Comments on the DGEIS / Amended GPP
from Organizations

Public Comment of Jennifer Hensley
Director of Intergovernmental & Community Affairs
Alliance for Downtown New York
February 18, 2004

Lower Manhattan Development Corporation
Draft Generic Environmental Impact Statement
for the World Trade Center Site

My name is Jennifer Hensley and I am the director of intergovernmental and community affairs for the Downtown Alliance, Lower Manhattan's Business Improvement District. I would first like to commend the state and the city, LMDC, the Port Authority and the MTA for your dedication and ongoing commitment to rebuilding Lower Manhattan. The progress made to date has been extraordinary.

The draft Generic Environmental Impact Statement is a major step toward a revitalized Lower Manhattan. While we, as many of the other parties here today, have concerns about some of the anticipated impacts of the construction on the World Trade Center site and the proposed mitigation strategies outlined in the DGEIS, I do want to emphasize the importance of moving the construction of the site forward as rapidly as possible.

In this regard, I want to underscore that despite the unprecedented support of $21 billion from the Federal government, the available public funds alone simply will not cover the cost of rebuilding. Timely and complete Downtown revitalization is dependent upon the extent and availability of private money. All of us must recognize the significant impact that the amount of available insurance proceeds will have on the rebuilding process. Though it is not our place to pass judgment regarding the legal merits of the World Trade Center insurance case, it is clear that the larger the settlement, the speedier the rebuilding process will be and the more public money available for use on other important Lower Manhattan projects.

With regard to the specifics of the DGEIS, the document goes a long way toward assessing the impacts of the enormous construction project planned at the World Trade Center site on the Lower Manhattan community. However, we are particularly concerned about some of the construction and post-construction impacts.

First, it is important that the environmental impact study assess the traffic patterns on streets adjacent to and running through the World Trade Center site within the context of the heightened security environment in which we all now live. While we recognize that, at this time, it may be impossible to state specifically what security measures will be in place at the completed World Trade Center site, it is important to analyze the traffic and pedestrian patterns with the likelihood of new measures in mind. How vehicles and pedestrians move through these spaces is critical to determining the impact of the new development on our neighborhood.

Further, the DGEIS asserts that parking facilities currently in the plans will be adequate to serve the projected needs. The Downtown Alliance is concerned that the number of tour buses bringing visitors to the site may exceed expectations, and we need to be sure there is an adequate plan for off-street storage. We are also concerned about the proposed routing plan whereby buses would be required to drop passengers off at a designated location and then moved through a security check-point and into an underground parking facility. Specifically, we believe that the LMDC should evaluate how this program will be enforced, and develop a contingency plan for peak times -- such as a 9/11 anniversary -- when the number of buses could easily exceed the capacity of the facilities.

Moreover, the DGEIS does not address the broader issue of the increase in commuter bus traffic that will be necessitated by the dramatically increased worker population at the site once it is completed. An important issue for Lower Manhattan is where commuter buses will be stored in between the morning and evening rush hours.

During the period of construction on the World Trade Center site, there will also be several other major construction projects happening throughout Lower Manhattan. This activity will cause an influx of huge construction crews into the area each day. Despite predictions that many of these workers will take public transportation, we believe that, if given permits or allowed to park, many will actually drive in, cluttering our narrow streets and sidewalks, as well as the areas reserved for staging, with parked cars. We ask for strict enforcement of parking rules at and near all Lower Manhattan construction sites, and urge you to consider severely limiting the number of vehicle permits you distribute to contractors as well as an overall reduction in the amount of official permit parking allowed Downtown during this highly congested construction period. That will help keep our streets, sidewalks and open spaces free of vehicular congestion and encourage use of public transportation.

Additionally, the DGEIS mentions congestion pricing or a similar scheme that would charge cars to come into a designated Lower Manhattan vicinity as a mitigation technique for the vehicular congestion that is expected to worsen when streets are closed and traffic rerouted due to construction activities. We strongly

oppose this measure, if only applied to Lower Manhattan. We believe it would have significant adverse impacts on all businesses located in Lower Manhattan.

If congestion pricing is considered, it should be considered for the entire Manhattan CBD south of 60th Street to ensure that Lower Manhattan doesn't suffer a disadvantage. Otherwise, it would have the likely effect of dissuading people from coming Downtown at all. Lower Manhattan shops and restaurants have suffered significant losses in sales since 9/11. In September, 2003, the Downtown Alliance found that 64% of retail stores and restaurants were still reporting a decrease in their customer base. A discriminatory congestion pricing scheme would no doubt exacerbate that problem. It would also place Lower Manhattan at a disadvantage over other established and growing business districts in the region prompting businesses to look elsewhere for space.

Finally, it is important to note that initial development guidelines issued by the LMDC and Port Authority include forward-looking design goals such as energy efficiency. Equally as important is a resilient telecommunications infrastructure. Consequently, telecommunications standards for the World Trade Center site should be upgraded to include infrastructure that would support a Wireless Redundancy Network and the final design guidelines should include the design goal of "state-of-the-art telecommunications reliability." Final plans for each new building on the site should include dual points of entry, dual carrier-neutral risers and a wireless contingency system on the roof. Further, we support the development of WiFi in the World Trade Center site's open spaces that can be integrated into the Downtown Alliance's existing network.

We continue to discuss the issues relating to the impacts of construction on and near the World Trade Center site with our constituents, and we plan to submit a more comprehensive and detailed response to the DGEIS before your March 15th deadline.

We believe that the World Trade Center site is one of this nation's most important urban development projects and the LMDC, the Port Authority, the state and the city have all proven to be true visionaries. Together you have convened the greatest architects, urban planners, engineers and designers of our time, and they have responded with inspired and innovative plans that will no doubt enhance Lower Manhattan's character and create a world-class destination. We look forward to seeing your wonderful plans take shape in the coming years.

Thank you.

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Comment of Jennifer Hensley
Director of Intergovernmental & Community Affairs
The Downtown Alliance
March 15, 2004

Lower Manhattan Development Corporation
Draft Generic Environmental Impact Statement
World Trade Center Site

I would like to commend the state and the city, the LMDC, the Port Authority and the MTA for all your work in moving this unprecedented urban planning and renewal project forward. The progress made to date is truly extraordinary.

At the February 18th public hearing on the LMDC's draft Generic Environmental Impact Statement (DGEIS), I submitted a comment on behalf of the Downtown Alliance that outlined some of our concerns regarding the anticipated impacts of the construction on the World Trade Center site and the proposed mitigation strategies outlined in the DGEIS. The following relates our additional concerns. We will also be submitting, with Wall Street Rising, a comment specifically about proposed construction impact mitigation measures that will help Downtown's retailers during the long and intense build-out period.

The Downtown Alliance is concerned about some of the assumptions made in the DGEIS regarding the impacts of a fully developed World Trade Center site on the Lower Manhattan community, as well as those that would result from the construction phase of the rebuilding.

In terms of a completed World Trade Center site, it is critical that some conclusions and assumptions be made now, before planning continues, about how the street pattern through the site will be set forth and how will operate. This includes determining if and when the streets running through and adjacent to the World Trade Center site are open to vehicular traffic, how the curb spaces will be programmed (taxi pick-up and drop-off, bus stops, etc.), the waiting areas for black cars, dedicated lanes for east/west surface transit through the area and the impact that heightened security measures will have on the functionality of these streets. The DGEIS has not adequately explored these issues, and we believe they need to be addressed in the final EIS.

Further, we believe that buildings on the site should be constructed to meet the most advanced security standards. Construction of secure buildings on the site

will increase the likelihood that the streets running through the site will remain open during heightened security alert periods. Keeping these streets open to traffic is essential to increasing connectivity among all Lower Manhattan neighborhoods and making it easier to get into and around Downtown. The final EIS should explore what these standards are and identify possible impacts of using them in the design guidelines for buildings on the World Trade Center site.

The final EIS must also explore another important part of connectivity – that is, the prospect of returning Liberty Street to being open for two-way traffic, at least from Church Street west. This two-way access would improve the flow of westbound traffic and provide easier access to the World Financial Center and Battery Park City.

Also, the final EIS should include a comprehensive assessment of how parking and staging for vehicles, including buses and black cars, will work on the site. Our earlier comments discuss concerns about tour bus drop-off, pick-up and parking on the site, as well as commuter bus storage between the morning and evening rush hours. We are also concerned about the planning of adequate space for black car staging on the site. The corporate tenants expected to occupy the class-A office space will no doubt use a significant number of black cars, and we need to make sure that there is an appropriate amount of space and an enforceable plan for staging them now, during this important planning stage.

The staging of black cars Downtown could also become an issue in the construction phase of the World Trade Center site redevelopment project. Downtown's narrow and crowded streets allow only very limited areas for black car staging. Should these areas become inaccessible due to construction impacts – such as street closures or increased traffic congestion – the remainder of the neighborhood would have to absorb that traffic. It is important that an assessment of these potential impacts be included in the final EIS, and mitigation measures, where appropriate, be provided.

Vehicle parking during the construction phase is also an important issue that needs to be addressed more fully in the final EIS. We believe that if opportunities to park exist, members of the huge construction crews working on Lower Manhattan projects would opt to drive into Downtown, cluttering our already overcrowded streets with cars. We have already suggested that the number of parking permits given to contractors be severely limited, and that parking rules on streets near construction sites be strictly enforced. We believe that no placard parking should be permitted Downtown during the construction period in order to open up current parking lanes to offset the anticipated increase in traffic congestion. We further suggest that the LMDC encourage use of public transportation and implement – as appropriate – some type of shuttle bus or ferry service to bring the large numbers of construction workers into Downtown from points outside the area.

Retail development is also a critical component of rebuilding the World Trade Center site. We support placement of the majority of the retail space at or above grade in order to keep the street life vibrant and active. We also support, if possible, the development of the retail components in the earliest phase of development. It is important that the retail components are built early, to serve the workers, residents and visitors who are anxiously awaiting the return of major destination retailers to the area. Moreover, in our view, a built-out retail center will create an environment and demand in which the office development will proceed more expeditiously.

The Downtown Alliance and our constituents are pleased to see the rebuilding process moving so swiftly and hope that the pace continues, ensuring Lower Manhattan's complete revitalization. We look forward to continued collaboration with you on these and other important initiatives.

Thank you.

Public Comment of
Julie Menin
President & Founder, Wall Street Rising
and
Jennifer Hensley
Director of Intergovernmental & Community Affairs, The Downtown Alliance

Lower Manhattan Development Corporation
Draft Generic Environmental Impact Statement
for the World Trade Center Site
March 15, 2004

Wall Street Rising, a non-profit Lower Manhattan advocacy group, and the Downtown Alliance, Lower Manhattan's Business Improvement District, both work to attract businesses and residents to and retain them in Downtown New York, maintaining Lower Manhattan's role as an around-the-clock, live/work neighborhood.

Retail stores and restaurants are a critical component of this neighborhood, and serve both the worker population during the day and the residential population in the evenings and on weekends. In the wake of the September 11th attacks, one of our biggest challenges has been the attraction and retention of retail stores. These small businesses suffered extensive business interruption after the attacks, when streets were closed and access was restricted. During the clean-up phase, as the fires continued to burn on the site and deconstruction began, the workers and residents who had come back Downtown to their offices and homes were not leaving to shop or eat out, so the retailers continued to suffer.

Throughout the past two and a half years, many Lower Manhattan retailers have had to close their doors; currently the retail vacancy rate south of Chambers Street is 11.5%. Still more who received low-cost loans in the aftermath of the attacks are starting to have trouble with their repayment schedules and face eviction and, in some cases, bankruptcy. Downtown's retailers are still struggling to recover.

According to the Lower Manhattan Development Corporation's Draft Generic Environmental Impact Statement, the construction phase of development on and near the World Trade Center site is expected to be long and intense. Impacts of this construction are said to include increased truck and vehicular traffic creating congestion on Downtown's narrow streets, loud noise and street closures as well as other access restrictions and environmental impacts. We believe that retailers

are positioned to suffer some of the most significant adverse effects of this construction, and specific measures need to be taken to mitigate those impacts on retailers. Moreover the on going viability of existing retailers, as well as the ability to attract new ones to the area, during the construction period is essential to the continued stabilization of both businesses and residents.

We propose that funding be allocated to launch a targeted, comprehensive marketing campaign that could include branding, advertising, and public relations, all with the goal of driving shoppers and diners to Lower Manhattan, offsetting the decline in foot traffic that will almost certainly result from the anticipated construction impacts. Before a campaign is developed, though, it is necessary to complete focused, intensive research on the Lower Manhattan retail market in order to more completely understanding the needs of the retail users Downtown (residents, workers, and tourists). We believe this two-pronged approach of partnering extensive research with tested marketing strategies would effectively increase patronage of Lower Manhattan shops and restaurants helping them to remain open throughout the construction phase of the WTC site redevelopment.

We also believe that a sales tax-free period should be established for Lower Manhattan retailers to mitigate the severe impact on them during this construction period. In the past, tax-free periods have proven to be successful – and marketable – programs that really do encourage shopping and dining Downtown. It is also a relatively low-cost, practical means for the government to reduce the significant impact of the construction on Downtown retailers.

We do not want retailers to be forced to close their doors. Therefore, Wall Street Rising and the Downtown Alliance encourage the LMDC to pursue construction impact mitigation strategies for retailers that will drive customers to shop and eat Downtown. We hope that the LMDC will look closely at the retail landscape in Lower Manhattan, acknowledge and support the commitments made by existing retailers, and work to retain these businesses throughout the critical construction phase and into the rebirth of the neighborhood.

We look forward to working with you on these important initiatives.

AMERICAN LUNG ASSOCIATION®
of the City of New York, Inc.

March 4, 2004

Lower Manhattan Development Corporation
Attn: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza
20th Floor
New York, NY 10006

To Whom It May Concern:

Enclosed please find the American Lung Association of the City of New York's comments regarding the DGEIS for the Redevelopment Plan for the WTC Memorial and Redevelopment Plan. Three (3) copies are provided for your reference.

If you require additional copies or information regarding the Association's position, please contact either Craig Wilson at 212-889-3370, ext 32, or Louise Vetter at ext 14.

Regards,

Louise Vetter
Director of Communications and Advocacy

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AMERICAN LUNG ASSOCIATION®
of the City of New York, Inc.

Testimony of Craig Wilson
Associate Director of Environmental Health
American Lung Association of the City of New York

Hello, my name is Craig Wilson and I am the Associate Director of Environmental Health for the American Lung Association of the City of New York. The Association is the City's oldest voluntary not-for-profit health organization dedicated to the prevention of lung disease and the promotion of lung health. On behalf of the Association, I am pleased to offer our comments on the environmental health impact of the redevelopment of the World Trade Center (WTC) site.

New Yorkers are exposed to some of the most unhealthful air pollution levels in the country. For the fourth year in a row, the *American Lung Association State of the Air Report* found that every borough monitored for ozone failed the clean air test. Moreover, New York City is in the middle of an asthma epidemic and the mere act of breathing can put the one million asthmatics -- 300,000 of whom are children -- at risk for severe health complications. In some neighborhoods, such as Harlem, nearly 25 percent of children are living with this debilitating lung disease.

With this information in mind, it is imperative that all construction at the WTC site be as environmentally clean as possible. Study after study has demonstrated that the emissions released from the combustion of diesel fuel in trucks and construction equipment is linked to a host of health effects including shortness of breath, wheezing, asthma and heart attacks, strokes, premature death and lung cancer. Diesel exhaust contains more than 40 different toxic chemicals, such as arsenic and benzene, which are known to be carcinogenic.

Additionally, the US Environmental Protection Agency has listed diesel exhaust particle as a likely human carcinogen. In short, diesel exhaust is just as bad as it looks and smells and this pollution poses a serious threat to the health of City residents.

Recognizing this threat to public health, the American Lung Association of the City of New York urges the Lower Manhattan Development Corporation to ensure that, as Governor Pataki announced, all construction at the WTC site utilize the most advanced diesel emission control technology. At a minimum, this should include the use of Ultra Low Sulfur Diesel fuel and Diesel Particulate Filters for both on-road trucks, such as utility vehicles, and heavy-duty construction equipment. Additionally, the City's anti-idling laws must be actively enforced to prevent unnecessary exposure to these toxic emissions. Taking these steps will help to ease the air pollution burden that this massive construction project will place on the lungs of those who live and work in Lower Manhattan.

Thank you for your consideration of these important recommendations. If you have any questions, please do not hesitate to contact me at the American Lung Association of the City of New York at 212-889-3370, extension 32.

ASIAN AMERICAN BUSINESS DEVELOPMENT CENTER
150 Lafayette Street, Suite 901, New York, NY 10013
Tel: 212-966-0100 Fax: 212-966-2786

Remarks by John Wang
President, Asian American Business Development Center (AABDC) at the
Public hearing on the Ground Zero Draft Generic Environmental Impact Statement
Wednesday, February 18, 2004, 1:00 p.m.
Pace University

Good afternoon, I'm John Wang, President of the Asian American Business Development Center headquartered in Chinatown. AABDC represents several hundred Asian, Asian American and American businesses throughout New York City. I'm here today in support of the efforts to rebuild the World Trade Center, but first I must say that the Asian American business community joins the world in mourning the tragic and senseless loss of life in the hours and days following the attacks.

Chinatown is home to hundreds of restaurants ranging from dim sum parlors to banquet halls, there are also colorful shops and fresh seafood, fruit and vegetable stalls, jewelry and clothing stores and gift and souvenir stores, its two square miles are also home to more than 100,000 residents.

The devastating effects of September 11th left all of Lower Manhattan reeling. Because of Chinatown's proximity to ground zero, the closing of Lower Manhattan severely restricted access by residents, workers and business operators and as a direct result of the attacks, businesses were decimated through the sharp decline in tourism, which provides a major source of revenue for the historic community.

Immediately after the tragedy, AABDC reached out and invited city's major tourism, cultural and business organizations to Chinatown to discuss organizing promotional campaigns to support tourism in Chinatown.

Within two weeks of the World Trade Center attacks, New York's Chinese-American community had raised nearly $2 million in support of general relief efforts in spite of the distressing effects of the attacks on the economy of Chinatown, the historic center of the largest Asian community in the Western Hemisphere.

Chinatown and Lower Manhattan need for the World Trade Center to be built now and built right so that the jobs, businesses and the lifeblood of the community—people—people who live and work there as well as people from all over the world—can once again take advantage of the beautiful waterfront vista and the historic Lower Manhattan neighborhoods like Chinatown.

Thank you.

E-MAIL AND FAX

March 15, 2004

Mr. Kevin M. Rampe
President
Lower Manhattan Development Corp.
One Liberty Plaza, 20th Floor
New York, New York 10006

Re: World Trade Center Memorial and
Redevelopment Plan/DGEIS

Dear Mr. Rampe:

AT&T Corp. and its wholly owned subsidiaries AT&T Communications of New York, Inc. and Teleport Communications New York ("AT&T") submit this comment letter on the Lower Manhattan Development Corporation's ("LMDC") Draft Generic Environmental Impact Statement ("DGEIS") for the World Trade Center Memorial and Redevelopment Plan (WTC Plan"). In preparing our comments, AT&T reviewed the March 11, 2004 letter submitted to the LMDC by Verizon New York Inc. and Empire City Subway Company (Limited) (collectively "Verizon"). AT&T believes Verizon has raised some issues that would benefit from further discussion during the planning process.

AT&T was directly affected by the September 11, 2001 attacks on the World Trade Center. As one of the major providers of telecommunications services to the financial district and other areas of lower Manhattan, we incurred significant damage to our facilities, extra expenses for emergency response, recovery and restoration efforts to our critical communications services and significant loss of revenue due to service outages. There was also severe impairment to the communications paths linking our lower Manhattan facilities with Verizon's facilities and with our many business and residential customers. AT&T was able to rapidly replicate its lost functionality through alternate facilities and permanent restoration but at significant cost. AT&T would like to ensure that any additional cost to us under the WTC Plan and other lower Manhattan projects is minimized and that vital telecommunications services are not unduly disrupted.

AT&T fully supports the reconstruction of the World Trade Center site and the revitalization of Lower Manhattan. We are pleased to have the opportunity to work with the LMDC, the Empire State Development Corporation, and other governmental agencies. The LMDC and other New York State and municipal agencies will base their

planning decisions on the DGEIS. In doing so, AT&T believes that certain points raised in the Verizon letter merit further examination.

Specifically, AT&T supports:

(1) establishing a coordinated planning approach for the World Trade Center Memorial and Redevelopment Plan, the Route 9A Project and the Fulton Transit Hub;

(2) implementing achievable time frames for completion of infrastructure construction related to these projects;

(3) avoiding unnecessary additional costs to carriers associated with any infrastructure relocation or construction, to the extent carriers may be responsible for such costs. This would include avoiding multiple relocations, identifying any new routes as quickly as possible, enlisting cooperation from building owners and minimizing any disruption of telecom services to business and residential consumers;

(4) treating all carriers with infrastructure in the project areas in a non-discriminatory manner. This would include (but not be limited to) extending to these carriers any benefits Verizon receives with regard to easements, reclassification of certain restoration costs to include them under the Emergency and Temporary Response category of the Partial Action Plan for Utility Restoration and Infrastructure Rebuilding ("Partial Action Plan") and reimbursement for relocation costs; and

(5) Verizon's request that the LMDC extend the application deadline beyond December 31, 2004 for funding under the Permanent Restoration and Infrastructure Improvments category of the Partial Action Plan to allow any carrier to submit an application for relocation of its infrastructure once the relocation has been completed.

AT&T looks forward to working with the LMDC, other governmental agencies and carriers to successfully restore lower Manhattan while avoiding disruption of vital telecommunications facilities and minimizing additional financial burdens on AT&T. Please feel free to call me at (585) 987-3160 if you have any questions.

Sincerely,

Sarah M. Ayer
Senior Attorney
AT&T Corp.

To the Ladies and Gentlemen of the LMDC:

It is beyond the capacity of the general public to respond to the DGEIS in a meaningful way, and yet its contents are critical to our quality of life. There is no way that such documents can accurately or fully assess the impact of this project. That is not the fault of the LMDC; its reality. Does the document underestimate the impact in some areas? Probably? But what are the alternatives? If we want a new Trade Center, we are going to have to deal with some painful externalities of construction, in the same way we have to work to buy a TV or exercise to have a strong heart.

Based on these realities, I suggest a small, funded task force representing residents and workers downtown be tasked with monitoring the progress and impact of these projects from a livability perspective. This group can review the situation as it unfolds, identify the most serious problems, and work with development officials to reduce the pain while enabling progress. This group would have to be carefully structured and staffed to walk the fine line between developers and community. If successful, it will be instrumental in guiding downtown through an inspiring rebirth. If it fails, downtown could be critically damaged and take years after the completion of construction to get back into full stride. Remember how long it took for downtown to fully realize the benefits of the original WTC? All of us should be dedicated to doing it better and faster this time. The proper level of community involvement can contribute to this.

In addition to a community alert task force, I recommend the following:

1) Keep West Street at grade. A cost/benefit analysis is required to justify burying West Street. The benefits from this project that could justify the approximately $1 Billion cost and resulting transportation havoc have never been communicated. While the impact on traffic is difficult to estimate, construction on West Street will certainly aggravate an already bad situation for a long period of time. In the end, what will we gain? West Street will still exist at ground level and we will have a more complex traffic situation.

2) Restrict vehicular access to the WTC site. Vehicles detract from the street level pedestrian experience and introduce congestion. They also limit the viable size of sidewalks. Fulton and Greenwich streets provide more than sufficient street access. Consideration should be made on the impact on traffic caused by limiting these streets to public transportation. Certainly, no new streets should be added to existing plans. The WTC is a public transportation hub and the priority should be placed on supporting pedestrian movement on, around, and under the site.

3) Locate the bus parking facility be located at the WTC site rather than in surrounding residential communities. This is the least expensive and most convenient option. It will keep buses further from surrounding residential communities.

4) Make the area defensible from attack. This requires methods to stop vehicles from easily reaching buildings. Look for ways to search for weapons at all entry points to WTC. This concern supports number 2 above.

5) Provide facilities for Limo transportation and taxicabs. These vehicles can overwhelm local streets if they are not provided for. If possible, underground pick-up areas would be useful in keeping the limo's off the street.

6) Establish environmental monitoring all around the construction sites to ensure that environmental rules are followed.

7) Use environmentally friendly equipment for all work on the site.

8) Design public space for year around use.

9) Please consider that many schools are located around the WTC area. These children, including my own, live and commute in and around the area. To protect the safety of our children, street markings, construction traffic, dust levels, etc. all have to be monitored very carefully.

10) Consider providing HEPA air filters for buildings within a block of the WTC, especially residential buildings. Similar units would be helpful for schools.

Thank you for you effort to construct the EIS for the projected scope of work. It substantially outlines the challenges we will face in the upcoming years. But also be aware that there will be numerous unexpected

circumstances and issues to be dealt with. As the LMDC residential grants run out, we will find out just how many people are interested in living downtown. In order to keep downtown afloat, those in charge of construction will have to execute at a high level of professionalism and sensitivity. Traffic, air quality, noise, idling trucks, etc. will have to be monitored carefully. If done well, the vision of the new WTC will pull the area through these tough times. If done badly, people will leave the area en-mass.

Thank you for taking our comments.
Regards,
David Stanke
Co-President of BPC United
bpcunited@ebond.com

STATEMENT AT PUBLIC HEARING ON DRAFT GENERIC EIS FOR THE WORLD TRADE CENTER MEMORIAL AND REDEVELOPMENT PLAN

FEBRUARY 18, 2004

MY NAME IS KENNETH K. LOWENSTEIN AND I AM SPEAKING ON BEHALF OF BROOKFIELD FINANCIAL PROPERTIES. BROOKFIELD IS A MAJOR PROPERTY OWNER IN LOWER MANHATTAN, WHICH OWNS ONE LIBERTY PLAZA AND THREE BUILDINGS IN THE WORLD FINANCIAL CENTER. I AM HERE TODAY TO EXPRESS BROOKFIELD'S STRONG SUPPORT FOR THE REDEVELOPMENT PLAN PROPOSED BY THE LMDC AND ANALYZED IN THE DRAFT GENERIC EIS BEFORE YOU TODAY.

LMDC FACED ENORMOUS CHALLENGES IN FORMULATING A REDEVELOPMENT PLAN. APART FROM IDENTIFYING AN APPROPRIATE LOCATION FOR THE MEMORIAL, IT NEEDED TO ADDRESS THE INADEQUATE TRANSPORTATION TO LOWER MANHATTAN AND PROVIDE A FRAMEWORK FOR THE REBUILDING OF THE VERY COMMERCIAL ACTIVITY THAT MADE THE WORLD TRADE CENTER A TARGET FOR THE TERRORISTS. IN SHORT, IT NEEDED TO RECONCILE THE NEED TO REBUILD AND MOVE FORWARD WITH THE NEED TO REMEMBER WHAT HAPPENED HERE.

THE REDEVELOPMENT PLAN ACHIEVES EACH OF THESE OBJECTIVES. IT IS A WELL-CONSIDERED, COHESIVE AND COMPREHENSIVE VISION THAT WILL RESULT IN A SPECTACULARLY IMPROVED ENVIRONMENT FOR LOWER MANHATTAN. IT EXTENDS THE CITY'S HISTORICAL STREET GRID SYSTEM TO AND THROUGH THE SITE, PROVIDES OPEN SPACE AND A SITE FOR THE MEMORIAL AND OTHER CIVIC AND CULTURAL INSTITUTIONS.

WHILE NOT DIRECTLY PART OF THE REDEVELOPMENT PLAN, THE PLAN TO SUBMERGE WEST STREET IN THE VICINITY OF THE TRADE CENTER SITE AND TO PROVIDE NEW TRANSPORTATION CONNECTIONS FROM QUEENS, LONG ISLAND AND JFK AIRPORT ARE CRITICAL ELEMENTS OF THE OVERALL STRATEGY FORMULATED BY LMDC. WE WANT TO EXPRESS OUR STRONG SUPPORT FOR BOTH OF THESE INITIATIVES.

FINALLY, BUT OF GREAT IMPORTANCE, THE REDEVELOPMENT PLAN INCLUDES THE DEVELOPMENT OF UP TO 10 MILLION SQUARE FEET OF CLASS A COMMERCIAL OFFICE SPACE AND UP TO 1 MILLION SQUARE FEET OF RETAIL SPACE, ALONG WITH A HOTEL, PARKING AND OTHER ASSOCIATED USES.

SOME MIGHT SAY THAT THIS OFFICE AND RETAIL SPACE IS NOT NEEDED. THEY POINT TO THE LARGE AMOUNT OF VACANT SPACE IN THE LOWER MANHATTAN OFFICE MARKET AND SAY THAT NOTHING SHOULD BE BUILT. AS ONE OF THE LARGEST CLASS A OFFICE OWNERS IN

LOWER MANHATTAN, WE KNOW FIRST HAND ABOUT THE VACANCY RATE AND THE AVAILABILITY OF CONSIDERABLE AMOUNTS OF SUBLEASED SPACE.

BUT WE ALSO KNOW THAT LOWER MANHATTAN IS THE HISTORIC CENTER OF THE COMMERCIAL CAPITAL OF THE COUNTRY AND THE WORLD. THE NEW YORK STOCK EXCHANGE AND THE AMERICAN STOCK EXCHANGES ARE LOCATED A FEW SHORT BLOCKS FROM THE TRADE CENTER. THE MERCANTILE EXCHANGE IS IN BATTERY PARK CITY. GOLDMAN SACHS, AIG, MERRILL LYNCH, AMERICAN EXPRESS AND MANY OTHER MAJOR COMPANIES, LAW FIRMS AND ASSOCIATED BUSINESSES CONTINUE TO BE LOCATED IN LOWER MANHATTAN, WITH HUNDREDS OF THOUSANDS OF EMPLOYEES.

RATHER THAN ABANDONING LOWER MANHATTAN, WE NEED TO TAKE AGGRESSIVE STEPS TO REINVIGORATE AND RESTORE IT. THE PROPOSED REDEVELOPMENT PLAN ACHIEVES THIS OBJECTIVE AND WE STRONGLY SUPPORT IT.

BTEA
BUILDING TRADES EMPLOYERS' ASSOCIATION

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NEW YORK, NY 10018
TEL: 212 704 9745
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Louis J. Coletti
President and CEO

TESTIMONY PRESENTED

ON THE

DRAFT ENVIRONMENTAL IMPACT STATEMENT

FOR THE

REDEVELOPMENT OF

DOWNTOWN LOWER MANHATTAN

February 18, 2004

PRESENTED BY

Louis J. Coletti
President
Building Trades Employers' Association

MY NAME IS LOUIS COLETTI AND I AM HERE TODAY WEARING TWO HATS. THE FIRST IS AS PRESIDENT OF THE BUILDING TRADES EMPLOYERS' ASSOCIATION REPRESENTING 1,500 CONTRACCTORS AND EMPLOYING 25,000 PEOPLE IN OUR CORPORATE OFFICES AND SECOND AS CO-CHAIRMAN OF THE CONSTRUCTION INDUSTRY PARTNERSHIP WHICH INCLUDES MY MEMBERS AND THE 100,000 MEMBERS OF THE BUILDING TRADES REPRESENTED BY ED MALLOY.

WE COME HERE TODAY AS STRONG SUPPORTERS OF THE REBUILDING EFFORT AND WITH A PLEA TO EXPEDITE THIS PROCESS AND START BUILDING NOW.

THERE ARE MANY REASONS TO DO SO. THE MOST BASIC IS THAT REBUILDING LOWER MANHATTAN WILL GIVE THIS CITY A DRAMMATIC ECONOMIC BOOST BOTH IN THE SHORT-TERM AND IN THE CITY'S LONG TERM FUTURE.

THE ECONOMIC BENEFITS ARE UNPARRELLED: 8,500 JOBS FOR EACH YEAR OF CONSTRUCTION AND 75,000 JOBS ONCE FULLY BUILT AND OPERATING. THE CONSTRUCTION PHASE ALONE WILL GENERATE OVER $400 MILLION IN TAX REVENUES PER YEAR AND $ 885 MILLION PER YEAR WHEN COMPLETE AND OPERATING FOR NEW YORK CITY AND STATE. ~~FOR THE STATE, CONSTRUCTION WILL GENERATE OVER $250 MILLION PER YEAR IN TAX REVENUE AND $460 MILLION PER YEAR WHEN COMPLETE AND OPERATING.~~

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ANOTHER REASON TO MOVE THESE PROJECTS QUICKLY IS BECAUSE WE SIMPLY NEED TO RESTORE THE COMMERCIAL OFFICE SPACE THAT WE LOST IN THE TRAGEDY OF 9/11. REMEMBER ALL THE PREDICTIONS ABOUT HOW COMPANIES WOULD DESERT DOWNTOWN FOR NEW JERSEY AND CONNECTICUT? WELL, THAT DID NOT HAPPEN. HOWEVER, THE THREAT STILL REMAINS UNTIL WE PROVIDE THE CLASS A OFFICE SPACE THOSE FIRMS NEED. IF WE FAIL TO PROVIDE IT, AND PROVIDE IT QUICKLY—THOSE FIRMS WILL FIND IT ELSEWHERE AND NEW YORK CITY WILL FEEL THE ECONOMIC LOSS OF THOSE FIRMS LEAVING FOREVER.

BUILDING THESE PROJECTS QUICKLY IS WILL PRESENT A TREMENDOUS OPPORTUNITY FOR NEW YORKERS TO BUILD NEW YORK.

THE CONSTRUCTION INDUSTRY WORKFORCE TODAY IS 40% MINORITY. THE NEW WORKFORCE ENTERING OUR APPRENTICE SYSTEM THROUGH OUR CONSTRUCTION SKILLS 2000 PROGRAM WHICH IS DONE IN PARTNERSHIP WITH THE NYC DEPARTMENT OF EDUCATION IS 85% AFRICAN/AMERICAN, LATINO AND WOMEN; WITH 43% COMING FROM BROOKLYN, 24% FROM THE BRONX AND 18% FROM QUEENS. IN ADDITION CONTRACTOR MEMBERS OF THE BTEA AWARDED OVER $ 2 BILLION IN CONTRACTS TO MINORITY AND WOMEN-OWNED BUSINESS LAST YEAR. THESE PROJECTS WILL PROVIDE AN INCREDIBLE JOB CREATION, BUSINESS EXPANSION AND INCREASED IN TAX REVENUE BENEFITS NOT JUST FOR MANHATTAN—BUT THROUGHOUT THE FIVE BOROUGHS OF OUR GREAT CITY.

REDEVELOPMENT PLAN will incorporate some of

FINALLY, THIS ~~DEVELOPMENT WILL BE~~ THE MOST INNOVATIVE ~~ECONOMIC DEVELOPMENT EFFORT EVER UNDERTAKEN WITH RESPECT TO NEW~~ ENVIRONMENTAL INITIATIVES I.E. CAPTURING RAINWATER FOR USE IN FLUSHING TOILETS AND IRRIGATING THE LANDSCARING; ULTRA FILTRATION OF INDOOR AIR; GENERATING ELECTRICITY BY CAPTURING ENERGY FROM STEAM THAT WOULD OTHERWISE BY WASTED; AND PLANS TO GENERATE MORE ELECTRICITY BY INSTALLING WIND TURBINES AT THE TOP OF THE FREEDOM TOWER.

their result.

IN CLOSING, LET ME SAY THAT THERE IS EVERY REASON TO MOVE AHEAD WITH THIS DEVELOPMENT AND TO DO SO QUICKLY—~~THERE IS NO REASON NOT~~ TO.

Remarkable ~~Remarkable~~ public process undertaken by this point. LMDC is to be commended.

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ENVIRONMENTAL IMPACT STATEMENTS BY THEIR VERY NATURE SEEK TO DEFINE WORST CASE SCENARIOS—LET'S NOT LET THAT DOMINATE THE DEBATE. BECAUSE THE WORST CASE SCENARIO FOR NEW YORK CITY WILL BE TO DELAY, DEFER OR DETER THIS ~~ECONOMIC DEVELOPMENT INITIATIVE~~ REDEVELOPMENT EFFORT **FROM MOVING AHEAD. THANK YOU.**

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Civic Alliance

To Rebuild Downtown New York

Convened by Regional Plan Association

March 11, 2004

RE: Comments on DGEIS WTC Memorial and Redevelopment Plan

Kevin Rampe
President
Lower Manhattan Development Corporation
1 Liberty Plaza, 20th Floor
New York, NY 10006

Dear Kevin:

Please find enclosed a copy of the Civic Alliance's comments on the Draft Generic Impact Statement (DGEIS) of the World Trade Center Memorial and Redevelopment Plan. We are grateful to have the opportunity to comment on this important document and commend the LMDC for the comprehensiveness of the environmental review.

However, there are two key areas of the DGEIS that we find deficient, which I would like to draw to your attention. We feel these areas should be corrected in the final GEIS so that the rebuilding of the World Trade Center site may move forward expeditiously and avoid litigation.

1. The DGEIS fails to sufficiently evaluate a true "reduced density alternative," i.e., an option for significantly less office and retail space on the Project Site. We feel this option is an increasingly likely outcome because of the weak market outlook for office space and uncertainty of project financing. By failing to account for this reasonable alternative, the DGEIS violates NEPA and SEQRA regulations.

2. The DGEIS fails to sufficiently account for cumulative impacts on air pollution resulting from the various related Lower Manhattan recovery projects to take place before 2015. Therefore, proposed mitigation measures are inadequate to address the anticipated levels of local air pollution resulting from construction and increased vehicle traffic.

We urge the LMDC and the Port Authority to look closely at these two points. We are also concerned about the high level of anticipated traffic as it relates to the Project Site and local neighborhood, and other environmental impacts outlined in our comments.

Thank you for your consideration of these concerns.

With best wishes,

Robert D. Yaro

Robert D. Yaro

cc: Joseph Seymour

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Civic Alliance To Rebuild Downtown New York
Convened by Regional Plan Association

March 11, 2004

RE: Comments on DGEIS WTC Memorial and Redevelopment Plan

Joseph Seymour
Executive Director
Port Authority of New York and New Jersey
225 Park Avenue South, 18th Floor
New York, NY 10003

Dear Mr. Seymour:

Please find enclosed a copy of the Civic Alliance's comments on the Draft Generic Impact Statement (DGEIS) of the World Trade Center Memorial and Redevelopment Plan. We are grateful to have the opportunity to comment on this important document and commend the LMDC for the comprehensiveness of the environmental review.

However, there are two key areas of the DGEIS that we find deficient, which I would like to draw to your attention. We feel these areas should be corrected in the final GEIS so that the rebuilding of the World Trade Center site may move forward expeditiously and avoid litigation.

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We urge the Port Authority and the LMDC to look closely at these two points. We are also concerned about the high level of anticipated traffic as it relates to the Project Site and local neighborhood, and other environmental impacts outlined in our comments.

Thank you for your consideration of these concerns.

With best wishes,

Robert D. Yaro

cc: Kevin Rampe

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Civic Alliance To Rebuild Downtown New York
Convened by Regional Plan Association

Civic Alliance Response to the Draft Generic Environmental Impact Statement (DGEIS)[1]
WTC Memorial and Redevelopment Plan

March 9, 2004

A thorough analysis of all reasonable alternatives to the WTC Memorial and Redevelopment Plan (Proposed Action) must take place in the Generic Environmental Impact Statement (GEIS). As requested in the Civic Alliance's comments on the Draft Scope, particular attention should be devoted to an option for significantly reduced commercial office and retail space on the Project Site and an increased mix of other activities, such as housing, civic or cultural programming and open space. The current "Reduced Impact Alternative" presented in the draft GEIS is not sufficiently evaluated. In fact, the treatments of all alternatives in the DGEIS are summary and dismissive. We find the current failure to include a thorough analysis of reasonable alternatives to violate both the spirit and the letter of NEPA and SEQRA. We urge the LMDC and the PA to consider the Reduced Impact Alternative in order to avoid litigation, project delay and impediments to the economic recovery of Lower Manhattan.

1. Reduced Impact Alternative: Without a thorough analysis of the impacts of a significantly reduced program for commercial office and retail space (such as a reduction of up to 50%) the DGEIS fails to consider all reasonable alternatives. A Reduced Impact Alternative, which studies approximately half the amount of commercial office space as the Proposed Action, and includes new uses in its program such as housing and civic and cultural space should be thoroughly analyzed for the following reasons:

    a. As stated in the Executive Summary of the DGEIS (S-7), one of the leading public comments at the "Listening to the City" town hall meetings of July 2002 was a call for reducing the commercial density on the WTC Site. A reduction in commercial space greatly expands the options for other uses, including cultural, civic, residential and open space that may do more to enhance Lower Manhattan's attractiveness for businesses, residents and visitors than office space that may not be needed to meet future employment demands for the district.

[1] This Statement drafted for the Civic Alliance by Regional Plan Association with contributions from American Planning Association – NY Metro Chapter, American Society of Public Administration – NY Metro Chapter, Asthma Moms, Environmental Defense, Family Association of TriBeCa East, Fine Arts Federation of New York, Municipal Art Society, Natural Resources Defense Council, NY Lawyers for the Public Interest, NY League of Conservation Voters, NYPIRG Straphangers Campaign, Mothra-NYC, PICCED, R.Dot., Waterfront Park Coalition and individual Civic Alliance forum participants.

b. We disagree with the assertion that because commercial office space within the Project Site has been reduced 15% by the inclusion of the Southern Site within the Project Site (DGEIS 23-44), that the only option for reducing density is in the reduction of memorial space, cultural programming, retail or hotel. The 15% Project Site reduction of commercial office space, while desirable from an urban design standpoint, does not represent a reduction in the overall program for commercial office space to be built in the WTC area, thus having no difference in environmental, construction or economic impacts to the primary or secondary areas of impact.

c. It is unlikely that 10 million square feet of office space will be built by the target year of 2015 if the leaseholder, Silverstein Properties, does not receive its desired insurance payment of approximately $7 billion, a prospect that is increasingly in doubt. If the insurance settlement does not cover construction costs for the majority of office development, the second phase of commercial office space will need to be traditionally financed. Since absorption rates are unlikely to capture 10 million square feet of new office space by the year 2015, as stated in the LMDC's own analysis (DGEIS 9-78), traditional financing for the second phase office development by 2015 is highly doubtful.

d. The likely delay of the second phase of office space means that the WTC site will be occupied with incomplete three-story pedestals for some time if the phasing strategy described in the Proposed Action is carried out. The DGEIS should evaluate the impacts of this scenario for effects on the downtown economy, the urban design composition of the master plan, open space and wind conditions, among other items. While reduced office density onsite may in fact be a desirable outcome; this scenario should be planned for and occur *by design* rather than *by default*.

If 10 million square feet of office space *is* to be completed by 2015, the GEIS should analyze the impact of excess office space on vacancy rates, business activity, employment and quality of life in Lower Manhattan. As stated in the LMDC's own analysis (DGEIS 9-78), the 12.4 million square feet of total new office space anticipated in Lower Manhattan between years 2010 – 2015 will exceed the projected absorption rate of 1.16 million square feet per year. In fact, this projected rate of absorption (based on the average for a short and unique period of time, 1998-2002) may be optimistic considering forecasts of slow employment growth and competition from potential new office space in Midtown, Jersey City and Manhattan's Far West Side. The impacts of a glut of subsidized office space may not be as benign as the DGEIS indicates. Without sufficient demand, the space will add little new employment to New York City and increase vacancy rates in other parts of Lower Manhattan, with negative impacts on the real estate, retail and small business sectors of the Downtown economy. It may also represent a sub-optimum use of both the land and capital available to redevelop the WTC site. The failure to consider both a reduced office program

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and a range of plausible demand forecasts makes it impossible to fully evaluate these impacts.

2. Finding of Adverse Environmental Impacts:

Our second major area of concern regards the cumulative environmental impacts of the proposed action with other related Lower Manhattan projects to take place before 2015. The finding that the construction of the Proposed Action *will not* cause adverse impacts to air quality is suspect, especially considering the marked increase in traffic anticipated to result from the proposed action, as described in the DGEIS. The failure to consider the cumulative impact on air quality of all related Lower Manhattan construction projects may constitute a segmentation of the project, and expose the project to litigation.

A necessary step towards mitigating air pollution resulting from the proposed action is to ensure that all diesel engines involved in rebuilding the WTC site are also required to use ultra low sulfur diesel fuel AND be retrofit with the best available pollution control technology to mitigate the pollution impacts of rebuilding. State vehicles and City vehicles are already required to do this by a New York State executive order and New York City Council resolution requiring all State construction equipment used during the rebuild of the WTC site and all City owned construction equipment used in all City contracts to use ultra low sulfur diesel fuel (15ppm or less) and to be retrofit with pollution control technology. These regulations should be extended to all diesel engine vehicles on the WTC site during the construction process. There is some mention of this sprinkled throughout Chapter 14 of the DGEIS, but no explicit commitments are made. The Civic Alliance requests that the LMDC make an explicit commitment to cleaning up diesel emissions and that this should include diesel trucks, construction equipment, stationary diesel generators and any other diesel engines utilized in the rebuild. We suggest the following steps towards achieving this commitment.

- Use Low Sulfur fuel. Low sulfur fuels should be used in place of regular diesel fuel. Low Sulfur fuel (15 ppm or less) enables the use of state-of-the-art emissions control technology, like particulate filters. Ultra low sulfur diesel fuel can cut emissions substantially – and, more important, it is a prerequisite to use of many retrofit filter technologies (sulfur can clog particulate filters). The most advanced retrofit technologies require use of the lowest possible sulfur fuels – lower even that the 15 ppm fuels generally available.

- Install oxidation catalysts. Oxidation catalysts can reduce particulate matter (PM) by at least 25%, HC 90%, CO, other toxics, smoke and odors. Oxidation catalysts were installed on equipment used in Boston's Central Artery Tunnel (Big Dig) project at a cost between $1,000-3,000 per vehicle. In fact, at the Big Dig, they have retrofit over 100 construction vehicles, with no delay to the construction process. These retrofits will achieve an emission reduction, for the city of Boston, equivalent to eliminating *96 million diesel truck miles* or removing *1300 diesel-powered public buses* for a year.

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- Use particulate filters. On-road vehicles (primarily MTA buses) that are retrofitted with particulate filters show reduction in PM of up to 90%, CO and HC up to 90%. Particulate filters may not have been tested extensively enough for some equipment to require mass installation in the immediate term. The World Trade Center site could serve as a pilot project for using these filters on construction vehicles. Additionally, this technology should be used on stationary generators and the heavy trucks used to cart debris through local neighborhoods. New rules could require their expanded use in the future.

- Test advanced technologies: There are other technologies available for use on diesel engines that may not yet have been fully tested. These include, for example: selective catalytic reduction and exhaust gas recirculation. Emulsified fuel also provides substantial opportunity for reductions. Testing at WTC could be followed by more widespread implementation throughout the metropolitan region and the state.

- Stop engine idling. Users of heavy-duty diesel equipment often keep their engines idling when equipment is not in use. Existing regulations limiting idling must be enforced throughout the State. Further, rules specific to the WTC rebuild and the non-road vehicles working on it should be devised.

- Improve equipment maintenance and inspection. Fleet managers need to keep their equipment in good repair. This is essential not only for the engines to operate efficiently, but also to ensure that emission reduction technologies can be used effectively. As with on-road vehicles, non-road equipment should have regular, periodic inspections, including smoke testing. All diesel equipment used while rebuilding the WTC site should be well-maintained.

- Apply measures to all diesel machinery in the LMDC area. PM 2.5 emissions are critical not only for machinery on the WTC site itself. For example, New York City will be excavating over 20 miles of streets in order to repair underground infrastructure, the MTA will be undertaking heavy construction to repair subway infrastructure and other projects will be moving forward throughout Lower Manhattan. Diesel engines will be located in communities around the city – this is an opportunity to test and establish the technologies that can most effectively be used on a widespread basis. To be effective, any program must look not just to the WTC site, but to the entire LMDC jurisdiction.

- Allow real-time air monitoring on the Internet. Effective monitoring of air pollution will play an important role in enforcing goals for emissions reduction. Air pollution monitors should be placed around the perimeter of the site to provide hourly readings available to the public online. Sound monitors should also be used to monitor noise levels in violation of CEQR.

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3. Methodology: standards against which adverse impacts are mitigated: An additional baseline condition should be added to the analysis as an objective for which mitigation should aim to achieve. Currently, adverse impacts generated by the Proposed Action will be mitigated to the Pre-September 11 baseline condition. The goal of mitigating adverse impacts to the standard of an office complex designed in the 1960s and completed in the 1970s does not seem an acceptable level for mitigation, nor in the spirit of advancing environmental excellence in design, construction and operation of buildings and related infrastructure. The Civic Alliance recommends a stricter standard for the mitigation of adverse impacts to match the goal of meeting environmental sustainability objectives, as set forth in the preliminary and revised versions of the 2002 *Blueprint for the Future of Lower Manhattan*. This new target scenario, potentially called the "Sustainable Target Condition," may be formulated by using the Current Conditions baseline and projecting operational objectives for target years 2009 and 2015 if all Commercial Sustainable Guidelines are followed. Unavoidable adverse impacts should then be mitigated to this standard as opposed to the level of the Pre-September 11 scenario.

4. Retail: The Proposed Action will add up to one million square feet of retail space to the Project Site by 2009, with a significant portion of it located underground. While the addition of substantial retail to the Project Site should serve to attract visitors and animate the area, it is essential that the majority of this retail be located at street level, as opposed to underground. While it is appropriate to locate convenience retail targeted to commuters in underground passageways, destination retail establishments should be located at street level. The current ratio of underground/ above ground retail to street level retail presented in the GEIS is favors underground /above ground retail. This ratio should be corrected to favor street level retail, reducing the total program for retail if necessary.

   Phasing of the new retail should also be carefully considered and accounted for in the GEIS. It is important that underground retail not precede the creation of street-level retail, lest shoppers will be drawn to underground retail, and the spillover effect to surrounding neighborhoods will be less likely.

   The inclusion of one million square feet of retail space at the Project Site--over twice the amount that was formerly located at the World Trade Center--will have a significant impact of the surrounding retail market. This will be joined by additional new retail that is planed as part of the LMDC's off-site planning studies for the Fulton Street corridor. As these two areas are closely linked, we request that assumptions about the proposed amount of retail space for Fulton Street be included in the retail analysis for the Proposed Action. Moreover, the document referenced on page 9-72, "LMDC, Fulton Corridor: Creating a Vision for Enhanced Retail+Arts+Cultural Activities in Lower Manhattan, June 12, 2003, Volume 1, Strategic Plan" should be made available to the public by inclusion on the LMDC website.

5. Freedom Tower Wind Turbines: We commend the goal of including wind turbines at the top of the Freedom Tower and the stated objective of generating

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approximately 20% of the building's energy by wind power. While we applaud the commitment to renewable energy for this building, we also wish to highlight the importance of studying the impact of placing wind turbines in a heavily populated urban area, with particular attention to noise and vibration. The final GEIS should evaluate whether wind turbines at the Freedom Tower will produce any adverse effects for local residents, office workers or visitors to the World Trade Center memorial and open space. If wind turbines are found not to be feasible, another renewable energy source, such as solar power or fuel cells should replace the turbines in order to produce at least 20% of the building's energy by renewable methods.

6. Birds: Songbirds, which migrate at night, make long journeys twice a year. These birds, whose numbers are declining, are threatened by New York City's mine field of glass. In designing the Freedom Tower and other office buildings, materials which deter bird strikes -- such as fritted glass -- should be given serious consideration.

7. Open Space: According to the DGEIS, the Proposed Action will result in open space ratios of .25 acres per 1,000 people in 2009 and .20 acres per 1,000 people in 2015. These ratios fall below the ratio of open space per 1,000 residents (.50 per 1,000 people) recommended in the CEQR Technical Manual (DGEIS S-30). While the Civic Alliance agrees that the space provided for in the Proposed Action will be a vast improvement in terms of urban design and quality of experience over the former Austin Tobin plaza; the master plan would only benefit from a further reduction of building footprints to increase the amount of open space, at least to the amount presented in the original version of the Studio Libeskind master plan. In reducing building footprints and increasing open space, special attention should be paid to the relationships between buildings and activities and pedestrian flows to and from these activities.

    a. There is a discrepancy observed between the 5.52 acres of Project Site open space stated in the DGEIS and used to calculate the open space ratios per 1,000 persons, and the observed total of 4.85 acres of open space counted in the Project Site program description (S-28). This discrepancy should be reconciled in the final GEIS.

8. Wind Conditions – The Proposed Action is estimated to generate adverse wind conditions comparable to those that existed prior to September 11. These conditions are described as occasionally prohibiting walking, standing and sitting in the Project Site, and in rare instances posing dangerous conditions. In other words, the DGEIS expects that wind conditions will occasionally be so bad that the open spaces on the Project Site will be unusable. Considering the memorably inhospitable wind conditions at the former Austin Tobin Plaza, we urge the LMDC to develop and implement significant measures to reduce undesirable wind effects in the Proposed Action to levels vastly improved over those that existed before September 11. The interim wind conditions resulting from the construction of three- story building pedestals before towers are fully built out should also be studied.

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9. Traffic, Parking and Pedestrian issues: In general, the significant adverse traffic impacts to be generated by the Proposed Action at 18 of 40 intersections by 2009 and 25 of 40 intersections by 2015 is not acceptable, nor is in keeping with the goal of enhancing environmental sustainability at the Project Site and surrounding areas. In light of the significant public investment in mass transit, car and truck trips should be reduced as much as possible, using a variety of regulatory measures. We commend the City of New York Department of Transportation (DOT) for initiating a street management study of Lower Manhattan, and recommend that the GEIS draw from this study to explore methods of reducing traffic, including establishing a hierarchy of streets for vehicle movement, goods movement and pedestrian movement. Specifically, we offer the following comments on the Traffic and Parking, Mass Transit and Pedestrians, and related Mitigation sections:

   a. The DGEIS provides an opportunity to examine the benefits or adverse impacts of the West Street/Route 9A short bypass option by presenting the information in easily understandable form. This opportunity is not taken.

   b. The DGEIS is silent on the advantage of opening Fulton Street to traffic on an unrestricted basis, including for drop-offs of black cars, taxis, limousines, tourist buses and private automobiles and as a through street to West Street and then for turning movements in both directions on West Street. This is a profound concern because of the impact this will have on this location so close to the memorial and museum, creating an ambiance more related to an airport departure terminal than a pedestrian-oriented area. We ask that a pedestrian-only option for Fulton Street be studied, in addition to similar vehicular restrictions on other streets that may run through the site such as Cortlandt and Dey Streets. The impact of extensive automobile, bus, and truck traffic directly adjacent to the memorial is of great concern and should motivate the consideration of pedestrian-only streets.

   c. The DGEIS indicates that many intersections are likely to be at unacceptable levels of service even with "transportation systems management" mitigations. The effectiveness of these measures is suspect, in light of past efforts, particularly for those involving enforcement. This suggests that specific measures to reduce the volumes of vehicle traffic are needed, as hinted at in the DGEIS. This should be elaborated on and an action plan developed, including the restriction of parking expansion, the use of congestion pricing measures to reduce peak period use of motor vehicles, "staged" goods delivery and waste removal into and out of the WTC site and Lower Manhattan as a whole, and street management plans that favor pedestrians with selective elimination or restriction of vehicle flow.

   d. The DGEIS points out that there will be pedestrian level of service problems at crosswalks, but that sidewalk levels of service at mid-blocks will not be a problem. Past research suggests that mid-block sidewalk congestion will occur if crosswalk congestion is a problem. This suggests mitigation on

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sidewalks, including the requirement for wider sidewalks, minimization of obstructions and removal of subway stairways from the sidewalks, placing them inside building lines.

e. The DGEIS fails to consider alternatives to buses for getting tourists to and from the WTC site. As the Civic Alliance recommended in response to the Draft Scope GEIS, a strict regulatory program that would prohibit tourists' buses within a prescribed area of Lower Manhattan should be analyzed. This would be coupled with an active campaign (e.g., in cooperation with hotels and their staff, airport and train terminals, other tourist sites and points of entry) to keep tourists informed of convenient cleaner and less obtrusive transportation alternatives to reach Lower Manhattan and the World Trade Center site.

f. The DGEIS indicates that there are many subway "elements" that will be at poor levels of service for pedestrians. However, no mention is made of how this will be mitigated in the mitigation chapter. While some of these elements may be addressed in the designs of the rebuilt PATH station complex and at the Fulton Transit Center, others will not be.

10. Appendix A: Environmental Guidelines: The inclusion of the Commercial Sustainable Guidelines in the DGEIS is a laudable commitment to the objective of achieving environmental sustainability with the Proposed Action. The high profile of this project ensures that achieving sustainable objectives will not only enhance Lower Manhattan's environment and quality of life for residents, workers and visitors, but will set a standard to be emulated by commercial developments worldwide.

To ensure that these guidelines are followed, stricter enforcement measures are necessary. Currently the guidelines described in Appendix A are not sufficiently explicit as to how they will be enforced with contractors, tenants and other parties making decisions about the construction and operation of the World Trade Center property. In addition:

a. We cannot be satisfied with just very good buildings when it comes to Lower Manhattan. Instead, the buildings and transportation facilities must all be the best that can be built and set a new international standard. Therefore, though the 20 percent minimum energy efficiency target is a start, we believe that this project can and must do far better. Furthermore, an agreement to set a goal of zero-net greenhouse gas emissions from on- and off-site energy consumption, including the purchase of offsets, is even more important than a strong minimum energy efficiency requirement. Such a pledge would propel this already promising endeavor far beyond any other large-scale building effort. Additionally, the renewable energy section of the guidelines should also not just talk about a transition to renewable technologies. As can be seen by the pledge to use wind power at the

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Freedom Tower, some renewable technologies (e.g., wind, photovoltaics and anaerobic digesters) are ready today.

b. Guideline UEQ-8 (P 9): The action that NY State Agency and other governmental on-site vehicles must have 50% and 100% alternative fuel or hybrid vehicles by 2005 and 2010, respectively, should be strengthened. All government vehicles, as well as delivery vehicles should conform to this requirement, as soon as the technology is available. As technology progresses for ultra-low sulfur fuel and retrofit technologies, the requirements should become correspondingly more stringent.

11. Enhanced Green Alternative: The redevelopment of the World Trade Center affords the opportunity to implement system-wide measures at the Project Site to improve energy efficiency, reduce cost over the long term, reduce traffic and improve environmental sustainability for the lifecycle of the Proposed Action. Unfortunately, this opportunity has not been taken, despite the stated commitment of improving environmental sustainability with the construction of the Proposed Action.

The Enhanced Green Alternative in DGEIS serves to explain why certain options for enhanced environmental efficiency and beneficence are not being considered in the Proposed Action. The Civic Alliance is unsatisfied that several of these options have been dismissed, and urge the reconsideration of such options below.

a. Solid Waste reduction: We suggest onsite centralized sorting facility for outgoing waste in order to increase efficiency and reduce vehicle trips.

b. Goods Delivery: LMDC and PA should revisit an off-site consolidation operation to reduce truck and delivery traffic to and from the WTC Site. While this recommendation was recently suggested by the Civic Alliance in its October 2003 resolution submitted to the Port Authority, the suggestion was not addressed in the "Enhanced Green Alternative." The GEIS should also explore electronic docking or bay stations for delivery trucks, in order to reduce air pollution during vehicle staging.

c. Centralized onsite sorting and collection facility: The option of a centralized onsite sorting and collection facility should be explored, with an automated delivery system to buildings. This option would allow for eventuality of coordinated goods delivery system and would only increase efficiency.

d. The possibility of onsite Cogeneration should not be dismissed, nor does it need to be located in a location that would be disruptive to community open space, such as under Liberty Park. In the case that market conditions dictate a reduction in the office space program, cogeneration facilities may be located onsite.

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The Civic Alliance Response to the DGEIS for the World Trade Center Memorial and Redevelopment Plan was approved by resolution of the voting members of the Civic Alliance on March 8, 2004. Voting Members of the Civic Alliance include:

AFG Construction Management, Inc.
American Institute of Architects, New York Chapter
American Planning Association New York Chapter
Asian Americans for Equality (AAFE)
Coalition of 9/11 Families
CUNY Institute for Urban Systems
Environmental Advocates of New York
Environmental Defense
Family Association of TriBeCa East
Fine Arts Federation of New York
Fiscal Policy Institute
Municipal Art Society
New School University Milano Graduate School
New York League of Conservation Voters
New York Metro American Society of Public Administration (ASPA)
NYPIRG Straphangers Campaign
Permanent Citizens Advisory Committee to the MTA
Pratt Institute Center for Community and Environmental Development
Puerto Rican Legal Defense and Education Fund
Rebuild Downtown Our Town
Regional Plan Association
ReHo
TIME/ To Improve Municipal Efficiency
Tri-State Transportation Campaign
University Settlement
Waterfront Park Coalition
Women's City Club of New York

Contact Information:

Civic Alliance to Rebuild Downtown New York
c/o Regional Plan Association
4 Irving Place, 7th Floor
New York, NY 10003

212-253-2727 x322
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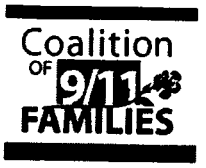
info@civic-alliance.org



VIA FACSIMILE AND ELECTRONIC MAIL

March 15, 2004

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

RE: WORLD TRADE CENTER MEMORIAL AND REDEVELOPMENT PLAN DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT (DGEIS) COMMENTS OF THE COALITION OF 9/11 FAMILIES

Gentlemen:

Attached please find the comments of the Coalition of 9/11 Families (the Coalition) on the referenced document. As you know, the Coalition is composed of six separate organizations representing approximately 4,000 family members of victims of the September 11th attacks on the World Trade Center. Although our comments concentrate on matters relating to historic preservation issues, they are not limited to that area of concern. We welcome this opportunity to comment through the environmental review (NEPA/SEQRA) process, and remind you that the Coalition has also provided numerous comments directly relevant to the DGEIS as a Consulting Party in the National Historic Preservation Act Section 106 review which is going on concurrently. All of those comments are incorporated here by reference.

We also want to remind you that since the issuance of the DGEIS, a number of import actions and decisions have been taken that relate directly to the effects of the Proposed Action on historic properties. These include issuance of a draft Coordinated Determination of Eligibility for the WTC Site, a revised Coordinated Determination of Eligibility, and a Proposed Finding of No Adverse Effect [on historic properties] for the Proposed Action. LMDC has indicated a newly revised Determination of Eligibility will be issued in the future. Given that the identification of historic properties on the WTC Site has not been completed, and that a determination of effect cannot be completed until it is, the public will not have an opportunity to make fully informed comments on the effects of the Proposed Action on historic resources prior to the planned issuance of the Final EIS. This is not acceptable, and runs counter to the spirit and intent of the National Environmental Policy Act.

LMDC can rectify the problem in several ways. It can acknowledge the potential for the Proposed Action to have an adverse effect on historic properties and proceed to enter into either a

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Programmatic Agreement (PA) or a Memorandum of Agreement (MOA) with the Advisory Council on Historic Preservation and other appropriate parties. Either type of agreement could set forth the process for completing the evaluation of historic properties, the identification of the effects of the Proposed Action once detailed design data becomes available, and procedures to avoid or minimize any adverse effects. A signed PA or MOA could then be incorporated into the FEIS. If scheduling of the FEIS precludes incorporation of a PA or MOA in the FEIS, then the FEIS should indicate the intention of LMDC to enter into one. Either approach would allow the evaluation of the effects of the Proposed Action on historic properties, and appropriate mitigation measures, to be fully considered as part of the NHPA Section 106 process.

A second possible solution is to prepare and issue a Supplemental EIS that specifically addresses issues related to historic resources. The Coalition notes that the use of a Generic EIS to satisfy NEPA requirements may be appropriate for undertakings like the Proposed Action in relation to certain categories of resources and types of effects. However, a generic approach is totally incompatible with the full assessment of effects on historic properties on the WTC Site or on archeological properties anywhere within the Area of Potential Effect (APE) associated with the Proposed Action. To properly assess the effects of the Proposed Action, detailed design and engineering documents must be reviewed. In the absence of such documents it is impossible to determine exactly which on-site historic properties will be affected, and how. The inability to do this also makes it impossible to properly design resource-specific mitigation plans, or even consider the viability of design modifications that might result in the reduction or elimination of adverse effects.

The regulations of both the Council on Environmental Quality (CEQ) that define the process for preparing Environmental Impact Statements for federal undertakings like the Proposed Action, and the NEPA implementing regulations of the US Department of Housing and Urban Development discuss the appropriateness of "tiering" environmental reviews. The HUD regulations state that tiering is appropriate "when site-specific analysis or mitigation is not currently feasible and a more narrow or focused analysis is better done at a later date" (24 CFR 58.15). In addition, HUD's regulations specifically authorize the preparation of a Supplemental EIS "When substantial changes are proposed in a project or when significant new circumstances or information becomes available during an environmental review" (24 CFR 58.60). The CEQ regulations state that agencies "shall prepare supplements to either draft or final environmental impact statements if: (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" (40 CFR 1502.9).

In summary, it is the position of the Coalition that the DGEIS does not adequately or accurately describe historic resources that may be affected by the Proposed Action. Additionally, the DGEIS does not adequately analyze or discuss potential effects of the Proposed Action on

historic resources. The vague and imprecise discussions of possible mitigation, and the lack of a legally binding commitment from LMDC to fully evaluate adverse effects and implement resource-specific mitigation where warranted, should necessitate either preparation of a supplement to the DGEIS, and/or a PA or MOA with the Advisory Council on Historic Preservation.

Sincerely,

Anthony Gardner, Executive Board Member, Coalition of 9/11 Families

cc: J. Fowler, Advisory Council on Historic Preservation
J. Nau, Advisory Council on Historic Preservation
D. Klima, Advisory Council on Historic Preservation
C. Vaughn, Advisory Council on Historic Preservation
Alphonso Jackson, Acting Secretary-HUD
Richard A. Hauser, General Counsel, HUD
R. Broun, HUD Preservation Officer
B. Castro, New York State Historic Preservation Officer

Attachment

Comments of the Coalition of 9/11 Families

Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan

GENERAL

- The entire concept of the use of the "Pre-September 11 Scenario" is suspect. It employs as a baseline for analysis conditions that would have existed had the events of September 11 never occurred. As a result, it describes only cumulative impacts to conditions that no longer exist. It tacitly accepts adverse environmental conditions that existed prior to September 11, and discusses only incremental impacts from a *non-existent* baseline. The result is a minimizing of adverse effects.

- There is no discussion in the DGEIS about how LMDC will honor its public statements that the memorial design will allow access to the "footprints." This is particularly worrisome since LMDC announced on February 12 that underground infrastructure requirements might make it impossible to honor the commitment from numerous public officials that "nothing will be built where the towers stood."

- The conclusion of LMDC that there are no unavoidable significant adverse impacts to historic resources is not supported by the data in the DGEIS.

EXECUTIVE SUMMARY (E.3 HISTORIC RESOURCES)

S-24. The statement "the Proposed Action is not expected to result in any significant adverse effects to historic resources . . ." is not supported by the data in the DGEIS. There is no explanation of what constitutes a "significant" adverse effect. Are there "non-significant" adverse effects?

S-25. The definition of the Area of Potential Effect (APE) is inconsistent with the definition provided in other sections of the DGEIS.

S-25. The WTC Site is *not* being considered for listing on the National Register of Historic Places. It has been determined eligible for listing.

S-25 and S-26. Phase IB archeological investigations are "recommended" in the area east of the bathtub. It is unclear whose recommendation this is. It is also unclear whether LMDC intends to follow through on the recommendation. There is no commitment from LMDC to do so, and no discussion of what would happen if the Phase IB (and possibly subsequent Phase II) investigation locates significant archeological remains.

S-25 and S-26. The statement that "In the Pre-September 11 Scenario there were no historic resources on the Project Site" is incorrect. The WTC itself, although never formally designated, was a historic site. Other potentially significant historic resources, including the original Hudson and Manhattan Railroad Tubes, were located on the WTC Site.

S-26. The statement that "since there were no historic resources on the site, there would have been no impacts to historic resources" is incorrect. (per previous comment).

S-26 and S-28. The DGEIS acknowledges that increased traffic levels would have some effect on historic resources. However, it goes on to dismiss those effects, saying they would not be adverse because "those resources were already in heavily trafficked areas." What level of increased

traffic would be considered an adverse effect? This discussion should be revised to note that any increase in traffic would be an adverse effect.

S-27. Restoring street linkages through the WTC site is described as beneficial to historic resources. While this may be true, there is no discussion of how this would affect other historic resources, particularly the extant physical remains of the WTC. It is likely that restoration of some street linkages would adversely affect these features.

S-27. Reference is made to "Construction Protection Plans" that are "required" to avoid potential construction period damage. However, the content of these plans is not described.

EXECUTIVE SUMMARY (E.6 SHADOWS)

There is no discussion of the effects of shadows on exterior spaces that are part of or associated with historic properties.

EXECUTIVE SUMMARY (E.15 COASTAL ZONE)

The Proposed Action is *not* consistent with coastal policies concerning historic resources (see further comments below).

EXECUTIVE SUMMARY (E.20 CONSTRUCTION)

S-55 (and S-56, and S-59). There will be construction through the Hudson River bulkhead. There is no mention that the bulkhead has been determined eligible for the National Register of Historic Places and no discussion of the fact that it would be adversely affected. No details about the content of the Programmatic Agreement for the Hudson River Park, the proposed basis for mitigation, are included here or anywhere else in the DGEIS.

S-55. "testing and monitoring" for archeological resources do not avoid adverse effects as stated. Testing and monitoring, depending upon what is involved, may mitigate adverse effects, but do not result in their avoidance.

