



CONTROLLED DEMOLITION INCORPORATED

**SOFT STRIP/INTERIOR GUT PLAN
[“PHASE IB”]**

FOR

**130 LIBERTY STREET
NEW YORK, NEW YORK**

PREPARED FOR

**GILBANE BUILDING COMPANY
125 MAIDEN LANE
NEW YORK, NEW YORK**

REVISED

9 DECEMBER 2004

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I. SCOPE OF WORK

This Initial phase of deconstruction (Phase I) includes the necessary interior, non-structural deconstruction and related work and will occur in two sub-phases referred to as Phase IA and Phase IB. Phase IA consists of dust cleaning, abatement of identified asbestos-containing building materials (ACBMs) and removal of interior building components as necessary to complete the cleaning and abatement. Phase IB will then include the removal of most of the remaining interior, non-structural building elements – gypsum wall board (GWB), small scale mechanical, electrical and plumbing (MEP), sprayed-on fireproofing, built-in shelving, bathroom fixtures and other interior, non-structural soft strip/interior gut materials not removed during Phase IA. The exception to this will be to leave the building's perimeter (exterior) gypsum wallboard (GWB) walls, fireproofing located behind this GWB, the window convactor units and risers within the column enclosures in place. These items will be removed during Phase II.

Phase II will then include the exterior wall associated GWB, MEP and fireproofing as stated above, systematic deconstruction and removal of the remaining "clean" building (system and structural) components (large scale MEP, roofing, exterior skin and all structural components).

It is the responsibility of both the Phase IA and Phase IB contractors to closely coordinate activities to ensure the safe and smooth execution of the work. A minimum of a one floor "buffer" (floor where no Phase I work is occurring) will be maintained between the Phase IA work and the Phase IB work following behind it. A more detailed description of Phase I-B work and the work process is included in Section X Execution.

II. WORK SCHEDULING AND PHASING

Hours of operations will be 7:00 AM to 3:30 PM, Monday to Friday for all trades except elevator operators who will work from 6:30 AM to 4:00 PM.

The interior soft strip/interior gut work will be done on two floors at a time using diesel-powered equipment compliant with environmental and safety regulations/standards including, but not limited to the Coordinated Construction Act for Lower Manhattan.

Construction debris generated at the site during this work shall be loaded and trucked off site during regular working hours.

Phase IB soft-strip/interior gut operations shall start at the top of the building and proceed downward. A minimum buffer zone of one floor shall be maintained between Phase IA and Phase IB work at all times.

III. BUILDING UTILITIES

Each floor shall have sufficient, centrally-located utilities including electrical power, Fire Safety standpipes and a 2" riser to be used to support the entire deconstruction process.

The electrical vaults in the basement, conduit runs, pumps to remain in service will be protected from water damage, deconstruction dust and from back-filling operations until these utilities are scheduled to be taken out of service. These services will be protected using various protection methods including utilizing steel barriers and plywood/plastic enclosures.

Rain water, water used for dust palliation and fire control during deconstruction, will be collected for discharge into the NY City sewer system. As required, a NYCDEP discharge permit shall be obtained prior to the discharging of water into the sewer. The Permit approval will dictate collection, sampling/testing and discharge requirements all of which will be followed.

IV. HEALTH AND SAFETY

All Phase IB work will comply with all requirements of the project HASP as detailed in Section 5 of the overall Phase I Deconstruction Plan. To elaborate, to insure that workers on site are equipped with the proper Personal Protective Equipment (PPE) and respiratory protection during their work, personal air sampling shall be performed to evaluate exposure and develop historical data on a task by task basis, to on-site hazards as identified in the "*130 Liberty Street Initial Building Characterization Study Report, September 14, 2004*" (Initial Building Characterization Report). Work will begin in type C level PPE and will proceed at this level until data can be reviewed and evaluated. Respiratory protection will conform to the project HASP regarding the Permissible Exposure Limits for asbestos, lead, silica and mercury and for benzene as a marker for the polyaromatic hydrocarbons (PAHs).

