyzed
NA - Not available

Concentration exceeds NJDEP Residential Direct Contact Soil Cleanup Criteria.

TABLE 7

Summary Analytical Results of Wet Chemistry Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB1-1 5-2	SB1-11.5-12	SB1-19.5-20	SB2-1.5-2	SB2-15.5-16	SB2-18.5-20	SB3-1 5-2.0	SB3-10-10.5	SB3-19.5-20	SB4-1 5-2.0	SB4-14 5-15	SB4-23.5-24
Lab Sample Number				34360	34361	34362	34363	34365	34364	34366	34367	34368	34370	34371	34372
Sampling Date				12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97	12/03/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)												
WET CHEMISTRY															
Chromium VI	10	NA	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.7	2.0 U	8.1	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Cyanide	1,100,000	23,000,000	NA	0.5 U	0.5 U	0.5 U	0.85	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Total Petroleum Hydrocarbons	10,000	10,000	10,000*	43.3	38.6	56.9	25.0 U	25.0 U	25.0 U	1210	25.0 U	25.0 U	87.8	25.0 U	25.0 U

U - The compound was not detected at the indicated concentration.
NR - Not analyzed.
NA - Not available.
Dup. Duplicate sample of SB2-15.5-16.
Dup. 2 Duplicate sample of SB9-1 5-2.
Dup. 3 Duplicate sample of SB12-12.5-13.
* NJDEP Total Organic Contaminant Criteria

TABLE 7

Summary Analytical Results of Wet Chemistry Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth			SB5-1.5-2	SB5-10.5-11	SB5-23.5-24	SB6-2.5-3	SB6-12.5-13	SB6-23.5-24	SB7-1.5-2	SB7-19.5-20	SB7-27.5-28	SB8-1.5-2	SB8-15.5-16	SB8-27.5-28
Lab Sample Number			34529	34530	34531	34532	34533	34534	34539	34540	34541	34542	34543	34544
Sampling Date			12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97
Matrix			SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)											
WET CHEMISTRY														
Chromium VI	10	NA	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.4	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Cyanide	1,100,000	21,000,000	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Total Petroleum Hydrocarbons	10,000	10,000	10,000*	39.6	66.6	25.0 U	25.0 U	88.9	427	210	25.0 U	25.0 U	52.6	94.8	25.0 U

U - The compound was not detected at the indicated concentration.
NR - Not analyzed.
NA - Not available.
*Dup. Duplicate sample of SB2-15.5-16.
Dup. 2 Duplicate sample of SB8-1.5-2.
Dup. 3 Duplicate sample of SB12-12.5-13.
* NJDEP Total Organic Contaminant Criteria.

TABLE 7

Summary Analytical Results of Wet Chemistry Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth				SB9-1.5-2	SB8-16-16.5	SB9-24-24.5	SB10-1.5-2	SB10-11-11.5	SB10-31.5-32	SB11-3-3.5	SB11-22-22.5	SB11-31-31.5	SB12-1.5-2	SB12-12.5-13	SB12-31.31.5
Lab Sample Number				34545	34546 -	34547	34548	34549	34550	34683	34684	34685	34689	34690	34691
Sampling Date				12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/04/97	12/05/97	12/05/97	12/05/97	12/05/97	12/05/97	12/05/97
Matrix				SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Dilution Factor				1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)												
WET CHEMISTRY															
Chromium VI	10	NA	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Total Cyanide	1,100,000	21,000,000	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	0.71	0.98	0.5 U
Total Petroleum Hydrocarbons	10,000	10,000	10,000*	62.7	33.4	0.0 U	27.8	25.8 U	25.0 U	NR	NR	NR	NR	NR	NR

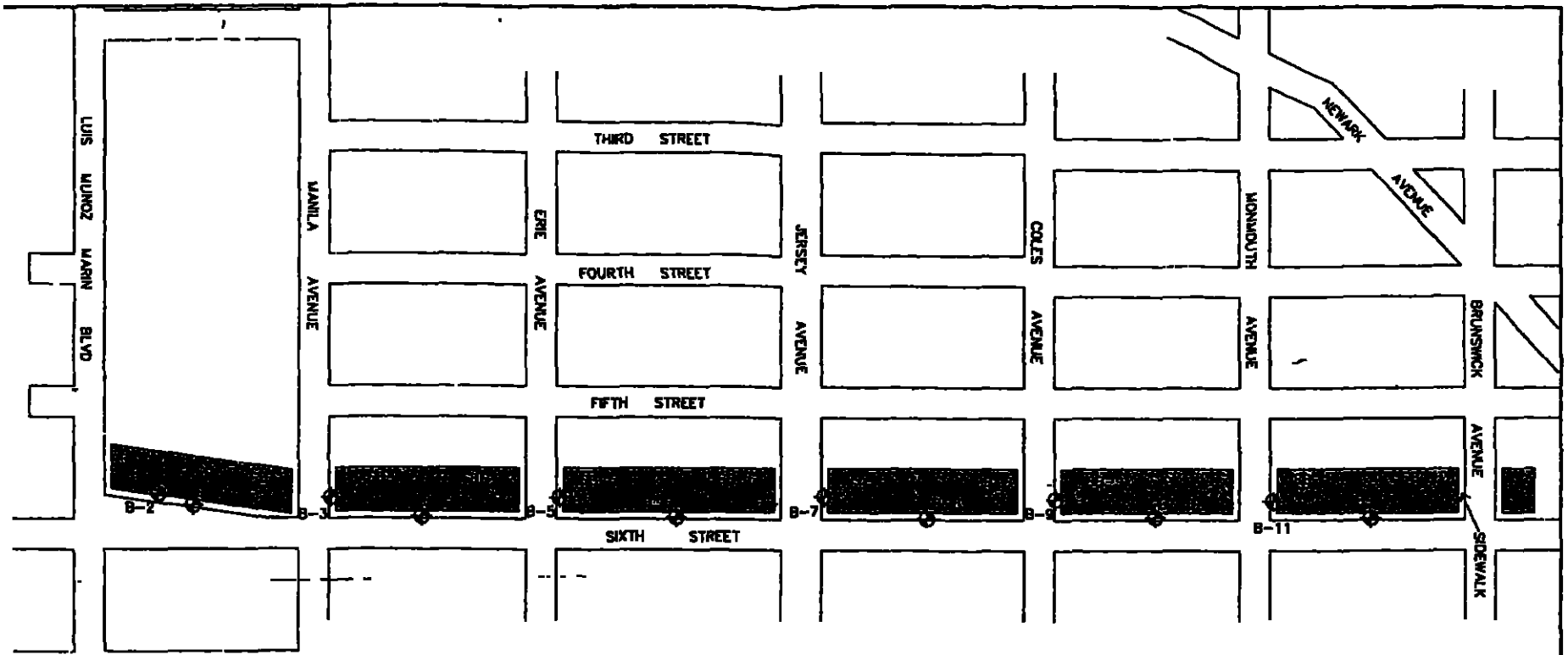
U - The compound was not detected at the indicated concentration.
NR - Not analyzed.
NA - Not available.
Dup Duplicate sample of SB2 15.5-16.
Dup. 2 Duplicate sample of SB9-1.5-2.
Dup. 3 Duplicate sample of SB12-12.5-13
* NJDEP Total Organic Contaminant Criteria

