



December 22, 2016

Michael Madura  
King Sykes, LLC  
1300 Bull Valley Drive  
Woodstock, IL 60098

RE: Radiation Monitoring Interim Report – King Sykes Medical Building at 2535 South Dr. Martin Luther King Jr. Drive, Chicago, IL.

Dear Mr. Madura:

Stan A. Huber Consultants, Inc. (SAHCI) was hired by your firm to provide radiation monitoring during excavation activities performed during the construction of the King Sykes Medical Building at 2535 South Dr. Martin Luther King Jr. Drive in Chicago, Illinois. The potential radiological contaminants at the site include both uranium (U-234+U235+U238) and radium (Ra-226+Ra-228). Radiation monitoring is required at this location by the City of Chicago Department of Fleet and Facility Management (2FM) due to its proximity to the Former Carnotite Reduction Company site located at 434 E. 26<sup>th</sup> Street.

The monitoring was performed by Glenn Huber, Steven Kowalczyk, and James Hatten, SAHCI Health Physicists, from September 7, 2016 – December 22, 2016, as needed. Additional surveys are anticipated at the site in the future since work has not yet been completed.

The Illinois Emergency Management Agency (IEMA) and United States Environmental Protection Agency (USEPA), in coordination with 2FM, have determined that the threshold level for contamination for total radium is 7.1 picocuries per gram (pCi/g), which is based on 5 pCi/g over background levels. A threshold for total uranium has not yet been determined for the site. Therefore, the Field Action Level has conservatively been determined as twice the background count rate to account for the potential of both radium and uranium being present. Any count rate exceeding twice the background count rate would then require both collection of a soil sample to be analyzed by gamma spectroscopy and additional field surveys with an instrument capable of measuring uranium in soil.

The following construction activities were monitored for thorium during the project:

- Initial Surface Gamma Scan of Site
- Site Grading and Preparation
- Potholing for Foundation Piles
- Trenching – Grade Beams and Utilities

#### Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaled / Ratemeters (serial no. 134542 and serial no. 127242) with attached Ludlum Model 44-10 2"x2" NaI detectors (w/ 6" collimated lead shield). The instruments were calibrated on August 8, 2016. The average background count rate for each instrument was determined by performing measurements at five different locations along the southern property line.

A Ludlum Model 2241 Scaler / Ratemeter (serial no. 148069) with attached Ludlum Model 44-40 shielded “pancake” G-M detector was also available in the event that potential uranium was encountered.

Using twice the average background count rate in counts per minute (cpm) as the threshold for further testing results in the following Field Action Levels.

	Ludlum 2221 #134542	Ludlum 2221 #127242	Ludlum 2241 #148069
Background Location #1	2716	3318	68
Background Location #2	2378	2766	59
Background Location #3	2732	1634	71
Background Location #4	2329	1817	63
Background Location #5	2031	2431	73
Average Background (cpm) =	2437	2393	67
2x BKG FAL (cpm)=	4874	4786	134

### Initial Surface Gamma Scan

Glenn Huber performed an initial surface gamma scan of the future building footprint on September 7, 2016. The area of the building footprint was paved at the time of the survey. The building footprint was delineated into sections based on the locations of future foundation piles (1-7 West-East and A-E North-South). Each section was then divided into four quadrants. A 100% surface gamma scan was performed by scanning the surface of each grid with the detector at a height of two to six inches above ground surface at a rate of 0.5 meters per second, and the maximum count rate for each quadrant was recorded on a Radiation Survey Form. Each grid section was approximately 30 feet x 30 feet, but varied depending on location.

Glenn Huber performed an initial surface gamma scan on the remainder of the property outside of the future building footprint on September 13, 2016. Although this area falls outside of the building footprint, it was also surveyed because the top soil was going to be removed and limited grading was planned. Since the areas outside of the building footprint do not have any piles or delineated grid lines, the lines used for the building grids were extended to the property lines. Surface gamma scans were performed using the same method as detailed above and the count rate data for each grid quadrant was recorded on a Radiation Survey Form

Attachment A - Initial Gamma Surface Scan details the results of the survey. The area colored purple shows the building footprint and the area colored green shows the remainder of the property.

No count rates were found at any time that exceeded the twice the background count rate threshold limit.

### Site Grading and Preparation

The initial grading of the site started in September 2016. Throughout September, existing light poles, curbs, trees, pavement and topsoil were removed from the site. Surface gamma scans were performed as the different features were removed. In addition to the surface gamma

scans, spot checks were performed using the Ludlum 2241 survey meter with attached Ludlum Model 44-40 shielded G-M detector, since this was the first time the material below the existing pavement was exposed.

Grading was performed on the North end of site for planned sewer pipe installation and East side of site for a drainage catch basin (October 28, 2016- November 2, 2016). The Northern area of the site was divided into seven sections, which were thirty feet each. The Eastern area was divided into five sections, which were twenty-one feet each.

