Tighe&Bond
Engineers | Environmental Specialists

12-1077-6
September 21, 2016

Mary Ellen Kowalewski
Director of Policy and Planning
Capitol Region Council of Governments
241 Main Street
Hartford, CT 06106

Re: **Opinion of Probable Abatement and Demolition Cost**
150 Windsor Street
Hartford, CT

Dear Ms. Kowalewski:

In accordance with our proposal dated October 15, 2015, Tighe & Bond has completed the attached Opinion of Probable Cost (OPC) for hazardous building materials (HBM) abatement and demolition of the building located at 150 Windsor Street in Hartford, Connecticut. This OPC has been prepared using information presented in the Supplemental Hazardous Building Materials Assessment Report prepared by Tighe & Bond, dated July 1, 2016 and previous reports prepared by other consultants. Costs presented in this OPC were developed using recent as-bid pricing from projects of similar size and scope, industry standard pricing, and published costing resources such as RSMeans. We also shared the HBM assessment results with and walked the building with a reputable HBM abatement and demolition company (Standard Demolition Services, Inc.) for the purpose of truth testing this OPC. The OPC provided by Standard for abatement and demolition services was within 10% of those costs developed by Tighe & Bond. This OPC is intended to have an anticipated accuracy range of +30% to -20%.

In addition to hard contractor costs, abatement and demolition design and monitoring will be incurred at a rate of approximately 5% of total construction cost presented in the attached table.

If you have any questions regarding the attached OPC, please contact Jim Olsen at (860)704-4761 or JTOlsen@tighebond.com.

Very truly yours,

TIGHE & BOND, INC.

Harley Langford, LEP
Senior Environmental Scientist

James T. Olsen, LEP
Vice President

Enclosure: Opinion of Probable Abatement and Demolition Cost Table

Opinion of Probable Hazardous Building Materials Abatement Costs
150 Windsor Street
Hartford, CT 06120

ASBESTOS ABATEMENT

MATERIAL	QUANTITY		UNIT COST	TOTAL COST
Pipe Insulation & Mudded Pipe Fitting Cement	450	EA	$ 25	$ 11,250
Louver Caulk	270	LF	$ 5	$ 1,350
Pipe Mastic	850	LF	$ 5	$ 4,250
Window Glazing Compound*	120	EA	$ 200	$ 24,000
Spray-Applied Fireproofing/Overspray and Contaminated Ceiling Tiles/Ductwork above Ceilings (with Duct Seam Sealant)/Carpets/Sheetrock* (and Pin Glue) & Plaster Walls/Ceilings	204,600	SF	$ 20	$ 4,092,000
Contaminated Sheetrock/Plaster Walls/Ceilings	245,308	SF	$ 5	$ 1,226,540
Contaminated Carpets	60,150	SF	$ 3	$ 180,450
Contaminated Air Handling Units (AHUs Including Seam Mastic on Insulation) and associated Ductwork (Including Duct Seam Sealant)	8	EA	$ 25,000	$ 200,000
Decontamination of Non-porous/Non-moveable Items (All Items in Penthouse and Switchgear Room on Service Level)	13,000	SF	$ 4	$ 52,000
Mastic under Carpet Squares	1,150	SF	$ 4	$ 4,600
Transite Power Box/Panel Components	20	EA	$ 200	$ 4,000
Carpet Mastic	2,380	SF	$ 4	$ 9,520
Vinyl Floor Tile and Mastic	7,830	SF	$ 5.5	$ 43,065
Assumed Water Fountain Components	10	EA	$ 50	$ 500
Assumed Underground Gaskets	50	EA	$ 25	$ 1,250
Assumed Transite Piping Underground	200	LF	$ 50	$ 10,000
Assumed Elevator Components	5	EA	$ 4,000	$ 20,000

Note: Surfaces within the building may be contaminated with asbestos fibers due to the presence of spray-on fireproofing within and adjacent to Air Handling Unit (AHU) intakes and adjacent to open/fallen ceiling portions.