TABLE 7

Summary Analytical Results of Wet Chemistry Compounds for Soil Samples Collected
Sixth Street Embankment Project
Jersey City, New Jersey

Sample ID / Sample Depth Lab Sample Number Sampling Date Matrix Dilution Factor Units	New Jersey Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (ug/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (ug/kg)	Dup. 34389 12/03/97 SOLID 1.0 mg/kg	Dup-2 34538 12/04/97 SOLID 1.0 mg/kg	DUP3 34582 12/05/97 SOLID 1.0 mg/kg
WET CHEMISTRY						
Chromium VI	18	NA	NA	2.0 U	2.0 U	2.0 U
Total Cyanide	1 100 000	21,000 000	NA	0.5 U	0.5 U	8.1
Total Petroleum Hydrocarbons	10,000	10,000	10,000	36 5	42 8	NR

U - The compound was not detected at the indicated concentration.
NR - Not analyzed.
NA- Not available
Dup. Duplicate sample of SB2-15.5-16
Dup. 2 Duplicate sample of SB8-1.5-2
Dup. 3 Duplicate sample of SB12-12.5-13
* NJDEP Total Organic Contaminant Criteria.



LEGEND

- ◈ B-12 GEOTECHNICAL SOIL BORING LOCATION
- ○ SB-12 ENVIRONMENTAL SOIL BORING LOCATION
- ▬ AREA OF FORMER CONRAIL RAILROAD EMBANKMENT

NOTE:

- ◈ B-1* BORING DELETED FROM THE GEOTECHNICAL DRILLING PROGRAM DUE TO UNDERGROUND UTILITY LOCATION CONFLICT

N

GRAPHIC SCALE

200 100 0 200

(IN FEET)

1 inch = 200 feet

JCRA – 6th STREET

JERSEY CITY, NEW JERSEY

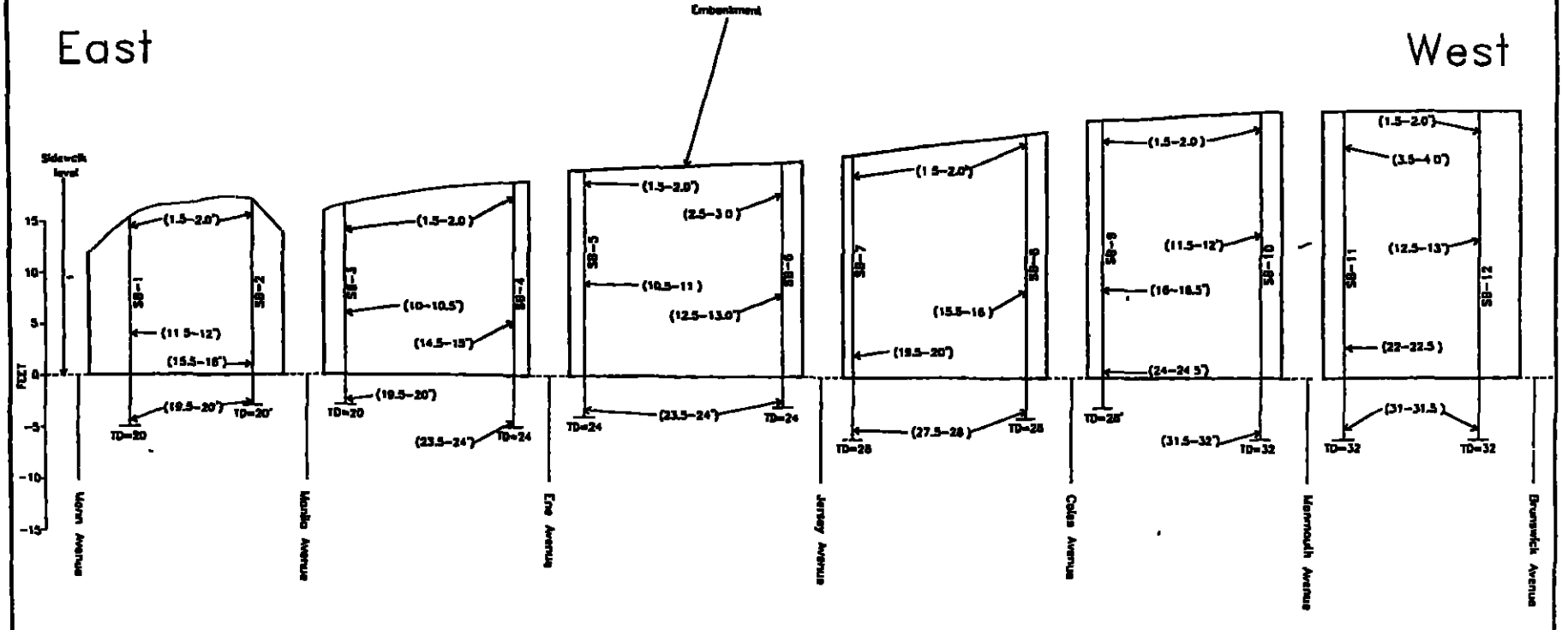
SOIL BORING LOCATION MAP

DRESDNER ROBIN

ENVIRONMENTAL MANAGEMENT, INC

1-11-99

2



Legend

TD	Total Depth
SB-12	Approximate Soil Boring Location
(1.5-2.0)	Environmental Soil Sample Interval (Feet Below Top of Embankment)

