




OFFICE OF THE MAYOR
THE CITY OF NEW YORK

CASWELL F. HOLLOWAY
DEPUTY MAYOR FOR OPERATIONS

Memorandum

To: Mayor Michael R. Bloomberg
From: Caswell F. Holloway 
Date: March 29, 2013
Re: World Trade Center Potential Human Remains Recovery Update

As you know, nearly 3,000 people were murdered in the September 11, 2001 terrorist attacks on the World Trade Center. Many of those killed have not been positively identified because no remains could be found, or remains that have been found have not yet been positively identified. The City expanded its search for potential human remains (PHR) at and in the vicinity of the World Trade Center (WTC) site in October 2006, when PHR were located in a Con Edison manhole at the site. Led by the Office of Chief Medical Examiner (OCME), our efforts have resulted in the recovery of 1,845 PHR to date. Since the City's last comprehensive sifting operation from April to June 2010, OCME has continued to conduct its search and recovery activities, including monitoring construction within and around the WTC site.¹

Through these operations, OCME has recovered approximately 590 cubic yards (cy) of new material, and on Monday April 1, OCME will commence what it expects will be a 10-week operation to examine this material for PHR. This memorandum provides an update on significant developments in our ongoing efforts to locate and identify remains from the 2001 terrorist attacks on the World Trade Center.

I. Summary of OCME WTC Operations (June 2010-Present)

As noted above, OCME has recovered approximately 590 cy of material from several construction areas at and around the WTC site, including the World Financial Center, West Street (Route 9A), and the section commonly referred to as the "Vehicle Security Center" north

¹ OCME completed search and recovery operations for the Haul Road, 140 Liberty Street Parcel, and Cedar Street, as well as several subterranean structures and building interiors and rooftops, prior to the last comprehensive sifting operation; OCME has not yet completed search and recovery operations for sections of the WFC, West Street (Route 9A), and portions of Vesey Street.

of 130 Liberty Street. A summary of activity in these areas follows below (see Appendix A and accompanying map for further information):

A. World Financial Center

OCME has recovered approximately 38 cy of excavated material from a previously inaccessible area in front of the World Financial Center (WFC). While search operations there are largely complete, several areas near the WFC remain inaccessible today, including the delivery access driveway extending north from Liberty Street, sections of sidewalk along the building façade, and parts of the former marginal road to the west of West Street (see C Grid on accompanying map).

B. West Street (Route 9A)

In addition to the material recovered at the main WFC site, approximately 13 cy of material have been collected from the western edge of the southbound lanes of West Street in front of the World Financial Center.

C. “Vehicle Security Center”

OCME has recovered 539 cy of excavated material from the previously inaccessible area north of 130 Liberty Street now known as the “Vehicle Security Center.”² In addition, four PHR were discovered at the site location in 2011. OCME completed its search operations there following the completion of demolition activities for the former Deutsche Bank building. The excavation area included areas within the foundation for the North Plaza of the building, Liberty Street between Greenwich Street and Washington Street, and Washington Street north of Albany Street (see “Vehicle Security Center” on accompanying map).

II. Upcoming WTC PHR Efforts

As noted above, the next comprehensive sifting operation is scheduled to begin on Monday, April 1. Using the state-of-the-art mobile sifting platform designed and built as an outgrowth of the operation begun in 2006, the operation will enable OCME to examine the approximately 590 cy of WTC materials described above. As during previous operations, a team of City agencies – including the Police Department, the Fire Department, the Department of Design and Construction, the Department of Information Technology and Telecommunications and the Department of Sanitation – will work with OCME. The operation is expected to last ten weeks.

OCME continues its work to identify as many victims of the WTC terrorist attacks as possible, making 34 new victim identifications and linking over 2,435 PHR to previously identified victims since 2006. The total number of WTC identifications is currently 1,634 victims. As

² Following the completion of the last comprehensive sifting operation in June 2010, OCME reported a total of 1,845 PHR, but subsequent laboratory analyses resulted in the reduction of total PHR to 1,841. OCME’s discovery of four PHR during the excavation of the “Vehicle Security Center” in March, April, and May 2011 again has increased the total to 1,845 PHR recovered to date.

explained in the June 22, 2010 update on this effort (attached), OCME continues to improve its ability to identify individuals lost on September 11, 2001 and we will continue DNA testing until all recovered remains that can be matched with a victim are identified.

As construction activity continues in and around the WTC site, OCME will continue its monitoring operations, investigating any newly accessible areas and examining any recovered WTC material for PHR.

I will continue to keep you up-to-date on this effort.