ASBESTOS ABATEMENT TOTAL **$ 5,884,775**

LEAD-BASED PAINT ABATEMENT

MATERIAL	QUANTITY		UNIT COST	TOTAL COST
Metal Dock Lip**	60	SF	N/A	N/A
Metal Corner Guard**	4	EA	N/A	N/A
Structural Steel**	Not Determined		N/A	N/A
Sliding Metal Door Frames**	3	EA	N/A	N/A
Metal Bollards**	4	EA	N/A	N/A

LEAD-BASED PAINT ABATEMENT TOTAL **$ 0**

PCB ABATEMENT

MATERIAL	QUANTITY		UNIT COST	TOTAL COST
Paint on Metal Stairwell Components (Contractor to Recycle <50 ppm***)	4,200	SF	N/A	N/A
Paint on Metal Doors and Door Casings (Contractor to Recycle <50 ppm***)	220	EA	N/A	N/A
Window Glazing Compound (<50 ppm)*	120	EA	See Above	See Above
Paint on Sheetrock Walls (<50 ppm)*	225,000	SF	See Above	See Above
Asphalt Roofing Under EPDM/Insulation (<50 ppm)	44,323	SF	$ 5	$ 221,615
Paint on Plaster Walls and Ceilings (<50 ppm)*	20,308	SF	See Above	See Above
Paint on CMU Walls (<50 ppm)	8,064	SF	$ 7	$ 56,448
Exterior Expansion Joint/Window/Door/Flashing Caulk with 1/2" Substrate on either side (>50 ppm)	8,355	LF	$ 50	$ 417,750
Soil Contamination (<50 ppm)****	250	Tons	$ 250	$ 62,500

PCB CLEANUP TOTAL **$ 758,313**

UNIVERSAL & MISCELLANEOUS WASTE REMOVAL AND DISPOSAL

MATERIAL	QUANTITY		UNIT COST	TOTAL COST
Fluorescent Light Tubing	36,780	LF	$ 2	$ 73,560
Fluorescent Light Bulbs (Irregular Shaped)	372	EA	$ 4	$ 1,488
Lead Acid Batteries at Lights and Exit Signs	186	EA	$ 20	$ 3,720
Large Industrial Flooded Wet Battery Cells	434	EA	$ 0	$ 0
Mercury Thermostats	109	EA	$ 20	$ 2,180
Refrigerants	127	GAL	$ 60	$ 7,620
Capacitors at Small Motors	64	EA	$ 25	$ 1,600
Cooling Tower - Coolant Pumping and Demolition	2	EA	$ 2,500	$ 5,000
Fire Extinguishers	33	EA	$ 15	$ 495
Chemical Waste Inventory	132	GAL	$ 5	$ 660
Remove Hydraulic Oil from Elevators	5	EA	$ 300	$ 1500
UNIVERSAL WASTE TOTAL				**$ 97,823**

BUILDING DEMOLITION	QUANTITY		UNIT COST	TOTAL COST
Mass Building Demolition	254,792	SF	$ 8	**$ 2,038,336**

*Material contains Asbestos and PCBs <50 ppm and will require disposal as mixed Asbestos/PCB waste.

**Metal coated with lead-based paint will be segregated and recycled during demolition

***Contractor must provide documentation from the appropriate recycling plant that accepts materials with <50 ppm PCBs for recycling.

****Additional PCB soil sampling is recommended to further delineate the identified soil contamination. Excavation limitations assumed in the OPC are 5 feet in width and 2 feet in depth on the West and South sides of the building.

ASBESTOS ABATEMENT TOTAL	**$ 5,884,775**
LEAD-BASED PAINT/PCB ABATEMENT TOTAL	**$ 758,313**
UNIVERSAL & MISC. WASTE REMOVAL TOTAL	**$ 97,823**
ABATEMENT SUBTOTAL	**$ 6,740,911**
DEMOLITION SUBTOTAL	**$ 2,038,336**
20% CONTINGENCY	**$ 1,755,849**
Consulting Costs @ 5% total contractor fee	**$ 526,755**

The anticipated accuracy of this opinion of probable cost is +30% to -20%

TOTAL OPINION OF PROBABLE HAZARDOUS BUILDING MATERIALS ABATEMENT AND DEMOLITION COSTS **SAY** **$ 11,061,851** / **$ 11,100,000**