Scale

Horizontal	1 inch = 200 feet
Vertical	1 inch = 10 feet

JCRA – 6th Street

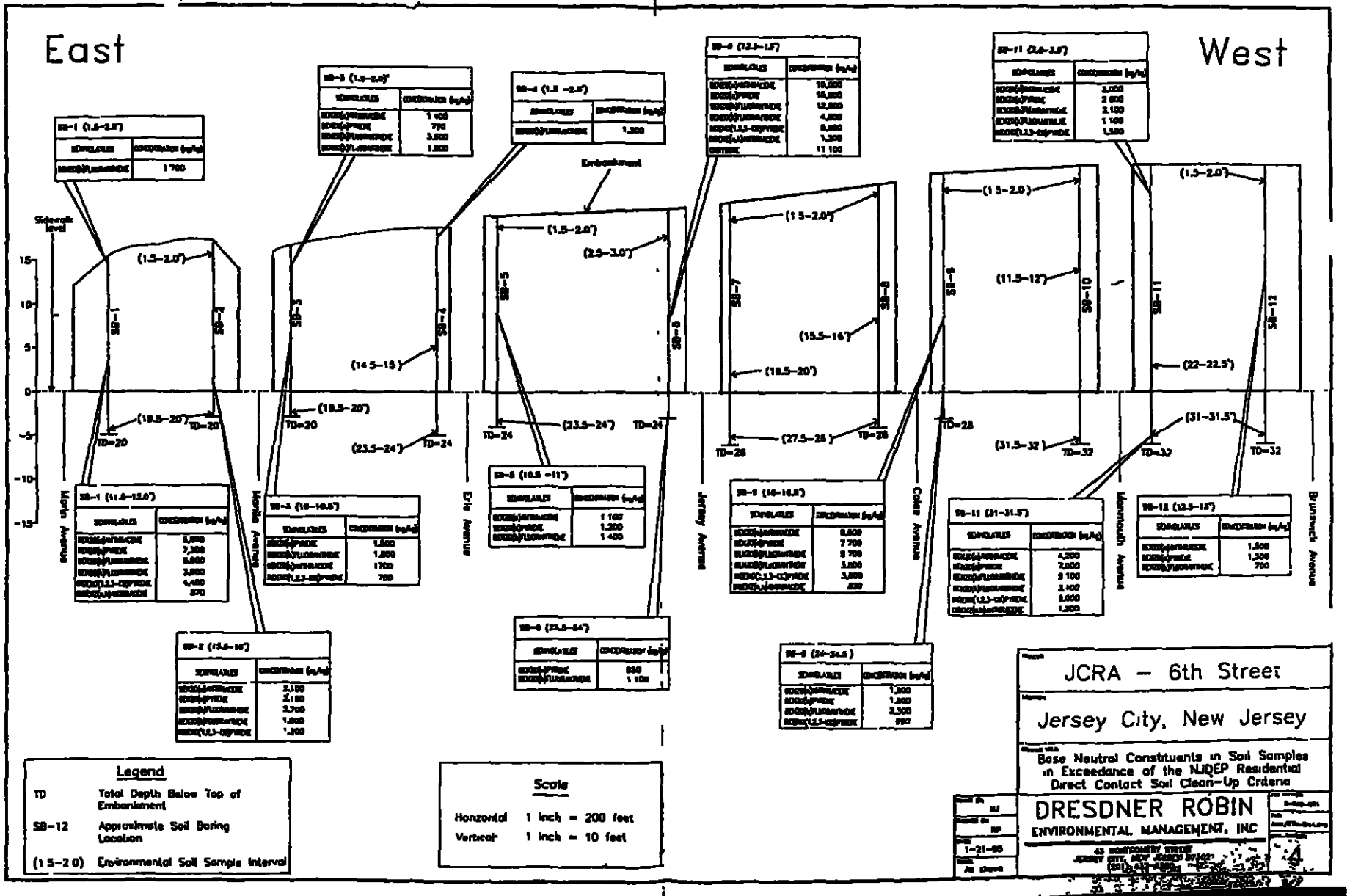
Jersey City, New Jersey

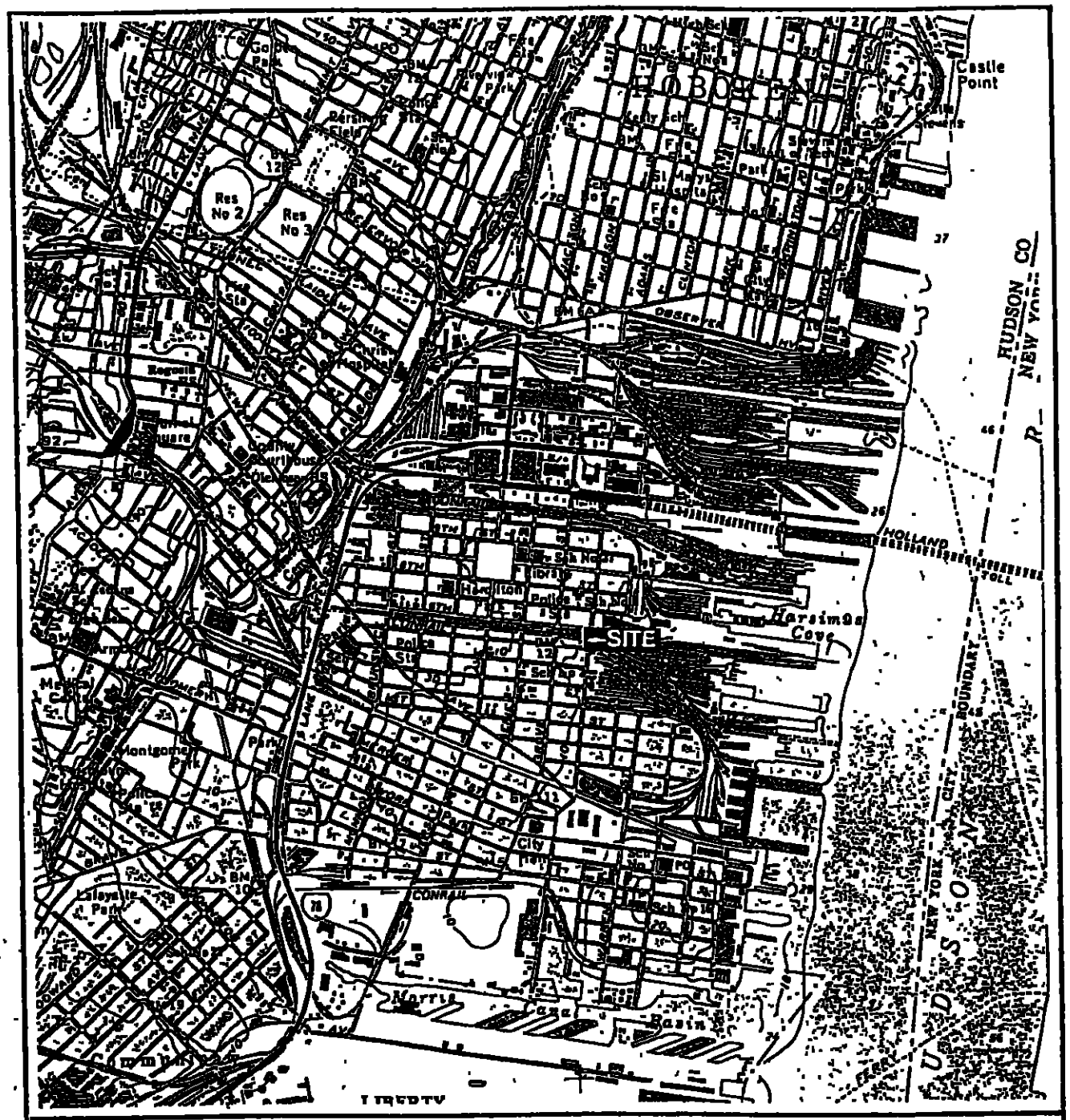
Embankment Cross-Section

DRESDNER ROBIN
ENVIRONMENTAL MANAGEMENT, INC

1-21-98

3


East
West
Embankment
Sidewalk Level
(1.5–2.0')
(2.5–3.0')
(14.5–15')
(19.5–20')
(23.5–24')
(15.5–16')
(27.5–28')
(11.5–12')
(22–22.5')
(31–31.5')
(31.5–32')
TD=20
TD=24
TD=28
TD=32
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
Martin Avenue
Erie Avenue
Jersey Avenue
Colter Avenue
Monmouth Avenue
Brunswick Avenue
SB-1 (11.5–12.0')
SB-3 (10–10.5')
SB-5 (10.5 –11')
SB-9 (16–16.5')
SB-11 (31–31.5')
SB-12 (13.5–13')
SB-2 (15.5–16')
SB-6 (23.5–24')
SB-8 (24–24.5')
Legend
TD Total Depth Below Top of Embankment
SB-12 Approximate Soil Boring Location
(1.5–2.0) Environmental Soil Sample Interval
Scale
Horizontal 1 inch = 200 feet
Vertical 1 inch = 10 feet
JCRA – 6th Street
Jersey City, New Jersey
Base Neutral Constituents in Soil Samples in Exceedance of the NJDEP Residential Direct Contact Soil Clean-Up Criteria
DRESDNER ROBIN
ENVIRONMENTAL MANAGEMENT, INC
1-21-98
As shown
4



Scale 1:24000 N40°43.490' W74°02.455' Contour Interval 10 feet

S. P. C.: N689609.21901 E2173445.14439

DRESDNER ROBIN ENVIRONMENTAL MANAGEMENT, INC.	**REGIONAL LOCATION** Sixth Street Embankments Jersey City, N.J. Source: USGS 7.5 Min. Series Jersey City, NJ-NY Quadrangle (1967)	**N**	**FIGURE** **1**

APPENDIX C

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Environmental Regulation
Office of Permit Coordination and Environmental Review
401 East State Street
P O Box 423
Trenton, New Jersey 08625-0423
Phone (609) 292-3600 Fax (609) 777-1330

JON S CORZINE
Governor

LISA P JACKSON
Commissioner

March 4, 2008

Mr. John K. Ennght
Associate General Counsel
Conrail
1000 Howard Boulevard, 4th Floor
Mt. Laurel, NJ 08054

RE: **Track Abandonment**
Harsimus Branch & Hudson Street Industrial Track
Jersey City, Hudson County
STB No. 167 (Sub-No. 1189X)

Dear Mr Ennght:

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of your recent letter regarding the Conrail railroad lines known as the Harsimus Branch and the Hudson Street Industrial Track in Jersey City, Hudson County, New Jersey, STB No 167 (Sub-No. 1189X). Conrail is proposing to abandon a portions of these lines. Your letter asked if there are any coastal zone areas in the vicinity of the proposal, and what effect would the proposal have on these zones.

The NJDEP's Office of Coastal Management 's review of your letter and attached maps has determined that the abandonment of the lines may be either in or affect the coastal zone of New Jersey. If so, the proposed abandonment and associated activities or outcomes may have to be considered in terms of federal consistency standards. The Office of Coastal Management request that Conrail provide additional information regarding the current conditions on site and what is planned to be done at the site. They are most concerned with how the proposal will impact the Hudson River Waterfront Walkway and perpendicular access to the Walkway. Please contact Ruth Ehinger of the Office of Coastal Management at (609) 633-2201 If you have any questions regarding these comments.

Thank you for the opportunity to review the proposed abandonment.

Sincerely,

Kenneth C. Koschek
Supervising Environmental Specialist
Office of Permit Coordination
and Environmental Review

C: Ruth Ehinger, NJDEP