- c: Linda I. Gibbs, Deputy Mayor for Health and Human Services
- Dr. Barbara Sampson, Acting Chief Medical Examiner
- Joseph F. Bruno, Commissioner, Office of Emergency Management
- David J. Burney, Commissioner, Department of Design and Construction
- Salvatore J. Cassano, Fire Commissioner
- John J. Doherty, Commissioner, Department of Sanitation
- Edna Wells Handy, Commissioner, Department of Citywide Administrative Services
- Raymond W. Kelly, Police Commissioner
- Rahul N. Merchant, Commissioner, DOITT
- Nazli Parvizi, Commissioner, Community Affairs Unit
- Joseph Simenic, Acting Executive Director, LMCCC
- Carter Strickland, Commissioner, Department of Environmental Protection

Appendix A—Summary of Excavations and Recoveries

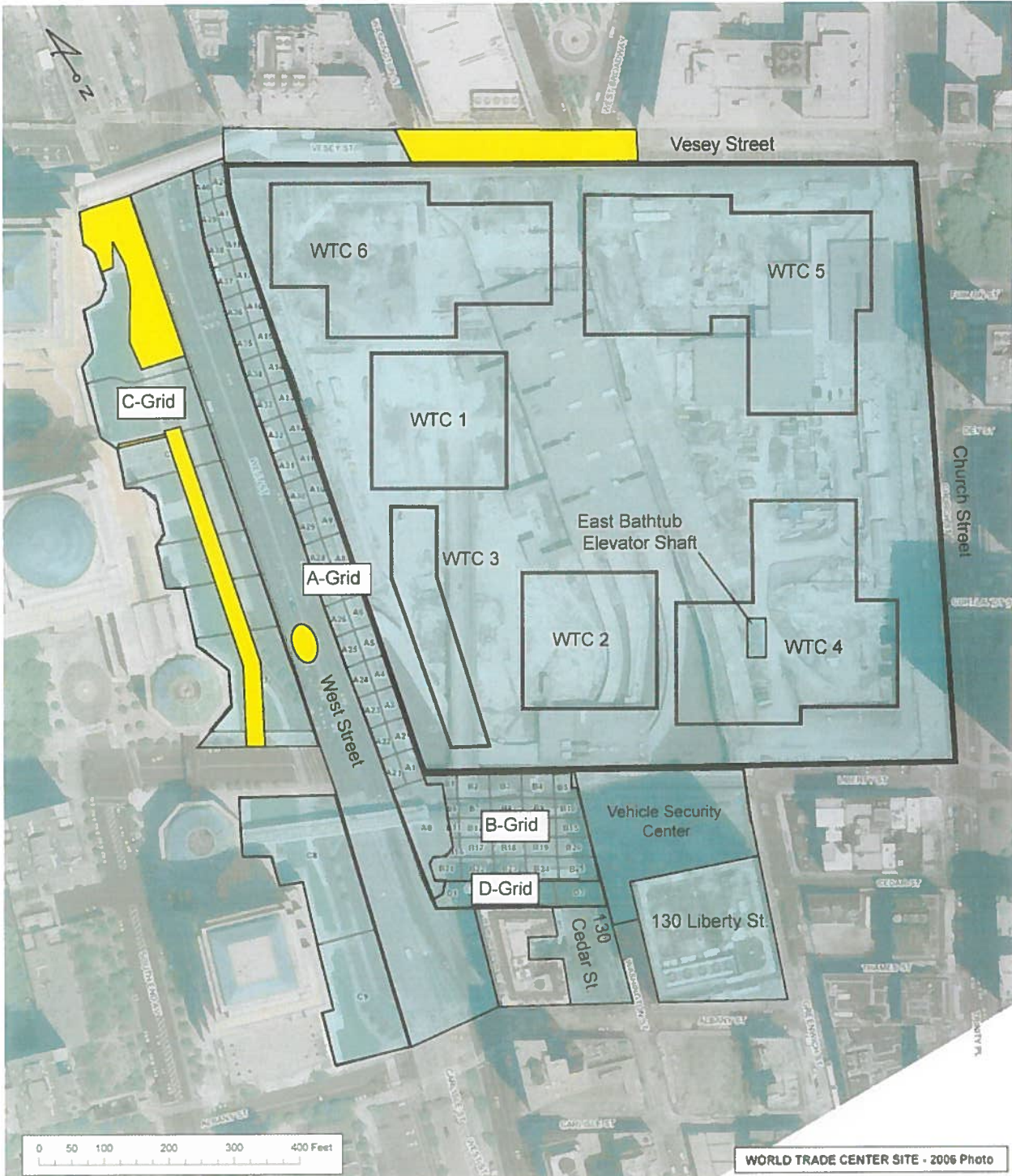
Expanded Search for Human Remains –Excavation and Recovery Summary (as of March 2013)				
Search Area	Parameters	Vol. Staged (cy)	Vol. Sifted (cy)	PHR Recovered
Haul Road (A Grid)	Road bounded by Vesey Street to the North, Cedar Street to the South, the slurry wall to the East, and West Street to the West; WTC access ramps; and the DEP Chimney Structure and DEP Sewer Line beneath the Haul Road.	0	7,416.5	601
140 Liberty Street Parcel (B Grid)	Former site of the St. Nicholas Greek Orthodox Church, this 0.8-acre plot is bounded by Cedar Street, Washington Street, Liberty Street, and West Street.	0	4,649	272
World Financial Center (C Grid)	Frontage of the World Financial Center bounded by Vesey Street to the North, Albany Street to the South, and West Street to the East.	38	2,341	87
Cedar Street (D Grid)	Entirety of Cedar Street from the Washington Street curb line to West Street.	0	427	35
Washington Street (E Grid) ³	Entirety of Washington Street from Liberty Street curb line to immediately south of the Cedar Street curb line.	0	6	0
Subterranean Structures	Subterranean structures in the area bounded by Barclay Street, Broadway, Albany Street and the Hudson River, inclusive.	0	247.5	22
Building Interiors and Rooftops	Includes the rooftops of 55 Church Street and 1 Liberty Plaza; the rooftops and interiors of Fiterman Hall and 130 Cedar Street; and the rooftops, exteriors, and interiors of 130 Liberty Street.	0	76 ⁴	786 ⁵
World Trade Center site	Includes East Bath tub area of the WTC site, and sections of Vesey Street.	0	25.5 ⁶	0
West Street (Route 9A)	NY State Route 9A (West Street) between Albany Street and Vesey Street.	13	592.5	38
Vehicle Security Center	Includes 130 Liberty Street North Plaza, Liberty and Washington Streets.	539	0	4
Totals		590	15,781	1,845

