APPENDIX 5
PHASE I - VARIANCE DECISION AMENDMENT #2 DATED JULY 22, 2005

NYS Department of Labor
Workforce New York
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STATE OF NEW YORK
DEPARTMENT OF LABOR
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DATE: 7/22/05

DELIVER TO:

Name: ANGEL JAVA/EDGERTS (TRC) 212-221-7840
PATEVANGELISTA (EPA) 212-637-4445
KRISH RADHAKRISHNAN (DEP) 718-595-3744
ROBERT IULO (NYCDOB) 212-566-3848

Office: RICHARD FRAM (DEC) 718-482-4804
GIL GILLEN (OSHA) 212-337-2371

Location:

Floor: **Room:**

Phone No: **Fax No:**

FROM:

Name: CHRISTOPHER ALONGE

Office: **Engineering Services**

Location: **Bldg 12, Room 154**
State Campus, Albany, NY 12240

Phone No: **518-457-1536**

Fax No: **518-457-1301**

COMMENTS: VARIANCE DECISION AMENDMENT #2
RELATING TO: VAULTED DUCTS & RACEWAYS CLEANING/INSPECTION PROCEDURES
& PILOT PROGRAM FOR REMOVAL OF COLUMN COVERS

NUMBER OF PAGES BEING TRANSMITTED: **(Including cover sheet)**

STATE OF NEW YORK
DEPARTMENT OF LABOR
STATE OFFICE BUILDING CAMPUS
ALBANY, NEW YORK 12240-0100

Variance Decision Amendment

Premises: Vacant High Rise Office Building
130 Liberty Street
New York, New York

Amendment: Revised Procedures & Conditions

File No. 05-0427

DECISION AMENDMENT #2

ICR 56

The site-specific variance decision file no. 05-0427, dated May 11, 2005, is hereby amended as follows:

AMENDMENT CONDITIONS

1. This amendment is based upon the amendment/reopening request that was submitted by TRC, dated June 10, 2005, the revised pilot program work plan dated June 24, 2005 and the additional information for walker ducts & raceway cleaning protocols dated July 7, 2005, totaling twenty-four pages. The amendment/reopening request for revised procedures and conditions to address several outstanding issues is approved. as modified by this decision amendment. A copy of the marked-up request is attached to this decision amendment.

2. Prior to commencement of "Pre-demolition Cleaning and Abatement" asbestos project work including scaffold installation and other preparatory work, revised plans for the entire deconstruction project shall be submitted to all pertinent federal, state and local regulatory agencies, and all necessary approvals obtained.

3. All proposed air monitoring for contaminants other than asbestos must be submitted to the appropriate regulatory agency for their review and approval prior to the commencement of any asbestos project work, including scaffolding installation and other preparatory work. The

Department will not grant or deny approval for any proposed non-asbestos contaminant air monitoring procedures.

4. The original variance decision condition #42 is now modified to include the provisions and conditions of this variance decision amendment.

Cleaning, Visual Inspection and Clearance of Walker Ducts and Raceways

5. Both the project monitor and supervisor shall observe all visual (including videotaped) duct inspections. The on-site project monitor is responsible for determining if additional cleaning is necessary within the ducts and raceways prior to successful completion of the visual inspection for any portion of a specific work area.

6. The proposed Walker Duct and Raceway cleaning procedures/protocol is conditionally accepted by the Department, dependent upon the effectiveness demonstrated for the initial interior work area. The local district of the Department's Asbestos Control Bureau shall be contacted, and an inspection scheduled to demonstrate the effectiveness of these cleaning procedures/protocols. The Department reserves the right to issue modifications to the cleaning procedures/protocol based upon observations and visual inspection results for the initial interior work area.

Pilot Program For Removal of Aluminum Column Covers & Fascia With Non-friable ACM Caulking

Extrerior Negative Pressure Tent Fireproofing Removals

7. All conditions of the previous variance decision amendment apply to the fireproofing removals completed at the exterior of the building within negative pressure tent enclosures.

8. The results of the pilot program shall be submitted to all pertinent regulatory agencies for their review and approval. Until approval is obtained from all pertinent regulatory agencies, any disturbance to ACM caulking shall be completed within negative pressure tent enclosures as per the conditions of the variance decision and current reopenings/amendments.

Waste Decontamination System Enclosure

9. When a remote personal decontamination system enclosure is allowed and utilized for a regulated abatement work area, the following requirements shall apply:

   a. Minor Size Regulated Abatement Work Area. No specific waste decontamination system enclosure is required for minor size regulated abatement work areas. The waste generated shall be

immediately bagged/containerized within the regulated abatement work area.

b. Small & Large Size Regulated Abatement Work Areas.

i. **Washroom.** An additional chamber shall be constructed within the regulated abatement work area, attached to the existing airlock used to access the work area. The washroom/airlock combination shall be utilized as the contiguous waste decontamination enclosure for waste bagging/containerization and waste transfer activities. The washroom shall be constructed and supplied with equipment/materials consistent with waste decontamination system enclosure washroom requirements for contiguous personal and waste decontamination system enclosures.

ii. **Removal.** The washroom chamber shall be removed only after satisfactory clearance air sampling results have been achieved or the asbestos project is complete.

Exterior Regulated Abatement Work Area Air Monitoring Requirements.

10. For exterior regulated abatement work areas, including but not limited to façade cleaning, netting removal, hoist/scaffold tie-ins and tent enclosure work, air monitoring requirements of ICR 56-17 apply, unless modified by the original variance decision (i.e. tent enclosures). In addition, all proposed air monitoring for contaminants other than asbestos must be submitted to the appropriate regulatory agency for their review and approval, prior to the commencement of any phase I work, including scaffolding installation. The Department will not grant or deny approval for any proposed non-asbestos contaminant air monitoring procedures.

11. All other provisions of the variance decision remain in force.

Date: July 22, 2005

Christopher G. Alonge, P.E.
Senior Safety and Health Engineer

TRC
Customer-Focused Solutions

05 0427

June 10, 2005

File No. 05-427

Christopher Alonge, P.E.
NYS Department of Labor
Engineering Services Unit
State Campus Bldg. 12, Room 154
Albany, NY 12240

Subject: **Variance Reopening (2) for Walker Duct and Raceway Cleaning Pro[illegible]**
Regarding File No. 05-0427; 130 Liberty Street, New York, NY

Dear Mr. Alonge,

We respectfully submit for consideration the additional information regarding the referenced File No. for this project. Please note the following protocol replaces the procedure submitted previously with the original submission:

Cleaning, Visual Inspection and Clearance of Walker Ducts and Raceways

It is the intent of this work to clean and remove all dirt, dust and debris from the raceway and walker ducts in the floor cabling system. If after video inspection and/or testing, it is determined that areas have not been thoroughly cleaned, those areas shall be re-cleaned by the contractor. Third party inspections will be conducted by the Owner's representative. This work will be done during the Asbestos Abatement Project under negative pressure.

1. Work to be performed will include the following:

   - Removal of raceway/duct access plates, as necessary.
   - Removal of all wires and cables from the ducts/raceways.
   - Isolation of ducts, as required, to prevent cross contamination.
   - Cleaning of all East to West Raceways (approx 2" x 6") on all floors.
   - Cleaning of all Walker Ducts (1" x 4") on all floors.
   - Cleaning of all terminal drops to floor ducts which are part of the systems.
   - Removal of all dirt, dust, lint, etc., caused by cleaning process in ALL areas affected by cleaning process.
   - Representative photographs will be taken after cleaning. CJK 7/21/05

2. Cleaning, Visual Inspection and Clearance Air Sampling will be performed as follows:

   - Cleaning will be performed in accordance with the National Air Duct Cleaners Association Standards (NADCA) ACR 2005. All access will be through existing 6" floor openings.
   - Negative air machine shall be attached to the duct system to obtain approximately 2,500 CUBIC ~~linear~~ feet per minute of air movement across the active duct work space.
   - All areas will be air washed using Scand Tech USA High Volume Nozzles or equivalent.
   - Air washing will be done using high volume, medium pressure Scand Tech USA Tornado Nozzles, or equivalent (see attached for example equipment). Maximum air pressure at

CJK 7/21/05

1430 Broadway, 10th Floor • New York, New York 10018
Telephone 212-221-7822 • Fax 212-221-7840

05 0427

nozzles should not exceed 125 psi with a minimum volume of 80 cubic feet per minute (CFM). Air movement must be of sufficient volume to prevent any cross contamination.