Grading was performed in three sections inside the building footprint (November 28, 2016 and December 1, 2016). This grading was minimal (several inches to one foot) and done to make the site level.

Grading was performed on the West side of site behind the construction trailer down to grade for the future parking lot (November 28, 2016 and December 2, 2016). This area has not been completed as future grading will be needed.

Surface Gamma scans were performed during site grading using the survey instruments identified above, and measurements were taken on the surface in lifts not to exceed 18 inches. The maximum count rates and excavation sketches are detailed in Attachment B – Site Grading. No count rates were found at any time that exceeded the twice the background count rate threshold limit.

#### Potholing of Foundation Piles

Potholing pile locations began in September 2016 and finished in October 2016. Pile locations along the north side of the building were dug as a single trench since there are many located all in a row. All other pile locations were excavated and surveyed individually.

Surface Gamma scans were performed using the survey instruments identified above, and measurements were taken as the soil was removed in 18" lifts. The material was stockpiled and surveyed and then the hole was back filled. The maximum count rates of each pile location are detailed in Attachment C - Potholing of Foundation Piles. No count rates were found at any time that exceeded the twice the background count rate threshold limit.

#### Trenching of Grade Beams and Utilities

Trenching started in September 2016 and ended in December 2016. Surface gamma scans were performed using the survey instruments identified above, and measurements were taken as material was excavated in 18-inch lifts and stockpiled. The following trenching items were surveyed:

- A test trench was dug on September 15<sup>th</sup> from C4 to D4.
- Grade beam trenching started on October 28<sup>th</sup> and finished on November 18<sup>th</sup>. The trenching started on the Northwest corner of the building. The North grade beam trench was divided into nine sections that were twenty-seven feet each. The East grade beam trench was divided into four sections and was twenty-two feet each. The South grade beam trench was divided into eight sections, which were twenty-seven feet per section. The West grade beam was divided into six sections, which were thirty feet each. See Attachment D.1 – Grade Beam Trenching

- Sewer and Water trenching started on November 21<sup>st</sup> and finished on December 1<sup>st</sup>. This trench started in the Northeast corner of the site. The trench was divided into a total of thirty-six sections. Pipe 108-112 was divided into fourteen sections, which were 26.4 feet per section. Pipe 113 was divided into seven sections, which were 18.8 feet per section. Pipe 101-104 was divided into eleven sections, which were 26.7 feet per section. Pipe 106 was divided into four sections, which were 15.7 feet per section. See Attachment D.2 – Sewer and Water Trenching
- Plumbing trenching was done on December 6<sup>th</sup>. The trench was divided in five sections, which were twenty-eight feet per section. See Attachment D.3 – Building Plumbing

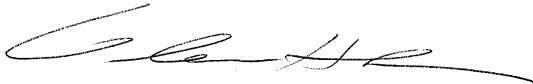
No count rates were found at any time that exceeded the twice the background count rate threshold limit.

#### 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.

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

Attachment A

Initial Surface Gamma Scan

King Sykes Medical Building  
2535 South Dr. Martin Luther King Jr. Drive  
Chicago, IL 60616