³ The area previously referred to as the E Grid (Washington Street) has been consolidated with the Vehicle Security Center area.

⁴ Only the 76 cy recovered from the Fiterman Hall rooftop is reflected in the table above. All other building rooftop material was sifted on site.

⁵ This figure includes 783 PHR recovered from 130 Liberty Street, and three PHR recovered from 130 Cedar Street.

⁶ This total comprises 5.5 cy of material excavated in 2009 from beneath the pavement on Vesey Street and 20 cy of material recovered from the East Bath tub and hand-sifted in 2007 (no PHR were recovered from either location).




- Cleared Zones
- Monitoring Zones



THE CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK, N. Y. 10007

STEPHEN GOLDSMITH
DEPUTY MAYOR FOR OPERATIONS

MEMORANDUM

To: Mayor Michael R. Bloomberg
From: Stephen Goldsmith 
Date: June 22, 2010
Re: WTC Potential Human Remains Recovery Update

The City's expanded search for potential human remains at and in the vicinity of the World Trade Center (WTC) site began in October 2006. As you know, that effort entered a new phase in April 2010 when the Office of Chief Medical Examiner (OCME) commenced a comprehensive sifting operation to evaluate approximately 800 cubic yards (cy) of material excavated from newly accessible areas. The sifting operation concluded this past Friday and resulted in the recovery of 72 potential human remains. To date, OCME's expanded search has recovered a total of 1,845 potential human remains from areas in and around the WTC site.¹ While OCME's presence at the WTC site will continue for the foreseeable future, the end of this sifting operation marks a significant milestone in the search and recovery effort.

I. Summary of Sifting Operation (April 5 – June 18)

The expanded search for those lost as a result of the September 11th attacks began in October 2006 following the discovery of human remains in a Consolidated Edison manhole within the WTC site. As the effort expanded to additional locations, the City established a state-of-the-art hand-sifting facility at 11 Water Street in Brooklyn, along with a staging and pre-sifting facility at the 39th Street Pier. OCME excavated and evaluated approximately 15,000 cy of material from the WTC site as part of this operation, an effort that lasted until December 2007.

¹ This figure includes 764 potential human remains (PHR) recovered from the roof of 130 Liberty Street prior to the expansion of the search for potential human remains at the WTC site that began in October 2006; OCME has recovered 1,081 PHR since the start of the expanded search. OCME previously reported that 766 PHR were recovered from 130 Liberty Street prior to October 2006; through subsequent analysis, OCME has revised this figure to 764 PHR.