- High volume Tornado Nozzles will be used to move contaminants to the collectors. Use of tube style air whips will not be allowed unless they are capable of dispensing a minimum of 80 CFM of discharge air.
- Air Compressors will be Kaeser ASD 30 or equivalent. Air compressors must generate a minimum of 130 CFM at 125 PSI. Air compressors will use "Y Delta" connections to reduce start up amperage.
- HEPA Air Scrubbers up to 2000 CFM will be used for make up air entering the duct systems.
- Dislodged contaminants will be collected in a HEPA filtration system. All dirt, duct, lint and other accumulations will be removed by approved, HEPA filtered negative air machines (NADCA ACR 2002, 5.3.3) capable of removing a minimum of 4000 CFM of air from the duct system during the cleaning process.
- Following initial air washing, a visual inspection of the cleaned duct area will be performed. As the cleaning work progresses and prior to duct access plate closure, the cleaned duct work area shall be inspected.
- Video inspection equipment will be used to inspect cleaned duct areas (see attached example equipment). The camera lens will be capable of focusing to 1" from surfaces. Inspection equipment will be capable of inspecting ducts of a minimum 1" x 4" dimension up to an approximate distance of 20 meters from one access port.
- All inspected areas will be identified and recorded on VHS format.
- If debris is still observed during the visual inspection, brushing ~~may~~ SHALL be required. If necessary, a variety of brushes and mechanical agitators may be used to dislodge contaminants. If brushing is required, brush cables must be capable of reaching up to 30 meters from one opening. Brushes must be sized specifically for each duct size; Scand Tech USA brushes or equivalent. If brushing is required, whip brushes must be used on all square or rectangular ducts.
- Upon successful completion of the visual inspection, aggressive air sampling within the work area shall be performed as described in Variance Decision File No. 05-0427. Prior commencement of this clearance air sampling, all Walker Duct/Raceway floor opening access ports shall be opened to the work area and leaf blower directed into access port openings.

cgm 7/21/05

OR REMOVE

cgm 7/21/05

If you have any questions please feel free to contact us at (212) 221-7822.

Sincerely,

Ariel Javal
Senior Project Manager

Attachments

cc: Amy Peterson - LMDC
Edward Gerdts - TRC
Vincent Lander – QuES&T

TRC
Customer-Focused Solutions

July 7, 2005

File No. 05-0427

Christopher Alonge, P.E.
NYS Department of Labor
Engineering Services Unit
State Campus Bldg. 12, Room 154
Albany, NY 12240

Subject: **Additional Information -**
Variance Reopening (2) for Walker Duct and Raceway Cleaning Protocols
File No. 05-0427; 130 Liberty Street, New York, NY

Dear Mr. Alonge,

Per your request, we respectfully submit for consideration this additional information regarding File No. 05-0427 - Variance Reopening (2) for Walker Duct and Raceway Cleaning Protocols dated June 10, 2005. This information supplements the information previously provided.

Additional Information - Isolation and Cleaning of Walker Ducts and Raceways

The Raceways run in an East/West direction. With the exception of Core Building shaft areas, the Raceways run beneath the floor slab and span the entire length of the building (182 feet). The structural column rows are separated by a horizontal distance of approximately twenty-five feet. Typically, there are six (6) rows of Raceways between each row of structural columns.

The Walker Ducts run in a North/South direction. The Walker Ducts are imbedded within the concrete floor slab, interconnect individual Raceways and typically do not span the entire length of the building. The Electrical Plan Drawing (Typical) for the 31st Floor is attached for reference.

A maximum of eight Raceways with their associated Walker Ducts will be cleaned within a single grouping. The actual number of Raceways included within a single grouping will be based on the requirement to maintain a minimum air movement within the duct of 1,000 linear feet per minute. The Raceways and Walker Ducts within a defined grouping will be isolated from the adjacent Raceway by installation of isolation points, within the Walker Ducts, where these systems interconnect.

Cleaning of the Raceways and Walker Ducts will be as follows:

1. Each Raceway and Walker Duct grouping will be cleaned for the entire East to West length by accessing through several existing floor openings.

2. Raceway and Walker Duct cleaning, within each negative pressure work area, will generally proceed from the outside edge of each negative pressure work area (i.e. the North and/or South end of the Building) working back towards the opposite end.

3. The connecting openings in the Walker Ducts, on the perimeter of the defined grouping, will be accessed through the existing floor openings and cleaned using HEPA vacuums.

05-0427

4. Isolation points, to segregate the grouping to be cleaned from the rest of the system, will be installed by using expandable foam in each of the cleaned perimeter Walker Duct openings.

5. Each defined grouping shall be placed under negative pressure by installation of High Volume HEPA Air Scrubbers; as described in the previous submittal. HEPA Filtered Supply air shall be provided at the Supply End of the isolated grouping and a HEPA Filtered Collection Unit shall be installed at the Collection End. This will provide air movement within the isolated grouping of at least 1,000 liner feet per minute.

6. Reverse Air Tornado nozzles, described in the previous submittal, will be inserted through the access opening downstream of the section to be cleaned. Maximum length of air hose to be inserted for cleaning shall be approximately sixty-five (65) feet.

7. The cleaning shall proceed from the Supply End towards the Collection End of the isolated Raceway/Walker Duct grouping. This process will be repeated until cleaning is complete by incrementally moving toward the HEPA negative air collector.

If you have any questions please feel free to contact us at (212) 221-7822.

Sincerely,

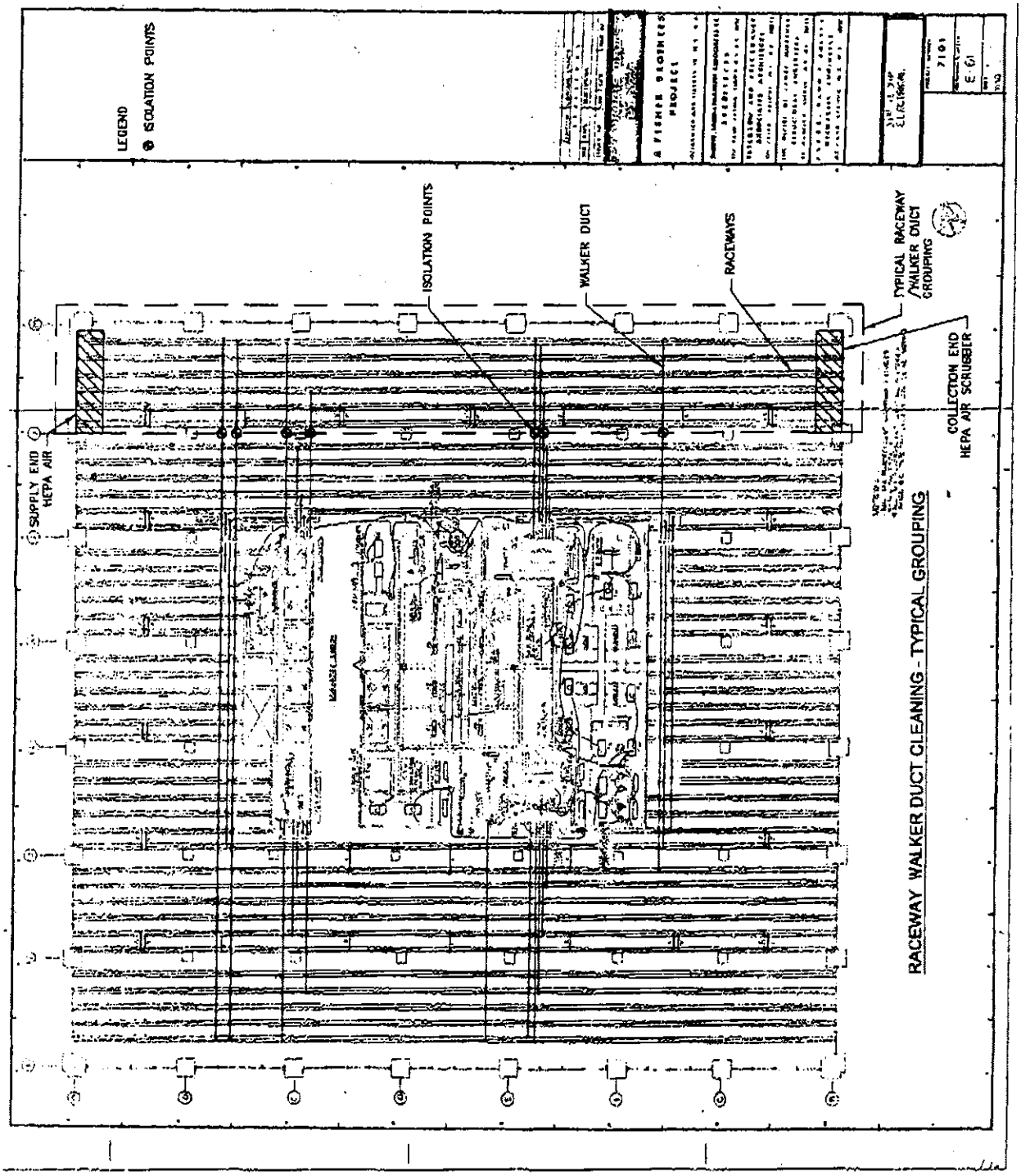
Arnel Javal

Arnel Javal
Senior Project Manager

Attachment

cc: Amy Peterson - LMDC
Edward Gerdts - TRC
Vincent Lander – QuES&T

05-0427


LEGEND
ISOLATION POINTS
ISOLATION POINTS
WALKER DUCT
RACEWAYS
TYPICAL RACEWAY /WALKER DUCT GROUPING
SUPPLY END HEPA AIR
COLLECTION END HEPA AIR SCRUBBER
RACEWAY WALKER DUCT CLEANING - TYPICAL GROUPING

05 0427

June 8, 2005

Vincent M Coluccio, DrPH
TRC
177 Upper Samsonville Road
Olivebridge, New York 12361

RE: 130 Liberty Street, NYC BASIC EQUIPMENT NEEDS for 1 set **Approx.$**

The following is a basic equipment list for the specialty requirements. There would be additional small tools and equipment need that most contractors would already have. The only printed Camera price list we have is from 2001. All pricing in our computer is approximately 20% higher. HEPA Equipped Collection units (we do not sell them) very greatly from manufactures. Rental Air Center, Inc. provide the compressors on other Ground Zero projects and are familiar with the requirements.