Charlie Welch, NJDEP

CONRAIL®

March 26, 2008 Via Fax and US Mail

Kenneth C. Koschek
NJ Department of Environmental Protection
Office of Permit Coordination and Environmental Review
P O Box 423
Trenton, NJ 08625-0423

Dear Mr. Koschek:

In response to your March 4, 2008 letter (attached), Conrail submits the following supplemental information

Question: The Office of Coastal Management request that Conrail provide additional information regarding the current conditions on site and what is planned to be done at the site They are most concerned with how the proposal will impact the Hudson River Waterfront Walkway and perpendicular access to the Walkway.

Response. The subject lines of the proposed abandonment were used for rail freight operations. There are no existing undergrade bridges along the lines However, historically, an elevated portion of the Harsimus Branch consisted of an undergrade bridge that traversed several street intersections. While the bridge no longer exists, some of the bridge supports are standing. Another elevated portion of the Harsimus Branch was supported by an embankment, which now consists of six blocks of embankment structures ("Embankment"). The Embankment was further supported by stone walls. The bridge spans connecting the Embankment were removed between the mid-1960s and the mid-1990s. The rails and ties of the subject lines were also removed over that period. Conrail's proposed abandonment will not involve will not involve any type of activity and, accordingly, there will be no impact on the Hudson River Waterfront Walkway or perpendicular access to the Walkway

If I may be of any further assistance, please feel free to contact me at (856) 231-7206.

Sincerely,

John K. Enright /rbd

John K Enright
Associate General Counsel
1000 Howard Boulevard, 4th Floor
Mt. Laurel, NJ 08054

cc Ruth Ehinger

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office
927 North Main Street, Building D
Pleasantville, New Jersey 08232
Tel: 609-646-9310 Fax: 609-646-0352
http://www.fws.gov/northeast/njfieldoffice

IN REPLY REFER TO:
08-I-0286

MAR 0 6 2008

The U.S Fish and Wildlife Service (Service) is unable to respond to your recent request for project or site review pursuant to the Endangered Species Act of 1973 (87 Stat 884, as amended, 16 U.S.C. 1531 *et seq*) (ESA). Staffing constraints currently limit the Service's New Jersey Field Office to reviewing only those projects that *may affect* federally listed species. The *may affect* determination is made by the federal action agency or non-federal project proponent using the information and instructions on our web site at http //www.fws gov/northeast/njfieldoffice/Endangered/consultation html Service concurrence with a *no effect* determination is not required under the ESA.

If you wish to resubmit your request, please follow the instructions on our web site, and indicate which federally listed species under Service jurisdiction may occur in the project's impact area (*i e.*, the *action area*) To expedite Service review, please provide all relevant project information listed on our web site. For projects in the northern counties of Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, Sussex, Union, and Warren (*i e* , range of the Indiana bat (*Myotis sodalis*)), please indicate whether or not tree clearing is proposed, and, if so, describe the species, size (diameter at breast height), and number (or acres) of trees proposed for removal.