S-55 (and S-59). Construction protection plans to avoid adverse impacts to standing structures will be developed in consultation with the State Historic Preservation Officer. There is no discussion of the content of these plans, no mechanism to insure that they will be prepared or be subject to public review.

EXECUTIVE SUMMARY (E.21 MITIGATION)

S-55. Referring to historic and archeological resources, the DGEIS says "the Proposed Action incorporates measures to avoid any potential adverse impacts." As the "measures" are not described in detail, the certainty that *any* adverse impact, presumably including those not yet identified, will be avoided, is unwarranted. In any case, the "measures" are mitigation of adverse effects. Those adverse effects will *not* be avoided.

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S-56. The DGEIS states in reference to archeological resources that "the Proposed Action would have one or more significant adverse impacts that would require mitigation measures to avoid or reduce impacts." This directly contradicts other statements that there will be no adverse effects.

EXECUTIVE SUMMARY (E.23 UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS)

There is no discussion of "unavoidable significant adverse impacts" to historic properties. The possible need for archeological data recovery in three areas identified by LMDC as archeologically sensitive may constitute mitigation, but it does not avoid an adverse effect. The historic significance of the physical remains of the WTC are still being evaluated. At this time it is not possible to say whether or not they will be adversely affected.

CHAPTER 1 (SECTION 1.1 - INTRODUCTION)

There is no mention of the role of the NHPA Section 106 process in the discussion of the legislation related to environmental review.

CHAPTER 1 (SECTION 1.3 – PURPOSE AND NEED)

1-6. The need for "emotional healing" is noted, yet LMDC's actions to date have been, and continue to be, very hurtful to a large percentage of victims' families.

1-7. The discussion of the intent of rebuilding needs to contain a reference to the need to respect and preserve the historic nature of the WTC Site.

1-11. It is noted that large numbers of people, when polled about specific features of the concept plan, indicated that "preserving the footprints [of the Twin Towers] was most important." However, LMDC continues to vacillate on a definition of "footprint." It has been, and continues to be, the position of the Coalition that the footprints are the outlines of the Twin Towers as delineated at the lowest level of the bathtub by the remains of the exterior box beam support columns—not midair voids.

1-13. The land use Program "Set aside space for a Memorial that respects the footprints of the Twin Towers." In the absence of a clear definition of "footprint"—which LMDC has refused to provide—it is not possible to make even a subjective evaluation of whether or not the Memorial "respects" them.

CHAPTER 1 (SECTION 1.5 – DESCRIPTION OF THE PROPOSED ACTION)

The description of the Proposed Action, while possibly sufficient to allow a generic analysis, is totally inadequate to allow for specific impacts to be identified. This is particularly evident in attempting to identify if or how the physical remains of the Twin Towers and the WTC Site will be affected. Without detailed—or even conceptual—plans for proposed below grade construction it is impossible to evaluate if or how these remains will be affected. It is also impossible to evaluate the effectiveness of any proposed mitigation measures. For example, on page 1-20, the DGEIS cannot even identify the location of proposed

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underground bus parking, noting it "may be underground on the Southern Site, on Site 26, or possibly on the WTC Site itself."

1-21. The "footprints" would be recognized at grade (present street level) and approximately 30 feet below grade. As noted, these are not the "footprints" of the Twin Towers. Mention must be made of the physical footprints at the base of the bathtub.

CHAPTER 1 (SECTION 1.6 – MEMORIAL MISSION STATEMENT)

1-29. The need to "convey historic authenticity" by including "surviving original elements" and "preservation of existing conditions of the World Trade Center Site," have been given only minor consideration. The DGEIS does not identify which *in situ* surviving original elements will be preserved and which will be destroyed or adversely affected. "Footprints" represented by mid-air voids have no "historic authenticity."

CHAPTER 2 (SECTION 2.5 – METHODOLOGY - TWO ANALYSIS SCENARIOS)

As noted under General Comments, the entire concept of the use of the "Pre-September 11 Scenario" is suspect. It employs as a baseline for analysis conditions that would have existed had the events of September 11 never occurred. As a result, it describes only cumulative impacts to conditions that no longer exist. It tacitly accepts adverse environmental conditions that existed prior to September 11, and discusses only incremental impacts from a *non-existent* baseline. The result is a minimizing of adverse effects.

CHAPTER 2 (SECTION 2.6 – METHODOLOGY - CONSTRUCTION PERIOD CUMULATIVE EFFECTS ANALYSIS)

2-5 (and others). The DGEIS says that the Proposed Action will be the "last of the Lower Manhattan construction projects implemented." This is confusing, since construction for the Proposed Action is scheduled to start in the fall of 2004, *before* construction begins on the other projects. This cannot be classified, as the DGEIS does, as a "conservative" approach.

CHAPTER 4 (SECTION 4.1 – URBAN DESIGN AND VISUAL RESOURCES – INTRODUCTION)

4-1. "Visual resources" are defined to include "natural or built features, as seen from publicly accessible locations." Under this definition the physical remains of the WTC including, but not limited to, the slurry wall and the box beam columns forming the footprints of the Twin Towers, are "visual resources" and should be classified as such, and addressed in this Chapter. All above-ground historic properties are "visual resources." If the public's ability to appreciate a historic resource is significantly enhanced by the ability to see it, and would be negatively affected by a Project-related change that would reduce or eliminate the ability for the public to view the resource, than an adverse effect will occur.

4-4. The DGEIS notes that "portions of below-grade structures from the former WTC" remain. It is unclear whether these are mentioned because they are considered "visual resources."

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4-4. The remains of portions of the Hudson and Manhattan (H&M) Terminal (a potential historic property) are dismissed from consideration because "they are not visible from street level." However, they may be visible from other perspectives.

4-4. The DGEIS correctly notes that remains of the Hudson Tubes (a potential historic property) are noted as being "visible."

CHAPTER 4 (SECTION 4.2 – URBAN DESIGN AND VISUAL RESOURCES – CURRENT CONDITIONS SCENARIO)

Impacts to on-site visual resources are not discussed for any of the scenarios. It is clear from the generic plans for the Project that views of these resources will changes and in some cases, for example the box beam columns that form the footprints, will be reduced or eliminated.

Certain sentences seem to imply that destruction of the Twin Towers was a good thing since views were improved.

CHAPTER 5 (SECTION 5.1 – HISTORIC RESOURCES - INTRODUCTION)

The DGEIS fails to consider that the World Trade Center Site is itself a historic property (and has been acknowledged as such by the LMDC subsequent to the issuance of the DGEIS). The WTC Site is both a ruin and an archeological site. Treating the WTC Site as an archeological site would allow for the recognition that the site has numerous components associated with different time periods and different historic contexts.

The possibility that the physical remains of the Twin Towers, and other WTC-related remains, are historic resources is never considered or addressed in this Chapter.

5-1. The DGEIS notes that "Historically, Lower Manhattan's skyline was developed with the most technologically advanced buildings of the time." Yet there is no discussion of the historic technological innovations associated with construction of the Twin Towers. Page 5-3 does note that the H&M Terminal and the Twin Towers "were pioneering achievements for their time of construction" but does not discuss why.

5-1. The Electric Bond and Share Company Building should be more properly referred to as the EBASCO Building.

5-2. The DGEIS notes that "in the aftermath of the terrorist attacks, the Twin Towers became a symbol of antiterrorist resolve." It would be more accurate to say, "the ruins of the Twin Towers became a symbol . . ."

5-2. The DGEIS states that "The Plan proposes to conserve portions of the slurry wall and building footprints in order to create an appropriate Memorial." There is no discussion of how this is to be accomplished. There is no discussion of what portions of the slurry wall will be conserved. It is unclear whether the real footprints or LMDC's mid-air "footprints" are being referred to. **The DGEIS needs to specifically address the tangible footprints marked by the remains of the box beam columns on the floor of the bathtub.**

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5-2. The statement that the determination of eligibility [of the historic significance of the WTC Site] and effect will be made through the Section 106 process and the results incorporated into the Final GEIS has only removed this issue from proper public review during the EIS process. The public will be presented with a *fait accompli* in the FGEIS. **Historic resource-related issues should be addressed in a supplemental DGEIS after final determinations of eligibility and effect have been made.**

5-3. In discussing the Pre-September 11 Scenario, no mention is made of the site's historic association with the 1993 terrorist bombings.

5-3 and 5-4. The identification of historic properties in the Proposed Action's Area of Potential Effect was not completed at the time the DGEIS was issued. In addition LMDC has not completed its evaluation of the Action's effects on historic properties. Yet discussions of both the Pre-September 11 and Current Conditions Scenarios contain the statement that "it is not expected that the Proposed Action would have an adverse effect on historic resources." These statements were clearly premature and may be inaccurate given that LMDC has subsequently determined that the WTC Site is a historic property.

5-3. The statement that "In the Pre-September 11 Scenario there were no historic resources on the Project Site" is incorrect. The Twin Towers were a historic resource (as numerous statements elsewhere in the DGEIS about the WTC's important role in the history of New York affirm) even though it was never formally designated one. Eligibility for the National Register of Historic Places is not dependent upon formal evaluation or designation.

5-4 and 5-6. As already noted in comments on the Executive Summary, reference is again made to "Construction Protection Plans" that are "required" to avoid potential construction period damage. However, the content of these plans is not described. The reader is merely referred to Chapter 21. However, Chapter 21 (page 21-7) merely states that construction protection plans will be developed and provides no information as to their content. There is no way to evaluate the ability of these plans to result in the "avoidance" of adverse effects.

5-5. As noted in comments on the Executive Summary, Phase IB archeological investigations are "recommended" "In order to identify potential impacts to [pre WTC] archeological resources" in certain parts of the WTC Site. It is unclear whose recommendation this is. It is also unclear whether LMDC intends to follow through on the recommendation. There is no commitment from LMDC to do so, and no discussion of what would happen if the IB (and possibly subsequent Phase II) investigation locates significant archeological remains.

5-5. The physical remains of the WTC Site are dismissed in the discussions of architectural resources with the statement that "Certain below-grade elements remain." What "elements" are being referred to, and what is their historic significance?

CHAPTER 5 (SECTION 5.2 – HISTORIC RESOURCES – REGULATORY CONTEXT)

5-7. In discussing the Section 106 process, the DGEIS notes that preparation of a Programmatic Agreement in accordance with the Section 106 implementing regulations is appropriate "when effects on historic properties cannot be fully determined prior to

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approval of an undertaking." That is exactly the reason why a Programmatic Agreement must be developed for the Proposed Action.

5-7 and 5-8. The DGEIS notes that federal agencies (which in this instance includes LMDC as HUD has delegated its NHPA responsibilities) must exercise a higher standard of care when considering undertakings that may affect National Historic Landmarks (NHLs). However, mention of the fact that the National Park Service is reviewing a request for NHL status for the WTC Site is deferred to a discussion of onsite *architectural* features (page 5-14). This fact should be mentioned in this section.

CHAPTER 5 (SECTION 5.3 – HISTORIC RESOURCES – METHODOLOGY)

5-9. The DGEIS notes that there are four criteria for evaluating the National Register of Historic Places eligibility of historic sites, but only one is addressed. LMDC's final determination of eligibility for the WTC site also addresses only one criterion. It ignores the fact that many archeologists and historic preservation experts believe at least several criteria apply, especially those that deal with the historic significance of the physical remains of the Trade Center. These other criteria must be given full consideration since they directly determine how the Project will affect the historic aspects of the site.

CHAPTER 5 (SECTION 5.4 – HISTORIC RESOURCES – IDENTIFICATION OF THE AREA OF POTENTIAL EFFECT)

5-10. The DGEIS states that "For archeological resources, the APE is generally the area to be excavated by the Proposed Action." However, that definition is not appropriate for the Proposed Action. There are archeological resources present in areas (notably the bathtub bottom) where no excavation will occur. These resources may be directly affected by removal, alteration, or destruction, but not by excavation. They may also be affected by actions outside the immediate area of disturbance if access to them is impeded or the their ability to convey their historic significance is impaired or reduced.

CHAPTER 5 (SECTION 5.5 – HISTORIC RESOURCES – CURRENT CONDITIONS SCENARIO)

There is no discussion of the archeological sensitivity of Site 26. Site 26 was never discussed in the archeological assessments used as a basis for the DGEIS. Although Site 26 is located on landfill, the depth of disturbance associated with the Proposed Action is unknown. As a result, there is a possibility that excavation on Site 26 could intersect former land surfaces with a potential to contain Native American archeological sites.

Neither the DGEIS nor the archeological assessments on which it is based make reference to the most recent reports of geoarcheological research in lower Manhattan (e.g. studies conducted in connection with the Foley Square Federal Courthouse, and 107-111 Worth Street). Those studies have resulted in the identification of a buried soil horizon that is believed to extend across lower Manhattan and which is a dated to approximately 2000 BP (Before Present). Determining if this soil horizon is present or has been intersected and removed by modern construction is essential to evaluating the archeological sensitivity of the Project Area outside the limits of the bathtub.

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Unfortunately, the archeological assessment upon which Chapter 5 is based, and which claims to be based in part on an analysis of soil boring data, does not reference or discuss any such data. There is no evaluation of boring data collected specifically for the Proposed Undertaking as referenced in Chapter 11 of the DGEIS.

Although this section contains photos of virtually every structure surrounding the WTC Site, there are no photos of the on-site historic resources such as the box beam column remnants that form the footprints of the Twin Towers.

5-11. According to the DGEIS, "East of Greenwich Street it is likely that pre-contact [Native American] resources [archeological sites] would have been destroyed by basement construction in these areas as well as construction activities associated with the WTC." This statement cannot be supported by the analysis in the archeological assessments and is contradicted by other data. The DGEIS notes that "Research on the Paleo-shoreline [which ran roughly along Greenwich Street] indicates the possibility of a bay from Cedar Street to north of the WTC and an irregular shoreline forming a spit of land near Vesey Street at *about 40 feet below current sea level*" [emphasis added]. Such a location would be considered a likely location for Native American occupation and is included among the types of terrain preferred for Paleo-Indian sites according to the archeological assessment prepared for LMDC, and cited in the DGEIS, but not included as an appendix. Both the DGEIS and the archeological assessment note at least two areas east of Greenwich Street that have not been disturbed to a depth sufficient to have eliminated the potential for the presence of *historic period* archeological remains. The maximum depth of disturbance in these areas as documented in the archeological survey report is 24 feet below grade. According to the archeological assessment report for the area immediately south of the WTC site, pre-WTC grade at Greenwich and Liberty Streets was 11 feet *above* sea level. In other words the maximum depth of disturbance in these areas is 13 feet below sea-level, well above the height of the Paleo-shoreline at 40-feet below sea level where Native American archeological remains may be extant.

5-11. The statement that "On the Southern Site, any precontact archeological resources that may have once existed have almost certainly been destroyed by exposure to the elements along the ancient Hudson River shoreline" is not supported by any data in the DGEIS or the archeological assessments. It is equally likely that sediments deposited as sea levels rose in the area over the last 12,000 years would have buried archeological remains. A figure in the archeological assessment (reproduced from a 1983 archeological study prepared for the Westway Project) notes that sea level in the area at 12,000 years ago was as much as 100 feet below its current level.

5-11. The Coalition disagrees with the statement that "the Project Site is not considered sensitive for prehistoric archeological resources." It should be eliminated or revised to reflect the above comments.

5-12. The Dutch ship *Tyjger* which burned on the Manhattan shoreline in 1613 is mentioned only briefly. The DGEIS does note that in 1916 the remains of the *Tyjger* were recovered during construction of the IRT subway from within what is now the WTC Site near what was Greenwich Street near Dey Street. The *Tyjger* was under the command of Adriaen Block (for whom Block Island is named). Only the forward portion of the *Tyjger* was recovered, but it was the subject of considerable study (including subsequent radiocarbon dating of recovered timbers confirming the age of the ship). The DGEIS also notes that an unsuccessful attempt was made to discover the

remaining portions of the *Tyjger* during the excavation of the WTC "bathtub" using detailed maps made at the time of the original find. It does not consider that it is possible that remains of the *Tyjger* remain embedded in the east side of the slurry wall along Greenwich Street. It is unclear from any of the information contained in the DGEIS or the archeological assessment if the edge of the excavation for the IRT subway abuts the slurry wall. If it does not, there is a possibility that some portion of the *Tyjger* may still exist in the intervening area. This needs to be discussed in the DGEIS.

5-12. The potential for the presence outside of the "former WTC construction footprint" of archeological shaft features (wells, privies and cisterns) which can be a source of important archeological information is noted. Although the possibility of pre-1850 remains on former lots that at one time had buildings with basements up to 20 feet deep is acknowledged, additional archeological investigation is recommended only on those lots that had basements less than 10 feet deep.

5-13. The DGEIS notes that the archeological assessment for the Southern Site concluded that there is a potential for the presence of 18th and 19th century archeological remains on former Lot 56 and recommends archeological monitoring of construction *"Since avoidance is not feasible"*(emphasis added). This directly contradicts other statements in the DGEIS that adverse affects will be avoided.

5-13. Quoting the archeological assessment, the DGEIS states that "Prior to any excavation work, an archeological monitoring plan should be developed." There is no commitment in the DGEIS to prepare or implement such a plan. No information is provided on what the plan would include, and there is no discussion of how public comments on the plan would be considered.

5-14. The DGEIS states that the SHPO has determined that remains of the Hudson and Manhattan Terminal and the Hudson Tubes do not satisfy the criteria for National Register eligibility. Reference is made to an August 19, 2003 Field Inspection Report. However, none of the information from that report is provided and it has not been made available to any of the Consulting Parties in the Section 106 process. The filed inspection report should be included as an appendix. There is no discussion of the Hudson and Manhattan Cofferdam, a potentially significant historic resource still extant and functioning on the WTC Site (it's existence is briefly noted in Chapter 11). There is no mention of the fact that DGEIS Chapter 21 says that the remains of the H&M Terminal will be demolished.

5-14. The DGEIS states that the Coalition of 9/11 Families has requested the National Park Service to consider "the footprints to bedrock of the Twin Towers for NHL status." This is incorrect. The Coalition has requested that NPS consider the entire WTC site for NHL status. That would include the actual footprints of the Twin Towers as delineated by the remains of the box beam support columns on the floor of the bathtub (*at* bedrock)—not the midair "footprints" implied by LMDC's "*to* bedrock" (emphasis added) phrasing.

5-15. As noted previously, the DGEIS only considers the National Register eligibility of the WTC site in terms of one of four possible eligibility criteria. The remaining three criteria must be discussed and addressed here.

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5-15. **The discussion of the period of potential significance is described as beginning on September 11, 2001. This should be revised to include the 1993 bombings and the original construction of the Twin Towers.** By confining the period of significance to September 11th and later, no consideration is given to any of the historic components of the site that pre-date 9/11. These include remains associated with the original WTC construction, remains associated with the H&M Terminal and Hudson Tubes, known and potential 19th century archeological remains, and the remains of the *Tyjger*.

5-17. **The statement that "The last of the columns projecting into the floor of the bathtub were removed on May 28, 2002" is incorrect. The remains of the box-beam columns that form the "footprints" of the Twin Towers are intact and are clearly visible at the bottom the bathtub.**

5-18. The statement that the WTC site "does not retain integrity of the overall design, materials, or workmanship" is unsupportable, and is at least partly contradicted by LMDC's revised determination of National Register eligibility for the WTC Site. The slurry wall and the exterior box beam support columns were engineering features unique to the World Trade Center and were the reasons its construction was even possible. The physical remains of these features are intact and clearly document the key components of the World Trade Centers' design, materials, and workmanship. It is LMDC's position that the significance of the WTC is solely related to the events of September 11. If one accepts that position, then it is the *ruins* of the WTC that convey its significance. This makes all arguments regarding lack of physical integrity irrelevant. The ruins are intact and unchanged since completion of the recovery effort.

5-18. The DGEIS implies that the slurry wall does not have integrity because "it was not designed to be freestanding and left without structural support." This is illogical and incorrectly implies that any historic site requiring stabilization could not be eligible for the National Register.

5-19. The Coalition objects to the unqualified statement that "The victims' families . . . called for rebuilding of the WTC Site. A more correct statement would be that "The victims' families . . . called for rebuilding of the WTC Site in a manner that respects the historic aspects of the site." The EIS should be changed accordingly.

5-19. It is unclear why discussions of LMDC funding and LMDC's involvement process are included in this Chapter. They should be removed, as they are not relevant to a discussion of historic resources.

Fig. 5-14 (following page 5-32) The southern boundary of the APE is shown cutting through the center of the Battery Garage. The APE should be revised to include the entire structure.

5-33. The discussion of 90 West Street does not discuss the significant engineering accomplishments associated with the construction of this building.

5-40 and 5-44. The DGEIS notes that "Potential archeological resources on the Project Site could be impacted by construction of the permanent WTC PATH Terminal." These statements need to be explained. The relationship between construction activities related to the Proposed Action and those related to future PATH construction in the same archeologically sensitive areas needs to be explained.

5-41, 5-45 and 5-48. The DGEIS states that Phase IB archeological investigations on the WTC Site will be conducted prior to construction to "avoid adverse effects." The carrying out of a Phase IB investigation would NOT avoid adverse effects. If the Phase IB investigations identified archeological remains, additional investigations, possibly culminating in archeological data recovery, would be necessary. This would constitute mitigation of an adverse effect.

5-41 and 5-45. The DGEIS states that the Hudson River bulkhead might be affected by tunnel construction if the bus garage were located on Site 26, and that the existing Programmatic Agreement for the Hudson River Park would be the "basis of coordination . . . to avoid, minimize, or mitigate adverse effects." As noted in a previous comment, no details about the content of the Programmatic Agreement for the Hudson River Park, or the proposed basis for mitigation, are included here or anywhere else in the DGEIS. Provisions to protect the Hudson River Bulkhead should be part of a broader Programmatic Agreement for the entire WTC Memorial and Redevelopment Plan Project.

5-42. The DGEIS states that the Proposed Action "would make visible each of the one acre areas occupied by the Twin Towers, allow access to *a portion* [emphasis added] of those footprints at bedrock . . ." There is no discussion of how this will be done. There is no discussion of what "a portion" means. Anything less than full public access in a manner that allows the historic and emotional significance of the footprints to be fully conveyed is an adverse effect and must be addressed. On March 11, 2004, LMDC verbally advised the Consulting Parties in the NHPA Section 106 process that responsibility for insuring access to the footprints would be the responsibility of the final designer for the Memorial. This issue must be addressed in future versions of the DGEIS.

5-42. The DEGIS notes that "Construction of the Proposed Action has the potential to cause damage to [historic] buildings from ground-borne vibrations and dewatering. Yet LMDC has issued a proposed determination of no adverse effect in regard to these structures. This is also acknowledged in Chapter 21 (Construction, page 21-78).

5-43 and 5-45. As noted in a previous comment, reference is made to "Construction Protection Plans" that "would be developed" to avoid potential construction period damage, and that implementation of these plans would "avoid or minimize" the potential for adverse effects. If ther is a possibility that adverse effects might only be minimized, how does LMDC justify its no adverse effect determination for the Proposed Action?

5-43. LMDC indicates that the Construction Protection Plans would be based on NYC Department of Buildings Technical PPN #10/88. However, PPN #10/88 is a mitigation procedure specifically designed to reduce—but not eliminate—the likelihood of construction damage. It is 18 years old and is based, in part, on engineering standards almost 40 years old. These standards may no longer represent a state-of-the-art approach. Site-specific Construction Protection Plans must be developed before any final decision concerning the Proposed Action is finalized. Alternatively, a process for developing these plans could be incorporated into a Programmatic Agreement or Memorandum of Agreement prepared as part of the on-going NHPA Section 106 process.

Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan

5-43. The statement that "Overall, the Proposed Action is not expected to have any adverse contextual or visual effects on any known or potential historic resources in the area surrounding the WTC Site" is not supported by the information in the DGEIS. The qualifier "overall" is deceptive and should be eliminated from the statement. Other Chapters of the DGEIS acknowledge that there will be adverse visual impacts (shadows) to known historic properties. The subjective explanation for the "no adverse effect" conclusion regarding "contextual" effects is meaningless. This evaluation should be conducted using the standards of adverse effect used in the NHPA Section 106 review as they relate to "historic context" and "setting." This will insure a uniformity of analyses relating to historic properties and result in evaluations consistent with those derived through the Section 106 process.

5-44 and 5-46. The conclusion that increased traffic levels would not have an adverse effect on historic resources is unsupportable. The DGEIS acknowledges that there will be a cumulative increase in traffic-related effects. Rather than the subjective analysis employed here (or the other criteria employed in Chapter 14), the more objective criteria of adverse effect used in the NHPA Section 106 process should be applied. Chapter 14 of the DGEIS acknowledges that there will be an increase in carbon monoxide (CO) and particulates ($PM_{2.5}$ and PM_{10}) as a result of the Proposed Action. These increases can be directly related to an increased potential for materials damage and the acceleration of on-going damage processes.

5-45. It is unclear why "new open spaces" would improve the setting of historic resources. There would certainly be a change in setting, and one could just as easily argue that the new setting is inconsistent with the original historic context (setting) of these same resources.

5-46. The statement that "As of September 11, none of the buildings on the WTC Site and Southern Site were listed on or determined eligible for listing on the S/NR or designated as a New York City Landmark," while true, is very misleading. A more correct statement would be that none of the buildings on the WTC Site were ever evaluated to determine if they were S/NR eligible. Such an evaluation would have occurred only if a state or federal undertaking that would have affected the WTC Site was involved. Listing on the National Register would have required the consent of the Port Authority. The mere fact that the WTC Site was never listed or determined eligible for the State or National Registers of Historic Places does NOT mean it would not have satisfied the criteria for listing or eligibility.

CHAPTER 5 (SECTION 5.6 – HISTORIC RESOURCES – PRE-SEPTEMBER 11 SCENARIO)

As noted in our general comments, the entire concept of the use of the "Pre-September 11 Scenario" is suspect. It employs as a baseline for analysis conditions that would have existed had the events of September 11 never occurred. As a result, it describes only cumulative impacts to conditions that no longer exist. It tacitly accepts adverse environmental conditions that existed prior to September 11, and discusses only incremental impacts from a *non-existent* baseline. The result is a minimizing of adverse effects.

CHAPTER 7 (SECTION 7.1 – SHADOWS – INTRODUCTION)

7-1. In this section of the DGEIS, LMDC acknowledges that the Twin Towers "represented American innovation and were a remarkable technological advancement." Yet Chapter 5

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(Historic Resources) of the DGEIS, and the Coordinated Determination of National Register Eligibility for the WTC Site, fail to take note of this when considering the historic significance of the WTC Site.

7-1. The DGEIS uses the standards in New York City's *CEQR Technical Manual* as the basis for assessing visual impacts. That standard states "An adverse shadow impact is considered to occur when the shadow from a proposed project falls on publicly accessible open space, historic landscape, or other historic resources if the features that make the resource significant depend on sunlight." While this may be the appropriate standard to apply for certain aspects of the environmental analysis, the adverse effect criteria defined in National Historic Preservation Act Section 106 implementing regulations should also be applied when dealing with historic properties.

CHAPTER 7 (SECTION 7.4 – SHADOWS – RESOURCES OF CONCERN FOR SHADOW ANALYSIS)

7-7. The DGEIS says that "The features of the identified open spaces and historic resources are described in this section." This is incorrect. It deals only with historic resources that are also open spaces and ignores other historic buildings and structures, including numerous National Historic Landmarks.

7-9. The graveyard at St. Paul's Chapel is the only historic resource discussed in this section. All historic properties within the shadow path associated with the Proposed Action should be addressed.

7-9. The statement that "No other historic resources [other than the graveyard at St. Paul's Chapel] were identified that would be in the shadow path but not already shadowed by intervening structures" is incorrect. The DGEIS in Section 7.6 notes that City Hall Park will be affected. City Hall Park is part of the African Burial Ground and the Commons Historic District which is listed on both the State and National Registers of Historic Places and is a New York City Landmark.

CHAPTER 10 (SECTION 10.3 – NEIGHBORHOOD CHARACTER – CURRENT CONDITIONS SCENARIO)

10-5. Although, in discussing its methodology for assessing impacts to neighborhood character, the DGEIS states that historic resources play a major role in determining neighborhood character, the fact that the WTC Site is a historic property is never mentioned in the discussion of the Project Site in Section 10.3.1.

10-12. The Coalition strongly disagrees with the statement that "The design concept would respect the original footprints of the Twin Towers both at-grade [sic] to approximately 30 feet below . . ." These mid-air voids are NOT the "original footprints" of the Twin Towers. The footprints are the outlines of the Twin Towers as delineated by the remains of the exterior support box beam columns visible on floor of the bathtub. At its March 11, 2004 meeting with NHPA Section 106 Consulting Parties, LMDC acknowledged this.

Comments of the Coalition of 9/11 Families

Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan

CHAPTER 16 (SECTION 16.1 – COASTAL ZONE – INTRODUCTION)

16-1. The Coalition disagrees with the statement that the Proposed Action "reflects a commitment to consistency with the coastal policies for the entire project site." In the opinion of the Coalition, the Proposed Action is not consistent with coastal zone policies relating to historic and cultural resources (see following comments).

16-10. The discussion of NYC Coastal Zone Policy 10.1 concerning the retention and preservation of designated historic resources is inadequate. This section of the DGEIS discusses only one designated historic resource, the Hudson River Bulkhead, to the exclusion of the scores of designated properties within what LMDC has defined as the Area of Potential Effect for the Proposed Action.

16-10. Conducting "Further investigations" and use of as-yet non-existent construction protection plans should not be equated with "preservation" as called for in Policy 10.1. These unspecified non-binding actions do not make the Proposed Action consistent with Policy 10.1 as the DGEIS states.

16-10. In discussing NYC Coastal Zone Policy 10.2, the DGEIS incorrectly states that monitoring of archeologically sensitive areas on the WTC site would result in the avoidance of any potential impacts. Monitoring is not mitigation. There is no discussion of what would be done if during monitoring important archeological remains are identified.

16-11. In discussing possible impacts to the Hudson River Bulkhead, the DGEIS says that they will be addressed "through documentation in a New York State Historic Site Inventory Form." Presumably LMDC is proposing this as mitigation. A substantial amount of documentation has already been developed about the historic significance of the Hudson River Bulkhead. The State Historic Preservation Office has raised numerous concerns about construction impacts to it in the course of reviewing several different projects. Preparation of an inventory form cannot be considered adequate mitigation. LMDC should acknowledge the potential for an adverse effect and the fact that mitigation of adverse impacts to the Hudson River Bulkhead may not be feasible.

16-11. There is no way to support the contention that use of Construction Protection Plans which have not yet been written ,would result in the avoidance of damage to historic structures from ground-borne vibrations. It is unclear why this issue is discussed in the context of Policy 10.2 which deals with *archeological* resources.

16-11. Policy 10.2 specifically calls for the preservation of archeological artifacts, yet there is no discussion of the artifacts from the WTC Site that are currently in the possession of the Port Authority.

16-11. The DGEIS refers the reader back to Chapter 5 for a further discussion, but there is no discussion of coastal zone consistency issues relating to historic resources in Chapter 5.

CHAPTER 21 (SECTION 21.1 – CONSTRUCTION – INTRODUCTION)

21-1. The DGEIS states that "The design of the Twin Towers and the WTC complex also required a number of innovative *design and construction* techniques. Perhaps the best known is

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the use of a slurry wall to create the bathtub . . ." (emphasis added). Yet LMDC (along with FTA and FHWA) in its Coordinated Determination of National Register Eligibility for the WTC Site has taken the position that the WTC Site is NOT significant under National Register Criteria C—Design and Construction.

21-2. The DGEIS correctly notes the need to honor those who died at the WTC "on September 11, 2001 *and on February 26, 1993* . . ." (emphasis added). Yet LMDC (along with FTA and FHWA) in its Coordinated Determination of National Register Eligibility for the WTC Site has taken the position that the 1993 bombings do NOT contribute to the significance of the WTC Site.

21-6. The DGEIS incorrectly states that archeological testing and monitoring of archeologically sensitive areas on the WTC site would result in the avoidance of any potential impacts. Neither testing nor monitoring is mitigation. There is no discussion of what would be done if during monitoring important archeological remains are identified. This statement is also inconsistent with statements elsewhere in the DGEIS that reference Phase IB investigations. "Testing" is usually equated with Phase II investigations. Phase II investigations are never mentioned in the DGEIS.

21-6. The DGEIS clearly states that the possible bus tunnel to Site 26 and the pedestrian connection to the World Financial Center "would be constructed through the Hudson River Bulkhead." This would be an adverse effect, but is not identified as such by LMDC.

21-6. It is unclear how "analysis" during the environmental review for the permanent WTC PATH Terminal would "avoid adverse impacts to archeological resources."

21-7. The statement that "no significant adverse impacts to archeological resources would be anticipated from the Proposed Action and the other major construction projects" is not supported by data about these projects, and known and potential archeological resources on the WTC Site. LMDC has inappropriately mixed the term "significant" as used in NEPA analyses with "adverse effect" as defined in the NHPA Section 106 regulations. All adverse effects to historic resources must be considered significant.

21-7. The DGEIS appropriately acknowledges that the Proposed Action may cause damage to historic structures from ground-borne vibrations and dewatering activities. Once again the DGEIS relies on as yet non-existent construction protection plans as a basis for stating "there would not be any adverse impacts to historic resources adjacent to the Project Site. Without a legally binding commitment from LMDC to prepare such plans, a specified procedure for developing the details of those plans, and provision for public comment on those plans, LMDC's conclusion cannot be justified.

21-8. LMDC's Environmental Performance Commitments do not provide for any protection of any archeological resources or any historic resources on the WTC Site. Only "culturally significant sites" are referenced.

Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan

CHAPTER 21 (SECTION 21.3 – CONSTRUCTION – OVERVIEW OF CONSTRUCTION ACTIVITIES: PROPOSED ACTION)

21-15. The DGEIS states that "There are remaining structures from the former WTC complex . . . that must be demolished . . ." There is no discussion of the fact that many of these structures may be historic resources. "Demolition" is definitely an adverse effect.

21-15. The DGEIS says that "an attempt will be made to incorporate remaining structures into new building programs." It is unclear whether this is meant to include structures on the WTC Site that may have historic significance.

21-16. The existence of remains of the original H&M Terminal below street level is acknowledged. According to the section of the DGEIS, these remains "would be demolished and removed from the site." The remains of the H&M Terminal may be eligible for the National Register of Historic Places. Demolition would be an adverse effect, yet this is the only section of the DGEIS to note that they will be demolished.

21-20. Sub-grade construction is described in only very generic terms. There is no discussion of the possible need to avoid historic remains of the original WTC, notably the remnants of the exterior support box beam columns that delineate the footprints of the Twin Towers. There is no discussion of how or where the "large pieces of site infrastructure" would be installed. This makes it impossible to determine if and how the footprints will be affected. There is no mention of the need to carry out sub-grade construction in a manner that will insure full access to the footprints.

CHAPTER 21 (SECTION 21.5 – CONSTRUCTION – STAGING AND LAY-DOWN AREAS, STREET CLOSURES, AND SITE ACCESS)

21-33. The DGEIS says that "Initial construction activities commence in early 2004." Have these activities already begun. If so, the FEIS should note that they began before NEPA and NHPA Section 106 processes were completed.

CHAPTER 21 (SECTION 21.6 – CONSTRUCTION – CUMULATIVE CONSTRUCTION EFFECTS DURING PEAK PERIOD 2006)

Table 21-13 (following page 21-55). The DGEIS notes here that St. Peter's Church will be affected by construction noise. This was also noted in several tables in Chapter 15 – Noise). However, there is no discussion of the fact that St. Peter's is a historic property.

Table 21-16 (following page 21-59). This table indicates that by 2006 the Proposed Action will increase noise levels at St. Peter's Church by 39.2% above current levels. This is an adverse effect to an historic property and should be addressed in detail in Chapter 5.

21-69. The DGEIS notes, "historic buildings, particularly those consisting of plaster, are potentially sensitive to damage from frequent vibration levels higher than 65Vdb." However, it is unclear whether historic buildings are included in Category 1. They are not mentioned in Table 21-24. This should be clarified.

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21-77 to 21-79. This entire Cultural Resources Section is inaccurate and rife with misstatements. It claims to consider "the full range of impacts to archeological and historic resources." As all the historic resources within the Proposed Action's Area of Potential Effect have not yet been identified, this statement is clearly incorrect.

The statement that "Potential issues, analytical methods to address the issues, and data to support the analysis were discussed throughout the initial planning stages of the Proposed Action" It is unclear who was discussing these matters. They were not being discussed with the NHPA Section 106 Consulting Parties, as Consulting Parties were not identified until January 2004. Freedom of Information Law requests to both LMDC and the State Historic Preservation Officer have yielded virtually no records of such discussions.

The statement that "The potential that construction activities could lead to temporary but adverse cumulative effects was recognized by the agencies" is untrue. LMDC has issued a proposed finding of no adverse effect for historic properties. Temporary adverse effects are still adverse effects and should be acknowledged.

As noted in a prior comment, LMDC's Environmental Performance Commitments (EPC) do not provide for any protection of any archeological resources or any historic resources on the WTC Site. Only "culturally significant sites" are referenced. The statement that "A detailed discussion of EPCs is provided in section 21.2.1 and in Table 21-1" is untrue for historic resources. Those parts of the DGEIS contain no more detailed information than is found in this section.

The DGEIS incorrectly says that the APE for the Route 9A Reconstruction has not been defined.

The APE for the Fulton Street Transit Center (FTSC) Project is mentioned, but not described. This makes it impossible to verify the statements about historic resources that are in both the FTSC and Proposed Action APEs.

As noted in several prior comments, DGEIS states again in this section that Phase IB archeological investigations on the WTC Site will be conducted prior to construction The unsupportable assumption is made that "mitigation and retrieval activities could be accomplished before or during excavation for construction." There is no way of knowing in advance if this is either feasible or appropriate. Data recovery ("retrieval") may not be appropriate for certain types of historic resources. Data recovery does not eliminate adverse effects. Likewise, as already noted, archeological monitoring does not eliminate adverse effects.

The statement repeated several times that "taken cumulatively, it is not expected that there would be a significant adverse effect on historic resources . . ." is not supported by the data in the DGEIS. There is no explanation of what constitutes a "significant" adverse effect. Are there "non-significant" adverse effects? As noted in a prior comment, LMDC has inappropriately mixed the term "significant" as used in NEPA analyses with "adverse effect" as defined in the NHPA Section 106 regulations. All adverse effects to historic resources must be considered significant.

Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan

CHAPTER 22 (SECTION 22.2 – MITIGATION – ARCHAEOLOGICAL RESOURCES)

22-1. As already noted, the carrying out of a Phase IB investigations is not mitigation. Phase IB investigations are, by definition, intended only to determine presence/absence of potentially significant historic resources. If the Phase IB investigations identified archeological remains, additional investigations, possibly culminating in archeological data recovery would be necessary.

22-1. As already noted in a previous comment, the DGEIS acknowledges that that the Hudson River bulkhead might be affected by tunnel construction if the bus garage were located on Site 26, and that the existing Programmatic Agreement for the Hudson River Park would be the "basis of coordination . . . to avoid, minimize, or mitigate adverse effects". As previously noted, no details about the content of the Programmatic Agreement for the Hudson River Park, the proposed basis for mitigation, are included here or anywhere else in the DGEIS. Provisions to protect the Hudson River Bulkhead should be part of a broader Programmatic Agreement for the entire WTC Memorial and Redevelopment Plan Project.

22-19. Although LMDC has issued as proposed finding of no adverse effect on historic properties, the DGEIS states that "special provisions" to deal with vibration impacts to historic structures are only "being considered." LMDC needs to make a legally binding commitment in regard to this matter, preferably as part of a PA or MOA in the NHPA Section 106 process.

CHAPTER 23 (SECTION 23.3 – ALTERNATIVES – MEMORIAL ONLY ALTGERNATIVE)

23-8. The statement that "unlike the Proposed Action, the Memorial Only Alternative might be designed to avoid any disturbance of potential archeological resources on the WTC Site" would seem to be an acknowledgement that the Proposed Action cannot avoid disturbance of archeological resources.

23-8. The statement that "This alternative could potentially be designed to avoid alteration of the remaining below grade elements of the WTC Site" is both an acknowledgement that those below grade elements, which include the footprints, are historically significant, and the Proposed Action cannot avoid that disturbance of those features. Any such disturbance would constitute an adverse effect and contradicts LMDC's proposed determination of no adverse effect.

CHAPTER 26 (IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES)

This chapter should discuss archeological resources that will be or may be destroyed by the Proposed Action. Archeological remains, including the *in situ* remains of the original World Trade Center, once damaged or destroyed can never to replaced. The DGEIS needs to acknowledge this. The statement that "unlike the Proposed Action, the Memorial Only Alternative might be designed to avoid any disturbance of potential archeological resources on the WTC Site" would seem to be an acknowledgement that the Proposed Action cannot avoid disturbance of archeological resources.

ATTN: PAUL, I personalized this a bit for you to give you an idea of how we envision this. THANK YOU SO MUCH! God Bless you!
Coalition of 9/11 Families Comments

I'm Paul Sipos, a resident of lower Manhattan, a member of Community Board One and a member of Coalition, which reps thousands of 9/11 families, survivors and rescue workers and concerned citizens.

Our concerns with the DGEIS include: (please read through all of the bullet points to get these points on the record)

THE COALITION OF 9/11 FAMILIES.

– ANTHONY GARDNER / PAUL SIPOS – CB1

CB1

- The DGEIS does not contain enough information about the actual form of the project on the ground to determine how it will affect historic resources.
- The DGEIS started from the premise that the project would have no adverse effect on historic resources.
- The DGEIS does not adequately address what aspects of the WTC site contribute to its historical significance (e.g. the box beam columns that outline the footprints on bedrock).
- The discussion of archeological resources at the WTC site is based on two reports prepared in October 2003. Why hasn't LMDC made these available to the public. Why has LMDC refused to respond to Freedom of Information Law request for copies of these reports?
- "The Plan proposes to conserve portions of the slurry wall and building footprints in order to create an appropriate Memorial" (p.5-2). Nowhere does the DGEIS identify which portions of these features that will be "conserved" and which will be destroyed.
- The DGEIS does not define what it means by the term "footprints." Although this has been a matter of discussion for more than two years, LMDC continues to refuse to acknowledge that the "footprints" are the outlines of the Twin Towers perfectly delineated by the remains of the exterior support box-beam columns presently visible at the lowest exposed level of the site--not some mythical void suspended in mid-air.
- Page 5-17 states that "The last of the columns projecting into the floor of the bathtub were removed on May 28, 2002." This is incorrect. The remains of the box-beam columns that form the "footprints" of the Twin Towers are intact and are clearly visible at the bottom the bathtub.

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- The statement that the WTC site "does not retain integrity of the overall design, materials, or workmanship" (p.5-18) is unsupportable. The slurry wall and the exterior box beam support columns were engineering features unique to the World Trade Center and were the reasons its construction was even possible. The physical remains of these features are intact and clearly document the key components of the World Trade Centers' design, materials, and workmanship.

- There is no discussion the DGEIS about how LMDC will honor its public statements that the memorial design will allow access to the "footprints." This is particularly worrisome since LMDC announced on February 12 that underground infrastructure requirements might make it impossible to honor the commitment from numerous public officials that "nothing will be built where the towers stood."

- The New York City Waterfront Revitalization Program Consistency Assessment Form included in the DGEIS and dated January 13, states that the proposed action would have no significant adverse impact on historic or archeological resources. How was this determination reached since LMDC has yet to completely identify all the historic resources on the WTC site. [Aditional archeological surveys have been recommended for two large portions of the WTC site].

- The DGEIS states that "adherence to Construction Protection Plans would be required to avoid potential construction period damage to architectural resources" (p.5-6). No additional information about these documents is provided. There is no discussion of what they would include or what principles they will be based on. In the absence of at least a draft version of these plans it is impossible to determine whether or not they will work to avoid damage to historic structures in the vicinity of the WTC.

- The DGEIS notes (p.5-9) that there are four criteria for evaluating the National Register of Historic Places eligibility of historic sites, but it considers only one. LMDC's final determination of eligibility for the WTC site also addresses only one criteria. It ignores the fact that many archeologists and historic preservation experts believe at least several criteria apply, especially those that deal with the historic significance of the physical remains of the Trade Center. These other criteria must be given full consideration since they directly determine how the Project will affect the historic aspects of the site.

- Chapter 5 contains a long discussion of LMDC's "Extensive Involvement of the Public" but does not mention that the LMDC has afforded participants in the National Historic Preservation Act compliance process only very limited timeframes to comment on extensive, complicated technical documents; has attempted to limit participation of groups such as the Coalition of 9/11 Families; has refused to provide copies of key technical documents; and has refused to

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even respond to Freedom of Information Law requests for copies of those documents.

- The LMDC's attempt to downplay the importance of the physical remnants of the Twin Towers is typified by the fact that no pictures of the "footprints" are included in the DGEIS.

- The DGEIS and LMDC's final determination of National Register eligibility start the period of historic significance of the WTC site on September 11, 2001. This needs to be expanded backward to include the period of construction. At present the significance of the Twin Towers—the very thing that made them the targets of the September 11 attacks—is ignored.

- Section 21.6.7 states that "The potential that construction activities could lead to temporary but adverse cumulative effects was recognized by the agencies." How then does LMDC justify its position that the project will have no adverse effect on historic properties?

-----Original Message-----
From: Marilyn Gaull [mailto:mg49@nyu.edu]
Sent: Wednesday, February 25, 2004 6:10 PM
To: William Kelley
Subject: Section 106

Thank you and Miss Chang very much for conducting such a fine and informative meeting yesterday. I represent the Coalition to Save West Street, which is really about saving our neighborhood, Battery Park City

south, and the neighbors whose lives were so badly damaged and who have not yet recovered their voices.

I have studied the materials that you distributed and was impressed by the objectivity of the report, the history, the documentary style. It rescued and reframed a subject which has provoked excessive and unnecessary rancor.

I agree with Bill Love, David Stanke, and other residents that none of the residual ruins of the WTC including the "slurry wall" and "bath tub" are of any historical consequence which would be lost if the site were redeveloped. They are simply what was left after the clean-up, rather arbitrary remains which are not nearly so significant as the facade, for example, or the sphere, or, if it is ever considered, the south bridge.

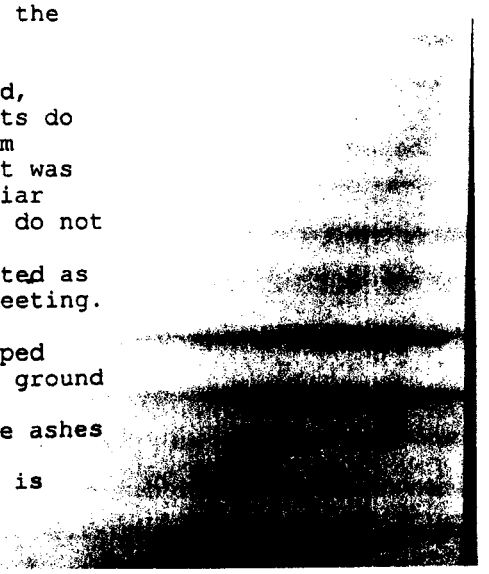
As a resident of BPC since 1987, as someone who escaped, survived, returned to rebuild and recover, I can tell you that these remnants do not represent in any way what was lost that day. We never saw them before and they are not to be seen now. They evoke nothing of what was there. . In an excess of sentiment, from many who were not familiar with the site, these remains have been endowed with a value they do not

have--just as the "bed rock" has now been inappropriately designated as sacred and hallowed--which raises the point I raised during the meeting.

The ground is sacred and hallowed to the terrorists, to their warped religions belief and the sacrifice they made in its name. If that ground

is sacred, then so are those survivors like myself who inhaled the ashes

and are suffering to this day. In fact, to preserve anything that is



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left would be a memorial to the crime itself. Under the categories of "feeling" and "association," to those who were there, who lived there and returned, who still suffer enormously, many of whom are "families," the site is a crime scene which needs to be rebuilt, to be purified and

not worshipped. My concern and my neighbors all of whom objected to having unidentified human remains deposited on the site is that terrorist remains and artifacts will also be enshrined there. It seems to me to be inevitable.

So, we are pleased that you have made the determination that rebuilding on the site will not compromise its historical significance. It may be the only way we recover it from the criminals who are responsible.

I am sorry I was unable to state this clearly yesterday. I do think these observations, however, are relevant to the discussion of Section 106 and supports the position of the LMDC.

With best wishes,

Marilyn Gaull Howard
350 Albany Street 3Q
New York, N. Y. 10280

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New York University
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conEdison

Peter P. Garam
Associate General Counsel

February 19, 2004

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

Re: World Trade Center Memorial and Redevelopment Plan
Draft Generic Environmental Impact Statement – January 2004

Dear Sirs and Madams:

Pursuant to your notice of January 20, 2004, Consolidated Edison of New York, Inc. ("Con Edison") hereby submits its comments on the Draft Generic Environmental Statement referred to above. Con Edison's comments, which are shown on the attached marked-up pages (12-1, 12-7 and 12-20), pertain to the electric, gas and steam services supplied to the WTC complex by Con Edison.

Respectfully submitted,

Peter Garam

PG/bd.
Attachment

9241198

Consolidated Edison Company of New York, Inc.
4 Irving Place New York, NY 10003 212 460 2985 212 677 5850 fax garamp@coned.com

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for the proposed WTC Site redevelopment

CHAPTER 12. INFRASTRUCTURE

12.1 INTRODUCTION

large portions of

12.1.1 CONTEXT

The horrific events of September 11 resulted in severe damage to infrastructure systems within and around the Project Site. Within the WTC Site, all mechanical, electrical, and plumbing systems supporting the WTC Site were either destroyed or left inoperable. In addition, all water, sewer, steam, gas, stormwater, and telecommunications utilities on site, as well as major utility distribution lines coming into the site were destroyed. Near the Project Site, on the former Seven World Trade Center (7 WTC) site, two essential Consolidated Edison Company of New York (Con Edison) substations were destroyed, causing severe disruptions to the electricity distribution network in Lower Manhattan.

Con Edison is currently rebuilding the two substations at the base of the 7 WTC, thereby restoring capabilities ~~to the project vicinity~~. In addition, all other essential utilities have been restored in Lower Manhattan.

Water, sewer, and telecommunications distribution networks have also been restored on the Project Site for the limited demands from the existing uses on the WTC Site that include the temporary WTC PATH station and related uses, minor construction (site preparation) work, and the No. 1/9 IRT subway line. Electricity for the temporary WTC PATH station and related uses is being supplied by Public Service Energy & Gas (PSE&G) a provider based in New Jersey.

The Proposed Action would require infrastructure capabilities to serve the construction and operational needs for the World Trade Center Memorial and memorial-related improvements, up to 10 million square feet of commercial office space, up to 1 million square feet of retail space, a hotel with up to 800 rooms and up to 150,000 square feet of conference facilities, new open space areas, museum and cultural facilities and certain infrastructure improvements described in more detail below by their location on the Project Site (see also Chapter 2, "Methodology," for details of the program by analysis year). As noted in Chapter 1, "Project Description," the hotel and retail space together would not exceed 1.6 million square feet. Servicing the program needs of the Proposed Action would require a major reconstruction of utilities and mechanical and electrical systems on site and upgrades to the existing telecommunications network in the immediate area, an effort that would fulfill the mission of LMDC, which has been charged with the responsibility for planning and coordinating the remembrance, rebuilding, and renewal efforts on the WTC Site and in Lower Manhattan.

The *Sustainable Design Guidelines* are being developed by LMDC in cooperation with the Port Authority of New York and New Jersey (the Port Authority), Silverstein Properties, and the "green group," a working committee comprised of environmental interest groups and other stakeholders (the current draft is included as Appendix A). These guidelines are a compendium of strategies and guidelines (outlined below in section 12.2.1, "Policies") and address reduction

SOLID WASTE

In New York City, solid waste from manufacturing and commercial uses is collected by private carters while residential refuse is handled by the New York City Department of Sanitation (DSNY). Commercial solid waste is typically hauled to out-of-city landfills. Residential waste was formerly disposed of at the Fresh Kills Landfill, located on the western shore of Staten Island. After nearly 50 years of operation[1], the Fresh Kills site stopped receiving solid waste on March 22, 2001. DSNY currently collects solid waste, delivers it to transfer stations, and from there private carters take it to a landfill. Solid waste for Lower Manhattan is typically hauled to Essex County, New Jersey. The municipal waste systems handle about 12,000 tons per day and the private carters handle approximately 10,000 tons per day. Private waste collection companies charge by the cubic yard (CY) and employ either manual collection or containers.

In April 1989, the city passed a law requiring residents and businesses to separate recycling material from wastes and requiring 25 percent of the city's waste to be recycled. These local laws have reduced the volume of waste that is disposed of at the city's landfills. Nearly 18 percent of the daily waste (both commercial and residential) that is generated by the 7.5 million inhabitants of New York City is recycled.

ENERGY

Con Edison supplies electricity, natural gas, and steam in New York City, and to the Project Site. Annual electric consumption totals approximately 50 billion kilowatt hours (kWh) of electricity in the Con Edison service area. On September 11, Con Edison lost the two substations at 7 WTC and suffered damage to its underground power network. Substations decrease voltage in electricity lines to be able to distribute electricity to neighborhoods. ~~Since then,~~ Con Edison ~~has~~ restored electric service to Lower Manhattan by bypassing the underground electrical system and laying approximately 36 miles of electric ~~conduits~~ above ground. These activities were completed, as part of the HUD funds for Emergency and Temporary Response. Currently Con Edison is working to restore the power network to pre-September 11 capabilities.

Con Edison ~~delivers~~ steam to the Project Site through a distribution main under Greenwich Street. A steam main ~~feeds~~ into the site on a 3-utility rack running north-south through the site parallel to the No. 1/9 IRT subway. Domestic water and sanitary sewer mains also run along this utility rack. The steam main ~~is~~ used by building tenants ~~in~~ heating ventilating and air conditioning (HVAC) systems and domestic water heaters.

Con Edison also supplied natural gas to the Project Site via ~~two~~ gas services. Prior to September 11, service entered off Vesey Street, for the concourse restaurants and through the Southeast Plaza Building, for the Commodities Exchange. Con Edison has since restored both steam and natural gas service to the Lower Manhattan area.

TELECOMMUNICATIONS

Telephone and cable lines are fed to the WTC Site through major entry points along the perimeter. The banks and casings remain intact and useable with the exception of a bank along the north side of the site. Empire City Subway, a subsidiary of Verizon, maintains telephone manholes and utilities. The telephone banks that remain may be rewired with a combination of telephone, cable or fiber optic lines.

[1] Except for the brief reopening for September 11-related material

Insert 12-20B

Insert 12-2a A

ENERGY

E

Electricity, steam and gas were the types of energy used pre-September 11. All energy for the WTC complex was supplied by Con Edison. ~~All~~ electricity for the WTC complex was ~~channeled through a substation at 7 WTC. This substation was controlled by the Port Authority, and was located at the western side of the No. 1/9 IRT subway in the northeast corner of the bathtub~~. From this single-point interface with the local electricity grid, on-site distribution lines and several substations dispersed energy to the buildings and concourse levels of the WTC complex.

Electrical service was provided by Con Edison from eight dedicated primary feeders. The feeders came from the substation at ~~66 Barclay St.~~ ~~The feeders were designed to lose any two feeders without shedding the entire electrical load.~~[1] The eight primary feeders were from the Con Edison service manholes at the property line, which were incased in concrete conduits that led to the Primary Distribution Center (PDC) sub-grade. The eight main service switchgear assemblies were used to distribute the electricity throughout the WTC complex, via "spot networks". The electrical service was metered by Con Edison at each of the eight main switchgear assembles. Office tenants were provided with a capacity of 10 watts per square foot.

7 WTC

Emergency electric service was provided via a diesel generator plant located on the WTC Site. The plant consisted of six diesel generators, which were river-water cooled. The generators were 1,250 kilowatts (kW) each and generated 480 volts. The emergency generators were to supply loads for stair and egress lighting, fire pumps, elevators, a fire alarm system and critical emergency operations such as the Operations Control Centers (OCCs). Also supplied by the emergency generator were river water, chilled water, and sump and ejector pumps. Standby electric service consisted of four diesel generators located on the roof of 5 WTC.

Steam that was used for heating was from Con Edison, delivered through a distribution main from under Greenwich Street. A steam main fed into the site on the three-utility rack. Domestic water and sanitary sewer mains also ran along this utility rack. The steam main was used for the HVAC system and domestic water heaters as well as a component of the fire suppression and humidification systems within the WTC complex.

three

Natural gas was supplied to the WTC complex buildings by Con Edison via ~~two~~ gas services. The first service entered off Vesey Street, which was for the concourse restaurants. The second service was installed in the Southeast Plaza Building. This was installed for the Commodities Exchange.

Insert 12-2a C

The WTC cooling system used water from the Hudson River that was circulated through the central refrigeration plant. The air conditioning system in Towers 1 and 2 called for the cooling of 8 million cubic feet of air per minute for circulation, and this was accomplished through a sub-grade refrigeration plant. The refrigeration plant used a closed circulation of water from the Hudson River to withdraw heat from the HVAC system. This type of system is referred to as a closed-loop system because the river water was drawn from and returned to the Hudson River through a loop of pipes. The river water was brought through the pipes as in a conveyor, without direct contact to other elements in the refrigeration plant outside of the pipe walls. River water intake pipes drew and returned the water through pipes. The pipes ran below grade, east-west across Route 9A, to connect the river water to entry points in the slurry wall. The entry points to the WTC Site were located mid-block between Vesey and Liberty Streets on the east side of West Street. The pump house controlling these intakes was equipped with eight pumps and two

[1] This is called ~~double~~ contingency.

second

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WORLD TRADE CENTER
MEMORIAL AND REDEVELPMENT PLAN
DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

INSERTS TO COMMENTS OF
CONSOLIDATED EDISON COMOPANY OF NEW YORK, INC.

Insert 12-7A

Con Edison permanently restored electric service to Lower Manhattan by establishing a new substation on the Lower East Side, installing the associated distribution infrastructure from this substation and reconfiguring various networks.

Insert 12-20A

supplied by Con Edison via eight dedicated high tension feeders from the World Trade Center Substation located at 7 WTC through a customer substation. The customer substation was controlled by the Port Authority and located in the northwest corner of the bathtub.

Insert 12-20B

The Con Edison service was designed to maintain full electrical service to the WTC complex even with the loss of any two feeders.

Insert 12-20C

The third service was installed in the Southwest Plaza Building. This was installed to serve the Vista Hotel.

e

ENVIRONMENTAL DEFENSE

finding the ways that work

March 15, 2004

BY FACSIMILE TRANSMISSION;
HARD COPY TO FOLLOW
Lower Manhattan Development Corporation
One Liberty Plaza, 20th Floor
New York, NY 10006.

Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS

Re: Comments of Environmental Defense on the Draft Generic Environmental Impact Statement World Trade center Memorial and Redevelopment Plan

Environmental Defense, a national non-profit environmental organization headquartered in New York City, is dedicated to working toward a reconstruction of lower Manhattan that advances a clean, healthy environment for all New Yorkers. Our Living Cities program works to revitalize urban neighborhoods, and we believe that the rebuilding of Lower Manhattan presents unique opportunities to create true models of environmental excellence.

The draft Generic Environmental Impact Statement (DGEIS) for the reconstruction lays out both opportunities and pitfalls. We believe that the areas of weakness can and must be corrected, and that the DGEIS should be revised to reflect a plan that both eliminates negative environmental and health impact and sets more ambitious goals for environmental results. Key areas that need improvement are:

1) Including full analysis of a "best available technology" baseline that will, across all areas of environmental impact, evaluate benefits of using the most advanced available techniques to improve environmental performance, both during construction and operation of the end result;

2) Elimination of health impacts from diesel exhaust, including reduction of emissions from construction, trucks and stationary engines;

3) Use of advance economic and technical tools to dramatically reduce traffic congestion;

In these ways, the DGEIS can set a powerful framework for environmental success in a broad range of areas, from construction techniques to waste management, air quality and water usage. The DGEIS has taken steps in this direction in some areas, but a comprehensive commitment is needed.

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Washington, DC · Oakland, CA · Boulder, CO · Raleigh, NC · Austin, TX · Boston, MA Project Office · Los Angeles, CA

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water usage. The DGEIS has taken steps in this direction in some areas, but a comprehensive commitment is needed.

Further, the DGEIS identifies specific areas of environmental impact, such a truck traffic, air pollution and traffic congestion, for which mitigation techniques clearly exist. The DGEIS should evaluate the benefit of making full use of those techniques.

The redevelopment of the World Trade Center (WTC) site with a Memorial, user-friendly public spaces and pedestrian walkways, commercial office towers, retail and cultural amenities is an enormously complex undertaking. The draft Generic Environmental Impact Statement (DGEIS) covers a vast array of topics.

In general, from a regional perspective, the redevelopment of this site has a number of environmental benefits compared to an alternative of further dispersal of commercial, retail and cultural facilities in other parts of the metropolitan region. Alternative sites for comparable space elsewhere in the metropolitan region may not be anywhere near as well served by public transportation resulting in increased vehicular miles traveled (VMT) in the region and further highway congestion. In addition, outside of the central business districts in the City, buildings in other locations in the metropolitan region would not be as energy efficient. Thus, there are sound environmental reasons to rebuild a reasonably dense complex at the WTC.

With that said, we focus our comments at this stage on a limited number of issues: 1) the methodology used to assess impacts and the need for offsets or mitigation, 2) air quality, 3) traffic and congestion pricing, and 4) the importance of the sustainable building guidelines in Appendix A, including the commitment to incorporate renewable energy generation in the Freedom Tower.

Impact assessment baselines and methodology. The DGEIS presents two baselines against which to measure impacts of the proposed WTC redevelopment. The first uses pre-September 11, 2001 conditions and the second current conditions. However, for purposes of offsets and mitigation, the DGEIS most of the time relies on the first baseline.

Both baselines are useful for impact assessment purposes, but both also have their limitations. Since the current conditions as reflected in the second baseline entail an absence of activity, with no use of energy and water, few sources of air pollution and no production of solid waste, by way of example, any energy, water, air pollution or solid waste would be a net impact, with virtually no way of securing mitigation. On the other hand, reliance on the first baseline also provides little incentive for minimization or need to consider mitigation since the pre-September 11 towers were dated with less than efficient energy systems etc.

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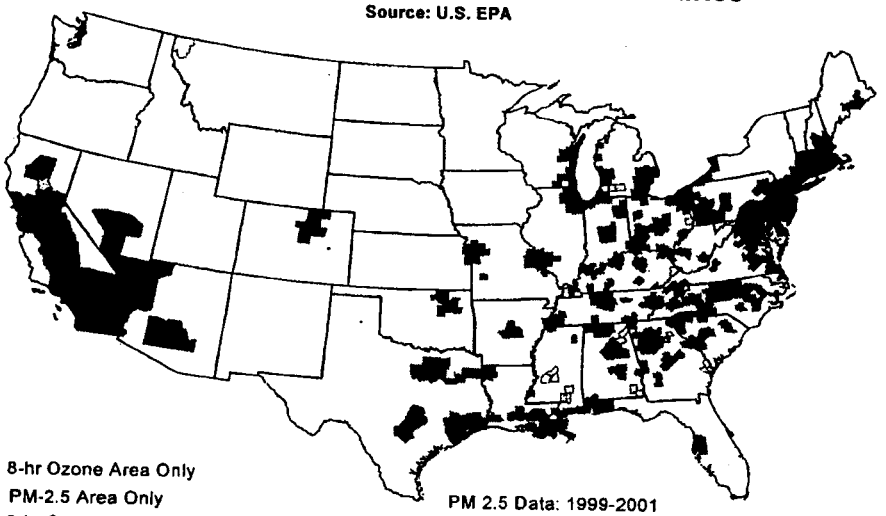
Since conditions at the WTC site are in many respects *sui generic*, we would propose a third baseline for impact assessment and mitigation purposes of best available technology that is economically available (BAT baseline). In many cases, the DGEIS proposes building and space designs that would meet a BAT baseline standard. Indeed, in some cases, the design goes beyond BAT, e.g., the Freedom Tower renewables proposal. On the other hand, in other cases, the DGEIS proposes business-as-usual, e.g., reliance on conventional construction and delivery trucks, goods delivery and waste handling. By relying primarily on the first baseline for mitigation purposes, the LMDC and Port Authority have not in all cases searched for the best possible technology or strategy for accomplishing a goal. Use of this third BAT baseline would foster continued pursuit of the best.

Air quality analysis and construction equipment and truck emissions. New York City has serious air quality problems with ozone and particulate matter. When EPA established the national health-based air quality standards for fine particles and ozone smog in 1997, EPA estimated that **each year** the high levels of harmful fine particle concentrations and smog that are common in metropolitan areas nationwide are responsible for an estimated 15,000 premature deaths, 350,000 cases of aggravated asthma and 1 million cases of significantly decreased lung function in children. http://www.epa.gov/ttn/oarpg/naaqsfin/naaqsfac.html. The Environmental Protection Agency has designated New York City as nonattainment for the health-based 8-hour ozone national ambient air quality standard, and it is very likely that New York City will be designated nonattainment for the health-based fine particulate matter (PM 2.5) health-based standard as well. Please see the map below.

Areas Not Meeting the 8-Hour Ozone or PM-2.5 Standards
CMSA Basis for Nonattainment Boundaries
Source: U.S. EPA



8-hr Ozone Area Only
PM-2.5 Area Only
8-hr Ozone and PM-2.5 Area

PM 2.5 Data: 1999-2001
Ozone data: 1998-2000 (primarily)

PM-2.5
Not Meeting Std: 131 counties, 65 million
Additional Counties in CMSA: 244 counties, 48 million
Total: 375 counties, 113 million

8-hour Ozone
Not Meeting Std: 341 counties, 124 million
Additional Counties in CMSA: 287 counties, 51 million
Total: 628 counties, 175 million

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As the DGEIS acknowledges, rebuilding on the World Trade Center site will mean increased traffic and diesel emissions for the duration of the project and beyond, and it recognizes that the site and lower Manhattan will face real air quality problems particularly during the construction period (page 14-8 and 14-9). The pollution from diesel engines of any sort – construction equipment, construction trucks or trucks servicing the site after construction - contributes to a suite of environmental and health problems, including:

- Environmental triggers of asthma. About one is eight New Yorkers suffers from asthma (including about 300,000 children), a disease with known environmental triggers that include fine particulate matter and urban smog. In some neighborhoods, including some downtown neighborhoods, asthma rates are unusually high. We believe that the reconstruction of the WTC site should be done in a way that demonstrates how construction, traffic and the built environment can be managed to eliminate serious triggers of asthma.

- Air Cancer Risk. In New York County, for example, 96% of the air cancer risk is due to mobile sources including diesel engines. Indeed, diesel emissions are the hazardous air pollutant with the highest contribution to cancer risk.

- Being a major source of harmful fine particles. Nationwide monitoring data indicates that 113 million people in 375 counties are exposed to levels of fine particles that exceed the national health-based air quality standard. And a body of epidemiological studies associates these fine particles with thousands of premature deaths and hospitalizations. New York City is not expected to meet the public health standard for PM 2.5. The reconstruction of lower Manhattan can and should be a model for getting fine particles out of city air.

- Contributing to harmful smog levels. Nationwide monitoring similarly indicates that 175 million people living in 628 counties are exposed to levels of ground-level ozone or "smog" that exceed the national health-based standard. High ozone levels cause acute respiratory problems, aggravated asthma, decreased lung function, inflammation of lung tissue, an increase in hospital admissions and emergency room visits for respiratory causes, and crop damage. Children with asthma are most at risk. According to the New York City Department of Health, there are 1 million people in New York City with asthma, including 300,000 children. New York City has recently been designated nonattainment by EPA.

In September of 2002, New York State Governor George Pataki required that all state construction equipment used during the rebuild of the WTC to use ultra low sulfur diesel fuel (15ppm or less) and to be retrofitted with best available pollution control technology. Please see http://www.environmentaldefense.org/article.cfm?contentid=2324 for additional detail. Further, in December 2003, the New York City Council unanimously passed legislation, signed by Mayor Michael Bloomberg, requiring all city

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owned construction equipment and equipment used in all city contracts also to use ultra low sulfur diesel fuel and be retrofitted with the best available pollution control technology. Please see http://www.council.nyc.ny.us/textfiles/Int%200191-2002A.html for more detail.

We urge LMDC and all agencies working in Lower Manhattan to use this legislation as a guide – and to commit explicitly to implementing programs that are at least as advanced. Indeed, we urge LMDC to step beyond this bill to adapt the commitment to all feasible diesel engines used in the reconstruction and operation of the WTC site, including trucks, buses, stationary generators, back-up generators and marine vessels.

(We note that in 2004 and 2005, a $7 million pilot project established by NYSERDA, NYC DOT and various other entities, including Environmental Defense, will implement best available retrofits for diesel ferries in NY harbor. That effort will yield clear steps for other marine applications, including of course ferries, tugboats, barges, etc.)

In view of the projected air quality impacts associated with redevelopment of the site, the LMDC should take all appropriate and reasonable steps to ensure that all diesel engines involved in rebuilding the WTC site use ultra low sulfur diesel fuel and be retrofitted with the best available pollution control technology to mitigate the pollution impacts of rebuilding. There is some mention of this issue sprinkled throughout Chapter 14 of the DGEIS, but no explicit commitments are made.