SCAND TECH LLC

1" Camera, Push Shaft, Reel, Monitor, Charger	$4,200 to $5,500
½ Tornado Cleaning Kit 101.012	$ 800 to $1,200
3/4 inch hose/Chicago fittings $75. each 50 feet x 4	$ 300
2 Rotating Cleaning Cables 12 meter &20 m	$ 800
Misc. Brushes	$ 100
	$6,200 to $7,900

VACUUM COLLECTION UNITS Three stage HEPA Equipped
Abatement, Air Care, Meyers Machine, Nikro Industries
Examples

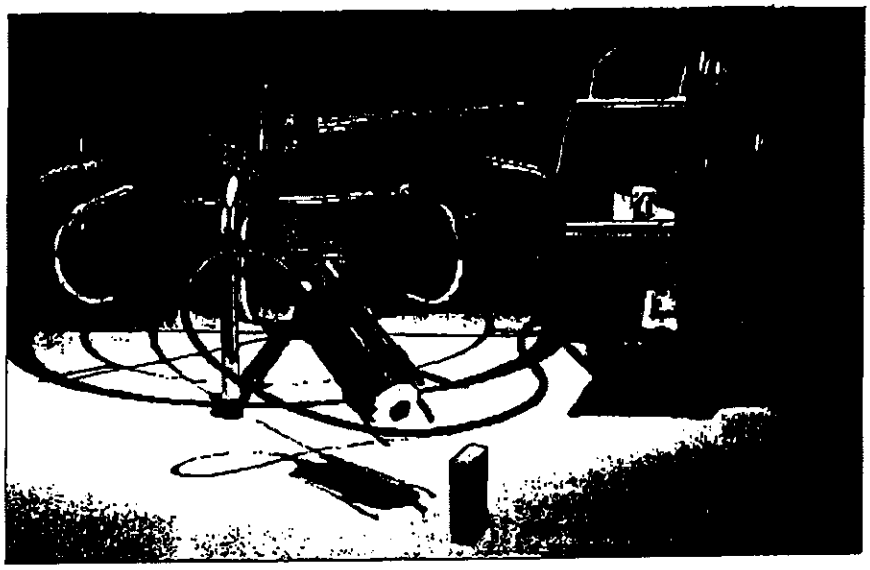
HEPA AIRE 2500 cfm	$7,500
HEPA AIRE 4500 cfm	$9,500

ELECTRIC AIR COMPRESSORS 100 to 200 cfms 220volt to 480 volt
Rentals Air Center, Inc 908-276-1992

AIR SCRUBBERS HEPA EQUIPPED 2000cfm
Rental or New $2000

INSPECTION EQUIPMENT

05 0427



Inspection Camera, 2 inches (49 mm)

Item No.501.001 This small size Inspection Camera is very versatile for vertical as well as horizontal ventilation ducts. The unit is equipped with a high-definition, black-and-white camera module with automatic aperture setting and super wide-angle lens. Focus control can be made from a distance of 0.4" (10 mm). The camera head is activated by a joystick and the movements are directly synchronized. Endless rotation of camera head as well as turning from 0 to 90 degrees. The control unit is equipped with a flat monitor in a solid plastic casing, remote control (joystick) and a cable reel for 65 ft (20 m) cable.

Technical Data: Camera Unit.
Camera: High-definition CCD b/w camera module with automatic aperture setting.
Super wide-angle lens 0.1" (2.5 mm).
Photosensitivity: 0.5 lux.

Diameter: Camera head = 2 inches (49 mm).
Length: Camera head = 5 inches (134 mm).
Range of rotation: Endless left – right.
Range of turning: 0 – 90 degrees vertical to horisontal position.
Weight: 0.6 lb (280 g).
Illumination: Nine subminiature lamps, 8.4 W totally.

Technical Data: Control Unit.
Monitor display: Flat monitor, 3"x 2" (81mm x 59 mm).
Panel: Flip switch, joystick, adjustment for contrast and brightness.
LCD-Voltage indicator, VCR-connection.
Cable: Cable reel with special cable, 65 ft (20 m) with metric scale.
Weight: 10 lbs (4.7 kg).
Power supply: Battery operated 12V – maintenance-free, long life accumulator.
Automatic charger. Operation time depending on camera head = 60 – 20 min.
Case: Black plastic casing with carrier belt.

Accessories: Watertight camera, diameter less than 1 inch (22 mm), with fixed head and with 10 ft (3 m), 16 ft (5 m), 33 ft (10 m) or 49 ft (15 m) push-shaft.
Charging-cable for cigarettelighter outlet in cars, 12 V.

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05 0427

KUMMERT

Chimney Inspection

Pricelist valide at March 2001

Bernhard Kummert Videoinspektionssysteme - D-97447 Gerolzhofen, Albert-Einstein-Str. 8

+20% For 2005

Article-No.	Picture	Article		Price
Analog Basic Instruments				
4352		Colour Mini Hand Instrument without cable, 12poles, incl. charge station and exchange accu		1.595,00
3588		Mini Hand Instrument without cable, 12poles, incl. charge station and exchange accu		1.095,00
1385		Portable Instrument with fixed cable reel, 20 m cable		1.449,00
1388		Portable Instrument with fixed cable reel, 30 m cable (12poles) and charge device		1.549,00
1776		Multi Inspection Device, with LCD Colour monitor, VHS-video recorder and rotatable cable reel with 20 m cable, 12poles		4.495,00
4283		Colour Portable Instrument with rotatable reel, 20 m cable (12poles) and charge device		2.450,00
1386		Portable Instrument with rotatable reel, 20 m cable (12poles) and charge device		1.895,00
1389		Portable Instrument with rotatable reel, 30 m cable (12poles) and charge device		1.995,00

All Prices are excluted V.A.T., postage and packing. Subject to alteration.

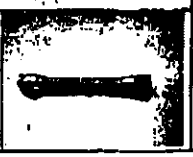
Bernhard Kummert Videoinspektionssysteme - D-97447 Gerolzhofen, Albert-Einstein-Str. 8

+3070 427

Article-No.	Picture	Article		Price
Camera heads				
4015		Colour Glass Cupola Camera, 12poles, swing range 180°, rotating range 360°, diameter 51 mm		1.590,00
3874		SK-22 Black/White Miniature Spring Camera 6poles diameter 22 mm		985,00
3867		CSK-35 Colour Camera, 6poles, waterproof, diameter 35 mm		1.265,00
Attachment camera heads				
1522		Reel Connection for art.-no. 1391/4258		185,00
1544		Centring Spring for art.-no. 1391/4258, ajustable - for the variable centering of die Rotating Globe Shape Camera for the inspection from top to bottom inside of the chimney		159,00
1558		Centring Carriage for art.-no. 1391/4258		249,00
4001		Reel Connection for art.-no. 2594/4015		248,00
3839		Spring Guide for art.-no. 2594/4015		71,50
4193		Removable protected cover for art. no. 3874		85,00
4105		Socket clip for Centring Carriage for art. no. 3874 Miniature spring Camera		45,00
4202		Basic connection		197,00

All Prices are excluted V.A.T., postage and packing. Subject to alteration.
All preceding Prices are invalide.

Bernhard Kummert Videoinspektionssysteme - D-97447 Gerolzhofen, Albert-Einstein-Str. 8 +2670

Article-No.	Picture	Article		Price
Attachment camera heads				
4262		Centring carriage for system 2000		168,00
4478		Centring Brush Set, 3 Leinstars of Nylon, 200 mm. 300 mm, 400 mm, hole 28 mm		57,00
4184		Connection Spring, 14 cm, 6poles, flexible connection between camera head CSK-35 and GFK rod		187,00
Accessories for pushing camera heads				
3923		Camera rod 3m , 6mm, 1* 6poles, 1*12poles		270,00
3922		Camera rod 5 m, 6 mm, 1*6poles, 1*12poles		320,00
4033		Camera rod 10 m, 6 mm, 1*6poles, 1*12poles		370,00
1571		Camera rod 3 m, 6mm, 2*12poles		270,00
1569		Camera rod 5 m, 6 mm, 2*12poles		320,00
1557		Camera rod 10 m, 6 mm, 2* 12poles		370,00
Camera reel				
4337		Mini reel 12poles, zinc-plated, 20 m, rod 4,5 mm		745,00
4336		Large reel zinc-plated, 12poles, 20 m, rod 6 mm		895,00

All Prices are excluted V.A.T., postage and packing. Subject to alteration.
All preceding Prices are invalide

