

**LOWER MANHATTAN RECOVERY PROJECTS  
ENVIRONMENTAL PERFORMANCE COMMITMENTS**

<b>AIR QUALITY</b>		
<b>Environmental Performance Commitment</b>	<b>Common Implementation and Verification Procedures among LMDC, MTA, NYSDOT and PANYNJ</b>	<b>Project Specific Procedures</b>
<b>Use of Ultra Low Sulfur Diesel (ULSD) for all non-road vehicles that operate with diesel engines</b>	<ul style="list-style-type: none"> <li>• ULSD for all diesel-powered non-road equipment to be used in the performance of work</li> <li>• Fuel slips</li> <li>• Fuel delivery summary</li> </ul>	<b>PA - WTC Permanent PATH</b> <ul style="list-style-type: none"> <li>• Take periodic samples of fuel - Fuel sulfur content no more than 15 ppm over 6 mo. Period or approved equal by Engineer</li> </ul>
<b>Use of Diesel Particulate Filters/Diesel Oxidation Catalysts (DPF/DOC)</b>	<ul style="list-style-type: none"> <li>• Use of DPF's on all non road diesel engines of 50 horsepower and greater.</li> <li>• Use of DPF with Tier 2 required unless contractor justifies otherwise (i.e., for purposes of safety considerations, mechanical reasons, or where the technology would not function properly) and is granted a waiver by the Project Engineer; then use DOCs unless a more effective and practical retrofit technology becomes available.</li> <li>• Physical verification on machinery</li> </ul>	<b>PA - WTC Permanent PATH</b> Approval of submitted Diesel Emission Mitigation Plan
<b>Use of Electric Powered Equipment - that can practically replace diesel powered equipment</b>	N/A	<b>PA - WTC Permanent PATH and LMDC - Memorial/Memorial Museum</b> <ul style="list-style-type: none"> <li>• Reduce on-site diesel exhaust to the maximum extent by utilizing electrically powered equipment in place of diesel powered equipment as appropriate, based upon the availability of grid power at WTC site for such purposes</li> <li>• Physical verification on machinery</li> </ul> <b>PA - WTC Permanent PATH</b> <ul style="list-style-type: none"> <li>• Visual inspection in accordance with approved Diesel Emission Mitigation Plan</li> </ul>
<b>Limit Unnecessary Idling</b>	<ul style="list-style-type: none"> <li>• Limit unnecessary idling times to 3 minutes</li> <li>• Physical Inspections and idling checks with on-site contractors and supervisors for Compliance</li> </ul>	<b>PA - WTC Permanent PATH</b> <ul style="list-style-type: none"> <li>• Visual inspection in accordance with approved Diesel Emission Mitigation Plan</li> </ul>
<b>Locate Diesel Equipment away from Fresh Air Intakes</b>	<ul style="list-style-type: none"> <li>• Reinforcement with contractors and supervisors on-site</li> <li>• Visual inspection in accordance with standard operating procedures</li> </ul>	<b>NYSDOT - Route 9A</b> <ul style="list-style-type: none"> <li>• Follow Diesel Emission Plan</li> </ul> <b>PA - WTC Permanent PATH</b>

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		<ul style="list-style-type: none"> <li>Visual inspection in accordance with approved Diesel Emission Mitigation Plan.</li> </ul>
<b>Dust Control Plan</b>	<ul style="list-style-type: none"> <li>Dust Control Plans will specify how fugitive dust emissions will be controlled (standard operating procedure) within the construction site during earth moving and demolition activities, which shall include as appropriate: <ul style="list-style-type: none"> <li>The spraying of a (non-hazardous, biodegradable) dust suppressing agent</li> <li>The physical containment of fugitive dust particulates through the use of tarps or other wind protection devices</li> <li>The adjustment for meteorological conditions, as appropriate</li> <li>Wheel washing of all construction Non-Road, On-Road and passenger vehicles leaving the site, including the containment and treatment of the wash water</li> <li>The wetting and covering of all trucks' loads containing materials delivered to or removed from the site that may generate fugitive dust</li> <li>The routine wetting and cleaning of streets and access roads within the construction site</li> <li>Fugitive dust emissions within the construction site shall be contained at all times including non-working days, weekends and holidays</li> </ul> </li> <li>Physical verification on site</li> </ul>	
<b>Other Emissions Reductions Technologies</b>	N/A	<p><b>PA – WTC Permanent PATH and LMDC - Memorial/Memorial Museum</b></p> <ul style="list-style-type: none"> <li>Continue to investigate the effectiveness of utilizing additional means (e.g., fuel emulsions) to reduce NOx (NO and NO<sub>2</sub>) emissions</li> </ul>