Environmental Defense respectfully requests that the LMDC make an explicit commitment to cleaning up diesel emissions, through use of ultra low sulfur fuels and best available retrofit technology, not only relating to construction equipment and stationary diesel generators, but construction trucks, and, as the site gets redeveloped and reoccupied, waste trucks and goods delivery trucks of all sizes. The DGEIS makes clear that truck traffic will pose a significant health threat for years to come. The technology exists to cut that threat dramatically, and the technology is cost-effective. We believe that a combination of clean fuels and best available retrofits can cut those emissions by up to 90%.

Environmental Defense specifically suggests the following solutions:

- Use 15ppm ultra low Sulfur fuel. Low sulfur fuels should be used in place of regular diesel fuel. Low Sulfur fuel (15 ppm or less) lowers SOx and PM and makes it possible to maximize use of state-of-the-art emissions control technology, like particulate filters. The infrastructure for low sulfur fuel is in place at parts of the Port of New York. Private companies supply low sulfur fuel to some MTA buses, and suppliers are seeking to expand. Ultra low sulfur diesel fuel can cut emissions substantially – and, more important, it is a prerequisite to use of many retrofit filter technologies (sulfur can clog particulate filters). The most advanced retrofit

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technologies require use of the lowest possible sulfur fuels – lower even that the 15 ppm fuels generally available.

- Install oxidation catalysts. Oxidation catalysts can reduce PM by at least 25%, HC 90%, CO, other toxics, smoke and odors. Oxidation catalysts were installed on equipment used in Boston's Central Artery Tunnel (Big Dig) project at a cost between $1,000-3,000 per vehicle. In fact, at the Big Dig, they have retrofit over 100 construction vehicles, with no delay to the construction process. These retrofits will achieve an emission reduction, for the city of Boston, equivalent to eliminating ***96 million diesel truck miles*** or removing ***1300 diesel-powered public buses*** for a year.

- Use particulate filters. On-road vehicles (primarily MTA buses) that are retrofitted with particulate filters show reduction in PM of up to 90%, CO and HC up to 90%. Particulate filters may not have been tested extensively enough for some equipment to require mass installation in the immediate term. The World Trade Center site could serve as a pilot project for using these filters on construction vehicles. Additionally, this technology should be used on stationary generators and the heavy trucks used to cart debris through local neighborhoods. New rules could require their expanded use in the future.

- Test advanced technologies: There are other technologies available for use on diesel engines that may not yet have been fully tested. These include, for example: selective catalytic reduction and exhaust gas recirculation. Emulsified fuel also provides substantial opportunity for reductions. Testing at WTC could be followed by more widespread implementation throughout the metropolitan region and the state.

- Stop engine idling. Users of heavy-duty diesel equipment often keep their engines idling when equipment is not in use. Existing regulations limiting idling must be enforced throughout the State. Further, rules specific to the WTC rebuild and the nonroad vehicles working on it should be devised.

- Improve equipment maintenance and inspection. Fleet managers need to keep their equipment in good repair. This is essential not only for the engines to operate efficiently, but also to ensure that emission reduction technologies can be used effectively. As with onroad vehicles, nonroad equipment should have regular, periodic inspections, including smoke testing. All diesel equipment used while rebuilding the WTC site should be well-maintained.

- Apply measures to all diesel machinery in the LMDC area. PM 2.5 emissions are critical not only for machinery on the WTC site itself. For example, New York City will be excavating over 20 miles of streets in order to repair underground infrastructure, the MTA will be undertaking heavy construction to repair subway infrastructure, and projects like Hudson River Park will be moving forward. Diesel engines will be located in communities around the city – this is an opportunity to test

and establish the technologies that can most effectively be used on a widespread basis. To be effective, any program must look not just to the WTC site, but to the entire LMDC region.

Please also see
http://www.environmentaldefense.org/documents/560_BriefingPaper011002.pdf

The LMDC should propose a supplement to the DGEIS that includes an analysis of the consequences of reduced emissions from all of stationary and mobile sources in a revised air quality assessment so that everyone can see what the implications are for air quality. Indeed, these actions should go a long way to offset the air pollution impacts of redevelopment and site operations. This analysis should also include an estimate of the additional costs of different kinds of trucks meeting this standard with discussion of who should bear these costs. We recognize that it may not in all cases be practical for all trucks servicing the site during construction or later operation to meet this standard; however, we are confident that there is good justification for most trucks to meet this standard.

Traffic, congestion and congestion pricing. We understand that Jeffrey Zupan of the Regional Plan Association is preparing comments relating to traffic, pedestrian circulation and transit. We expect to support those comments. We add, however, that the expectation that vehicle/truck trips will increase 5% compared to pre-September 11 conditions is unacceptable. The DGEIS makes a cursory reference to roadway congestion pricing around the site and possibly lower Manhattan. A comprehensive system of congestion pricing that applies to the site and, beyond that, lower Manhattan should be given thorough consideration in a supplemental DGEIS. Roadway pricing create a powerful incentive for workers, residents, tourists and commercial shippers or haulers to find alternative ways of achieving their transportation goals, whether these alternatives are transit, barge or freight rail.

Indeed, we believe that congestion pricing will reduce exposure to asthma triggers in Lower Manhattan and in neighboring borough so Brooklyn and Queens. Smart use of pricing techniques and other traffic demand management incentives can cut congestion and the resulting air quality impacts substantially. It makes no sense to advance without full evaluation of potential benefits of using these proven methods.

Sustainable building guidelines. On the whole, we consider the sustainable building guidelines set forth in Appendix A to be a sound product. While we could always hope for even higher standards relating to, for example, building energy efficiency, the larger issue is compliance and effective implementation. We find the statement in the DGEIS that the Freedom Tower will have wind turbines that have the capacity to generate 20% of the energy needs of that building to be particularly impressive.. Indeed, as we mentioned above, this is an example of going beyond a BAT standard. We understand that the developer is looking seriously at this system in terms of engineering

feasibility and cost. We are prepared to assist in this assessment. Given the symbolic nature of the Freedom Tower, this willingness to incorporate an urban-compatible renewable energy system points the way to a different kind of freedom, freedom from such total dependence on fossil fuels to operate the energy systems of our buildings.

Thank you for considering our comments. Please don't hesitate to contact us if you need further assistance.

Respectfully submitted,

Andrew Darrell,
New York Regional Director

Janea Scott,
Staff Attorney

James T.B. Tripp,
General Counsel

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Attachment A

History of Determinations of the Carcinogenicity of Diesel Exhaust		
Agency	Year	Determination
National Institute for Occupational Safety and Health (NIOSH)	1988	Potential occupational carcinogen
International Agency for Research on Cancer (IARC)	1989	Probable human carcinogen
State of California (under provisions of Proposition 65)	1990	Known by the state to cause cancer
Health Effects Institute (HEI)	1995	Potential to cause cancer
World Health Organization International Programme on Chemical Safety (WHO-IPCS)	1996	Probable human carcinogen
California Air Resources Board (CARB)	1998	Toxic air contaminant (determination based substantially on the cancer risk to humans)
U.S. Department of Health and Human Services National Toxicology Program (U.S. DHHS/NTP)	2000	Reasonably anticipated to be human carcinogen
American Council of Government Industrial Hygienists (ACGIH) (proposed)	2001	Suspected human carcinogen
U.S. Environmental Protection Agency (EPA)	2002	Probable human carcinogen

Sources: National Institute for Occupational Safety and Health, "Carcinogenic Effects of Exposure to Diesel Exhaust," *Current Intelligence Bulletin* 50 (August 1988). Available online at http://www.cdc.gov/niosh/88116_50.html.

International Agency for Research on Cancer (IARC), *Diesel and Gasoline Engine Exhausts and Some Nitroarenes.* IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, no. 46 (Lyons: World Health Organization, 1989), pp. 41–185.

California Environmental Protection Agency, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity (Proposition 65, 1997), revised May 31, 2002.

Health Effects Institute, *Diesel Exhaust: A Critical Analysis of Emissions, Exposure and Health Effects* (Cambridge, MA: Health Effects Institute, 1995). Available online at http://www.healtheffects.org/Pubs/diesum.htm, accessed on January 20, 2002.

American Conference of Governmental Industrial Hygienists, "Documentation of the Threshold Limit Values and Biological Exposure Limits, Notice of Intended Changes," 2001.

International Programme on Chemical Safety, World Health Organization, "Diesel Fuel and Exhaust Emissions," *Environmental Health Criteria* 171 (1996).

"The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," fact sheet. Available online at http://www.arb.ca.gov/toxics/dieseltac/factsht1.pdf, accessed on January 28, 2001.

U.S. Environmental Protection Agency, Draft Health Assessment Document for Diesel Exhaust, July 2000, EPA/600/8-90/057E.

California Air Resources Board, Portable Equipment Registration Program. Available online at http://www.arb.ca.gov/perp/perp.htm.

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Comments on DGEIS for WTC Site:
Caroline Martin
Family Association of Tribeca East

This Draft EIS appears to be rushed, inaccurate, and predictive of an out come that according to NEPA should not have been decided at this stage.

Although the Draft EIS was not approved by the Board of LMDC on January 20th and made available to the public January 22nd, HUD put a notice signed January16th in the Federal Register. This is in contravention of NEPA rules, and seems rushed.

In the Catskills an EIS is being prepared, and due to public pressure the time for comment is being extended an additional two months. I formally request that the public comment period for this draft EIS be extended from the current minimum of 45 days by an additional 2 months e.g. until May 15th.

The Draft EIS says that 13,000 public comments were received through "Plans in Progress"; there were also seven community workshops. The FEIS must include proof of affirmative solicitation of these people for comment on the Draft EIS as required by NEPA, and affidavits as to what notices were put into which newspapers, and when.

Although the proposed action includes cultural + retail buildings and claims to be planning a 24/7 community, I can find no reference to traffic or pedestrians that relate to activities in these buildings. The Final EIS must recalculate all numbers for traffic and pedestrians to reflect this group.

The Final EIS should also include the Fitterman Hall and Deutche Bank demolitions. It should include a thorough study of conditions without the four additional towers when Mr. Silverstein's insurance payment is $3.55 million instead of 7. The Final EIS should study the effect of a loss of rental tenants when the LMDC grants run out in 5/05 and the tenants have seen the effect of construction on quality of life.

The Port Authority of New York and New Jersey must commit in the Final EIS to follow best practices during design and construction. They should also agree to follow the recommendations of the NYC department of buildings WTC building code now before the city council.

The Port Authority seems to be planning new towers with no roof egress. They and anyone else in charge of building on the site should include fire engineers, fire marshals and a National Institute of Technology representative in their design team.

The Final EIS should include a memorandum of understanding specifically agreeing to make the site subject to NYC building codes.

The Final EIS should include a detailed plan for air and sound monitoring around the periphery of the site during construction, with the hourly readings posted on a publicly accessible and publicly announced web site.

In Europe it has been discovered that people living closer than 600 yards – or in some cases a mile from wind turbines have had their health adversely effected by low frequency noise.

The Final EIS should address how this problem will be mitigated. In Denmark the government has responded to public demand and stopped erecting onshore turbines because of the noise hazard.

The Final EIS should explain why the Draft EIS makes the determination that there are sufficient fire and police personnel available to cope with the 62,530 plus additional people they expect. In appendix B the fire department say they have not seen the WTC plans, and the police department say that they have 24 fewer staff than on 9/11.

The most worrying thing about this rushed EIS is that there appears to be no penalty for being wrong.

I f you have made comments on the Draft EIS, you are entitled to a copy of the Final EIS under NEPA rules – no mention of it only being available electronically, or having to pay for the privilege. I would like to go on record as stating that I want a free hard copy on the day the Final EIS is made available to the public, and I want to be affirmatively informed when that date is, and where I can pick up my copy.

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS One
Liberty Plaza, 20th Floor,
New York, NY 10006

Written comments on DGEIS for WTC Site 3/11/04
Caroline Martin
Family Association of Tribeca East

The general feeling I have about the DGEIS is that it is rushed, inaccurate, and predictive of an out-come that according to NEPA should not have been decided at this stage – in fact a decision on a proposal covered by an EIS must not be made for another 30 days after the release to the public of the final EIS and their comments thereon.

Although to DGEIS was not approved by the Board of LMDC and made available to the public until 1/20 and 1/22 respectively, HUD put a notice in the Federal Register of 1/23 about the availability of the DGEIS, which was signed on 1/16, before the LMDC board had approved the document. All this is in contravention of NEPA rules, and seems rushed.

There is an EIS being prepared for a development in the Catskills. This project is also long and complicated, and due to public pressure the time for comment is being extended an additional two months. The WTC site GEIS covers a project that is not even completely designed – I formally request that the public comment period be extended from the minimum of 45 days to add an additional 2 months e.g. until May 15th. The FGEIS should explain why this extension was not granted.

An extension is also necessary, as there seems to have been a failure to 'affirmatively solicit comments from those persons or organizations potentially interested in or affected by the proposed action'. The DGEIS says that 13,000 public comments were received through "Plans in Progress"; there were also seven community workshops. Can LMDC prove they affirmatively contacted those who commented and workshop participants as to the availability of the DGEIS as required under NEPA? We would like the FEIS to include affidavits to the effect that this affirmative solicitation indeed happened, and affidavits as to what notices were put in which newspapers, and when.

In the ever changing proposed action, the New York Times today reports that the towers #2, #3, and #4 may not be built in the foreseeable future. The article reports that there will be three space holding retail structures along Church Street. It adds:

Podium structures could have another benefit, in the eyes of the Lower Manhattan Development Corporation, by providing room - in double-height chambers above the three stories of retail space - for the mechanical equipment needed to serve the vast underground areas, including the PATH station and pedestrian concourses.

The FGEIS should explain this mechanical equipment, and add any emissions to the air quality studies. It should also discuss the air quality impacts of building towers on top of these structures in an active pedestrian environment.

All air quality analysis in the FGEIS should not be regional, but reflect air quality in the immediate area of the proposed action where it will have an impact on pedestrians and residents.

There are inaccuracies in the DGEIS – some of which will be addressed by others. I can attest that the NYC Buildings Department has no record of 52 Franklin Street where LMDC allege that 30 residential units are planned for 2003. "Projects in Construction or Planned to be Completed in 2009' must be redone to assure accuracy. They should be corrected for the year 2015.

Although the proposed action includes cultural buildings, shops and a hotel/conference center and claims to be planning a 24/7 community, I can find no reference to traffic or pedestrians that may be related to these buildings. There is just mention of workers and memorial visitors. This should be corrected in the FGEIS, and all calculations for traffic and pedestrians should be adjusted to reflect these groups. The FGEIS should include an explanation as to why no weekend or nighttime traffic and pedestrian studies were done for this 24/7 community. Or, it should include such studies.

Experts suggest there are an estimated 16 kinds of vehicles that will be visiting the site. The FGEIS should include a break down of these vehicles including all trip generation data, mode split assumptions, bases for trip assignments, and passengers per trip.

Traffic calculations should be redone in the FGEIS to include private commuter busses, black cars, construction worker vehicles and the effect of street closures and security checks. They should also include trucks from the truck routes, and construction equipment travel to and from the site. The Manhattan Bridge should be included in all calculations.

The FGEIS should include the Fitterman Hall and Deutche Bank demolitions and rebuilding on those sites, and add these to the air quality, traffic and noise studies.

The FGEIS should include a thorough study of the 2009 and 2015 conditions in the event that the insurance payment to Mr. Silverstein is $3.55 million and not the $7 million he hopes for, and thus the potential that the four additional towers will not be built.

The FGEIS should include the memorial redevelopment plan. It should report on the environmental impact of the water usage, chemical usage, electrical requirements, pump noise and water source. The building of the memorial should be included in the air quality, traffic and noise studies.

The FGEIS should address the issues of on site fuel storage – where is it and how much of it there is – and details of all backup generators planned for the site, and their emissions included in the air quality studies.

The FGEIS should study the effect on the neighborhood of a huge exodus of rental tenants when the LMDC grants run out in 5/05 and the tenants in question have not only lost – in some cases a subsidy of up to 30% of their rent – but have also seen what effect the construction will have on their quality of life. This analysis should take note the related loss of customers to small business and to the NYC tax base, and also the possibility that few of the projects on line to be completed for residential units will in fact happen. It should also explore the possibility of the long construction period resulting in a down zoning of the area.

The Port Authority of New York and New Jersey must commit in the FGEIS to follow best practices during design and construction, and a commitment to sustainable guidelines. They should also agree to follow the recommendations of the NYC department of buildings WTC building code now before the city council. Memorandums of understanding between any and all combinations of the Port Authority, LMDC, Empire State

Development Corporation, New York City Fire Department and New York City agencies should be made public, and their signing be attested to in the FGEIS.

To quote someone who lost her husband on 9/11: Despite the Port Authority of New York and New Jersey's mandate to its architects and structural engineers to use acceptable engineering practices in the design and construction of the Twin Towers, the Port Authority accepted approved and indeed advocated unorthodox design features in the twin towers. These buildings were anything but accepted practice. Indeed, the twin towers combined so many unorthodox untested design features, they might justifiably be termed experimental."

This would also seem to apply to the Freedom Tower.

She continues: " No fire tests were done on the bar joist floors that were such an integral part of the twin towers stability. With no comparable floor assembly design having ever been used in the high-rise structures, and thus no relevant, comparable test listed, neither the Port Authority, the architects or the structural engineers could really know the fire resistance capacity of the bar joist floors in the twin towers".

The National Institute of Standards and Technology (NIST) which is investigating the twin towers collapse states: In 1966, the architect of record and, in 1975 the structural engineer of record stated that the fire rating of the floor system could not be determined without testing. NIST has not found any evidence indicating that a test based on ASTM E 119 had been conducted to determine the fire rating of the WTC floor system; Port Authority informed NIST that "there are no test records in our files".

The Port Authority must do better this time. For example, even an untrained person such as myself can see that there appears to be no roof egress on any of the planned towers – the roves at too slanted, In the case of the Freedom tower, there is again no access for helicopters to remove people stranded on the roof due to fires on the lower levels. The FGEIS should clearly state that appropriate fire rating tests will be done on all structures. The Port Authority and anyone else in charge of building on the site should include fire engineers, fire marshals and a NIST representative in their design team.

The FGEIS must commit the Port Authority to proper fire testing and proofing, and contain a mass evacuation plan for all of the buildings.

The FGEIS should include a memorandum of understanding specifically agreeing to make the site subject to NYC building codes.

For residents of the area, the FGEIS should include a detailed plan for air and sound monitoring around the periphery of the site, with the hourly readings posted on a publicly accessible and publicly announced web site. This work (except in the case of sound) is already being done at different location in NYC by State DEC, so the technology is available. All land-marked buildings should have vibration monitors installed in their basements and these monitors be regularly read so that historic buildings are not undermined during the rebuilding.

In Europe it has been discovered that people living closer than 600 yards – or in some cases a mile from wind turbines have had their health adversely effected by low frequency noise. The FGEIS should address how this problem with wind turbines will be mitigated. In Denmark where wind turbines were introduced as long as 30 years ago, government has responded to public demand and stopped erecting onshore turbines because of the noise hazard. The FGEIS should commit to a thorough testing protocol for the proposed wind turbines before they are installed, and explain how much electricity they are estimated to generate, with backup calculations.

The FGEIS should explain the total electrical load on the grid including the commercial and cultural buildings, the memorial, the PATH station and the hotel.

There is currently no location for the hotel on the plans. Port Authority should commit not to acquire extra land for this building – or any other - through eminent domain. Residents need to be assured there will be no land grab.

The FGEIS should clearly explain how the writers of the DGEIS came to the determination that there are sufficient fire and police personnel available to cope with the additional people that will be coming to the rebuilt WTC site. Numbers of people include and additional 5-10 million per year for the memorial, 250,000 per day for the combination of Fulton Street Transit Hub and New PATH station (up from 40,000), additional ferry riders, retail

shoppers (an estimated 129,000,000 shopping minutes are needed for the planned retail to be viable), cultural event attendees (2000 seat auditorium), 20,000 new residents, workers in 7WTC, riders on Second Avenue Subway, proposed train to the plane travelers, construction workers, and hotel (800 rooms). Currently in appendix B the fire department say they have not seen the plans, and the police department say that they have 24 fewer staff than on 9/11. Although the Port Authority will have their own police on the site, all these additional people will have to pass through the 1st precinct's jurisdiction to access the site. A real informed signoff on the project by the police and fire departments must be part of the FGEIS. A proper bed count from the only local hospital (NYU Downtown Hospital) must be included, and a sign off from that hospital as to its ability to cope with the additional people who will be coming downtown as a result of the proposed action.

The above-mentioned people will also need sidewalks. The Final Scopes promised to "inventory street widths, sidewalk widths, traffic flow direction, lane markings, parking regulations, and other items required for traffic analyses. Obtain signal timings from DOT to update the field inventory of traffic control devices in the study area". Much of this information is missing from the DGEIS.

As shown by the Port Authorities 18% undercount of riders arriving at the temporary PATH station, transit calculations appear not be an exact science. The consequences of an undercount on traffic and pedestrians can have serious consequences to quality of life, and can be dangerous if adequate sidewalk space is not available. The pedestrian and traffic figures should be recalculated for a worst-case scenario.

Other items promised in the Final Scopes, which I cannot find in the DGEIS, include:

Potential changes in transit passenger and pedestrian flows due to the two proposed street extensions.

Activity associated with the proposed Memorial, memorial-related improvements and museum and cultural facilities on the WTC Site, as well as additional activity generated by increased retail development.

The analysis will also examine the potential impacts of the project on traffic flows and levels of service in the area if the proposed extensions of

Greenwich and Fulton Streets through the Project Site are closed to vehicular traffic (except emergency and service vehicles and, possibly, buses) or if street screening for security purposes significantly affects traffic. Other potential environmental impacts from such street closures or security screening will also be examined in such tasks as air quality, noise, open space and other relevant areas.

f. Determine the volume of person trips and vehicle trips that would be generated by the amount and type of development envisioned as the reasonable worst-case under the Proposed Action. Appropriate trip generation rates, modal splits, and average vehicle occupancies will be used. Independent research will be conducted for new uses that are expected to be included in the Proposed Action, e.g. the proposed Memorial and memorial related improvements and museum and cultural facilities on the WTC Site.

g. Assign the generated vehicle trips through the traffic study area based on the specific origins and destinations of trips, and develop build condition traffic volume networks for each of the traffic analysis hours. Traffic volumes expected to be generated as a result of the new street configuration at the WTC Site will be identified.

i. Identify and evaluate traffic improvement measures that would mitigate significant impacts under the Proposed Action. These measures could include signalization modifications, parking regulation modifications, intersection channelization improvements, signage changes, street widenings, one-way streets, turn prohibitions, traffic calming measures, or other comparable mitigation measures.

It is important to remember that the Proposed Action is in addition to all the projects included in the No Action plan. Thus traffic studies, air quality information, and pedestrian numbers should include all these projects.

The most worrying thing about this rushed EIS is that there appears to be no penalty for making incorrect assumptions. We had better make sure that it is correct in all aspects. It has just been announced that a lawsuit is being filed against EPA for their inappropriate handling on the contamination from the WTC collapse, which has resulted in serious health consequences. In the event that there are serious health consequences from the rebuild, the Port Authority must specifically agree to be the responsible party.

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The FGEIS should include information on how to make comments on the FGEIS during the 30-day waiting period after the FGEIS is made available to the public. I am hereby specifically requesting in writing a free hard copy of the FGEIS.

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From: Galloway, Jeff [mailto:galloway@HughesHubbard.COM]
Sent: Monday, March 15, 2004 12:20 PM
To: WTCENVIRONMENTAL
Cc: Madelyn Wils (E-mail); Robin Forst (E-mail); Alan Gerson (E-mail); Anthony Notaro (E-mail); Richard Kennedy (E-mail); Akira, Allesandra (E-mail); Audrey Comisky (E-mail); Belfer, Linda (E-mail); Bill Blum (E-mail); Ellie Silk (E-mail); Greg White (E-mail); Jeff Galloway (E-mail); Joan Cappellano (E-mail); Jossen, Jonathan (E-mail); McDonnell, Michael (E-mail); Schreibman, Seymour (E-mail); Skolnick, Barry (E-mail); Wiese, Karlene (E-mail)
Subject: Comments of Gateway Plaza Tenants Association on DGEIS

Attn: Comments WTC Memorial and Redevelopment Plan/DGEIS

Please accept the following as the comments of the Gateway Plaza Tenants Association on the WTC Draft Generic Environmental Impact Statement.

Gateway Plaza is the largest residential complex in Battery Park City, with over 1700 residential units. It is also the Battery Park City residential complex closest to the World Trade Center site. Its "600 Building" suffered severe damage on September 11, losing most of the windows on its east face that morning, as well as suffering structural damages to its east wall. Many Gateway residents have a direct view of the WTC site from their windows; all Gateway residents will be deeply affected by the WTC site redevelopment, both during construction and afterwards.

Chapters 13A, 21 and 22, and Appendices E and J of the Draft Generic Environmental Impact Statement (DGEIS) address, among other things, the issue of traffic along West Street, and the impacts of the WTC redevelopment under scenarios that include (a) a short tunnel on West Street and (b) keeping West Street at grade. The DGEIS makes abundantly clear that the tunnel option will make life miserable for both residents and workers downtown, particularly those in Battery Park City, for periods of years. The DGEIS also makes clear that the end result of this multi-year construction purgatory will have little, if any, benefit to workers and residents downtown. According to the DGEIS, building a tunnel will still require 2 to 3 lanes of traffic in either direction at grade. In addition, the entrance and exit ramps for the tunnel lanes will decrease connectivity at points that BPC workers and residents frequently use to cross West Street
- at Albany Street and at Murray Street.

As unattractive as the tunnel option is under the DGEIS analysis, we are concerned that the negative effects of the tunnel option are understated by the DGEIS. The DGEIS appears to underestimate the amount of traffic that the WTC redevelopment will generate locally, and fails to account in any quantified manner for the differences in impact of trucks and buses on West Street as between the at-grade and tunnel options. We believe that a rigorous treatment of this issue would likely show that the tunnel option would cause even further unacceptable increases in congestion in the at-grade lanes from buses, trucks and automobiles. At a minimum, it would appear that four at-grade lanes in both directions would inherently provide more flexibility and efficiency in accommodating traffic loads than a traffic-splitting scheme such as the tunnel option, where the four-lane pattern is segregated into separate two-lane patterns. This effect is not addressed in the DGEIS.

The Executive Board of the Gateway Plaza Tenants Association opposes the tunnel option for rebuilding West Street/9A, based on the analysis contained in the DGEIS. To the extent that the tunnel option remains a potential choice for rebuilding West Street, GPTA urges the LMDC to revise the DGEIS to address the West Street options in a more rigorous and complete manner.

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Very truly yours,

Jeff Galloway, Executive Board Member, GPTA
On behalf of the Board

Testimony of
Marie Christopher on behalf of the Good Old Lower East Side
to the Lower Manhattan Development Corporation
on the Draft Generic Impact Statement

Good Afternoon. My name is Marie Christopher. I live on the Lower East Side and I witnessed the tragic events of September 11th and lived through as many of us here did the difficult days in the frozen zone and the toxic air we breathed. I call upon the LMDC to take seriously the environmental impact of the decision they make.

GOLES wishes to join the comments of the Regional Plan Association and the Civic Alliance on the Draft Generic Impact Statement. In the interests of time we will not repeat their points on the need for a review of the impact of other alternatives particularly in light of the economic realities of fulfilling the stated goal of 10 million square feet of office space and 1 million square feet of retail space.

The Lower Manhattan Development Corporation states that there will be no adverse socioeconomic impact on the community. We feel that the development of 10 million square feet of office space and 1 million square feet of retail space will have many ripple impacts on the area and on the communities of the Lower East Side and Chinatown. Gentrification of Lower Manhattan impacts the very ability of people to remain in the communities they live in. There has already been a ripple impact from the resident attraction grants that the LMDC gave out. Much of Lower Manhattan's office space is already being converted to residential space. The LMDC has not taken these conversions into account and the impact on the cost of rent.

Low income people have essentially no housing options in Lower Manhattan. Meanwhile, the need in the communities of Chinatown and the Lower East Side is dramatic. According to 2000 Census figures, almost 25% of the residents of Community Board 3 (comprising much of Chinatown and the Lower East Side) receive public assistance, SSI or Medicaid—**almost 40,000 people in that community alone**. The median income rose in nearly every part of Manhattan according to the 2000 census, except in Chinatown where the median income of Asians **dropped** to $18,629. In 19 of the 31 census districts comprising Community Board 3, more than 25% of the residents fall below the poverty line as do 30% of the people over 65 years of age. Citywide, the number of homeless people increased in record numbers for 2003 and the number of nonpayment filings in Housing Court rose sharply. In order to afford a two-bedroom apartment at the city's fair market rent, a worker must earn $19.83 per hour or work 154 hours per week at minimum wage. The truly needy are desperate for housing. Each and every community survey and forum strongly highlights the need for housing for low income people in these communities.

Responding to community needs and truly responding to socioeconomic needs, calls for the LMDC to consider that a significant portion of the planned office space be instead affordable housing and the civic amenities that are necessary to support an increased population of families.

Additionally, there is a need to consider a community benefit agreement so that when jobs are created they are created at a living wage for low-income community members. This will provide a benefit for a community, which will be adversely impacted by displacement and economic jobs

loss if they are not planned for. We plan to provide to you more information on this in our written commentary.

Environmentally, we must take a realistic look at the hazards of the site and the impact that the hauling of debris and construction materials will have on the lower Manhattan community.

Dear Mr. Kelley:

As per our conversation today, I would like you to consider the submission on St. Nicholas Church, sent to you February 4, as a comment on the DGEIS, regarding St. Nicholas Church as an off-site historic resource.

Thank you,

George Schira

----- Forwarded by George Schira/NYC/goarch on 03/03/2004 04:01 PM -----

George Schira

02/04/2004 12:18 PM

To: wkelley@renewnyc.com
cc:
bcc:
Fax to:
Subject: Historic resource submission-comments

(See attached file: HistoricResource.doc)

William Kelley,

I was unable to attend the last coordinated Section 106 meeting, on Draft Determination of Eligibility, but I have been researching and preparing the position of our Greek Orthodox Archdicoese and St. Nicholas Church, which institutions I represent and which I am happy to submit meeting your deadline of 2:00 pm today, February 4. Please call me if there is

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anything else you require.

Thanyou,

George G. Schira
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ST. NICHOLAS CHURCH: A HISTORIC RESOURCE

Historic Tragedy for All Peoples

"A humble whitewashed church once graced the shadows of the Trade Towers. Since 1916, the white altar candles of St. Nicholas Greek Orthodox Church shone brightly for all peace seekers and peacemakers. But at 9:59 am, September 11, those candles were violently extinguished. The sweet scent of incense was blown away by the acrid smell of senseless death and destruction. And the walls came tumbling down. Our hearts were crushed. But they will not be kept down."

So ran a full-page donated ad in the New York Times. St. Nicholas Church was featured in articles in the Times, the Wall Street Journal and newspapers around the world. Donations poured in, not only from Bari, Italy where the holy relics of St. Nicholas were enshrined in 1087 in their St. Nicholas Basilica, but from the State of Qatar whose Emir personally presented a donation and from the American Jewish Committee.

The President of the United States, the Governor of New York, The Mayor of New York City and a host of dignitaries honored the church and the Greek Orthodox Archdiocese.

St. Nicholas Church, was founded 88 years ago and, like so many other American churches, by immigrants. They came with a rock hard belief in God, in liberty and the chance to build great things. The church was dedicated to the beloved St. Nicholas, patron protector of all who travel.

The terrorist attack against the Twin Towers of the World Trade Center that killed an estimated 3;000 people, also destroyed tiny St. Nicholas Greek Orthodox Church located about 500 feet from Ground Zero. On September 11, 2001, St. Nicholas Church also became the victim of an unprecedented and atrocious terrorist attack. It was totally demolished, rendered into an amorphous mass under the enormous weight of the debris that fell from one of the Twin Towers of the World Trade Center.

On that fateful morning, Fr. John Romas, pastor, attempted to go to his church but was turned back by police. Wednesday, he was permitted to visit the site to view what was left of the church. "It would break your heart," he said of the devastation he witnessed. "It's one thing to see it on TV, and another thing to see it in person. St. Nicholas is buried under debris. It is the worst thing." He described steel girders and concrete from the towers burying the building.

Greek immigrants established St. Nicholas Church in 1916 and purchased the structure for $25,000. It was one of two old calendar parishes under the Archdiocese until 1993 when it switched to the Gregorian calendar. Among the church's unique characteristics are its small size and its icons, which were a gift from the last czar of Russia, Nicholas II. Fr. Romas expressed hope he would be able to salvage some of the icons.

The church also was open Wednesdays at midday, for people to light a candle and pray during their lunch breaks, to attend a paraklisis the first Wednesday of the month, or just for spiritual contemplation. The tiny church building was constructed around 1832. It originally was a residence and later housed a tavern before the founders of the parish purchased the structure. It measured 22 feet wide in front, 20 feet, 11 inches in the back, and about 56 feet long. It was 35 feet tall. On three sides it was bounded by a parking lot.

The church has been known locally for several years for its celebration of Epiphany. Parishioners would proceed to nearby Battery Park at the south tip of Manhattan, where a diver would jump into the icy water of New York Harbor to retrieve the cross.

A Sacred Monument for All Peoples

St. Nicholas Church, located at 155 Cedar Street in the Financial District of Downtown Manhattan, was for eighty-five years the place of worship of a small but dynamic Greek Orthodox community. For three consecutive generations this community experienced there the uplifting results of inspiring, Eucharistic gatherings, the resplendent joys of wedding and baptisms, the mournful occasions of funerals and memorials and the happy celebrations of feasts and festivals of a religious and cultural nature.

On September 11 the Church of St. Nicholas was destroyed but not its community. Eighty-five years of faith and vibrant parish activity could be traumatized but not eradicated by any terrorist assault. There is no doubt that the Church will be rebuilt, on the very sacred ground, sanctified not only by her own history, but also by the blood of the thousands of innocent victims of September 11.

"The Church of St. Nicholas certainly will be rebuilt facing the World Trade Center site, to serve again the community bereft of her sanctuary," said His Eminence Archbishop Demetrios, Primate of the Greek Orthodox Church in America. "The new St. Nicholas, however, will be much more than an ordinary parish church serving the needs of its parishioners," he emphasized. A committee composed of members of the Greek Orthodox Archdiocese and the St. Nicholas Parish Council, inspired by the Archbishop's vision, heeded his words:

"Due to the location, the site of a uniquely tragic event, due to the strong pan-American and international interest shown in the past nine months for the restoration of St. Nicholas, and due to the clear determination of the Greek Orthodox Archdiocese, the rebuilt Church will assume new, tremendously important functions. It will become a sacred monument, declaring and showing to the people who will visit the area the light of faith and goodness prevailing over the darkness of evil, the overcoming of hatred by the power of creative love, and the uncompromising will to establish peace and life for all people in valiant opposition to war and death."

The committee adopted the Archbishop's recommendations that:

- The new St. Nicholas will be a holy place offering serenity and restfulness to all the people who will visit it, being a heavenly embrace to those tired or alienated, and opening windows to the comforting and calming divine reality for all those suffering under the terrible pressures and anxiety of the modern world.
- The new St. Nicholas will be a place of mental and psychological support offered free to people who suffered in the aftermath of September 11, regardless of their religious affiliation and beliefs.
- The new St. Nicholas will be erected as a place which will combine services for its own spiritual community with offerings for the larger American and international communities.
- The transformation of Ground Zero into a magnificent, vibrant place, certainly presupposes the presence of a new St. Nicholas Church.
- All of Ground Zero is sacred space and functions as a symbol, recalling to memory an event like no other, revealing our humanity and allowing us to experience promise and joy even in the midst of great tragedy in hopeful celebration of the unique value of each individual human being.
- Sacred space allows us to reconstitute the world because that world has been ruptured, creating a central axis for future orientation, making possible not just a passage, but also an opening between this life and the one beyond it.
- The new St. Nicholas Church, like the Memorial itself, will be intercultural and educational, recalling the events of September 11, their historic meaning as it interrelates with the historic meaning of the church, its community and the area.
- The new St. Nicholas will, like all buildings outside the footprint area, and encompassing the remainder of the 16-acre area and beyond, whether commercial, residential, governmental or other, and transportation stations, relate to the historic significance and design of the Memorial itself, by means of similar architectural features or some designation that brings them into the orbit of memorial reverence.

Historic Remembrance for All Peoples

The holy relics of St. Nicolas, St. Katharine and St. Sava remained buried with the remains of victims of the tragedy of September 11, intertwining the sacred history of diverse peoples and cultures from many periods of human history. What artifacts that have been recovered include:

- Bell used for services
- Embroidered cloth used on Holy Altar
- Cloth used on Holy Altar
- Intertwined Beeswax Candles
- Bible- paperback
- History book of the Ecumenical Patriarchate
- Wooden Icon of the Life-giving Fountain of the Theotokos
- Paper Icon of St. Dionysios of Zakynthos

All these items and any others in possession relating to the history of the church and the community will be displayed in an educational museum that will also tell the story of St. Nicholas in relation to the World Trade Center Site.

Conclusion

Just as the WTC Site meets the requirement of National Register Criteria Consideration G, so does St. Nicholas.

Just as the WTC retains integrity of location, so does the site of St. Nicholas Church, the physical environment remaining essentially the same.

Just as the WTC Site retains integrity of feeling, so does St. Nicholas site, where services are held on special occasions, where pilgrims visit, where people remember.

Just as the WTC Site retains integrity of association, which is the direct link between an important historic event and historic property, so does St. Nicholas, buried under the debris with the remains of victims and the Towers, intertwined for all time like its recovered candles.

COMMENTS BY ROBERT KORNFELD, JR. R.A. ON BEHALF OF THE HISTORIC DISTRICTS COUNCIL, MARCH 15, 2004

World Trade Center Memorial and Redevelopment Draft Generic Environmental Impact Statement (DGEIS)

The original impetus for the design selected for the World Trade Center Redevelopment Plan is summed up in the words of New York Governor George Pataki from June 29, 2002:

> "...we will never build where the towers stood. It will always be a permanent and lasting memorial to those who we lost...Where the towers stood, where the towers stood is hallowed ground. Thousands of American heroes died there just like thousands of American heroes died in Gettysburg."

The competition entry of Daniel Libeskind from December, 2002 received support chiefly for its dedication to that pledge. It stated that:

> "We have to be able to enter this hallowed, sacred ground while creating a quiet, meditative, and spiritual space. We need to journey down, some 70 feet into Ground Zero, onto the bedrock foundation, a procession with deliberation into the deep indelible footprints of Tower One and Tower Two."

Unfortunately, from this promising start the redevelopment planning never included a meaningful investigation of historic resources on the site. The security restrictions of the emergency operation obscured public awareness of the ruins, such as the bases of the perimeter and core box columns that comprise the footprints of 1 WTC and 2 WTC. In fact, the study performed initially by LMDC did not identify any of the ruins of the WTC as historically significant and contributing to the eligibility of the site. All of the contributing features that have been recognized so far, and others that should be recognized, have been brought to LMDC's attention by the consulting parties to the Section 106 review. That should be a clear indication that LMDC did not perform its due diligence in examining the historic resources of the site. A proper assessment of historic resources should have been conducted at the start of the planning process in order to incorporate significant features in a sensitive and appropriate manner in the redevelopment plan, consistent with the Secretary of the Interior's Guidelines.

There has also not been a coordinated effort to identify and catalogue artifacts that were removed from the WTC site, and many of which should be returned. Artifacts are in the custody of the Port Authority of New York and New Jersey, the NYPD, FBI, NIST, the Smithsonian Institute, New York State Museum, New York Historical Society and other institutions and agencies. More than two years after the disaster there is still not an inventory of which items exist and who has custody of them. This should have been an integral part of the planning process.

The DGEIS requires substantial revision to allow it to catch up with developments in the Section 106 review process. For example, the DGEIS identifies the footprints as existing at grade and 30 feet below grade. It does not acknowledge that the footprints are actually a historically significant place that exists at the bedrock level, defined by the bases of the tube and core box columns of 1 WTC and 2 WTC. The voids at grade level actually define the volume that the towers once occupied, not the footprints, which still exist as physical entities at 70 feet below grade. Moreover, the DGEIS still indicates that parking for busses may be located below grade on the WTC site, as well as many other infrastructure items and commercial functions. Nothing in the plan precludes these functions from being located on the actual footprints of the towers. The DGEIS refers only to access to unspecified, "portions of the bathtub at bedrock." It defies credibility that a finding of no adverse effect could have been proposed based on this document.

In a time when the banners proclaiming "We Will Never Forget" have faded, and people want to avoid reminders of the disaster and painful memories, it is urgent that precious historic remnants and artifacts are not destroyed in the rush to recover and move on.

It would be a tragic irony if the historic ruins of the World Trade Center were destroyed in order to build a memorial to it and parking for tourist busses to visit it. The few who have visited the footprints of the towers for the purposes of commemoration and reflection will attest that it is a profound experience and one that should be made available to all.

We endorse the comments of the Coalition of 9/11 Families on the World Trade Center Memorial and Redevelopment Draft Generic Environmental Impact Statement (DGEIS), which we believe is well researched, well reasoned and authoritative.

COMMENTS BY ROBERT KORNFELD, JR. R.A. ON BEHALF OF THE HISTORIC DISTRICTS COUNCIL, MARCH 15, 2004

Proposed Finding of No Adverse Effect Under Section 106 of the National Historic Preservation Act – World Trade Center Memorial and Redevelopment Plan, dated February 9, 2004

The Proposed Finding of No Adverse Effect should be withdrawn for the following reasons:

1. The Proposed Finding is not based on an acceptable Determination of Eligibility. The Determination is deeply flawed, as reflected by our comments as well as those of many other consulting parties. The Determination lacks a factual and conceptual understanding of the site's historic features, the basis of their significance, the aspects of integrity that they possess, and their contribution to the significance of the site as a whole. A significant risk is that if portions of the current proposed action are revised or cancelled, this document would be presumably remain standing, offering the historic resources on-site almost no consideration or protection.

2. There clearly are adverse effects, even under the flawed Determination. For example, in terms of setting, the disaster created a 16-acre open space comprised of the ruins of the World Trade Center complex. Surrounding it on all sides were street walls of buildings damaged as a result of the disaster. Securing and stabilizing these buildings was one of the three basic components of the disaster response (above grade, below grade and surrounding structures). These buildings are intimately connected both the disaster and recovery. The proposed action would reduce the open space from 16 to about 4-1/2 acres, surrounded on three sides by interposed new buildings and on the fourth by a new highway. The ways that the proposed action mitigates these adverse effects should be stated and justified.

   Another adverse effect is the preservation and access to the B-6 bedrock level footprints. Based on the vague, inconsistent information available it is not clear that full access to the footprints of 1 WTC and 2 WTC is assured. If not, this must be addressed as an adverse effect. Also, covering the footprints must be addressed as an adverse effect because the emergency operation left them open as the visual focus of the site. While none of the consulting parties has expressed a desire to see them remain exposed permanently, the character of the cover and the space that it creates is a primary consideration for evaluating mitigation.

   The voids in the grade level memorial, known as "Reflecting Absence," are intended to define the volume once occupied by the towers. It would be an adverse effect if this volume is reduced and incorrectly defines the location and scale of the towers as LMDC has indicated that it will in press interviews.

3. The Proposed Finding appears self-contradictory because it makes reference to several proposed mitigation measures.

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4. If the Proposed Finding stands it would draw the Section 106 process to an abrupt end without a successful resolution of outstanding issues. In fact there is a great deal of acrimony concerning process as well as substance.

5. There are no specific plans of the proposed action. The adverse effects of the proposed action cannot be determined without additional information. For example, does LMDC plan to span the 1 WTC and 2 WTC footprints with long-span structures and create a large, dignified, ceremonial space, or will there be a grid of columns and numerous partitions, with part occupied by a PATH station and access to the footprints limited to portions?

6. The Proposed Finding and the vague plans that it is based on would allow wide latitude to modify or revise the plans without accountability for the consequences to historic resources on the site. Given the historical significance of the site to our nation's heritage it is not sufficient to accept vague assurances that could be withdrawn if new constraints are announced. There should be a Memorandum of Agreement that references specific features and dimensions.

7. The Proposed Finding reaches several unfounded conclusions based on syllogistic or invalid reasoning:

   A. The text states that, "The importance of the transcending events of September 11 and in its aftermath the heroic rescue and unprecedented recovery efforts do not depend on the presence of the actual structures in and around which they took place."

      This is comparable to saying that the historical significance of the holocaust does not depend on the presence of the structures at Auschwitz, so it would not be an adverse effect to demolish them. In fact, such historical features, intact or ruined, have an unmatched power to convey the significance of the events with which they are associated. This is particularly true of events such as the World Trade Center disaster, which is so closely associated with a particular site, yet had such wide-reaching influence. The presence of authentic historical features on the World Trade Center site is highly significant and their indiscriminate loss would be tragic and shameful.

      The redevelopment planners should treat the historic features of the site with reverence and a sense of stewardship, not with glib dismissals, grudging acceptance, or arbitrary decisions of what is significant by individuals unqualified to make the determination.

   B. The text refers to leaving, "open the space at grade level where the Twin Towers stood..." and refers to the, "...appropriateness of recognizing the footprints in this manner..." This concept is supported with a quote from one of the consulting parties: "a footprint can be something that is written on the psyche or in the soul and on the heart and not necessarily always in steel and cement and concrete." This line of reasoning is clearly intended

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to put a warm, fuzzy face on the desecration of the physical footprints at the B-6 bedrock level, a place once referred to as "hallowed ground" by New York Governor George Pataki. The consulting party quoted, a representative of the Shinnecock Nation, clarified that her quote was taken out of context and was not intended to take away from the significance of physical features, but to emphasize the transcending spirituality of the site.

At the March 12, 2004 meeting LMDC officials maintained that they have recognized that the physical footprints at bedrock level are distinctive features and that the creation of openings at ground level and thirty feet below are not a substitute for their preservation. If that is the case, the text should be completely revised to reflect that distinction. The text should indicate any adverse effects to either the physical footprints at B-6 bedrock level or to the grade level voids that define the volume that the towers once occupied.

C. Several major historic features, including the ruins of the garage beneath 6 WTC, which are slated to be demolished, are dismissed as lacking "functional integrity." This is absurd when their significance does not stem from their original function, and their viability as historic features does not rely on their performing their original function if preserved. In fact, they would not be permitted to perform their original function if preserved because they would be treated as historic ruins. Because of this arbitrary and irrelevant consideration these features are not evaluated for the several aspects of integrity that they do possess, and their demolition is not counted as an adverse effect, which it clearly would be.

D. Several major historic features, including the ruins of the garage beneath 6 WTC, which are slated to be demolished, are dismissed as lacking "structural integrity." Based on all information made available it appears that they are viable with stabilization and that this is not a valid consideration. These garage ruins have stood for 2-1/2 years since the disaster and they continue to be relied on to partially stabilize the north slurry wall, so they clearly retain a substantial degree of integrity. Some shoring and stabilization have already been performed on the garage ruins, and it was asserted that they could not weather indefinitely outdoors. No study or report has been cited to support a position that they would not be viable as ruins if protected and stabilized. It appears that the evaluation originates with unnamed parties who consider the removal of these features desirable and who have made an arbitrary judgement that they are not worth preserving. This is not a valid means of determining if they are significant or contributing, or if their demolition would be an adverse effect, which it clearly would be.

8. Much of the Proposed Finding is devoted to discussion of ways in which features are not contributing rather than issues of effect. This is material that procedurally

belongs in the Determination because it should already be established prior to assessing adverse effects. Much of this consists of tortured arguments that struggle to disqualify nearly every feature from consideration. An example of this is that, "none of these remnants are considered character-defining in relationship to the WTC as a symbol of American commerce," a statement that does not reflect the essence of what the Determination found historic about the site. It also states that most of the ruins on-site are not character-defining in relationship "to the attacks or to the rescue and recovery efforts." This is entirely absurd since the disaster and subsequent recovery efforts gave shape to what remains. What could be more character-defining than concrete with scratches and gouges from the steel of the collapsing towers, smoke stains from fires, and the serrated edges of steel members cut by the acetylene torches of iron workers from the emergency operation?

Patricia Dillon, Chair, Environment Committee
Independence Plaza Tenants Association
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New York, NY 10013

Response to the Draft Generic Environmental Impact Statement (DGEIS)
for the World Trade Center Memorial and Redevelopment Plan

Testimony by Patricia Dillon, Chairperson,
Environment Committee
Independence Plaza Tenants Association
February 18, 2004

For more than 8 months after the barbaric attack on the World Trade Center, residents of Lower Manhattan continued to be assaulted, at the hands of our own government. The air in our neighborhoods was filled with toxic fumes from diesel trucks and demolition equipment, and uncontrolled contaminated dust from the trucks carrying WTC waste to Pier 25 in the Hudson. The suspension by New York State of regulations governing the transport of toxic waste enabled the recovery and cleanup to be completed ahead of schedule and under budget, but the citizens of Lower Manhattan paid a very heavy price.

Now, we face 10-plus years of possibly even greater assaults on our air quality. The DGEIS indicates that particulate matter emitted from diesel engines will substantially exceed EPA's air quality standards. The DGEIS contains many well-intentioned statements about planned efforts to mitigate these terrible impacts, but it makes no real commitments in this regard. The language regarding such mitigation is filled with loopholes, the most frequent of which is that the use of ultra-low sulfur diesel (ULSD) fuel, and retrofitting equipment with emissions-reduction devices, are required only "when practicable."

Governor Pataki, Silverstein Properties and others have gotten much favorable press coverage by stating that ULSD and the best available emissions-reduction devices are being used in WTC reconstruction. But we have information from air quality consultants and low-sulfur fuel suppliers that the reality on the ground is somewhat different. At #7 World Trade Center site, for example, only 3 out of 7 pieces of large, permanent diesel equipment were able to be retrofitted to reduce harmful emissions. Much more than good intentions is needed if citizens are not to be subjected, for many years, to the dangerous air pollutants that will be generated by this massive reconstruction.

We understand that the DGEIS, cannot absolutely *mandate* these toxic-emissions reduction measures, since there are factors which sometimes make them not "practicable." However, the DGEIS can do much more than it currently does to ensure that contractors cannot so easily evade their responsibility to protect our air quality. It is essential that the projects and their contractors be held accountable.

Therefore, Independence Plaza Tenants request that the following requirements be added to the DGEIS in order to reduce air pollution:

- Require that contracts with (and by) the MTA, the Port Authority, Con Edison, Verizon, and all other quasi- and non-government entities, contain the same provisions regarding diesel emissions reduction as are included in current New York State contracts per Gov. Pataki's order, and in City law A-191.

- Require that all *moving* vehicles involved in Lower Manhattan reconstruction projects, including delivery trucks, also comply with diesel-emissions reduction provisions of the NYC A-191 law and the governor's order.

- Require the establishment of a Lower Manhattan Construction Command Center (LMCCC) and charge it with issuing regular, quarterly reports of non-compliance with air quality mitigation measures by each of the Lower Manhattan demolition and/or construction projects.
  - These reports should be posted on the LMDC web site and should also be sent in hard copy to Community Board 1 and to the City Council's environment committee.
  - The reports should include – for on-road vehicles as well as non-road equipment – the number of instances of non-compliance for each project, and the reasons for them.
  - In addition to non-compliance with diesel emissions requirements, the reports should include non-compliance with dust-control measures such as wetting down debris, and the reasons for same.

IPNTA Environmental Committee
40 Harrison Street, 31H
New York, New York 10013

March 12, 2004

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

Following are further comments to my testimony given at the public hearing February 18, 2004 on behalf of the Independence Plaza Tenant Association, which comments were mailed to you in February.

As I said in my prior testimony, the DGEIS makes no explicit commitments to mitigate the certain negative impacts on Lower Manhattan air quality that will result from the World Trade Center reconstruction. Independence Plaza Tenants are very concerned about the cumulative environmental impacts of the proposed action when considered with other related projects that will take place before 2015. Therefore, in addition to the request in our 2/18 testimony that contracts with and by *all government and non-government entities* contain *requirements* that ULSD fuel and best-available diesel emissions-reduction technologies be used on all moving and stationary diesel equipment used in construction and demolition, and that a Lower Manhattan Construction Command Center be charged with issuing regular reports (both electronic and hard-copy) of non-compliance with those requirements, we suggest that the following steps be explicitly outlined in the final DGEIS.

- Apply the diesel emissions-reduction measures outlined in New York City Law A-191 and in Gov. Pataki's executive order to all diesel machinery in the entire LMDC area, including the more than 20 miles of streets that are to be excavated, the MTA construction to repair subway infrastructure, and all other demolition and/or construction activity in Lower Manhattan.
- Enforce engine idling regulations, not only at construction sites but for all on-road busses and other diesel engines
- Improve equipment maintenance and inspection

Independence Plaza tenants are also very concerned about the threats to migrating birds from the glass and steel towers that will be built. Serious consideration should be given to using building materials that deter bird strikes.

Thank you for giving serious attention to these comments and suggestions regarding issues that will have heavy impacts on the lives of Independence Plaza residents for the foreseeable future.

Very truly yours,

Patricia Dillon
Chair, IPNTA Environmental Committee

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INSTITUTE FOR RATIONAL URBAN MOBILITY, INC.

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President

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February 18, 2004

Comments on Draft Generic Environmental Impact Statement (DGEIS)
World Trade Center Memorial and Redevelopment Plan

The Institute for Rational Urban Mobility, Inc. (IRUM) supports measures to reduce motor vehicle use, improve public transportation and enhance the walking environment. IRUM presented its comments at the July 23, 2003 scoping session that led to the preparation of this document. IRUM made several specific recommendations for transport improvements at the World Trade Center site, which have not been addressed in the current DGEIS. IRUM as well as a number of transit advocacy organizations made similar comments at scoping sessions for the Permanent PATH WTC Terminal and the Fulton Transit Center. Segmenting what should be a comprehensive planning process into several discrete, disconnected segments makes it difficult for public transit agencies to advance collective improvements that would actually ease travel. The resulting plans call for building two "trophy" transit terminal structures, connected by circuitous passageways that actually worsen travel for transit riders.

IRUM requests that its recommended transit improvements, summarized below, be carefully considered in the Final Generic Environmental Impact Statement (FGEIS) for the rebuilding of the WTC complex, including its PATH terminal.

1. PATH-Lex Connection

An important opportunity exists to greatly improve the region's transit system by linking the PATH line with the Lexington Avenue #6 local. Both lines were built in the early 1900's with similar dimensions and "through-running" of trains is feasible. Before the construction of the World Trade Center in 1962, several public agencies seriously considered making a track connection between these two lines, as an alternative to the plan that was selected by Port Authority of NY and NJ. Now, with the destruction of the World Trade Center, it is possible to re-consider this possibility. There are advantages to both passengers and transit agencies. For New Jersey residents, travel to Manhattan's East Side, Union Square, East Village, SoHo, Chinatown and Civic Center will be greatly eased by eliminating long walks and multiple transfers. Improving access will stimulate travel to these business centers. Manhattan residents from these districts will be able to more easily reach the rebuilt World Trade Center and also the growing job opportunities in Jersey City and Hoboken. The #6 local has capacity to accommodate these additional passengers.

2. Eliminate on-site parking

Adding 1,200 to 1,500 automobile parking spaces at the WTC site will have serious negative environmental consequences. Lower Manhattan's limited street grid is already clogged with car traffic. The FGEIS should look at the benefits and costs associated with the complete elimination of on-site parking. Many successful office building in New York City, such as the Empire State Building, the Chrysler Building and the Woolworth Building do not include any parking. In this era of concern about terrorism, on-site parking imposes a heavy financial burden for security and vehicle inspection. Existing off-site parking can accommodate the small amount of essential vehicle traffic.

3. Enhance ground level access for pedestrians and surface transit

While plans for restoring Fulton Street and Greenwich Street through the site make sense, the FGEIS should consider making these streets "auto-free". Encouraging through traffic and "drive-by" tourism is a serious mistake. Furthermore, a new surface light rail transit system -- the Liberty Loop –would facilitate short distance travel in Lower Manhattan. This would enhance tourism and help distribute travel from ferry terminals. The light rail loop, described in IRUM's earlier comments at the scoping hearing, could pass through the World Trade Center site in a pedestrianized Fulton Street and should be carefully considered in the FGEIS for the site.

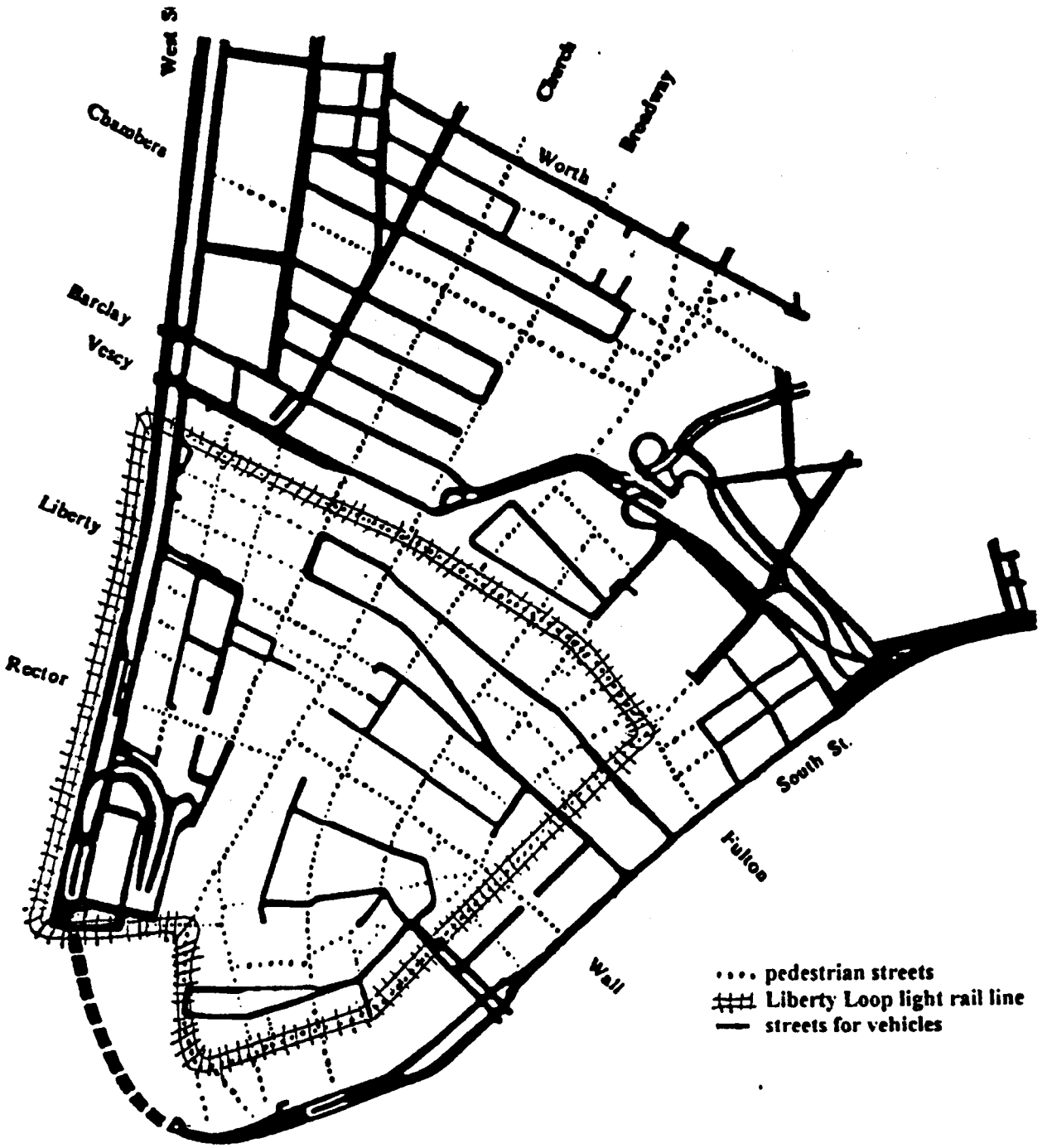
4. Incorporate planning for Regional Rail within the scope of this analysis

High speed regional rail links from the outer parts of New York City, from the airports and from the Long Island, New Jersey and Westchester/Connecticut suburbs are crucial to the economic success of the rebuilding of the World Trade Center and the long-term viability of the region as a whole. This is clearly a three-state initiative that must be advanced in parallel with the rebuilding at the site. The FGEIS should consider the impacts of a regional rail plan, similar to the "Liberty Links" plan suggested by IRUM in earlier statements.

Monumental terminals for existing rapid transit lines will do little to alter Lower Manhattan's remoteness from much of the region's work force, which lives well beyond easy access of the city's existing subway system. For the rebuilding of the World Trade Center and Lower Manhattan to be truly successful it is critical that plans for construction of new rail lines that will fundamentally change regional access to the nation's premiere financial district be included in the WTC rebuilding effort.

George Haikalis
President

www.auto-free.org
www.vision42.org



Grid of Pedestrian Streets and Liberty Loop LRT for Lower Manhattan

A grid of pedestrian streets would greatly improve the attractiveness of Lower Manhattan for residents, employees and visitors, while offering an opportunity to enhance security. A circumferential arterial, plus a series of local service loops would provide access for essential motor vehicular traffic. A 2.5 mile long Liberty Loop light rail line running east-west on Fulton Street, and north-south on Water Street and along West Street would greatly improve local circulation and distribution from the PATH and ferry terminals.

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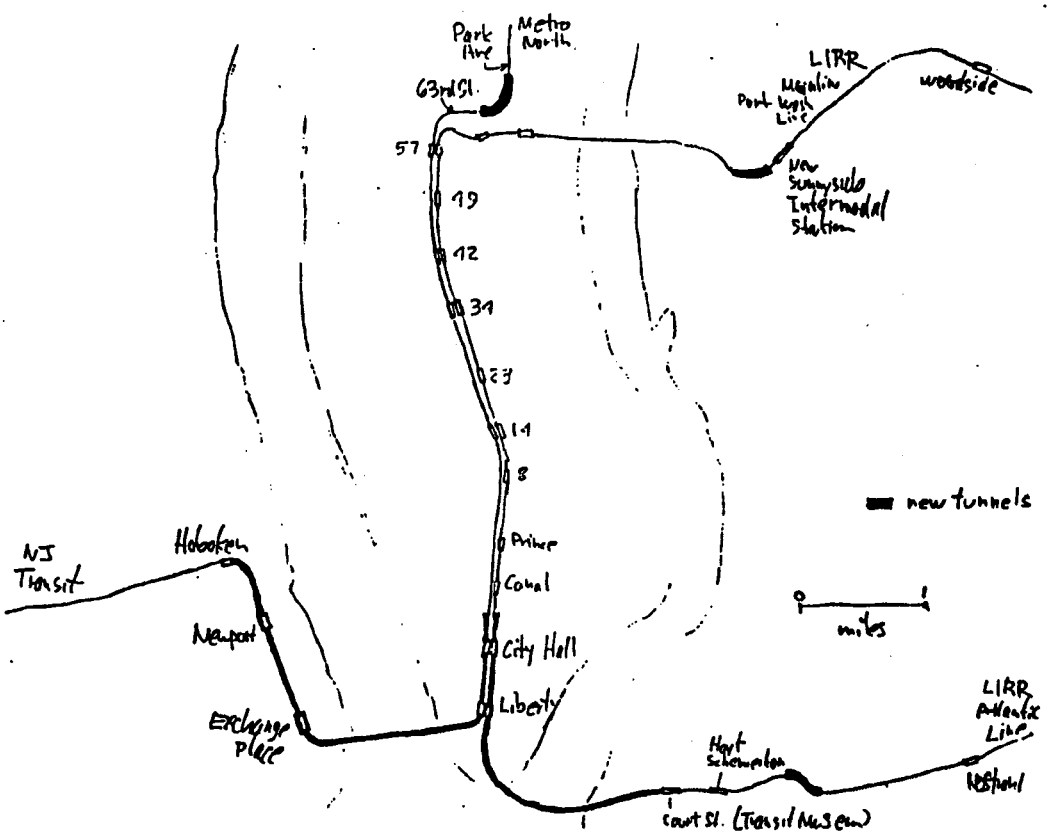


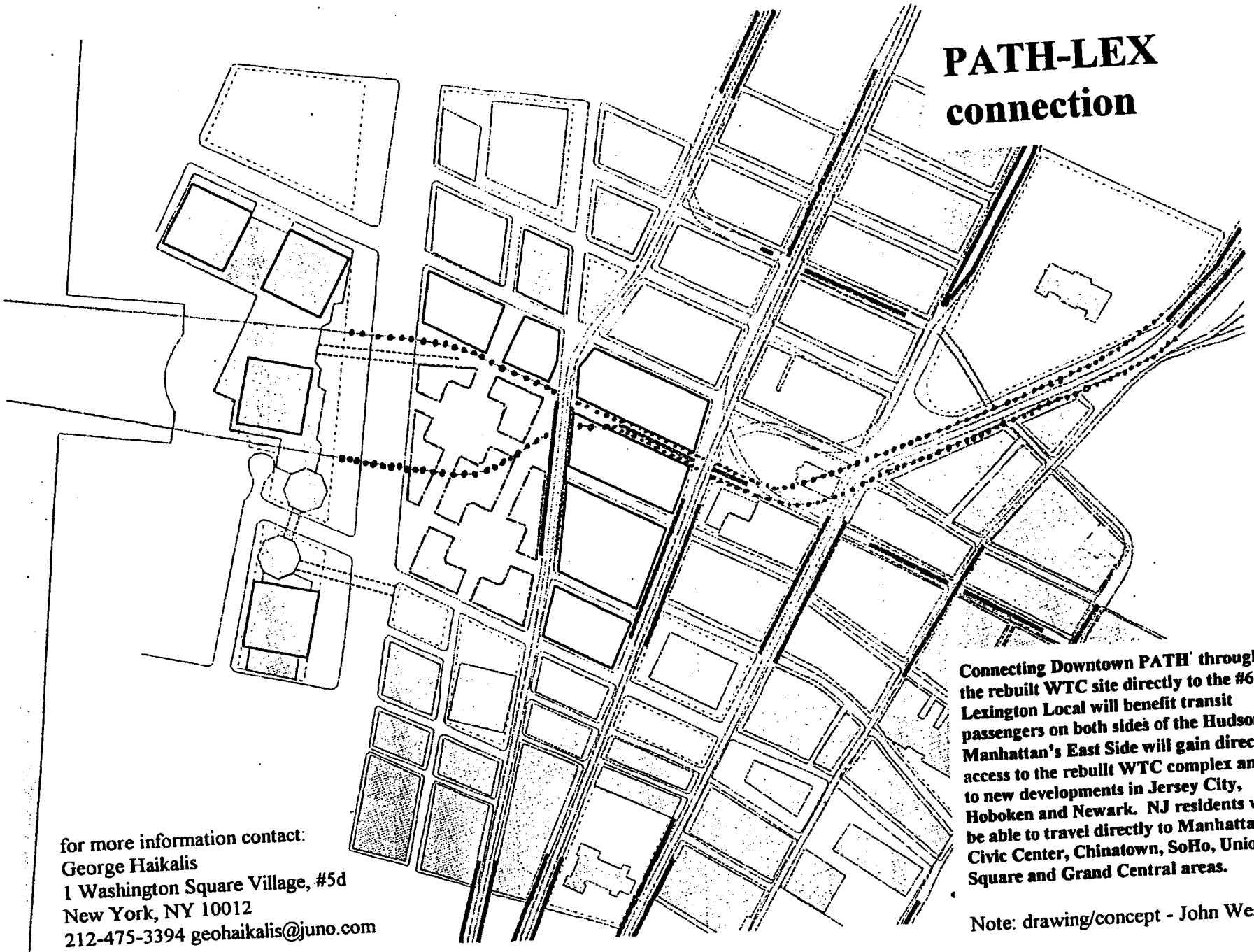
The Liberty Links -- Connecting the City and the Suburbs to Lower Manhattan

A regional rail plan focusing on Lower Manhattan is feasible and affordable. The key is to take advantage of, and link two great underutilized rail assets -- the region's commuter rail system and a four-track north-south BMT subway in the Manhattan business district. Critical links and connections are needed in Manhattan and Queens and two new tunnels under the Hudson and East Rivers must be constructed. The tunnels would connect the subway with existing railheads in Hoboken and Brooklyn. The commuter rail system would be converted to "regional rail", a modern state-of-the-art rail transit technology not unlike the Washington Metro or San Francisco's Bay Area Rapid Transit, with fast, frequent train service and fully integrated fares. Since trains would operate on rail lines with existing commuter rail service, cars would be designed to meet Federal railroad standards.

The plan would be a critical element in the restoration of the nation's Financial District in Lower Manhattan including its extensions in Downtown Brooklyn and Jersey City.

Prepared by George Haikalis -- November 9, 2001

PATH-LEX connection



Connecting Downtown PATH through the rebuilt WTC site directly to the #6 Lexington Local will benefit transit passengers on both sides of the Hudson. Manhattan's East Side will gain direct access to the rebuilt WTC complex and to new developments in Jersey City, Hoboken and Newark. NJ residents will be able to travel directly to Manhattan's Civic Center, Chinatown, SoHo, Union Square and Grand Central areas.