Please also refer to our web site for current lists of federally listed and candidate species in New Jersey, the National Bald Eagle Management Guidelines, and contacts for obtaining current information regarding State-listed and other species of concern from the New Jersey Natural Heritage and Endangered and Nongame Species Programs

Reviewing Biologist: Wendy Walsh
Wendy Walsh

Authorizing Supervisor:
John C. Staples

CONRAIL

March 11, 2008

U S Fish and Wildlife Service
New Jersey Field Office
927 North Main Street
Heritage Square, Building D
Pleasantville, NJ 08232
ATTENTION ESA Consultation

Re F&WS Reference No 08-I-0286

Dear Sir/Madam.

Pursuant to your March 6, 2008 response (attached) to my February 7, 2008 letter (attached) requesting consultation regarding the abandonment described below, Conrail has reviewed the F&WS web site and has identified the Indiana bat ("Potential") and Peregrine Falcon ("Extant") as species within the limits of its proposed abandonment.

Conrail is proposing to abandon a portion of a railroad line, known as the Harsimus Branch, between milepost 0 0 and milepost 1 36, and the entirety of a neighboring railroad line known as the Hudson Street Industrial Track, between milepost 0 0 and milepost 0 72, both located in Jersey City, Hudson County, NJ (together hereinafter the "Line" or "Lines") Because of the proximity of the two Lines, we are including them in the same application To begin this abandonment process, Conrail must file an application with the Surface Transportation Board (STB) **This application will be docketed as STB No. AB 167 (Sub-No. 1189X).**

Unlike most rail abandonment filings, rail service on the Lines was previously discontinued, the underlying right-of-way was either sold or reverted to various parties, and the bridges, track, and ties were removed Pursuant to the decision of the federal Surface Transportation Board served on August 9, 2007 (STB Finance Docket No 34818), Conrail has been directed to file the subject abandonment application. A requirement of this filing is that various agencies be contacted concerning certain items, one being the presence of any endangered or threatened species or critical habitats Simultaneous with Conrail's filing of its abandonment application, CSX Transportation, Inc ("CSXT) and Norfolk Southern Railway Company ("NS") will be filing Notices of Discontinuance of Service with respect to the same lines **(these applications will be docketed as STB No. AB 55 (Sub-No. 686X (CSXT)) and STB No. AB 290 (Sub-No. 306X (NS)).** This letter will serve as the consultation notice with respect to each of these three filings

The Surface Transportation Board is the federal agency that will authorize Conrail's application for abandonment Conrail expects to file its application with the STB on April 7, 2008 Conrail does not believe a State Freshwater Wetland permit will be required. Conrail has requested the NJDEP to comment on permitting requirements

Enclosed is a copy of a portion of a U S G S quadrangle map delineating the area being considered In this case, the abandonment will not involve the salvage or removal of track material As noted above, the bridges, rails and ties of the subject lines have already been removed and therefore the abandonment will not result in any salvage activity or disturbance on the Lines No tree clearing is proposed Removal of the bridges, track, and ties, which traversed a highly urbanized area. was consummated over 10 years ago and therefore Conrail believes there was no impact on federally listed species and that no species were adversely affected by the removal of bridges, rail, and ties at that time As the proposed abandonment application with the STB will not involve any salvage activity or disturbance of the Lines, Conrail likewise believes no species will be impacted or adversely affected

The Lines are situated in a highly urban residential/commercial/industrial area The Hudson River is nearby, though not within the abandonment area Photographs of the bridge supports that supported the bridges that were previously removed, the embankment walls, and the surrounding area are enclosed

Please forward your written reply to the address below Because of the necessary time schedules for the STB filing, I would appreciate your response within 30 days of the date of this letter If I may be of any further assistance, please contact me at (856) 231-7206 or john enright@conrail com Thank you for your cooperation

Sincerely,

John K. Enright /rhd

John K Enright
Associate General Counsel
1000 Howard Boulevard, 4th Floor
Mt Laurel, NJ 08054
Enclosure(s)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

MAR 1 2 2008

John K. Enright
Associate General Counsel
Conrail
1000 Howard Boulevard, 4th Floor
Mt. Laurel, New Jersey 08054

Dear Mr. Enright·

Thank you for providing the Environmental Protection Agency (EPA) the opportunity to comment on the project information Conrail plans to utilize to support a Surface Transportation Board railroad line abandonment application. EPA understands that CSX Transportation, Inc. and Norfolk Southern Railway Company also intend to file Notices of Discontinuance of Service for the same lines concurrently with Conrail's application

The proposed project involves abandonment of a segment of the Harsimus Branch and the entire adjacent Hudson Street Industrial Track, both of which are located in Hudson County, Jersey City, New Jersey. EPA has evaluated the project description and U.S.G S maps included with your letter However, before responding to your request for a determination regarding whether a Clean Water Act Section 402 permit is required, we are requesting additional information, as follows:

- A Section 402 permit is required if there are any point source discharges (via pipes, ditches, storm drainage, construction site runoff) to waters of the U S from the site, e.g., to the Hudson River Will there be such a discharge and what is the source of the discharge?

- GIS mapping indicates that the site contains wetland resources. Is there any hydrological connection to the Hudson River? If so, a Section 404 permit is required for placing any dredged or fill materials into wetlands and other waters of the U.S

- Has a site investigation been conducted to ascertain the presence of hazardous materials, such as polychlorinated biphenyls (PCBs)? If so, how will these materials be managed to avoid degradation of water quality standards?

In addition, according to your letter, the rails and ties have already been removed and no salvage activity or land disturbance was involved Please describe these prior activities more fully, including the environmental mitigation measures which were implemented, and provide a copy of the permit which was obtained, if any. If you have any questions regarding this letter, please contact LeAndrea Dames of my staff at (212) 637-3705

Sincerely yours,

Grace Musumeci, Chief
Environmental Review Section
Strategic Multi-Media Programs Branch

CONRAIL

March 25, 2008

Grace Musumeci, Chief
Environmental Review Section
U S. Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866

Dear Ms Musumeci

In response to your March 12, 2008 letter, Conrail submits the following supplemental information.

Question: A Section 402 permit is required if there are any point source discharges (via pipes, ditches, storm drainage, construction site runoff) to waters of the U.S from the site, e.g., to the Hudson River Will there be such a discharge and what is the source of the discharge?

Response· The proposed abandonment will not involve any activity that will create any point source discharges to waters of the U.S

Question GIS mapping indicates that the site contains wetland resources Is there any hydrological connection to the Hudson River? If so, a Section 404 permit is required for placing any dredged or fill materials into wetlands and other waters of the U.S.

Response. The proposed abandonment does not involve excavation or other activity that would create any dredged or fill materials, and therefore no dredged or fill materials will be placed into wetlands or other waters of the U S.