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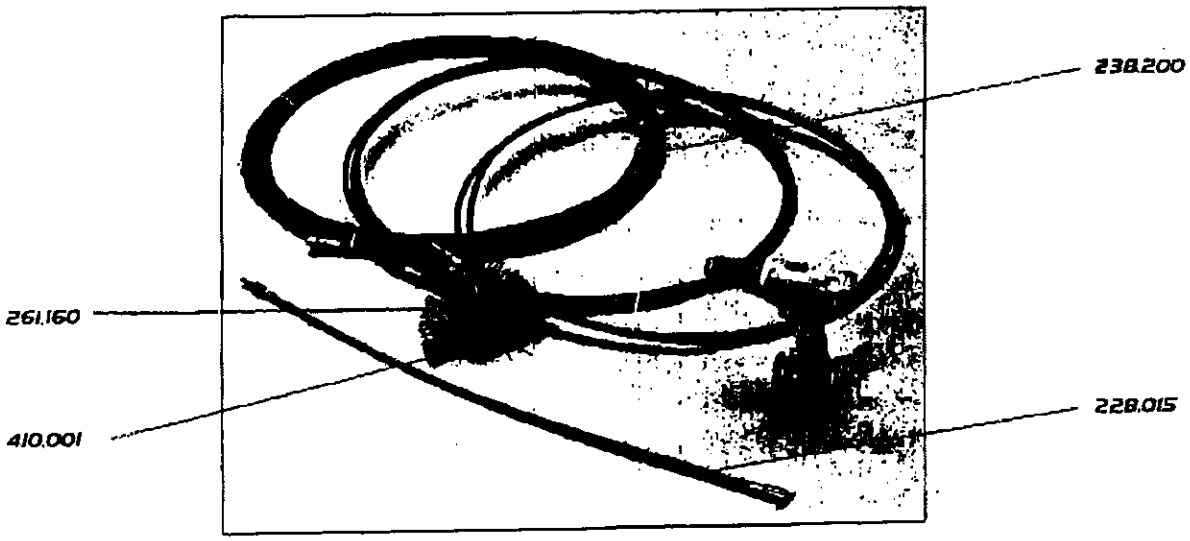
MECHANICAL CLEANING



Rotating Cleaning Cable

Item Nos. 228.010 - 238.300

The Rotating Cleaning Cables are connected to a battery - powered drill,up to 33 ft (10 m), or to the Brush Machine, 33 ft (10 m) and up. The innerwire is made from hardened steel and inspected using laser. The outer casing has a diameter of 0.4 inch/10mm.

* **Item Nos. 228.010- 228.100** Cleaning Cable, with 0.11" (2.8 mm) inner wire recommended for duct sizes of 3" – 6" (80 mm – 160 mm) with numerous bends. Available in standard lengths from 3 ft – 30 ft (1m – 10 m). Any preferred length available on special request. Marked with yellow tape at the stop nipple.

Item Nos. 232.010- 232.120 Cleaning Cable, with 0.13" (3.2 mm) inner wire recommended for duct sizes of 4" – 12" (100 mm – 300 mm) with some bends. Available in standard lengths from 3 ft – 40 ft (1 m – 12 m). Any preferred length available on special request. Marked with blue tape at the stop nipple.

Item Nos. 238.050- 238.300 Cleaning Cable, with 0.15" (3.8 mm) inner wire recommended for duct sizes of 6" – 24" (160 mm – 600 mm) with few bends. Available in standard lengths from 16 ft – 98 ft (5 m – 30 m). Any preferred length available on special request. Marked with red tape at the stop nipple.

Item No. 238.200 Cleaning cable with 0.15" (3.8 mm) inner wire and a length of 66 feet (20 m).

Item No. 228.015 Cleaning cable with 0.11" (2.8 mm) inner wire and a length of 5 feet (1.5 m).

Item No. 261.160 6" (160 mm) brush for circular ducts – see separate product leaflet.

Item No. 410.001 Brush Ball – see separate product leaflet.

SCANDTECH, USA
Phone: 1-800-587-3980
Fax: 1-800-587-3979
E-Mail Address:
scanduct@AOL.Com

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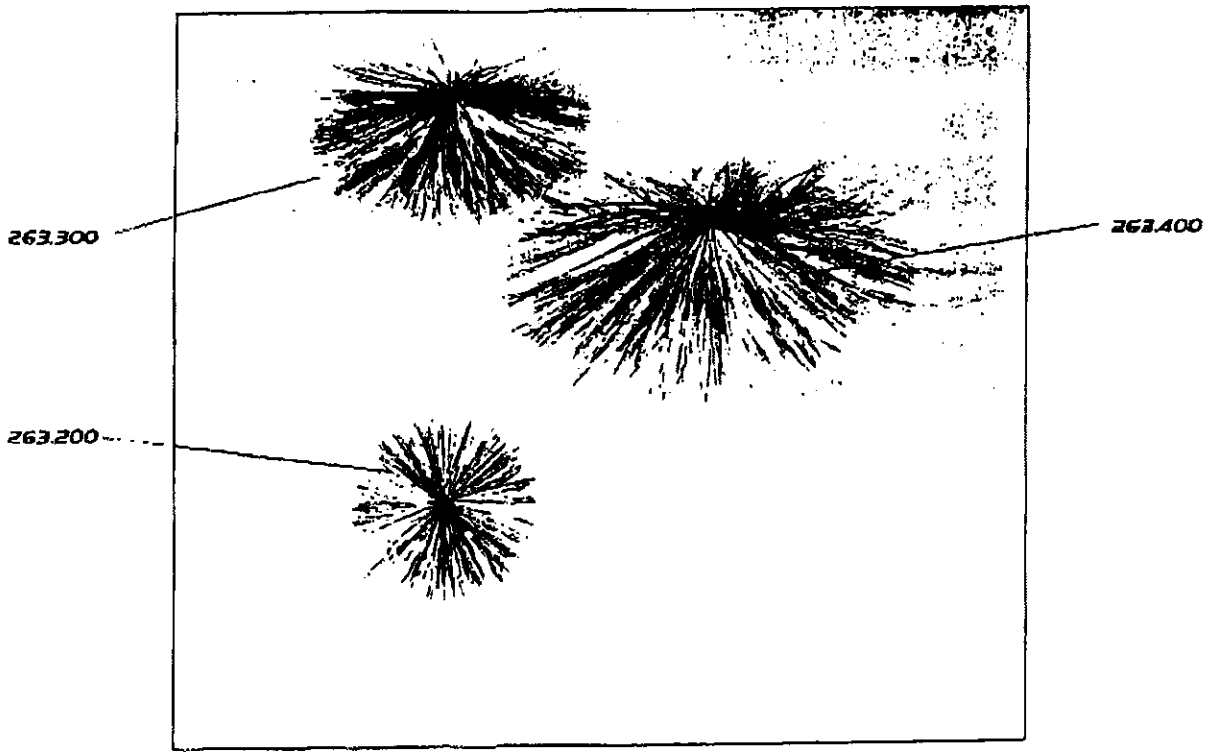
MECHANICAL CLEANING

05 0427



Soft and hard Nylon Whip Brushes

Item Nos 263.200 - 263.600 Brushes made of hard red/white nylon bristles, and 8" (200 mm) extended soft white nylon bristles. The brushes are designed for use in square and rectangular ducts. The soft white nylon bristles remove dirt from corners. The Brushes are available in sizes from 8"-24" (200 mm-600 mm).

2" & 3" AVAILABLE

SCANDTECH, USA
Phone: 1-800-587-3980
Fax: 1-800-587-3979
E-Mail Address:
scanduct@AOL.Com

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	Rotating Nozzles	
100.012	Rotating Brush Nozzle Cleaning Kit, 1/2 inch (12 mm) with an 80 ft (25 m) hose on a reel, shut-off valve and claw coupling. 12 different brushes made of nylon and steel. **IMPROVED!**	2.695
100.020	Rotating Brush Nozzle Cleaning Kit, 3/4 inch (20 mm) with an 80 ft (25 m) hose on a reel, shut-off valve and claw coupling. 12 different brushes made of nylon and steel. **IMPROVED!**	3.495
100.025	Rotating Whipstream Nozzle Cleaning Kit, 1 inch (25 mm) with an 80 ft (25 m) hose, shut-off valve and claw coupling. **IMPROVED!**	2.995
	Tornado Nozzles	
101.012 *	Tornado Nozzle Cleaning Kit, 1/2 inch (12 mm) with a 98 ft (30 m) hose on a reel, shut-off valve and claw coupling. 4 hard plastic jet nozzles with variable spreading angles for different duct sizes. 1 aluminium jet nozzle for ducts made of concrete.	1.195
101.016	Tornado Nozzle Cleaning Kit, 2/3 inch (16 mm) with a 98 ft (30 m) hose on a reel, shut-off valve and claw coupling. 4 hard plastic jet nozzles with variable spreading angles for different duct sizes. 1 aluminium jet nozzle for ducts made of concrete.	1.395
101.025	Tornado Nozzle Cleaning Kit, 1 inch (25 mm) with an 80 ft (25 m) hose, shut-off valve and claw coupling. 1 hard plastic jet nozzle for sheet metal ducts and 1 aluminium jet nozzle for ducts made of concrete.	995
	Cleaning Hoses	
102.012	Light-weight cleaning hose, 1/2 inch/80 ft (12 mm/25 m).	259
102.112	Cleaning Hose, 1/2 inch / 98 ft (12 mm / 30 m).	289
102.116	Cleaning Hose, 2/3 inch / 98 ft (16 mm / 30 m).	510
102.120	Cleaning Hose, 3/4 inch / 80 ft (20 mm / 25 m).	917
102.125	Cleaning Hose, 1 inch / 82 ft (25 mm / 25 m).	487
	Feeding Hoses	
103.010	Feeding Hose 0.4 inch/98 ft (10 mm/30 m) with claw coupling and quick coupling.	160
103.020	Feeding hose (Mantex) 1 inch/65 ft (25 mm/20 m) with 2 claw couplings.	255
103.060	Feeding hose (Mantex) 1 inch/197 ft (25 mm/60 m) with 2 claw couplings.	708