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**NOISE AND VIBRATION**

<b>Environmental Performance Commitment</b>	<b>Common Implementation and Verification Procedures among LMDC, MTA, NYSDOT and PANYNJ</b>	<b>Project Specific Procedures</b>
<p><b>Schedule individual projects to avoid or minimize adverse impacts.</b></p>	<ul style="list-style-type: none"> <li>• Noise intensive construction activities limited to daytime hours</li> <li>• Participate in LMCCC meetings with other stakeholders.</li> </ul>	<p><b>LMDC - Memorial/Memorial Museum</b></p> <ul style="list-style-type: none"> <li>• During pre-construction design review, take into account noise reduction features and technology, especially with regards to areas in the Memorial important for serenity and quiet, in furtherance of the noise reductions measures and goals in the ROD and Sustainable Design Guidelines. The goal for operation of the Memorial is a noise attenuation of 5 dBA and the goal for the operation of the Memorial Museum is a noise attenuation of 30-40 dBA</li> </ul>
<p><b>Coordinate construction activities with projects under construction in adjacent and nearby locations to avoid or minimize impacts.</b></p>	<ul style="list-style-type: none"> <li>• Use noise-attenuated equipment as appropriate</li> <li>• Participate in LMCCC coordination meetings with other stakeholders.</li> </ul>	
<p><b>Consider condition of surrounding buildings, structures, infrastructure, and utilities where appropriate.</b></p>	<ul style="list-style-type: none"> <li>• Confirm compliance with sound level measurements.</li> <li>• Instrumented vibration measurement when needed</li> <li>• Appropriate construction vibration measures will be established for the protection and avoidance of structural and architectural damage to historic properties within 90 feet of the construction zone, or 30 meters for projects using metrics units.</li> <li>• Physical verification at site for use of sound attenuated equipment and use of worker protection devices.</li> </ul>	

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<b>Prepare contingency measures in the event established limits are exceeded.</b>	Participate with LMCCC regarding developing additional measures as required to minimize cumulative effects that exceed established thresholds	
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**ACCESS AND CIRCULATION**

<b>Environmental Performance Commitment</b>	<b>Common Implementation and Verification Procedures among LMDC, MTA, NYSDOT and PANYNJ</b>	<b>Project Specific Procedures</b>
<b>Establish a project-specific pedestrian and vehicular maintenance and protection plan.</b>	<p>Individual Project's Maintenance &amp; Protection of Traffic Plans (MPT Plans) are coordinated with LMCCC(NYCDOT), community groups, and other interested parties, and shall address the following as appropriate:</p> <ul style="list-style-type: none"> <li>• Proposed project staging, with detailed notes ensuring maintenance and protection of vehicular and pedestrian traffic during each stage</li> <li>• Incorporate changes as conditions merit, as approved by the engineer in charge of the project.</li> <li>• Ensure adherence to plans through the daily diligence of project site inspectors</li> <li>• Maintain active communication with residents, local businesses, agencies and other interested parties in coordination with LMCCC</li> </ul>	
<b>Promote public awareness</b>	<p>Agency efforts to promote public awareness in order to facilitate access and circulation during the construction period shall include, as appropriate, the following items:</p> <ul style="list-style-type: none"> <li>• Coordinating with LMCCC in all public relation initiatives</li> <li>• Submitting updates through <a href="http://www.lowermanhattan.info">www.lowermanhattan.info</a> for inclusion in their list of work throughout lower Manhattan</li> <li>• Posting of appropriate signage to facilitate pedestrian and vehicular access and to inform the public of hotline numbers and web site addresses</li> <li>• Assigning personnel to assist in way-finding</li> <li>• Setting up a telephone hotline</li> <li>• Posting web site updates</li> <li>• Sending e-mail notifications of upcoming work and road closures to agencies, local businesses, interested members of the public.</li> <li>• Holding regular stakeholder meetings and agency and community update meetings to notify interested parties of current and upcoming construction activities</li> </ul>	
<b>Ensure sufficient alternate street, building, and station access during construction period.</b>	<ul style="list-style-type: none"> <li>• Use of signage, press releases, coordination with LMCCC (NYCDOT), staff assigned to assist in way finding</li> <li>• Maintain access to local businesses and points of interests to the greatest extent practicable</li> <li>• Add appropriate signage and way finding for affected businesses and amenities</li> <li>• To extent practicable, minimize disruption to businesses in general area of project site</li> <li>• Physical inspection of implementation of approved project specified MPT Plan</li> </ul>	

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<b>Regular communication with New York City Department of Transportation and participation in its construction coordination efforts.</b>	Coordination with LMCCC (NYCDOT) in all public relations initiatives. <ul style="list-style-type: none"><li>• Standard operating procedure.</li><li>• Meetings on a regular basis.</li></ul>	

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**CULTURAL AND HISTORIC RESOURCES**

<b>Environmental Performance Commitment</b>	<b>Common Implementation and Verification Procedures among LMDC, MTA, NYSDOT and PANYNJ</b>	<b>Project Specific Procedures</b>
<b>Establish coordination between project construction activities to avoid or minimize adverse impacts.</b>	Implement cultural and historic resource protection measures as stipulated in individual project's Section 106 documents and in coordination with LMCCC	
<b>Initiate public information and involvement outreach with sensitivity to local cultural resources</b>	Implement cultural and historic resource protection measures as stipulated in individual project's Section 106 documents and in coordination with LMCCC	
<b>Identify existing information sources that would be providing current information about access during construction</b>	See Access and Circulation	
<b>Consult with SHPO and NYCLPC regarding potentially impacted, culturally significant sites. Monitor noise and vibration during construction at such sites as appropriate</b>	See Noise and Vibration	

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<b>ECONOMIC EFFECTS</b>		
<b>Environmental Performance Commitment</b>	<b>Common Implementation and Verification Procedures among LMDC, MTA, NYSDOT and PANYNJ</b>	<b>Project Specific Procedures</b>
<b>Coordinate with LMDC and Downtown Alliance and other entities to minimize residential and retail impacts.</b>	This outreach is incorporated in the public outreach efforts and individual project's MPT plans and further coordinated through LMCCC (NYCDOT).	
<b>Add appropriate signage and a way-finding for affected businesses and amenities</b>	This issue is addressed in the individual project's MPT plan and community outreach efforts and further coordinated through LMCCC (NYCDOT).	