Question: Has a site investigation been conducted to ascertain the presence of hazardous materials, such as polychlorinated biphenyls (PCBs)? If so, how will these materials be managed to avoid degradation of water quality standards?

Response. In connection with a proposed redevelopment by a third party, of the property surrounding and including the embankment, soil sampling and anylsis was conducted in 2005, which concluded that any detected contamination can be designated as "Historical Fill" type contamination Moreover, the proposed abandonment will not

involve any type of activity and, accordingly, there will be no degradation of water quality standards

Question: In addition, according to your letter, the rails and ties have already been removed and no salvage activity or land disturbance was involved. Please describe these prior activities more fully, including the environmental mitigation measures which were implemented, and provide a copy of the permit which was obtained, if any

Response For the most part, the abandonment involved the removal of bridge spans that connected six sections of an embankment that remains in place. It was Conrail's policy and practice (or that of its predecessor railroads), during the time of said removal activities (mid-60s to mid-90s), to engage an outside contractor for such demolition and removal work. Any such contractor was required to obtain whatever permits were necessary. While Conrail does not have a record of what permits, if any, were obtained in connection with the prior removal, we note that most of the subject rail lines were elevated and, therefore, not located near any waterways nor in need of soil excavation.

If I may be of any further assistance, please contact me at (856) 231-7206

Thank you for your cooperation

Sincerely,

John K. Enright /bd

John K. Enright
Associate General Counsel
1000 Howard Boulevard, 4th Floor
Mt Laurel, NJ 08054

Enclosure(s)

State of New Jersey

DEPARTMENT OF TRANSPORTATION
P O Box 600
Trenton, New Jersey 08625-0600

JON S CORZINE
Governor

KRIS KOLLURI, Esq
Commissioner

March 13, 2008

John K Enright
Associate General Counsel
CONRAIL
1000 Howard Boulevard, 4th Floor
Mt Laurel, NJ 08054

RE: Harrimus Branch/Hudson Street Industrial Track Abandonment Proceeding
STB No.: AB167 (Sub-No. 1189X) – Conrail
STB No.: AB55 (Sub-No. 686X) – CSX Transportation, Inc.
STB No.: AB290 (Sub-No. 306X) – Norfolk Southern Railway

Dear Mr. Enright:

The New Jersey Department of Transportation (NJDOT) Bureau of Rail Services has reviewed your letter of February 7, 2008 regarding the above cited abandonment proceeding.

The NJDOT has no interest in this transaction as it pertains to rail freight services.

Sincerely,

James L. Badgley

James L. Badgley
Manager
Rail Services

ET 7235

Simon Monroe
<Simon Monroe@noaa.gov>
04/21/2008 05 17PM

To "Ennght, John" <John Ennght@Conrail com>
cc Surface Transportation Board <sea@stb,dot gov>, National Society of Professional Surveyors <Dawn James@acsm,net>, Gilbert Mitchell
bcc
Subject NGS Response, STB Docket AB-167 (SUB NO, 1189X)

Thank you for sharing your railroad abandonment environmental report for

Jersey City, Hudson County, NEW JERSEY

Approximately 00 geodetic survey marks may he located in the area described,

If marks will be disturbed by the abandonment, [THE RAILROAD] shall

consult with the National Geodetic Survey (NGS) at least 90 days prior to

beginning salvage activities that will disturb, or destroy any geodetic station

marks are described on the attached file Additional advice is provided at

http //geodesv noaa gov/marks/railroads"

```
|D_st|PID...|h V|Vert_Source|Approx.|Approx..|Stab|Designation
|----|------|- -|-----------|-------|--------|---|-----------
```

No Stations Found

EXHIBIT C

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC 20423

STB NO. AB 167 (SUB-NO. 1189X)

CONSOLIDATED RAIL CORPORATION – ABANDONMENT EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

STB NO. AB 55 (SUB-NO. 686X)

CSX TRANSPORTATION, INC. – DISCONTINUANCE EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

STB NO AB 290 (SUB-NO. 306X)

NORFOLK SOUTHERN RAILWAY COMPANY – DISCONTINUANCE EXEMPTION – IN HUDSON COUNTY, NEW JERSEY

NOTICES OF EXEMPTION

MOTION TO STAY EFFECTIVE DATE OF VERIFIED NOTICES OF EXEMPTION AND TO WAIVE PRE-FILING NOTIFICATION REQUIREMENTS

Consolidated Rail Corporation ("Conrail"), CSX Transportation, Inc ("CSXT"), and Norfolk Southern Railway Company ("NS") today filed combined Verified Notices of Exemption for abandonment (Conrail) and discontinuance of service (CSXT and NS), pursuant to 49 C.F R § 1152 50(b) (out-of-service exemption), of property the Board has determined is a line of railroad requiring abandonment authority (the "Harsimus Branch") in Jersey City, Hudson County, New Jersey *See City of Jersey City, Et Al —Pet for Dec Order,* STB Fin Dkt No 34818 (served August 9 and December 17, 2007) ("2007 Decisions") Conrail also filed and served a Supplemental Environmental and Historic Report, pursuant to 49 C F R §§ 1105 7 and

1105.8 The purpose of this Motion is to request a stay of the effective date of the Verified Notices of Exemption and a waiver of the pre-filing notification requirements for the Supplemental Environmental and Historic Report

Applicants originally intended to file their Notices of Exemption in the above-captioned proceedings in April 2008 In anticipation of that filing, on February 7, 2008, Conrail notified all public entities listed in 49 C F R §§ 1105 7 and 1105 8 of the proposed abandonment and sought their comments On March 6, 2008, Conrail served those same entities and other interested parties with an Environmental and Historic Report

Conrail received a significant number of comments on its March 2006 Environmental and Historic Report, primarily raising historic preservation issues In light of those comments, Conrail determined to defer filing the Verified Notices of Exemption and prepare a Supplemental Environmental and Historic Report To aid in the preparation of that supplemental documentation, Conrail retained the services of Richard Grubb and Associates, Inc ("RGA"), a New Jersey consulting firm that specializes in cultural resources investigations involving railroad undertakings The Principal Investigators assigned to the project exceed the National Park Service's *Professional Qualifications Standards* for Historians, Architectural Historians, and Archaeologists. RGA developed a report that defines the Area of Potential Effects ("APE") for the undertaking and proposes a methodology for a cultural resources investigation under Section 106 of the National Historic Preservation Act ("NHPA") (hereafter, "APE Report") Conrail and RGA consulted with both the Section of Environmental Analysis ("SEA") and the New Jersey Historic Preservation Office ("HPO") about the APE Report, which is incorporated into the Supplemental Environmental and Historic Report