* DELETE REEL ! EXTRA JETS — 400.00

Scand Tech, USA, L.L.C.
P. O. Box 265 440 John Fitch Blvd South Windsor, CT 06074 USA
Phone 800-587-3980 Fax 800-587-3979 E-Mail: scanduct@aol.com

MECHANICAL CLEANING 05 0427

Powerful Brush Machines

210.670	Brush Machine, 110 V, Single-phase, 740 rpm.	2 695
220.670	Brush Machine, 220 V, Single-phase, 740 rpm.	2 695

Soft and flexible cleaning cable, 0.11 inch (2.8 mm) for duct sizes from 3"-6" (80 - 160 mm).

228.010	Cleaning Cable, 3ft (1 m).	103
228.015	Cleaning Cable, 5ft (1.5 m).	139
228.030	Cleaning Cable, 10 ft (3 m).	160
228.050	Cleaning Cable, 16 ft (5 m).	187
228.070	Cleaning Cable, 23 ft (7 m).	229
228.100	Cleaning Cable, 33 ft (10 m).	296

Medium and flexible cleaning cable, 0.13 inch (3.2 mm) for duct sizes from 4"-12" (100 - 300 mm).

232.010	Cleaning Cable, 3 ft (1 m).	103
232.015	Cleaning Cable, 5 ft (1.5 m).	139
232.030	Cleaning Cable, 10 ft (3 m).	160
232.050	Cleaning Cable, 16 ft (5 m).	187
232.070	Cleaning Cable, 23 ft (7 m).	229
232.100	Cleaning Cable, 33 ft (10 m).	296
232.120	Cleaning Cable, 39 ft (12 m).	339

Hard and flexible cleaning cable, 0.15 inch (3.8 mm) for duct sizes from 6"-24" (160 - 600 mm).

238.050	Cleaning Cable, 16 ft (5 m).	187
238.070	Cleaning Cable, 23 ft (7 m).	229
238.100	Cleaning Cable, 33 ft (10 m).	296
238.120	Cleaning Cable, 39 ft (12 m).	339
238.150	Cleaning Cable, 49 ft (15 m).	405
238.200	Cleaning Cable, 66 ft (20 m).	458
238.250	Cleaning Cable, 82 ft (25 m).	544
238.300	Cleaning Cable, 98 ft (30 m).	608

Hard and flexible cleaning cable with Jetstream-function. Suitable for rectangular ducts 10"-28"(250 mm-700 mm)

250.150	Rotating JetStreamCable, 49 ft (15 m).	799
250.200	Rotating JetStreamCable, 65 ft (20 m).	899
250.250	Rotating JetStreamCable, 82 ft (25 m).	999
250.300	Rotating JetStreamCable, 98 ft (30 m).	1 099

Brushes for normal pollution in circular ducts

261.100	Nylon Brush, 4 inches (100 mm).	18
261.125	Nylon Brush, 5 inches (125 mm).	20
261.160	Nylon Brush, 6 inches (160 mm).	22
261.200	Nylon Brush, 8 inches (200 mm).	24
261.250	Nylon Brush, 10 inches (250 mm).	26
261.315	Nylon Brush, 12 inches (315 mm).	29
261.400	Nylon Brush, 16 inches (400 mm).	34
261.500	Nylon Brush, 20 inches (500 mm).	48
261.600	Nylon Brush, 24 inches (600 mm).	54
261.700	Nylon Brush, 28 inches (700 mm).	61
261.800	Nylon Brush, 32 inches (800 mm).	65

Scand Tech, USA, L.L.C.
P. O. Box 265 440 John Fitch Blvd South Windsor, CT 06074 USA
Phone 800-587-3980 Fax 800-587-3979 E-Mail: scanduct@aol.com

Item no.	Description	Price USD
	Brushes for severe pollution in circular ducts	
262.100	Nylon Brush reinforced with steel, 4 inches (100 mm).	18
262.125	Nylon Brush reinforced with steel, 5 inches (125 mm).	20
262.160	Nylon Brush reinforced with steel, 6 inches (160 mm).	22
262.200	Nylon Brush reinforced with steel, 8 inches (200 mm).	24
262.250	Nylon Brush reinforced with steel, 10 inches (250 mm).	27
262.315	Nylon Brush reinforced with steel, 12 inches (315 mm).	29
262.400	Nylon Brush reinforced with steel, 16 inches (400 mm).	34
262.500	Nylon Brush reinforced with steel, 20 inches (500 mm).	48
262.600	Nylon Brush reinforced with steel, 24 inches (600 mm).	54
262.700	Nylon Brush reinforced with steel, 28 inches (700 mm).	61
262.800	Nylon Brush reinforced with steel, 32 inches (800 mm).	65
	Brushes for normal pollution in rectangular ducts (Whip Brushes)	
263.075		25
263.200	Soft and hard Nylon Whip Brush, 8 inches + 8 inches (200 mm + 200 mm).	27
263.300	Soft and hard Nylon Whip Brush, 12 inches + 8 inches (300 mm + 200 mm).	31
263.400	Soft and hard Nylon Whip Brush, 16 inches + 8 inches (400 mm + 200 mm).	37
263.500	Soft and hard Nylon Whip Brush, 20 inches + 8 inches (500 mm + 200 mm).	52
263.600	Soft and hard Nylon Whip Brush, 24 inches + 8 inches (600 mm + 200 mm).	60
	Brushes for internally insulated ducts	
264.085	Soft Polythene Brush, 3 inches (85 mm).	16
264.100	Soft Polythene Brush, 4 inches (100 mm).	18
264.125	Soft Polythene Brush, 5 inches (125 mm).	20
264.160	Soft Polythene Brush, 6 inches (160 mm).	22
264.200	Soft Polythene Brush, 8 inches (200 mm).	27
264.250	Soft Polythene Brush, 10 inches (250 mm).	29
264.315	Soft Polythene Brush, 12 inches (315 mm).	31
264.400	Soft Polythene Brush, 16 inches (400 mm).	34
264.500	Soft Polythene Brush, 20 inches (500 mm).	48
264.630	Soft Polythene Brush, 25 inches (630 mm).	54
	Brushes for severely polluted ducts, for example kitchen ducts	
265.085	Steel brush, 3 inches (85 mm).	16
265.110	Steel brush, 4 inches (110 mm).	18
265.140	Steel brush, 6 inches (140 mm).	20
265.170	Steel brush, 7 inches (170 mm).	22
265.230	Steel brush, 9 inches (230 mm).	27
265.290	Steel brush, 11 inches (290 mm).	29
265.350	Steel brush, 14 inches (350 mm).	31
265.425	Steel brush, 17 inches (425 mm).	34
265.525	Steel brush, 21 inches (525 mm).	48
265.625	Steel brush, 25 inches (625 mm).	54
	Spare Parts	
240.028	Inner thread, 0.11 inch (2.8 mm), per ft.	2
240.032	Inner thread, 0.13 inch (3.2 mm), per ft.	2
240.038	Inner thread, 0.15 inch (3.8 mm), per ft.	2
242.028	Brush nipple, 0.11 inch (2.8 mm).	31
242.032	Brush nipple, 0.13 inch (3.2 mm).	31
242.038	Brush nipple, 0.15 inch (3.8 mm).	31
243.028	Stop nipple, 0.11 inch (2.8 mm).	31
243.032	Stop nipple, 0.13 inch (3.2 mm).	31
243.038	Stop nipple, 0.15 inch (3.8 mm).	31