If the collected data indicates that the exposure levels are below the HASP requirements for level C PPE, the work will proceed utilizing level D PPE, as outlined in the project HASP.

Carbon Monoxide (CO) detectors shall be mounted on all diesel powered equipment and at strategic locations throughout the floor, during the work on each floor. Alarms shall alert workers if CO levels reach potentially unsafe levels, within the work area. The CO alarms will be tested/calibrated on a regular basis per the manufacturer's directions.

In the event that a CO detector alarm sounds, all equipment on the floor shall be shut down and the workers shall retreat to a designated "safe" area. Due to the propensity of the CO gas to rise up through the building, safe areas shall be established on the next floor below active Phase IB deconstruction. As a one floor buffer will be maintained at all times between the Phase IA and IB work, this "safe" floor below will have been previously cleaned/abated and cleared and no work activity would be occurring. Workers shall remain in the safe area until the "all clear" is given by the designated Subcontractor Safety Officer or their Emergency Coordinator.

Fall protection at shaft openings on each floor shall include barricades to prevent personnel access into the shaft. Barriers shall conform to OSHA Sub Part M fall protection requirements.

As required by OSHA, all personnel working within 6' of the debris chute opening on each floor shall wear appropriate fall protection while performing any activities. Paint will be applied to the floor surfaces 6' from the opening and refreshed as necessary to indicate that 6' distance. Workers shall be tied off and wear safety harnesses in accordance with OSHA Subpart M requirements.

V. FIRE PROTECTION AND EMERGENCY EGRESS

CDI will work in accordance with the requirements as detailed in the Emergency Action Plan Section 3 of the overall Phase I Deconstruction Plan. Some additional specific detail for pertinent activities/issues is provided below.

Fire protection shall be provided via a dry standpipe system to be located centrally on each floor in accordance with all applicable NYC Building Department or FDNY requirements. The

water pipe shall be heat-traced, to prevent freezing, during winter operations. Both the dry standpipe and the 2" water line will be available for fire protection and fire prevention at all times during the deconstruction operation.

CDI will comply with all Gilbane and/or FDNY requirements related to hot work operations including permitting. Certificates of Fitness shall be obtained for all burners and Firewatch during the course of that work. A Firewatch shall be maintained for a minimum period of one hour after burning operations have been completed for that shift.

Fire extinguishers shall be ABC dry chemical type fire extinguishers used to fight all types of fires.

Designated Evacuation Assembly and Emergency Egress are shown on pages 16 through 19 of the Emergency Action Plan Section 3. These drawings show all locations to be used for exiting each floor and, in turn, the building when Emergency Warning signals have been sounded. In the event of any emergency requiring evacuation, all CDI personnel shall report to the designated location. At this location a head count shall be made to insure that all individuals have been safely evacuated from the building by the designated Subcontractor Emergency Coordinator.

VI. HOUSE KEEPING

The subcontractor will maintain all exits and stairwells clean and free from hazards at all times. Debris will be removed as it is being generated to prevent trip hazards, combustible fire hazards and to prevent the overloading of floors.

VII. PERMITS AND STANDARDS

At a minimum, the following applicable codes, standards, and regulations shall govern the work identified within this document:

- 29CFR Eye and Face Protection - 1910.133
- 29CFR Hand Protection - 1910.138
- 29CFR Occupational Foot Protection - 1910.136
- 29CFR1926.59, as set forth in 29 CFR 1910.1200 – Hazard Communication
- 29CFR1910.101 - Hearing Protection
- 29CFR1910.145 - Accident Prevention Signs and tags
- 29CFR.1910.132 - Personal Protective Equipment for general industry
- 29CFR Respiratory Protection - 1926.134
- 29CFR Construction Standard for Asbestos - 1926.1101
- 29 CFR 1926 Subpart M - Fall Protection
- 29CFR Title 29 1926.33- Access to Employee Exposure and Medical Records
- 29 CFR1926.52 - Hearing Protection
- 29CFR 1926.101 - Hearing Protection
- 29 CFR 1910.1030 – Bloodborne Pathogen
- USDOT 49 CFR Parts 171 and 172
- NY State 6NYCRR Part 364 - Waste Handling and Permitting Vehicles and Haulers
- NY State 12NYCRR Part 56 - Asbestos
- New York City Department of Transportation
 - New York City Highway Rules, Title 34, chapter 2
 - New York City Traffic Rules, Highway and Traffic Routes, Sec. 4-13.