Note: drawing/concept - John West

for more information contact:
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Labor Community Advocacy Network to Rebuild New York

March 12, 2004

LCAN Endorsers

Asian American Federation
Asian Americans for Equality
Asian American Legal Defense and Education Fund
Brennan Center for Justice at NYU Law School
City Project
Communications Workers of America District 1
Communications Workers of America Local 1180
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Harlem Tenants Council
Henry Street Settlement
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New York City Arts Coalition
New York City Central Labor Council (AFL-CIO)
New York City Employment and Training Coalition
New York City Environmental Justice Alliance
New York Foundation for the Arts
New York Immigration Coalition
New York Industrial Retention Network
New York Jobs with Justice
New York Lawyers for the Public Interest
New York Unemployment Project
NOW Legal Defense and Education Fund
Phoenix Group
Planning Center of the Municipal Arts Society
Planners Network
Pratt Institute Center for Community and Environmental Development (PICCED)
Presbytery of New York City
Puerto Rican Legal Defense and Education Fund
Rebuild Coalition with a Spotlight on the Poor
SEIU Local 32BJ
Sikh Mediawatch and Resource Taskforce
UNITE Local 23-25
Women's Housing & Economic Development Corporation (WHEDCO)
Working Families Party

Response from The Labor Community Advocacy Network and Rebuild With a Spotlight on the Poor Coalition to the LMDC Draft Generic Environmental Impact Statement (DGEIS) WTC Memorial and Redevelopment Plan

The purpose of the Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center WTC site is to perform a thorough analysis of alternatives for the site's redevelopment. The Proposed Action for the redevelopment of the WTC site should not focus on just its relationship with past or current conditions, but should improve equity and enhance sustainable development. This document reflects comments created by **The Labor Community Advocacy Network to Rebuild New York (LCAN)** and the **Rebuild with a Spotlight on the Poor Coalition** to the issues we find most pressing in the DGEIS. The signers to this document feel that the DGEIS does not do an adequate job of evaluating several key elements of the Proposed Action and leaves other options unstudied.

TRANSPORTATION

1) **Local bus depots:** We believe the Proposed Action should encourage tourists to use public transit, which may lead to an increase in MTA buses. The DGEIS should consider local bus depots to house the estimated increase in local and express MTA buses servicing the WTC area. However, additional buses that service the downtown area should not increase the burden on Uptown communities. Currently, 6 of the 7 bus depots are located in Upper Manhattan in majority low-income people of color communities. It is more efficient and equitable to house buses closest to the routes that they serve. We suggest the charter bus parking lot under Lot 26 be used as a MTA bus depot at night or that another suitable nearby site be evaluated for use as a bus depot.

2) **Possible burdens of tourist buses on nearby communities:** The DGEIS fails to evaluate routes for buses to get tourists to and from the WTC site. Tourist buses should be prohibited from traveling on certain local streets in certain areas of Lower Manhattan and Chinatown. There should be a route used that is both most efficient and least intrusive to nearby communities and the DGEIS should study a suitable route. In addition, a campaign should be put in place that encourages tourists to use public transit (subway and buses) to get to Lower Manhattan and the WTC site.

3) **Delivery of Construction Materials:** It is unlikely that no adverse impacts would exist from the delivery of construction materials to the WTC site, as the DGEIS claims. There will be an increase in truck deliveries to the site that have a good likelihood of adversely impacting local and other NYC neighborhoods, if most materials originate from north and west of the Hudson. If trucks continue to be banned from nearby tunnels, the only route to reach the site would be over the GW Bridge and down to the site. Environmental justice communities in Northern Manhattan are already choked with diesel exhaust and safety hazards from the passing of trucks over the bridge, which would only increase with WTC site construction.

   We suggest that the DGEIS consider alternatives such as the use of barges to bring in materials by water. An emergency barge pier on the East River next to the Heliport was set up to remove materials from the site after September 11th. There is a pier owned by the Port Authority at this place that could be converted to receive construction materials. Trucks would then transport the materials to the site a short distance away. Mitigation measures can be taken to minimize any disruption to local residential properties. Another alternative to evaluate in the DGEIS is the use of rail for the delivery of construction materials.

4) **Measures to reduce vehicle traffic:** The DGEIS states that many intersections are likely to be at unacceptable service even with "transportation systems management" mitigations. Therefore, the DGEIS should explore in more depth mitigation measures that could be effective at reducing vehicle traffic. These measures could include congestion pricing, parking restrictions and street management plans that favor pedestrians with selective elimination or restriction of vehicle flow.

5) **Subway problems:** The DGEIS reports that some subway "elements" would be at poor levels of service for pedestrians. These elements should be clearly defined in the document and mitigation measures should be discussed along with the discussions of the other transit projects (PATH Station and Fulton Transit Center, among others).

6) **Reducing sources of air pollution:** The DGEIS contains many well-intentioned statements about planned efforts to mitigate air quality impacts, but it makes no real commitments in this regard. The language regarding such mitigation is filled with loopholes, the most frequent of which is that the use of ultra-low sulfur diesel (ULSD) fuel, and retrofitting equipment with emissions-reduction devices, are required only "when practicable." We understand that the DGEIS cannot absolutely *mandate* these toxic-emissions measures, since there are factors, which sometimes make them not "practicable." However, the DGEIS can do much more than it currently does to ensure that contractors cannot so easily evade their responsibility to protect our air quality.

   Local law 191A requires city construction contracts to call for ULSD and best available pollution control technology on nonroad diesel engines above 50 hp. We suggest that

contracts with the MTA, Port Authority, Con Edison, Verizon, and other quasi- and non-governmental entities, contain the same provisions regarding diesel emissions reduction as are included in current New York State contracts per Gov. Pataki's order, and in City law 191A. We also urge extending local law 191A to highway vehicles that are performing construction tasks at the site.

ENVIRONMENTAL JUSTICE ANALYSIS

EJ analysis too narrow: The DGEIS Environmental Justice analysis takes into account only the primary site area and a portion of Chinatown, because by defining study areas narrowly, adverse impacts are placed out of consideration. The possibility for an adequate quantitative and qualitative evaluation of environmental justice impacts is undercut from the beginning by the definition of study areas, which exclude the locations where many of these impacts are likely to occur. However, when considering the impact of the WTC site on hotels and tourism the secondary study area is suddenly all of Manhattan.

In order to be an accurate environmental justice analysis the document should take into account other environmental justice neighborhoods within NYC that may be adversely impacted from the development going on at the site. There should be a focus on making all jobs at least living wage and to recruit local residents to fill new positions.

ENERGY AND INFRASTRUCTURE

1) **Wind Turbines**: The inclusion of wind turbines to generate approximately 20% of the power for the Freedom Tower is a great step forward. We look forward to monitoring the progress of this system to insure that this goal is realized.

2) **Additional infrastructure and energy for WTC site**: Although the estimates in the DGEIS point to an insignificant increase in energy needs, solid waste and sewage treatment from the pre- September 11th scenario, there will be an increase from the present condition. The DGEIS states that permitting around additional infrastructure needs will be done by the relevant agencies. Environmental justice communities have historically and presently shouldered the transportation of waste, sewage treatment and power generation. Therefore, the DGEIS should evaluate a plan that would reduce solid waste, sewage generation and power use that would fall on environmental justice communities. The document should evaluate on site energy generation, water conservation and reduction of solid waste through recycling.

COMMERCIAL USE

Retail space: The Proposed Action will add up to one million square feet of retail space to the Project site by 2009, with a significant portion of it located underground. While the addition of retail space would attract visitors that have come to the project site it does not do much to animate the area if the majority of retail is located below street level. The Proposed Acton should place the majority of retail at street level. While it is appropriate to locate convenience retail targeted to commuters in underground passageways, destination retail establishments should be located at street level. The underground to aboveground retail ratio should be corrected to favor street level retail, reducing the total program for retail if necessary.

OTHER

Discussion of CDBG Funds: The DGEIS is flawed in that it does not discuss how all the 9/11 Community Development Block Grant Money which was or will be approved by Housing and Urban Development will be disbursed. The omission is in violation of the National Environmental Policy Act and the State Environmental Quality Review Act. For instance, the DGEIS does not discuss the $70 million dollars allocated for the Hudson River Park, which many environmental and environmental justice groups are in opposition to.

Sincerely,

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Date: March 15, 2004

To: LMDC Attn: Comments WTC Memorial and Redevelopment Plan/ DGEIS

Fax Number: 212-962-2431

From: Labor Community Advocacy Network to Rebuild NY

Re: # of pages, including cover sheet: 5

These same comments are being sent via regular mail.

LCAN

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March 14, 2004

Attn: Kevin Rampe, President
Attn: William Kelly, Project Manager/Environmental Review
Attn: Comments WTC Memorial & Redevelopment Plan/DGEIS
Lower Manhattan Development Corporation
1 Liberty Plaza, 20th Floor
New York, NY 10006

Attn: Madelyn Wils, Chairperson
Community Board #1
49-51 Chambers Street, Room 715
New York, NY 10007-1209

Re: In its commentary regarding the Draft Generic Environmental Impact Statement (DGEIS), the League for the Hard of Hearing proposes that ambient-level "Smart Alarm" back-up alarms should be required on all construction vehicles as a simple, cost-effective way to significantly mitigate the ten years of noise projected at the World Trade Center/9/11 Memorial Site, complying with OSHA regulations, preventing hearing loss and stress problems by employees, and permitting residents to get sleep, employees to focus on work, allowing schoolchildren to study, and tourists to enjoy their visit.

Dear Mr. Rampe, Mr. Kelly and Ms. Wils:

The League for the Hard of Hearing, responding to the Draft Generic Environmental Impact Statement (DGEIS), is very concerned that the ten years of construction projected to begin shortly at the World Trade Center/9/11 Memorial site would result in ten years of significantly increased noise levels in Lower Manhattan, in a City where noise is already the #1 complaint received by Mayor Bloomberg's 311 City Hotline. Dr. Arline Bronzaft, a noise consultant to the League for the Hard of Hearing who has participated in the rewriting of the City's Noise Ordinance for Mayor Bloomberg, has been working with Mr. John Bergan, urban planner, on the impact of the noise of back-up alarms on cities and suburban areas nationwide.

The League, whose offices and well-known Noise Center is located in Lower Manhattan, is concerned that the City, other agencies, and construction companies could become inundated with World Trade Center site noise complaints from residents over the ten years; already, the "New York Times" has published several articles highlighting *noise* as the greatest negative environmental effect; in the article "Redevelopment at Ground Zero to Mean Noise and Traffic" (Jan. 21, 2004 issue, pp. B-1, B-6), the "Times" reporter

David Dunlap states: ***"Snarled traffic, long shadows and noise - a decade's worth of noise - will be the inevitable byproducts of the redevelopment of the World Trade Center site, according to.....a draft environmental impact statement that was approved unanimously by the (Lower Manhattan Development Corp.) board.....Further, the statement conceded that the neighborhood would be very noisy for an entire decade, during the almost simultaneous construction of the office towers, the trade center memorial, cultural and retail buildings, the permanent PATH station and the Fulton Street Transit Center - while Route 9A-West Street is under reconstruction."***

Another recent "New York Times" article (Feb. 19, 2004 issue, p. B-4), included neighborhood groups such as the Family Association of TriBeCa and 9/11 Environmental Action reflecting concerns over noise and other negative environmental effects. Andrew Winters, the Lower Manhattan Development Corporation (LMDC) Director of Planning, Design & Development, stated that they were "working on" how to enforce environmental and noise guidelines "right now." This is an opportunity to plan the construction to be as quiet as possible, given the state of back-up warning device technology. There does not appear to be any scientific evidence that extremely loud back-up alarms save lives, a prime concern of contractors that utilize construction equipment that feature back-up alarms.

The League proposes that loud noise not be an "inevitable" byproduct of a construction site, and urges the agencies and construction companies involved to utilize ambient-noise-level "Smart Alarm" back-up alarms as the easiest, most cost-effective way to significantly reduce the noise levels for those living, working, attending school, or tourists visiting the WTC site and the neighborhood within a half-mile from that site (pls. refer to the following website as an example of a manufacturer of ambient-noise-level back-up alarms: "www.eccolink.com"). Ambient noise level back-up alarms comply with OSHA (Occupational Safety and Health Administration of the U.S. Department of Labor) workplace regulations, as the sounds emitted are about 5 db louder than the surrounding noise levels, but when the construction site is quieter, the alarm sound level is automatically reduced; alternatively, when the noise level increases, so does the volume of these reverse alarms. The types of sounds permitted are less intrusive on adjacent neighborhoods, and these "Smart Alarms" have been used, at a cost of about $100.00 each, for years with great success on City of Seattle garbage trucks, and in other municipalities.

The League, like construction contractors, wants to save lives and prevent injuries from backover accidents, but proposes a method that accomplishes that objective without causing concomitant medical problems to employees, including hearing loss and tinnitus caused by exposure to loud noise, while reducing noise levels in the neighborhoods surrounding construction sites. The League recently joined with the "Kids and Cars" non-profit group, the Deafness Research Foundation, the Noise Pollution Clearinghouse and other entities in proposing that Congress study various backover technologies, including rear-view cameras, Doppler ultrasound, and back-up alarms in a one-year study to be undertaken by the National Highway Transportation Safety Administration (NHTSA).

Quieter, available "off-the shelf" technologies could result in less noise complaints to government agencies and construction companies, saving them time in answering complaints; currently, municipalities such as New York are powerless to respond to back-up alarms, which are poorly regulated and not really controlled by any Federal or State entity. Indeed, most back-up alarms are designed so that they cannot be turned off, making it difficult for construction companies to respond to noise complaints. The result of "noise all the time, all day long, all over the City" could be changed, beginning with the World Trade Center site.

As recently as the mid-1990's, back-up alarms were rarely heard anywhere in the United States, but, beginning with OSHA regulations that were enacted in the 1970's (which OSHA has admitted would not pass a cost-benefit study if proposed now), the back-up alarms have been used as a solution to preventing backover injuries, when no scientific evidence has been published indicating that they work. The result has been that one now hears the noise from back-up alarms all over New York City, even in the center of Central Park, as OSHA did not study neighborhood impacts in their original regulations, and did not include any decibel limits, nor restrictions on the type of sounds to be emitted. OSHA's own regulations on decibel limits and the health hazards of noise conflict with their regulations on back-up alarms, which allow alarms of unlimited loudness levels to be used at all workplaces. One of the main reasons why back-up alarms are now heard in almost every neighborhood is due to these original regulations, which specified no decibel limits.

Dr. Bronzaft and other noise researchers have noted that OSHA standards for protection of workers has been set too high and, even within these standards, employees too often fail to wear hearing protection as required (Bronzaft, Arline L., Ph.D., "Noise Pollution: A Hazard to Physical and Mental Well-Being", published in "Handbook of Environmental Psychology", by authors R. B. Bechtel and A. Churchman, by John Wiley & Sons, 2002).

The League's proposal to use available quieter back-up alarm technologies to significantly reduce the noise level on-site would comply with OSHA regulations 29 CFR 1926.601 and 1926.602 regarding reverse alarms, or "back-up alarms". 1926.601 (b)(4)(i)& (ii) states that "*The vehicle has a **reverse alarm** audible above the surrounding noise level OR: the vehicle is backed up only when an observer signals that it is safe to do so*". 1926.602(a)(9)(i) states that "*All.....machines.....shall be equipped with a horn, distinguishable from the surrounding noise level, which shall be operated as needed.....*" (pls. refer to attached OSHA regulations).

OSHA regulations state only that the alarms need be audible slightly "*above the surrounding (ambient) noise level*" yet, with no maximum limits, these alarms have become so loud that they may violate OSHA's own standards for protecting the hearing health of a company's employees, as per 1910.95(c)(1) "***Occupational noise exposure***", which states: "*The employer shall administer a continuing, effective hearing conservation program.....whenever employee noise exposures equal or exceed an 9-hour*

time-weighted average sound level...of 85 decibels....." (pls. see attached OSHA regulations).

Construction sites have always resulted in loud noises from the heavy equipment bothering neighbors who live or work directly adjacent to the site. ***However, over the past 10 years (the time period when back-up alarms have been increasingly used instead of a person signaling at a site), these work areas have become much louder, not due to the noise of the construction equipment, but due to the noise of the back-up alarms, which can be heard a half-mile away. Thus, construction sites that might have bothered 50 neighbors with the noise now cause a geographic spread of noise that affects perhaps 10,000 people within this half-mile radius, an unacceptable by-product of the use of back-up alarms with no volume limits.*** In a City with hundreds of construction sites, one hears the noise from these reverse alarms all day long, in almost every neighborhood.

Unlike the regular mechanical sounds emanating from the engines of the construction equipment, back-up alarms emit electronic sounds of the type that can not be masked, as the sounds readily penetrate walls of buildings, even blocks away from the construction sites, causing sleep problems for residents, stress, and lack of focus for employees and schoolchildren. The tourism industry is important to the city's economy, and hearing constant back-up alarm sounds (which originate outside, often from construction vehicles) inside hotel rooms, or outside at sidewalk cafes does not calm the nerves of tourists.

Finally, I would like to conclude this letter by inviting representatives of the affected agencies and companies to meet with me and my staff regarding our proposed solution of using ambient-noise-level Smart Alarms to significantly reduce the noise levels at the World Trade Center site over the next decade. The League is also interested in the hearing conservation program that would be implemented to preserve the hearing health of employees on the site in the future. Hopefully, a quieter construction site will result in some calm and repose at such an important and now, historic, place in our nation. Thank you for your consideration of these comments..

Sincerely,

Joseph F. Brown

Joseph F. Brown
Executive Director

Attachments: Occupational Safety and Health Administration (OSHA), U.S. Dept. of Labor, Occupational Noise Exposure Regulations, and reverse alarm regulations, from 6/24/02 fax; "New York Times", article by reporter David Dunlap, "Redevelopment at Ground Zero to Mean Noise and Traffic", Jan. 21, 2004, pp. B-1, B-6; "New York Times", article by reporter Anthony DePalma, "Environmental Fears at Ground Zero Hearing", Feb. 19, 2004, p. B-4; 2004 "Kids and Cars" Feb. 10, 2004 press release; Bronzaft, A.L., Hearing Rehabilitation Quarterly, Vol. 22, No. 1, 1997, "Beware: Noise is Hazardous to Our Children's Development- Noise Impinges on the Child's Language, Cognitive and Learning Abilities"; League for the Hard of Hearing, Feb. 2, 2004 letter by Executive Director Joe Brown to Senate Commerce Committee re NHTSA study and other back-over injury bills in Congress.

0 6-24-13 by OSHA -Bergan

U.S. Department of Labor
Occupational Safety and Health Administration
Protecting the Safety and Health of America's Workers

[Text Only]

Regulations (Standards - 29 CFR) Occupational noise exposure. - 1910.95

Regulations (Standards - 29 CFR) - Table of Contents

- **Part Number:** 1910
- **Part Title:** Occupational Safety and Health Standards
- **Subpart:** G
- **Subpart Title:** Occupational Health and Environment Control
- **Standard Number:** 1910.95
- **Title:** Occupational noise exposure.
- **Appendix:** A, B, C, D, E, F, G, H, I

1910.95(a)

Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows:

FIGURE G-9 - Equivalent A-Weighted Sound Level
(For Figure G-9, Click Here)

Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table 1.G-16.

1910.95(b)

1910.95(b)(1)

When employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

1910.95(b)(2)

If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

2

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES (1)

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Footnote(1) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: C(1)/T(1) + C(2)/T(2) C(n)/T(n) exceeds unity, then, the mixed exposure should be considered to exceed the limit value. Cn indicates the total time of exposure at a specified noise level, and Tn indicates the total time of exposure permitted at that level. Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

..1910.95(c)

1910.95(c)

"Hearing conservation program."

1910.95(c)(1)

The employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent. For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.

1910.95(c)(2)

For purposes of paragraphs (c) through (n) of this section, an 8-hour time-weighted average of 85 decibels or a dose of fifty percent shall also be referred to as the action level.

1910.95(d)

"Monitoring."

1910.95(d)(1)

When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall develop and implement a monitoring program.

3

1910.95(d)(1)(i)

The sampling strategy shall be designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.

1910.95(d)(1)(ii)

Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the employer shall use representative personal sampling to comply with the monitoring requirements of this paragraph unless the employer can show that area sampling produces equivalent results.

..1910.95(d)(2)

1910.95(d)(2)

1910.95(d)(2)(i)

All continuous, intermittent and impulsive sound levels from 80 decibels to 130 decibels shall be integrated into the noise measurements.

1910.95(d)(2)(ii)

Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.

1910.95(d)(3)

Monitoring shall be repeated whenever a change in production, process, equipment or controls increases noise exposures to the extent that:

1910.95(d)(3)(i)

Additional employees may be exposed at or above the action level; or

1910.95(d)(3)(ii)

The attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet the requirements of paragraph (j) of this section.

1910.95(e)

"Employee notification." The employer shall notify each employee exposed at or above an 8-hour time-weighted average of 85 decibels of the results of the monitoring.

1910.95(f)

"Observation of monitoring." The employer shall provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to this section.

..1910.95(g)

r6-14m

by PH10, OSHA

4

prev

To find standards on OSHA public page
1) Bottom of page: Regulation & Compliance
2) Standards
3) Type in the Standard # (1910.601) to get results

1926.601(b)(2)(ii)
All vehicles, or combination of vehicles, shall have brake lights in operable condition regardless of light conditions.

1926.601(b)(3)
All vehicles shall be equipped with an adequate audible warning device at the operator's station and in an operable condition.

..1926.601(b)(4)

1926.601(b)(4)
No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:

1926.601(b)(4)(i)
The vehicle has a reverse signal alarm audible above the surrounding noise level or:

1926.601(b)(4)(ii)
The vehicle is backed up only when an observer signals that it is safe to do so.

..1926.602(a)(9)

1926.602(a)(9)
Audible alarms.

1926.602(a)(9)(i)
All bidirectional machines, such as rollers, compacters, front-end loaders, bulldozers, and similar equipment, shall be equipped with a horn, distinguishable from the surrounding noise level, which shall be operated as needed when the machine is moving in either direction. The horn shall be maintained in an operative condition.

1926.602(a)(9)(ii)
No employer shall permit earthmoving or compacting equipment which has an

Metro Section N B1

The New York Times

WEDNESDAY, JANUARY 21, 2004

REGION

Redevelopment At Ground Zero To Mean Noise And Traffic

By DAVID W. DUNLAP

Snarled traffic, long shadows and noise — a decade's worth of noise — will be the inevitable byproducts of the redevelopment of the World Trade Center site, according to a 2,000-page study approved yesterday by the Lower Manhattan Development Corporation.

The data came in a draft environmental impact statement that was approved unanimously by the corporation board. Part of its purpose is to identify potential problems and recommend ways to avoid or lessen them.

But it could find no way to fully mitigate the worsening traffic expected at 18 key intersections and crosswalks. Nor could it envision dispelling the shadows that would be cast by the Freedom Tower and four other skyscrapers on Washington Market Park in TriBeCa and other open spaces nearby.

Further, the statement conceded that the neighborhood would be very noisy for an entire decade, during the almost simultaneous construction of the office towers, the trade center memorial, cultural and retail buildings, the permanent PATH station and the Fulton Street Transit Center — while Route 9A-West Street is under reconstruction.

As for air quality, the statement acknowledged that "there is a great deal of uncertainty regarding the long-term health impacts" of Sept. 11, 2001. Because "significant adverse impacts have been predicted in the vicinity," special attention will be given to air quality, the corporation said. It cited its policy of significantly reducing diesel emissions from construction equipment, which is identified as a major source of new pollutants.

It also outlined measures like worker training, protective and monitoring equipment, physical isolation and treatment systems to deal with materials like polycyclic aromatic hydrocarbons, metals, asbestos and dust at the site. "Because hazardous materials would be abated, managed or remediated during construction," the statement said, "no significant adverse impacts are expected."

Ultimately — and not surprisingly — the impact statement concluded that the project would have far more benefits than drawbacks. The goal, it said, was "to revitalize Lower Manhattan as a center of commercial, residential and cultural activity," with "a memorial at its heart to honor and remember the victims of the attacks."

The document, required by state and federal agencies financing the project, compares the effects of the proposed construction with existing conditions, alternate development approaches and conditions that might have existed had the attack not occurred. It sets two milestones: 2009, when the first phase is finished, and 2015, for total completion.

Continued on Page B6

Redeveloping Trade Center To Mean Noise and Traffic

Continued From Page B1

Conditions studied in the document often represent the maximum that might be expected, said Irene Chang, the vice president for legal affairs and counsel at the development corporation. And because revitalization is a goal, certain increases — say, in pedestrian traffic — are not unwelcome.

The draft will be available by the end of the week at three New York Public Library branches downtown, at the Humanities and Social Sciences Library on Fifth Avenue and 42nd Street and at the offices of Community Boards 1, 2 and 3 in Lower Manhattan. It will also be posted on the corporation's Web site, www.renewnyc.com.

Two public hearings on the document are scheduled for Feb. 18 at Pace University, and public comments will be accepted until March 15.

After revisions are made, the document will be voted on again by the board, probably in April. It is sure to be refined in the months ahead for the detailed information it provides. And it is certain to be criticized for impacts that it does not consider.

Parallel reviews now under way include a study required by the National Historic Preservation Act to determine whether the World Trade Center site is eligible for listing on the state and federal registers of historic places. That determination "appears likely," Ms. Chang told the board yesterday.

Depending on the outcome, it could affect the design of the memorial and of the permanent PATH terminal, which share the site where the twin towers stood.

At the bottom of the 70-foot-deep foundations are many steel column footings defining the full outline of the north tower and much of the south tower.

Far older historical artifacts may be found, the impact statement noted, on what were once waterfront lots. Remnants might include parts of wharves or timber cribbing, as well as privies, cisterns, wells and cesspools from before the 1850's.

At the end of 2009, by far the largest use on the site in square footage will be the commercial office space controlled by Larry A. Silverstein: 2.6 million square feet in the 70-story Freedom Tower, which will also have a 400-person viewing deck, a 600-seat cafe, a 400-seat restaurant and 41,500 square feet of retail space on three levels. The 65-story second tower, the 62-story third tower and the 58-story fourth tower will not yet have risen, but their retail bases will be in place, on three levels, with a total of 310,000 square feet among them. An underground retail area will bring the total to 1 million square feet.

The memorial will be 4.2 acres, or 182,670 square feet, and is expected at first to draw up to 9 million visitors, which will decline to 5.5 million by 2015. There will also be an underground memorial center, other cultural space and a performing arts center.

Revitalization benefits outweigh concerns, a study says.

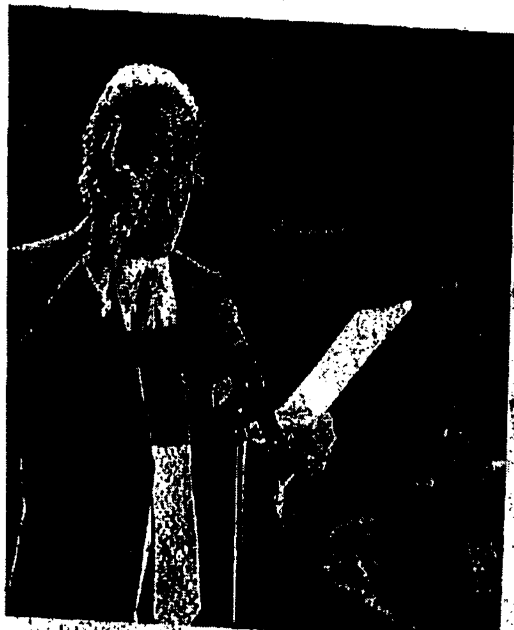
Since the impact statement was compiled, a winning design, "Reflecting Absence" by Michael Arad and Peter Walker, was chosen for the memorial. "We will have to do some adjusting of analyses as the design continues," Ms. Chang said.

Open space completed by 2009 will total 211,350 square feet, or 4.9 acres, the largest being the 1.3-acre Wedge of Light along Fulton Street and the 1.3-acre Liberty Park South on the south side of Liberty Street. There will also be an 18,965-square-foot galleria along the route of Cortlandt Street.

There will be room in the underground roadway network for about 80 trucks to service the buildings above. An underground garage for 100 buses will be built nearby in Battery Park City or on the Deutsche Bank site south of Liberty Street.

THE NEW YORK TIMES METRO THURSDAY, FEBRUARY 19, 2004

REGION



first artificial heart, criticized the winning design for the victims' memorial at a hearing yesterday. Dr. Jarvik had submitted a competing design.

Environmental Fears at Ground Zero Hearing

By ANTHONY DePALMA

The controversy that has surrounded nearly every aspect of the rebuilding of the World Trade Center site spilled over to the project's impact on the environment yesterday as New Yorkers had their first chance to express concerns publicly about traffic, air pollution and the availability of public space.

More than 100 people showed up at Pace University's Michael Schimmel Center for the Arts, a few blocks from the redevelopment area, to pick through details of the 2,000-page draft environmental impact statement for the redevelopment.

While electricians, small-business owners and other workers encouraged the Lower Manhattan Development Corporation to begin work on the project right away, many residents of Lower Manhattan wanted the process delayed until all aspects of the decadelong construction project are studied more thoroughly.

Caroline Martin, who represented the Family Association of TriBeCa East, said the impact statement did not sufficiently address such important issues as air monitoring.

"The final environmental impact statement should include a detailed plan for air and sound monitoring around the periphery of the site during construction, with the hourly readings posted," Ms. Martin said. She also asked for more time to study the 2,000-page document, which was made public on Jan. 22.

The current deadline for comment is March 15. Ms. Martin asked for an extension to May [illegible].

But [illegible], an electrician from [illegible] Falls, N.Y., said there had already been too many delays.

"The time has come to cut through the red tape and start rebuilding the site," said Mr. Llanos, one of several members of the International Brotherhood of Electrical Workers who spoke at the hearing. "The construction industry is an important part of the New York City work force and it needs to get back to work."

Environmental impact statements are required for all major buildings in New York, but this one is different. Because the site is so large — 1[illegible] acres — and the project will take a long to complete, the environmental assessment is considered generic, taking into account the impact of several buildings yet to be designed.

The Lower Manhattan Development Corporation has proposed a set of design guidelines with energy conservation measures and environmental safeguards that would cover all buildings on the site. But several speakers doubted the standards could be effectively applied.

Andrew Winters, the corporation's director of planning, design and development, said it had not yet been determined how to enforce those guidelines. "That's what we're working on right now," he said.

Throughout the afternoon, speakers said the impact of the project had not been sufficiently studied.

"This is a rush job," said Jenna Orkin, a member of the steering committee of 9/11 Environmental Action, a neighborhood organization. "The rebuilding project shows signs of repeating the reckless behavior of the cleanup operation."

The availability of open space was another frequently voiced objection. Diane Dreyfus, an urban planner, said the city would end up with only 60 percent as much open space as existed before.

Some of the most unexpected comments came from Dr. Robert Jarvik, the inventor of the first artificial heart. Dr. Jarvik, who had submitted a competing design for the victims' memorial, criticized the winning design, saying that the extraordinary amounts of both water and electricity it would use had not been fully acknowledged.

"I know something about how pumps work," said Dr. Jarvik. "This design should not be built."

John Bergan

From: <KYDSNCARS@aol.com>
To: <Janette@kidsandcars.org>
Sent: Tuesday, February 10, 2004 6:37 PM
Subject: Contact your Federal Senators today!

KIDS AND CARS
LOVE THEM. PROTECT THEM

2641 West 118th Terrace, Leawood, KS 66211 (913) 327-0013 Fax (913) 327-0014

Greetings!

In the next few days, your Senators will consider the highway safety reauthorization bill that addresses some of the safety problems inherent in the vehicles we drive. Now is your chance to insist on a better, safer vehicle.

You can be a force for improving the safety of vehicles and the American highway by urging your Senators to support the Transportation Reauthorization Act of 2003 - S. 1978.

There is language in the this bill that would direct the National Highway Traffic Safety

HEARING
REHABILITATION QUARTERLY

VOLUME 22, NUMBER 1, 1997

Beware: Noise Is Hazardous to Our Children's Development

Arline L. Bronzaft, Ph.D.
Chair of the New York City Council on the Environment.

Noises impinge on the child's language, cognitive and learning abilities.

"We can do something about noise and when we do, children profit!"

In the Time magazine's special report on "How a Child's Brain Develops" (February 3, 1997), one of the articles, "The Day-Care Dilemma" (Collins, February 3, 1997) began simply with the following statement: "Environment matters." Collins goes on to say that what the baby "sees, hears and touches..." is critical to development. It is equally true that what the child doesn't hear is also important, but how often do we think about or discuss the impact of those unnecessary intrusive sounds on the child's development (other than effects of noise on hearing), or for that matter the crucial role quiet and solitude play in the child's maturation process? The non-auditory effects of noise on a child's overall development, the focus of this paper, has received too little attention.

Life Before Birth

Development doesn't commence with birth, nor do the impacts of the enveloping environment, and that is why the early intrauterine months are very influential in a child's development. When Jones and Tauscher (1978) reported that infants born to mothers living near the Los Angeles airport were lower in birth weights and had greater numbers of birth defects, such as cleft palates, than did infants born to mothers living in quieter communities, there was concern that the neighboring planes were disruptive to the fetus' development. Kryter (1985) doubts that the acoustic energy from the planes was being transmitted to the fetus through the mother's tissues but rather believes that it was the annoyance and the fear of the planes that affected the mother's tissues and fluids and this in turn affected the environment of the developing fetuses. Although other reports from European investigators confirmed the Jones and Tauscher findings, the data have not been sufficient to support a strong relationship between aircraft noise and fetal defects. However, the United States National Research Council (1982) decided to err on the safe side and urged pregnant women to avoid working in noisy industrial settings. Yet, how many individuals are aware of the Research Council's recommendations? Should this information not be more readily available in this ever increasingly noisier society?

The Home– Quiet or Noisy?

Now the baby is born! So many of our youngsters are born into an environment abounding with unnecessary noises – television sets blasting , stereo systems booming, speaking voices that are shouting rather than talking, and an overall level of sound that would make any person cringe. The newborn cannot withdraw, cannot escape and is a captive to the loud sounds all around him Are these

sounds harmful? Yes, these noises impinge on language, cognitive and learning abilities.

According to Wachs and Gruen (1982), noise in the early home environment is a strong factor in slowing down language and cognitive development. They also found that these noisy homes were characterized by little interaction between parents and children. Wachs became interested in noise because he believed that so many economically disadvantaged children lived in homes that were overwhelmed by intrusive noises, and he is probably correct in proposing that the poorest youngsters in our society are indeed adversely more affected by noise. It should be noted that the National Urban League was a recipient of a noise - abatement grant in 1980 and had intended to work on the problems of noise in poor Black communities, but before the League could undertake its task, the United States government curtailed funding of noise projects. The nation's noise abatement office is still closed, but there is some hope on the horizon in that a bill has been recently introduced to refund that office.

Noise is not confined to the homes of the poor because many affluent homes are also too noisy. The instruments of noise -- television sets, computers, stereo systems, vacuum cleaners, and toys, yes toys -- may be more plentiful in the homes of the middle - and upper - class. Add to this cacophony of sounds the voices that tend to be louder today than they once were. In my recent book Top of the Class (Abex, 1996), I had studied the lives of older high academic achievers, inquiring about their childhood homes and how they were reared. It was wonderful to learn that there were quiet times in their homes -- quiet times for children to do their homework, to read and to think. There were no television sets, radio, and stereos blasting in the background. These high academic achievers also reported that their parents disciplined them with stern but moderate voices, not shouts and screams; most often all they needed was a " look of disapproval."

Unlike the homes where Wachs reported little interaction between parents and children, the academic achievers report much interaction. Parents read to them, engaged them in conversation, and listened to their thoughts and ideas, as well as their problems, when they grew older. Family meetings took place around the dining-room or kitchen table, where each member of the family shared his/her thoughts and experiences.

To busy parents who today spend too little time eating with their children in a quiet setting, but rather at some loud fast-food place, I urge you to rethink your present dining habits and set aside some quiet mealtimes in which you and your children can eat as well as converse. All parents should evaluate the noise levels of their homes, and if they are indeed very noisy, take steps to lower the sound level. Your children will most certainly reap benefits from a quieter, more serene home. More about this later on in the article.

The Neighborhood – Intrusive Sounds from Autos, Trains and Airplanes

It isn't only the interiors of the homes that are noisy, but so many houses are located near noisy sources -- train tracks, highways, airports. These noises may affect the physical health of children. Cohen, et al. (1980) found higher systolic and diastolic blood pressure among schoolchildren living near the Los Angeles airport. Evans, et al. (1995) in a more recent paper found a relationship between chronic noise exposure and elevated neuroendocrine and cardiovascular measures. Evans and his colleagues also found that children living near the airport reported more "annoyance and a lower quality of life than did children in quiet communities." To quote from Evans: "These data are sobering when one considers that more than 10 million American schoolchildren are exposed to comparable noise levels."

With respect to psychological development, Cohen, Glass and Singer (1973) found that children living on the lower-floors of buildings, directly exposed to high levels of expressway noise, demonstrated

greater impairment of auditory discrimination and reading achievement than those children living in higher-floor apartments. In attempting to explain their findings, Cohen, et al. referred to Deutsch's (1964) work in which he had speculated that a child reared in a noisy environment would eventually become inattentive to acoustic cues. The result would be impaired auditory discrimination or the child's inability, as she tunes out the incoming noises, to discriminate between relevant and irrelevant sounds. This, in turn, might explain why it is difficult for that child to listen in class. Although other studies have supported the Deutsch hypothesis, not all have, and that is why the relationship between noise and auditory discrimination needs further research. For the present time, the results can serve as a warning, cautioning parents to lower the decibel levels surrounding the growing child.

Furthermore, children who live near noisy highways or airports often attend schools near these same noisy sources, compounding the problems. It is often too difficult to examine the impact of aircraft noise on children in their homes, so investigators have looked at the impact of noise on children's learning and reading scores when their schools lie within the path of noisy overhead planes. Elementary school children attending schools near New York's two noisy airports (Green, et al, 1992) had lower reading scores than those children attending schools further from the planes, and Cohen, et al. (1980) reported that children attending school near the Los Angeles airport had more difficulty in solving cognitive problems. A critical review of the nonauditory effects of noise on American school children (Evans and Lepore, 1995), including the deficits in learning, reading, and problem-solving, clearly demonstrates that more attention must be given to the effects of noise on cognitive development. Although the government has provided some dollars to protect schools and, in some cases, homes from noisy overhead airplanes, there is no doubt, as a later study will reveal, that much more needs to be done in the area of noise abatement.

In New York City, hundreds of thousands of people live near the elevated train tracks, and thousands of children attend school near these tracks. Hambrick-Dixon (1985) found that pre-schoolers attending day-care centers near New York's noisy elevated train tracks did poorer on tests on psychomotor skills. Whether noise affected the reading ability of older children was examined in a study by Bronzaft and McCarthy (1975). The examined the reading scores of children attending classes adjacent to the tracks and compared them with the reading scores of the children attending classes on the quiet side of the building. Second, fourth and sixth grade children on the noisy side were reading behind their counterparts on the quiet side, with the children in the sixth grade lagging behind by as much as one year. The Transit Authority was convinced by parents and local public officials to install rubber pads on the tracks to lower the din, and the Board of Education installed acousting ceilings in the noisy rooms. The result was a drop in the decibel level, and in a later study Bronzaft (1981) found that children on both sides of the building were reading at the same level. So, we have another lessons here -- namely, that we can do something about noise and when we do, children profit!

Apparently not enough has been done to quiet schools from the overhead jets despite the growing body of literature demonstrating the adverse impact of aircraft noise on learning (Evans & Lepore, 1993). In a soon-to-be published paper, Evans (personal communication) has found that children chronically exposed to aircraft noise have "significant deficits in reading as indexed by a standardized reading test administered under quiet conditions." Furthermore, Evans provides data to support his contention that chronic noise interferes with reading because of deficits in language acquisition. The experimental elementary school in the Evans study is located near a major New York metropolitan airport, and the control group was located in a quiet neighborhood. All of the children attending the noisy school also lived near the airport and the majority were Black. Green, et al. (1982) published their findings that airport noise lowers reading of ability of school-aged children in New York in 1982, and now Evans reports the same in 1996.

At a time when New York City is concerned about its reading scores, it is especially disturbing that, for

the most part, this city's leaders have not yet addressed the adverse effects of aircraft noise on its youngsters. New York's public officials boast that three airports serve their city, but are they aware that these airports have exposed more people to the harmful effects of aircraft noise than any other city's airports (Stenze, 1995)? The city's airports are denying the rights of many children to a peaceful and quiet environment in which to grow into physiologically and mentally healthy adults.

New York City is not alone in robbing our nation's children of an environment conducive to proper development because so many other cities are similarly exposing children to all sorts of external noises. Will the Los Angeles school district be able to protect its students from the encroaching expansion of the Santa Monica airport into some very quiet, residential areas? Has Chicago considered the impacts of its airport expansion, or have any of the other cities planning expansions (Stenzel, 1995)?

Children living in noisy communities do find the noise annoying, and when asked to rate their quality of life, children in these areas rated them poorer than did children in quieter communities (Evans, 1995). When speaking with my grandson's third-grade class about noise, I was amazed to learn how bothered they were by noise and how many sources of noise they identified that interfered with their personal lives. Similarly in the League for the Hard of Hearing's Noise Poster Contest in 1996, we saw how cognizant children were about noise sources. There is no question that youngsters do not like these noises in their lives. This doesn't mean that children don't enjoy playing and laughing and often doing this loudly, but after all this is playing, not learning, not relaxing. Children need quiet rooms in which to study and quiet areas for reading. Children also need quiet times for relaxing and resting.

As I watch the hectic pace of our society, I begin to become more and more aware of the need to take it easy and to slow our tempo. So many parents often choose the same kind of frenzied pace for their children as they rush them from activity to activity. Children are not being given the time to reflect at their own pace, and to digest the lessons to which they are exposed, and a time to rest. To learn effectively, children need the time to rest between lessons. Give them this time -- a time in which to do nothing, a time in which they are not intruded upon by outside stimuli, especially noises.

John Dallas (1995) is so right when he says that: "In an environment where you can't obtain peace and quiet, it's close to impossible to find peace within yourself, to find quiet on the inside." Children need to find that quiet inside themselves as well -- a quit that brings them serenity and solace. There is a time to play and frolic and there is a time to slow down and to simply rest. The body needs that time to repair itself and so does the so-called "mind." There is no doubt that when a child finds the ability to "slow it down," then his development will be enhanced in every respect.

Noise Abatement -- a Parent's Obligation, a Citizen's Responsibility.

Being aware of the dangers of noise in our children's development is the first step toward improving the conditions in their lives. The second step is action-oriented. Parents must make every effort to keep their homes quieter, but they must also attempt to quiet their communities. They must inform their neighbors, their school representatives, and their legislators as to the dangers of noise. All citizens, parents and non-parents alike, must then demand that noise laws, at all levels of government, be enforced and urge the passage of more effective laws where needed. The federal government has a law on the books to provide its citizenry with a less noisy environment, but it hasn't provide the dollars to ensure the implementation of this law. Isn't it about time to urge the federal authorities to abide by the intent of its noise law? Let's join the League for the Hard of Hearing in its efforts to get the government to do so.

When one learns of the technology to abate noise, one learns that the "know-how" is there; what is sadly

our children's future is very much at stake!

References

- Bronzaft, A.L. & McCarthy, D.P. (1975). The effect of elevated train noise on reading ability. Environment and Behavior, 7, 517-528.
- Bronzaft, A.L. (1981). The effect of a noise abatement program on reading ability. Journal of Environmental Psychology, 1, 215-222.
- Bronzaft, A.L. (1996). Top of the Class. Norwood, NJ: Ablex.
- Cohen, S., Evens, G.W., Krantz, & Stokols, D. (1980). Physiological, motivational, and cognitive effects of aircraft noise on children. American Psychologist, 35, 231-243.
- Cohen, S., Glass, D.C. & Singer, J.D. (1973). Apartment noise, auditory discrimination and reading ability in children. Journal of Experimental and Social Psychology. 9, 407-422.
- Collins, J. (February 3, 1997). "The Day Care Dilemma," Time.

• Wachs, T. & Gruen, G. (1982). Early experience and human development. New York, NY Plenum.

FINAL
LEAVE FOR THE
HARD OF HEARING
-J. Bergan

February 2, 2004

Attn: Pablo Chavez, Esq., Counsel
Attn: Sunita Krishna, Staff Assistant
Senate Commerce Committee
428 Hart Senate Office Building
Washington, D.C. 20510

Re: Changes to language of Sections 154 & 155 of Surface Transportation Safety Re-authorization Act requesting that NHTSA consider environmental noise effects/neighborhood impacts of any back-over technology to be studied (in addition to safety and cost issues) so that sleep-deprivation, stress and lower work productivity caused by currently un-regulated and loud back-up alarms would be reduced

Dear Mr. Chavez and Ms. Krishna:

Many Americans have noticed that the noise levels outside and inside buildings have gotten significantly louder over the past ten years, and one of the many contributors to such noise is the spreading use of outside-the-vehicle back-up alarms, which are almost completely un-regulated by any Federal or State agency. The League for the Hard of Hearing, through its Noise Center, has campaigned for many years to reduce the dangerous noise levels in the environment, ranging from toys that are too loud for children's ears, to traffic noise, and to the current issue regarding exterior back-up alarms. Hearing loss is a significant and growing problem for our youth and a research study (Niskar et al) published in the April 8, 1998 "Journal of the American Medical Association (JAMA)" reported that "14.9% of U.S. children have low-frequency or high-frequency hearing loss", most probably caused by exposure to loud noise, including noisy machinery or appliances. Hearing loss (which is usually permanent), and accompanying medical problems including tinnitus (ringing in the ears) and hyperacusis (abnormal sensitivity to loud noise) cost society much in terms of lost work productivity, loss of sleep (especially with tinnitus), difficulties in learning, and increased stress.

Clearly, deaths and injuries to children and adults from vehicles backing up is a serious concern, and we commend the Senate Commerce Committee for recommending the National Highway Traffic Safety Administration (NHTSA) re-authorization study on back-over accidents. As part of this study, however, we strongly recommend that NHTSA should consider technologies that both save lives and prevent injuries and maintain a quiet environment to those who are near these vehicles. The costs of stress due to the level of noise caused by current back-up alarms should be carefully compared to

the newer quieter technologies which, in fact, emit no outside beeping noises. The League also desires that NHTSA, in their proposed study on backover technologies, include a review of the medical problems that can result from currently-used loud technologies such as exterior back-up alarms.

The purpose of this letter is to request that the Senate Commerce Committee consider minor changes in the language of the National Highway Traffic Safety Administration Sections (154 & 155) of the Surface Transportation Safety Re-authorization Act so that the loud noise from exterior back-up alarms is studied along with other back-over technologies. The League, along with other non-profit organizations such as the Noise Pollution Clearinghouse, believes that there is no scientific evidence that the benefits of exterior back-up beeps are effective and that the benefit outweighs the detriments in terms of noise pollution. The League hopes that NHTSA will eventually require quieter technology that will also be more effective in saving lives, such as rear-view cameras or Doppler ultrasound, microwave devices or types of rear-view mirrors. These devices assist drivers in backing up safely without causing unnecessary outside noise pollution and also put the driver in the responsible position of controlling the vehicle and avoiding backing over a person or an inanimate object. Indeed, a principal fault with existing exterior back-up alarms is that they do not warn the driver, but only warn the pedestrian behind the vehicle.

Specifically, the League suggests that the language in Section 154(b.) "Specific Issues to be Covered" should be changed as follows: (b.)(1.) should read: "include an analysis of backover prevention **technologies, including technologies that notify the driver inside the vehicle, and outside-of-vehicle back-up alarms**"; Section (b.)(2.) should be changed to read: "identify, evaluate, and compare the available technologies for detecting **or warning** people behind a motor vehicle for their accuracy, effectiveness, cost, **environmental noise pollution to the surrounding neighborhoods,** and feasibility of installation; Section (b.)(3.) should be changed to read: "provide an estimate of cost savings.........to the prevention of -- **(C.) "unnecessary noise emitted to the surrounding neighborhood from exterior back-up alarms or other technologies."** Section 155 should be revised to read: "**In conjunction with the directives....number and types of injuries and deaths involving motor vehicles in non-traffic, non-accident incidents, as well as the effects of noise from exterior back-up alarms on children, adults, residents, students, employees, and other persons working, residing, or visiting neighborhoods that would be affected by noise from various back-up technologies.**"

Currently, the noise from exterior back-up alarms is un-regulated, with the public completely helpless to complain to any agency overseeing these loud and ineffective devices. While the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor has some regulations dating from the early 1970's dealing with exterior back-up alarms, even OSHA has admitted that no cost-benefit study was undertaken when the regulations were adopted, and those OSHA regulations also allow employers to use a person to signal when a vehicle is backing up instead of an alarm. A problem with the OSHA regulations is that no decibel limits and no controls on the type

of sound were incorporated into the regulations, so that such back-up alarms, now common, can be so loud that they affect thousands of neighborhood residents within a half-mile of a work-site. From such an unscientific beginning, outside-the-vehicle back-up alarms have spread to other non-regulated vehicles so that ***the back-up beeping noises have become the second-most common man-made noise heard out-of doors***, and ***the most common noise from outside that is now heard inside of buildings***.

Indeed, the League hopes that NHTSA, after considering the safety, cost issues, and environmental noise and neighborhood impacts of various back-over technologies, will recommend that back-up alarms be banned, for the following reasons:

1.) due to the type of sound emitted by back-up alarms, the noise emitted penetrates exterior walls of buildings, bothering people inside schools, office buildings, homes, and other buildings with alarming sounds that are of no use to them;

2.) to supposedly save lives, the sounds emitted by back-up alarms are designed to be

should be of the type that automatically adjusts to be just slightly louder than the ambient noise level within the area of the vehicle that is backing up.

The League believes that back-up alarms are an un-needed nuisance whenever a vehicle produces engine noise that is audible to a person with normal hearing from 10 feet away, as adding a back-up alarm to a vehicle that one can already hear is duplicative. In the rare cases where the engine noise might be so low as to be inaudible, such back-up alarms as might be required should still be much quieter than current loud models.

The League also strongly supports the passage of legislation just introduced in the Senate, the "**Safe Kids, Safe Cars Act of 2004**," sponsored by Senator Mike DeWine (R-OH) which deals with back-over accidents and technologies. Ms. Janette Fennell, Founder and President of the Kids and Cars non-profit organization, submitted to the League a scientific paper published in the journal "**Injury Prevention**" in 2003, entitled "**Children's Response to a Commercial Back-up Warning Device**", which demonstrates that, rather than alerting children that vehicles are backing up, the back-up alarms actually attract children to the noises emitted, possibly causing future injuries and deaths (pls. see attached article).

The League would like to conclude this letter to the Senate Commerce Committee with some words on the effects of noise on children's learning and stress levels from some noise experts: "Children living in noisy communities do find the noise annoying, and when asked to rate their quality of life, children in these areas rated them poorer than did children in quieter communities (Evans, 1995)." [from Bronzaft, A.L., Hearing Rehabilitation Quarterly, Vol. 22, No. 1, 1997, "Beware: Noise is Hazardous to Our Children's Development- Noise Impinges on the Child's Language, Cognitive and Learning Abilities"] .

Again, the League commends the Senate Commerce Committee for recommending the NHTSA study on back-over technologies, and hopes that the study will result in the recommendation of newer interior back-up systems and the phasing out of loud exterior back-up alarms.

Sincerely,

Laurie Hanin, Ph.D., CCC-A
Co-Executive Director

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FINAL

LEAGUE FOR THE HARD OF HEARING

-J. Bergan

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LOWER MANHATTAN EMERGENCY PRESERVATION FUND

Municipal Art Society | National Trust for Historic Preservation | New York Landmarks Conservancy | Preservation League of New York State | World Monuments Fund

March 4, 2004

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

Re: Draft Generic Environmental Impact Statement (DGEIS) WTC Memorial and Redevelopment Plan

The Lower Manhattan Emergency Preservation Fund (LMEPF) is an initiative of five preservation groups: the Municipal Art Society, the National Trust for Historic Preservation, the New York Landmarks Conservancy, the Preservation League of New York State, and the World Monuments Fund.

Each group has a successful track record in balancing preservation with economic redevelopment. Lower Manhattan is America's most significant downtown with buildings representing various periods of the city's and nation's history.

The LMEPF commends the DGEIS for addressing historic preservation concerns and for identifying many of the numerous historic resources that contribute to the character and architectural significance of Lower Manhattan.

We offer the following specific comments for strengthening Chapter 5 of the DGEIS on Historic Resources:

Historic Resources and Boundaries

1. We believe that the boundaries of the Primary Area of Potential Effect should be adjusted to include all of City Hall Park and the Battery-Park Garage. The current boundaries only include portions of these two historic resources and not the full site.
2. In addition, we recommend that Fulton Street from Nassau Street to Water Street be considered as a Secondary Area of Potential Effect and include historic resources identified in the LMEPF's Preliminary Documentation of Fulton Street. Similar to the three sections of Tribeca that are included as Secondary Areas of Potential Effect, the Fulton Street corridor has the potential to be dramatically affected by the Proposed Action.
3. In our initial survey of historic resources, our coalition identified a number of important buildings that the DGEIS does not recognize. We ask that the Greenwich South Corridor include all the buildings identified in the LMEPF's Preliminary Documentation of the area. These additional historic resources include:
    a. 74-80 Washington Street
    b. 109 Washington Street
    c. 98-100 Greenwich Street
    d. 21-23 Thames Street
    e. 32-42 Trinity Place a/k/a 69-79 Greenwich Street

Municipal Art Society
457 Madison Avenue
New York, NY 10022
212 935-3960

National Trust for Historic Preservation
1785 Massachusetts Avenue, NW
Washington, DC 20036
800 944-NTHP

New York Landmarks Conservancy
141 Fifth Avenue
New York, NY 10010
212 995-5260

Preservation League of New York State
44 Central Avenue
Albany, NY 12206
518 462-5658

World Monuments Fund
95 Madison Avenue
New York, NY 10016
646 424-9594

4. The language from the final determination of eligibility for the World Trade Center site National Register nomination should be adapted and included in Chapter 5.
5. In Figures 5-4 and 5-8, the buildings within the known historic districts should be shaded to indicate that each one is a known historic resource.

Construction Coordination

1. As stated in Chapter 21 of the DGEIS, building the WTC was "one of the largest and longest construction projects in New York City's history." With this in mind, the Proposed Action, as well as the numerous private sector construction projects that will most likely take place, will have a dramatic and unknown impact on the area's dense inventory of historic buildings. The LMEPF is very concerned how vibrations from these cumulative construction projects spanning over 11 years will affect area's historic resources. The LMEPF recommends that the DGEIS include specific standards on how to limit and monitor vibrations as well as explicit language on how historic buildings will be protected during all phases of construction.
2. Since the Proposed Action will be coordinated by multiple agencies, the LMEPF strongly urges that a single entity be charged with monitoring the impact on historic properties during all stages of construction activities over the 11-year period. Additionally, the LMEPF recommends creating a civic advisory group on historic preservation to assist this entity as well as the various agencies involved in the Proposed Action.

The LMEPF recognizes the unprecedented nature of this undertaking and the importance of ensuring for meaningful public input. We appreciate the outreach that the LMDC is doing with various interest groups and look forward to continued participation as additional projects are presented to the public.

Thank you for the opportunity to express the LMEPF's views.

Sincerely,

Ken Lustbader
Preservation Consultant
Lower Manhattan Emergency Preservation Fund

LOWER MANHATTAN EMERGENCY PRESERVATION FUND

Municipal Art Society | National Trust for Historic Preservation | New York Landmarks Conservancy | Preservation League of New York State | World Monuments Fund

February 18, 2004

Response of the Lower Manhattan Emergency Preservation Fund to the Draft Generic Environmental Impact Statement (DGEIS) WTC Memorial and Redevelopment Plan.

Good afternoon. My name is Ken Lustbader and I represent the Lower Manhattan Emergency Preservation Fund. The Fund is a coalition of five leading preservation organizations that was formed in response to the events of September 11th. The group consists of the Municipal Art Society, the National Trust for Historic Preservation, the New York Landmarks Conservancy, the Preservation League of New York State, and the World Monuments Fund.

Each group has a successful track record in balancing preservation with economic redevelopment. Lower Manhattan is America's most significant downtown with buildings representing various periods of the city's and nation's history.

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    b. 109 Washington Street
    c. 98-100 Greenwich Street
    d. 21-23 Thames Street
    e. 32-42 Trinity Place a/k/a 69-79 Greenwich Street
4. The language from the final determination of eligibility for the World Trade Center site National Register nomination should be adapted and included in Chapter 5.
5. In Figures 5-4 and 5-8, the buildings within the known historic districts should be shaded to indicate that each one is a known historic resource.

Construction Coordination

1. As stated in Chapter 21 of the DGEIS, building the WTC was "one of the largest and longest construction projects in New York City's history." With this in mind, the Proposed Action, as well as the numerous private sector construction projects that will most likely take place, will have a dramatic and unknown impact on the area's dense inventory of historic buildings. The LMEPF is very concerned how vibrations from these cumulative construction projects spanning over 11 years will affect area's historic resources. The LMEPF recommends that the DGEIS include specific standards on how to limit and monitor vibrations as well as explicit language on how historic buildings will be protected during all phases of construction.
2. Since the Proposed Action will be coordinated by multiple agencies, the LMEPF strongly urges that a single entity be charged with monitoring the impact on historic properties during all stages of construction activities over the 11-year period. Additionally, the LMEPF recommends creating a civic advisory group on historic preservation to assist this entity as well as the various agencies involved in the Proposed Action.

The LMEPF recognizes the unprecedented nature of this undertaking and the importance of ensuring for meaningful public input. We appreciate the outreach that the LMDC is doing with various interest groups and look forward to continued participation as additional projects are presented to the public.

Thank you for the opportunity to express the LMEPF's views.

Contact Information:

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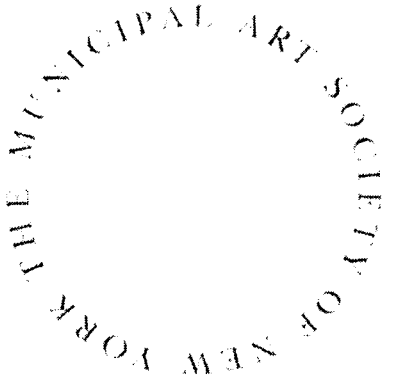

Municipal Art Society Response to the Draft Generic Environmental Impact Statement (DGEIS)
WTC Memorial and Redevelopment Plan

March 12, 2004

In submitting its comments on the Draft Generic Environmental Impact Statement, the Municipal Art Society wishes to reaffirm its support for the statements submitted by three organizations of which it is a member, namely, the Civic Alliance, New York New Visions and the Lower Manhattan Emergency Preservation Fund. In particular, we would like to amplify the points made in both the Alliance's and New York New Visions' comments on the DGEIS's failure to examine the demand for space at the World Trade Center in a comprehensive manner and to thoroughly consider alternatives to the WTC Memorial and Redevelopment Plan (Proposed Action). The Society believes that a more in-depth study of market demand would prove that an additional 10 million square feet of office space on this site in Lower Manhattan by a build-out year of 2015 will be neither necessary nor desirable for the area or the region. Reducing office and retail space would allow an increase in the amount of open, cultural, residential and other spaces and uses on the site, knitting the new development more seamlessly into the surrounding neighborhoods. Flooding the market with office space could have significant negative impacts that need to be more fully considered and analyzed in the DGEIS.

The Society has similar concerns about the effects of adding one million square feet of retail space at the project site. We believe that the majority of new retail space must be above ground, although we also believe that there must be sufficient below ground retail to serve the transit center. Any planned new retail on-site and in areas closely linked to the site, like Fulton Street, should be examined collectively. The Design Guidelines meant to shape this development are absent from the document and should be included. In their absence, the physical form of the structures and open spaces, as well as how they relate to each other, remains uncertain, which further aggravates our concerns about whether this DGEIS reflects an adequate assessment of the market. A reduction in office and retail space, and other alternatives, should be more fully examined.

In addition, this Proposed Action needs to be more formally linked, analyzed and coordinated in combination with other proposed actions located in Lower Manhattan. Along this line, the DGEIS references on page 9-72 the "LMDC, Fulton Corridor: Creating a Vision for Enhanced Retail + Arts + Cultural Activities in Lower Manhattan, June 12, 2003,

THE MUNICIPAL ART SOCIETY OF NEW YORK 457 MADISON AVENUE NEW YORK NY 10022 TEL (212) 935-3960 FAX (212) 753-1816

Volume 1, Strategic Plan." This document should be made available to the public by inclusion on the LMDC website.

In addition to the comments above, the Society feels that the DGEIS could better address issues relating to historic resources. The Society recently submitted comments regarding historic preservation issues in the study area as part of the Lower Manhattan Emergency Preservation Fund coalition. Along with its colleague preservation organizations, MAS has three main concerns regarding the DGEIS with regard to historic resources:

Boundaries and Identification of Historic Resources
We ask LMDC to expand the Primary Area of Potential Effect to include all of City Hall Park and the Battery-Park Garage. We recommend that Fulton Street from Nassau to Water Streets be considered a Secondary Area of Potential Effect and include historic resources identified in LMEPF's Preliminary Documentation of Fulton Street. In addition, a number of historic resources we identified were not identified by the DGEIS, and we hope you will include them. They are: 74-80 and 109 Washington Street; 98-100 and 69-79 Greenwich Street; and 21-23 Thames Street.

Construction Coordination
The Proposed Action, as well as numerous private sector construction projects that will most likely take place, will have a dramatic and unknown impact on the area's dense inventory of historic buildings. We are very concerned that vibrations from these cumulative construction projects, spanning 11 years or more, will have an adverse effect on the area's historic resources. While the DGEIS cites the Department of Building's construction guidelines, we further recommend that the DGEIS include specific standards on limiting and monitoring vibrations, as well as explicit language describing how historic buildings will be protected during the construction years. We strongly urge the agencies involved to create or appoint a single entity to monitor the impact on historic properties. Further, we recommend the creation of a civic advisory group on historic preservation to assist this entity and all the agencies involved in the Proposed Action.

Inclusion of Determination of Eligibility
The language from the WTC Site State & National Register Eligibility Determination, when finalized, should be included in Chapter 5 of the DGEIS.

NEIGHBORS AGAINST N.O.I.S.E.

February 23, 2004

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

RE: WTC DGEIS

Neighbors Against N.O.I.S.E. [Noxious Odors Incessant Sounds and Emissions] is committed to eliminating harmful noise and other hazardous environmental pollution from commercial machinery installed in buildings, with a special focus on Lower Manhattan and the Tribeca West Historic District. Given this focus, we submit the following comments on the DGEIS.

Safety and Security

- Section 1.7.2 states, "(t)he Proposed Action would meet or exceed safety standards expressed by applicable building codes and guidelines." Because the Port Authority is exempt from NYC codes, assurance should be provided that the site will be specifically required to meet or exceed all NYC, NYS, and Federal codes, guidelines, regulations, and requirements relating to safety and security – those being contemplated or likely to be adopted in the foreseeable future as well as those currently in place. At a minimum, there should be an analysis of the difference between "applicable building codes and guidelines" and what would be required by current and pending NYC, NYS, and Federal requirements.

- The DGEIS does not appear to include any analysis of the potential impact of fuel stored on the site for emergency generators and other uses. Our experience with the fire at 7 World Trade, which was fueled by diesel fuel stored in the building and burned for months, suggests that no diesel fuel or other flammable liquids should be stored above ground. In addition, the tanks and generators themselves need to be much better protected against accidents and potential terrorist threats, including state-of-the art redundant systems for preventing and fighting fires.

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Noise

- Other than noise generated by construction equipment, the DGEIS does not adequately address the potential impact of noise and seems to assume that, because the site is already noisy, additional noise is acceptable. To the contrary, every effort should be made to use this opportunity to reduce the overall noise level both during and post-construction. This is important for several reasons: the Memorial should be as quiet as possible to facilitate contemplation and reflection; parks and open spaces will be more enjoyable in a quieter environment; and there are several residences and schools nearby.

- The entire site – not just the Memorial – should use noise reduction features and technology to reduce exterior noise levels and not simply incorporate noise attenuation measures for interior spaces. No building should inflict nearby residents, workers, or visitors with excessive noise pollution.

- Consideration should be given to how new and evolving technologies might reduce the noise levels created by the Proposed Action. These might include:

  - Reducing the amount of vehicular traffic.

  - Setting guidelines for stationary noise sources, similar to the Sustainable Design Guidelines, that meet or exceed all existing and pending codes and regulations. This would include setting standards for the type, size, quality, and placement of HVAC systems, generators, and mechanical equipment. For example:

    - Because the flow of air as well as HVAC equipment itself can create significant noise, maximum face velocity should be limited to 1000 fpm at discharge louvers and HVAC equipment should have a minimum of 7 feet of 2" thick, 3 lb. density ductliner from the unit to the louver face on the exterior of the building and high-quality sound traps.

    - Exterior condensing units should be eliminated as much as possible and all condensing units should be treated with high-quality sound absorbing panels to reduce reflection of sound to adjacent buildings.

    - Emergency generators should be hospital grade or better with acoustically treated radiator discharge, intake, and exhaust pipe. This treatment should include 3 ft. sound traps for the radiator intake/discharge and a critical-grade muffler for the exhaust.

- Every effort should be made to meet HUD Site Acceptability Standards of 65 dBA for the Memorial. Given the stated commitment to environmental sensitivity, the entire project site should adhere to the HUD requirement to "be aware of the problem of noise and to take positive steps to protect residential and other sensitive land uses from high noise levels." Therefore, anything other than a decrease in aggregate noise levels is unacceptable and the proposal to permit a 3 dBA should be rejected. In no case should

the site, when fully built, exceed the current NYC Noise Code ambient noise quality criteria for noise quality zones N-3 of Leq-70 dBA measured for any one hour (subchapter 6, Section 24-243) – and, ideally, it will fall well below that level.

- The DGEIS should recognize and take into account that the NYC Noise Code is being revised and consider whether the Proposed Action would comply with the revised code and, if not, what actions can be taken to ensure compliance.

Sincerely,

Tim Lannan
President

NEW YORK CITY AUDUBON

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Comments on WTC Memorial and Redevelopment Plan/DGEIS
Lower Manhattan Development Corporation
Wednesday, February 18, 2004

Good afternoon, my name is E. J. McAdams and I am the Executive Director of New York City Audubon. With over 10,000 members, New York City Audubon is the city's bird conservation leader. We have read the DGEIS and appreciate your attempt to incorporate birds into the final plan for the Freedom Tower. We encourage you to follow through on the suggestions from Chapter 18 for glass and light reduction measures, and urge you to go further by making decreased bird mortality one of the Sustainability Design Objectives in Appendix A.

Long before we ever thought about building skyscrapers on Manhattan, thousands of small songbirds were migrating through as part of their ancient life cycle. **Now many of these migratory birds are in decline, a decline caused—in great part—by our glass-clad buildings with their alluring lights.**

The DGEIS proposes to mitigate this loss by a reduction in the amount of above-ground vertical exterior surface—63% less than the World Trade Center. However, suggesting that the number of collisions will be reduced by 63% reflects a grave and fundamental misunderstanding of bird collisions at man-made structures. Surface area above 500 feet is largely irrelevant. **The mechanism by which birds collide with buildings is far more complex than the DGEIS analysis suggests.**

There are other problematic aspects of the DGEIS that New York City Audubon will take up in our written comments, but I want to focus on three promising directions that need to be expanded and mandated:

- **The DGEIS proposes a reduction in reflective glass surfaces (p.18-45).** New York City Audubon applauds this direction and suggests that you look into a creative glass design that will mitigate bird collisions, for example, this fritted glass proposed for Swarthmore College's new science center.

- **The DGEIS proposes a reduction of interior lights visible from the outside (p.18-45).** This measure, if mandatory for tenants during spring and fall migration, has tremendous potential. A study in Chicago found that turning off lights at the McCormick Place led to an 83% decline in bird collisions.

- **The DGEIS proposes a reduction in the duration of nighttime decorative lighting (p.18-45).** If mandatory for building management during spring and fall migration, birds would not be attracted to the hazardous glass, cables and wind turbines.

In addition to benefiting migrating birds, **fritted glass and mandatory policies for reducing interior and exterior lights would lead to marked reductions in energy use**, which is a goal of the design.

Safe passage for migrating birds is a sustainability issue for the Freedom Tower. That is why New York City Audubon insists that a significant reduction in bird collisions should be part of the Sustainable Design Objectives in Appendix A. If it is an objective, New York City Audubon can be sure that the Proposed Action will have a "bird-friendly" glass design, interior and exterior light reduction, and a reassessment of the decorative lighting of cables and wind turbines.

Naturalist Scott Weidensaul has written that "Bird migration is the one truly unifying natural phenomenon in the world." Certainly, the Freedom Tower has the opportunity to ensure that future generations will see the nightly cascades of migrant birds knitting them together with other cities, states, countries, and times.

New York City Audubon would like the LMDC to create this future.

New York City Audubon is the largest chapter in National Audubon with over 10,000 members representing all five boroughs.

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Public Comment of Jennifer Hensley
Director of Intergovernmental & Community Affairs
Alliance for Downtown New York
February 18, 2004

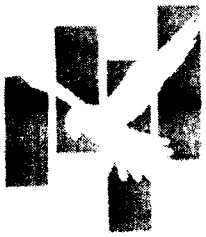
Lower Manhattan Development Corporation
Draft Generic Environmental Impact Statement
for the World Trade Center Site

My name is Jennifer Hensley and I am the director of intergovernmental and community affairs for the Downtown Alliance, Lower Manhattan's Business Improvement District. I would first like to commend the state and the city, LMDC, the Port Authority and the MTA for your dedication and ongoing commitment to rebuilding Lower Manhattan. The progress made to date has been extraordinary.

The draft Generic Environmental Impact Statement is a major step toward a revitalized Lower Manhattan. While we, as many of the other parties here today, have concerns about some of the anticipated impacts of the construction on the World Trade Center site and the proposed mitigation strategies outlined in the DGEIS, I do want to emphasize the importance of moving the construction of the site forward as rapidly as possible.