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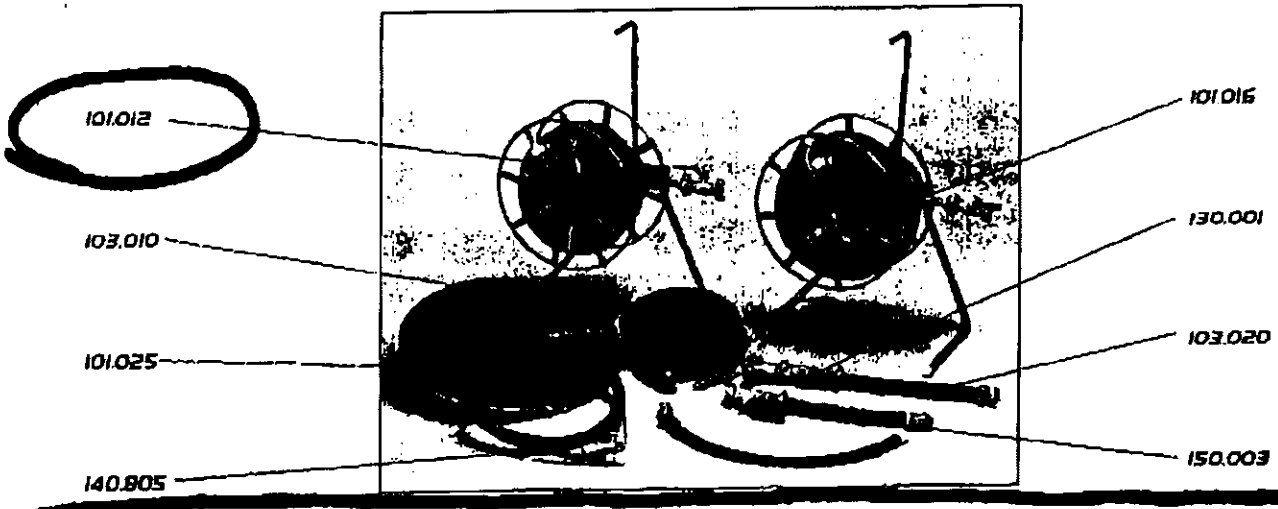
COMPRESSED AIR CLEANING

05 042



Item No. 101.012 Tornado Nozzle Cleaning Kit, 1/2 Inch (12 mm) with a 98 ft (30 m) hose on a reel, shut-off valve and claw coupling. 4 hard plastic jet nozzles with variable spreading angles for different duct sizes. 1 aluminium jet nozzle for ducts made of concrete. Recommended for: Duct sizes from 3" - 12 " (80 mm-300 mm).
Recommended compressor capacity: 185 cfm (5.2 m3 / min) at 116 psi (8 bar).

Item No. 101.016 Tornado Nozzle Cleaning Kit, 3/4 Inch (16 mm) with a 98 ft (30 m) hose on a reel, shut-off valve and claw coupling. 4 hard plastic jet nozzles with variable spreading angles for different duct sizes. 1 aluminium jet nozzle for ducts made of concrete.Recommended for: Duct sizes from 6" - 24 " (160 mm-600 mm).
Recommended compressor capacity: 185 cfm (5.2 m3 / min) at 116 psi (8 bar).

Item No. 101.025 Tornado Nozzle Cleaning Kit, 1 Inch (25 mm) with an 80 ft (25 m) hose, shut-off valve and claw coupling. 1 hard plastic jet nozzle for sheet metal ducts and 1 aluminium jet nozzle for ducts made of concrete. Recommended for: Duct sizes from 12" - 47" (300 mm-1200 mm).
Recommended compressor capacity: 185 cfm (5.2 m3 / min) at 116 psi (8 bar).

Item No. 103.010 Feeding Hose 0.4 " /98 ft (10mm/30m) with claw coupling/ quick coupling. To be used together with Jetstream Cables, Air and Blaster Guns or other Air Tools.

Item No. 103.020 Feeding Hose black (Mantex) 1 " /65 ft (25mm/20m) with two claw couplings.

Item No. 130.001 Connection central for two Compressed Air Cleaning Kits. This Y-type connection central connects with a claw coupling to an 1 inch (25 mm) feeding hose from the compressor. Allowing you to connect two different Compressed Air Cleaning Kit with claw couplings.

Item No. 140.805 Air Gun recommended to be used in smaller ducts -from 3 inch to 5 inch (80 mm-125 mm). The kit consist of a 0.3 inch / 33 ft (8 mm - 10 m) stiff plastic hose and two plastic jet nozzles for forward or reverse directed compressed air. Recommended compressor capacity: 10 cfm (250 l / min) at 87 psi (6 bar).

Item No. 150.003 Shut-off valve 1 inch (25mm) with two claw couplings.

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MEMBER OF BOVB

SCAND TECH

MEMBER OF NADCA

05-0427

PROPOSED PILOT PROGRAM WORK PLAN

FOR THE

REMOVAL OF ALUMINUM COLUMN COVERS AND FASCIA WITH NON-FRIABLE ACM CAULKING MATERIAL

At

130 Liberty Street
New York, New York

LMDC
Lower Manhattan Development Corporation

Lower Manhattan Development Corporation
1 Liberty Plaza
New York, New York 10006

Prepared by:
TRC Environmental Corporation
1430 Broadway
New York, New York 10018

June 24, 2005

05-0427

I. **DESCRIPTION OF WORK:** The building located at 130 Liberty Street, New York, New York is scheduled for cleaning and deconstruction. Non-friable asbestos caulking material exists in the factory installed joints inside the aluminum column covers and fascia. The non-friable ACM caulking is a Category II non-friable material as defined by NESHAPS, 40 CFR Part 61 Subpart (M).

Aluminum column covers span the height of the building at each column, and fascia are present around the building façade at the ground, mechanical and roof levels. In addition, aluminum covers and fascia are located inside the building within the lobby level. See photo below.