VIII. WORK AREA ENGINEERING CONTROLS

Special care shall be taken during Phase IB operations to ensure that all building components, especially sheetrock partitions and sprayed-on fireproofing, are maintained wet during deconstruction on each floor. These materials shall be wet down with water hoses equipped with fogging nozzles to ensure a reduction of potential dust during soft strip/interior gut operations.

Prior to sending materials into the debris chute, all debris shall again be misted with water utilizing a fire hose connection to the 2" water line.

The base of the debris chute shall be equipped with a water misting system to ensure dust suppression during movement and removal of these materials. Several water hoses equipped with fogging nozzles shall be established around the perimeter of the chute area and will be used as warranted. As waste materials are placed into containers, materials shall continue to be misted to further minimize and prevent the generation of dust during this activity. Any materials that are brought down from the upper floors prior to the chute being operable will be done so using the crane with a skip pan or the material hoist.

Water, drawn from the temporary 2" water line installed by Gilbane's plumbing subcontractor, will be used for dust palliation purposes. To prevent potential ice hazards in the work place, water shall not be used when the temperature at the site is below 32° Fahrenheit. The contractor shall take care to sweep and squeegee any remaining standing water from the floor surfaces at the end of the day to avoid freezing overnight. If ice does form on walking surfaces, a grit-like material (ex., sand) will be applied to provide traction.

If freezing temperatures prevent the use of water, the subcontractor will utilize air filtration devices (AFD) in close proximity to the work so as to prevent dust release outside of the building envelope.

Fresh air shall be maintained on each floor by removing several windows around the perimeter. Windows shall be cleaned of potential contaminants prior to removal in coordination with the work of Phase 1A. Fall protection for any created openings will be installed as necessary in compliance with OSHA subpart M. In addition, should interior dust control measures as outlined herein prove unable to completely eliminate releases through these openings, filters will be secured to the interior wall to completely cover the opening. The filters shall be minimum MERV 6 to adequately filter airborne matter of the size likely to be generated based on the materials impacted during Phase IB. These filters will allow for the free flow of fresh air into the work area yet adequately filter air leaving the work area. Filters shall be tightly secured to the wall using furring and a Hilti nail gun fastener such that the filter will remain in place for the duration of a shift. All installed filters will be removed at the conclusion of the shift to avoid the possibility for weather conditions to dislodge the filter during unattended times.

Dust Control

Water will be used to provide dust control on each floor during this phase of the work. See Scope of Work in this plan.

Sheetrock partitions and sprayed-on fireproofing shall be constantly misted with water especially prior to pushing into debris chute.

IX. EQUIPMENT

Our plan utilizes diesel powered deconstruction equipment, including:

- ◆ Bobcat Model 763
- ◆ Takeuchi 035 mini-excavators, or equivalent
- ◆ Komatsu rubber tired loaders WA 95, or equivalent

As stated previously, Carbon Monoxide (CO) detectors/alarms shall be installed on each diesel powered machine in the work area.

The personnel/equipment hoist and Tower Crane shall be installed while work is ongoing during Phases 1A and 1B. Tie-in locations, for both the crane and hoist, shall be abated during Phase 1A work. Refer to Section 6 – Abatement Plan for detail of required pre-cleaning in support of this activity.

Machines will be moved from floor to floor by use of the building freight elevators or rigging the equipment from floor to floor using the established debris chute. The outside climbing crane may also be used for moving this equipment from floor to floor utilizing slings and taglines. Equipment will be taken into the building through openings in the curtain wall.