In this regard, I want to underscore that despite the unprecedented support of $21 billion from the Federal government, the available public funds alone simply will not cover the cost of rebuilding. Timely and complete Downtown revitalization is dependent upon the extent and availability of private money. All of us must recognize the significant impact that the amount of available insurance proceeds will have on the rebuilding process. Though it is not our place to pass judgment regarding the legal merits of the World Trade Center insurance case, it is clear that the larger the settlement, the speedier the rebuilding process will be and the more public money available for use on other important Lower Manhattan projects.

With regard to the specifics of the DGEIS, the document goes a long way toward assessing the impacts of the enormous construction project planned at the World Trade Center site on the Lower Manhattan community. However, we are particularly concerned about some of the construction and post-construction impacts.



NEW YORK CITY AUDUBON

Written Comments on the WTC Redevelopment Plan Draft Generic Environmental Impact Statement

Prepared by:

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March 15, 2004

In these comments, we first include an excerpt from the DGEIS, then respond to it.

[T]he Proposed Action is expected to result in fewer bird strikes than those realized under pre-September 11 conditions. The amount of above-ground vertical exterior surface area extending above 500 feet, which represents a strike hazard for migrating birds, would be approximately 63 percent less under the Proposed Action in 2009 than in pre-September 11 conditions (approximately 540,000 square feet versus approximately 1,469,000 square feet, respectively). In 2015, bird strikes under the Proposed Action are anticipated to be 15 percent less than those realized under pre-September 11 conditions due to a reduced amount of vertical exterior surface area extending higher than 500 feet elevation (1,246,000 square feet proposed in 2015 versus 1,469,000 square feet in pre-September 11). *(Page 18-70. Similar ideas also appear on page S-48,18-4, 18-15, 18-44, 18-61, 18-66, 18-70 and 18-72.)* **For purposes of this analysis, the likelihood of bird strike is expected to change proportionally with vertical surface area** *(page 18-66).* **Elevations below 500 feet are expected to present minor collision potential for birds as described above and were not quantified** *(page 18-15).* **In 2009... [t]he amount of aboveground exterior surface area above 500 feet is 63 percent less than pre-September 11 conditions. This would potentially result in 37 percent of the bird strikes realized under pre-September 11 conditions** *(page 18-72).*

The DGEIS focuses the amount of surface area above 500 feet, which is actually of limited value in assessing a structure's potential impact on birds. Suggesting that the number of collisions will be reduced by 63% reflects a grave and fundamental misunderstanding of the phenomenon of bird collisions at man-made structures. Surface area above 500 feet is largely irrelevant: significant numbers of birds collided at the shorter structures at the WTC complex, which ranged from seven (6WTC) and nine storeys (4 & 5WTC) to 24 stories (3WTC) in height. While height plays major role in drawing birds into an area, glass at or near ground level or landscaped terraces is what is responsible for most collisions.

The mechanism by which birds collide with buildings is far more complex than the DGEIS analysis suggests. It involves 1) tall, lit-up structures, which attract and disorient birds, particularly in the absence of a clear night with a full moon; 2) landscaping, which draws birds to the ground plane; and 3) glass windows/walls near the landscaping (generally, the first four stories), where the majority of collisions are thought to occur. The phenomenon is described in greater detail below.

¶ Night-migrating birds are attracted to and disoriented by artificial lighting. Although this phenomenon is particularly strong during foggy or overcast conditions or during precipitation, it is not limited to inclement weather. Birds have been observed to be attracted to light at tall structures (e.g., the Empire State Building) even in clear weather. Once "trapped" by light, birds are reluctant to fly back into the darkness, and swarm chaotically around the source. While milling about the light source, birds are prone to colliding with any potential obstructions.

¶ Obstructions would include the "lacy structure of tension cables" called for in the Freedom Tower design. Such cables at communications towers are thought to kill 4 million to 50 million night-migrating birds each year in the U.S. alone. The cables are to be illuminated with inspirational lighting, which will lure great numbers of migrating birds—again, particularly during periods of inclement weather.

¶ Individual birds that don't collide with obstructions eventually become exhausted and seek refuge in landscaping on the ground plane or terraces. But these patches of habitat are surrounded by vast amounts of glass, which birds are unable to recognize as a solid obstacle. Both reflective and transparent types of glass are problematic. Birds are killed when they attempt to fly 1) to habitat reflected in the window, 2) to a potted plant inside the building, or 2) all the way through the building to habitat visible on the other side. Researchers estimate that 100 million to 1 billion birds are killed each year in the United States alone by flying into windows. The problem is widely unrecognized, since the evidence is either obscured by shrubbery or swiftly removed by predators or building-maintenance staff.

The DGEIS asserts that **Nighttime collisions with buildings and towers are more common than daytime collisions** *(page 18-14)*. This statement is true of communications towers but not of buildings, where daytime collisions with glass at ground level seem to be the primary killer. The Freedom Tower design incorporates the bird hazards of communications towers and glass buildings. We maintain that if built as currently designed, the Freedom Tower will be far deadlier to birds than its predecessors.

While collisions with buildings are often fatal to birds due to the speeds involved, many birds (greater than twice the number killed) are only slightly injured or temporarily stunned from the force of impact (Ogden 1996). Birds that are stunned may not survive however, if predators catch them before they can recover *(pages 18-14 – 15)*.

The proportion of fatalities to non-fatalities does not match our experience, nor does it continue to be true in Toronto, which Ogden is referencing (Michael Mesure, pers. comm.). Approximately two-thirds of the collision victims reported NYC Audubon volunteers are fatalities. Moreover, birds that appear to be only stunned—including some that fly away—may also sustain fatal injuries, of which they die 24–48 hours later.

According to published reports, approximately 75 percent of neotropical migratory birds fly at altitudes between 500 and 6,000 feet during migration (e.g., Able 1999) *(pages 18-14 – 15)*.

The range given above suggests that the 1,776' Freedom Tower wouldn't necessarily project into the airspace of many migrants. Actually, radar studies reveal that 75% of songbirds migrate between 500 and 2,000 feet (Deinlein).

Migration studies using light aircraft confirmed that bird density is greatest at the level of

985 feet (Alerstam). The second-greatest density of birds occurs at both 500 and 1,475 feet. All three critical altitudes are well within the height of the proposed Freedom Tower. Fog, overcast conditions or precipitation all force migrating birds to fly at lower altitudes. The American Woodcock migrates at 300 feet and is #5 on NYC Audubon's list of birds most frequently to have collided with buildings.

The number of collisions and resulting bird mortality is expected to be insignificant when compared to the total number of birds migrating along the Atlantic Flyway *(page 18-44).*

Individual threats to birds need to be considered in the aggregate, not in isolation. Extensive data show that thousands of birds can be killed in a single night at a single structure. Hundreds of such structures are killing migrating birds throughout the Atlantic Flyway. Of the 97 different species of birds that have been found to have collided with NY buildings, 43 are in decline. For a species in danger, every source of mortality is significant.

Potential measures that may reduce bird strikes include reduction in reflective glass surfaces and interior lights visible from the outside, and reduction in the duration of nighttime decorative lighting, especially during the spring and fall migration periods (page 18-45 and others).

We agree that these measures would significantly reduce the number of collisions. We further urge the design team to develop glass that birds can perceive as a solid barrier while appealing to human viewers in the buildings. Swarthmore College professor Carr Everbach has developed a fritted glass that has the potential to reduce bird collisions while appealing to human subjects. It will be unveiled in their new Science Center this spring. (A sample of this glass is included.)

Reduced interior lighting has tremendous potential. In addition to motion-detector lighting now commonly used on office floors, it should be extended to lobby areas during spring and fall migration. A study in Chicago found that turning off lights at the McCormick Place led to an 83% decline in bird collisions.

Reducing the extent and duration of decorative nighttime during migration would prevent night-migrating birds from being attracted to buildings at the WTC site. A lights-out program should be mandatory for building management after 10PM during spring and fall migration. This reduction in decorative lighting and concomitant reduction in bird kills has the potential to function as an Innovative Design LEED point for exceeding the Light Pollution Reduction credit.

The selection of exterior building materials would have to balance reduction of bird strikes with the goal of integrating the conservation and optimization of energy use into the design of the structures of the Proposed Action *(page S-58).*

All three of the previous measures—reflective glass, interior lighting, and duration of nighttime decorative lighting—would meet and exceed this caveat. Fritted glass and mandatory policies for reducing interior and exterior lights would lead to marked reductions in energy use.

Based on USFWS (1997) data for the Lower Hudson River region, and New York City Audubon Society (NYCAS) bird strike data collected from within the WTC Site, common species (exclusive of pigeons and mourning doves) that may be present within the project area during migratory periods include... *(p.18-35)*

The partial list offered is highly abridged. All of the 97 species that NYC Audubon volunteers have found at city buildings to date are likely strike victims. Indeed, each of the 200 bird species that are observed in Central Park each year are potential victims. In Chicago, where bird collisions have been documented since 1978, 147 different species have been found.

Because of the removal of birds by cleaning crews and scavengers, collisions reported by the NYCAS monitoring program may not represent the total number of bird collisions (page 18-62).

The phrase "may not" should be replaced with "do not." Monitors were on site for less than an hour on each visit. Our totals represent only the birds we found, and can only hint at the total number of victims. Given our limited coverage, actual totals were undoubtedly considerably higher.

Landscaping measures are anticipated to include shade trees and other vegetation including grass. The inclusion of such elements would offer resting/stopover habitats for migrating song birds as well as habitats for resident birds *(page 18-66).* **Current designs offer additional open space and trees over that present under pre-September 11 conditions. These offer beneficial resting and stopover habitat for migrating birds as well as habitat for resident birds** *(page 18-70).*

The fact that the WTC site will include trees and shrubs makes it all the more important that non-reflective, patterned glass be used up at least to four stories above the ground plane to prevent collisions.

Appendix A: Commercial Sustainable Design Guidelines

In our view, safe passage for migrating birds—many species of which are in long-term population decline— is a sustainability issue. That is why we maintain that a new Bird Collision Reduction objective within a Wildlife Management category be added to the Sustainable Design Guidelines in Appendix A. A Bird Collision Reduction objective would ensure that glass is non-refective and perceptible to birds; that decorative

nighttime lighting is reduced in amount as well as duration during spring and fall migration; and that all interior lighting, including in lobby areas, would be turned off at night during migration.

This proposed Bird Collision Reduction objective is consistent with the LEED reference standards for Innovation. A Bird Collision Reduction objective would put these guidelines at the forefront of sustainable design in the international community. The whole world is watching this plan. This is a wonderful opportunity to take the lead on migratory bird conservation. In the words of naturalist Scott Weidensaul, "Bird migration is the one truly unifying natural phenomenon in the world." These sustainable design guidelines, and their ripple effect through the international design community, will ensure that future generations will witness the progression of migrant birds each spring and fall—a passage that knits together New Yorkers with people in other cities, states, countries, and times.

Submitted by New York City Audubon
71 West 23rd Street, Room 1529
New York, NY 10010
March 15, 2004

Literature cited:

Alerstam, T. 1990. Bird Migration. Cambridge Univ. Press, Cambridge.
Deinlein, M. Neotropical Migratory Bird Basics. Smithsonian Migratory Bird Center. http://natzoo.si.edu/ConservationAndScience/MigratoryBirds/Fact_Sheets/fxsht9.pdf. Accessed Sept. 28, 2003.

New York Environmental Law & Justice Project
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Attention: **DGEIS Comments** 212-962-2431

NYC Fire and Zoning Codes are stringent and time tested. Why cannot the proposed and discretionary action meet or exceed these standards as set forth in these codes.

1. NYC Fire Code Local Law 5 -
   For example:
   a. Sprinklers - redundant systems
   b. Stand pipes
   c. Sufficient fire fighters for the projected population

2. NYC BUILDING CODE
   a. Bunkerized command center
   b. Evacuation space
   c. Double wide stairs
   d. Methods and materials used should be consistent with or exceed the standards set forth in this category
      i. Di-electric fluids === cooled with a non-toxic, biodegradable, clear dielectric fluid that breaks down in water and evaporates (NOTE e it was the persistent burning of the di-electric fluids that was a mjor source of toxicity in the hundred days following 9/11. Although PCB's are no longer used, present class of dielectric fluids are noxious when burning.

3. CONSTRUCTION METHODOLOGY & TECHNIQUES
   a. Why cannot the project use best practices methods?
      i. In a partnership, OSHA enters into an extended, voluntary, cooperative relationship with groups of employers, employees, and employee representatives (sometimes including other stakeholders, and sometimes involving only one employer) in order to encourage, assist, and recognize their efforts to eliminate serious hazards and achieve a high level of worker safety and health.
      ii. OSHA and its partners have the opportunity to identify a common goal, develop plans for achieving that goal, and cooperate in implementation.

4. NYC ZONING CODE
   a. Performance standards
      NYC Standard should be adhered to
   b. Reasonable expectations
      Down zoning based on meter readings..
   c. Mitigation Measures
      i.e. Particulate Monitors set at a threshold equal to or better than an m1 district as described in Zoning Code... Since The WTC EIS calls for "Mixed Use" community– Mixed Use as defined in the Zoning Code allows for living near an m1 Zone but restricts living in m2 or m3 zones based on performance standards that are inconsistent with Residential Use.

5. Use of Non-toxic Materials - minimize use of toxic materials

6. OUTREACH
   a. Why were there were so few copies of DGEIS available on such a limited basis for comment?
   b. Why were there no comprehensive translations of the documents into Chinese and Spanish?
   c. Why did LMDC send out a letter on 3FEB04 inviting comment on the "Neighborhood Document" with NO MENTION of the WTC-EIS - released 22JAN04?

   d. Where are these two lists of interested Citizens, who demonstrated interest in the transparent and public process and were never contacted again?

      i. Database of Participants of "Listening to the City"
      ii. Database of Participants of "Neighborhood Workshops"

   e. Why was the WebSite not updated to FEATURE the WTC-EIS?
   f. What steps were taken to supply timely data and announcements to those without computer access?

7. Environmental Justice and Special Class of Vulnerable populations: see Appendix B
   a. Not enough attention has been given to special classes of vulnerable populations such as children / pregnant women who may be much more sensitive to certain environmental hazards. Especially children in Chinatown - their asthma rate went up significantly after WTC and may increase again due to the proposed action.

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STATE OFFICE WORKERS IN GROUND ZERO REVOLT **EXHIBIT A**

By LOIS WEISS NY POST

January 24, 2004 -- EXCLUSIVE

More than 200 irate state Health Department workers are demanding that officials reconsider their group's proposed move to a building near Ground Zero, which they say has a sickening history of "extreme contamination."

In an angry petition sent yesterday to the state Office of General Services, which would oversee the move, 220 livid workers currently at 5 Penn Plaza blasted the department's proposed move to 90 Church St.

The members said the building - which was hit by the landing gear of one of the two hijacked 9/11 airliners - suffered structural damages and had been plagued by asbestos contamination, lead dust, fungi, fiberglass dust, heavy metals, mercury and bacteria.

The workers say the move could endanger their physical and mental health and that they would be forced to work for the next decade beside the largest construction site in the city - the redevelopment of the World Trade Center area.

"Noise, air pollution and congestion from the site . . . and trucks that will be continuously unloading materials" are cause for "great apprehension," they said in the petition.

"People with respiratory conditions, especially asthmatics, are very fearful of moving [and] the harmful psychological consequences of such a move should not be underestimated." The group - which represents about half of the department's 400 managers, researchers and clerical workers at Penn Plaza currently slated for relocation - wants the department to look for a "different, healthier location" for its new offices. "How ironic is it that health professionals are being asked to move to an unsafe structure and an unsafe location?" said Denyce Duncan Lacy, a spokeswoman for the Public Employees Federation, one of the unions representing the state workers.

A recent study showed that traffic and noise would be inevitable byproducts of the massive downtown redevelopment. When rebuilding efforts get under way, planners expect almost simultaneous construction of the Freedom Tower and four nearby skyscrapers, as well as the trade center memorial, a permanent PATH station and a transit center.

The 15-story, 1.1-million- square-foot limestone monolith at 90 Church St. previously housed the Postal Service and other federal offices.

It was considered damaged but stable immediately after the attacks of 9/11 and was completely renovated last year during a cleanup that included ripping out all its interior walls.

An official for Ambiant Laboratory, which tested the building afterward, told The Post its previous owners, Boston Properties, left it clean as a whistle.

"On a scale of one to 10, they were an 11," said Ambiant Vice President John Leitner. Boston Properties Vice President Robert Selsam said the building was restored "to its pre-9/11 condition."

Calls to the state health commissioner's office were not immediately returned.

Home

Exhibit B. Asthma Studies in Chinatown

Study: Asthma Up in Post-Sept. 11 NYC
Mon Mar 8, 7:07 PM ET Add U.S. National - AP

GARDEN CITY, N.Y. - Researchers said Monday they found a significant increase in the number of asthma clinic visits and asthma medications for children living in or near Manhattan's Chinatown neighborhood in the year following the terror attack that destroyed the World Trade Center towers.

"This study suggests that the collapse had clinical consequences for children with asthma and that we have reason to be concerned about chronic respiratory consequences for these asthmatic children," said one of the authors of the study, Dr. Anthony Szema, an assistant professor of medicine at Stony Brook University.

The study by Stony Brook researchers appears in the March issue of the Journal of Allergy and Clinical Immunology.

It found that in the year before Sept. 11, 2001, 306 pediatric asthma patients made 1,044 visits to a health clinic in Chinatown, northeast of Ground Zero. That jumped to 510 patients and 1,554 visits in the year following the collapse of the twin towers.

"The question that remains to be answered is: Are these kids going to need more visits to doctors and more medications for the rest of their life?" Szema said.

Federal officials announced a week after the Sept. 11 attacks that the air in downtown Manhattan was safe to breathe. Last fall, an internal watchdog at the Environmental Protection Agency (news - web sites) found the agency gave misleading assurances about the air quality at the White House's direction, downplaying health risks from the debris, for national security reasons.

NEW YORK NEW VISIONS
E. Hutton Testimony

I am Ernest Hutton, co-chair of New York New Visions. With me today are Jordan Gruzen FAIA and Marcie Kesner AICP, also co-chairs with me of NYNV and the respective heads of our site committee and our context committee. Also with us is Ethel Sheffer, a member of our executive committee and President of the Metro Chapter, American Planning Association.

New York New Visions is responding today to both the Master Plan and to the DGEIS. The American Institute of Architects, NY Chapter, and the Metro Chapter of the American Planning Association concur in this statement, in lieu of making separate statements. These verbal comments, outlining our response, will be supplemented by detailed written comments prior to the deadline of March 15 2004.

In terms of our response to the Plan, although we are technically responding as requested to the September Plan by Daniel Libeskind, , we are doing so within the context of changes that have taken occurred over the last six months. These includethe expanded site, the proposed Freedom Tower, the proposed permanent PATH station, the proposed Memorial. Our purpose here is to delineate the many issues that are still unresolved among these disparate elements, and to call for their resolution according to the principles that we at New York New Visions, the AIA and the APA have consistently advocated.

We are also responding to the Draft Generic Environmental Impact Statement (the DGEIS) for the proposed development ("Proposed Action" in CEQR-ese), which is is represented by the Plan as presented within the DGEIS . A Generic Environmental Impact Statement is intended to present the potential impacts resulting from the proposed development, to consider alternatives, and to propose mitigations where possible. It is structured as a 'Generic' EIS so as to serve as a framework for future development that takes place within its parameters, obviating the need for future Environmental Impact Statements.

1. An environmental impact statement is not a master planning document and does not reflect a comprehensive planning analysis. It is not a coordinated and complete review of the full range of public activities and private actions within a defined geographic area. The World Trade Center DGEIS before us may fulfill the legal and administrative requirements as set forth in federal NEPA, State SEQRA and City CEQR regulations, but its scope is limited to the areas required by environmental law. Tthe DGEIS can't and doesn't look at the full planning context of the proposed site plan, nor of that plan's relationship to the many other planned improvements within Lower Manhattan. For example, due to scheduling of associated studies, a variety of significant, closely related contextual actions are not included in this review. These include West Street, Fulton Street from East River to Broadway, Greenwich Street south of Liberty, South Ferry plan, or the recently proposed Air Train link to JFK Airport.

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2. In addition, The analysis contained within this DGEIS is only as good as the the clarity and accuracy of the its Proposed Action. The gaps and questions that we perceive in the description of the Proposed Action call into question the vailidty of this DGEIS as a framework for future actions.

Our general concerns with the interrelated plan and impact statement are therefore the following:

- Definition of the Proposed Action—the plan, being made up of independently created component parts-- is still unresolved and incomplete and is not yet a plan;
- Ththe glue to hold the Master Plan together is the the design guidelines, whichstill does not exist in a publicly accessible form;
- It is therefore difficult for any member of the public to assess the possible effects that would be derived from this plan and its implementation mechanism,s, such as Design Guideliens;
-

The following testimony details our initial review of these problems. As always, wWe look forward to working with the LMDC and others in search of a solution.

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NEW YORK NEW VISIONS
E. Sheffer Testimony

I am Ethel Sheffer, a member of the New York New Visions executive committee and President of the Metro Chapter of the American Planning Association. These comments are delivered on behalf of both organizations.

I would like to speak on two specific issues, concerns over sustainable development as reflected in the master plan and DGEIS to date, and similar issues having to do with historic preservation on and near the site.

Sustainability

The sustainability comments have been drafted for NYNV by Bruce Fowle AIA, senior partner of Fox & Fowle Architects and a member of our executive committee.

We appreciate the effort that has been made to incorporate guidelines for sustainability. While recognizing that this is a work in progress, it is important to note that what has been proposed is focused primarily on the individual development projects and makes no call for a comprehensive master plan for sustainability. What is needed, as part of the design guidelines and incorporated into the standards established for the GEIS, is a study of the entire site and its environs that sets forth sustainability measures that will be common to all projects-- and allocates responsibility for those measures. While the guidelines presented are at the leading edge of the norm for large scale developments, they generally do not seize the unprecedented opportunity afforded here to set new benchmarks that will advance state-of-the-art of sustainability practices and technologies. The fact that tenants, the occupants of 80-85% of the above-grade floor space, are not mandated to comply with the guidelines suggests business as usual.

Other issues include:

- Shadow analysis: The shadow analyses acknowledge that there will be a negative impact on open spaces toward the north and east of the site. What is not addressed is the impact that shadows from the five towers will have on existing buildings and neighborhoods beyond the site.
- Wind power: While there is some reference in the executive summary to wind power proposed on the Freedom Tower, it is not even mentioned as a possible alternative energy source in Appendix A. There are five key issues that need to be addressed on wind power: safety, noise, vibration, icing and bird mortality -- not to mention approval by the city.
- Air pollution: A primary source of air pollution, which is addressed in general, will be the exhaust air from the sub-grade parking, security check-in, loading docks, bus stations, etc. There is no discussion as to how this will be handled

Historic Preservation

There is an argument to be made that the WTC site should be regarded as a ruin, thereby bringing into place the ability to declare existing fragments as significant. The document, *Coordinated Determination of National Register Eligibility*, which in its final form will constitute the determination of historic resources and any adverse effects upon them for purposes of the FGEIS, lists all these resources but then dismisses them as insignificant.

For instance, with respect to the Slurry Wall, Statements were made at the 106 hearings that the slurry walls cannot be considered as significant features because they have been repaired and would require stabilization in order to be displayed. This begs the questions of whether *with stabilization* both features could be preserved. National Register eligibility requirements do allow for the protection of stabilized ruins so long as substantial portions remain.

Basically, the report says that there is no point in keeping these or other last remnants of the WTC since we can photograph them. The argument about a lack of functional integrity only applies if we continue to reject the concept that they are *ruins*, in which case they can also be stabilized without losing integrity.

It is therefore no surprise that Section V: Proposed Finding, states "For the reasons set forth in Chapter 5 of the DCEIS and in the discussion above, LMDC proposed to find that the Proposed Action would not have an adverse effect of historic resources." We are concerned about the analysis that led to this conclusion.

TESTIMONY AT THE PUBLIC HEARING FOR THE GENERAL ENVIRONMENTAL IMPACT STATEMENT
FEBRUARY 18, 2004
BY JORDAN GRUZEN, FAIA

I AM JORDAN GRUZEN, AN ARCHITECT SPEAKING BOTH AS, REPRESENTATIVE OF THE NEW YORK CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS AND CO-CHAIR OF NEW YORK NEW VISIONS AND ITS SITE COMMITTEE.

NEW YORK NEW VISIONS IS A PRO-BONO CONSORTIUM OF 21 ARCHITECTURAL, PLANNING AND ENGINEERING ORGANIZATIONS THAT HAS FOR THE LAST 2 1/2 YEARS, SINCE SEPTEMBER 11TH, BEEN ACTIVELY PARTICIPATING IN THE RECONSTRUCTION EFFORT.

AS A RESULT OF OUR ANALYSIS, COMMENTARY AND SPECIFIC PLANNING SUGGESTIONS WE HAVE MET REGULARLY WITH THE CLIENT AGENCIES AND THEIR CONSULTING ARCHITECTS AND ENGINEERS. WE HAVE REVIEWED EACH PUBLISHED PLANNING DOCUMENT AND HAVE OFFERED TIMELY REACTIONS TO THE PROPOSALS.

TODAY, WE WISH TO OFFER OUR REACTIONS TO THE MASTER PLAN AS IT IS CONSIDERED IN THE GENERAL ENVIRONMENTAL IMPACT STATEMENT. THE GENERAL ENVIRONMENTAL IMPACT STATEMENT IS A SOUND AND THOUGHTFUL DOCUMENT, AND IT COVERS ASPECTS OF THE PLAN IN GREAT DETAIL. NEVERTHELESS, THERE ARE ISSUES THAT WE BELIEVE NEED GREATER ATTENTION AND SIGNIFICANTLY INCREASED DESIGN ACTION.

EACH PART OF THE PLAN IS BEING DEVELOPED BY A SEPARATE GROUP OF DESIGN PROFESSIONALS, EACH WORKING FOR A DIFFERENT CLIENT, WHETHER IT BE LMDC, THE PORT AUTHORITY, M.T.A., NYSDOT, OR SILVERSTEIN. IN EXAMINING THESE PLANS WE

HAVE OBSERVED A WEAKNESS IN THE CONTINUITY BETWEEN ADJACENT ELEMENTS. THERE ALSO MAY BE A DIFFERENCE OF OPINION BETWEEN GROUPS ABOUT HOW THESE LAND USE AND CIRCULATION ISSUES SHOULD BE RESOLVED. THIS IS NOT SURPRISING SINCE THESE IDEAS ARE NOW JUST EMERGING IN PHYSICAL FORM AND CAN NOW BE MEASURED AND EVALUATED WHEN SEEN IN THE LIGHT OF THE OVERALL MASTER PLAN. THIS MASTER PLAN, BROADLY CONCEIVED BY DANIEL LIBESKIND, HAS HAD MANY EVOLUTIONARY CHANGES SINCE ITS INTRODUCTION BUT STILL REMAINS THE DOMINANT CONCEPT. NEW YORK NEW VISIONS HAS BEEN SUPPORTIVE OF THIS OVERRIDING VISION. WE ENCOURAGE LMDC AND THE OTHER CONTROLLING AUTHORITIES TO WORK CLOSELY TOGETHER SO THAT WE DO NOT END UP WITH POWERFULLY EXPRESSIVE INDIVIDUAL SOLUTIONS TO THE PARTS WITHOUT THE CONNECTIVITY THAT MAKES FOR AN INTEGRATED URBAN FABRIC.

AS EXAMPLES:

- WE BELIEVE THE PLANNING OF THE FREEDOM TOWER, THE MEMORIAL ELEMENTS. THE CULTURAL BUILDINGS AND THE PATH TERMINAL SHOULD HAVE AN OVERRIDING SYSTEM OF PEDESTRIAN MOVEMENT THAT LEADS NEIGHBORS, WORKERS, AS WELL AS VISITORS, THOUGH THE VARIOUS ABOVE GRADE SPACES AND UNDERGROUND PASSAGES;
- ALL FOUR SIDES OF THE MEMORIAL SITE SHOULD BE INTEGRATED WITH ADJACENT USES AND PROVIDE FOR AUTO, BUS. AND PEDESTRIAN ACCESS;
- FOR THE WEST SIDE OF THE MEMORIAL

  1. IF NYSDOT DETERMINES THAT WEST STREET WILL BECOME A RAISED STREET OVER A DEPRESSED THROUGH-HIGHWAY, THEN THIS SERVICE ROAD WILL ALLOW EASIER PEDESTRIAN ACCESS FROM THE WORLD FINANCIAL

CENTER AND BATTERY PARK CITY TO THE MEMORIAL PLAZA LEVEL;

2. WEST STREET'S ELEVATION WILL AFFECT THE AVAILABILITY OF DRIVE-BY VIEWING INTO THE SITE FROM AUTOMOBILES AND BUSSES ON THE SERVICE ROAD;

- FOR THE SOUTH EDGE OF THE MEMORIAL SITE

1. WE HAVE GREAT CONCERN THAT THE SOLUTION CURRENTLY SHOWN FOR THE ACCESS RAMP LEADING FROM LIBERTY STREET TO THE BELOW GRADE VEHICLE INSPECTION STATION DOES DAMAGE TO THE PEDESTRIAN FLOW, THE APPEARANCE OF THE STREET, AND THE INTEGRITY OF THE MEMORIAL. STACKING OF VEHICLES ON THE RAMP CAN CAUSE A PROBLEM AT THE INTERSECTION OF LIBERTY AND WEST STREETS;

2. A LARGE, OPEN PARK SURROUNDING A NEW GREEK ORTHODOX CHURCH IS NOT THE BEST MASSING SOLUTION TO THE SOUTHERN BOUNDARY OF THIS LARGE, OPEN MEMORIAL PLAZA. ANOTHER LOW CULTURAL BUILDING WITH PROPER BLAST PROTECTION, WOULD BE A PREFERRED SOLUTION;

- THE EAST EDGE OF THE MEMORIAL SITE

1. GREENWICH STREET, THE MEETING OF THE MEMORIAL, THE PATH TERMINAL, THE CULTURAL BUILDINGS AND SEVERAL OFFICE BUILDINGS IS THE LEAST DEVELOPED AREA IN THE PLAN AND REQUIRES COLLABORATION BETWEEN THE FOUR OWNER GROUPS. PEDESTRIAN FLOW FROM THE PATH STATION TO THE CULTURAL BUILDINGS AND THE MEMORIAL ELEMENTS IS NOT YET SATISFACTORILY RESOLVED;

- THE MEMORIAL DESIGN SHOULD EVOLVE WITH SIGNIFICANTLY ADDED PENETRATIONS FROM GRADE TO THE SUB-TERRANEAN SPACES TO ALLOW VISUAL AND PHYSICAL CONNECTIVITY BETWEEN LEVELS;
- THE SLURRY WALL SHOULD HAVE SUBSTANTIAL VISIBILITY FROM AREAS OTHER THAN THE LOWER LEVELS OF THE MEMORIAL;
- THE GEIS SPEAKS ON SEVERAL OCCASIONS TO THE IMPORTANCE OF RETAIL SPACE AT GRADE TO ANIMATE THE STREETS AND THE NEWLY CREATED PLAZAS. THIS IS CURRENTLY AN UNRESOLVED ASPECT OF THE MASTER PLAN. WE UNDERSTAND THE NEED TO PROTECT THE MEMORIAL SPACE FROM DISTRACTING RETAIL ACTIVITY, BUT IN EXAMINING THE PLANS WE SEE AN ABSENCE OF RETAIL SPACE IN SEVERAL OF THE OTHER ELEMENTS THAT FRONT ON THE NEW PUBLIC SPACE. AS THE PLANS PROCEED BEYOND THIS STAGE, WE HOPE THAT EACH DESIGNER WILL DISCOVER THE FULL POTENTIAL TO ENLIVEN THE STREET ACTIVITY;
- A GREAT DEAL OF THE PROGRAMMED SPACE IS BELOW GRADE AND A LARGE PROPORTION OF THE POPULATION WILL MOVE FROM ACTIVITY TO ACTIVITY IN THESE PASSAGEWAYS. IT IS OUR FEELING THAT A SERIOUS RE-EXAMINATION OF THE COMPATIBILITY OF ADJACENT BELOW GRADE SPACE USES WILL LEAD TO INCREASED CONNECTIVITY BETWEEN THEM. WE ALSO BELIEVE THAT THIS UNDERGROUND SPACE CAN BE ARCHITECTURALLY MORE EXPRESSIVE AND SATISFYING IF IT IS GENEROUSLY PROVIDED WITH NATURAL LIGHT FROM ABOVE;

IN CONCLUSION, IT IS CRITICAL THAT THE LMDC, THE PORT AUTHORITY, NYSDOT, AND SILVERSTEIN WORK CLOSELY TOGETHER TO INTEGRATE THEIR INDIVIDUAL PARTS,

AND WE OFFER THE CONTINUING PARTICIPATION OF NEW YORK NEW VISIONS AND THE AIA NEW YORK CHAPTER AS INDEPENDENT CONTRIBUTORS TO THIS UNIQUE PLANNING RESPONSIBILITY.

NEW YORK NEW VISIONS
Testimony of
Marcie Kesner AICP

I am Marcie Kesner, AICP, Co-chair of New York New Visions and a member of the Metro Chapter of the American Planning Association. These remarks are being delivered on behalf of both organizations.

As we said in our August comments on the EIS scope, the redevelopment of the site must be driven by a broad conception of the public interest--not by private interests nor by the parochial goals of individual public agencies. In addition, I want to reiterate our position that an EIS is no substitute for sketchy - does not replace the need for comprehensive planning. In addition this overall comment, the following are specific comments on the DGEIS before us:

- The Proposed Action is incomplete as described in the DGEIS. The location of uses is unclear from the sketchy description and incomplete diagrams.
    - The location of retail uses, particularly as they relate to the ground plane, is not clear. The amount and location of below grade retail use is not specified.
    - There is a lack of clarity as to pedestrian and vehicular connections to surrounding community. One section refers to re-opening east-west and north-south connections, while others sections mention, for example "streets may be closed" (Section 1-20).
    - The Proposed Action does not include treatment of Route 9 A or of the PATH Terminal, both of which are inextricably linked to the site plan.

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- The Arad/Walker Memorial plan is illustrated in the DGEIS but the text refers to a LMDC competition as underway.

- The Design Guidelines are not included. As we know, the devil is in the details and it is these guidelines which are key to defining the generic framework for future development which is key to the EIS strategy. How will the buildings on the site relate to each other, their context, and the open spaces?

  - 'Should' and 'would' are used to describe site design treatments.

  - Assumptions of how development of the WTC site will relate to the surrounding context ~~is~~ are therefore based on wishes—not on specific design guidelines that are shared with the public at this time. The office program as defined is still too large and, as NYNV stated in its comments on the proposed EIS Scope in August 2003, is not based upon objective market analysis. The stated public policy goal is to retain Lower Manhattan as major office hub, and the DGEIS accepts the premise that 10 million square feet on the expanded project site is the only manner in which to do so. Even the reduced impact alternative accepts as a given the 10 million square feet (with a note that by expanding Project Site to south of Liberty Street, the overall density of the combined sites has been effectively reduced by 1.5 million square feet) and states that all reductions would have to be to retail, hotel, or cultural uses. No objective analysis is presented of truly reduced office density, nor of any analysis as to what is the real impact of putting 10 million square feet of office space onto the market by 2015—nor the reality of that assumption.

- Similarly with the retail program: The DGEIS mentions that 2.3 million sf (32% of Downtown's 7.1 million sf) is currently vacant and catalogs the difficulties that downtown retailers are already having. What would be the effect of adding the additional 1 million sf? Moreover, all of the retail is proposed to be built by

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2009, while only 2.6 million sf of the office space will be built by then (and the rest not at all if the market doesn't call for it). So the spurt of retail space supply would not, for a good period of time, have the support of the purchasing power of workers in the 7.4 million sf of office to be built post-2009. It would, under the sequencing of this plan, be thrown onto the current depressed market. Finally, because much of it would be built underground or above grade (2nd & 3rd floors), it risks drawing retail traffic off the street entirely.

The DGEIS does not satisfactorily address these concerns, in large part due to the form of an environmental impact statement. This once again underlines the need for truly comprehensive planning that examines in a less structured format the interrelationships among a wide range of planned and proposed actions within a larger geographic area. We at New York New Visions and the American Planning Association would look forward to working with LMDC and other involved government agencies in performing this comprehensive planning review.

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NewYork NewVisions | Coalition for the Rebuilding of Lower Manhattan

Tuesday, March 16, 2004

Mr. Kevin Rampe, President
Lower Manhattan Development Corporation
1 Liberty Plaza
New York, NY 10006
Dear Mr. Rampe:

These written comments reiterate the testimony given by representatives of New York New Visions at the public hearing on the Draft Generic Impact Statement ("DGEIS") and General Project Plan ("GPP") for what is called the Memorial and Site Design Plan ("Plan") for the World Trade Center site.

In terms of the Plan, although we are technically responding as requested to the September Plan by Daniel Libeskind, we are doing so within the context of changes that have occurred over the last six months. These include the expanded site, the proposed Freedom Tower, the proposed permanent PATH station, and the proposed Memorial. Our main point is to delineate unresolved issues among these disparate elements, and to call for their resolution according to the principles that we at New York New Visions, the AIA, and the APA have consistently advocated.

We are also responding to how the DGEIS outlines the anticipated environmental impacts of the proposed development ("Proposed Action" in CEQR-ese), which is represented by the Plan as presented within the DGEIS.

Our responses to these two documents are constrained by their formats and purpose. A Generic Environmental Impact Statement is intended to present the potential impacts resulting from the proposed development, to consider alternatives, and to propose mitigations where possible. The document before us is structured as a 'Generic' EIS so as serve as a framework for future development that takes place within its parameters, obviating the need for future Environmental Impact Statements.

First, an environmental impact statement is not a master planning document and does not reflect a true comprehensive planning analysis. It is not a coordinated and complete review of the full range of public activities and private actions within a defined geographic area. The World Trade Center DGEIS before us may fulfill the legal and administrative requirements as set forth in federal NEPA, State SEQRA and City CEQR regulations, but its scope is limited to the areas required by environmental law. The DGEIS can't and doesn't look at the full planning context of the proposed site plan, nor of that plan's relationship to the many other planned improvements within Lower Manhattan. For example, due to scheduling of associated studies, a variety of significant, closely related contextual actions are not included in this review. These include West Street, Fulton Street from East River to Broadway, Greenwich Street south of Liberty, South Ferry plan, or the recently proposed Air Train link to JFK Airport.

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In addition, the analysis contained within the DGEIS is only as good as the clarity and accuracy of its Proposed Action. The gaps and questions that we perceive in the description of the Proposed Action call into question the DGEIS as a fully analysed framework for future actions.

Our general concerns with the interrelated plan and impact statement are therefore the following:

* Definition of the Proposed Action- the plan, being made up of independently created component parts, is still unresolved and incomplete, and is not yet a plan;

* The glue to hold the Master Plan together is the design guidelines, which still do not exist in a publicly accessible form;

* It is therefore difficult for any member of the public to assess within the EIS deadline for comment the possible impacts which derive from this plan and its implementation mechanism, the Design Guidelines.

1. The Plan

NYNV is a pro-bono consortium of 20 architectural, planning and engineering organizations that have for the last 2 1/2 years, since September 11th, been actively participating in the reconstruction effort. As a result of our analysis, commentary and specific planning suggestions we have had the privilege to meet regularly with the client agencies and their various consulting architects and engineers. We have reviewed published planning documents and have been able to offer timely reactions to the proposals being made.

The City Planning Commission Review of the World Trade Center's Amended Project Plan is very perceptive in defining criteria for changes and further regulations that will benefit the overall plan. NYNV supports many of its observations and requirements. These are some of the issues that NYNV believes need further study and improved solutions both in the Master Plan and in the Memorial design.

Memorial Site Edges

In general, the decision to use the northwest corner as elevation datum for a completely level site has the unfortunate impact of isolating the site from its perimeter context by an often huge retaining wall. We understand the desire to distinguish the memorial site from its more secular surroundings, but feel that this can be accomplished by other means, including using cultural uses as buffers to adjacent commercial development (a concept which grew out of early workshops with community and family members, adopted by the original Libeskind plan).

If some vertical separation is required by the memorial concept, attention should be paid to such examples as the Trinity churchyard retaining wall along Rector Street,

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which follows in part the slope of the street itself. Any wall defining the World Trade Center site should maintain a human scale and height— the site itself should slope so that one can always see into the site from the perimeter. The nature of such a wall-- type of material, slope if any, possible inclusion of artifacts, etc.-- is a design problem in itself.

- The West Street perimeter should allow several points of access to the site by pedestrians. The effect of the proposed high wall is to limit access only from the corners of Liberty and Fulton streets. The design should increase opportunities to view the slurry wall opening from the west. If West Street becomes a raised street over a depressed through highway, then the higher grade will allow easier access from this side. All four sides of the Memorial Site should be considered for taxi and bus access in order to reduce the congestion and disturbance on any one street. Bus parking and waiting should be prohibited.

- The South edge, Liberty Street will have increased pedestrian access from Battery Park City and a growing Greenwich Street community. The service ramp, down into the truck and bus security checkpoint, is a visual and physical blockage to the continuity of the public open space. It must be relocated. The large open park surrounding the new Greek Orthodox Church is not the best southern boundary for the large open Memorial plaza. Instead, another low building containing cultural space would be a preferred boundary for the Memorial. Explosion protection can be provided below this new building.

- The slurry wall is not adequately exposed to view in response to the earlier opinion of NYNV that the visual void of the "bathtub" seen from many vantage points was the strongest expression of the tragedy of loss. The current narrow opening in the west edge of the Memorial Plaza does not give adequate expression to the wall. The wall is only seen up close from the relocated ramp moved to the north and from within the below grade Memorial Center space. Without diminishing the Memorial Plaza, the openings can be enlarged.

- No northern Memorial Plaza edge exists. The space flows across Fulton Street and becomes the forecourt of the New Freedom tower. Either trees, a retaining wall or changes of plane here must not restrict space for pedestrian movement along Fulton Street.

- The new pair of "cultural buildings", remaining from the bolder Libeskind master plan, anchor the northeast corner of the Memorial space. Together they can act as an entry gateway to the plaza. These two buildings should have sufficient mass and the right form to compliment both the Plaza and the new Path Station design by Calatrava. View corridors from Dey Street should influence their placement and footprint.

- The Greenwich Street edge seems defined only by landscaping or sidewalk furniture. The design cannot accommodate a major tourist bus drop off without distracting from the Memorial character. The southeast corner of the plaza requires an additional low building as a buffer or shield for the southern Memorial pool as originally planned by

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Libeskind. The removal of these low structures on the north, east and south sides has weakened the plan. The mandated retail on the East Side of the street should defer to the Memorial.

Memorial Plaza; Below Grade Space; The Footprints

- The Memorial Plaza landscape treatment may not be programmed to accommodate both occasional large gatherings as well as more frequent smaller groups of people. If the below Liberty Street park is eliminated, there will be a need for a large gathering space elsewhere.

- The plaza can be graded or stepped to relate more easily to all four perimeter streets. This changing elevation must not, however, significantly diminish the useable space below for the Memorial Center.

- The WTC footprint voids should contain water features of sufficient expressive character to be fully appreciated as Memorials to the 9/11 tragedy. This can be achieved by Arad's design of large, quiet reflecting pools contrasting with the active sight and sound of falling water. However, do both footprints require the identical expression or is there a potential for varied experience by treating them differently?

- The entry points to the lower spaces for the Memorial Center should be located in some proximity to the exits from the Memorial pools as well as related to the entries to the Plaza. They should also be placed for inclement weather visiting.

- The below grade space should be formed to develop a sequence of powerful spatial experiences for the visitors utilizing artifacts from the 9/11 destruction. Use of skylights from above should animate and dramatize the spaces.

- The slurry wall should be incorporated into the Memorial Center visitors experience with dramatic effect.

- Does the plan yet take advantage of the visual potential of the north, pedestrian passage from the Path Station to the World Financial Center? For instance, can the substantial number of visitors in the passageway enter the Memorial Center along the slurry wall without disturbing visitors to the Memorial pools? Do all visitors have to rise first to the surface and then descend again in order to have the moving experience of entry into the Memorial chambers?

- There is the potential for a large interconnecting exhibition/ lobby space between the Memorial Center and the Footprint Pools. This space (like that below the Louvre pyramid in Paris) could become the knuckle that connects all the parts of the Memorial and adjacent uses without either disturbing the serenity of the reflective spaces or connecting directly to the Path Terminal.

Street front Retail and New Plazas

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- The earlier criteria, widely supported, to maximize the street front level retail has not been satisfied. Why does the design of the Path Terminal have none? The glass roof of the PATH station where it meets the ground level plaza contains no elements of retail use (such as kiosks) to support plaza life. There appears to be heavy reliance on only below grade retail, unconnected with elements from above in the base of the office buildings and terminal.

- Several proposed plazas adjacent to the PATH terminal and the Freedom Tower have potential to be sun filled places for relaxation and refreshment, but require adjacent retail space for servicing.

- The shapes of these plazas are not clearly contained with trees or low buildings or other site features.

- The vitality of Fulton Street, east of Broadway should carry as well to the West into the Memorial zone. Together with Greenwich Street do these retail potential streets present a contrasting character yet supportive function across the street from the Memorial. If retail frontage is appropriate on these two streets facing the Memorial,a (and this is a delicate design challenge), strong edge conditions adjacent to the Memorial Plaza must be created. This was the function of the earlier cultural buildings, and some similar buffer or transition would still seem to be needed.

- Dey Street's roadbed, either as an extension of the PATH terminal plaza or as a one way street, will depend upon the design of the Terminal edge. If no retail is provided on the Terminal's southern edge, then the retail in the base of Tower Three will serve this open space and the road will be then a hindrance.

Each part of the plan is being developed by a separate group of design professionals, each working for a different client, whether it be LMDC, the Port Authority, MTA, NYSDOT, or Silverstein. In examining these plans we have observed a weakness in the continuity between adjacent elements. There also may be a difference of opinion between groups about how these land use and circulation issues should be resolved. This is not surprising since these ideas are now just emerging in physical form and can now be measured and evaluated when seen in the light of the overall master plan. This master plan, broadly conceived by Daniel Libeskind, has had many evolutionary changes since its introduction but still remains the dominant concept. New York New Visions has been supportive of this overriding vision. We encourage LMDC and the other controlling authorities to work more closely together so that we do not end up with powerfully expressive individual solutions to the parts without the connectivity that makes for an integrated urban composition.

In conclusion, it is critical that the LMDC, the Port Authority, NYSDOT, and the developer work closely together to integrate their individual parts, and we offer the continuing participation of New York New Visions and the *AIA New York Chapter* as independent contributors to this unique planning responsibility.

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2. The DGEIS

As we said in our August comments on the EIS scope, the redevelopment of the site must be driven by a broad conception of the public interest-not by private interests nor by the circumscribed goals of individual public agencies. An EIS, no matter how skillfully prepared, cannot replace the need for truly comprehensive planning that looks at all planned and proposed government actions within a wider geographic area The Proposed Action described in the DGEIS does not include other off-site actions and plans that will affect, and be affected by, development at the World Trade Center site; it does not include meaningful alternatives; and it does not provide an objective basis for the proposed development program.

Significantly, a DGEIS is not designed to address serious and critical issues regarding governance and administration, which are of vital concern for a site with so many overlapping jurisdictions. These are planning and public policy questions that deserve open discussion and public input. An EIS document cannot and should not be viewed as an alternative to this public debate. These issues include the following questions: what are the Design Guidelines and who will administer them; how can the Plan be amended; what official role does the City of New York and its elected representatives and administrative agencies have in the governance of 16 acres of land in New York City?

In addition to these general comments, the following are specific comments on the DGEIS before us:

- The Proposed Action is incomplete as described in the DGEIS. The location of uses is unclear from the sketchy description and incomplete diagrams.

* The locations of retail uses, particularly as they relate to the ground plane, are not clear. The amount and location of below grade retail use is not specified.

- There is a lack of clarity as to pedestrian and vehicular connections to surrounding community. One section refers to re-opening east-west and north-south connections, while others sections mention, for example, "streets may be closed" (Section 1-20).

- The Proposed Action does not include treatment of Route 9 A or of the PATH Terminal, both of which are inextricably linked to the site plan.

- The Arad/ Walker Memorial plan is illustrated in the DGEIS but the text refers to a LMDC competition as underway. With the relationship of the Memorials to the site plan still in flux, how can their impacts be accurately estimated?

- The Design Guidelines are not included. As we know, the devil is in the details and it is these guidelines that are key to defining the generic framework for future

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development which is key to the EIS strategy. Official public comment is therefore not possible regarding such questions as how buildings on the site will relate to each other, their context, and the open spaces.

- 'Should' and 'would' are used to describe site design treatments. Assumptions of how development of the WTC site will relate to the surrounding context are therefore based on wishes,not on specific design guidelines that are shared with the public at this time.

- The office program as defined is still too large and, as NYNV stated in its comments on the proposed EIS Scope in August 2003, is not based upon objective market analysis. The stated public policy goal is to retain Lower Manhattan as major office hub, and the DGEIS accepts the premise that 10 million square feet on the expanded project site is the only manner in which to do so. Even the reduced impact alternative accepts as a given the 10 million square feet (with a note that by expanding Project Site to south of Liberty Street, the overall density of the combined sites has been effectively reduced by 1.5 million square feet) and states that all reductions would have to be to retail, hotel, or cultural uses. No objective analysis is presented of truly reduced office density alternatives, nor any analysis as to what is the real impact (or realistic feasibility) of putting 10 million square feet of office space onto the market by 2015.

- Similarly with the retail program: The DGEIS mentions that 2.3 million sf (32% of Downtown's 7.1 million sf) is currently vacant, and catalogs the difficulties that downtown retailers are already having. What will be the effect of adding this additional 1 million sf? Moreover, all of the retail is proposed to be built by 2009, while only 2.6 million sf of the office space will be built by then (and the rest not at all if the market doesn't call for it). So the spurt of retail space supply would not, for a good period of time, have the support of the purchasing power of workers in the 7.4 million sf of office to be built post-2009. It would, under the sequencing of this plan, be thrown onto the current depressed market. Finally, because much of it would be built underground or above grade (2nd & 3rd floors), it risks substantially drawing retail traffic off the street..

The DGEIS does not satisfactorily address these concerns, perhaps due to the form of an environmental impact statement. This once again underlines the need for truly comprehensive planning that examines in a less structured format the interrelationships among a wide range of planned and proposed actions within a larger geographic area. We at New York New Visions would look forward to working with LMDC and other involved government agencies in performing this comprehensive planning review.

3. Sustainable Development

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We appreciate the effort that has been made to incorporate guidelines for sustainability. While recognizing that this is a work in progress, it is important to note that what has been proposed is focused primarily on the individual development projects and makes no call for a comprehensive master plan for sustainability. What is needed, as part of the design guidelines and incorporated into the standards established for the GEIS, is a study of the entire site and its environs that sets forth sustainability measures that will be common to all projects-- and allocates responsibility for those measures.

While the guidelines presented are at the leading edge of the norm for large scale developments, they generally do not seize the unprecedented opportunity afforded here to set new benchmarks that will advance state-of-the-art of sustainability practices and technologies. The fact that tenants, the occupants of 80-85% of the above-grade floor space, are not mandated to comply with the guidelines suggests business as usual.

Other issues include:

* Shadow analysis: The shadow analyses acknowledge that there will be a negative impact on open spaces toward the north and east of the site. What is not addressed is the impact that shadows from the five towers will have on existing buildings and neighborhoods beyond the site.

* Wind power: While there is some reference in the executive summary to wind power proposed on the Freedom Tower, it is not even mentioned as a possible alternative energy source in Appendix A. There are five key issues that need to be addressed on wind power: safety, noise, vibration, icing and bird mortality - not to mention approval by the city.

* Air pollution: A primary source of air pollution, which is addressed in general, will be the exhaust air from the sub-grade parking, security check-in, loading docks, bus stations, etc. There is no discussion as to how this will be handled.

4. Historic Preservation

There is an argument to be made that the WTC site should be regarded as a ruin, thereby bringing into place the ability to declare existing fragments as significant. The document, Coordinated Determination of National Register Eligibility, which in its final

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form will constitute the determination of historic resources and any adverse effects upon them for purposes of the FGEIS, lists all these resources but then dismisses them as insignificant.

For instance, with respect to the Slurry Wall, statements were made at the Section 106 hearings that the slurry walls cannot be considered as significant features because they have been repaired and would require stabilization in order to be displayed. This begs the questions of whether with stabilization these features could be preserved. National Register eligibility requirements do allow for the protection of stabilized ruins so long as substantial portions remain.

Basically, the report says that there is no point in keeping these or other last remnants of the WTC since we can photograph them. We find the statement "none of these remnants are considered character-defining in relationship to the WTC as a symbol of American commerce or to the attacks or to the rescue and recovery efforts" the most peculiar. By this standard, most of the remnants in the Forum in Rome aren't worth saving. Of course they don't relate to the WTC as a "symbol." They relate to the WTC as buildings, the actual structures that were attacked. Section V: Proposed Finding, states "For the reasons set forth in Chapter 5 of the DGEIS and in the discussion above, LMDC proposed to find that the Proposed Action would not have an adverse effect of historic resources." We are concerned about the analysis that led to this conclusion and we believe that the public will reject this reasoning as well.

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In conclusion, it is critical that the LMDC, the Port Authority, NYSDOT, and Silverstein work closely together to integrate their individual parts, and we offer the continuing participation of New York New Visions and the *AIA New York Chapter* as independent contributors to this unique planning responsibility.
Sincerely yours,

Jordan Gruzen, AIA
Ernest Hutton, AICP, Assoc AIA
Marcie Kesner, AICP
Co-Chairs,
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From: Jennakilt@aol.com [mailto:Jennakilt@aol.com]
Sent: Tuesday, February 24, 2004 2:19 PM
To: WTCENVIRONMENTAL
Subject: dgeis comments

This is a rush job. Although the rebuilding of Ground Zero will be one of the largest construction projects in the world, the usual three year EIS process has been condensed to one for reasons that have nothing to do with the environment or public health. Once again, the reasons have to do with image and politics. In this respect as in others, the rebuilding process shows signs of repeating the reckless behavior of the cleanup operation.

The Draft Generic EIS is flawed in that it does not discuss how all the 9/11 Community Development Block Grant money which was or will be approved by Housing and Urban Development will be disbursed. This omission is in violation of the National Environmental Policy Act and the State Environmental Quality Review Act. For instance the DGEIS does not discuss the seventy million dollars allocated to the inaccurately named Hudson River Park which both Friends of the Earth and Sierra Club have said will be damaging to fisheries as well as to other aspects of the environment. This money would be better spent on cleanup of the contaminants which remain from the environmental disaster of 9/11 in people's homes, offices and public buildings; healthcare for those affected; and affordable housing.

The DGEIS consists in large part of sanguine projections into the future and assurances that where there are problems they'll be handled appropriately "when practical."

Who determines what's practical? Who defines it and according to what criteria? During the cleanup it was often found to be impractical to wet down dust during the winter for fear the water would freeze. Is that going to happen again? Will other actions protective of human health be considered impractical because they require too much time or money? (On the subject of dust suppression: If chemical foams are used to tamp down dust, Material Safety Data sheets for each foam should be made available to the public and press no later than six weeks before application begins. All instructions on the label should be followed.)

Will it be considered impractical to enforce the rules against truck and bus idling? And how will those rules be enforced? Simply through fines? Bus and truck companies are known to consider fines a necessary part of doing business and to write the expense into their contracts. The fines, therefore, don't deter anybody.

If LMDC's predictions about the future are anything like their comments about the past, we're in trouble. About the cleanup after 9/11 they rely on EPA data although EPA was found by its own Inspector General to have misled the public about the air following 9/11. This doesn't stop the DGEIS from asserting that the dioxin levels until January 2002, some of which were the highest ever recorded, attaining to 170 times the previous record, are "not expected to cause serious longterm health problems."

Not expected by whom? There are many venerable scientists who do expect serious longterm health consequences. In this assertion the DGEIS is engaging in 'averaging:' When levels are uncomfortably high, dilute them over a larger time or space and they'll go away.

The human body, however, doesn't play that game. When a child ingests E Coli, the body doesn't average. The child gets sick or dies. Similarly, when people's immune systems were assaulted in the months following 9/11 by dioxin and other toxics, those immune systems didn't say, "I'll just average this out over a lifetime and he or she'll be fine."

The DGEIS also asserts that P.M. 2.5 was not much of a problem outside Ground Zero. This, too, is false. For half the days until February P.M. 2.5 was higher at Stuyvesant High School than at Ground Zero.

Finally, the DGEIS refers to EPA's cleanup of Lower Manhattan apartments. It neglects to say that because of the agency's lackadaisical outreach and its distribution of fliers that said EPA did not expect serious long term health consequences from the contaminants that remained in people's homes, fewer than 20% of eligible residences received this cleanup. For the record, the cleanup was woefully inadequate anyway in ways which are not relevant here.

3/16/2004

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These are a few of the reservations which 9/11 Environmental Action and Concerned Stuyvesant Community have about this document and the building scheduled to take place pursuant to it. In addition we endorse the recommendations of Skyscraper Safety Campaign regarding safety and the responsibility of the Port Authority to adhere to all relevant local, state and federal regulations.

Jenna Orkin
Steering Committee, 9/11 Environmental Action
Concerned Stuyvesant Community

3/16/2004

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Testimony of Glenn P. Goldstein
Program Director, NESCAUM

LMDC DGEIS Public Hearing
February 18, 2004

Dear Mr. Rampe and Colleagues:

Thank you for the opportunity to speak before you today regarding the DGEIS (Draft Generic Environmental Impact Statement) for the proposed World Trade Center Memorial and Redevelopment plan. First allow me to commend you on the work LMDC continues to do in coalescing the thoughts, hopes, and visions of so many into what will one day surely become the most mesmerizing landmark and humbling sanctuary in this great city. When done, the WTC memorial, freedom tower, and surrounding grounds will be truly remarkable.

What may be truly unremarkable, however, is the manner in which the site is potentially reconstructed. The DGEIS, in its current form, neither addresses in any meaningful way nor provides mitigation guidelines and standards for the long term adverse impacts from the very machines, equipment, and vehicles that stand to re-erect the World Trade Center complex. This must change.

As the Program Director for NESCAUM[1] (the Northeast States for Coordinated Air Use Management), I am the lead individual responsible for implementing the diesel emissions reduction initiative at 7 WTC with Silverstein Properties, and an environmental scientist who has quantified first hand the impact of mobile source air toxic emissions to our public health. In a report published in June of 2003 evaluating the occupational and environmental impact of non-road diesel equipment in the Northeast , NESCAUM found that "diesel equipment activity substantially increased fine particulate matter exposures for workers and nearby residents, in some cases by as much as 16 times. With our growing understanding of the adverse health impacts associated with both acute and chronic fine particulate matter exposure, this finding raises the concern of the potential adverse health impact for individuals working and living near worksites like those evaluated.[2]"

At 7 WTC, my work and that of my colleagues has centered around the control and mitigation of mobile source air toxics, metals, and gases through the use of fuel technologies and exhaust after-treatment devices, more commonly referred to as

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[1] A nonprofit association of the eight air quality agencies of the Northeast States.
[2] A full copy of this report, entitled "Evaluation of the Occupational and Environmental Impacts of Nonroad Diesel Equipment in the Northeast", has been submitted with this testimony. The primary author, Dr. Melinda Treadwell of NESCAUM, can be reached at 617-367-8540, or by email at mtreadwell@nescaum.org.

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'retrofits'. In most instances, we are able to achieve 30-80% reduction in fine particulate matter and 70 – 90% reduction in CO (Carbon Monoxide) and HC (hydrocarbons) with ULSF (ultra-low sulfur diesel fuel) and the best retrofit technologies available to us, such as passive and active DPF (diesel particulate filters), high performance DOC (diesel oxidation catalysts), and other emerging technologies. We have done so in a manner that neither impedes nor interferes with the routine construction operations at the site. Our work has served as a model for Governor Pataki's clean construction mandate in September of 2002, and more recently the City Council's passing of Introduction 191-A to use ULSF and BART (best available retrofit technologies) for all city-let construction projects.

If left unchecked, the emissions from construction equipment will adversely impact local air quality for the next decade. During the height of the WTC recovery effort, NESACUM performed an inventory and emissions calculation for the 200 or so pieces of equipment congregated around the site. We found that this inventory had the equivalent diesel emissions signature of a 300 MW gas fired power plant operating on site, or a fleet of six-hundred transit buses circling the site 12 hours per day, seven days a week. At peak reconstruction, the total equipment population could approach if not exceed this estimate, making the ongoing probability of adverse health impacts and public health issues from diesel air toxics very real in lower Manhattan.

If LMDC is to indeed uphold its mission of rebuilding in an "environmentally sensitive" manner, then the DGEIS must embody this principle by addressing the potentially adverse impacts to air quality from reconstruction efforts through the use of clean construction practices. To act upon this, LMDC must form what I term a 'Consortium for Clean Construction', to act as a clearinghouse for the facilitation of all related activities. The CCC will be an independent third party, will serve to uphold the interests of all stakeholders, and will use BART and other emerging technologies to mitigate diesel exhaust emissions from <u>all</u> LMDC reconstruction activities. As evidenced by our experience at 7 WTC, this can be accomplished for a small fraction of one percent of total reconstruction costs. The CCC would also serve a primary role in the roll-out of Int. 191-A for city agencies, and to continue to uphold the Governor's mandate for the PA NYNJ and other state agencies such as the DOT. I implore you to move quickly to create such an entity.

Thank you.

Glenn P. Goldstein

Evaluating the Occupational and Environmental Impact of Nonroad Diesel Equipment in the Northeast

Interim Report
June 9, 2003

Northeast States for Coordinated Air Use Management
(NESCAUM)

Acknowledgements

NESCAUM would like to acknowledge the financial support provided by the U.S. Environmental Protection Agency (EPA) and Breakthrough Technologies, Inc. (BTI) for the work performed in this project. We would also like to acknowledge the technical advice and support provided by EPA staff and Mr. Richard Rumba (New Hampshire Department of Environmental Resources) and the critical sampling and analytical support provide by Ms. Sniega Stapinsaite, Environmental Research Institute, Storrs, CT; and staff at the Scott Lawson Group, Concord, NH; DataChem, Salt Lake City, UT; the University of Massachusetts-Lowell, Lowell, MA; Keene State College, Keene, NH; and Dartmouth College, Hanover, NH. Furthermore, this project would not have been possible without the dedicated collaboration of Dr. Susan Woskie and Dr. Fred Youngs from the University of Massachusetts-Lowell.

B. INITIAL FINDINGS

Note: to view sample interim study results that support these findings, please refer to Appendix C.

1. In all locations, diesel equipment activity substantially increased fine particulate matter exposures for workers and nearby residents, in some cases by as much as 16 times. When comparing the integrated daily $PM_{2.5}$ concentrations collected in and around operating equipment at the three sites, concentrations were 1-16 times greater than the average ambient concentrations normally recorded in each monitoring area. This observation underscores the adverse impact diesel equipment activity can have on air quality. In addition to increasing the average exposure to $PM_{2.5}$, short-term exposures at the perimeter of the site varied widely during the day. The peak concentrations observed during very active work may present *acute* health risks for workers and nearby residents.

With our growing understanding of the adverse health impacts associated with both acute and chronic fine particulate matter exposure, this finding also raises the concern of the potential adverse health impact for individuals working and living near worksites like those evaluated in this study.

2. Individual's estimated 24-hour exposures exceed the current air quality standard by nearly 2 to 3.5 times – substantially increasing workers' health risk.

In-cabin exposures to $PM_{2.5}$ for operators of monitored diesel equipment ranged from 2 $\mu g/m^3$ to over 660 $\mu g/m^3$. At the higher end of this monitored exposure range, if one were to average the individual's eight-hour workday exposure with the remaining 16-hours of the day at average ambient concentrations for that area, the 24-hour exposure would exceed the NAAQS by 1.9 to 3.5 times.

3. The most potent portion of particulate matter ($PM_{2.5}$) – *diesel* particulate matter -- was estimated to exist at levels that pose risk of chronic inflammation and lung damage in exposed individuals.

Diesel particulate matter concentrations were shown to exceed the established reference concentration (5 $\mu g/m^3$) in both in-cabin and the perimeter samples[2]. Repeated exposures above this concentration are believed to present some risk of damage (i.e.: chronic inflammation and histopathological changes) in the lungs of exposed individuals.

At this time, complete elemental and organic carbon and metal speciation analyses are not available for this work. However, recognizing the significant contribution of diesel exhaust to ambient $PM_{2.5}$, it is possible to estimate the potential range of contribution of

[2] Assuming based on USEPA data, that diesel particulate matter constitutes between 6 and 36% of the ambient particulate matter concentrations nationwide and in urban areas. United States Environmental Protection Agency, Health Assessment Document for Diesel Engine Exhaust, USEPA/600/8-90/057F, May 2002.

I. Initial Study Overview and Findings

A. BACKGROUND

This study was conducted by the Northeast States for Coordinated Air Use Management[1] (NESCAUM), in collaboration with researchers from Keene State College (Dr. Melinda Treadwell) and the University of Massachusetts Lowell (Drs. Susan Woskie and Fred Youngs). The objective of this work was to evaluate the potential health risks from nonroad sources by monitoring selected hazardous air pollutant and particulate matter exposures in the cabin of operating nonroad diesel equipment and at the perimeter of the active work site. During the past decade, a number of analyses have concluded that mobile source air toxic emissions pose a significant public health threat across the entire nation. In the northeast region, review of national computer modeling analyses and ambient air monitoring data have concluded that emissions from mobile sources are the dominant contributors to elevated ambient levels of several key toxic air pollutants across the region. A number of analyses are ongoing to investigate important mobile source contributors and means to reduce these emissions. However, the contribution of nonroad heavy-duty diesel (HDD) equipment emissions in the region has been relatively uncharacterized. This study was undertaken in an effort to gather quantitative and qualitative evidence of the range of public health and environmental impacts associated with nonroad equipment operations in the northeast region and to determine the significance of these exposures when considering the health risks for residents and equipment operators.

Diesel equipment emissions from the agricultural, construction (building and roadway), and lumber industries were examined. Initial pilot work was conducted at a construction site in June 2002. Site work was then conducted at a New Hampshire construction site and a roadway construction project, a lumberyard in Maine, a Vermont dairy farm, and a New York City construction site. Final field monitoring was completed May 29, 2003; therefore, complete data are not yet available from all sites evaluated. **This interim report provides preliminary conclusions and a summary of selected results available from three of the five sites evaluated** during the past twelve months of active fieldwork. A final report and conclusions will be forthcoming.

For each location, the researchers used established federal methods to monitor the daily average exposures, and in some cases minute-to-minute exposures, to diesel soot, fine particulate matter ($PM_{2.5}$), and a suite of highly toxic gaseous pollutants including acetaldehyde, benzene, and formaldehyde. In addition to these analyses, measurement techniques were used to provide qualitative and quantitative analyses of the metal content of selected $PM_{2.5}$ samples. At this time a comprehensive presentation of this work is not available; however, initial speciation results are presented later in this interim summary.

[1] a nonprofit association of the eight air quality agencies of the Northeast states

II. Study Method

Note: For a summary chart of sampling methods and sampling locations, please refer to Appendix A of this interim report.

For each location, the researchers used established federal methods to monitor the daily average exposures, and in some cases minute-to-minute exposures, to diesel soot, fine particulate matter ($PM_{2.5}$), and a suite of gaseous pollutants including acetaldehyde, benzene, and formaldehyde. In addition to these analyses, x-ray fluorescence spectrometry and inductively coupled mass spectrometry were used to provide qualitative and quantitative analyses of the metal content of selected $PM_{2.5}$ samples.

Samples were collected in the cab of HDD equipment operators and at the perimeter of the worksite. The in cab samples were collected to characterize occupational exposures for equipment operators[4]. The worksite perimeter samples[5] (at the property boundary with nearby residential receptors) were also collected to characterize the near-field ambient air quality impact of worksite operations. Eight-hour integrated monitoring was conducted to quantify worker exposure to carcinogenic compounds of concern (i.e. benzene, 1,3-butadiene, acetaldehyde, and formaldehyde), particulate matter ($PM_{2.5}$), and diesel soot. Real time sampling for $PM_{2.5}$ and diesel soot was also conducted at the worksite perimeter locations to determine whether peak, episodic exposures during a shorter averaging time might present potential non-cancer health effect of concern in exposed workers or nearby residents.

After sampling, and post sampling pump calibration, the absorbent tubes and filter cassettes were removed from the air pumps, capped, bagged and stored in a freezer (if appropriate) until analyzed. Analyses for this project were completed by: Environmental Research Institute (ERI), DataChem, the Scott Lawson Group, Keene State College, the University of Massachusetts-Lowell, and Dartmouth College, as described below.

Carbonyl Analyses (EPA Method TO-11):
Samples for carbonyl compounds (monitoring targets: acetaldehyde, acrolein and formaldehyde) were collected on 2,4-dinitrophenylhydrazine (DNPH-with ozone scrubber) coated SKC sorbent tubes (stock #226-120). In cab or perimeter samples were collected using appropriately calibrated Gilian personal air sampling pumps. The cartridges used for these analyses were stored at a temperature less than 4°C before and after sampling. The carbonyl compounds react to form hydrazones, which are retained on the cartridge. The hydrazones are then extracted from the cartridge using a solvent and the extract is analyzed by high performance liquid chromatography (HPLC) with UV-visible detection by ERI personnel.