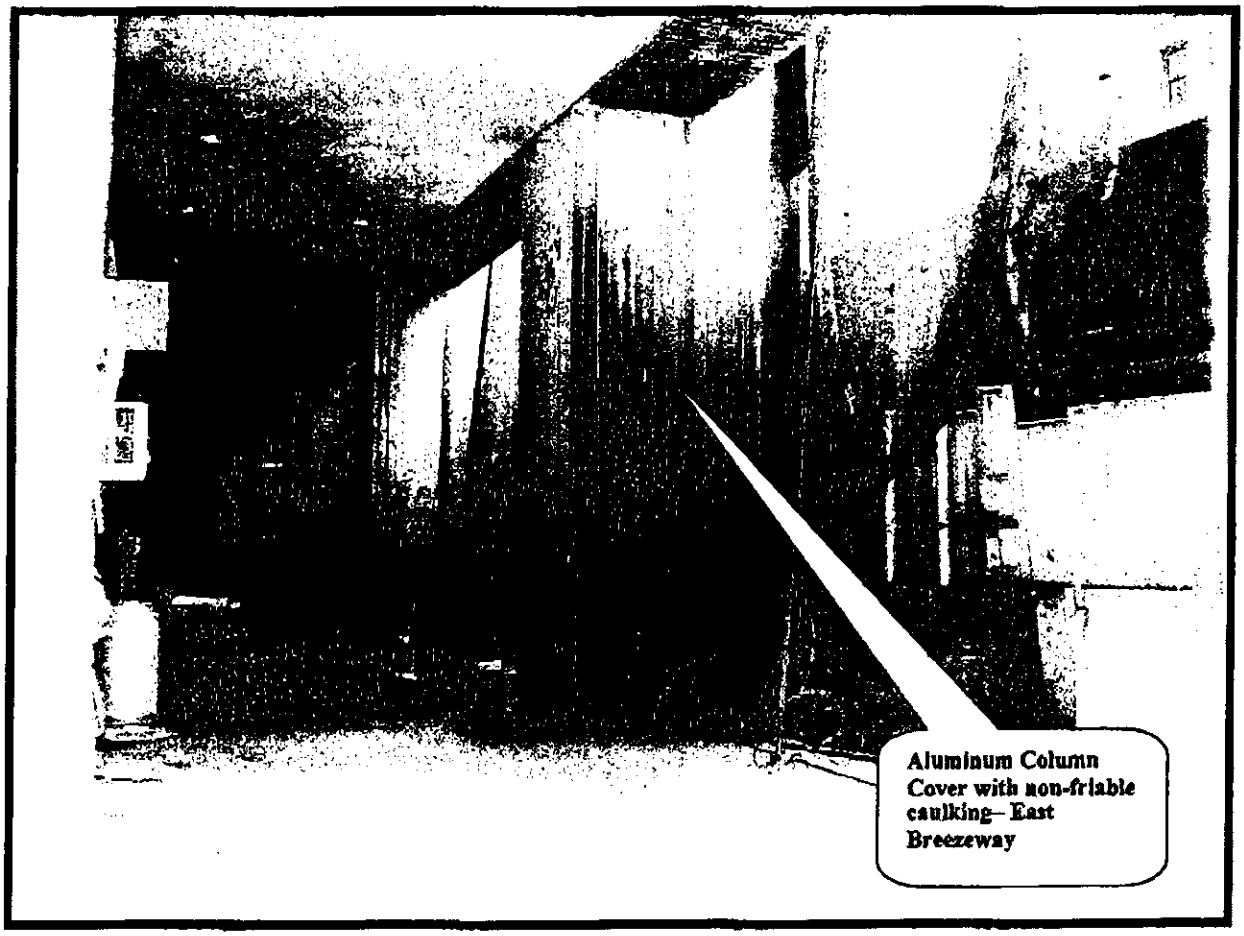

Figure 1

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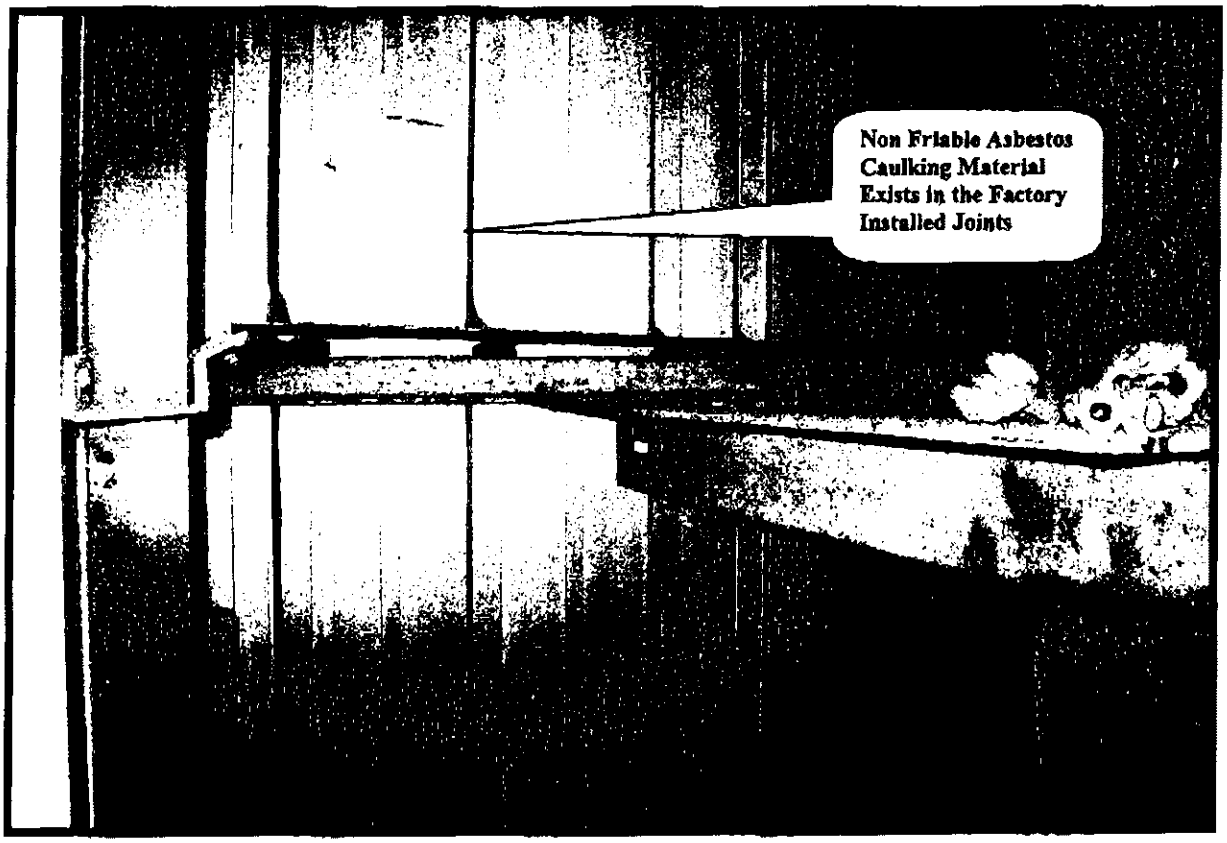

Figure 1

The United States Environmental Protection Agency (USEPA), the New York State Department of Labor (NYSDOL), and the New York City Department of Environmental Protection (NYCDEP) agreed to review a pilot project submitted by the Lower Manhattan Development Corporation (LMDC) to assess the concentrations of asbestos in air, if any, generated during the proposed aluminum column cover and fascia removal operations. The results from the pilot project are intended to assist the USEPA, NYSDOL, and NYCDEP in determining whether or not to continue to require tent enclosures during removal of aluminum covers and associated exterior non-friable caulking material as part of the deconstruction. The work under this pilot project will be performed within tent enclosures with a remote decontamination unit.

To ensure that the pilot project is performed on aluminum covers with non-friable asbestos-containing caulking, three (3) representative bulk caulking samples shall be collected and analyzed for asbestos at each of the four (4) pilot project locations. The Pilot Project will be performed at four (4) locations where the presence of ACM caulk has been verified.

Prior to initiating the Pilot Project at any of the selected locations, the contractor will remove porous materials from within the enclosure and thoroughly clean all exposed non-porous surfaces at that Pilot Project location. Removal of porous materials within the aluminum column enclosure shall be conducted within an exterior negative pressure tent enclosure per NYSDOL Approved Variance Decision Amendment entitled "Amendment: Revised Procedures & Conditions" under file # 05-

05-0427

0427 (~~Copy attached~~). This will ensure that the conditions existing within the column cover enclosure, during the Pilot Project, are representative of the actual field conditions anticipated during removal of the aluminum covers during deconstruction of the building.

The Pilot Project will be conducted within the same negative pressure tent upon achieving satisfactory clearance air sampling results using the procedures described herein. The Pilot Project work shall be performed by a NYSDOL Licensed Asbestos Abatement Contractor with appropriately certified asbestos handlers. The existing basement remote decontamination unit shall be utilized for work associated with this Pilot Project.

Pilot Project work includes cutting of aluminum column covers into manageable sections and packaging them for disposal. Asbestos caulking material shall remain intact but will be cut as necessary to represent anticipated site conditions. Pilot project work will be completed using the same tent enclosure as pre-pilot project work.

II. WORK PLAN GENERAL NOTES:

1. A detailed layout of the four (4) pilot project locations, columns and enclosures, and tent structure are presented in the attached plans.

2. Certified individuals and contractors shall perform the work in compliance with the requirements of all applicable laws, rules, and regulations including site-specific variance decisions and conditions.

3. The Abatement Contractor shall file and pay all required notifications and permit fees to complete the pilot project.

4. The Abatement Contractor shall complete at least four (4) different work areas under this pilot project. The exact locations of the work areas are identified in the attached plans.

III. TECHNICAL REQUIREMENTS:

The Contractor shall use work methods and equipment during the pilot project that represent abatement procedures anticipated to be employed for the remainder of the building during Deconstruction Activities.

Pilot Project Work: Includes the cutting of aluminum column covers into manageable sections with the asbestos caulking material intact to the extent feasible. Pilot project work will be completed using the same tent enclosure as pre-pilot project work.

1. Using the same tent enclosure during the pre-pilot project work, the abatement contractor shall install an additional layer of clean six-mil fire retardant polyethylene sheeting inside each tent enclosure.

05-0427

2. The aluminum column covers with asbestos caulking shall be cut into manageable pieces and removed from the structure, using non-abrasive mechanical method (i.e. power shear equipment). Cutting of asbestos caulking shall be limited to the extent possible. Asbestos caulking shall be wetted prior to being cut and during cutting at the point of removal. Cut aluminum panels shall be double-wrapped with six-mil fire-retardant polyethylene sheeting or bagged and properly labeled for disposal as asbestos waste.

NEGATIVE AIR SYSTEM

3. Engineering controls shall not be applied to each tent and therefore no air volume changes shall occur within each tent during the non-friable caulking on aluminum cover removal.

cyk 7/21/05

4. Inside and outside of each tent, continuous air monitoring shall be performed during all operations. Three (3) TEM air samples inside and three (3) TEM air samples outside the tent enclosure shall be collected.

5. A third party air monitoring entity shall perform the air sampling described above.

6. The air sampling analyses from each of the four (4) tents shall be assessed and shall be deemed acceptable only if all analyses are less than 70 s/mm^2 or less than the ambient concentration, which ever is greater.

7. Any tent inside which any individual air sample analysis exceeds 70 s/mm^2 shall be subjected to final cleaning and final air clearance procedures for asbestos, pursuant to file # 05-0427, before dismantling.

UPON REGULATORY AGENCY APPROVAL

8. Where the in-tent air monitoring gives all acceptable results as per item 6 above, removal of the remaining vertical aluminum column covers may be permitted to occur using continuous spraying of amended water at all points of cutting, use of polyethylene drop cloth under each work area and HEPA vacuuming of polyethylene drop cloth, without tent enclosures.