Ordinarily, an abandonment Notice of Exemption under 49 C.F R § 1152 50(b) becomes effective 30 days after the Board publishes the Notice of Exemption in the Federal Register. 49 C F R § 1152 50(d)(3) Since the Board publishes the Notice of Exemption 20 days after it is filed, the Notice of Exemption is usually effective 50 days after it is filed *Id* In accordance with this schedule, the Board's Section of Environmental Analysis ("SEA") normally issues an Environmental Assessment ("EA") 25 days after the Notice of Exemption is filed, and parties have 15 days to comment on the EA 49 C.F R § 1105.12 This leaves very little time to address historic preservation issues Thus, if there are any historic properties potentially affected by the abandonment, the Board often imposes an open-ended historic preservation condition that requires completion of the Section 106 process of the NHPA before the abandonment can be consummated *See, e g , Great Western Ry of Colorado, LLC—Abandonment Exemption—in Weld County, CO,* STB Docket No. AB-857 (Sub-No 1X), 2008 WL 2271470 (served June 4, 2008) The Section 106 process can drag on for years *See, e g , Consolidated Rail Corp — Abandonment Exemption—Lancaster and Chester Counties, PA,* 4 S T B. 312, 1999 WL 608840 (served August 13, 1999)

Conrail believes that a different procedure is called for in this case As recognized in the Board's August 9, 2007 Decision in STB Finance Docket No 34818, almost all of the property underlying the Harsimus Branch right-of-way has been sold, and much of it has already been redeveloped Slip op at 4-5 Most of the particular property underlying the right-of-way involved in the STB's decision was sold in July 2005, and its possible reuse is being held in limbo because of the STB's determination that Conrail must first obtain abandonment authority Conrail is not here contesting the Board's decision that Conrail must seek abandonment

authority.[1] Nor is Conrail here claiming that because it no longer owns the property underlying the right-of-way involved in the Board's decision, the Board cannot impose historic preservation conditions on Conrail with respect to that property.[2] But Conrail does believe that the Board in this case can and should conduct the Section 106 process *before* it issues its EA, so that the EA can incorporate the results of the Section 106 process (including any Memorandum of Agreement that may be reached, if adverse effects are identified) and the Board can expeditiously render a final decision permitting abandonment of the right of way and disposition of the underlying property.[3]

To that end, Conrail requests that the Board stay the effective date of Applicants' Notice of Exemption for 180 days, to July 6, 2009, to allow time for the Board's Section of

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[1] At the same time, Conrail is not conceding that the STB conclusion in its 2007 Decisions that Conrail must seek abandonment authority was correct. Conrail and 212 Marin, et al. are currently appealing those Decisions to the U.S. Court of Appeals for the District of Columbia in *Consolidated Rail Corp. v. United States* (Nos. 07-1401, 07-1529, 08-1019, and 08-1052). A railroad may pursue abandonment before the STB at the same time it contests the STB's abandonment jurisdiction. *See, e.g., Huron and Eastern Ry. Co.—Aban. Exemption—Sanilac County, MI*, STB Dkt. No. AB-380X (served Dec. 22, 1992), slip op. at 1.

[2] The Board has previously determined that it can impose historic preservation conditions only to the extent a particular property is owned by a carrier. *See Implementation of Environmental Laws*, 7 I.C.C.2d 807, 828-29 (1991). Thus, where a carrier sells off property and retains operating rights, or obtains only operating rights in the first place, the Board will not impose historic preservation conditions on the abandonment or discontinuance of service over the line. *See, e.g., Chicago and N.W. Transp. Co.—Abandonment and Discontinuance of Service Exemption in Hennepin County, MN*, STB Docket No. AB-1 (Sub-No. 252X) (served Aug. 23, 1994), *Lamoille Valley R.R. Co.—Abandonment and Discontinuance of Service Exemption—In Franklin and Lamoille Counties, VT*, STB Docket No. AB-444X (served Oct. 17, 1996). Nevertheless, in order to moot any claim that Conrail improperly avoided any historic preservation obligation in connection with the sale of the property at issue, Conrail is prepared to cooperate in a Section 106 review and to provide appropriate mitigation. *See Implementation of Environmental Laws*, 7 I.C.C.2d at 830.

[3] As discussed in Conrail's "Comments on Pre-Filing Correspondence," Conrail does not concede that the possible impacts of "reuse" of the properties at issue here are either proximately caused by the proposed abandonment and discontinuance or reasonably foreseeable within the meaning of the National Environmental Policy Act ("NEPA") or the National Historic Preservation Act ("NHPA").

Environmental Analysis ("SEA") to conduct its environmental review and complete the Section 106 process before it issues its EA. Conrail intends that all interested parties have ample opportunity to participate in the Section 106 process *First*, Conrail expects some parties will comment on the Supplemental Environmental and Historic Report that Conrail is filing today, including the APE Report *Second*, Conrail expects a draft Cultural Resources Report, prepared by RGA, will be ready for circulation by January 22, 2009 [4] Conrail proposes that the Board in late January schedule a Public Information Forum in Jersey City for late February, where Board representatives, the HPO, Conrail representatives, and RGA can receive oral input from interested parties Conrail would also propose that the Board invite written comments on the draft Cultural Resources Report With that oral and written input, Conrail expects that RGA can issue the final Cultural Resources Report by March 10, 2009

Third, with the assistance of the final Cultural Resources Report and any additional comments parties have on that report, Conrail expects that SEA can issue its EA by early May, 2009 Conrail proposes that SEA give parties a full 30 days to comment on the EA.[5] SEA can then finalize its EA as needed to enable the Board to issue a final decision before the effective date of the abandonment on July 6, 2009

In light of (1) the fact that public agencies and interested parties were earlier in 2008 provided with substantial advance notice of the proposed abandonment, (2) the extensive opportunity that public agencies and interested parties will have to comment on the proposed

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[4] The draft Cultural Resources Report will include a proposed Memorandum of Agreement ("MOA") among consulting parties concerning the mitigation for any historical preservation effects Conrail will actively participate with the Board and the HPO in attempting to reach agreement on an MOA

[5] Normally, parties have only 15 days to comment on an EA in an abandonment exemption proceeding under 49 C F R § 1152 50 *See* 49 C F R. § 1105 10(b).

abandonment over a six-month period under Conrail's proposed schedule, and (3) the consultation that has already taken place with the HPO regarding the APE Report and proposed methodology for the Cultural Resources Report, Applicants request that the Board waive the pre-filing notification requirements of 49 C F R §§ 1105 7 and 1105 8 with respect to the Supplemental Environmental and Historic Report By any measure, public agencies and interested parties will receive far more notice and opportunity to comment before issuance of the EA in this case than parties receive under the usual 50-day time frame for Notices of Exemption under the Board's rules.