[4] Using appropriate absorbent media for the various analytes of concern and Gilian or SKC personal air sampling pumps or BGI Inc. Cyclone pumps that were calibrated to draw an acceptable air volume across the sampling duration.
[5] Each site was approximately 300' X 300' square, perimeter sampling stations were positioned at the upwind and downwind edge of the site at the beginning of the monitoring day.

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the nonroad equipment diesel particulate matter emissions to the total average $PM_{2.5}$ concentration recorded at each site analyzed to date. It is estimated that nonroad equipment activities at the three sites analyzed thus far result in diesel particulate matter exposures for workers and nearby residents ranging from 1 $\mu g/m^3$ to 230 $\mu g/m^3$.

4. As many as 200,000 workers may be exposed to these harmful concentration levels of nonroad equipment emissions in the Northeast region.

Based on a recent nonroad equipment inventory completed in the Northeast, it is estimated that between 48,262 and 201,022 employees are exposed daily to diesel exhaust concentrations similar to those monitored in this study.

5. Measured concentrations of acetaldehyde, benzene, and formaldehyde around the tested nonroad equipment operations were as much as 140 times the Federally established screening threshold for cancer risk.

In recent years a number of national analyses conducted by the EPA have used computer models to predict ambient concentrations and exposures to a toxic air pollutants regulated under the Clean Air Act. Four pollutants resulting primarily from the combustion of gasoline – benzene, 1,3-butadiene, formaldehyde and acetaldehyde – have consistently been shown to exceed 1 in 1 million cancer health benchmarks across the country[3]. Benzene, 1,3-butadiene and formaldehyde also each exceed one in one hundred thousand cancer risk thresholds in all urban areas in the Northeast. The results of this study suggest that nonroad HDD equipment operations can elevate levels of acetaldehyde, benzene, and formaldehyde in and around nonroad equipment sites.

6. Concentrations of metals such as iron, nickel and vanadium, are elevated in samples collected around nonroad equipment. These metals are known to cause inflammatory responses and damage in pulmonary cells.

Initial results indicate that the concentrations of toxic metals observed in ambient $PM_{2.5}$ samples are increased when nonroad equipment is operating. These concentrations vary across sites and may present adverse health impact risk(s) for workers and nearby residents. Metals such as nickel, vanadium and iron are higher in samples collected in-cabin or near the perimeter of monitoring sites. These metals vary by location and may be of great significance when considering respiratory damage and potential long-term health effects.

[3] For cancer effects, the risk screening benchmarks used by the EPA reflect the assumption that there is no concentration below, which there is no risk (e.g. no threshold). The one in one million risk benchmark is an estimated exposure concentration, which would result in one excess cancer in one million individuals exposed for a lifetime.

operation, and any unique duty cycle activities throughout the monitoring day that may later be correlated with episodic exposures peaks recorded by the real-time monitors for diesel soot and $PM_{2.5}$.

Controlling variability in the study population:

The sampling goal of this study was to monitor similar equipment across the project worksites in an effort to increase the sample population per equipment type. Since the worksites monitored were similar, comparable types of nonroad equipment were available. As with all exposure monitoring studies; however, it was not possible to monitor all workplace conditions or all worker populations at each of the worksites. The original aim of the study was to characterize exposure to similar types of nonroad equipment between worksites, and to provide exposure/ ambient impact data across a number of days at each site. These monitoring data provide ranges of exposure and ambient air quality impact across the study population that will ultimately be compared with ranges of potential adverse health endpoints. The monitoring approach is intended to provide quantitative evidence useful in estimating the potential public health impact in high-end exposed sub-populations and near-field residents at specific worksites. Further, quantitative monitoring evidence, when coupled with knowledge of the potency of monitored toxicants, and an understanding of the scope of nonroad construction activities in the region, will support a qualitative estimate of the potential regional impact of nonroad equipment activities. With respect to sample variability, the researchers anticipated the variability in worksite activities on any given day, difference in meteorological conditions during a sample collection period at a given site, and due to regional air mass transport the project team expected differences in the background concentrations of the compounds characterized in the study. By carefully recording twenty minute time-activity data for all monitored equipment each day on each site, by recording the minute-to-minute meteorological conditions on each day of monitoring at each site, and by evaluating state ambient air quality monitoring data across the region it is anticipated that variability in quantitative evidence will likely be controlled to some degree.

Estimation of number of workers using heavy equipment

In order to estimate the number of workers in the region operating heavy-duty diesel nonroad machines, three sources of information were used. The first source was Census Bureau employee data from 1997. The Census Bureau provides information on the number of employees in a variety of industry sectors. For this analysis we took from the Census Bureau the numbers of workers in the region from several industry segments that use heavy equipment such as building construction, road building, mining, agriculture, and excavation. The second column in Table 1 (entitled *8 state employees*) provides the number of workers in the region for each of the industry segments included in this analysis.

In order to estimate the number of pieces of equipment used per employee, we used NESCAUM survey data gathered as part of a recent study on construction equipment

Volatile Organic Compound Analysis (EPA Methods TO-17-UMASS-Lowell and TO-15-ERI):
In cabin exposures benzene, 1,3-butadiene, ethyl benzene, and xylene were collected using Carbotrap X and Carboxen 1016 absorbent traps and were analyzed by UMASS-Lowell using thermal desorption mass spectrometry. Tubes are stored at less than 4°C before and after sampling.

A major goal for this monitoring project was to evaluate the range of organic compounds generated from nonroad equipment and the impact on worker exposure and ambient air quality. Therefore, in addition to the targeted breathing zone sampling with personal air sampling techniques, 8 hour average concentrations of volatile organic compounds were collected in cleaned, evacuated SUMMA canisters using eight-hour restrictive flow orifices. The SUMMA canister samples were analyzed by gas chromatography with mass spectrometry detection for compound identification confirmation by ERI.

Organic and Elemental Carbon Analysis (NIOSH Method 5040):
Eight hour respirable particulate samples were collected in the cab of selected equipment and at the perimeter of the worksite using a BGI Inc. cyclone sampler and pre-fired pure quartz fiber filters. DataChem analyzed these particulate exposure samples to quantify the elemental carbon/organic carbon content. The quartz filters are heated to 900°C prior to sampling to remove all organic and elemental carbon adsorbed on the filter. The filters are then sealed in special petri dishes, which are then individually wrapped in foil to prevent adsorption of organic carbon during shipping and storage.

For analysis, a small punch from the filter (rectangular, 1.5 cm^2) is removed and placed it in a small tube furnace. The sample is heated from 25°C to 850°C in a pure helium (He) atmosphere to evolve the organic carbon. The carbon is oxidized to CO_2 then reduced to methane (CH_4) for detection by a flame ionization detector. The temperature is reduced to 550 °C and the atmosphere is changed to 2% O_2 in He. The heating continues to 850°C. The carbon evolved during this stage is elemental carbon. A correction is made for charring of the organic carbon in the later stage of the first temperature ramp, using the measured reflectance of the filter sample. The light reflected by the surface of the filter from a laser is measured throughout. This reflectance decreases as the organic carbon is charred. Upon switching the purge gas to 2% O_2 in He, the reflectance of the filter returns to its initial value. The carbon evolved during this segment of the analysis is defined as organic carbon and the results are reported accordingly.

Assessing the impact of equipment activity on monitored concentrations:

During the field monitoring studies described above, field-monitoring technicians prepared daily time activity diaries in 20-minute increments for each monitoring location (equipment and perimeter). These journals will record episodic exposures as well as general employee activities throughout the workday. The field technicians also recorded the type and activity of equipment used on the worksite during the day, the equipment horsepower, the fuel type and consumption data (if available for worksite), the hours of

Possible underestimation of exposed workers

The reason there is a wide range of workers exposed estimated in this study is due to the fact that some information key to the calculation was not available. It is important to note that the estimate of number of workers exposed to heavy-duty nonroad diesel emissions in this analysis likely underestimates the actual number of workers. The reasons for this are: lack of rental equipment data, other industry segments that use heavy equipment not well identified, and workers other than operators exposed to emissions from these pieces of equipment.

An important and growing industry category not characterized in the survey was the rental or leasing companies. This category could prove to be a significant source of equipment and has not been addressed in this analysis. There could be other industry categories not well characterized in the estimates presented here. Shipping (primarily around marine ports but other intermodal points as well) was another category not represented in these estimates.

In addition, equipment types other than construction and mining (such as forklifts, aerial lifts, generators) are used by construction and industrial operations but were not surveyed. So the total equipment counts calculated above underestimates the diesel equipment operational within these industry categories.

Finally, operator worker exposure is only one element of the exposure at a construction site. Any number of supervisors, spotters, welders, and other workers are engaged in proximity to active construction and mining equipment.

III. Discussion

When evaluating the interim results of this study, one must be aware of the health endpoints being considered. A number of federal agencies develop occupational and environmental "safe" exposure guidelines for carcinogens and non-carcinogens and several are presented here for comparison. Agencies such as the Occupational Safety and Health Administration (OSHA) and the Mine Safety and Health Administration (MSHA) are responsible for occupational safety and health for general industry or the mining industry, respectively. These agencies often seek input from organizations such as the American Conference of Governmental Industrial Hygienists (ACGIH) or the National Institutes of Health (NIOSH), which develop guidance values or recommendations based upon industrial experience assessing exposures and health outcomes. Occupational exposure limits are values that are expected to result in no adverse health outcomes if a worker is exposed 40 hours per week each year for a working career. Environmental exposure standards established by the EPA are intended to protect the entire population for 24 hours per day for a lifetime of exposure. Typically environmental exposure standards are more restrictive as they are established to ensure all members (even the ill, very young, and elderly) of the population will not suffer adverse health outcomes following continuous lifetime exposure.

activity in the region. This data provided an estimation of the number of pieces of heavy equipment per employee for each industry segments. Columns 3, 4, and 5 of Table 1 provide the ratio of equipment to employees for three different counties studied. The survey showed that for some industries such as Heavy Construction Contractors and Excavation & Demolition the ratio of heavy duty diesel equipment to employees is high, while for other sectors, such as Lumber and Wood Products the ratio of equipment to employees is relatively low.

Table 1. Ratio of Equipment to Employees in Three Counties

Description	*8 State Employees*	Equipment counts per employee		
		Franklin	**Providence**	**Albany**
Forestry	NA	0.00	0.25	ND
Nonmetallic Mining	9,093	0.63	0.13	ND
General Building Contractors	154,781	0.12	0.03	0.040
Heavy Construction Contractors	90,684	0.73	0.17	0.037
Specialty Trade Contractors	398,913	0.01	0.01	0.013
Excavation & Demolition	24,516	1.41	0.60	1.000
Lumber and Wood Products	32,954	0.02	0.01	0.000
Stone, Glass, and Concrete Products	52,685	0.09	0.04	0.051
Garden Supply & Nurseries	136,247	0.00	0.07	0.031
Landfills	6,854	NA	NA	NA
Scrap Metals	18,407	---	0.68	---
Municipal*	41,518,048 Population	0.001003	0.00004	0.00320

*Equipment counts as a function of human population

The combination of equipment counts per employee and employees in each industry category can be combined to estimate the equipment operational in the 8-State NESCAUM region. Since some employees do not operate heavy equipment, but rather do office or administrative work, repair, or other functions, properly estimating the equipment/operator ratio is important to this analysis.

Once the number of employees was established and the equipment/operator ratio estimated, the number of hours each worker spends operating the equipment needed to be estimated.

Information on hours of operation per piece of equipment was taken from both the NESCAUM survey and the EPA NONROAD model. The average annual hours of equipment usage (engine on) ranges from about 400 to 1100 hours or about 20 – 50% of an average 8-hour workday.

has established a **threshold limit value of 3000 $\mu g/m^3$**. TheMSHA **standard of 400 $\mu g/m^3$** may also be used.

When evaluating cancer effects, the United States Environmental Protection Agency has not yet determined a unit risk value for DPM, therefore carcinogenic risks associated with exposures at the concentrations measured on the four sites are not estimated here.

When considering the cancer effects of the gaseous pollutants measured in this study the benchmarks used by the EPA reflect the assumption that there is no concentration below which there is no risk (eg. no threshold). Concentrations, which are assumed to present a potential public health concern, are derived by estimating a risk concentration for humans from observed tumor incidence in animals. The approach typically incorporates the idea of multiple steps in cancer development, but assumes that the transition from one step to the next is irreversible. This approach has been criticized for these assumptions and the conservative concentrations, which are calculated using this "linear multistage model" approach. The EPA has recently been revising its guidelines for carcinogen risk assessment guidelines. The revisions are meant to allow flexibility in presentation of carcinogen risk assessment. A benchmark concentration represents the atmospheric concentration of a pollutant above which there may be potential public health concerns. The benchmark values essentially serve as "yardsticks" to assess the potential threat to public health posed by a toxicant. These values represent the current state of scientific understanding about the health effects of the pollutants of concern.

One of the most significant challenges presented by this work is that exposure to diesel exhaust around non-road HDD equipment sites results in exceedances of environmental exposure standards but not occupational standards. For pollutants such as particulate matter, not otherwise specified, this is a dilemma as an individual's exposure would be acceptable by one agency and unacceptable by another. The final report will more fully characterize the scope and magnitude of exposure and policy challenges presented by nonroad equipment activities.

Substantial data exist regarding the occupational and environmental exposure to diesel engine emissions as well as the acute and chronic health impacts associated with the pollutants to be targeted in this work. The project participants developed a summary database that compiles the critical target organ effects and carcinogenic and non-carcinogenic potency, or potency range, for inhalation exposure to acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and respirable particulate matter (summary sheets shown in Appendix B). This database was developed following review of the current information available from the peer-reviewed scientific literature, the Agency for Toxic Substances and Disease Registry, the ACGIH, various EPA Staff Papers or Criteria Documents, the Hazardous Substances Data Bank, the Integrated Risk Information System, and NIOSH. Comparing monitoring results with established occupational and environmental standards provides an initial assessment of the potential risk to workers and nearby residents associated with the exposures monitored during fieldwork.

When considering the non-cancer health impacts of diesel exhaust exposure[6], the US EPA recently finalized a health-protective **reference concentration of 5 $\mu g/m^3$** for diesel particulate matter (DPM)[7]. The MSHA has established an interim allowable occupational exposure standard[8] for diesel particulate matter of **400 $\mu g/m^3$** this standard will drop to a final allowable exposure limit for this worker population of **160 $\mu g/m^3$** within five years. The OSHA has yet to adopt a standard for diesel exhaust particulate matter. However, OSHA has identified diesel exhaust as a compound of concern and is developing an action plan to reduce worker exposure to this hazard. NIOSH considers diesel exhaust a potential occupational carcinogen and, as such, recommends that occupational exposures be reduced to the **"lowest feasible concentration."** The ACGIH is considering a recommendation for diesel exhaust but has yet to establish one. A challenge when assessing exposure to DPM is that diesel exposure is typically measured using a surrogate, such as quantification of elemental carbon and organic carbon as done in this study. The EC/OC data are not yet available for this project. These data will be forthcoming; however, in the interim by using previous inventory analyses completed by the EPA, one can assume that DPM constitutes a minimum of 6 % of the national total ambient inventory for $PM_{2.5}$, which can be measured directly. In urban areas (and very likely on the nonroad construction sites evaluated in this study) the percentage of DPM could range from 10 to 36% of the $PM_{2.5}$ mass[9].

When considering the non-cancer health effects associated with exposure to $PM_{2.5}$ mass in general, the current **National Ambient Air Quality Standard of 65 $\mu g/m^3$ (24-hour)** established by the United State Environmental Protection Agency may used to compare integrated 24-hour exposures on or near project sites. When considering allowable occupational exposures for fine (respirable) particulate matter, not otherwise specified, the OSHA has established a **permissible exposure limit of 5000 $\mu g/m^3$** and the ACGIH,

[6] The established reference concentration is based upon demonstrated inflammatory and histopathological changes in the lung in numerous species following diesel exhaust exposure.
[7] [9]United States Environmental Protection Agency, Health Assessment Document for Diesel Engine Exhaust, USEPA/600/8-90/057F, May 2002.
[8] This standard addressed exposures for underground metal and nonmetal miners.

Appendix B: Health Effects Database Summary Sheets

Acetaldehyde **CAS: 75-07-0** **Chemical Formula: CH3CHO**

Molecular Weight	44
RfC	9x10-3 mg/m3
RfD	No Data
EPA Unit Cancer Risk Value 1 :1,000,000	5x10-4 mg/m3
Occupational Limits	
15 - minute STEL	none specified
OSHA PEL 8-hour TWA	200 ppm
ACGIH TLV	25ppm
NIOSH REL	carcinogen, lowest feasible
Ceiling	45 mg/m3 Ceiling- ACGIH Recommendation
NH State Ambient Air Limit	161=24-hour AAL http://www.des.state.nh.us/rules/env-a1400.pdf

Target Organs	Type of effect in humans NIOSH	Type of effect in animals-RATS
Eyes	Irritation eyes, eyes burning, Blurred vision.	
Skin	dermatitis, skin burning	squamous cell carcinomas
Respiratory System	Irritation-nose, throat, Shortness of breath.	Nasal Cancer, Male/Female Rats
Central Nervous System	Depression, Unconsciousness.	
Reproductive System		kidney, reproductive, teratogenic effects
Developmental		
Kidneys		
Potential Human Carcinogen	B2 Classification, Nasal in animals	

NOAEL	LOAEL-http://www.epa.gov/iris/subst/0290.htm#carc	LC50http://www.hhmi.org/research/labsafe/lcss/lcss.html OR *http://epa.gov/ttn/atw/hlthef/acetalde.html*
Rat-150ppm or 48.75 mg/cu.m	Rat-16.9 mg/cu.m-adenocarcinomas from olfactory epithelium	Rat-20,560 ppm inhalation/37,000mg/m3 Rat inhalation

Sampling Methods OSHA	Primary
Method No.	2(OSHA 68)
Media:	Coated XAD-2 Tube (450/225 mg sections, 20/80 mesh) Coating is 10% (w/w) 2-(Hydroxymethyl)piperidine.
ANL Solvent:	Toluene
Max Volume (TWA)	3 liters
Max Flow (TWA)	0.05 L/min
Max Volume (STEL)	0.75 L
Max Flow (STEL)	0.05 L/min
ANL 1:	Gas Chromatography
SAE	0.1
Class	Fully Validated

Appendix A: Summary Testing Matrix[10]

Date	Location	In Cabin Monitoring (3 - 5 pieces)	Upwind Site – Perimeter #1 (~300ft X 300 ft site)	Downwind Site – Perimeter #2 (~300ft X 300 ft site)
July 2002 *through* June 2003	Roadway Construction Keene, NH Forestry Operations Carmel, ME Building Construction New York City Agricultural Operations Brattleboro, VT Roadway Construction Manchester, NH	**EC/OC**[11] Respirable cyclone (PM_4) @ 4.2 liters/minute **$PM_{2.5}$**[12] $PM_{2.5}$ cyclone @ 3.5 liters/minute **Volatile Organic Compounds**[13] (Carbotrap X and Carboxen 1016 absorbent trap) @ 0.200 liters/minute **Carbonyls**[14] (DNPH with O_3 scrubber) @ 0.200 liters/minute	**EC/OC** Respirable cyclone (PM_4) @ 4.2 liters/minute **$PM_{2.5}$** $PM_{2.5}$ cyclone @ 3.5 liters/minute **Volatile Organic Compounds**[15] SUMMA Canister with 8-hr orifice **Carbonyls** (DNPH w/ O_3 scrubber) @ 0.200 liters/minute **Real Time Black Carbon** Aethelometer (PM_4) **Real Time $PM_{2.5}$** EPAM-5000 ($PM_{2.5}$ kit) Data Logging **Weather** Station Tracking temperature, relative humidity, wind speed/direction, and dew point	**EC/OC** Respirable cyclone (PM_4) @ 4.2 liters/minute **EC/OC** BGI PQ100 ($PM_{2.5}$) @ 16.7 liters/minute **$PM_{2.5}$** $PM_{2.5}$ cyclone @ 3.5 liters/minute **Volatile Organic Compounds** SUMMA Canister with 8-hr orifice **Carbonyls** (DNPH w/ O_3 scrubber) @ 0.200 liters/minute **Real Time Black Carbon** Aethelometer (PM_4) **Real Time $PM_{2.5}$** EPAM 5000 ($PM_{2.5}$ kit)

Samples were collected on nonroad heavy-duty diesel equipment operators and at the perimeter of each site using established federal methods and novel real-time monitoring strategies. Global positioning system (GPS) coordinates were taken for each site and are being used to integrate the movement of equipment within the site on site maps that will be provided in final reports developed under this project. Perimeter monitors were positioned at an upwind and downwind location on this site grid at the start of each monitoring day. Due to wind direction changes throughout the monitoring day however these sites are not consistently upwind or downwind sites, rather perimeter monitors. The wind speed and direction was monitored on site as well and will be integrated with real-time monitoring results once all site data are available. Until these analyses are completed, data are presented as perimeter #1 (initial upwind site) and perimeter #2 (initial downwind site). The"in-cabin" exposure measurements for three pieces of heavy-duty equipment at each site were expected to characterize high-end exposures. Perimeter monitoring samples were collected to characterize the near-field ambient air quality impact of worksite operations. Eight-hour average integrated personal and perimeter exposure monitoring was conducted to quantify exposure to carcinogenic compounds and respiratory irritants of concern (i.e. benzene, 1,3-butadiene, acetaldehyde, and formaldehyde) and for respirable particulate matter ($PM_{2.5}$) and diesel soot (PM_4). Real-time monitoring was also conducted, as detailed above, to quantify respirable particulate matter ($PM_{2.5}$), diesel soot (PM_4), and site weather conditions.

[10] For each location evaluated three days (8-9 hour samples each day). This figure summarizes the monitoring conducted each of the three days for each location.
[11] Elemental Carbon/Organic Carbon, NIOSH Method #5040
[12] Gravimetric Analyses for total particulate mass
[13] EPA Method TO-17
[14] EPA Method TO-11
[15] EPA Method TO-15

1,3 - Butadiene CAS: 106-99-0 Chemical Formula:

Molecular Weight	54
RfC	2 x 10-3; mg/m³ http://www.epa.gov/iris/subst/0139.htm#top
RfD	No Data
EPA Unit Cancer Risk Value 1 :1,000,000	2.1x10-6 µg/m3
Occupational Limits	
15 - minute STEL	5 ppm
OSHA PEL 8-hour TWA	1 ppm (Action level- .5ppm)
ACGIH TLV	2 ppm, 4.4 mg/m3 TWA
NIOSH REL	Lowest Feasible Concentration
Ceiling	None Specified
NH State Ambient Air Limit	16=24-hour AAL http://www.des.state.nh.us/rules/env-a1400.pdf

Target Organs-NIOSH	Type of effect in humans	Type of effect in animals(MICE)
Eyes	Irritation eyes, Blurred Vision	
Central Nervous System	Drowsiness, headache, fatigue	CNS Depression
Respiratory System	Irritation Nose, Dryness Irritation, respiratory paralysis	bronchiolar adenomas, neoplasms
Reproductive System	Teratogenic Reproductive Effects	granulosa cell tumors,(females) acinar cell carcinomas of mammary gland, testicular atrophy
Skin (liquid exposure)	Frostbite, Irritation	
Reproductive		
Developmental		
potential occupational carcinogen	Hematopoetic Cancer	

NOAELwww.atsdr.com	LOAELwww.atsdr.com	LC50 www.atsdr.com/ EPA http://www.epa.gov/ttnatw01/urben/natpapp.pdf
Item # 7=200ppm Rat	Item # 7=Rat- 1000 ppm (wavy ribs)	LC50 Rat inhalation 285,000 mg/cu m/4 hr EPA=269,896 mg/m3
Item # 22= 6.25 ppm- Mice	Item # 22= Mouse- 20ppm (Increased Mortality)	LC50 Mouse inhalation 270,000 mg/cu m/2 hr EPA= 285,382 mg/m3

Sampling Methods OSHA	Primary
Method No.	2 (OSHA 56)
Media:	Coated Charcoal Tube (100/50 mg sections, 20/40 mesh); Coating is 10% (w/w) 4-t-Butylcatechol.
ANL Solvent:	Carbon Disulfide
Max Volume (TWA)	3 Liter
Max Flow (TWA)	0.05 L/min (TWA & STEL)
Max Volume (STEL)	
Max Flow (STEL)	
ANL 1:	Gas Chromatography; GC/FID
SAE	0.11
Class	Fully Validated

Benzene CAS: 71-43-2 Chemical Formula: C_6H_6

Molecular Weight	78
RfC	RfC of 9 E-3 mg/m^3 http://www.epa.gov/ncea/iris/subst/0276.htm
RfD	
EPA Unit Cancer Risk Value 1 :1,000,000	1.3x 10-4 or 4.5x10-4 mg/m^3
Occupational Limits	
15 - minute STEL	5 ppm
OSHA PEL 8-hour TWA	1 ppm (Action Level-.5 ppm)
ACGIH TLV	0.5 ppm
NIOSH REL	0.1 ppm
Ceiling	25 ppm
NH State Ambient Air Limit	5.714 = 24-hour AAL http://www.des.state.nh.us/rules/env-a1400.pdf

Target Organs-NIOSH	Type of effect in humans	Type of effect in animals
Eyes	Contact of vapor- irritating, Contact with liquid- irritation, pain;prolonged cause tissue damage	
Skin	Irritation, Redness, Repeated exposure, dermatitus, removes oil from skin, dryness	squamous cell carcinomas
Respiratory System	cough, hoarseness, general irritation of nose, throat and resp. tract	
Blood	cause anemia, leukemia, Hodgkin's Disease	leukemia
Central Nervous System	Drowsiness, headache, nausea, incoordination	
Bone Marrow	Decrease in production or changes to the cells of hemoglobin, hematocrit, red/white blood cells	reduced the cellularity of the bone marrow
Reproductive		
Developmental		
potential occupational carcinogen	Leukemia	

NOAEL www.atsdr.com	LOAEL www.atsdr.com	LC50 www.atsdr.com/EPA http://www.epa.gov/ttnatw01/urban/natpapp.pdf
Item # 65=10 ppm Rat	Item # 11=Rat-47ppm (decreased maternal weight gain)	LC50 Mouse ihl 9680 ppm EPA= 31,887 mg/m3
Item # 31, 50=3 ppm Mouse	Item # 58=Mouse-9.6ppm (increased spleen weight)	LC50 Rat ihl 10,000ppm/7 hr EPA= 31,951 mg/m3
	Item # 14=Mouse-47ppm (decreased WBC Count)	
	Item# 65=Rat-58ppm (leukpenia)	
	Item #131=Rat-960ppm (30% depression of evoked electricalm activity)	
	Item # 136=Rat- 6,600ppm (testicular weight increase)	
	Item #140=Rat- 200ppm (CEL:hepatomes)	
	Item # 178=Rat- 100ppm (Liver tumors)	

Sampling Methods OSHA	Primary
Method No.	2 (OSHA 1005)
Media:	Charcoal Tube (100/50 mg sections, 20/40 mesh)
ANL Solvent:	Carbon Disulfide
ALT Solvent:	(99:1) Carbon Disulfide/Dimethylformamide
Max Volume (TWA)	12 Liters
Max Flow (TWA)	0.05 L/min (TWA)
Max Volume (STEL)	0.75 Liters
Max Flow (STEL)	0.05 L/min (STEL)
ANL 1:	Gas Chromatography;GC/FID
SAE	none specified
Class	Fully Validated

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Diesel Exhaust **CAS: none**

Molecular Weight	Not available
RfC	5µg/m³
RfD	Not available
EPA Unit Cancer Risk Value 1 :1,000,000	diesel exhaust (DE) is likely to be carcinogenic to humans
Occupational Limits	
15 - minute STEL	none
OSHA PEL 8-hour TWA	none
ACGIH TLV	none
NIOSH REL	lowest feasible
Ceiling	none
NH State Ambient Air Limit	24-hour AAL http://www.des.state.nh.us/rules/env-a1400.pdf

Target Organs	**Type of effect in humans NIOSH**
Eyes	Irritation eyes, slight redness
Respiratory System	pulmonary function changes; [potential occupational carcinogen]
Central Nervous System	neurophysiological symptoms, lightheadedness, nausea
Potential Human Carcinogen	not available

NOAEL	**LOAEL**-http://www.epa.gov/iris/subst/0642.htm#carc
Rat chronic inhalation study Ishinishi et al. (1988) NOAEL: 0.46 mg/m³ NOAEL/HEC: 0.144 mg DPM/m³	0.96 Ishinishi *et al.* (1988) (HD)

Sampling Methods OSHA	**Primary**
Method No.	ID-196 (Carbon Black in Workplace Atmospheres)
Media:	Samples are collected on polyvinyl chloride (PVC) filters. 37mm. 5.0-micrometer pore size
Max Volume (TWA)	480 to 960 liters
Max Flow (TWA)	2 liters/minute
ANL 1:	gravimetric
CLASS	Fully Validated

Formaldehyde **CAS: 50-00-0** **Chemical Formula: CH2O**

Molecular Weight	30
RfC	no data
RfD	2E-1 mg/kg/day
EPA Unit Cancer Risk Value 1 :1,000,000	8E-2 ug/m^3
Occupational Limits	
15 - minute STEL	2ppm
OSHA PEL 8-hour TWA	0.75ppm (action level-0.5ppm)
ACGIH TLV	0.3ppm
NIOSH REL	0.016ppm
Ceiling	0.3 ppm ceiling (ACGIH)
NH State Ambient Air Limit	1.321=24-hour AAL http://www.des.state.nh.us/rules/env-a1400.pdf

Target Organs-NIOSH	Type of effect in humans	Type of effect in animals(MICE)
Eyes	Irritation eyes, Blurred Vision	
Respiratory System	Irritation nose, throat, respiratory system; lacrimation (discharge of tears); cough; wheezing	
potential occupational carcinogen	nasal cancer	

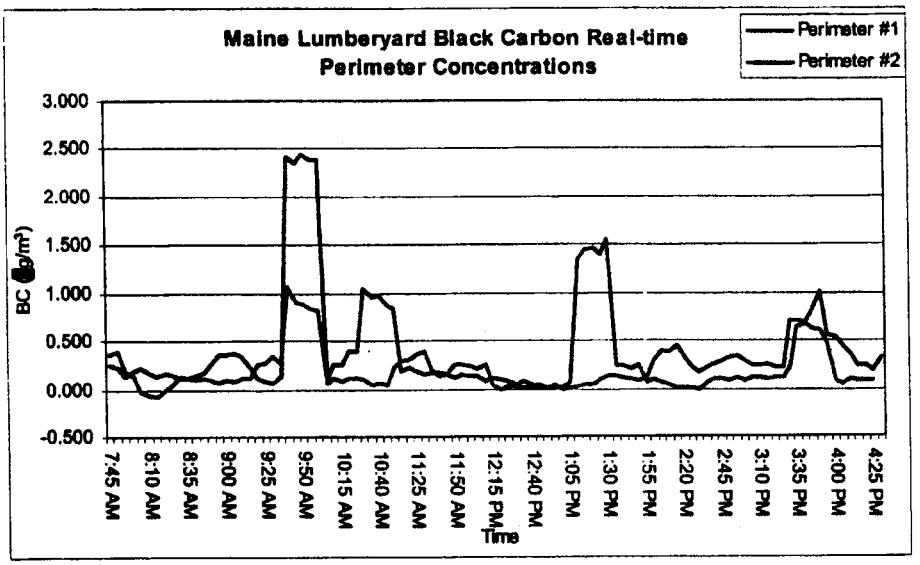
NOAEL-http://www.epa.gov/iris/subst/0419.htm#refinhal	LOAEL-http://www.epa.gov/iris/subst/0419.htm#refinhal	LC50 http://www.jtbaker.com/msds/englishhtml/F5522.htm
15 mg/kg/day (male rat) Reduced weight gain, histopathology in rats	82 mg/kg/day (rat) 2 year Bioassay	LC50 Rat inhalation 203 mg/m3 LC50: 64000 ppm/4H
	0.2 (nasal irritation) Human (atsdr.cdc.gov)	
	2ppm (eye irritation) Rat (atsdr.cdc.gov)	

Sampling Methods OSHA	Primary
Method No.	OSHA 52
Media:	sampling tubes containing XAD-2 adsorbent which has been coated with 2-(hydroxymethyl)piperidine.
ANL Solvent:	desorbed with toluene
Max Volume (TWA)	24 L
Max Flow (TWA)	0.1 L/min
Max Volume (STEL)	3 L
Max Flow (STEL)	0.2 L/min
ANL 1:	GC w/ nitrogen phosphorus flame ionization detector.
Class	Evaluated method

Daily Minute-to-Minute Exposure Diesel Particulate Matter (diesel soot):

As shown in Figures 3 and 4 below, diesel soot concentrations (measured as black carbon –BC) vary throughout the day, arguably due to nonroad equipment activity on the site. Future analyses will compare these results to observations recorded in the time-activities diaries for each site. Note the vast difference, as shown in Figures 1 and 2 previously, between the Maine site and New York City. Recalling that the reference concentration for diesel particulate matter is 5 $\mu g/m^3$, it is possible to identify a potential overexposure by averaging the results in New York City around the construction site assessed.

Figure 3: Black carbon concentrations measured at Maine Lumberyard



297

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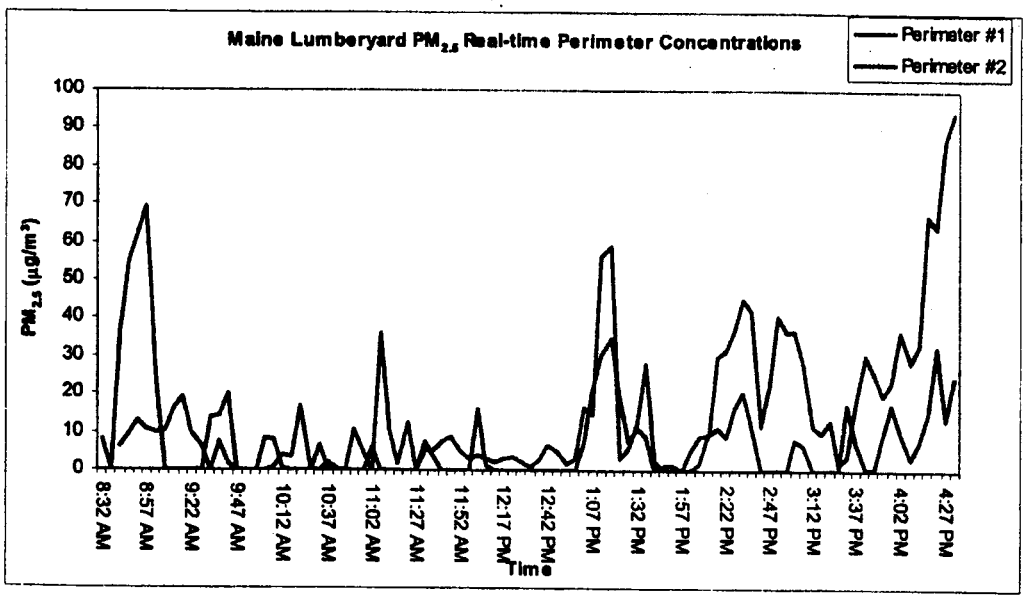
Appendix C: Interim Summary Data from Three of Five Monitored Sites

Daily Minute-to-Minute Exposure $PM_{2.5}$:

The peak concentrations observed during very active work may present *acute* health risks for workers and nearby residents (shown in Figures 1 and 2). Note the wide differences in concentration between the Maine Lumberyard and the New York City Construction site. Future analyses will identify specific instances of potential adverse acute exposure health effects and variability between sites.

Figures 1 and 2. Real-time $PM_{2.5}$ concentrations at the perimeter of nonroad equipment site.



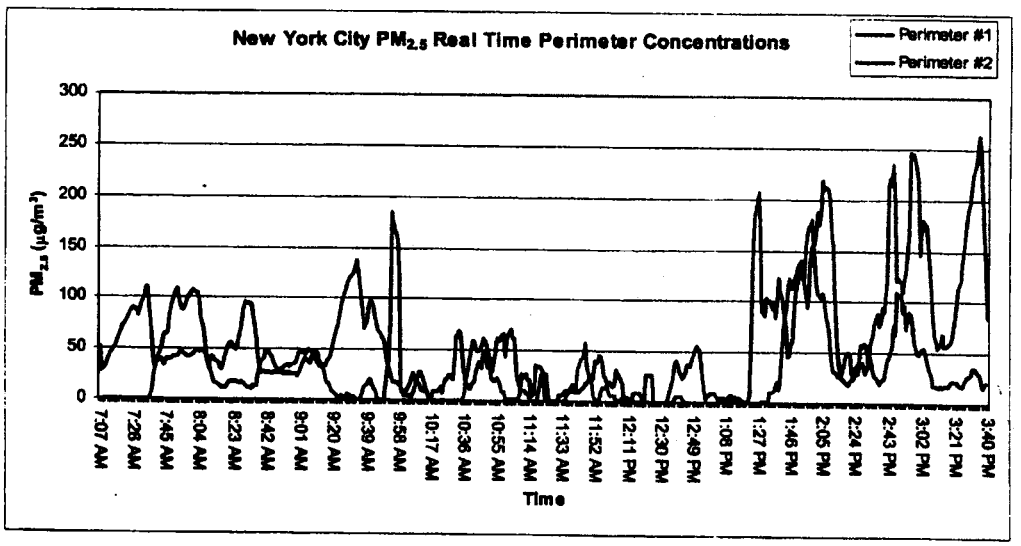


Figure 5. NH Construction Activity $PM_{2.5}$ Integrated Sampling Results

Sampling Location	Monitored 8-hour Average $PM_{2.5}$ Conc. (µg/m³)	Estimated Low DPM Conc. (µg/m³) RfC = 5 µg/m³	Estimated High DPM Conc. (µg/m³) RfC = 5 µg/m³	Estimated 24-hour Average* $PM_{2.5}$ Conc. (µg/m³) *NAAQS = 65 µg/m³*	Estimated Low DPM Conc. (µg/m³) RfC = 5 µg/m³	Estimated High DPM Conc. (µg/m³) RfC = 5 µg/m³
	Day 1					
Bulldozer	N/D	N/D	N/D	N/D	N/D	N/D
Downwind (Perimeter #2)	23.79	1.43	[illegible]	17.26	1.04	[illegible]
Upwind (Perimeter #1)	45.19	2.71	[illegible]	24.40	1.46	[illegible]
Loader	34.16	2.05	[illegible]	20.72	1.24	[illegible]
Ingersoll Rand Lull	335.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hyster lull	472.62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Day 2					
Upwind (Perimeter #1)	15.93	0.96	[illegible]	14.64	0.88	[illegible]
Downwind (Perimeter #2)	N/D	N/D	N/D	N/D	N/D	N/D
Lull	660.88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Front loader	32.29	1.94	[illegible]	20.10	1.21	[illegible]
Bulldozer	8.28	0.49	2.95	12.07	0.72	4.34
	Day 3					
Bulldozer	42.64	2.56	[illegible]	23.55	1.41	[illegible]
Upwind (Perimeter #1)	14.44	0.87	[illegible]	14.15	0.85	[illegible]
Front Loader	62.89	3.77	[illegible]	30.30	1.82	[illegible]
Lull	168.10	[illegible]	[illegible]	[illegible]	3.92	[illegible]
Downwind (Perimeter #2)	25.10	1.51	[illegible]	17.70	1.06	[illegible]

*Assumes 16-hr ambient average concentration is 14 µg/m³

Shaded values reflect exceedance of diesel particulate matter reference concentration (RfC) or the $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS)

Figure 6. NH Construction Site Monitored $PM_{2.5}$ Concentrations

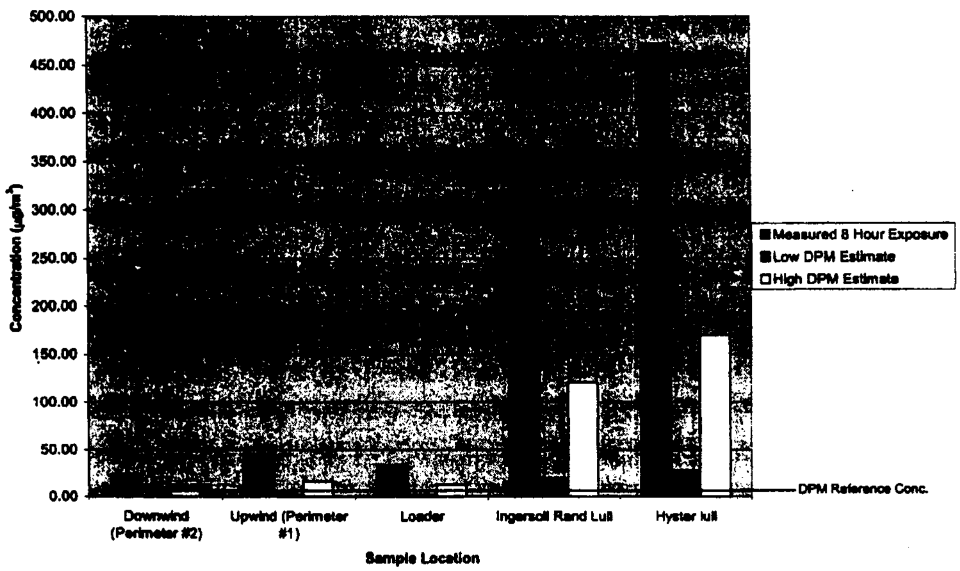


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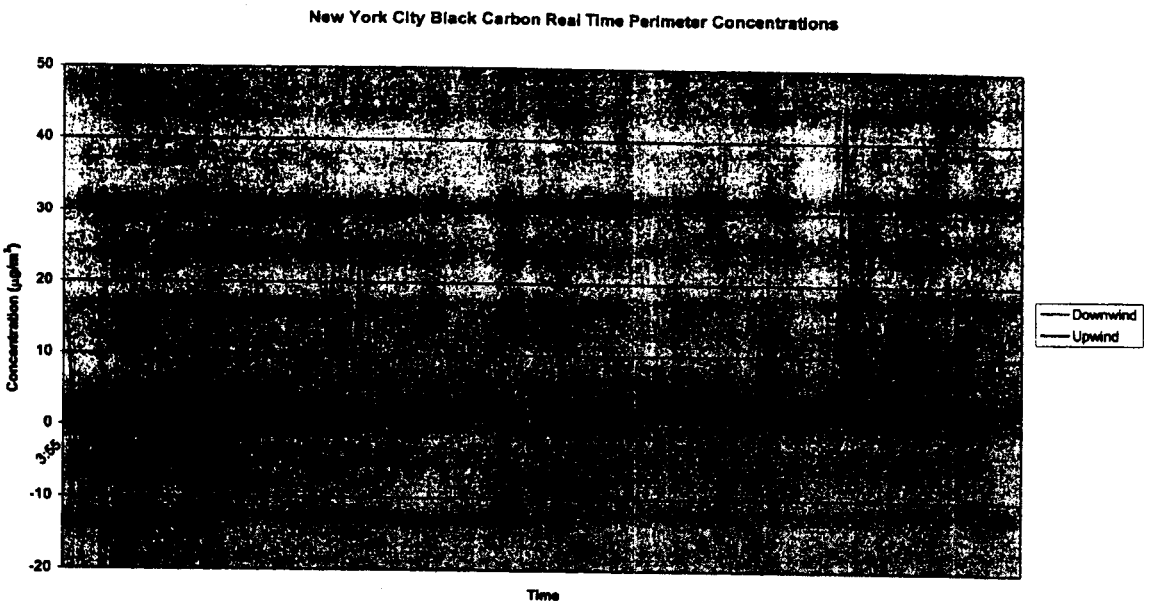
Figure 4. Black carbon concentrations measured at New York City Construction Site



Daily Average Exposures to $PM_{2.5}$ and The Impact of Work on Individual Exposure

Figure 5 illustrates the daily average exposure to $PM_{2.5}$ on a construction site in New Hampshire. The concentrations of $PM_{2.5}$ monitored over the course of each consecutive monitoring day are in bold print in the far left column of the table. Estimated diesel particulate (DPM) exposures for each of the eight-hour samples are then calculated and presented in the second and third column. If the reference concentration for DPM was exceeded during the eight-hour day, the value is shaded. In the fourth column, a 24-hour exposure is calculated in order to determine the potential impact of nonroad construction work on an individual's daily exposure to $PM_{2.5}$. In order to estimate the 24-hour exposure, the individual or perimeter concentration measured over eight-hours (shown in the first column) is averaged for the remaining sixteen hours of the day at average ambient $PM_{2.5}$ concentrations for the area as reported by the state air quality control agency. If the 24-hour integrated exposure is greater than the USEPA National Ambient Air Quality Standard (NAAQS) of 65 $\mu g/m^3$, then the value is shaded. In the remaining two columns of the table, the 24-hour DPM exposure concentration is estimated, again if the reference concentration is exceeded, the column is shaded. These calculations will be completed for all sites evaluated during this project.

Figure 6 graphically illustrates the estimated low or high contribution of DPM to the measured $PM_{2.5}$ for the Day 1 New Hampshire construction site samples. This figure also illustrates the magnitude of exceedance above the established reference concentration for diesel particulate matter.

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Figure 8. Metal Content $PM_{2.5}$

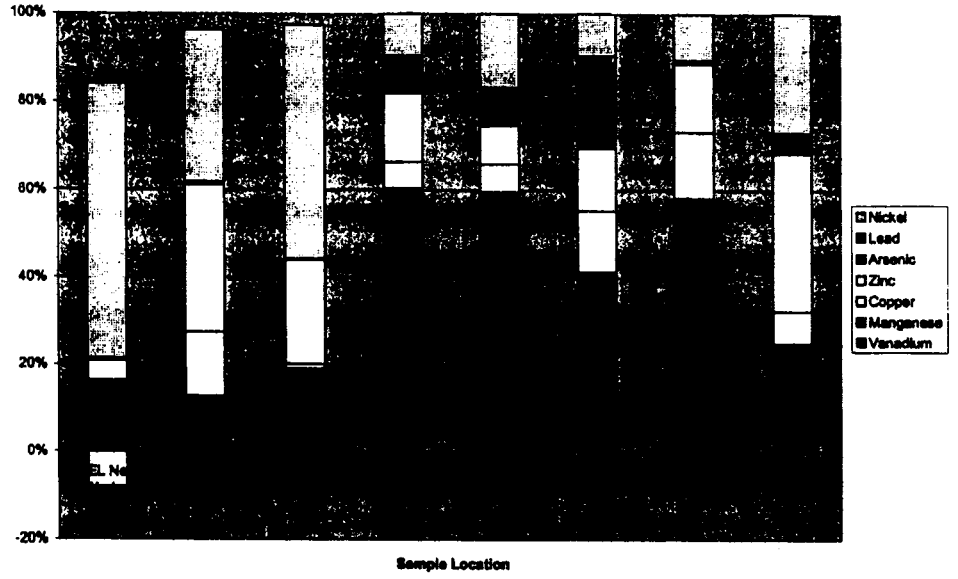
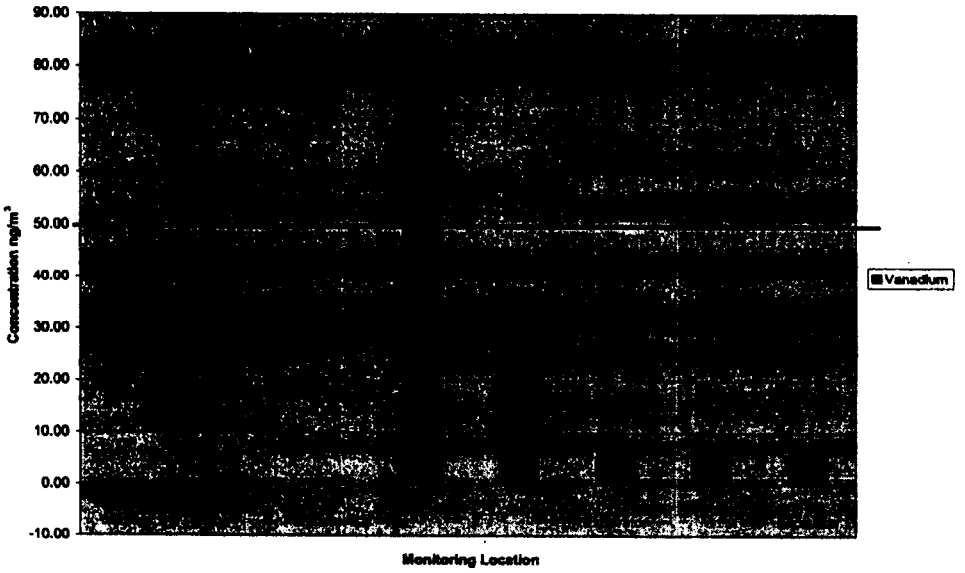


Figure 9. Vanadium Concentration in $PM_{2.5}$



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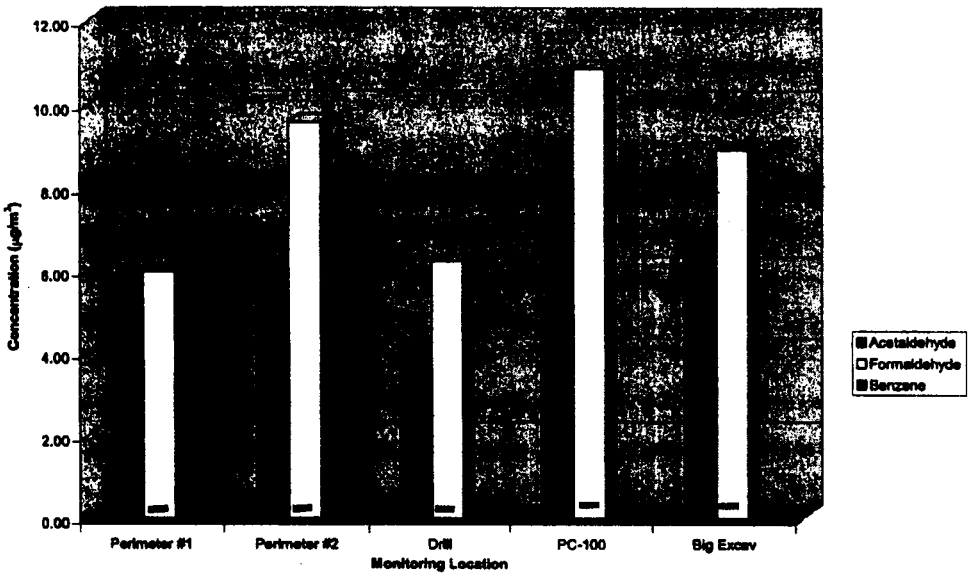
Daily Exposures to Gaseous Toxicants:

As shown in Figure 7 below the monitored concentrations for acetaldehyde, benzene, and formaldehyde exceed conservative risk screening thresholds for cancer. The x-axis for this figure indicates the monitored concentration in mg/m3 and the y-axis identifies the monitoring location on the New York City construction site. The black line on each compound-specific column indicates the one in one million risk screening concentration. Future analyses will compare these monitored valued with measured ambient concentrations for these same compounds to quantitatively assess the impact of nonroad equipment activity on measured gaseous pollutants. Additionally, benzene in cab monitoring result will be integrated with these data.



Concentrations of Toxic Metals in $PM_{2.5}$ Collected by Operating HDD Equipment:

Initial results indicate that the concentrations of toxic metals observed in ambient $PM_{2.5}$ samples are increased when nonroad equipment is operating. These concentrations vary across sites and may present adverse health impact risk(s) for workers and nearby residents. Metals such as nickel, vanadium and iron are higher in samples collected in-cabin or near the perimeter of monitoring sites. These metals vary by location.
Initial results from x-ray fluorescence and inductively coupled plasma mass spectrometry indicate that the concentrations of toxic metals observed in the $PM_{2.5}$ samples collected in operating equipment cab or near the site perimeter are altered. These concentrations vary across sites and may present adverse health impact risk(s) for workers and nearby residents. As shown in Figure 8 below, the concentrations of several toxic metals vary between sampling locations (MEL= Maine Lumberyard; KSC= NH Construction Site; and NY= NY Construction Site). Additionally, as shown in Figure 9, the concentration of vanadium exceeds the ACGIH recommended occupational exposure limit for an eight-hour workday (50 ng/m^3). These data will be integrated with additional analyses from the remaining sites and will be more completely summarized in the final report for this project.

NYPIRG
Straphangers Campaign
a project of the New York Public Interest Research Group Fund
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March 9, 2004

Kevin Rampe
President
Lower Manhattan Development Corporation
One Liberty Plaza, 20th Floor
New York, New York 10006

Dear Mr. Rampe:

This letter constitutes the comments of the NYPIRG Straphangers Campaign on the Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan.

The Straphangers Campaign is a member of the Civic Alliance to Rebuild Downtown New York and I serve on LMDC's Commuter Advisory Council. My organization has been located downtown for more than 30 years, three blocks directly north of the World Trade Center Site. My comments address three areas: (1) reasonable alternatives; (2) transportation; and (3) air quality.

1. The Straphangers Campaign strongly shares the Civic Alliance's view that the DGEIS fails to fully explore reasonable alternatives to the Proposed Action for the WTC Redevelopment Plan. The failure to include a thorough analysis of reasonable alternatives violates both the spirit and the letter of the relevant state and federal environmental laws, NEPA and SEQRA. We urge the LMDC and the Port Authority to consider the Reduced Impact Alternative in order to avoid litigation, project delay and impediments to the economic recovery of Lower Manhattan.

Specifically, the Reduced Impact Alternative as described in the DGEIS does not constitute a true alternative for significantly reduced commercial office and retail space on the Project Site and an increased mix of other activities, such as housing, civic or cultural programming and open space. The current "Reduced Impact Alternative" presented in the draft GEIS is not sufficiently evaluated. In fact, the treatments of all alternatives in the DGEIS are summary and dismissive.

The reasons for giving a serious review to these alternatives is compelling laid out in the Civic Alliance's comments. These include the strong desire for consideration of reduced commercial and retail space expressed in many public forums; the likely environmental benefits; and the detrimental impact of overdevelopment on the rest of downtown;

2. The DGEIS indicates significant adverse traffic impacts to be generated by the Proposed Action at 18 of 40 intersections by 2009 and 25 of 40 intersections by 2015. This is a very poor outcome following the expenditure of many billions of dollars on transportation improvements in and around the World Trade Center site. The Straphangers Campaign urges serious exploration of the following traffic reduction strategies:

- increased and more attractive subway and bus service to and in lower Manhattan;
- restriction on parking expansion;
- the use of congestion pricing measures to reduce peak period use of motor vehicles;
- street management plans that favor pedestrians with selective elimination or restriction of vehicle flow, prohibition tourists' buses within a prescribed area of Lower Manhattan;
- working with hotels, airport and train terminals, and other points of entry to keep tourists informed of convenient transportation alternatives to reach Lower Manhattan; and
- wider sidewalks, and placing subway stairways inside building lines.

3. The Straphangers Campaign is concerned about the cumulative environmental impacts of the Proposed Action on air quality in Lower Manhattan, especially given the anticipated increase in traffic. The failure to consider the cumulative impact on air quality of all related Lower Manhattan construction projects may constitute a segmentation of the project, and expose the project to litigation.

The Straphangers Campaign supports the steps recommended by the Civic Alliance to mitigate air pollution, including low sulfur diesel fuel for vehicles used constructing downtown and effective monitoring of air pollution. We support placing pollution monitors around site to provide hourly readings available to the public online. Sound monitors should also be used to monitor noise levels in violation of CEQR.

Yours truly,

Gene Russianoff
Senior Attorney

Cc: Stefan Pryor
Andrew Winters

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Hello.

My name is Dan Slippen, and I am the Director of Government and Community Relations and the Center for Downtown New York at Pace University.

Many months ago, the CEOs from many of New York's top financial industry firms wrote to Governor Pataki strongly encouraging him to move swiftly in redeveloping downtown. They indicated that a failure to do so could result in their difficult but necessary decision to move their offices out of Lower Manhattan.

The Governor heard that plea and similar concerns expressed by others with an interest in the revitalization of this community. Thankfully, we have seen an expedited planning and development schedule downtown. This is evidenced in the return to near-normalcy along Wall Street, the process to finalize construction plans for the World Trade Center site, the selection of a memorial design, ~~and~~ the opening of new parks and green space & the opening of PATH ~~one near and dear to my heart at Drumgoole Square adjacent to~~ my ~~employer, Pace University~~.

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I am here to address specifically my university's interest in swift progress on our redevelopment efforts – and why I believe the university's interests mirror those of many in the downtown community.

Pace University is the largest private educational institution in Lower Manhattan – a community of some 10,000 people living, working, learning, spending and adding quality of life value to downtown.

You know that the university has made a major commitment to downtown – taking part in the WTC Job Creation and Retention Program, creating the Center for Downtown New York, & harnessing many of Pace's considerable resources to enhance this community. We have been a force here for nearly 100 years. We are here to stay. The issue for Pace and for much of downtown is whether we will be able to grow and thrive in a vibrant, renewed environment or suffer the dire consequences of delay and indecision.

Our agenda is to grow Pace University into a world-class institution of higher education – one that Lower Manhattan, all of New York City and indeed the entire region can take pride in and continue to benefit from. A vibrant and vigorous Pace University

translates to a sophisticated and job-ready workforce for downtown and beyond; a community of individuals who volunteer their talents and time to social, cultural and educational enterprises here; an institution and its thousands of individuals spending their resources here; and the added value a strong, international university brings to a place like Lower Manhattan.

We have our own plans to grow the university. The success of those plans, however, is in part dependent on the ability of Lower Manhattan to rebound quickly from the devastating events of 9/11. We need the City + State to make a strong commitment to expedite the largest and most ambitious reconstruction project New York has ever seen. It is incumbent upon all parties-in-interest – public officials, the business community, residents and environmentalists alike – to resolve outstanding issues promptly and intelligently. Together we possess the social, political and environmental talent to do so. Yes, it is important that we bring normalcy and, to the greatest extent possible, closure to our community here in lower Manhattan. But allow me to also direct your attention to the political realities of the next two years. 2005 and 2006 will host mayoral and gubernatorial contests respectively. They promise to be hard-fought campaigns amongst strong candidates. If the issues before us today are not resolved before

those electoral seasons commence, lower Manhattan will become a casualty not just of our indecisiveness but of political hardball, New York style.

Pace applauds the reintroduction of the street grid into the community, the commitment to develop facilities that will provide for educational and cultural learning, the reopening of the PATH and the upcoming opening of the Fulton Transit Hub and the permanent PATH station. We are especially pleased with the commitment to use environmentally conscious designs throughout the reconstruction efforts.

Above all, we are grateful for the commitment of the Port Authority and the Lower Manhattan Development Corporation, with the leadership of Governor Pataki and Mayor Bloomberg, along with the partners in the EIS. All of them have established a view to this process that balances the need for speed with prudent and deliberate decision-making. ~~At the same time,~~ we know that ~~this massive undertaking can have~~ negative impacts on business, ~~employers,~~ and residents of Lower Manhattan, and all concerned continue to do ~~their best to minimize~~ those impacts.

Thank you.

Hearing on Ground Zero Draft Generic Environmental Impact Statement (DGEIS)
Wednesday, February 18, 2004

Comments of Patricia Noonan, Vice President, Research & Policy

Partnership for New York City

Good Afternoon. I am pleased to testify today on behalf of the Partnership for New York City. Our President and CEO, Kathryn Wylde, was unable to attend, so I am representing her here today. The Partnership is an organization comprised of the chief executives of the city's largest employers. It is committed to working in partnership with government, labor and the non-profit sector to enhance the economy and maintain New York City's position as the global center of commerce, culture and innovation.

Eight weeks after the terrorist attack, the Partnership issued its Economic Impact Analysis of 9/11. One of the study's central findings was that the future of Downtown Manhattan will be determined by the clarity and the pace of the rebuilding effort.

Urban recovery efforts after several major earthquakes provided an invaluable lesson: those cities that quickly agreed on a recovery plan, even though it may have taken years to implement, maintained their economic strength. A plan helps to create new business and stimulate investor confidence.

Today's hearing, two and a half years after that terrible day, is proof that New York City is on the right track. We have a plan and we are now in the process of implementing it.

The business community commends the Lower Manhattan Development Corporation and its partners in the EIS. They have set forth a balanced approach to expedite construction while minimizing the impacts on businesses, residents and workers in Lower Manhattan.

A host of major Lower Manhattan businesses will soon be faced with renewing leases; they will be making location decisions within the decade. In order to remain in Lower Manhattan, they must be confident about its future.

If they decide not to stay in Lower Manhattan , there is no guarantee they will stay in the city at all. Once they begin evaluating alternative locations, it is possible that they will choose to locate elsewhere. Some place where rents are lower and labor costs less.

Neither Lower Manhattan nor the city at large can afford to let these firms relocate

The business community believes that it is important to expedite the rebuilding process of the commercial sites in order to maintain the commercial character of Lower Manhattan and keep this important business district, which is the third largest CBD in the country.

The same sense of urgency and focus that drove the clean up of the World Trade Center site – which took 9 months rather than one year and cost $750 million, not the projected $2.5 billion – must continue to drive the rebuilding process.

Obviously, we cannot afford the kind of three-decade timetable that eventually produced the new Times Square and a built-out Battery Park City and World Financial Center.

A twenty or thirty year process is not acceptable for the businesses, workers and residents of Lower Manhattan. Nor is it acceptable for the families of victims or millions of people worldwide who want to come pay their respects.

Therefore, we must make every effort to keep to Governor Pataki's aggressive timetable for redevelopment. Efforts to date to improve the quality of life for workers and residents have helped make a difference.

And some of the proposals in the DGEIS will help minimize disruption during the critical construction period.

The business community applauds LMDC's efforts to move forward on the rebuilding because it recognizes the significance of this project to the economic health of Lower Manhattan, the city and the nation.

The Partnership for New York City supports LMDC's findings in the DGEIS.

LSNY sm Manhattan Providing Free Civil Legal Services To Manhattan Residents
Legal Services for New York City

John S. Kiernan
Chairman

Andrew Scherer
Executive Director and President

Peggy Earisman
Interim Project Director

March 15, 2004

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

Re: Comments on the Draft Generic Environmental Impact Statement (DGEIS)

To the Lower Manhattan Development Corporation:

I am submitting these comments as the attorney for the Rebuild with a Spotlight on the Poor Coalition to the Draft Generic Environmental Impact Statement (DGEIS). These comments are specifically directed to "Chapter 9: Socioeconomic Conditions," although some of the comments are relevant to the entire DGEIS.

The Rebuild Coalition, comprising approximately 20 non-profit advocacy and service organizations, was formed in December, 2001, to ensure that low-income communities, particularly Chinatown and the Lower East Side, had a voice in the rebuilding process. Since that time, the Coalition has been actively working to ensure that the voices of people from low-income communities are taken into account in the decision-making processes of organizations such as the Lower Manhattan Development Corporation (LMDC). Over 140 people attended the most recent community forum sponsored by Rebuild which was held on January 27, 2004. The need for housing affordable to low–income residents, including people living in Chinatown and the Lower East Side, and the need for jobs remain crucial community concerns.

1. The DGEIS Fails to Consider Alternatives As Required by Federal Law

Pursuant to the National Environmental Policy Act (NEPA), environmental statements must consider alternatives to the proposed action. See 42 USC § 4332 (C) (iii). The Second Circuit has described this requirement—the inclusion of detailed statements of alternatives and an evaluation of the alternatives—as "absolutely essential to the NEPA process . . . that we have characterized as the 'linchpin of the entire impact statement'". Natural Resources Defense Council, Inc., et. al. v. Callaway, 534 F. 2d 79 at 13-14 (2nd Cir. 1975), quoting Monroe County Conservation Society, Inc. v. Volpe, 472 F.2d at 697-98.

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The DGEIS prepared here seems only to propose one alternative—the alternative of taking no action and leaving the project site vacant. In analyzing future conditions, the alternative of building nothing is compared with the alternative of only one "proposed action" which includes 10 million square feet of office space, no housing, and new retail. No consideration at all appears to have been given to any other alternatives and certainly not the careful consideration that is required clearly by NEPA and the State Environmental Quality Review Act (SEQRA). As one example, the LMDC could have considered an alternative of a reduced amount of office and retail space on the project site with the addition of other activities such as housing, open space and cultural amenities. A need for new affordable housing has been repeatedly identified by the community; yet the LMDC considered no alternative considered that included any housing. The failure of the DGEIS to look at reasonable alternatives violates the law and renders the whole DGEIS meaningless.

2. The Socioeconomic Condition Report Violates Federal Law by Failing to Analyze the Impact of the Project on Racial Minorities or Low-Income People

Both federal and state law requires governmental agencies to scrutinize with care the impact their actions will have on minority groups. See, for example, Executive Order No. 12898, which mandates that "[t]o the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations. . . ." SEQRA requires a review of changes that would affect populations at risk such as minorities. No such review was completed in this case. Beyond reviewing the data, the DGEIS completely fails to address issues of concern to racial minorities or poor people. As a result, the DGEIS fails to utilize this unique chance to expand opportunities for racial minorities and poor people or look at alternatives that might enhance racial and economic justice.

Housing

In the primary study area, according to the DGEIS, the current population is 75% White, in contrast to the ratio in Manhattan as a whole of 54% White. The Black population in the primary study area is only 3.6% whereas Manhattan has a Black population of 17.4%. The Hispanic population is only 5.3% compared with 27.2% in the borough as a whole. Only the Asian population is greater than the Borough percentage, reflecting the proximity to Chinatown.

The median contract rent in the primary study area is $1,796, over twice the median rent for Manhattan. Most new units in this area are "upscale", according to the DGEIS. The median household income in the primary study area was $106,360, substantially above the median income for Manhattan as a whole.

In the secondary study area, both the Hispanic and Black populations are significantly below the borough average and these percentages have dropped since 1990. With the exception of Chinatown, the median household income is well above the Manhattan average. In contrast, the Chinatown median income of $23,867 is well below the city average.

The trend of an increasing wealthy White population in these study areas (except for Chinatown) may already have been exacerbated by the LMDC residential attraction grants which brought, in large part, wealthy Caucasians into the downtown area.

Despite these numbers, the DGEIS utterly fails to address much less analyze the effect of the "proposed action" on racial minorities or poor people. What effect will the proposed action have on the decrease in the Black and Hispanic population? Will the proposed action address the income inequities between the primary study area and the Chinatown community? Even more shamefully, the DGEIS does not consider any alternative that might address these racial disparities and income inequities. The increasing lack of diversity in race, nationality and income of these areas is harmful not only to affected minorities but also the social fabric of the entire City of New York and to the borough of Manhattan.

Employment

Absolutely no attempt was made to analyze the types of jobs that will be created. The DGEIS estimates by the year 2209, there will 28,486 new employees in the area with the proposed action. Yet no attempt is made to break these jobs down by income levels. Moreover, no attempt is made to analyze how this projected new employment could be used to assist low-income people to obtain employment or help people still without jobs after September 11th to regain employment.

3. The Methodology Used in the Socioeconomic Conditions Analysis is Flawed

Several aspects of the methodology used in the entire socioeconomic condition study are flawed. The study uses 1990 and 2000 census data for population, race and economic characteristics of the households residing in the primary and secondary areas. Although we understand that the latest federal census data is for the year 2000, the major tragedy occurred in this locale makes that data extremely unreliable. No serious attempt was made to update the data or take into account the major economic and other effects caused by the devastation of September 11th.

Indeed, the LMDC did not even look at its own, more recent data from its residential attraction and retention program. For example, what were the racial and economic characteristics of people who received the attraction grants and retention grants?

Additionally, the Socioeconomic Condition report assumes throughout that total housing units in the future are equal to the total housing units now existing plus buildings

that are being built or converted. No analysis is done of units lost to the housing market. This occurs, for example, when an owner decreases the number of units in a building in order to increase the size of the units or to get the building below the six-unit minimum for rent regulation. Units can also be lost by fire or demolition.

Finally, the area chosen for the secondary study makes no sense. Although the LMDC claims to employ "commonly used neighborhood definitions," it actually splits the Chinatown community in half. The Chinatown area—the "residential and business area that is defined by the presence of Asian American residents, workers, and Chinese-owned and -operated businesses in Lower Manhattan"—is generally considered to go north to Houston Street. See Asian American Federation of New York, Neighborhood Profile, Asian American Federation of New York Census Information Center, released in 2004. Community members have repeatedly noted in comments to the LMDC that Chinatown does not end at Canal Street. Yet once again, the LMDC has ignored this fact and has chosen to stop analysis at Canal Street.

Moreover, in choosing the secondary study area, the DGEIS fails to justify the boundaries chosen and gives no rationale for excluding the Lower East Side. The Lower East Side is currently undergoing enormous gentrification pressures which are likely to be exacerbated by the addition of millions of square feet of office space, as well as upscale retail and upscale housing nearby. The DGEIS does not address this situation. It also ignores the impact on the Lower East Side of September 11th— for example, the small retail stores in that neighborhood were also closed for many days.

4. The Conclusion of No Secondary Displacement Lacks a Foundation

The DGEIS baldly asserts that "the potential for indirect, or secondary, residential displacement is limited in scope." It essentially justifies this conclusion by saying that the trends of higher-cost housing, less racial diversity and richer people will continue regardless of what is done in this neighborhood. Its allegation that a project of this size will not affect neighborhood residential trends is simply unbelievable. If one creates thousands of jobs at high salaries and encourages upscale retail businesses, the secondary displacement pressures on low-cost residential housing will clearly increase.