Since then, OCME has monitored construction in and around the WTC site. As new sites became accessible, OCME conducted additional search and recovery operations, excavating 791 cy of material.² To properly evaluate the newly excavated material for potential human remains, OCME established a special sifting operation that utilized a mobile forensic sifting platform. The sifting operation began on April 5th at a secure area of Fresh Kills on Staten Island. OCME led the effort, with coordination from the Office of Emergency Management and support from the Police Department, the Fire Department, the Department of Sanitation, the Department of Design and Construction, and several other City Agencies. In addition, the City coordinated with the State Department of Environmental Conservation (DEC).

Using the same hand-sifting techniques employed at the previous sifting operation in Brooklyn, anthropologists carefully and thoroughly evaluated the material recovered since December 2007. The potential human remains were sent to OCME laboratories for further testing, and personal items were documented and subsequently provided to the Police Department. Pursuant to authorization granted by the State DEC, the Department of Sanitation placed all sifted material in a covered structure at Fresh Kills, where the material continues to be stored. The cost for the sifting operation was approximately \$1.7 million.

The potential human remains discovered during the recent sifting operation were recovered from material found at multiple areas around the WTC site. A description of those areas follows below (see Appendix A and accompanying map for further information on sites within the sifting operation).

A. Haul Road (A Grid)

Primary search operations for the Haul Road were completed in 2007; however, 7.5 cy of material were subsequently recovered from a previously inaccessible subterranean structure at the road. OCME discovered one potential human remain from this material during the recent sifting operation.

B. 140 Liberty Street Parcel (B Grid)

OCME's search of the 140 Liberty Street Parcel, former site of St. Nicholas Greek Orthodox Church, has been largely complete since December 2007. Last month, OCME gained access to a small, previously inaccessible area under a pedestrian overpass, removing 30 cy of material. In the recent sifting operation, OCME recovered two potential human remains. OCME's search of the 140 Liberty Street parcel is now complete.

C. World Financial Center (C Grid)

Earlier this year, OCME recovered 31 cy of additional material from a previously inaccessible area in front of the World Financial Center. OCME evaluated this material in the recent sifting operation, and recovered ten potential human remains. While search operations on

² An earlier projection of 844 cy of material was based on OCME estimates made during the excavation process. The recent sifting operation provided a much more precise calculation of the total volume of material.

this parcel are largely complete, several small portions will not become accessible until next year or 2012, contingent upon the progress of the West Street underpass portion of the WTC PATH Hub project and State Department of Transportation's reconstruction of West Street adjacent to the WTC site.

D. Cedar Street (D Grid)

Small excavations conducted by OCME since December 2007 in newly accessible areas of the Cedar Street grid between West Street and Washington Street resulted in the recovery of 22 cy of new material. Sifting of this material during the recent operation resulted in the discovery of 21 potential human remains.

E. Washington Street (E Grid)

The recent sifting operation evaluated 6 cy of material recovered by OCME from a small area near the corner of Cedar Street and Washington Street.³ No potential human remains were found. The remainder of this area will not be accessible until the demolition of 130 Liberty Street is complete.

F. West Street (Route 9A)

The majority of the WTC material sifted in the recent operation came from newly accessible areas within NY State Route 9A (West Street) between Albany Street and Vesey Street. Since December 2007, OCME recovered a total of 592.5 cy of material from beneath West Street itself and from structures within West Street. Sifting of material from this area resulted in the discovery of 37 potential human remains. OCME will continue monitoring construction work in West Street and remove any potential WTC material.

G. Subterranean Structures

Since December 2007, 20.5 cy of new material have been removed from pre-9/11 subterranean structures in and around the WTC site. The recent sifting operation recovered one potential human remain from this material.

H. Building Interiors and Rooftops

Since 2006, OCME has conducted thorough evaluations of building interiors and rooftops in the vicinity of the WTC site as they became accessible. As part of the recent sifting operation, OCME examined 76 cy of ballast removed last summer from the rooftop of Fiterman Hall. No potential human remains were found.

³ OCME previously determined that all of Washington Street from the Liberty Street curb line to south of the Cedar Street curb line required close monitoring. Initially, that area was inaccessible, but as excavation has progressed, OCME has gained new access to and evaluated approximately half of Washington Street.

As demolition continues at 130 Liberty Street, OCME will closely monitor the excavation of the north plaza area, which is expected to occur once the building deconstruction reaches approximately the fifth floor. OCME has and will continue to examine any potential WTC material found until the deconstruction is complete.