X. EXECUTION

A. GENERAL

Work under Phase IB shall be coordinated with Phase IA work and shall follow Phase IA work with a minimum of a one floor buffer.

Deconstruction debris shall be chuted from upper floors past lower floors on which Phase IA activities are occurring. CDI will closely coordinate with the Phase IA subcontractor to ensure that no negative impacts to the control measures required for the Phase IA operations occur.

Work shall be closely coordinated with the Phase IA work to ensure that there is also minimal impact on the air sampling conducted during that work. Dust control methods, outlined in Section VIII, Work Area Engineering Controls, of this plan, shall be closely adhered to during all phases of the Phase IB operation.

B. PRE-DECONSTRUCTION PREPARATION

1. Establish Rubbish Chutes

A group of mechanical shafts, adjacent to the 1st floor loading dock, shall be established from the working deconstruction level to the 1st floor for the safe transport of non-hazardous rubbish and debris generated by this Phase IB work.

These shafts must be prepped. Firstly, the Phase IA subcontractor will abate any existing ACBMs and clean the WTC dust from the chute after which clearance visuals and air sampling will be performed to demonstrate the successful completion of that work. The abatement/cleaning and related work are detailed in Section 6 – Abatement Plan. Then CDI will remove piping and conduits from the entire length of the shaft. Work shall start at the bottom and proceed upward.

The landing area shall be prepared with steel plates and other reinforcement as deemed necessary by a NY State Professional Engineer.

At shaft openings on each floor barricades shall be established to prevent personnel access into the shaft. All personnel, working within 6' of the shaft access at each floor, shall wear appropriate fall protection while performing any activities within that area.

During deconstruction only one machine shall feed the deconstruction chute at a time. This will prevent miscommunication between deconstruction on the floor and the removal of debris at the base of the chute.

The base landing area shall not be cleared out until barricades are in place on each upper floor and an 'all clear' signal is received from work area floors. Communication between the deconstruction floors and the 1st floor landing area shall be closely maintained with radio communication. In the event of radio communication failure, all debris removal work shall stop and no materials shall be permitted to be dropped or removed from the base of the chute until radio communication has been re-established.

2. Installation of Crane & Hoist

Installation of the crane and hoist equipment shall take place after the abatement and cleaning of tie in locations has been completed.

Hoist

Personnel/material hoist shall be mobilized and installed on the south side of the building in accordance with the manufacturer's requirements as well as Attachments A and B of this document.

Crane

The Tower Crane shall be mobilized and installed on the north side of the building in accordance with the manufacturer's requirements as well as Attachments A and B of this document.

3. Equipment List

The following types of equipment shall be mobilized for this work.

- ◆ Diesel Takeuchi 035 mini-excavator or equivalent
- ◆ Diesel Bobcat 763, or equivalent
- ◆ Diesel Komatsu, rubber tire loader WA95 or equivalent
- ◆ USA 6000, dual car, Personnel / Material Hoist
- ◆ Link Belt FMC TG 1900T, or Favco STD 750 Tower Crane
- ◆ Various over the road diesel powered trucks equipped with 30cy containers for the transport of waste from the site

4. Equipment Mobilization

Prior to mobilizing equipment onto each floor elevation, a NY State Professional Engineer shall evaluate the allowable loading of the existing floor slabs. Equipment shall be brought on to each floor using one of the following procedures. All procedures shall be

evaluated and signed off by a NY State Professional Engineer prior to being used to transport equipment to each work location.

a. Service Elevator:

Prior to using elevators, elevator capacities shall be confirmed by a licensed elevator mechanic to insure that equipment weights can be safely transported to the various work areas within the building.

b. Debris Shaft:

Equipment may be hoisted from the top of the shaft to the floor elevation where equipment is required.

With equipment hanging in the shaft at the required location, a come-along or similar tool, shall be used to pull the equipment from the shaft on to the floor elevation. This shall be coordinated with the hoist. As the equipment is pulled on to the floor the hoist shall let out cable to allow the equipment to land on the floor elevation.