Additionally, the DGEIS conclusion that Chinatown has remained insulated from displacement pressures is contrary to the understanding of everyone who works in the community and may well be the result of its faulty analysis and flawed definition of Chinatown. Given the potential for the accelerating displacement of huge numbers of minorities from both Chinatown and the Lower East Side, this conclusion needs to be much more carefully examined.

5. The DGEIS Report Is Flawed Because It Fails to Discuss the Distribution of CDBG Funds

In violation of NEPA and SEQRA, the DGEIS is faulty in that it does not discuss how all the Community Development Block Grant (CDBG) money that has been or will

be approved by the Department of Housing and Urban Development (HUD) will be disbursed. In fact, as noted above, the LMDC even fails to look at its own data to see what impact that money may already have had on socioeconomic trends. This omission continues the LMDC policy of disbursing this money without regard to community priorities.

Respectfully submitted,

Peggy Earisman, on behalf
Of the Rebuild Coalition

LSNY sm Manhattan Providing Free Civil Legal Services To Manhattan Residents
Legal Services for New York City

John S. Kiernan
Chairman

Andrew Scherer
Executive Director and President

Peggy Earisman
Interim Project Director

FAX COVER SHEET

TO: LMDC

Attention: DGEIS Comments

FROM: Peggy Earisman

FAX NUMBER: (212) 962-2431

RE: Attached DGEIS Comments which was too large to fit into e-mail

DATE: March 15, 2004 **NUMBER OF PAGES INCLUDING COVER SHEET** 6

COMMENTS:

LSC

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New York, NY 10038
Tel. No.: 646-442-3100
Fax: 212-227-9798

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These are the [illegible] I am concerned about, I support this position.

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4 pgs.

Att: draft GEIS Comments

Re: Comments on the Draft Generic Environmental Impact Statement (DGEIS)

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Both federal and state law requires governmental agencies to scrutinize with care the impact their actions will have on minority groups. See, for example, Executive Order No. 12898, which mandates that "[t]o the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations. . . ." SEQRA requires a review of changes that would affect populations at risk such as minorities. No such review was completed in this case. Beyond reviewing the data, the DGEIS completely fails to address issues of concern to racial minorities or poor people. As a result, the DGEIS fails to utilize this unique chance to expand opportunities for racial minorities and poor people to look at alternatives that might enhance racial and economic justice.

Housing

In the primary study area, according to the DGEIS, the current population is 75% White, in contrast to the ratio in Manhattan as a whole of 54% White. The Black population in the primary study area is only 3.6% whereas Manhattan has a Black population of 17.4%. The Hispanic population is only 5.3% compared with 27.2% in the borough as a whole. Only the Asian population is greater than the Borough percentage, reflecting the proximity to Chinatown.

The median contract rent in the primary study area is $1,796, over twice the median rent for Manhattan. Most new units in this area are "upscale", according to the DGEIS. The median household income in the primary study area was $106,350, substantially above the median income for Manhattan as a whole.

In the secondary study area, both the Hispanic and Black populations are significantly below the borough average and these percentages have dropped since 1990. With the exception of Chinatown, the median household income is well above the Manhattan average. In contrast, the Chinatown median income of $23,867 is well below the city average.

The trend of an increasing wealthy White population in these study areas (except for Chinatown) may already have been exacerbated by the LMDC residential attraction grants which brought, in large part, wealthy Caucasians into the downtown area.

Despite these numbers, the DGEIS utterly fails to address much less analyze the effect of the "proposed action" on racial minorities or poor people. What effect will the proposed action have on the decrease in the Black and Hispanic population? Will the proposed action address the income inequities between the primary study area and the Chinatown community? Even more shamefully, the DGEIS does not consider any

a ernative that might address these racial disparities and income inequities. The i ncreasing lack of diversit y in race, nationality and income of these areas is h armful not o ly to affected minorities but also the social fabric of the entire City of New York and to t e borough of Manhattan

Employment

Absolutely no attempt was made to analyze the types of jobs that will be created T e DGEIS estimates by the year 2209, there will 28,486 new employees in t e area with t e proposed action. Yet no attempt is made to break these jobs down by income levels. M oreover, no attempt is made to analyze how this projected new employmen could be u ed to assist low-income people to obtain employment or help people still without jobs a er September 11th to regain employment.

3. The Methodology Used in the Socioeconomic Conditions Analysis Is Flawed

Several aspects of the methodology used in the entire socioeconomic condition s tdy are flawed. The study uses 1990 and 2000 census data for population, race and e onomic characteristics of the households residing in the primary and secondary areas. A though we understand that the latest federal census data is for the year 2000, the major t gedy occurred in this locale makes that data extremely unreliable. No serious attempt w s made to update the data or take into account the major economic and other effects c used by the devastation of September 11th.

Indeed, the LMDC did not even look at its own, more recent data from its r sidential attraction and retention program. For example, what were the racial and e onomic characteristics of people who received the attraction grants and retention g ants?

Additionally, the Socioeconomic Condition report assumes throughout that total h using units in the future are equal to the total housing units now existing plus buildings t at are being built or converted. No analysis is done of units lost to the housing market T is occurs, for example, when an owner decreases the number of units in a building in o der to increase the size of the units or to get the building below the six-unit minimum f rent regulation. Units can also be lost by fire or demolition.

Finally, the area chosen for the secondary study makes no sense. Although the L MDC claims to employ "commonly used neighborhood definitions," it actually splits t e Chinatown community in half. The Chinatown area—the "residential and business a ea that is defined by the presence of Asian American residents, workers, and Chinese-o med and -operated businesses in Lower Manhattan"—is generally considered to go n rth to Houston Street. See Asian American Federation of New York, Neighborhood P ofile, Asian American Federation of New York Census Information Center released in 2 04. Community members have repeatedly noted in comments to the LMDC that C inatown does not end at Canal Street. Yet once again, the LMDC has ignored this fact a d has chosen to stop analysis at Canal Street.

Moreover, in choosing the secondary study area, the DGEIS fails to justify the boundaries chosen and gives no rationale for excluding the Lower East Side. The Lower East Side is currently undergoing enormous gentrification pressures which are likely to be exacerbated by the addition of millions of square feet of office space, as well as upscale retail and upscale housing nearby. The DGEIS does not address this situation. It also ignores the impact on the Lower East Side of September 11th — for example, the small retail stores in that neighborhood were also closed for many days.

4. The Conclusion of No Secondary Displacement Lacks a Foundation

The DGEIS baldly asserts that "the potential for indirect, or secondary, residential displacement is limited in scope." It essentially justifies this conclusion by saying that the trends of higher-cost housing, less racial diversity and richer people will continue regardless of what is done in this neighborhood. Its allegation that a project of this size will not affect neighborhood residential trends is simply unbelievable. If one creates thousands of jobs at high salaries and encourages upscale retail businesses, the secondary displacement pressures on low-cost residential housing will clearly increase.

Additionally, the DGEIS conclusion that Chinatown has remained insulated from displacement pressures is contrary to the understanding of everyone who works in the community and may well be the result of its faulty analysis and flawed definition of Chinatown. Given the potential for the accelerating displacement of huge numbers of minorities from both Chinatown and the Lower East Side, this conclusion needs to be much more carefully examined.

5. The DGEIS Report Is Flawed Because It Fails to Discuss the Distribution of CDBG Funds

In violation of NEPA and SEQRA, the DGEIS is faulty in that it does not discuss how all the Community Development Block Grant (CDBG) money that has been or will be approved by the Department of Housing and Urban Development (HUD) will be disbursed. In fact, as noted above, the LMDC even fails to look at its own data to see what impact that money may already have had on socioeconomic trends. This omission continues the LMDC policy of disbursing this money without regard to community priorities.

New Jersey Association of Railroad Passengers
P.O. Box 68 Chatham, NJ 07928 Web: www.nj-arp.org

Combine a Thru-Running PATH/#6 Lexington Avenue Subway Connection with an Ideal Interdivisional Station at Fulton Street

- **Link the Lower Manhattan PATH line and the #6 Lexington Avenue local subway line with a physical track connection, allowing through service between Newark and The Bronx.**
- **Build a new PATH/#6 station under Fulton Street, between Greenwich Street and Broadway, and use its mezzanine to join it and the #1 and #9 and the A, C, and E stations to the existing # 2, 3, 4, 5, A, C, J, Z, and M stations – an ideal interdivisional station in that it contains every transit line serving Lower Manhattan.**
- **Realize Fulton Street as a pedestrian way and interdivisional subway station entrance spanning Lower Manhattan between the South Street Seaport and the Wintergarden.**

The Regional Rail Working Group consisting of the New Jersey Association of Railroad Passengers (NJ-ARP), the Empire State Passengers Association (ESPA), and the Committee for Better Transit (CBT) urges the Lower Manhattan Development Corporation (LMDC), the Port Authority of New York and New Jersey (PANYNJ), the Metropolitan Transportation Authority (MTA), the New York State Department of Transportation (NYSDOT) and the City of New York (NYC) to consider a through running track connection between the Lower Manhattan PATH line and the #6 Lexington Avenue local subway line in conjunction with the rebuilding of the former World Trade Center (WTC) site in Lower Manhattan.

Routing this new track connection under Fulton Street and building a new PATH/#6 station with a mezzanine connecting six New York City subway stations and PATH would merge 14 transit lines within a single underground transportation complex. The establishment of Fulton Street as a pedestrian centerpiece of a revitalized Lower Manhattan, extending from the Hudson River to the East River, will act to centralize commercial and retail development, eliminate the costly entry pavilion proposed on Broadway and save the historic buildings which have been threatened with demolition.

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The proposal envisions constructing approximately 3000 feet of track between the Lower Manhattan PATH line, which was partially uncovered by the September 11, 2001 terror attack, and the Lexington Avenue #6 local line at the City Hall station. Trains could run through between Newark and either of the two current Bronx terminals at Parkchester or Pelham Bay Park and designated trains could turn at the existing City Hall loop or the interim rebuilt WTC PATH station.

This connection is possible because PATH and Lexington Avenue line car exterior dimensions, propulsion voltage, and signal systems are relatively similar.

The PANYNJ has expended $556 million dollars rehabilitating the Exchange Place station in New Jersey and the downtown tunnels between Exchange Place and the WTC site. However, ridership is expected to be well below pre-9/11 levels for many years to come. Actual ridership on the entire PATH system for 2000 was reported to have been 74 million; for 2003, the PANYNJ projects only 54 million.

The Regional Rail Working Group believes that connecting the PATH tunnels to the New York City subway network is a relatively quick and inexpensive way for PATH to adapt to the changed transportation patterns, augment the already overstressed 93 year old Amtrak and New Jersey Transit regional rail twin track trans-Hudson tunnels to Penn Station, and provide additional transit options for the region.

This once-in-a-century opportunity benefits both states, the City of New York and the entire metropolitan area.

New Jersey residents benefit by having access not only to a greater portion of the Lower Manhattan business district but also the east midtown Manhattan employment district. New York City benefits by downtown and midtown employers having more widespread access to a skilled labor pool in New Jersey's urban cores, especially gentrifying communities in Hudson County, and outlying suburban areas. New York City east side, Midtown and Lower Manhattan residents benefit by gaining a transit alternative to Newark Liberty International Airport and job sites that relocated to the west bank of the Hudson in the aftermath of 9/11. The entire metropolitan region benefits by concentrating expanding economic activities in the compact urban core areas rather than the auto dependant suburban sprawl office complexes so prevalent in both states.

The joint LMDC, PA, MTA, NYSDOT and the City of New York document entitled, "Lower Manhattan Transportation Strategies" dated April 24, 2003, identifies the two components of the Lower Manhattan Transit Complex as the WTC PATH Terminal and the Fulton Street Transit Center. The design team of Robert A.M. Stern Architects and Gensler Architecture, Planning, and Design has been tasked with the goal of establishing Fulton Street as the "...major east-west artery...by transforming the street's character into a unique retail, arts, culture, and entertainment destination." In another document, Mayor Bloomberg's "Vision for Lower Manhattan" aims at transforming the Fulton Street-Broadway Nassau subway station "...into an attractive and efficient transit hub...spurring...a lively mixed use neighborhood that links the Hudson and East Rivers."

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To more effectively accomplish these goals for downtown rebuilding, the Regional Rail Working Group proposes that the two transit components be combined into a single complex centered along Fulton Street. This combination integrates all downtown subway lines and PATH. Under this plan, the eastern four subway stations would be joined by a new PATH/#6 station with the other two stations in the Fulton Street catchment area.

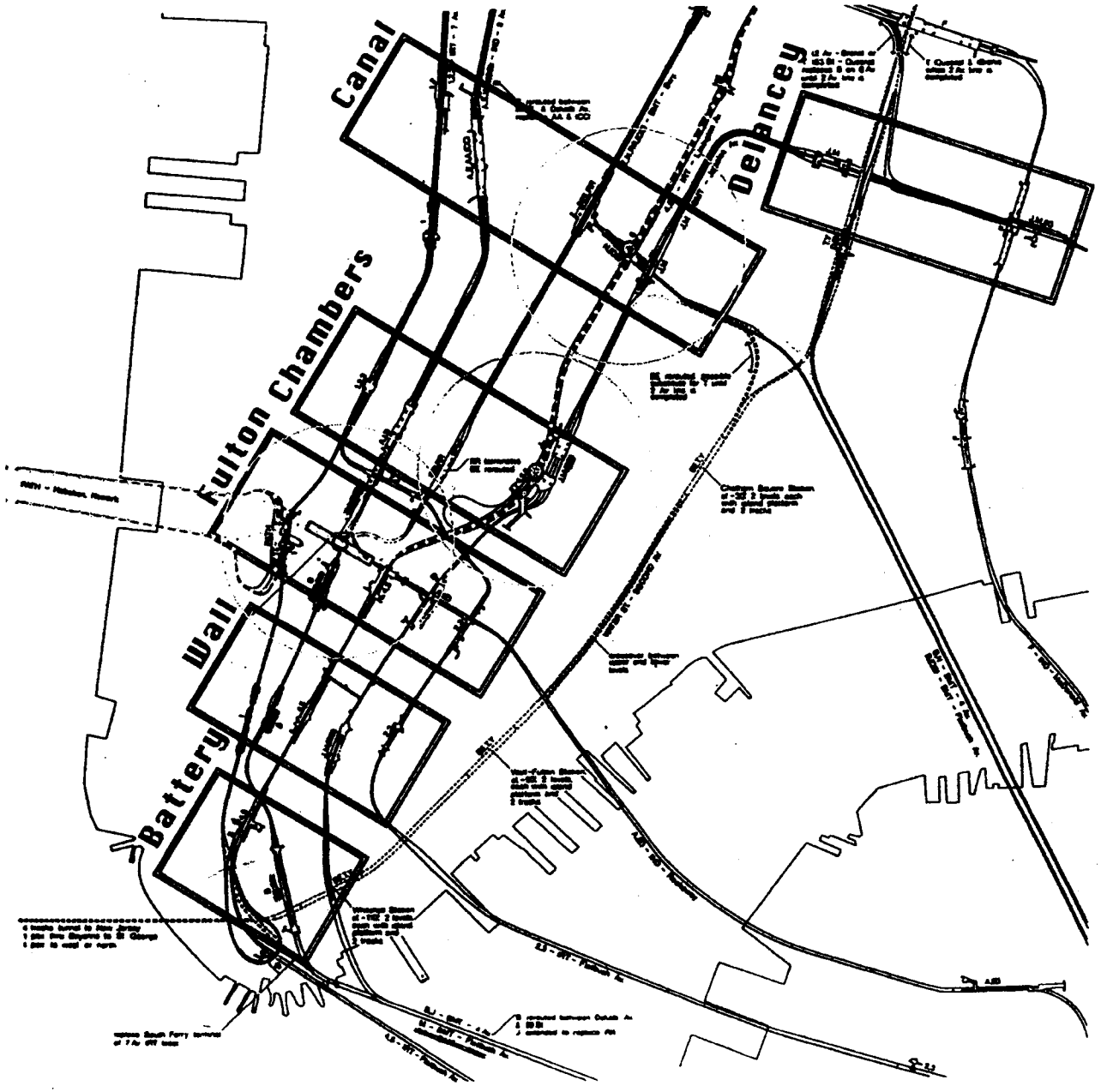
By so doing, fourteen transit lines are combined in one station complex - rather than the two currently under consideration - and through running is established between the PATH and the Lexington Avenue line. Another attraction of this plan is the avoidance of expensive property acquisition for the MTA's station fronting on the east side of Broadway between Fulton and John Streets. Construction of this head house would involve the purchase and demolition of a series of historic buildings. Under the Regional Rail Working Group's concept, the combined station complex and its entrances will be located on Fulton Street.

Capitalizing on its proximity to all major downtown transit lines, retail shops, culture and entertainment venues, Fulton Street should be rebuilt as a pedestrian thoroughfare from the South Street Seaport to the Wintergarden with widened sidewalks leaving sufficient roadway space for emergency, delivery and service vehicles. Station entrances should be celebrated with entranceways prominently located along the street rather than hidden along its edge and within buildings.

The connection of the PATH and #6 Lexington Avenue subway services, the construction of a PATH/#6 station at Fulton Street, and the interconnection and improvement of the Fulton Street interdivisional station and Fulton Street itself should cost less than the plans for the new WTC PATH station and Fulton Street Transit Center. But we hasten to add that this estimate is based on the redevelopment of the WTC site being designed so as not to preclude the physical PATH/#6 link from being put in place. The location of a structural column or other obstruction in the middle of the proposed right-of-way could, of course, render the connection impractical.

Presently, the individual costs of the two components of the Lower Manhattan Transit Complex are $1.7 to $2.0 billion for the WTC PATH Terminal phased over 3 to 6 years (the PANYNJ has asked $1.4 to $1.7 billion from FEMA/FTA) and $750 million for the Fulton complex phased over 3 to 4 years. Therefore, the sum of the individual construction expenses range from a minimum of $2.45 billion to a maximum of $2.75 billion. Our estimate for the 3000 feet of track to link the downtown PATH tunnels to the #6 Lexington Avenue local line at City Hall is $800 million, using the 8 mile, $16 billion Second Avenue subway published expense as a guide. We believe that the remaining $1.95 billion, using the high end of the range, should be more than adequate to enlarge and improve a single station complex if the decision to do so is made expeditiously and the size and scope of the permanent PATH WTC station is reduced to reflect the lessened amount of trains that will use it.

The Regional Rail Working Group requests that this comprehensive program of transportation infrastructure improvements for Lower Manhattan be examined and seriously considered for implementation. The benefits for all jurisdictions are noteworthy and will act to restore the integrity of the transportation fabric of Lower Manhattan, the third largest commercial business concentration in our nation.



Downtown

PATH & Lex Av IRT

PATH and the Lexington Avenue IRT could be connected to each other.

Path could be extended east to a new station at Fulton Street where it would connect to the Lexington Avenue IRT.

The 6 route of the Lexington Avenue IRT, which now terminates at Chambers Street, could be extended to a new station at Fulton Street where it would connect to PATH.

Assuming a common train ran on the PATH and 6 routes, PATH would gain service in the Chambers Street catchment area and the 6 would gain service in the Fulton Street catchment area.

This would double the area of Lower Manhattan served by PATH and by the 6.

Also, if PATH is extended to Newark airport it provides direct access from the east side of Manhattan.

FULTON
BACK INDEX END NEXT

RIVERKEEPER.

To: LMDC

Fax: 212-962-2431

From: Riverkeeper - Reed Super

Phone: 845.424.4149
Fax: 845.424.4150

Date: March 15, 2004

Re: Comments - WTC Memorial & Redevelopment

We are faxing 14 pages, including this cover page.
If you have any problems or do not receive the entire transmission, please contact us at 845.424.4149 for assistance. Thank you.

25 Wing & Wing • Garrison, NY 10524-9910 • 845 424.4149 • fax 845 424.4150 • www.riverkeeper.org

March 15, 2004

VIA FACSIMILE (212-962-2431) AND FEDERAL EXPRESS

Lower Manhattan Development Corporation
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS
One Liberty Plaza, 20th Floor
New York, NY 10006

Re: **Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan**

To Whom It May Concern:

Below please find comments submitted by Riverkeeper, NY/NJ Baykeeper, Soundkeeper and the Natural Resources Defense Council on the Draft Generic Environmental Impact Statement (DGEIS) for the World Trade Center Memorial and Redevelopment Plan ("WTC Project"). These comments focus on two issues: the WTC Project's impacts on surface water quality resulting from combined sewer overflows (CSOs) and the Project's impacts on aquatic biota resulting from cooling water withdrawals from the Hudson River.[1]

Redevelopment of the WTC is likely the most important project being undertaken in New York City today, due to its sheer magnitude as well its vital role in helping lower Manhattan, the City, the region and the country recover from the tragic events of September 11, 2001. As such, the WTC Project will be a national symbol and will have enormous repercussions well beyond its immediate environment. According to its website, "LMDC is charged with ensuring Lower Manhattan recovers from the attacks and *emerges even better than it was before*" (emphasis added). Because the WTC was originally designed during a time of less ecological awareness, this principle of progress and improvement is especially relevant in the environmental context. The DGEIS states that "[i]n response to strong public sentiment for sustainable and green design, construction, and function at the Project Site, LMDC and the Port Authority have sought from the beginning to advance sustainable environmental excellence." (DGEIS, p. 1-40.) To this end, one of the stated goals of the "Enhanced Green Construction Alternative" is to "optimize water usage and discharge." (DGEIS, p. 23-32.)

But, as currently proposed, the WTC Project fails to match this laudable ambition with respect to its impacts on water quality and the marine environment. As discussed

[1] NRDC has separately submitted additional brief comments on the air and energy sections of the DGEIS.

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further below, the current plan would allow substantial quantities of raw sewage and polluted stormwater from the Project site to be discharged untreated in combined sewer overflows (CSOs) to the Hudson River, East River, and Newtown Creek. Likewise, the WTC's cooling water intake structure does not reflect the best technology available (BTA) as required by state and federal law, and will result in the needless mortality of aquatic life in the Hudson River. Fortunately, there are existing technological solutions to both sets of problems that LMDC can and should put into place to mitigate the WTC Project's water quality and aquatic ecology impacts in order to ensure that the Project meets the LMDC's goal of environmental excellence. We look forward to working with LMDC and all stakeholders to ensure that the vitally important WTC project meets this standard in all areas.

TO REDUCE CSO DISCHARGES OF UNTREATED SEWAGE INTO THE HUDSON AND EAST RIVERS AND NEWTOWN CREEK, THE WTC PROJECT SHOULD ELIMINATE COMBINED SEWAGE FLOWS TO THE CITY'S ALREADY-OVERLOADED SEWAGE SYSTEM, PARTICULARLY DURING WET WEATHER.

The project will contribute more than one million gallons per day of raw sewage, plus stormwater runoff from the 16-acre project site, into a combined sewage system that is already overloaded during rain events. The Citywide lack of adequate wet weather storage and treatment capacity causes approximately 50 overflow events per year (i.e., an average of one per week), discharging approximately 8 billion gallons of raw sewage and 32 billion gallons of polluted stormwater runoff to local waterways annually. These CSO discharges exact an enormous cost – health costs, financial costs, intrinsic costs – on the City and its residents, tourists and other visitors.

CSOs are a serious environmental problem and threat to human health, and will neither be abated quickly nor without concerted effort. For more information on the environmental, social and human health costs of sewer overflows, please see the enclosed February 2004 report prepared by the Natural Resources Defense Council and the Environmental Integrity Project entitled *Swimming In Sewage: The Growing Problem of Sewage Pollution and How the Bush Administration Is Putting Our Health and Environment at Risk.* Despite the state legislature's designation of the waters of Hudson River Park as a marine sanctuary, and other commendable efforts by the city and state to open and improve the NYC waterfront for public uses, far too little has been done to abate water pollution in CSOs.

New York City's sewage system includes approximately 450 combined sewer overflow pipes, or outfalls, all around the five boroughs. Although the City's system captures both sanitary sewage and stormwater runoff, its 14 sewage treatment plants have only enough treatment capacity to meet demand during dry weather or very light rains. In about half of the City's rainfall events, sewage and polluted stormwater is discharged untreated as combined sewer overflows from some or all of the 450 outfalls. In some areas of the City, a rain event as small as 0.05 inches can initiate overflow conditions,

causing untreated sewage to overflow into the estuary. CSOs send bacteria, toxins, excess nutrients and trash into the receiving waters, impairing the human use and ecological function of the waters.[2]

As the LMDC acknowledges, "CSOs are the largest single source of pollutants and pathogens to the New York Harbor." (DGEIS. p. 18-38, citing a 2003 NYC DEP report.) While water quality has improved overall in the Harbor, CSOs continue to cause violations of water quality standards and, as a result, many of New York City's local waterways are included on the state's list of "impaired" waters under Section 303(d) of the Clean Water Act. Newtown Creek and its tidal tributaries are among those included on New York State's 2004 Section 303(d) list as waterbody segments with impairments caused by CSOs. Because the WTC is in the Newtown Creek drainage basin, raw sewage and polluted stormwater from the project site will add to the volume of combined sewage that discharges untreated into the Hudson River, East River and Newtown Creek.

The City's sewage troubles are not new; in fact, its sewage system has never been in compliance with federal and state law. Until the North River plant began primary treatment (i.e., removal of suspended solids) in 1986, raw sewage from most of Manhattan's West Side flowed untreated to the Hudson. Secondary treatment (i.e., biological purification) did not begin at North River until 1991, fourteen years after the federal Clean Water Act's 1977 deadline. The City's 1988 sewage discharge permits "were inadequate under federal and state law"[3] and are only now being updated. Since 1992, the City has been subject to an enforcement order from the state Department of Environmental Conservation (DEC) for violations regarding discharges from its CSOs. However, the City has missed almost every mandatory deadline in the order's 14-year schedule for abating CSOs and has failed to fund water quality programs totaling $250,000, as was required. As a result of this non-compliance, DEC initiated a new enforcement action against the City in December 2003.[4] Most importantly, the City still lacks a Long Term Control Plan for CSOs, which is required by EPA's 1994 CSO control policy[5] and the federal Clean Water Act.[6]

At full build-out in 2015, the WTC project will generate more than a million gallons of raw sewage per day which, during dry weather, will be treated before being discharged at the Newtown Creek Water Pollution Control Plant (WPCP). During wet weather, however, this additional sewage poses significant problems. Today, *without* any

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[2] New York/New Jersey Harbor Estuary Program, Combined Sewer Overflows in the New York/New Jersey Harbor Estuary Fact Sheet 2 *at* http://www.hudsonriver.org/hep/facts.htm (hereinafter "HEP Fact Sheet").

[3] NYS DEC, Supplemental Rulings of Administrative Law Judge Andrew S. Pearlstein, DEC Case No. 0026131, Jan. 27, 1993.

[4] December 3, 2003 Notice of Violation issued by DEC to NYC DEP.

[5] 59 Fed. Reg. 18,688 (April 19, 1994).

[6] CWA section 402(q), 33 U.S.C. § 1342(q), enacted in the Wet Weather Water Quality Act of 2000.

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additional flow from the WTC Project, Newtown Creek already frequently reaches full capacity during storm events, resulting in polluted stormwater mixed with raw sewage bypassing the plant and discharging into Newtown Creek without treatment. In addition, rainfall causes sewer pipes to back up, and untreated combined sewage overflows from some or all of the 80+ CSO outfalls in the Hudson River, East River and Newtown Creek that are between the WTC site and the plant. In sum, because the City currently lacks wet weather sewage capacity in the relevant area – a situation that will persist for the foreseeable future – the more than one million gallons of raw sewage generated at the WTC site and all of its polluted stormwater runoff (which the DGEIS fails to quantify) will add to the volume discharged in CSOs.

By building a 16-acre project from the ground up in the heart of New York City, the WTC project presents an unprecedented opportunity to not only significantly reduce CSOs and their impacts but to set an example for sustainable development. If the opportunity presented by the WTC redevelopment is not acted upon, the City's Long Term Control Plan for CSOs will take even longer to attain water quality standards, will be more expensive, or both. Every gallon of untreated combined sewage that the WTC site adds to the City's centralized sewage system is a gallon that will have to be removed, stored, or treated elsewhere – likely at greater cost – in order to resolve the systemic lack of wet weather capacity.

Controlling New York City's CSOs to meet water quality standards will take significant amounts of time and money. It will, unfortunately, not be accomplished by 2015, when full build-out of the WTC redevelopment is expected. If the course of action currently proposed is followed, the WTC site is likely to exacerbate the CSO problem by contributing more raw sewage and polluted stormwater to the City's already-overloaded combined system.

We strongly advocate a different course of action, one by which the WTC Project can be part of the solution to ongoing water quality problems around the City, rather than part of the problem. As discussed in greater detail below, at a minimum, to comply with NEPA and SEQRA's requirements that an EIS set forth mitigation measures for all significant adverse environmental impacts, the LMDC should adopt a "no net CSO increase" standard for this project, and demonstrate how this will be achieved. But the WTC project can and should go well beyond a policy of CSO neutrality, and seek to minimize combined sewage flows from the Project site to the greatest extent feasible. As also described below, standard technology used in other locations in NYC and around the world can achieve this goal at modest cost.

The WTC Project Can and Should Set a "No Net CSOs" Goal and Incorporate Readily Available Technologies To Meet It.

The redevelopment of the WTC Project is a prime opportunity to embrace progressive efforts to reduce water pollution while pioneering to achieve new levels of environmental stewardship. The WTC Project should adopt the goal of eliminating net increases in sewage overflows from the Project Site to the sewage system serving the

Newtown Creek Water Pollution Control Plant. The WTC Project should endeavor to eliminate Hudson River CSO events in the wastewater service area of the Project Site, significantly reduce CSOs to the Hudson triggered by stormwater flows from neighboring properties, and reduce system-wide CSO events in the East River and Newtown Creek, triggered by downstream bottlenecks.

While the Draft Sustainable Design Guidelines adopt water quality and conservation management as sustainable design objectives and identify sustainable design guidelines for site/parcel and water environmental qualities, they fail to embrace and provide for a framework or strategy to accomplish a project design that addresses CSO impacts. Moreover, the draft guidelines are unclear as to the method, timing and enforceability of their implementation.

The Draft Sustainable Design Guidelines are commendable for having raised the floor for environmental and sustainability attributes to be incorporated into the WTC Project. However, they fail to adequately address the CSO impacts, and thus important water quality impacts, of the Proposed Action. The final guidelines should adopt a "no net CSO" objective in the Comprehensive Resource (SEQ-1) and Water (WEQ-1) Management Plans and call for actions that will ensure that CSO impacts are avoided or mitigated.

These management plans should minimize wastewater flows into the sewer system to the extent necessary to avoid CSO events. To accomplish this goal, a decentralized wastewater system should be considered to treat stormwater and or sewage from the project area, with possible discharges into the Hudson River. This will dramatically reduce CSO events in the immediate sewer service area and diminish flows subject to downstream bottlenecks.

The DGEIS leaves the matter of the enforceability and implementation of guidelines unclear. As the comment period comes to a close, the guidelines have not been incorporated into the Commercial Design Guidelines and there is no designated Implementation Authority. To the extent that certain features of the Proposed Action incorporate "green design" features such as wind turbines, the guidelines appear to remain soft proposals and concepts. Additional features that are described below should be incorporated into the DGEIS and considered as components of the Proposed Action, or thoroughly considered as alternatives.

The DGEIS makes mention of several techniques to decrease stormwater runoff and points to the Draft Guidelines' intent to develop a Comprehensive Resource Management Plan. However, several "off-the-shelf" technologies currently exist that should be directly incorporated into the Proposed Action and its Green Construction Alternative review for purposes of NEPA and SEQRA analysis.

For example, the Solaire development in nearby Battery Park City, the Durst Organization's Four Times Square, Durst's nearly completed 38 floor residential development, and the planned Hearst Tower project all incorporate innovative design

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features that exemplify the viability and success of these green development features in large New York City development projects. These projects incorporate a host of methods that collectively accomplish decentralized wastewater treatment, reducing new wastewater flows into the city's combined system. They range from green roofs to a black water purification plant serving Durst's 38-floor, 600-unit rental residential property.

Decentralized wastewater and stormwater plants are being considered for urban areas subject to CSOs in New York City and beyond. Depending on the technology applied, the scaled-down plants can collect, treat, pre-treat, discharge, recycle, and even re-use the building's wastewater. These facilities can discharge their treated wastes outside the large, centrally located system that receives inputs from all the buildings and impermeable surfaces in the area. In this way, decentralized systems can remove large volumes of wastewater from the system, and when incorporated into any new development, can ensure no net volume or a limited volume of untreated sewage is added into an already overloaded system.

According to the EPA, adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals.[7] The EPA defines decentralized wastewater treatment systems as onsite or clustered wastewater systems that are used to treat and dispose of relatively small volumes of wastewater, generally from dwellings and businesses that are located relatively close together.

In Hunters Point, San Francisco, engineers and officials favored a decentralized system as the outcome of a year-long feasibility study linking new development to the city's CSO problem. After technical review, the San Francisco Hunters Point project settled on membrane bioreactors (MBR) as the most effective system. MBR combines multiple treatment processes into one step where grit and nitrogen are removed from the wastewater and then microorganisms are screened out via submerged synthetic membranes or layers. The MBR scored higher than the other methods in terms of footprint, water reuse potential, highest quality effluent, capital and operational costs, and public benefits such as health, safety, and odors.[8]

We recommend that the LMDC, as part of a revised or supplemental DEIS, examine the potential use of MBR and similar technologies for the purpose of designing a system that treats all wastewater flows from the WTC Project, including providing treated water to meet reuse demand, discharging excess treated wastewater to the neighboring Hudson River, and returning all solids to the combined sewer system. As an alternative to a decentralized system treating sewage, the DEIS should also consider detention of excess stormwater flows from the Project Area with treatment and release to the Hudson.

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[7] www.epa.gov/owm/mtb/decent/summary.htm.

[8] San Francisco Public Utilities Commission, Hunters Point Shipyard Decentralized Wastewater Treatment Study, www.sfwater.org.

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As the "construction of the WTC by the Port Authority was a remarkable achievement that exemplified the planning ideas of the day," (DGEIS, p. S-1) the redevelopment effort should similarly exemplify today's innovative planning ideas. As the Revised Blueprint for the Future of Lower Manhattan (June 5, 2002) guides agency policy decisions to embrace "excellence and sustainability in new design and engineering (including "green building" technology) (DGEIS, p. S-6), the DGEIS should go beyond the immediate confines of the WTC redevelopment to embrace environmental policy issues such as CSOs and their effects on Lower Manhattan waterways and beyond.

THE WTC'S COOLING WATER INTAKE STRUCTURE DOES NOT REFLECT THE "BEST TECHNOLOGY AVAILABLE" TO MINIMIZE IMPINGEMENT AND ENTRAINMENT OF AQUATIC ORGANISMS, AS REQUIRED BY CLEAN WATER ACT § 316(B) AND 6 NYCRR § 704.5.

Reuse of the WTC's cooling water intake structure (CWIS) for heating, ventilation, and air conditioning (HVAC) system without significant technological upgrades will cause substantial ecological harm. The withdrawal of large volumes of water from the biologically-rich Hudson River will cause the needless loss of millions of fish and invertebrates each year. As a federal appeals court recently recognized, "the pressure from the flow of large volumes of water into these cooling systems traps ("impinges") larger organisms, like fish, against intake points, or draws ("entrains") smaller ones, like plankton, eggs, and larvae, into the cooling mechanism, killing or injuring them. The environmental impact of these systems is staggering...."[9]

The DGEIS acknowledges that, if withdrawal volumes approach the CWIS's design capacity of 179 million gallons per day (MGD), losses of aquatic biota at the WTC's CWIS may be significant. (DGEIS, p.18-2). But the document fails to set forth and analyze the feasibility or effectiveness of specific measures to mitigate these impacts.[10]

In addition, the DGEIS incorrectly assumes that if the CWIS is operated at somewhat lower withdrawal volumes, impacts will not be significant. Available information shows that impacts will be significant at lower withdrawal volumes. Prior to September 11, 2001, the WTC CWIS operated at between 65 and 82 percent of capacity, which translates into a withdrawal of approximately 130 MGD. The withdrawal of such large volumes resulted in significant losses to more than twenty different species of fish and invertebrates, particularly entrainment of early life stages, including annual mortality of more than 48 million bay anchovy, more than 8 million winter flounder, nearly 2 million silver hake, nearly 2 million goby, as well as impingement of more than 15,000

[9] *Riverkeeper, Inc. v. U.S. EPA*, No. 02-4005(L), slip op. at 3 (2d Cir. Feb. 23, 2004).

[10] The DGEIS merely provides a laundry list of possible technologies to mitigate impacts (e.g., flow and velocity reductions, closed-cycle cooling, fine mesh barriers and screens, and fish avoidance and return systems) that would be explored during the SPDES permitting process. (DGEIS, p. 18-3.)

adult blue crab. (*See* DGEIS, p. 18-48 to 18-50, providing impingement and entrainment tables for WTC 1991-1993.)

This substantial aquatic mortality damages the Hudson River ecosystem because it reduces adult populations of these species; deplete the species' resilience to survive unfavorable environmental conditions; and diminishes the forage base, which disrupts the food chain, transferring energy from high to lower trophic[11] levels and compromising the health of the entire aquatic community.[12] To use a simplified example, if an individual bay anchovy is killed via entrainment and disintegrated upon passage through a CWIS, it is no longer available as food to a striped bass and other top predators, but rather it is only useful as food to lower trophic level organisms, such as detritivores (organisms that feed on dead organic material). Further, the bay anchovy would no longer be available to consume phytoplankton, which upsets the distribution of nutrients in the ecosystem.[13]

As a result, it is clear that the WTC intake will significantly and adversely affect Hudson River biota if it is operated at pre-9/11 levels. The DGEIS forecasts that it will be operated at 60 percent lower withdrawal volumes because there will be 60 percent less space requiring cooling, as compared to pre-9/11 conditions. But even if withdrawals are approximately 80 MGD (60 percent of 130 MGD), the losses to aquatic biota will still be significant. For example, such withdrawals would be expected to result in the annual loss of nearly 30 million bay anchovy. Even taking into account that bay anchovy are prolific spawners and have high natural mortality rates, losses on that order of magnitude cannot be considered trivial in light of the trophic and community level effects described above.

For comparison, consider the volumes of water withdrawn by steam electric generating power plants using improved technologies. The Athens power plant on the Hudson River, which was permitted by New York State in 2000, will generate 1080 megawatts (MW) of electricity (enough to power more than a million homes) using only 180,000 gallons of cooling water per day – which is *one-tenth of one percent* of the design capacity for the WTC's CWIS and *less than one percent* of the projected WTC CWIS withdrawal. As a new greenfield facility, the Athens plant relies on a dry cooling system, which reduces fish impacts to negligible levels. The Bethlehem Energy Center near Albany, permitted in the state in 2002, will replace an existing plant and, like the WTC, reuse the existing CWIS. But its permit requires the plant to install closed-cycle

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[11] The term "trophic" refers to the feeding habits or food relationship of different organisms in a food chain.

[12] *See* New York State Department of Environmental Conservation (NYSDEC). 2003. Final Environmental Impact Statement: Concerning the Applications to Renew NYSPDES Permits for the Roseton 1 & 2, Bowline 1 & 2 and Indian Point 2 & 3 Steam Electric Generating Stations, Orange, Rockland and Westchester Counties ("HRSA FEIS"). The HRSA FEIS examined entrainment and impingement effects at power plant CWISs on the Hudson River.

[13] The US EPA recently cited with approval this example of the environmental impacts of cooling water intake structures, which was first set forth in the HRSA DEIS prepared by NYS DEC. *National Pollutant Discharge Elimination System — Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities*, pre-publication version at p. 54.

cooling technology that reduces intake capacity from 500 to 7 MGD, as well as wedgewire screens. The plant will generate energy for 750,000 homes, using 90% less water than the WTC's CWIS.

Most importantly, the WTC's CWIS fails to reflect the "best technology available" for minimizing adverse environmental impact, as required by Clean Water Act section 316(b) and 6 NYCRR § 704.5. In applying the state regulation, New York State DEC has required dry cooling or equivalent technology for new plants and closed-cycle cooling or equivalent technology for existing plants The US EPA is promulgating federal CWIS regulations in three phases, pursuant to a federal district court consent decree. The Phase I rule, which applies to all new facilities, requires closed-cycle cooling in all but the most extraordinary situations.[14] EPA's Phase II rule, which applies to all existing cooling water intake structures with a design intake flow greater than 50 MGD, was signed by the Administrator in February 2004, and will be published in the Federal Register later this month. While the regulation will be challenged in court and likely strengthened at a result of judicial review, even the minimum standards set forth in the rule will require substantial technology upgrades to the WTC's CWIS. The Phase II rule requires, at a minimum, entrainment reductions of 60-90 percent compared to a baseline of normal business operations. Thus, the WTC cannot take credit for reduced water withdrawals resulting from lowered cooling requirements, but would have to reduce flow by a further 60-90 percent or otherwise exclude an equivalent proportion of entrainable organisms. Moreover, New York State can and consistently has imposed standards more stringent than the federal minimum intake requirements.

No other commercial building in New York of which we are aware uses cooling water drawn from navigable waters for its climate control system. Thus, the LMDC should consider using a standard air conditioning system at the WTC. Taking into account the additional technology that will be required during SPDES permitting, the LMDC maybe be incorrect in assuming that "reuse of the existing cooling water intakes and outfalls is the most economical and efficient method for cooling." (DGEIS, p. 12-11.) While the SPDES permitting process, and in particular an adjudicatory hearing, is the proper context for determining and mandating the best CWIS technology for protecting fish, the NEPA/SEQRA process is appropriate for comparing the various options for cooling the WTC with regard to feasibility, cost and impacts on energy supply and other resources. But, unfortunately, that has not been done in this instance.

The LMDC should reconsider its proposal to reuse the WTC's CWIS, or in the alternative, should analyze in a revised or subsequent DEIS the mitigation measures necessary to minimize impacts on aquatic biota.

[14] 40 CFR § 125.84.

THE DGEIS DOES NOT COMPLY WITH NEPA OR SEQRA.

NEPA and SEQRA require an EIS to be an informational document which will inform public agency decision-makers and the public generally of the significant effects of a project, identify possible ways to minimize those effects, and evaluate project alternatives. For the reasons discussed herein, the DGEIS is inadequate both in process and in product, with the result that decision-makers and the public are deprived of the information necessary to assess the project and its impacts fairly and accurately.

Specifically, the DGEIS for this project fails to provide adequate and unbiased information with respect to combined sewage flows and cooling water intakes, and the impacts of these project components on the environment. Among other shortcomings, the DGEIS provides insufficient detail on the WTC Project and its adverse impacts; fails to consistently use current conditions as the baseline for determining the significance of impacts; fails to fully and properly analyze and determine whether impacts to water quality and aquatic biota will be significant; incorrectly assumes without evidence (and despite evidence to the contrary) that such impacts are insignificant; fails to analyze the cumulative impacts; fails to set forth measures sufficient to mitigate the significant adverse environmental impacts; and fails to consider reasonable project alternatives that would eliminate these impacts. As a result and as further set forth below, the DGEIS for the WTC Project fails to comply with the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. § 4321 et seq., and the State Environmental Quality Review Act ("SEQRA"), Article 8 of the Environmental Conservation Law, and its implementing regulations, 6 NYCRR part 617.

- **Improper Baseline.** As the DGEIS correctly explains, the customary approach in presenting an impact analysis under NEPA and SEQRA is to set forth a baseline of existing conditions, and then extrapolate forward in time to compare the future with and the future without the proposed project. A true and accurate assessment of current conditions is necessary to identify the project's impacts in the relevant study areas and the need, if any, for mitigation. But the DGEIS does not consistently use current conditions as its baseline. LMDC has chosen a methodology that uses a second baseline scenario, based on the Pre-September 11 conditions. While pre-September 11 conditions do make an interesting reference point for comparison – and we appreciate that information being provided – there is no authority for using anything other than current conditions in making formal determinations of impact significance. Any project impacts that will be significant compared to existing conditions must be treated as significant under NEPA and SEQRA (e.g., with respect to mitigation measures and findings), even if those impacts are not significant when compared to the pre-9/11 conditions.

- **Insufficient Detail.** The DGEIS fails to quantify the volume and flow rate of stormwater that will run off the 16-acre Project site into City's combined sewage system if the Project is built (a) as proposed, (b) according to either of the baseline scenarios, or (c) according to any of the project alternatives. In addition, the DGEIS provides no information on the constraints of the combined sewer system infrastructure in the

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immediate vicinity of Project Site or anywhere else in the Project's Newtown Creek drainage basin.[15]

o **Analysis of Impacts.** The project will, by 2015, contribute more than a million gallons per day of raw sewage to the City's combined sewage system that already lacks adequate capacity in wet weather. In order to assess the effects of this increased sewage load on CSOs, the DGEIS should have, but did not, quantify any reductions in stormwater runoff which might counteract the effect of increased sanitary sewage generations. While the *Floodplain* section of the DGEIS (Chapter 17) suggests that the WTC Project may reduce impervious surfaces as compared to either baseline scenario (see, e.g., DGEIS, p. 17-1 to 17-5), there is no assessment as to whether the net result will be an increase or decrease in combined sewer flows and CSOs from the project site under foreseeable wet weather conditions.

o **Determination of Significance.** The DGEIS acknowledges that "[d]uring wet weather conditions, overflow discharge from the combined sewer system is discharged into either the Hudson River or East River." (DGEIS, p. 18-5 to 18-6.) Any addition to these overflows must be deemed significant because CSOs are the single largest contributor of pollutants and pathogens to local waters, thereby causing violations of water quality standards and impairing both human use and ecological function. In the absence of evidence or analysis to the contrary, the DGEIS should have, but did not conclude, that combined sewage from the Project Site will cause significant impacts.

In addition, the DGEIS concludes, despite overwhelming evidence to the contrary, that fish impingement and entrainment impacts will not be significant unless the CWIS is operated at levels approaching its design intake capacity of 179 MGD. (DGEIS, p. 18-2.) In fact, the evidence shows that even if the intakes are operated at pre-9/11 levels, there will be significant losses to more than twenty different fish species, including entrainment of millions of individual fish at early life stages. (DGEIS, p. 18-48 to 18-50.) These losses are significant because not only would some of the young fish and invertebrates be added to the population of older fish despite the natural mortality of early life stages, but also because (as the NYS DEC has determined in a related context) any natural compensatory responses to CWIS mortality could seriously deplete the species' resilience to survive unfavorable environmental conditions. Moreover, disruption of the food chain compromises the health of the entire aquatic community because a diminished forage base means that there is less food available for the survivors.[16]

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[15] Without providing any information on sewer constraints and how much rainfall causes a CSO discharge, the DGEIS's *Infrastructure* section merely states that the nearby collection system "consists of combined sewers that collect both sanitary sewage and stormwater flows along West Broadway, Vesey, Barclay, and Washington Streets. A pump station located at 14th Street and the ... [FDR] Drive collects sanitary sewage and stormwater from the South Branch Interceptor that runs along Route 9A and South Street." (DGEIS, p. 12-6.)

[16] New York State Department of Environmental Conservation (NYSDEC). 2003. Final Environmental Impact Statement: Concerning the Applications to Renew NYSPDES Permits for the Roseton 1 & 2, Bowline 1 & 2 and Indian Point 2 & 3 Steam Electric Generating Stations, Orange,

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o **Cumulative Impacts Analysis.** The DGEIS is inadequate because it provides a cumulative impacts analysis only for the construction period (see DGEIS, p. 2-5 to 2-6, explaining methodology) and not for operation of the WTC project. As the DGEIS correctly acknowledges, "[t]he objective of a cumulative effects analysis is to identify and consider the combined effects of multiple actions that potentially would not be identified if each action and its associated impacts were evaluated in isolation." (DGEIS, p. 2-5.) Cumulative impacts analyses are critically important because the incremental effects of many projects that overlap in time and space aggregate to collectively affect the same resources. For example, in addition to the WTC project, other development and redevelopment projects, such as Hudson Yards and the Olympic Village, may also increase combined sewer flows and exacerbate CSOs to a greater extent than any of the individual projects viewed alone. The failure to include any cumulative impacts analysis extending beyond an immediate, e.g., construction, period would be a concern in any EIS, but is especially problematic in a generic EIS like the DGEIS, which as the LMDC acknowledges are appropriate "to identify and evaluate cumulative effects with other actions." (DGEIS, p. 2-1.)

o **Mitigation Measures.** The DGEIS fails to set forth and analyze measures sufficient to mitigate the Project's significant impacts to surface water quality and fish. With respect to CSOs, while there are some proposed project features that might reduce impacts, such as the Sustainable Design Guidelines and reductions in impervious surfaces, it is unclear to what extent the former will be mandated as project requirements (rather than suggestions or goals) and there has been no quantification or analysis of the effect of the later. The DGEIS should set forth green building practices, decentralized greywater and blackwater treatment and detention systems sufficient to meet a modest goal of "no net CSO increases" and a superior standard of no untreated sanitary sewage or stormwater contributions to City sewers.

With respect to CWIS impacts, while the DGEIS sets forth a laundry list of possible mitigation measures (e.g., flow and velocity reductions, closed-cycle cooling, fine mesh barriers and screens, and fish avoidance and return systems), the analysis of their effectiveness is entirely deferred to DEC's SPDES permitting process for the WTC intake. (DGEIS, p. 18-3.)

o **Project Alternatives.** The DGEIS fails to consider reasonable project alternatives that would drastically reduce or eliminate the significant impacts discussed above. While the Enhanced Green Construction Alternative purports to meet a goal of "optimizing water usage and discharge" (DGEIS, p. 23-32), it fails to consider on-site decentralized wastewater treatment, storage and reuse systems that would eliminate contributions to CSOs from the Project site. Likewise, the DGEIS fails to consider an alternative that uses conventional climate control systems for the WTC without withdrawing cooling water from the Hudson River. Such an alternative is quite obviously reasonable because virtually every building in New York City does so. Rather than simply assume that "reuse of the existing cooling water intakes and outfalls is the

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Rockland and Westchester Counties.

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most economical and efficient method for cooling," the DGEIS should have compared the energy usage, impact on biota, and other environmental effects of various cooling options. Because the SPDES permit for the WTC CWIS will require installation of significant technology upgrades (such as closed-cycle cooling and wedgewire screens) to minimize fish kills, reuse of the existing intake may in the end prove to be both environmentally damaging and economically inefficient.

Conclusion

As explained above, the WTC Project should be modified to incorporate measures such as those described herein to minimize water pollution, fish kills, and other negative impacts on New York's City's marine environment to the greatest extent feasible. The LMDC and the other decision makers have an unprecedented opportunity to create a symbol of New York City recognized around the world not only for its contribution to the skyline but also for its environmental excellence. But, for the reasons discussed herein, the WTC Project has not yet achieved that goal. We hope to have the opportunity to work with all involved in this monumental undertaking to resolve the shortcomings of the current project and its environmental documentation, in furtherance of our shared goals.

We thank you for the opportunity to comment on the DGEIS.

Sincerely,

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Justin Bloom, Staff Attorney
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Terry Backer, Long Island Soundkeeper
Soundkeeper, Inc.
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40 West 20th Street
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Remarks of Janno Lieber, Director of Development

World Trade Center Properties, LLC

Wednesday, February 18, 2004

LMDC Public Hearing Regarding the Draft Generic Environmental Impact Statement (DGEIS) and the Amended General Project Plan (Amended GPP)

Members of the LMDC Board and Staff, community leaders, and neighbors:

I am Janno Lieber, Director of Development for WTC Properties, LLC, an affiliate of Silverstein Properties. The Silverstein organization welcomes this opportunity to address the progress that is being made on the redevelopment of the World Trade Center.

In barely a year since the LMDC's selection of the Libeskind Master Plan, we have made huge strides toward our common goal – a full rebuild of a new, better World Trade Center and the revitalization of Lower Manhattan. In cooperation with Studio Daniel Libeskind, the LMDC, the Port Authority and many other agencies – including Community Board #1 – we've developed a detailed blueprint that resolves the many difficult technical problems posed by the site. We've seen the unveiling of acclaimed designs for three key project elements – the Memorial, the Freedom Tower and the permanent PATH station. And – with the Governor's leadership – we've adopted an aggressive schedule for constructing the first phase of the project. And while all this was

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going on, we've continued to move forward –on time and on budget – in the rebuild of 7 World Trade Center, the first high rise building that is rising again at the site of the tragedies two and a half years ago.

The Draft Environmental Impact Statement – and this hearing especially – represents another major step forward in this process. The entire redevelopment has been a model for civic participation, which has not only improved the product, but has helped to elevate and inspire even the most mundane technical aspects of our work. Working together, we are making the World Trade Center a project worthy of our shared aspirations.

You have already heard from other speakers about the economic impact the rebuild will have on this City and the entire region. The Silverstein organization is dedicated to building a World Trade Center that will benefit all New Yorkers – and especially Lower Manhattan residents and businesses. Instead, I would like to highlight how the buildings proposed for the new World Trade Center will be pioneering in terms of energy efficiency, broader environmental impact, and quality of life for tenants, visitors, and for our neighbors in the area.

The Freedom Tower and other buildings at the site will track the many innovations being implemented at 7 WTC. These include capturing rainwater for use in flushing toilets and landscape irrigation; ultra-filtration of indoor air; installing state of the art exterior glass to maximize natural light and minimize energy consumption from artificial light; generating electricity by capturing energy from steam that would otherwise be wasted.

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And, of course, we plan to generate still more electricity by installing wind turbines at the top of the Freedom Tower.

These and other innovative design features will be developed according to the Sustainable Design Guidelines that were crafted in cooperation with LMDC and leading environmental advocates and planners, and which are embodied in the Draft Environmental Impact Statement that is being considered here today.

To achieve our goals, we have hired some of the world's "greenest" architects, engineers, and builders. Our aim is to create buildings that meet the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standard, as well as other leading benchmarks of sustainable building. In other words, this development will set the standard for the twenty-first century and beyond.

Building the new World Trade Center will undoubtedly require patience and resolve. It will certainly impose burdens upon the lower Manhattan community, which has already endured so much.

But we want our neighbors to know that we will work closely with them and with all the government agencies to ease the impact of the construction. We have already proven our willingness to do so at the 7 WTC project where, in an innovative pilot program, we are using cleaner fuels in our equipment, which has also been outfitted with state-of-the-art air pollution controls. Our effort to reduce emissions at 7 WTC has been so successful

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that the City Council and Mayor have mandated that our innovations be adopted for all city construction projects in Lower Manhattan. And of course we will be carrying out these measures – and more –in the construction of the Freedom Tower and the other WTC buildings.

In sum, we all know how important the World Trade Center redevelopment is to our community, our ideals, and our future. It will bring jobs, revenue, and vitality to New York. While no one can promise that an operation of this scope will be simple to achieve, Silverstein Properties does pledge to create a World Trade Center that will be safe, healthy, efficient, and environmentally responsible. We will maintain the highest standards of design excellence. And we will fulfill our shared dreams of a triumphant rebirth for Lower Manhattan.

DRAFT 8
2/18/04

My name is Tom Dunne/ I am here today representing Verizon/ and its wholly-owned subsidiary/Empire City Subway Company.

I would like to thank you for giving us the opportunity to discuss our concerns regarding/~~The Draft Generic~~ Environmental Impact Statement/We appreciate the time, energy, and effort that the Lower Manhattan Development Corporation has put into the plan for Lower Manhattan, along with every other entity that participated in the preparation of the Statement.

As you know, Verizon supplies telephone and other communications services to thousands of customers in Lower Manhattan/including Wall Street and government offices/ Empire City Subway Company/owns and maintains the conduits under the streets that carry the Verizon network/- and the networks of other large telecom providers such as AT&T, Time Warner Cable and RCN/ through the City streets to these same customers.

The terrorist attack on September 11, 2001 caused extensive damage to Verizon and Empire City facilities in Lower Manhattan/ As you will recall/telephone and other communications services were cut off to large parts of Lower Manhattan when 7 World Trade Center collapsed onto Verizon's switching facility at 140 West Street.

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Verizon suffered over 1 Billion dollars in damages. Repair and restoration is still ongoing. We have, in many cases, installed new conduit, new cabling, new switching equipment, the location of which was in large part based on the directives of government agencies such as the City and State Departments of Transportation.

I am here today to alert the Lower Manhattan Development Corporation and the other public agencies whose decisions may be based in whole or part on this Environmental Impact Statement to a serious problem which must be faced in planning for the World Trade Center site and for other public highway and transit projects in Lower Manhattan. For example at present we do not know whether West Street will be at grade boulevard or whether it will be below surface. If below surface, we do not know for what distance it will be below grade or at what depth. Similarly, with the transit improvement for the PATH, the MTA, and the connecting concourses, there is a great deal of uncertainty. At present because there are no definite plans and many variables depending on cost, the entire effort lacks coordination, certainty and timeliness. In some cases, cables and equipment we have recently installed will have to be moved and reinstalled. I bring to your attention the work on Route 9A that was completed and will possibly have to be redone at great expense both in cost and inconvenience to our customers and the community. In other cases, we cannot get clear direction where to install our cables and equipment. I bring to your attention the Port Authority's

Project on Liberty Street. This project deals with street transportation issues. In this particular instance we cannot get any direction as to how the Port Authority wants us to proceed. Constantly changing plans and not having a timely plan is costly, unfair to the people who live in Lower Manhattan, and harmful to our customers. Moving major cables and equipment is very time consuming and expensive, requiring the design and construction of duplicate facilities before the existing facilities can be abandoned. The underground streets of Lower Manhattan are severely crowded with underground wiring for telephone, cable television, fire alarms, and traffic lights, as well as gas, electric and sewer services, not to mention an extensive rail transit system.

Unless there is a far greater degree of coordination among the public agencies and a greater degree of certainty introduced into the public planning process, and unless Verizon and Empire City are given sufficient time to plan and install their systems and networks to meet project schedules, there is a serious risk that the restoration projects planned for Lower Manhattan will be delayed and that telecommunications service to Lower Manhattan may once again be disrupted.

We will submit detailed written comments to the ~~Draft Generic~~ Environmental Impact Statement, along with proposed mitigation measures. However, Verizon and Empire City Subway want to take this

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opportunity -- to emphasize the gravity of the problem and the need to address it now.

Thank you.

John J. Bachmore
Director – Network Engineering, Liberty Region

verizon

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Phone 212 208-1203
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March 11, 2004

Mr. Kevin M. Rampe
President
Lower Manhattan Development Corp.
One Liberty Plaza, 20th Floor
New York, New York 10006

Re: World Trade Center Memorial and Redevelopment Plan/DGEIS

Dear Mr. Rampe:

Verizon New York Inc. and its wholly owned subsidiary, Empire City Subway Company (Limited), submit the enclosed comments on the Lower Manhattan Development Corporation's Draft Generic Environmental Impact Statement ("DGEIS") for the World Trade Center Memorial and Redevelopment Plan.

Let me assure you that Verizon supports the reconstruction of the World Trade Center site and does not wish to impede or delay that effort. However, for the reasons outlined in the attached comments, if our concerns are not addressed, the Plan proposed by the Lower Manhattan Development Corporation in the DGEIS could:

- Delay the restoration projects planned for Lower Manhattan;
- Disrupt telecommunications service to Lower Manhattan;
- Waste millions of dollars;
- Increase street closures and traffic congestion;
- Impede the construction of state-of-the-art telecommunications networks for future tenants at the World Trade Center site; and
- Adversely affect the quality of life for the residents of Lower Manhattan.

We also note that the significant costs associated with relocating and reconstructing Verizon's facilities have not been addressed.

The attached comments outline the actions necessary to mitigate these concerns. If our concerns are addressed in a timely manner, we believe the reconstruction of the World Trade Center site will be expedited and that Lower Manhattan's telecommunications needs will continue to be met with the quality and reliability demanded by businesses and residents.

Very truly yours,

JJ Bachmore

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cc:

Lower Manhattan Development Corporation
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New York, NY 10006
Attention: Comments WTC Memorial and Redevelopment Plan/DGEIS

New York State Department of Transportation
5 Governor Harriman State Campus
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Albany, NY 12232
Attention: Joseph H. Boardman, Commissioner

New York State Department of Transportation
Route 9A/Lower Manhattan Redevelopment Project Community Outreach
21 South End Avenue
New York, New York 10280
Attention: Richard J. Schmalz, P.E., Project Director

Empire State Development Corporation
633 Third Avenue
New York, New York 10017
Attention: Charles A. Gargano, Chairman

The Port Authority of New York and New Jersey
225 Park Avenue South
New York, NY 10003
Attention: Joseph J. Seymour, Executive Director
Anthony G. Cracchiolo, Priority Capital Programs Director

Office of the Mayor
City Hall
New York, NY 10007
Attention: Daniel L. Doctoroff, Deputy Mayor for Economic Development and Rebuilding

New York City Department of Transportation
40 Worth Street
New York, NY 10013
Attention: Iris Weinshall, Commissioner
Andrew Salkin, Lower Manhattan Borough Commissioner

New York City Department of City Planning
22 Reade Street
New York, NY 10007-1216
Attention: Amanda M. Burden, Chair
Vishaan Chakrabarti, Manhattan Office Director

New York City Department of Design and Construction
30-30 Thomson Avenue
Long Island City, NY 11101
Attention: David J. Burney, Commissioner

New York City Economic Development Corporation
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Attention: Andrew M. Alper, President
Josh Sirefman, Executive Vice President

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Attention: Madelyn Wils, Chair
Paul Goldstein, District Manager

Silverstein Properties, Inc.
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Attention: Larry Silverstein
Jack Klein

Brookfield Properties Corporation
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165 Broadway, 6th Floor
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Attention: John Zuccotti
Larry Graham

VERIZON NEW YORK INC.
EMPIRE CITY SUBWAY COMPANY (LIMITED)

COMMENTS

TO

WORLD TRADE CENTER

MEMORIAL AND REDEVELOPMENT PLAN

Draft Generic Environmental Impact Statement

March 11, 2004

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Table of Contents

I. SUMMARY

Verizon New York Inc. and its wholly owned subsidiary, Empire City Subway Company (Limited) (collectively, for purposes of this document, "Verizon") support the redevelopment of the World Trade Center ("WTC") and do not wish to impede or delay those efforts. Verizon is submitting these comments to the WTC Draft Generic Environmental Impact Statement ("DGEIS") for the purpose of alerting the Lower Manhattan Development Corporation ("LMDC") and other New York State and municipal agencies whose decisions will be based on the DGEIS to a serious problem which must be faced in planning for the WTC site and for other public projects in Lower Manhattan. There is a significant risk that the restoration projects planned for Lower Manhattan may be delayed and that telecommunications service, including emergency services, to Lower Manhattan may once again be disrupted unless:

(1) The applicable New York State and municipal agencies immediately designate one of the routes proposed herein by Verizon for the location of its sub-surface infrastructure;

(2) All applicable New York State and municipal agencies approve the designated route for the Verizon infrastructure;

(3) The location of the designated route is not changed once it is approved;

(4) The applicable New York State and municipal agencies designate an additional WTC entry point for Verizon conduits to allow network diversity for future tenants at the WTC site;

(5) Verizon is granted a permanent easement for its sub-surface infrastructure, to the extent the designated route is located on private property, or on any property (including Port Authority and LMDC property) that is not within New York City mapped streets;

(6) Verizon is given uninterrupted and unimpeded access to all conduits and manholes located in the WTC site and other project areas in Lower Manhattan, both during construction and thereafter;

(7) The New York State and municipal agencies, including the New York City agencies that issue "order out" mandates, provide Verizon with sufficient time to plan, remove its existing infrastructure and install the new infrastructure;

(8) There is greater coordination among the New York State and municipal agencies involved in the planning process for the rebuilding of Lower Manhattan;

(9) The LMDC agrees to the reclassification of certain restoration costs incurred by Verizon in order to allow Verizon to supplement its application for funds under the Emergency and Temporary Response category of the Partial Action Plan; and

(10) The LMDC extends the application deadline for funds under the Permanent Response category of the Partial Action Plan to allow Verizon to submit an application when the relocation of the Verizon infrastructure is complete.

The September 11, 2001 attacks on the WTC caused extensive damage to Verizon's 1.1. million square foot central office and switching facility located at 140 West Street, immediately north of the World Trade Center (WTC) site and west of 7 WTC. Through this facility, Verizon supplies telecommunications services to many large financial services firms, financial clearing organizations, government offices and residents in Lower Manhattan. When 7 WTC collapsed directly onto 140 West Street, Verizon's building was severely damaged and telephone and other communications services were cut off to large parts of Lower Manhattan (See Tab 1). Verizon, through its wholly-owned subsidiary Empire City Subway Company (Limited), owns and maintains the conduits under the streets that carry the Verizon network (as well as the networks of other large telecom providers such as AT&T, Time Warner Cable and RCN) through the streets of New York City. The Verizon sub-surface infrastructure also suffered major damage when the WTC collapsed.

The financial impact to Verizon of the September 11 attacks has been over one billion dollars to date. In connection with its restoration efforts, Verizon has in many cases, installed new conduits, cabling and switching equipment. The location of the new conduit and cable was in large part based on the coordination and supervision of government agencies such as the City Department of Design and Construction and the City and State Departments of Transportation. As a result of the proposed WTC Memorial and Redevelopment Plan and other proposed projects such as the Route 9A Project, cables and conduits which have been installed will have to be moved and reinstalled at great cost and with the risk of additional service disruptions. To date, Verizon has been unable to get clear direction from governmental agencies involved in the WTC redevelopment regarding a permanent location for its cables and equipment. Relocating the sub-surface infrastructure of Verizon involves tens of thousands of lines which are routed through 140 West Street. Moving major cables and equipment is extremely time consuming and expensive, requiring the design and construction of duplicate facilities and the hand splicing of tens of thousands of telephone lines before the existing facilities can be removed (See Tab 2).

During the post-September 11 restoration efforts, Verizon found the emergency response to be well coordinated; this expedited the restoration process and benefited the Lower Manhattan community. In the case of the proposed projects for the rebuilding of Lower Manhattan, Verizon has found the planning process to be lacking in coordination, certainty and timeliness. Our comments detail the impact that the planning process will have on Verizon's efforts to provide telecommunications service to Lower Manhattan, and our proposed mitigation of those impacts.

II. SCOPE OF SEPTEMBER 11 DAMAGES

A. Overview of 140 West Street Facility

Verizon's central office and switching facility located at 140 West Street is integral to Verizon's ability to provide telephone and other communications services to the thousands of large financial services firms, financial clearing organizations, government offices and residents of Lower Manhattan that comprise Verizon's customer base. The 140 West Street facility contains over a dozen floors of telecommunications equipment and cables, which are used to connect and route voice and data signals throughout the New York Metropolitan area and beyond.

The network equipment located at 140 West Street was comprised of 4 digital switches used to connect and route telephone calls, approximately 500 optical transport systems, 7,600 fiber optic strands of glass used to transmit voice and data, nearly 200,000 voice lines, 111,800 PBX lines which are used by companies to allow multiple employees to share voice lines, 11,100 ISP lines used for internet access, 4.4 million circuits used to transmit data and 500 copper cables. The telephone lines used to transmit voice and data are routed through the building, and then grouped together and encased inside cables (See Tab 3). A total of 500 cables are located inside and fed out of 140 West Street through a cable vault in the building in order to provide service to Verizon customers (See Tab 4). Each copper cable contains up to 3600 pairs of wires, for a total of up to 7200 individual wires per cable. Cables containing fiber optics would contain on average 216 strands of fiber per cable (See Tab 5). Cables fed from 140 West Street through the cable vault to the street are placed inside conduits which are located underground throughout the streets of New York City and routed to customer locations to provide service (See Tab 6). Verizon personnel gain access to the conduits via manholes located throughout the streets, and

Verizon needs free access to its conduits and manholes in order to install, replace and repair cables, both during construction and thereafter.

B. Physical Damage and Network Disruption

The collapse of the WTC caused a tremendous amount of physical damage to 140 West Street and the phone lines and equipment contained inside the building. 140 West Street suffered major physical impact on 9 critical network floors, with numerous building breaches. Sensitive digital switching equipment, air pressure systems, power panels, cables and other equipment were either smashed, flooded or damaged by dust, smoke and soot from the burning of the WTC and the efforts to extinguish the blaze. The clean-up of 140 West Street was extensive and included debris removal, structural repairs, mechanical and electrical repairs, façade restoration and asbestos clean-up and abatement. Damage to Verizon's external wire network was also extensive. The sub-surface cable vault, conduits, cables, and manhole infrastructure suffered tremendous damage as the collapsing towers and steel beams penetrated the sidewalks and Verizon's underground infrastructure located outside of the building (See Tab 7). The extensive damage and flooding of the cable vault located at 140 West Street impacted over 250 cables and caused tens of thousands of businesses and residents in Lower Manhattan to lose telephone service.

The collapse of 7 WTC onto 140 West Street resulted in severe contamination of Verizon's offices and Verizon had to relocate more than 2,200 displaced employees from the WTC and 140 West Street locations to temporary facilities in and around the New York City area. As a result of the attacks on the WTC, Verizon also suffered a sizable loss to its conduit and manhole system, which required the construction of 900,000 duct feet of mainline conduit and 25 new manholes, and extensive repairs to 20 manholes due to structural damage resulting from falling steel and concrete. The repair and replacement of the existing conduit system, and approximately 45 miles of fiber-optic cable and 22 miles of copper cables, was required and is still ongoing.

C. Emergency Management and Restoration Efforts

Verizon's post-September 11 restoration efforts included the implementation of an emergency plan and the activation of a command center, an endeavor which required enormous coordination and dedication of manpower and resources. Repairing and rerouting emergency

service lines for the New York City Emergency 911, Police Department, Fire Department, emergency medical services, and the New York City, New York State and Federal governmental agencies was a top priority for Verizon. The data network for the Securities Industry also required immediate attention. Verizon reconfigured the network infrastructure to restore the Securities Industry data network and enable a timely Stock Exchange reopening.