I. World Trade Center Site

OCME's recent sifting operation also examined 5.5 cy of material discovered last summer beneath the pavement on Vesey Street near the southwest corner of Vesey Street and Washington Street. No potential human remains were found.

OCME, working with the Lower Manhattan Construction Command Center, will continue to monitor work at the WTC site for the foreseeable future, and will conduct further searches and excavations as it gains access to new areas.

II. Ongoing Efforts

Since 2006, OCME has recovered a total 1,845 potential human remains from areas in and around the WTC site. Although the recent sifting operation has concluded, OCME will continue monitoring ongoing construction in the WTC area, conducting excavation and sifting operations as necessary and as it gains access.

Moreover, OCME continues to work to identify as many victims of the WTC attacks as possible. Since 2006, OCME has made 25 new victim identifications and hundreds of potential human remains identified during the renewed search have been linked to previously identified victims. OCME's ability to identify those lost on 9/11 continues to improve, and DNA testing will continue until all recovered remains that can be matched with a victim are identified.

The City has not wavered in its dedication to finding and identifying those lost on September 11th. And while the end of this recent sifting operation marks a significant milestone, OCME's search for the remains of victims of the WTC attacks will continue for the foreseeable future. Led by a team of capable and caring scientific staff and operations personnel, the City remains well-prepared for and strongly committed to this important effort.

I will continue to keep you updated.

cc: Linda I. Gibbs, Deputy Mayor for Health and Human Services
Dr. Charles S. Hirsch, Chief Medical Examiner
Joseph F. Bruno, Commissioner, Office of Emergency Management
David J. Burney, Commissioner, Department of Design and Construction
Salvatore J. Cassano, Fire Commissioner
John J. Doherty, Commissioner, Department of Sanitation
Robert N. Harvey, Acting Executive Director, LMCCC
Martha K. Hirst, Commissioner, Department of Citywide Administrative Services
Caswell F. Holloway, Commissioner, Department of Environmental Protection
Raymond W. Kelly, Police Commissioner
Nazli Parvizi, Commissioner, Community Affairs Unit

Appendix A—Summary of Excavations and Recoveries

**Expanded Search for Human Remains
Excavation and Recoveries Summary
(as of June 18, 2010)**

Search Area	Parameters	Vol. Excavated and Sifted (cy)	Potential Human Remains Recovered
Haul Road (A Grid)	Construction artery bounded by Vesey Street to the North, Cedar Street to the South, the slurry wall to the East, and West Street to the West; WTC access ramps partially under West Street; and the DEP Chimney Structure and DEP Sewer Line beneath the Haul Road.	7,416.5	603
140 Liberty Street Parcel (B Grid)	Former site of the St. Nicholas Greek Orthodox Church, this 0.8-acre plot is bounded by Cedar Street, Washington Street, Liberty Street, and West Street.	4,649	272
World Financial Center (C Grid)	Frontage of the World Financial Center bounded by Vesey Street to the North, Albany Street to the South, and West Street to the East.	2,341	90
Cedar Street (D Grid)	Entirety of Cedar Street from the Washington Street curb line to West Street.	427	35
Washington Street (E Grid)	Entirety of Washington Street from Liberty Street curb line to immediately south of the Cedar Street curb line.	6	0
Subterranean Structures	Subterranean structures in the area bounded by Barclay Street, Broadway, Albany Street and the Hudson River, inclusive.	247.5	22
Building Interiors and Rooftops	Includes the rooftops of 55 Church Street (Millenium Hotel) and 1 Liberty Plaza; the rooftops and interiors of Fiterman Hall and 130 Cedar Street; and the rooftops, exteriors, and interiors of 130 Liberty Street.	76 ⁴	786 ⁵
World Trade Center site	Includes East Bathtub area of the World Trade Center site, and sections of Vesey Street.	25.5 ⁶	0
West Street (Route 9A)	NY State Route 9A (West Street) between Albany Street and Vesey Street.	592.5	37
Totals		15,781	1,845

⁴ Only the 76 cy recovered from the Fiterman Hall rooftop are reflected in the table above of material excavated and retained. With the exception of Fiterman Hall, all building rooftop material was sifted on site.

⁵ This figure includes 783 PHR recovered from 130 Liberty Street, and three PHR recovered from 130 Cedar Street.

⁶ This total comprises 5.5 cy of material excavated in 2009 from beneath the pavement on Vesey Street and 20 cy of material recovered from the East Bathtub and hand-sifted in 2007 (no PHR were recovered from either location).