Workers assisting this operation, working proximate to the shaft, shall be tied off and shall wear safety harnesses to prevent falls into the shaft during this operation.

c. Personnel/Material Hoist:

See Attachments A and B (to be provided)

d. Tower Crane:

See Attachments A and B (to be provided)

C. DECONSTRUCTION

1. Work Sequence:

The Takeuchi mini-excavator shall be used to demolish sheetrock, metal stud and wood walls. Wall deconstruction shall start at the top of each wall section. Walls shall be systematically pulled down onto floor slabs.

As walls are being pulled down the related shelving, built in casework, desks, cabinets, bathroom fixtures, remaining MEP, etc. shall also be pulled onto the floor. The Takeuchi shall run over protruding objects to minimize their size prior to pushing this material into the debris chute.

The day before removal of fireproofing from the structural beams and corrugated Q-Deck, the fireproofing shall be thoroughly saturated with water. The next day the material shall be removed with hand scrapers while continuing water misting operations. Scraping shall be followed with power-washing of all surfaces using high-pressure water.

A Takeuchi, equipped with a grapple, shall be used to segregate sheetrock and metal studding on the floor. A Bobcat 763 shall be used to selectively isolate and retrieve deconstruction debris along with the Takeuchi. The Komatsu, rubber tire loader WA95 shall be used to push the majority of deconstruction debris generated on the floor into the rubbish chute. Work shall proceed in a coordinated, directional flow toward the

debris chute. Machines shall not be used for any deconstruction work within 2' of the building's curtain wall.

At locations where the remainder of each partition wall is attached to the interior sheetrock of the curtain wall, that work shall be performed entirely by hand. This work shall be done with hammers, pry bars and other hand tools, up to the curtain wall's interior sheetrock. Special care shall be taken to insure that the sheetrock on the inside face of the curtain wall is not damaged.

Where the removal of interior partition walls leaves an opening into the interstitial space between the curtain wall and the sheetrock wall, that opening shall be covered with two layers of 6 mil polyethylene.

2. Debris Handling in the Work Area:

Prior to dropping the segregated material into the debris chute, all materials shall be thoroughly wet down using rubber water hoses equipped with misting nozzles. If water is unavailable, no chuting of debris shall occur.

Debris sent down the debris chute shall be collected on the 1st floor, adjacent to the loading dock. A metal skid mounted shield lined with 1/4" steel plate shall be installed at the base of the debris chute on the loading dock side. This shield, too heavy to be moved by hand, shall be moved into place with a Komatsu WA95 rubber tire loader when the chute is in use and debris is coming down the chute.

After a sufficient quantity of deconstruction debris has collected within the base of the chute, the debris shall be removed with a Komatsu WA95 and loaded into open top 30cy containers situated within the loading dock.

A laborer shall be stationed proximate to the work in the loading dock to wet down deconstruction debris as well as ensure that the area is kept clear of any non-essential personnel during work in this area.

After deconstruction waste has been loaded into the containers, tarps shall be secured over the debris. Tarps will remain in place over the containers at all times when direct loading is not occurring. Loading dock doors will be closed when debris removal operations are not occurring.

Trucks shall proceed in accordance with the approved site Trucking Plan.

Debris generated during this Phase IB work, shall be handled in accordance with the requirements dictated by waste characterization testing performed by others. Cleaned metal waste shall be segregated for transport to a local recycling facility. All non-recyclable waste shall be hauled to a landfill facility that has been approved by the LMDC. All required waste shipment records will be provided to Gilbane.

3. Work Area Remediation:

Any holes of 2" diameter or greater must be covered with plywood, securely attached to the floor slab using a Hilti nailgun fastener or equivalent and clearly marked "HOLE" to prevent falling/tripping injuries at the site. The plywood used shall be adequate for the intended load given the size of the hole it covers. Openings in the concrete floor slabs

that cannot be safely covered with plywood shall be barricaded in conformance with 29 CFR 1926 Sub-Part M for Fall Protection.