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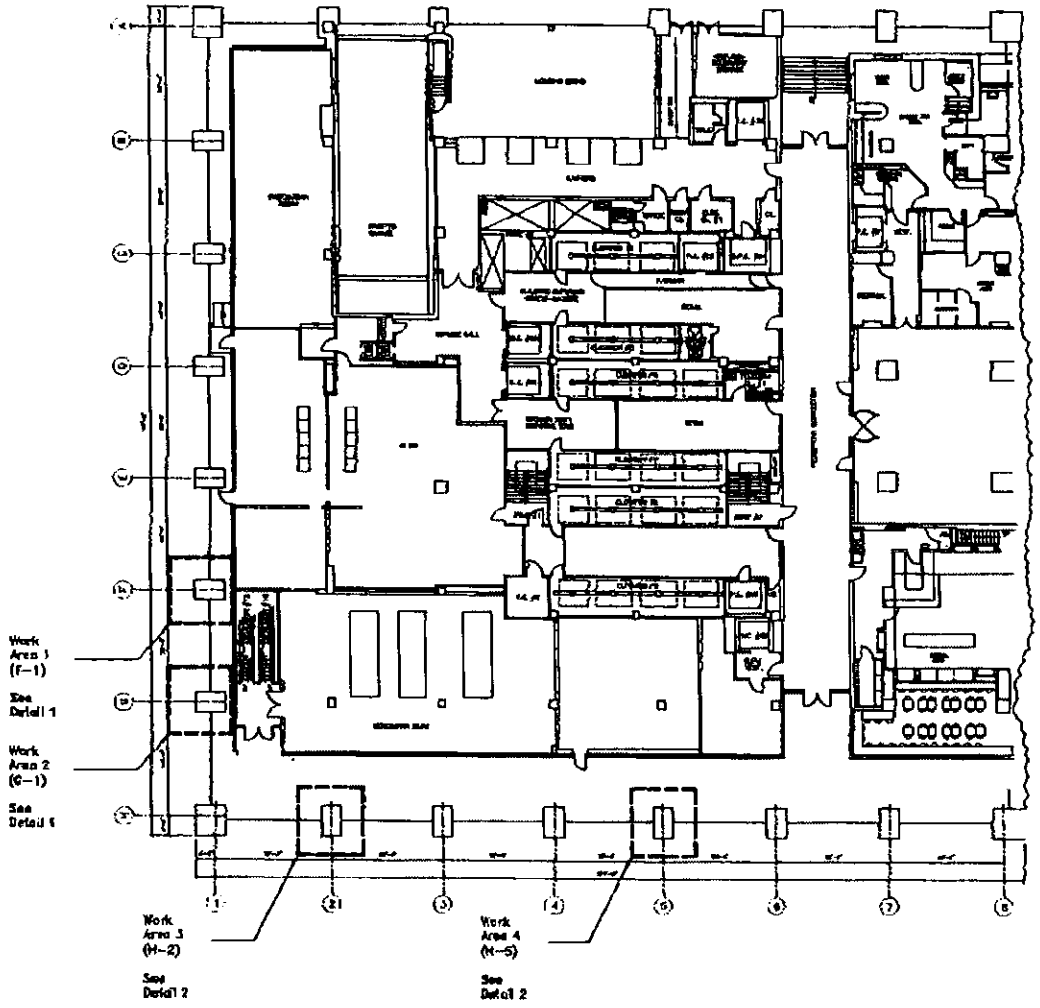
9. The results of the Pilot Program shall be transmitted to the USEPA, NYSDOL and NYCDEP for their review and determination as to whether or not tent enclosures will be required during deconstruction.



General Notes:

1. The work under this pilot project will include the construction of four modified tent enclosures with a remote worker and waste decontamination units.

2. The pilot project will be completed subsequent to the removal of contaminated fire proofing material applied on the structural beams and clean up of overspray material inside each aluminum column cover enclosure using Exterior Negative Pressure Tent Enclosure per NYSDOL Variance Decision Amendment File No. 05-0427 Pilot project will include the cutting of aluminum column cover into manageable sections with the asbestos caulking material intact project will be completed using the same tent enclosure used for the previous fireproofing work.

3. A remote decontamination unit shall be established before the commencement of any work under this pilot project.

4. All work under this pilot project shall be performed by a Certified Asbestos Abatement Contractor.

LMDC

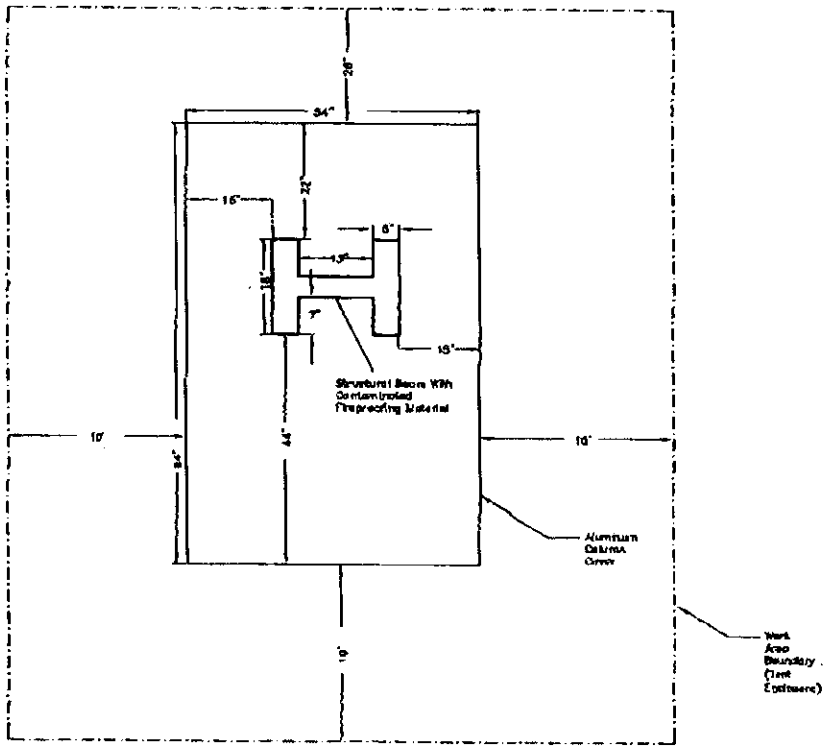
130 LIBERTY STREET

05-0427

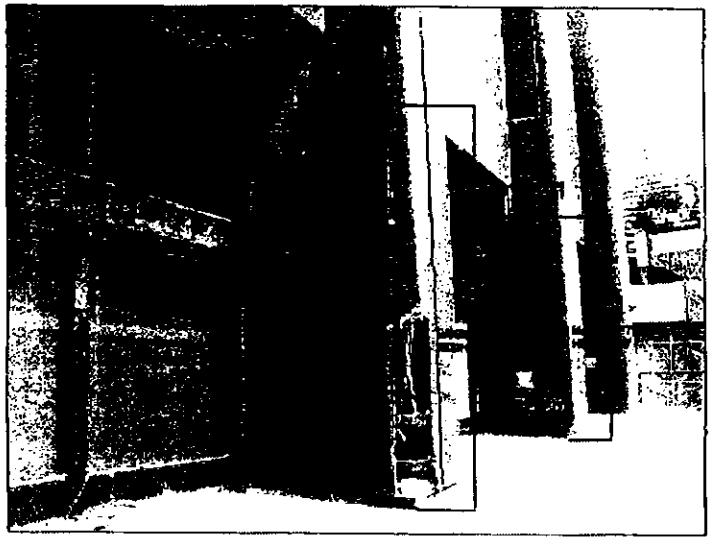
TRC

1st FLOOR Abatement Plan Pilot Project

A-1



Area 1&2: Columns F–1 & G–1 Work Area Layout (See Detail 1)



Detail 1: Actual Photo of Column F–1 & G–1

LMDC

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1st FLOOR Abatement Plan Pilot Project

D–1

TRC

05-0427

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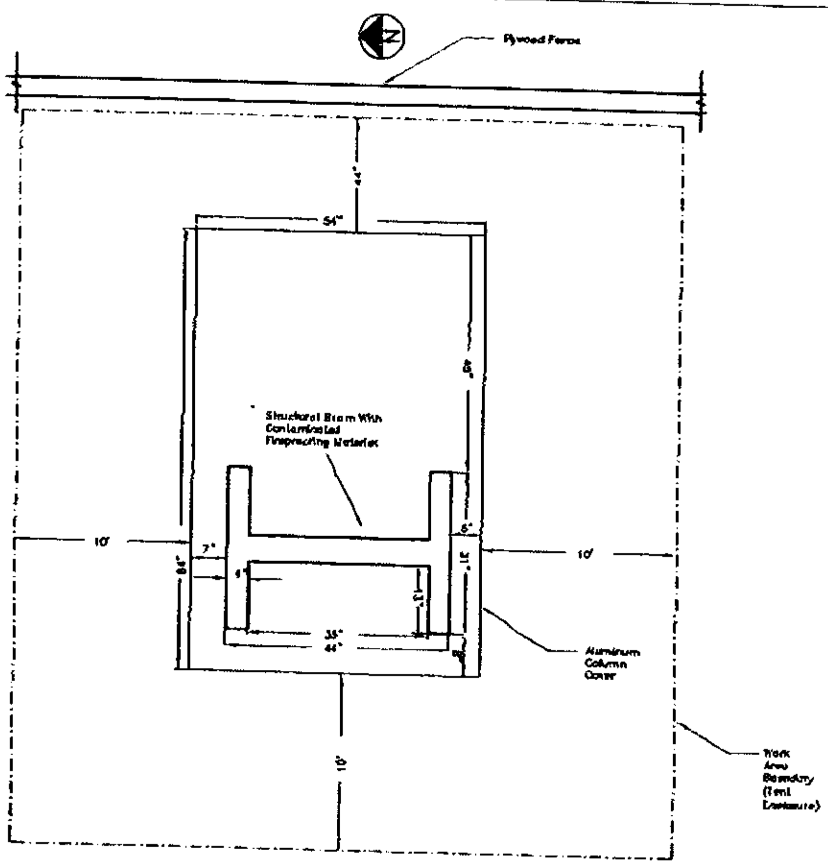

Area 3&4: Columns H-2 & H-5 Work Area Layout (See Detail 2)

Detail 2: Actual Photo Of Column H-2 & H-5

LMDC

130 LIBERTY STREET

1st FLOOR Abatement Plan Pilot Project

D-2

TRC