Verizon's restoration efforts began with the dangerous task of ensuring the structural integrity of the 140 West Street building and assessing the building and equipment damage. Because of the extensive damage, floors full of equipment had to be replaced. In other cases, salvageable equipment was cleaned and tested. In connection with its restoration efforts, Verizon hung 37 temporary "bypass cables" out of the windows of 140 West Street and down the side of the building until it could implement a more permanent solution (See Tab 8). The "bypass cables" were spliced and routed to manholes which were located several blocks away from the building. In addition, new conduits and cables were placed underground to replace the damaged equipment.

The location of these new conduits and cables, including the decision to by-pass the WTC site and relocate Verizon's infrastructure in the bed of Route 9A, was determined with the coordination and supervision of government agencies such as the New York State Department of Transportation (See Tab 6). This work was done by Verizon at a cost of millions of dollars and, if current government proposals to reconfigure Route 9A come to fruition, much of the newly installed infrastructure will have to be replaced and removed. Because of the lack of coordination among the major development projects being contemplated for Lower Manhattan, Verizon is now faced with the prospect of expending precious time and resources to undo this work and relocate its cables and equipment to locations in Lower Manhattan which have not yet been confirmed with any degree of certainty or permanency. Unless the mitigation proposed herein is implemented, the WTC Memorial and Redevelopment Plan, as well as other projects being contemplated for Lower Manhattan, may have an adverse impact on the ability of Verizon to provide telecommunications services to tens of thousands of Lower Manhattan businesses, residents and governmental agencies. The mitigation proposed herein is submitted in order to avoid further negative impacts on these consumers of telecommunications services and on the revitalization of Lower Manhattan.

D. Estimate of Losses

The financial impact suffered by Verizon in connection with the WTC attacks exceeds one billion dollars to date. Verizon continues to incur costs in connection with the repair and replacement of infrastructure which existed prior to the collapse of the WTC, some of which costs are not recoverable by Verizon. Further, Verizon continues to dedicate time and resources to strengthen the communications infrastructure serving Lower Manhattan.

III. WTC MEMORIAL AND REDEVELOPMENT PLAN

A. Redevelopment Concerns

The DGEIS contains statements regarding the sufficiency of the telecommunications infrastructure required for the WTC Redevelopment Plan. Verizon questions the accuracy of some of these statements, which imply that the existing infrastructure would accommodate the needs of future tenants at the WTC site, because Verizon has not yet received a route for its infrastructure or a location for the additional WTC conduit entrance for network diversity that future tenants at the WTC would require. The DGEIS also fails to reveal adverse impacts that may occur unless the mitigation proposed by Verizon is implemented. These include timing delays, service disruptions, disruptions to vehicular and pedestrian traffic, inconvenience to the Lower Manhattan community and wasted costs, all of which can be prevented or managed if the mitigation proposed herein is implemented. These comments will address the foregoing adverse impacts and proposed mitigation at length so that the same will be considered by the public authorities responsible for the planning and coordination of the WTC Redevelopment Plan and other proposed projects in Lower Manhattan.

B. Lower Manhattan Projects

In connection with the rebuilding of Lower Manhattan, several large scale projects are proposed. Each of the projects has an ambitious timeframe and, taken as a whole, the scope of the various projects is enormous. Given the magnitude of the projects, the various governmental agencies responsible for development will need to dedicate adequate time and resources in order to coordinate the projects. Currently, the major projects being planned include the WTC Memorial and Redevelopment Plan, the Route 9A Project and the Fulton Transit Hub.

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Pursuant to the WTC Memorial and Redevelopment Plan, (i) the existing slurry wall on the west boundary of the WTC site will be extended southward, (ii) the entire site will shift further south due to the shift of the Memorial in the original plan and (iii) a new truck ramp and high security garage will be placed adjacent to and under Liberty Street. This poses a severe problem for Verizon as Liberty Street is a main west to east corridor for the routing of conduits and cables. As a result of the foregoing plans, Liberty Street will be effectively foreclosed as a route for Verizon conduits and cables and Verizon will need to relocate its equipment. As noted above, this will require the hand-splicing of thousands of lines. The situation is further aggravated by the fact that most of the alternative west to east routes lie in narrow streets which do not have the capacity for relocation of the Liberty Street conduits and cables due to obstructions or underground congestion.

The Route 9A Project involves changing the grade of the West Side Highway, which is located west of the WTC site, from its current state by either lowering the roadway past the WTC memorials or leaving the highway at grade but creating a promenade above it to create new Lower Manhattan park space. Regardless of the final form of plans for the West Side Highway, the existing Verizon facilities below the surface of Route 9A will be greatly impacted. Under the coordination and supervision of State and municipal authorities, after September 11 a significant amount of conduit and cable and its supporting facilities were placed within the bed of Route 9A, which is now an important artery that serves the areas south, west and east of the WTC site, including Battery Park City (See Tab 6). Such conduit and cable will need to be removed and relocated at a considerable cost to Verizon as a result of the Route 9A Project. Before the existing conduits and cables can be removed, in order to avoid a disruption in telephone service, Verizon will first need to create a duplicate system along a newly designated route that does not yet exist. In view of the interdependence of the WTC Redevelopment Plan and the Route 9A Project, and the impacts that the Route 9A Project will have on the ability of Verizon and other infrastructure service providers to respond to the WTC Redevelopment Plan, it would be desirable for the DGEIS to describe the Route 9A Project in greater detail, to compare it to the "no build" or "no action" alternative, to describe its impacts and propose mitigation for those impacts.

The Fulton Street Transit Hub Project, which is aimed at linking the subway station at Fulton Street across town to the WTC site, is broad in scope and will impact multiple streets and

consequently the Verizon conduits and the thousands of telecommunications lines located beneath the affected streets. This project will undoubtedly exacerbate the impact of the other projects that will be ongoing in Lower Manhattan and will likely result in the repetition of work unless the projects are properly managed and coordinated.

While Verizon is supportive of the redevelopment of Lower Manhattan, the most troubling aspect of the proposed construction is the lack of coordination among the respective New York State and New York City agencies responsible for the planned projects and, with respect to each project, the lack of coordination regarding the relocation of various utilities such as telecommunications, electricity, gas, steam, water and sewer. The absence of synchronization with respect to the proposed projects will undoubtedly have severe impacts on Verizon and the residents and businesses of Lower Manhattan. Because all of the foregoing projects will be constructed within a small radius, the work areas utilized by Verizon will be in close proximity to each other and the projects must be managed with an appreciation for their interdependencies. In addition, several utilities will each be affected by the various projects. Because Verizon and other service providers, both public and private, often share a common infrastructure for the placement of equipment, and in fact compete for scarce space, a greater degree of coordination will be necessary to minimize delays and maximize the efficient use of available space.

Also of grave concern to Verizon is the lack of certainty involved in the redevelopment plans for Lower Manhattan. Verizon has done significant work on inside and outside infrastructure to facilitate the area construction, however, there has always been a "moving target" mentality. When information regarding direction is shared with Verizon, it is often subsequently changed, costing Verizon significant time and resources. The proposed projects are a difficult engineering challenge for Verizon and, if significant aspects of the plans for the proposed projects continue to change, it becomes impossible to design and complete construction in a timely fashion. In order for Verizon to provide service to its customers in Lower Manhattan without wasting additional funds and without considerable delays and potential disruption in service, the governmental authorities in charge of the proposed projects will need to provide Verizon with concrete direction in a timely fashion, as further provided herein.

C. Network Relocation

The process of relocating the infrastructure of Verizon's underground network is a complicated engineering task. In order to replace and relocate existing conduits and cables,

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Verizon will first need to create a completely new conduit and cable system along a yet to be designated route before the old system can be removed. The intricate nature of splicing the wires within cables will also require adequate time to perform the work. In the case of copper cables, each cable can hold up to 3600 pairs of wires for a total of up to 7200 individual wires per cable. Once the new cables are in place, Verizon will need to splice the existing wires inside of each cable from the old network and reconnect each individual wire to the corresponding wire with which it forms a matching pair. In the case of fiber optic cables, the process of relocation is more complex as the cables contain strands of glass that must be spliced by a process called "fusion splicing" which requires heat to cut the lines and fuse them back together when relocated to the new conduit system. Although the cables containing fiber lines contain fewer lines per cable and the splicing is faster than it is with copper cables, each line carries far more high-speed data than the copper lines and splicing of fiber lines will often require Verizon to negotiate "down-time" with its customers. Because construction projects usually require Verizon to complete its work 18 to 24 months before the end date of the project, Verizon will need to receive, well in advance, adequate information regarding a finalized permanent route and any other relevant factors from the various New York State and municipal agencies.

The process of relocating network and equipment is extremely complicated, costly and time consuming if performed once, and unduly burdensome to Verizon to the extent work will need to be performed repeatedly due to the lack of coordination and certainty. Relocating the network once was unavoidable, however, it is incomprehensible to relocate the infrastructure again to the extent work is duplicated based on an absence of coherent planning by the relevant New York State and municipal agencies. As it stands, the cost of relocation in connection with the WTC Memorial and Redevelopment Plan and the Route 9A Project is estimated in excess of $90 million; this will be in addition to the millions of dollars that Verizon spent in connection with the initial placement of the infrastructure in Route 9A. If the proposed projects are not coordinated, the estimated cost to redo the work will be an additional $15 million to $35 million per occurrence. If a new route were designated today, the engineering and construction of the new conduits and cables, and the required splicing of dozens of cables and tens of thousands of lines, would not be complete until approximately 2 to 3 years from now.

Another important consideration is the subsurface space required for the new conduit infrastructure, which is approximately 16 square feet of unobstructed space for the entire length

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of the designated route (See Tab 6). Verizon must have uninterrupted and unimpeded access to the conduit network via manholes, which will need to be suitably located to provide such access to Verizon personnel during construction and thereafter. Further, because manholes often have space adequate for only one person at a time, splicing and rerouting cables is a labor intensive and time consuming process and adequate planning and timing of Verizon's work is necessary to avoid disruption of telecommunication service in Lower Manhattan.

Chapter 12 of the DGEIS states that access for telecommunications is available for the WTC site and that telephone lines can be fed to the WTC site through major entry points along the perimeter. Further, the DGEIS states that slurry wall access points and manhole facilities remain largely intact and would accommodate the needs of future tenants of the WTC site as development progresses, but such statements do not paint a complete picture of the telecommunications needs of the WTC site, because major tenants at the new WTC buildings will require network diversity, or more than one entry point for conduit access at the WTC site. Prior to September 11, the WTC site had two entrance feeds. One conduit entrance was located on Vesey Street, between West and Washington Streets, and is still intact and usable in connection with the redeveloped WTC site. The second conduit entrance was located on Liberty Street, between Greenwich and West Streets, and is still intact, but this entrance will be inaccessible if the expansion of the slurry wall and the WTC site to the south occurs. Verizon also had an additional conduit that went through the WTC site from Vesey Street to Liberty Street. This conduit no longer exists inside the WTC site although the Vesey Street entrance for this conduit is still intact from the slurry wall to the corner of 140 West Street. Therefore, because access to the site for telecommunications will only be available on Vesey Street, a new conduit entrance will need to be built in the southern or eastern side of the WTC site.

D. Impacts of WTC Redevelopment Plan

The WTC Memorial and Redevelopment Plan, as well as other proposed projects for Lower Manhattan, will potentially have serious impacts on Verizon and the businesses and residents of Lower Manhattan. If the mitigation proposed herein by Verizon is not employed, the end result will be: (1) timing delays in project completion, (2) the risk of service disruption, including disruption to emergency services, to the crucial business and governmental entities and residents of Lower Manhattan serviced by Verizon and other telecommunications providers who use Verizon facilities, (3) adverse affects on vehicular and pedestrian traffic in Lower

Manhattan, (4) inconvenience to the businesses and residents of Lower Manhattan as a result of the continuous demolition and construction in the streets of Lower Manhattan; and (5) wasted financial resources.

The collective effects of the proposed projects in Lower Manhattan will impact Verizon and result in timing delays. In order to effectively contribute to the revitalization of Lower Manhattan, the New York State and municipal agencies charged with responsibility for the various projects will need to consider the timing of work that Verizon must perform. The schedules that have been proposed for the projects in Lower Manhattan are extremely ambitious considering the short windows of time allotted not only for Verizon to complete its work, but also for all of the other utility companies to move their imbedded infrastructure as well. While Verizon is aware of the collective momentum to rebuild the WTC and Lower Manhattan, the decision-making process should not occur with an indifference to the complex problems of infrastructure installation and relocation.

Redevelopment plans for Lower Manhattan will also potentially disrupt vehicular and pedestrian traffic unless appropriate measures are taken to mitigate such factors. Synchronization of the various projects with respect to coordination of street closings and construction will be a key element in preventing traffic disruption which can disrupt business, as well as stifle access to the businesses, especially retail businesses, and governmental agencies that are vital to the resurgence of Lower Manhattan. Further, unless the mitigation suggested by Verizon is heeded, the repetition of work resulting from of a lack of coordination and certainty will exacerbate the poor traffic conditions in Lower Manhattan.

Another impact of the WTC Memorial and Redevelopment Plan and the other Lower Manhattan projects is the inconvenience to the community as a result of the constant construction in the streets that will occur as a result of the proposed projects. It is important to note that these are the same residents and businesses that had to endure the tragedy of September 11 and its lingering effects on their way of life; to the extent possible Verizon would like to mitigate this impact. Because each of the proposed projects has the potential to cause disruptions to downtown telecommunications service, including disruptions to emergency services which could jeopardize the safety of Lower Manhattan residents, it is crucial that the respective New York State and municipal agencies are mindful of Verizon's coordination and timing concerns.

E. Proposed Mitigation

Verizon believes that the impacts of timing delays, service disruptions to its Lower Manhattan customers, traffic congestion, inconvenience to residents of Lower Manhattan, and wasted financial resources will be effectively mitigated if:

(1) The applicable New York State and municipal agencies immediately designate one of the routes proposed herein by Verizon for the location of its sub-surface infrastructure;

(2) All applicable New York State and municipal agencies approve the designated route for the Verizon infrastructure;

(3) The location of the designated route is not changed once it is approved;

(4) The applicable New York State and municipal agencies designate an additional WTC entry point for Verizon conduits to allow network diversity for future tenants at the WTC site;

(5) Verizon is granted a permanent easement for its sub-surface infrastructure, to the extent the designated route is located on private property, or on any property (including Port Authority and LMDC property) that is not within New York City mapped streets;

(6) Verizon is given uninterrupted and unimpeded access to all conduits and manholes located in the WTC site and other project areas in Lower Manhattan, both during construction and thereafter;

(7) The New York State and municipal agencies, including the New York City agencies that issue "order out" mandates, provide Verizon with sufficient time to plan, remove its existing infrastructure and install the new infrastructure;

(8) There is greater coordination among the New York State and municipal agencies involved in the planning process for the rebuilding of Lower Manhattan;

(9) The LMDC agrees to the reclassification of certain restoration costs incurred by Verizon in order to allow Verizon to supplement its application for funds under the Emergency and Temporary Response category of the Partial Action Plan; and

(10) The LMDC extends the application deadline for funds under the Permanent Response category of the Partial Action Plan to allow Verizon to submit an application when the relocation of the Verizon infrastructure is complete.

Coordination: In order to mitigate the impacts that will occur as a result of poor coordination, the LMDC and the other New York State and municipal agencies responsible for

the redevelopment of Lower Manhattan should establish a coordinated planning approach for the proposed projects which will allow all of the respective agencies to promptly designate and approve a new telecommunications route that will not change. Verizon must be able to rely on them as definitive. If routes are changed or major features altered, replanning and redesign to accommodate these changes can add many months to the redevelopment process.

Establish Alternate Telecommunications Route: In order to assist in the designation of such a route in a timely fashion, Verizon proposes the following routes in order of preference, which routes are depicted by maps attached hereto[1]:

- Verizon Proposal #1:

  West out of 140 West Street across Route 9A, then south along the west side of Route 9A, then east on Albany Street, then north on Greenwich Street to Liberty Street (See Tab 9).

- Verizon Proposal #2:

  West out of 140 West Street, then south along the east side of Route 9A (and west of the slurry wall on the west boundary of the WTC), then east on Albany Street, then north on Greenwich Street to Liberty Street (See Tab 10). To the extent this route is selected, the issue of conduit space in connection with traversing the truck ramp to be located at the intersection of Liberty Street and Route 9A will need to be resolved.

- Verizon Proposal #3:

  West out of 140 West Street, then north on along the east side of Route 9A, then east on Barclay Street, then south on Greenwich Street (through the WTC site) to Liberty Street (See Tab 11).

Grant Adequate Rights: In order to mitigate the impacts of the proposed Lower Manhattan projects, Verizon promptly require rights to a designated route for the sub-surface placement of conduits and cables. To the extent that the new routes cross private property, and property that is not within New York City mapped streets (such as Port Authority and LMDC property), Verizon's rights to place conduits and cables along a specified route should be granted pursuant to a permanent easement as opposed to a license, because a mere license does not afford

[1] The maps attached hereto at Tabs 9, 10 and 11 reflect the overall proposed routes for illustrative purposes only, and do not contain engineering detail.

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Verizon the protection and certainty that it reasonably deserves in order to ensure that it will not continuously be forced to relocate and duplicate costs. Considering Verizon's efforts with respect to the restoration and revitalization of Lower Manhattan, and the sums it has expended in connection with such efforts, it is unreasonable to expect Verizon to install and maintain equipment on the basis of a mere license in such areas that are either privately-owned or not located in New York City mapped streets.

Establish Realistic Timeframes: Adequate timing is a key element of the mitigation proposed by Verizon in order to alleviate the impacts of the WTC Memorial and Redevelopment Plan and other proposed Lower Manhattan projects. Given the complicated nature of Verizon's network infrastructure, the timing of the proposed projects will be significantly delayed if the New York State and municipal agencies, including New York City agencies that issue "order out" mandates, do not give Verizon adequate access to information and realistic timeframes to complete its work. Considering the quantity and overlapping nature of the various proposed projects, and the fact that Verizon's work will take approximately 2 to 3 years from the date it receives a designated route, Verizon is very concerned that significant project delays will occur. In order to effectively mitigate the impacts to Verizon as well as the developers and future occupants of the proposed Lower Manhattan projects, the State and municipal agencies will need to be aware of timing concerns outlined herein and set realistic deadlines with certainty. Currently, Verizon is forced to make assumptions and plan various alternate routes based on conjecture.

Mitigate Financial Impact – Cost Reclassification: In order to mitigate the financial impact of the proposed Lower Manhattan projects, and the financial losses suffered by Verizon in connection with restoration efforts following September 11, Verizon is seeking the reclassification of financial assistance sought by Verizon through the federal Partial Action Plan for Utility Restoration and Infrastructure Rebuilding which is aimed at protecting businesses from bearing the full cost of infrastructure rebuilding, and enhancing the revitalization of Lower Manhattan by encouraging investment in energy and telecommunications infrastructure. Based on the objectives of this LMDC plan, Verizon believes that it is an eligible recipient of these program funds, and Verizon intends to avail itself of all applicable resources under the Partial Action Plan and any other programs Verizon is eligible for. While Verizon has previously applied for federal funds under the Emergency and Temporary Response category of the Partial

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Action Plan, Verizon's application did not include costs incurred in connection with the relocation of its infrastructure to Route 9A and Liberty Street after September 11 to the extent that Verizon was led to believe that such work was permanent. Because the work performed by Verizon in connection with its infrastructure located in Route 9A and Liberty Street will need to be relocated in connection with the redevelopment of the WTC and the Route 9A Project, Verizon is seeking to have costs incurred in connection with such work reclassified as Emergency and Temporary Response work so that Verizon may amend its initial application for Emergency and Temporary Response funds and recover the costs of such work.

Mitigate Financial Impact – Extension of Tentative Deadline: In connection with the proposed relocation of the Verizon infrastructure due to the WTC and Route 9A Projects, it is anticipated that Verizon will submit an application for funds from the Permanent Response category of the Partial Action Plan for such relocation work. The Partial Action Plan requires any permanent work to be completed before an application for Permanent Response funds is submitted. Because Verizon has not yet received a designated telecommunications route from New York State and municipal agencies, Verizon will not complete its permanent work prior to the tentative December 31, 2004 LMDC deadline for the submission of applications under the Permanent Response category of the Partial Action Plan. Verizon requests that LMDC extend the tentative deadline for the Permanent Response category of the Partial Action Plan to a date which is 2 years from the date that Verizon receives a certain, permanent route for the relocation of its infrastructure, so as not to preclude Verizon from submitting an application for Permanent Response funds and recovering the costs of such work.

IV. IMPACTS SPECIFIC TO 140 WEST STREET

In furtherance of Verizon's commitment to the rebuilding of Lower Manhattan, Verizon is preparing to move hundreds of its employees that were dislocated as a result of the WTC attacks back to 140 West Street now that the restoration of the building is nearing completion. Verizon is concerned that potential wind tunnel problems discussed in the DGEIS will have an impact on Verizon's ability to protect the safety of its personnel and its ability to access key locations. The DGEIS states that during limited periods, particularly in open space areas and at building corner locations, uncomfortable conditions may occur and, in severe weather conditions, high winds may pose potential safety problems which would limit access to certain areas. The construction of the Freedom Tower and 7 WTC on two sides of 140 West Street has

the potential to cause a serious wind tunnel effect for pedestrians. In prior years, on certain days wind conditions at 140 West Street were so severe that pedestrians needed to hold onto ropes to allow travel next to 140 West Street.

Although the DGEIS provides that, with one exception, the wind conditions after redevelopment will be comparable to the conditions which existed prior to September 11, it would be beneficial to Verizon as well as the pedestrians of New York City if appropriate measures are taken to mitigate the impact of the WTC Memorial and Redevelopment Plan. According to the DGEIS, wind tunnel studies will be undertaken as part of the final design activities to examine measures to reduce and mitigate undesirable wind effects. Verizon requests a commitment by LMDC and the WTC site developer to (a) conduct wind tunnel studies to determine how wind conditions will specifically affect 140 West Street, (b) take appropriate design measures to minimize any adverse wind affects, and (c) design the WTC project such that the new buildings do not channel winds at gale force or greater, which Verizon considers "severe" as such term is described in the DGEIS. (See Letter from William F. Collins Architects and Land Beaufort Scale at Tab 12.)

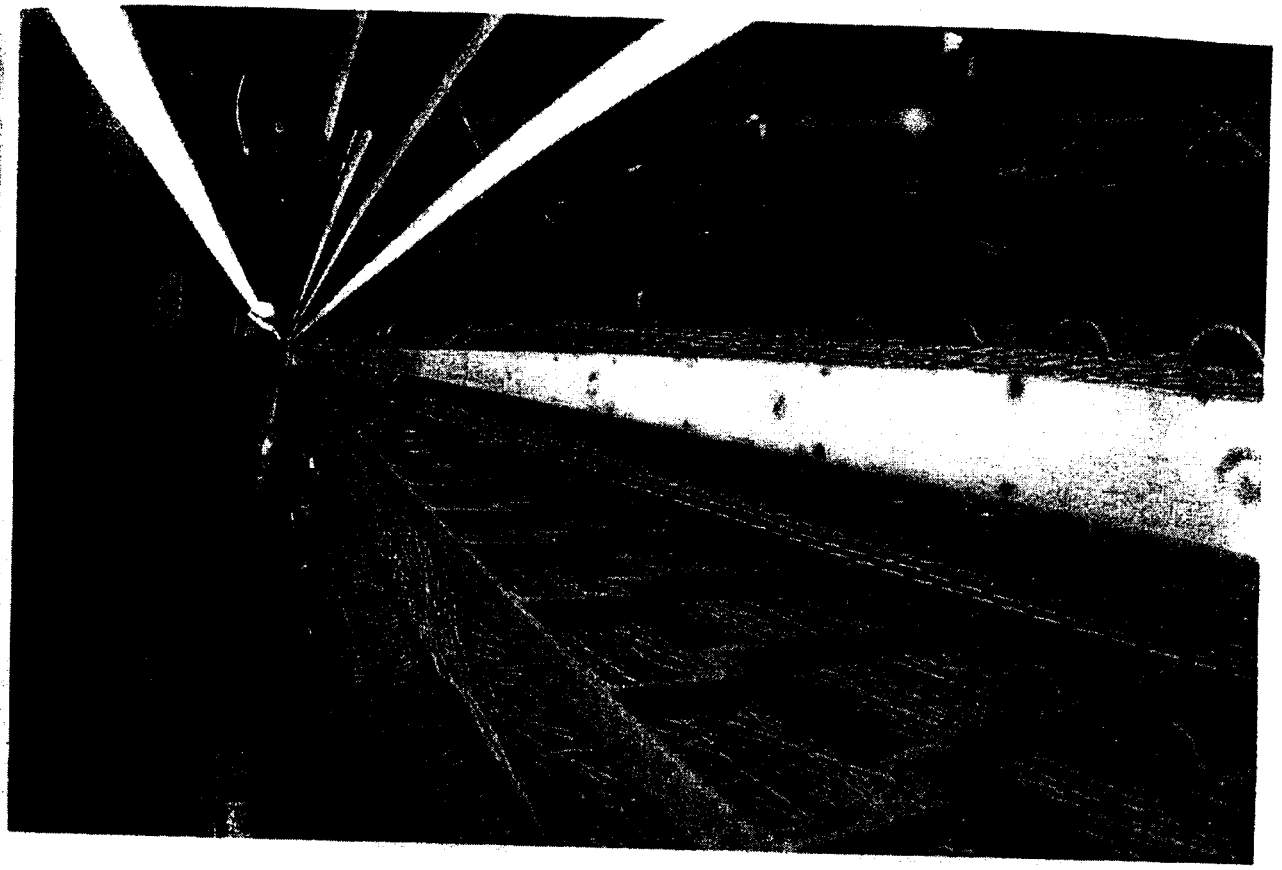
V. CONCLUSION

The WTC Memorial and Redevelopment Plan is an important initiative for the revitalization of Lower Manhattan and New York City. Verizon strongly supports the Lower Manhattan rebuilding effort and wishes to play an active role in that effort. However, if the redevelopment of Lower Manhattan is to be successfully completed without project delays and inconvenience to the Lower Manhattan community, the applicable New York State and municipal agencies will need to take into account the issues surrounding the telecommunications infrastructure and act together in order to quickly designate a telecommunications route for Verizon's infrastructure. The key elements going forward will be coordination, certainty and timeliness. By adopting the mitigation measures proposed herein, LMDC and the New York State and municipal agencies responsible for the rebuilding can avoid the delays and disruptions that have frustrated the Lower Manhattan community, and provide a higher level of assurance that major projects will proceed as planned and on schedule. The implementation of the mitigation proposed by Verizon will enable Verizon to provide telecommunications service with the quality and reliability demanded by the government offices, businesses and residents of Lower Manhattan and, at the same time, assist the LMDC and other New York State and

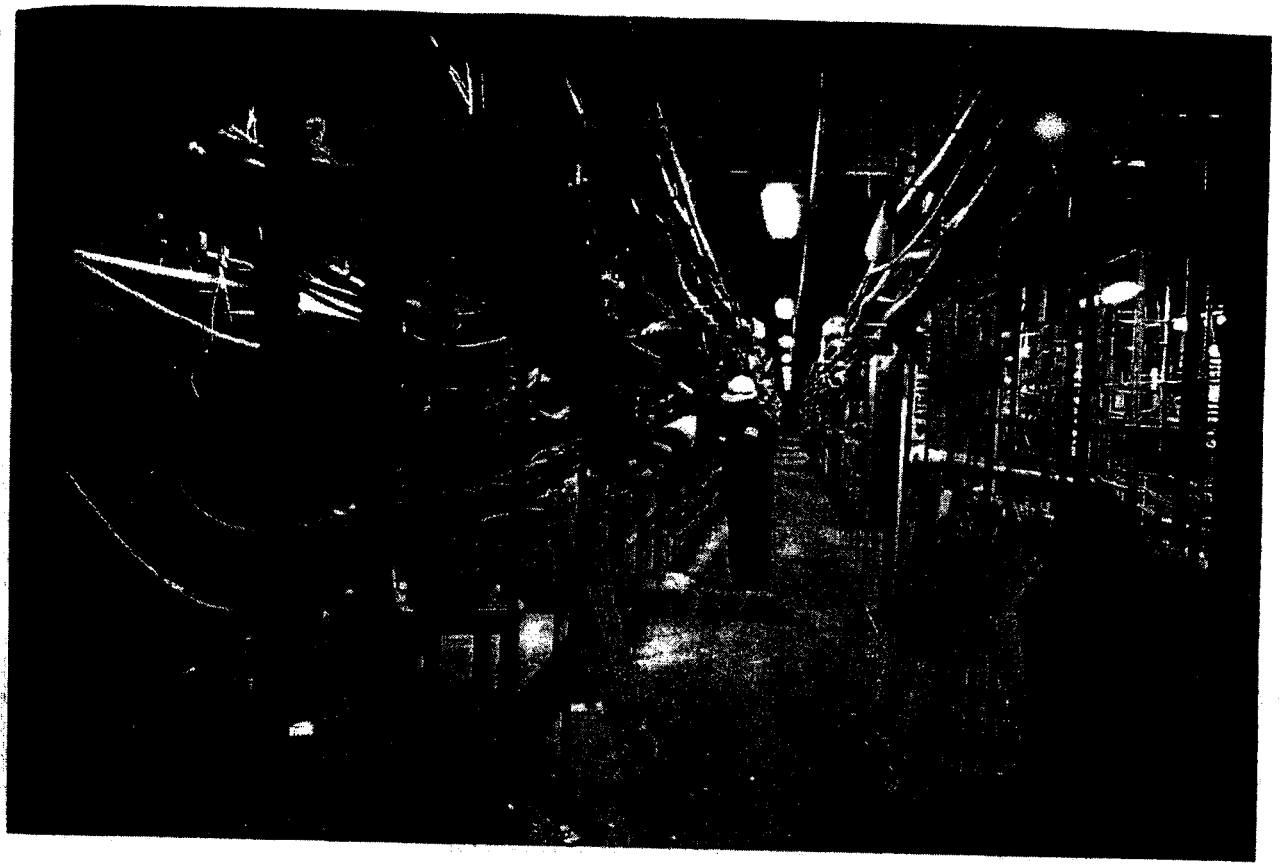
municipal agencies in their efforts to make Lower Manhattan a premier New York City destination.

7 World Trade Center collapsed onto Verizon Central Office at 140 West Street

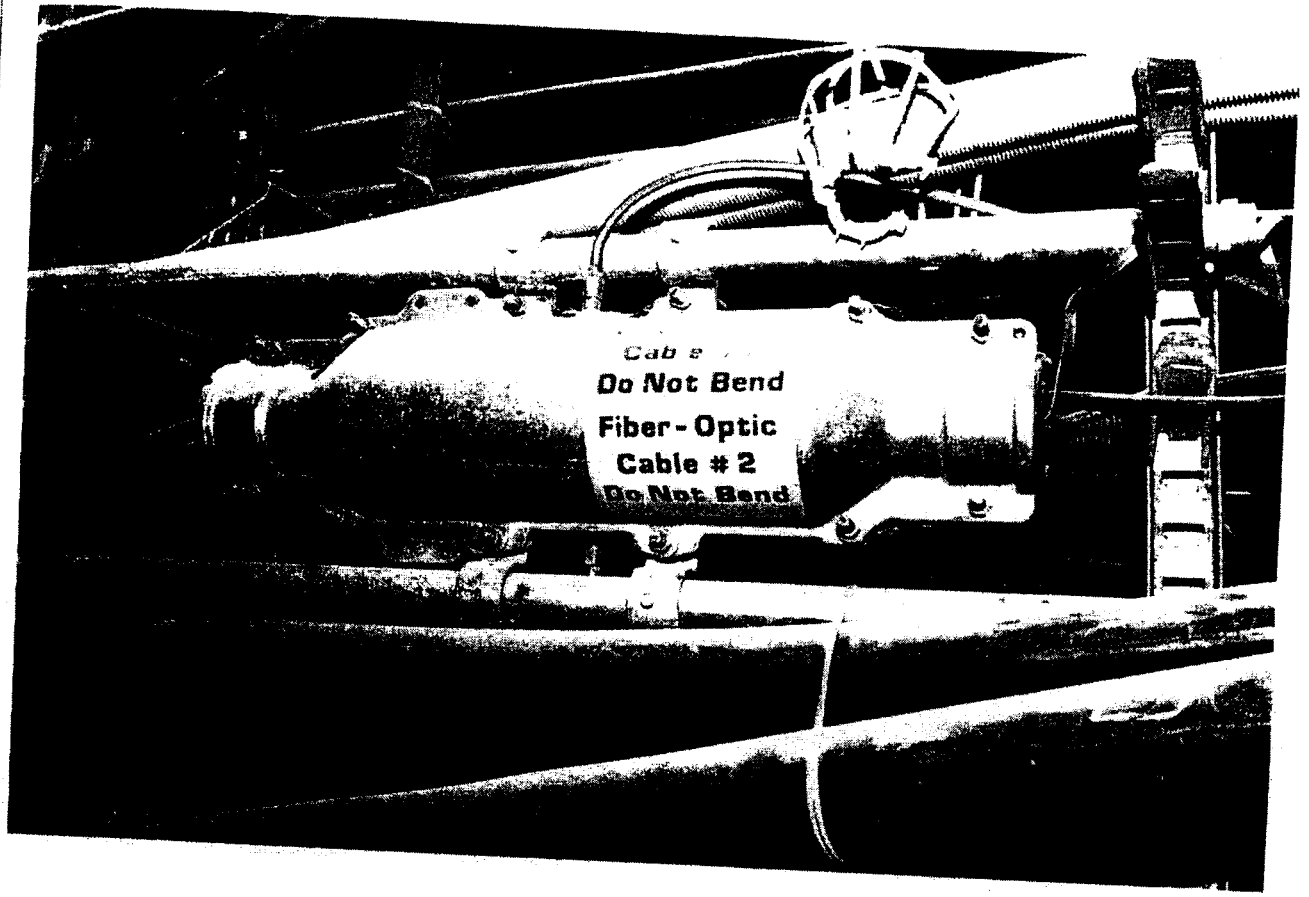
Splicing a copper cable



Some of the thousands of telephone lines passing through Verizon Central Office at 140 West Street

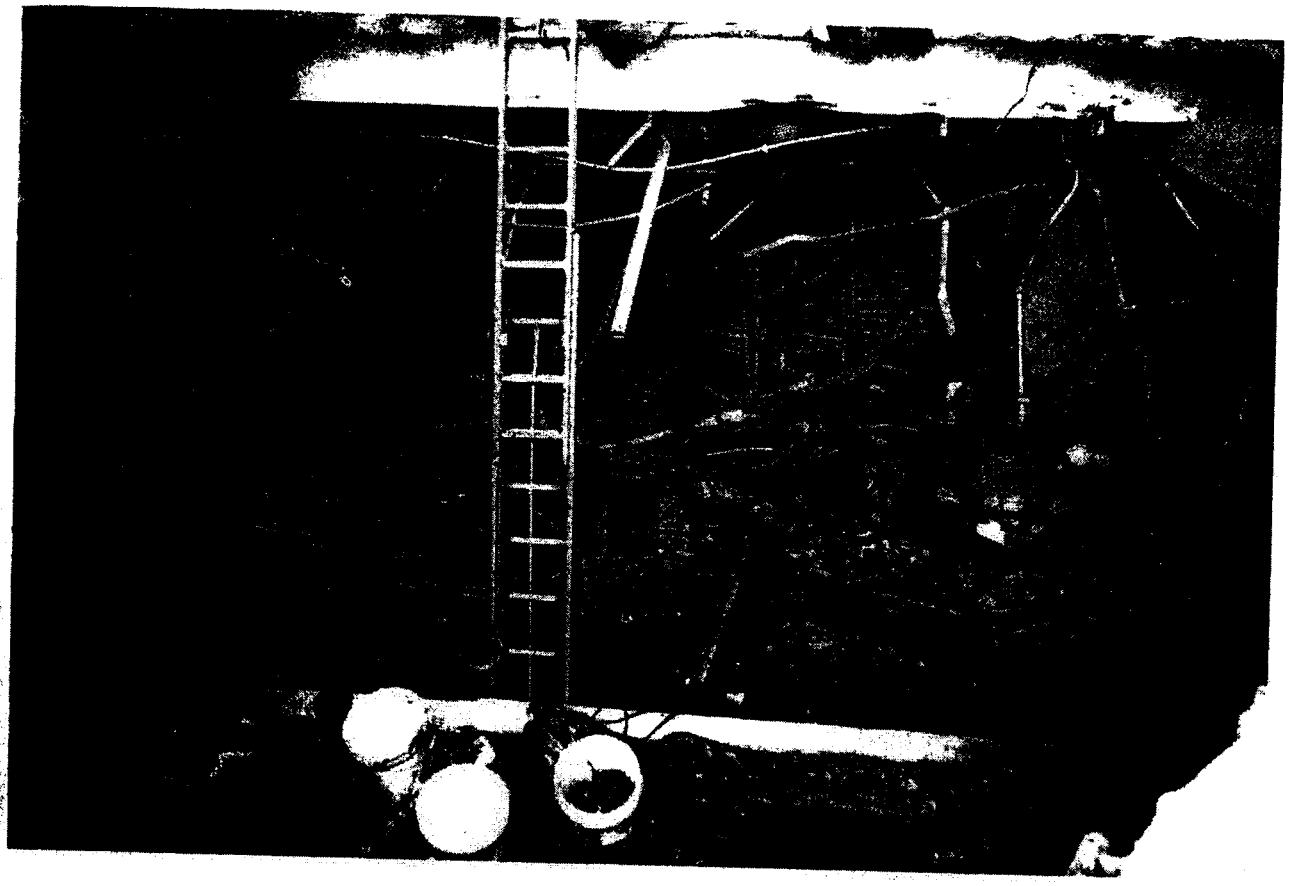


The cable vault at Verizon Central Office at 140 West Street



Fiber-optic cable and splice case

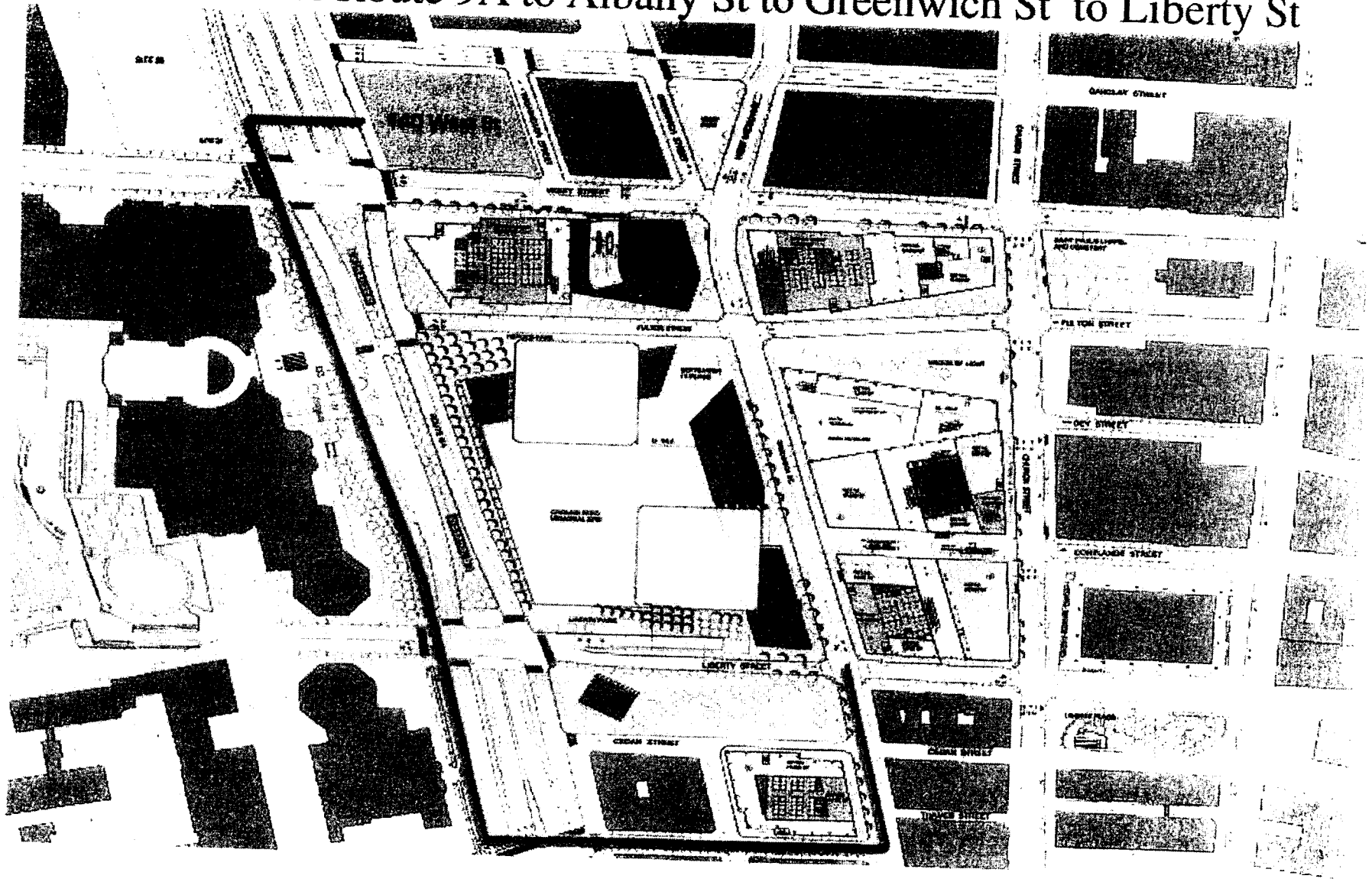
Conduit under Route 9A
(from NYS DOT Route 9A website)



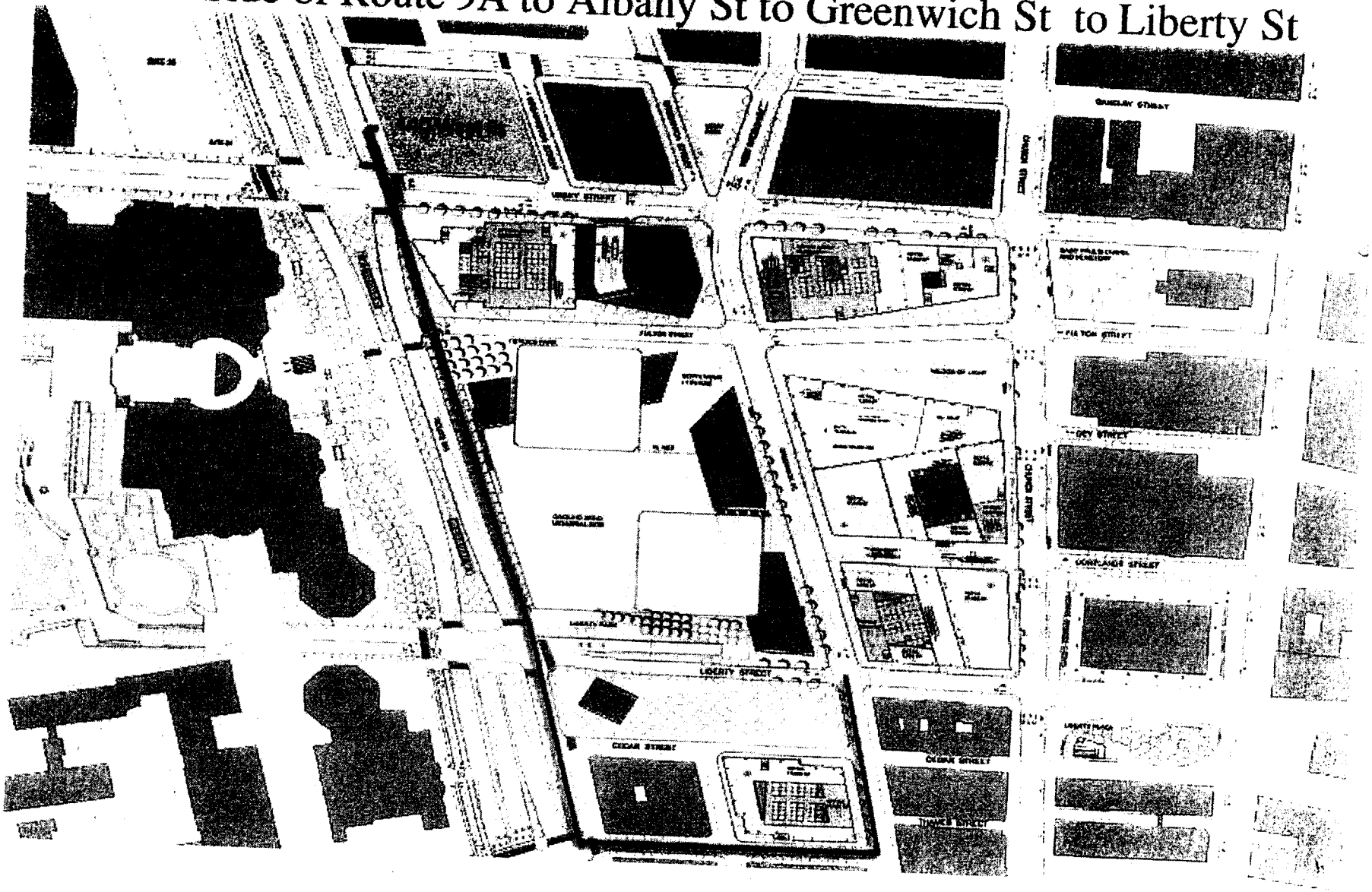
Damage to sub-surface cable vault at Verizon Central Office at 140 West Street

Cables temporarily rerouted out of the windows of Verizon Central Office at
140 West Street through the streets of Lower Manhattan

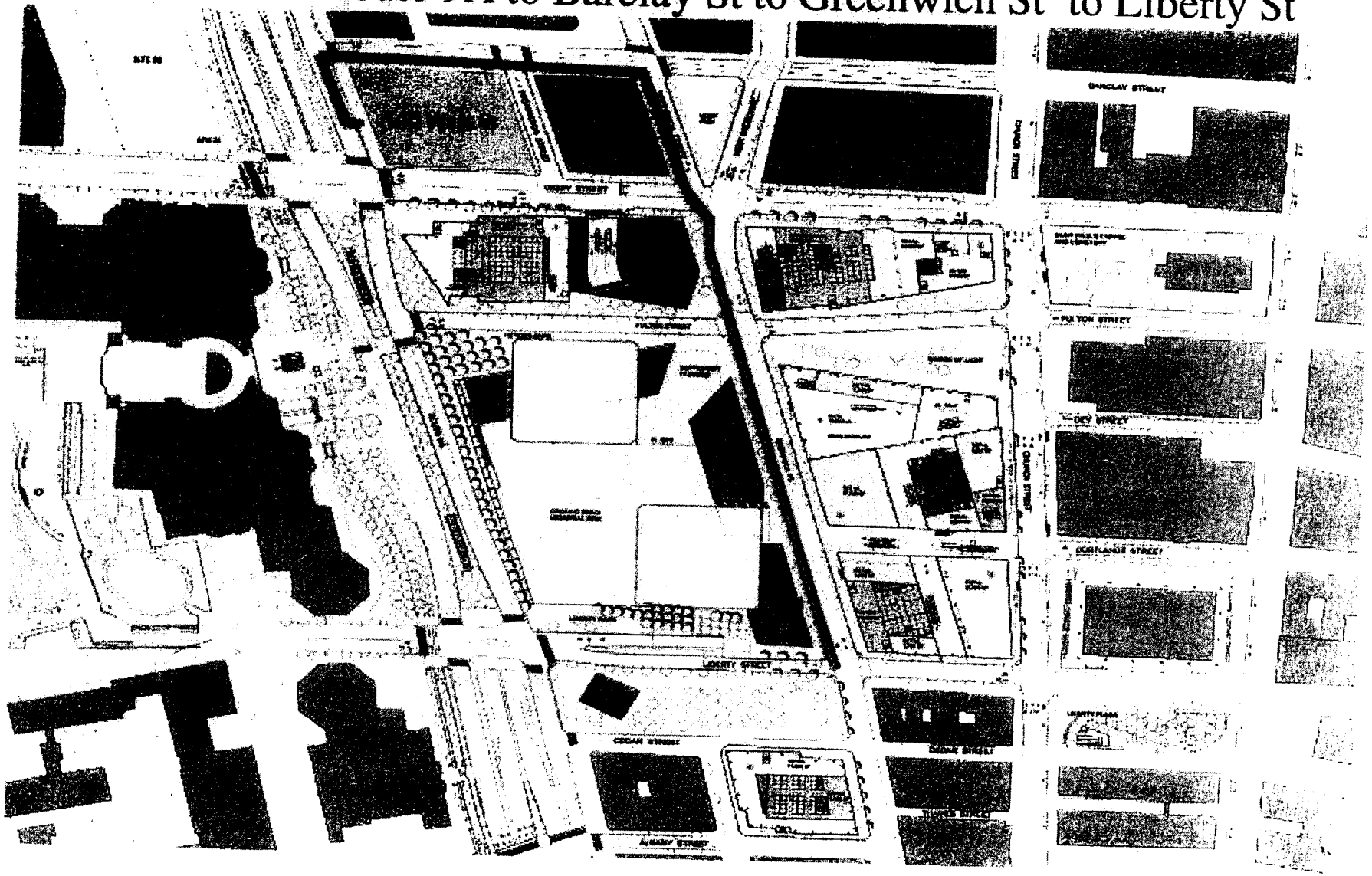
Route 9A and World Trade Center Conduit Map
Verizon Proposal #1
West Side of Route 9A to Albany St to Greenwich St to Liberty St



Route 9A and World Trade Center Conduit Map
Verizon Proposal #2
East Side of Route 9A to Albany St to Greenwich St to Liberty St

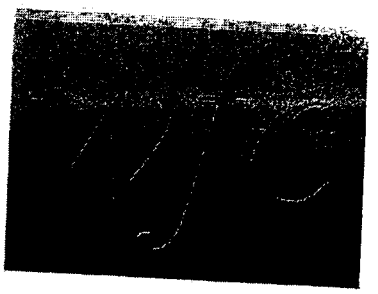


Route 9A and World Trade Center Conduit Map
Verizon Proposal #3
East Side of Route 9A to Barclay St to Greenwich St to Liberty St



March 8, 2004

Mr. Dominic P. Veltri, P.E.
Director – Real Estate Operations
Verizon
1095 Avenue of the Americas – Rm. 3628
New York, New York 10036



WILLIAM F. COLLINS, AIA
ARCHITECTS, LLP

Re: World Trade Center Memorial & Redevelopment Plan / EIS

Dear Mr. Veltri,

As requested, after reviewing the Lower Manhattan Development Corporation's (LMDC) World Trade Center Memorial and Redevelopment Plan Environmental Impact Study (EIS), Chapter 6, "Open Space", dated January 2004, the following synopsis and recommendations are offered.

The pedestrian level wind conditions, as described in the EIS, are listed in three ways, "Comfortable" where all outside activities are considered not affected, "Uncomfortable" where activities like sitting, standing and walking may be impeded, and "Severe" where for several hours a year, under high wind weather conditions, access to the Project site may be limited.

All scenarios that conclude "Severe" conditions may occur for several hours per year, under high wind weather conditions, are primarily due to the prevailing northwest winds coming off the Hudson River, blowing unabated for more than a mile, and impacting said buildings at and around the WTC site. "Severe" wind conditions, at the pedestrian level, are produced by Vortex-Corner stream wind effects and Funneling-Deflection wind effects. (Figure 6-2, EIS).

The *"Current Conditions Scenario"* proposed action by 2009 and 2015 (sections 6.3.3 and 6.3.5 respectively, EIS) describe the creation of pedestrian level wind conditions that are "slightly worse, than those that currently exist on the Project site." Moreover the wind conditions at and around the future Freedom Tower, located at the northwest quadrant of the Project site, directly across Vesey street from 140 West Street, are reported to be the strongest.

Following our conversations, on March 3, 2004, with a representative of the LMDC we were informed that a wind tunnel study, at and around the future Freedom Tower, which will include the pedestrian level wind effects at Verizon's 140 West Street, will be forthcoming. In addition the LMDC will forward the ranges (MPH) of what are considered "Severe" winds, as described in the EIS. In the interim WFC would like to reference the attached chart, taken from the National Weather Service, describing the *Beaufort Scale* degrees of wind severity in average miles per hour.

Finally it is our recommendation that Verizon request a study that describes how the LMDC plan to mitigate the "Severe" wind effects produced at the pedestrian level described in chapter 6 (EIS), "Open Space".

Regards,

Ray Nemschick, AIA

Ray Nemschick, AIA
William F. Collins Architects

Land Beaufort Scale

The Beaufort Scale was originally developed in 1805 by Sir Francis Beaufort as a system for estimating wind strengths without the use of instruments. It is currently still in use for this same purpose as well as to tie together various components of weather (wind strength, sea state, observable effects) into a unified picture.

Force	Speed		Land Conditions
	knots	mph	
0	<1	<1	Calm, smoke rises vertically
1	1-3	1-3	Light air, direction of wind shown by smoke drift only
2	4-6	4-7	Light breeze, wind felt on face, leaves rustle, vanes moved by wind
3	7-10	8-12	Gentle breeze, leaves and small twigs in constant motion, wind extends light flag
4	11-16	13-18	Moderate breeze, raises dust, loose paper, small branches move
5	17-21	19-24	Fresh breeze, small trees in leaf begin to sway
6	22-27	25-31	Strong breeze, large branches in motion, umbrellas used with difficulty
7	28-33	32-38	Near gale, whole trees in motion, inconvenience felt walking against the wind
8	34-40	39-46	Gale, breaks twigs off trees, impedes progress
9	41-47	47-54	Strong gale, slight structural damage occurs
10	48-55	55-63	Storm, trees uprooted, considerable damage occurs
11	56-63	64-73	Violent storm, widespread damage
12	64+	74+	Hurricane, extreme destruction

http://www.ncdc.noaa.gov/ol/climate/conversion/beaufortland.html
Last updated 25 May 2000 by ncdc.webmaster@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

D-185

March 8, 2004

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Director – Real Estate Operations
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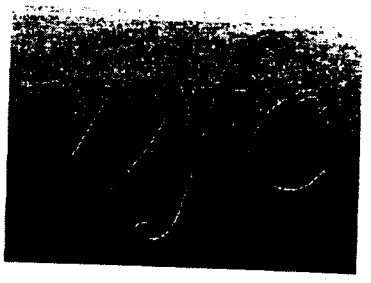
1095 Avenue of the Americas – Rm. 3628
New York, New York 10036



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Regards,

Ray Nemschick, AIA

Ray Nemschick, AIA
William F. Collins Architects

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Land Beaufort Scale

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WALL ST

RISING

Testimony on the Draft Generic Environmental Impact Statement

For the World Trade Center Memorial and Redevelopment Plan

February 18, 2004

Good afternoon. I am Julie Menin, the President and Founder of Wall Street Rising, a not-for-profit organization dedicated to the revitalization of Lower Manhattan.

The redevelopment of the World Trade Center site is a critical component of the area's revitalization. Lower Manhattan is still deeply affected by the loss of jobs that occurred in the aftermath of September 11, 2001, and many businesses are still struggling to recover. Wall Street Rising supports the redevelopment of the World Trade Center site, and believes that it is an important and critical step towards the revitalization of Lower Manhattan. However, because residential and commercial land uses exist in the area in such close proximity, it is imperative that the impacts of proposed major redevelopment projects be thoroughly understood, so that any detrimental impacts may be mitigated to the greatest extent possible.

The magnitude and length of the construction called for in the Proposed Action as well as the other major projects contemplated for Lower Manhattan will create significant impacts to local residents and businesses. Wall Street Rising proposes the following general measures with respect to the Draft Generic Environmental Impact Statement (DGEIS) that we believe would help to ease these adverse effects:

25 BROAD STREET, NEW YORK, NY 10004 TEL: 212.509-0300 FAX: 212.509-7829
www.wallstreetrising.org

Traffic, Parking and Transit

- We believe that the increase in traffic that will ensue from the Proposed Action may be considerably higher than the 5% estimated in the DGEIS. It has been estimated that more than 10 million people will visit the Memorial every year, in addition to tens of thousands of people who will be employed in the new buildings on the World Trade Center site, and the additional visitors who will attend cultural facilities and performances there on evenings and weekends. It is likely that the Proposed Action will result in a site that is active seven days a week and during evenings as well as business days, in contrast to the World Trade Center. We therefore ask the LMDC to reassess projected traffic increases to ensure that all of these factors are taken into consideration.

- The methodology employed in the DGEIS finds that traffic congestion is already unacceptable at intersections around the site of the Proposed Action, and will remain unacceptable after the Proposed Action, and therefore no mitigation is necessary. We believe this logic is faulty and that mitigation measures are called for to address the increase in congestion that will result from the Proposed Action.

- Driving and walking in Lower Manhattan has been difficult and time-consuming since September 11, 2001, because streets and sidewalks have been closed as a result of security concerns, construction projects, infrastructure work and other reasons. This situation will be exacerbated by the Proposed Action and other major new development projects. We urge the adoption of taxi stands throughout Lower Manhattan to ease this problem, which is hurting many businesses.

- The DGEIS holds out the possibility that delivery trucks, tour buses and other large vehicles will travel along local streets including Greenwich and West Broadway as an alternative to West Street. These streets are crossed by large numbers of school children who attend several large schools in the area around Chambers Street. We urge the LMDC to ensure that to the extent possible, these heavy vehicles travel along West Street and when they do use local streets, all possible mitigating measures are adopted.

- LMDC did not present a solution in the DGEIS to the need for tour bus parking in Lower Manhattan. We urge LMDC to carefully study and address this issue.

- In addition to construction vehicles and tour buses, other types of vehicles may pose special problems for the community around the World Trade Center site. In particular, issues may arise in connection with "black car" livery cabs, which typically require a designated area to wait for their passengers. The layout of the World Trade Center included locations for idling livery cabs and other special vehicles like commuter buses. If there is no designated area for these vehicles, they may have to seek places in adjacent areas where they would disturb residential areas. We request that the LMDC study this problem and ensure that it is accounted for in plans for the site.

Noise and Construction

We believe that loud noise and other disturbances caused by construction will be among the most significant adverse impacts to area residents and businesses. We have therefore made a number of recommendations about how to mitigate these problems:

- The establishment of a Lower Manhattan Construction Command Center (LMCCC), as proposed in the DGEIS (22-21), to coordinate the work schedules of major projects to minimize noise and other impacts. The LMCCC should ensure to the extent possible that noisy work is done during daytime hours or less sensitive days. A representative of the Lower Manhattan Construction Command Center should be available on site and by telephone 24 hours a day. The LMCCC should have representation from local businesses and residents living in close proximity to the site as well as from Community Board One and other community organizations. Moreover, an expeditious mechanism should be put in place to address noise and construction complaints.

- The construction at the World Trade Center site will be very disruptive to nearby businesses. We urge the LMDC and Port Authority to implement clear signage to instruct customers that businesses are indeed open and accessible.

- Soundproof windows - There are residential units in close proximity to the site and it is inevitable that construction activities will result in annoyance to the occupants. We therefore urge that soundproof windows for these buildings be included among the mitigation measures.

- LMDC's Draft Sustainable Design Guidelines (Appendix A) concerning noise and vibration levels should be adopted.

- The mitigation measures listed in 22-21 and SEQ-5 with respect to noise and vibration should be adopted.

- An expeditious grievance procedure should be implemented to deal with complaints that arise regarding noise and construction.

- The DGEIS anticipates severe noise impacts from designated truck routes on both Liberty and Barclay streets. Exceptional measures must be taken to mitigate effects on residents and businesses in these areas, especially residential neighbors near the Liberty Street truck route.

- LMDC and the Port Authority should ensure that sound receptor stations are established at various locations throughout and near the site and regularly monitored to ensure that agencies and contractors adhere to sound level guidelines.

- Since the DGEIS notes that acceptable standards for noise will be exceeded at the measured sites, we urge that all appropriate mitigation measures be employed.

Air Quality

- Since the DGEIS notes that the city and federal standards for particulate matter from diesel engines will be exceeded, we urge that all appropriate mitigation measures be adopted.

- We recommend that all contracts related to the Proposed Action incorporate the 191-A law, requiring the use of ultra low sulfur diesel and other state-of-the-art pollution control methods and technologies, and that this provision be enforced.

- We recommend that a detailed plan be put into place to monitor air quality in the area throughout the course of the Proposed Action.

- The 3 minute rule against idling vehicles must be vigorously enforced around the site to prevent adverse impacts to air quality and to facilitate traffic flow.

- We support the adoption of LMDC's recommendation to install HEPA filters at hospitals, office buildings, and residential buildings in the immediate vicinity of the site.

Community Facilities

- The Proposed Action and other major developments planned for Lower Manhattan will clearly bring a huge number of new workers, residents and visitors to the area. We are therefore concerned that the DGEIS does not anticipate the need for additional police officers, firefighters and other emergency service workers. In addition, existing facilities and resources in the area, including hospitals, day care centers, parks and other open spaces, and libraries will surely see significant additional use. We request that LMDC study for the final EIS the impact of the Proposed Action in these areas, and ensure that the community has the resources needed in these vital areas.

In conclusion, I would like to thank the LMDC for the opportunity to present testimony on this important project which will help to revitalize Lower Manhattan. We hope that the mitigation measures adopted will to the greatest extent possible address the impacts on the Lower Manhattan community.

Public Comment of
Julie Menin
President & Founder, Wall Street Rising
and
Jennifer Hensley
Director of Intergovernmental & Community Affairs, The Downtown Alliance

Lower Manhattan Development Corporation
Draft Generic Environmental Impact Statement
for the World Trade Center Site
March 15, 2004

Wall Street Rising, a non-profit Lower Manhattan advocacy group, and the Downtown Alliance, Lower Manhattan's Business Improvement District, both work to attract businesses and residents to and retain them in Downtown New York, maintaining Lower Manhattan's role as an around-the-clock, live/work neighborhood.

Retail stores and restaurants are a critical component of this neighborhood, and serve both the worker population during the day and the residential population in the evenings and on weekends. In the wake of the September 11th attacks, one of our biggest challenges has been the attraction and retention of retail stores. These small businesses suffered extensive business interruption after the attacks, when streets were closed and access was restricted. During the clean-up phase, as the fires continued to burn on the site and deconstruction began, the workers and residents who had come back Downtown to their offices and homes were not leaving to shop or eat out, so the retailers continued to suffer.

Throughout the past two and a half years, many Lower Manhattan retailers have had to close their doors; currently the retail vacancy rate south of Chambers Street is 11.5%. Still more who received low-cost loans in the aftermath of the attacks are starting to have trouble with their repayment schedules and face eviction and, in some cases, bankruptcy. Downtown's retailers are still struggling to recover.

According to the Lower Manhattan Development Corporation's Draft Generic Environmental Impact Statement, the construction phase of development on and near the World Trade Center site is expected to be long and intense. Impacts of this construction are said to include increased truck and vehicular traffic creating congestion on Downtown's narrow streets, loud noise and street closures as well as other access restrictions and environmental impacts. We believe that retailers

are positioned to suffer some of the most significant adverse effects of this construction, and specific measures need to be taken to mitigate those impacts on retailers. Moreover the on going viability of existing retailers, as well as the ability to attract new ones to the area, during the construction period is essential to the continued stabilization of both businesses and residents.

We propose that funding be allocated to launch a targeted, comprehensive marketing campaign that could include branding, advertising, and public relations, all with the goal of driving shoppers and diners to Lower Manhattan, offsetting the decline in foot traffic that will almost certainly result from the anticipated construction impacts. Before a campaign is developed, though, it is necessary to complete focused, intensive research on the Lower Manhattan retail market in order to more completely understanding the needs of the retail users Downtown (residents, workers, and tourists). We believe this two-pronged approach of partnering extensive research with tested marketing strategies would effectively increase patronage of Lower Manhattan shops and restaurants helping them to remain open throughout the construction phase of the WTC site redevelopment.

We also believe that a sales tax-free period should be established for Lower Manhattan retailers to mitigate the severe impact on them during this construction period. In the past, tax-free periods have proven to be successful – and marketable – programs that really do encourage shopping and dining Downtown. It is also a relatively low-cost, practical means for the government to reduce the significant impact of the construction on Downtown retailers.

We do not want retailers to be forced to close their doors. Therefore, Wall Street Rising and the Downtown Alliance encourage the LMDC to pursue construction impact mitigation strategies for retailers that will drive customers to shop and eat Downtown. We hope that the LMDC will look closely at the retail landscape in Lower Manhattan, acknowledge and support the commitments made by existing retailers, and work to retain these businesses throughout the critical construction phase and into the rebirth of the neighborhood.

We look forward to working with you on these important initiatives.

Hello – good afternoon. My name is Carrie Sullivan and I am here representing the World Trade Center Survivors' Network. We are a newly formed organization comprised of survivors of the attacks on the World Trade Center. We ardently feel that because survivors were not organized soon after the attacks that our voice has not been included in the rebuilding of the World Trade Center Site or in the formation of a memorial up to this point. Since we are now a formal organization, we are hoping that it is not too late for the voice of survivors to be valued and included in the decisions currently being made. Today, I will be speaking about the interpretive center within the memorial, specifically concerning what our organization would like to see happen at the interpretive center relating to survivors. We would like to see created a separate space in the interpretive center for which access will be exclusively restricted to survivors. Currently, when survivors visit the site, we are surrounded by photographing tourists who are often unaware of the feelings and needs of survivors. We can only imagine that once the new World Trade Site, the memorial, and interpretive center are constructed that even more people will be visiting the area, worsening the situation for survivors. We are asking for your consideration for including a space for survivors of the 2001 attacks on the World Trade Center in the new site plan. We feel this space will allow us to come together as survivors to remember, to pay our respects for all that we lost that day, and to move forward in our healing process. The World Trade Center Survivors' Network could be deemed accountable for the "Survivors Area" and we would enthusiastically accept that role. Our Network has the potential to ensure that voice of the 20,000 plus living victims of the attacks will be included in the formation of the new World Trade Center Site. We urge the LMDC, the Port Authority, HUD, the Governor's Office of New York, the Office of the Mayor of New York City, and Mr. Silverstein to reserve and create a separate space for survivors of the attacks within the interpretive center plan. The World Trade Center Survivors' Network will work to assist in the creation of the space in any way possible. Specifically, we ask that representatives of the Survivors' Network be appointed to the World Trade Center Site Memorial Foundation. In summary, there are three issues that we would like you to consider. First, that survivors are ensured a private space within the interpretive center and museum. Second, that the Survivors' Network is given the lead role in designing the space. Last, that representatives from our Network be appointed to the Memorial Foundation so that the voice of survivors will be finally be heard. We will be sending a letter to the Memorial Foundation and the LMDC finalizing these requests in the near future. Thank you.

Contact Information

Carrie Coen Sullivan
212-845-4445
coen@ndri.org

World Trade Center Survivors' Network
c/o September Space
520 8th Avenue, 11th Floor
New York, New York 10018

Mr. Kevin M. Rampe, President
Lower Manhattan Development Corporation
One Liberty Plaza, 20th Floor
New York, New York 10006

March 13, 2004

Dear Mr. Rampe:

The Survivors' Network is an organization representing people who were in and around the World Trade Center on September 11th, 2001. Survivors are significant to the renewal of Lower Manhattan, the formation of a new World Trade Center site, and the memorial/interpretive center building process. Unfortunately, we have not been involved in any of the decision-making up to this point.

Our representatives spoke at the public hearing for the draft generic environmental impact statement on the World Trade Center Memorial and Redevelopment Plan. It is clear that survivors have not been adequately represented in the development process. Going forward, we propose to correct this situation and hereby request advisory status to the Lower Manhattan Development Corporation and the World Trade Center Memorial Foundation on matters relevant to the WTC redevelopment and memorial. Specifically we ask that representatives from our organization be invited to work with LMDC and the Memorial Foundation on the aforementioned issues.

Several needs are emerging from the continuing discussions among our members. Survivors need to experience the Memorial in a way that reflects their personal traumas and supports healing. Currently a visit to the site is a confrontation with tourists and vendors. Survivors need to have their own space in the memorial design; a place in which we can remember and pay our respects for all that we lost that day. We are alive, we are coming together and will always remember. Our voice needs to be heard. We will always continue to support the special needs of the friends and families of those who were not so fortunate. Despite all the studies and reports, there needs to be better information and forums about who we are, our recoveries and issues. The WTC site, no matter what emerges there, will always be a reference point and landmark in our lives. Survivors can provide a unique perspective to the millions of potential visitors to the site, by telling our experiences of the tragic events while keeping the spirit of the towers alive in the hearts of those who visit the site. Not only should visitors revisit the tragedy, but they should leave the site knowing how much the World Trade Center meant to our daily lives.

Survivors are a unique group with the potential to assist in the ongoing efforts to recover and renew. As an organized group we will actively contribute to the dignity and vitality of the WTC redevelopment.

So far, the plans for the renewal of Lower Manhattan have neglected our interests. We are writing to request that the LMDC and Memorial Foundation recognize our unique status, acknowledge our special needs to organize and incorporate our representation in all renewal projects. In conclusion, we look forward to your affirmative response to this request and hope you will assist us in our efforts.

Sincerely,

Carrie Sullivan

Peter Miller

Holly Haff

Copies to: Jennifer Brown, Assistant Vice President,
Community and Government Relations

Gerry Bogacz