Accordingly, for the foregoing reasons, Applicants request that the Board stay the effective date of the Notice of Exemption for 180 days from Applicants' filing (i e , until July 6, 2009) and waive the pre-filing notification requirements of 49 C F R §§ 1105 7 and 1105 8

Respectfully submitted,

John K Enright
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Dated January 6, 2009

EXHIBIT D

CONRAIL

March 6, 2008

New Jersey State Clearinghouse
State Review Process
Office of the Governor
P O. Box 001
Trenton, NJ 08625-0001

Kris Kolluri, Commissioner
New Jersey Dept of Transportation
1035 Parkway Avenue
CN-600
Trenton, NJ 08625

U S Department of the Interior
National Park Service
Chief, Recreation Resources Assistance Division
1849 C Street, NW - Room 3129
Washington, DC 20240

U S Department of the Interior
National Park Service
Chief, Land Resources Division
1849 C Street - Room 3120
Washington, DC 20240

Bob Korpanty
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720 Thimble Shoals Boulevard, Suite 130
Newport News, VA 23606-2574

Gail Kimbell, Chief
USDA Forest Service
Sidney R Yates Federal Building
1400 Independence Avenue, SW
Washington, DC 20250-0003

RE Docket No AB 167 (Sub-No. 1189X)
Consolidated Rail Corporation -- Abandonment
Exemption -- in Hudson County, New Jersey

Docket No. AB 55 (Sub-No 686X)
CSX Transportation, Inc -- Discontinuance
Exemption -- in Hudson County, New Jersey

Docket No. AB 290 (Sub-No 306X)
Norfolk Southern Railway Company -- Discontinuance
Exemption -- in Hudson County, New Jersey

Dear Sir/Madam:

This is to notify you pursuant to 49 C F R 1152 50(d)(1) that on or after April 7, 2008, Consolidated Rail Corporation ("Conrail"), CSX Transportation, Inc ("CSXT"), and Norfolk Southern Railway Company ("NS") intend to file combined Notices of Exemption with the Surface Transportation Board for abandonment (Conrail) and

discontinuance of service (CSXT and NS) of the rail lines shown on the attached map, and more fully described below. because of the proximity of the two lines, they are being included in the same application

Name. Harsimus Branch

Location. Hudson County, New Jersey, traversing United States Postal Service Zip Codes 07302 and 07306

Description of Track From approximately milepost 0 0± to approximately milepost 1.36± in the city of Jersey City, Hudson County, New Jersey

Length of Track: 1.36 total miles±

Name: Hudson Street Industrial Track

Location: Hudson County, New Jersey, traversing United States Postal Service Zip Code 07302

Description of Track· From approximately milepost 0 0± to approximately milepost 0.72± in the city of Jersey City, Hudson County, New Jersey

Length of Track. 0 72 total miles±

The Notices of Exemption will be filed pursuant to the provisions of 49 C.F R. 1152 50 regarding abandonment of out-of-service lines of railroad. Because the subject lines are out of service and have handled no traffic for the past two years, the abandonment will result in no change in current operations or maintenance. Rail service on the lines was previously discontinued and the underlying right-of-waywas either sold or reverted to various parties. The rail and ties of both lines have already been removed, as has an undergrade bridge that traversed several street intersections of an elevated portion of the Harsimus Branch The only alternative considered is no action

Based on information in our possession, the line does not contain federally granted rights-of-way Any documentation in our possession will be made available promptly to those requesting it

If you have any questions concerning this proceeding, please call me at the number shown below.

Very truly yours,

John K. Enright/rbd

John K. Enright
Associate General Counsel
1000 Howard Boulevard, 4th Floor
Mt Laurel, NJ 08054
(856) 231-7206

Enclosure

cc Anne K Quinlan, Secretary
Surface Transportation Board
395 E Street, SW
Washington, D C 20423-0001

Regional Director
National Park Service – Northeast Region
U. S Custom House
200 Chestnut Street, 5th Floor
Philadelphia, PA 19106

EXHIBIT E

Everything Jersey

BEST LOCAL CLASSIFIEDS

Notices and Announcements-Legal Notice

AD TEXT

Legal Notices

NOTICE Consolidated Rail Corporation ("Conrail") gives notice that on or after January 6, 2009, it intends to file with the Surface Transportation Board, 395 E Street, SW, Washington, DC 20423, a Verified Notice of Exemption under 49 C F R 1152 Subpart F-Exempt Abandonments, permitting the abandonment of a 1 36-mile segment of what the Board has determined to be a line of railroad, between railroad Milepost 0 00 (CP Waldo) and Milepost 1 36 (east of Washington Street), which traverses through United States Postal Service Zip Codes 07302, 07306, and 07310 in the City of Jersey City, Hudson County, New Jersey (According to the Board, the Milepost at CP Waldo is 2.54 and the Milepost at a point near Marin Boulevard is 1 30. The Board has not assigned a Milepost number to the point east of Washington Street.) The proceeding will be docketed as STB No AB 167 (Sub-No. 1189X) Simultaneous with Conrail's filing of its abandonment application, CSX Transportation, Inc ("CSXT") and Norfolk Southern Railway Company ("NS") will be filing Verified Notices of Discontinuance of Service with respect to the same property, and these applications will be docketed as STB No AB 55 (Sub-No 686X) and STB No. AB 290 (Sub-No 306X) Under normal procedures, the Board's Section of Environmental Analysis (SEA) will prepare an Environmental Assessment (EA), which is typically available 25 days after the filing of the notice of exemption, and any comments from the public are due no more than 15 days after issuance of the EA Here, the procedural process is anticipated to be different Conrail will file a motion with the STB to stay the effective date of the abandonment for 180 days, until July 6, 2009 Under the schedule proposed by Conrail, parties will have several opportunities to comment on environmental matters before the SEA issues an EA In addition, the schedule will permit parties to have 30 days after the SEA issues an EA to comment on the EA. Those comments will be addressed in a Board decision. Interested persons may obtain information about the procedural schedule or a copy of the EA, or make other inquiries regarding environmental matters, by writing to the Section of Environmental Analysis, Surface Transportation Board, 395 E Street, SW, Washington, DC 20423, or by calling that office at 202-245-0295 Appropriate *offers of financial assistance to revive railroad service can be filed with the* Board Requests for environmental conditions, public use conditions, or rail banking/trails use also can be filed with the Board An original and 10 copies of any pleading that raises matters other than environmental issues (such as trails use, public use, and offers of financial assistance) must be filed directly with the Board's Office of the Secretary, 395 E Street, SW, Washington, DC 20423, and one copy must be served on the Applicant's representatives Questions regarding offers of financial assistance, public use or trails use may be directed to the Board's Office of Congressional and Public Services at 202-245-0230 Copies of any comments or requests for conditions should be served on the Applicants' representatives John K. Enright, Associate General Counsel, Consolidated Rail Corporation, 1717 Arch Street, 32nd Floor, Philadelphia, PA 19103, telephone 215-209-5012, and Robert M Jenkins III, Mayer Brown LLP, 1909 K Street, NW, Washington, DC 20006, telephone 202-263-3261. $171 00

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