

November 5, 2024

705350

Angel Camacho  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Transportation (Bigane)  
CDOT Permit: 1990780 – 458-521 N. Columbus Dr. & 528-541 N. Fairbanks Ct.

Dear Mr. Camacho:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiological monitoring during excavation for center median construction at 458-521 N. Columbus Dr. and 528-541 N. Fairbanks Ct. in Chicago, Illinois. The monitoring was performed by Jeremy Kieser, SAHCI Health Physicist, on October 30 through October 31, 2024. All activities were conducted under the guidance of the document SET General Procedure for Thorium Monitoring.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 127242) with attached 2"x2" NaI probe (w/ 6" collimated lead shield). The instrument was calibrated on May 7, 2024. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,943 counts per minute (cpm).

The average background count rate for this location was determined to be 2,056 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above. Survey data was collected by entering the 4 separate excavations and recording the highest count rate for the floor and walls for each 18-inch lift.

The maximum gamma count rates were recorded on the attached Radiation Survey Form. The count rates ranged from 1,700 cpm to 2,900 cpm to a maximum depth of 18 inches below ground surface. No count rates were found at any time that exceeded the instrument specific count rate threshold of 6,943 cpm.

#### Additional Monitoring

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

I will be providing a copy of this report to both the City of Chicago Department of Public Health and US Environmental Protection Agency, as required.

Thank you for your assistance with this project. If you have any questions or need additional information, please call me at (815) 485-6161.

Sincerely,  
Stan A. Huber Consultants, Inc.



Glenn Huber, CHP  
President

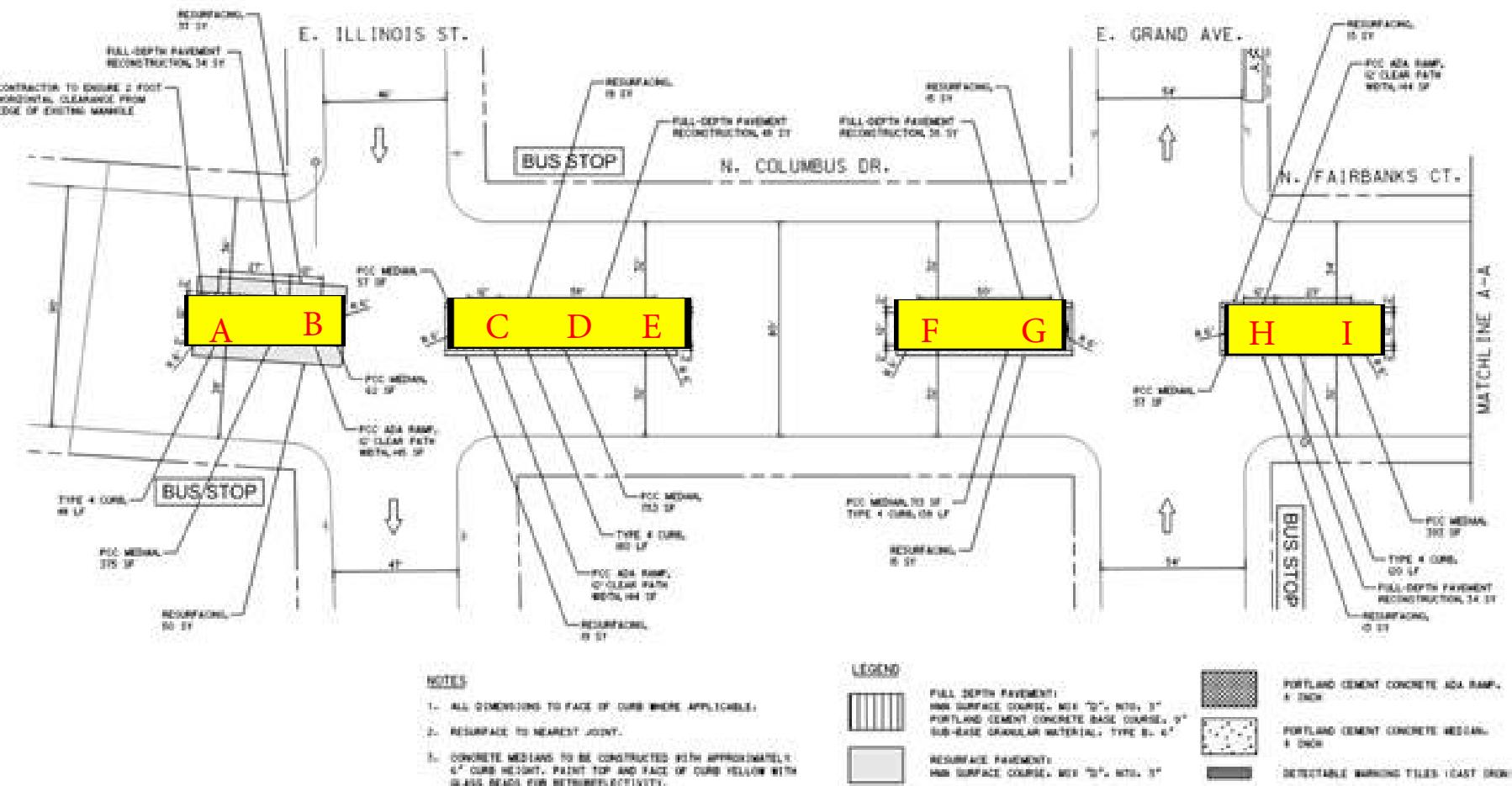
# Bigane October 2024 Survey Diagram

DOT1990780

Date: October 30 & 31, 2024

Surveyed by: Jeremy Kieser, SAHCI

Location: N. Columbus Dr. and N. Fairbanks Ct.



## 2024 Bigane Thorium Survey Results

DOT1990780

Survey dates: October 30, and 31, 2024

Surveyed by: Jeremy Kieser, SAHCI

Location: N. Columbus Dr. and N. Fairbanks Ct., between E. North Water st. and E. Ohio St.

Instrument: Ludlum 2221, SN: 127242

Background: 2056 cpm

Action: 6943 cpm

Survey Results:

Location ID:	Surface:	18 inches:
A	2000 cpm	1900 cpm
B	2000 cpm	2900 cpm
C	2000 cpm	1800 cpm
D	2000 cpm	1700 cpm
E	2000 cpm	1900 cpm
F	2000 cpm	1900 cpm
G	2000 cpm	2000 cpm
H	2000 cpm	2000 cpm
I	2000 cpm	2200 cpm