*Stan A. Huber Consultants, Inc.  
200 N. Cedar Road  
New Lenox, IL 60451*

CERTIFIED  
 CONNECTIONS  
 CONDITIONAL  
 PERMIT  
 EX-1

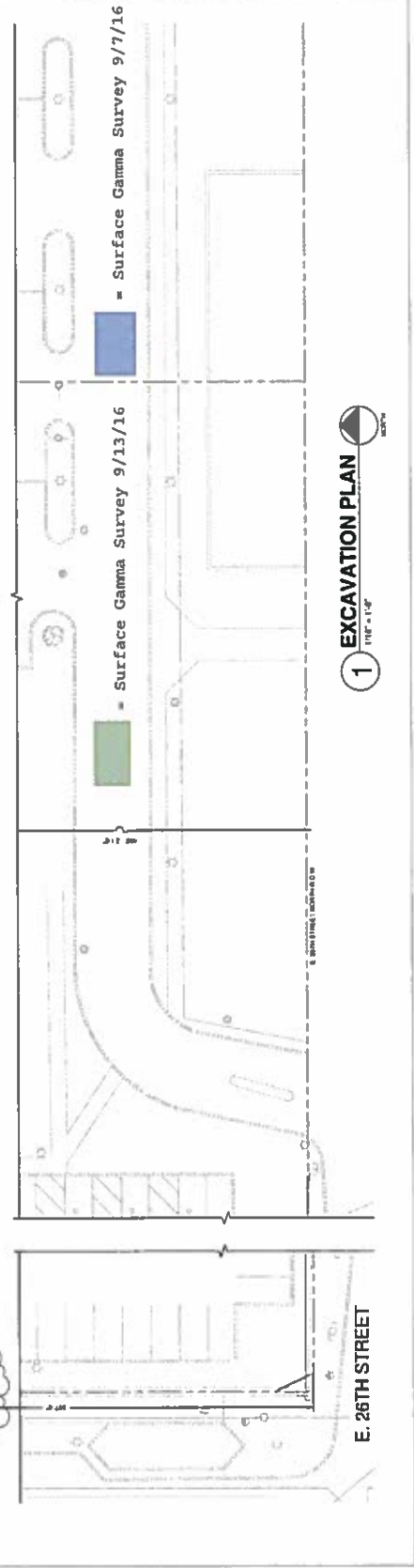
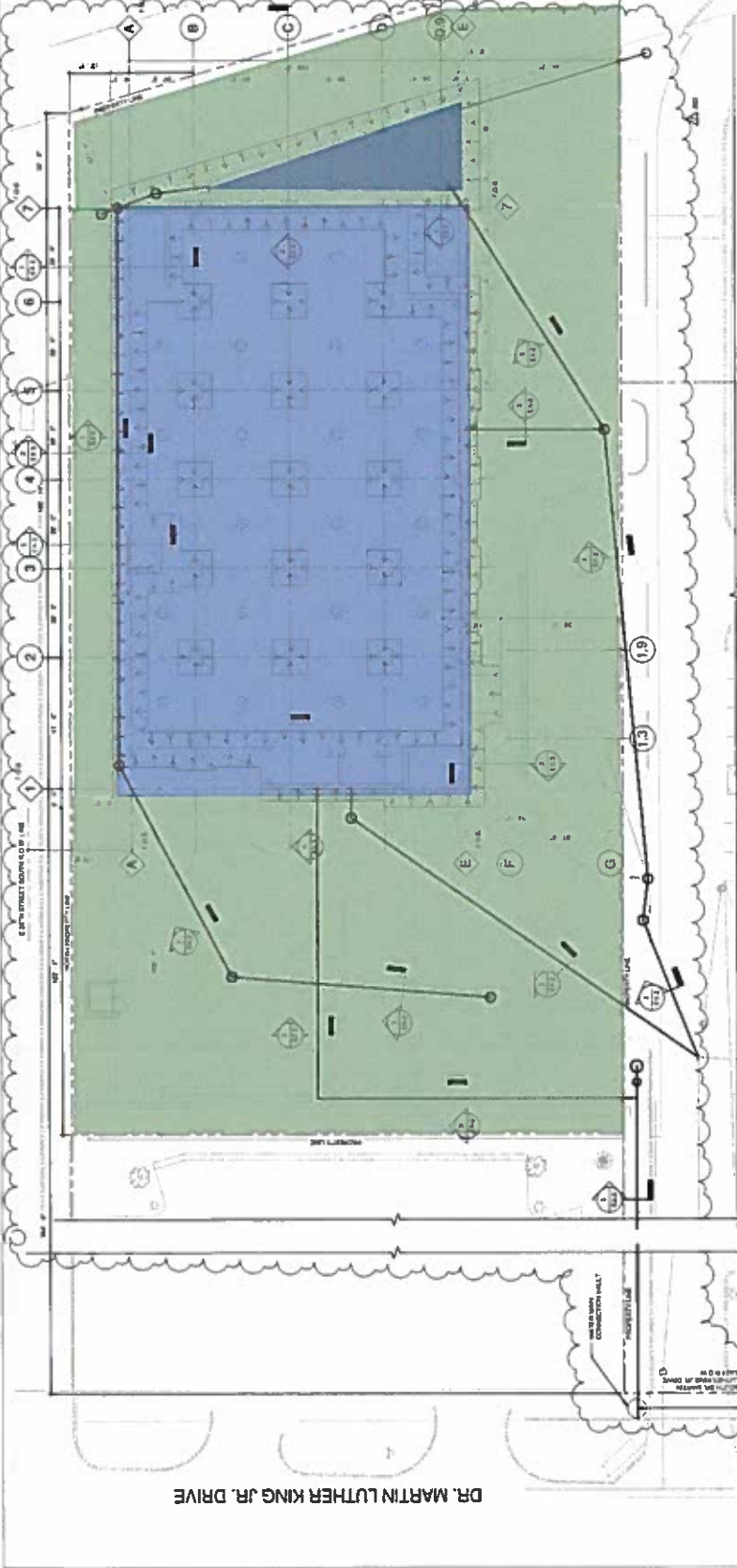
**KNIGHT**  
 Engineers & Architects  
 431 E. Madison Road - Suite 205  
 Bannockburn, IL 60015  
 Phone: (708) 342-1250  
 KNIGHTEA.COM  
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**CARLSON CONSTRUCTION**  
 NATIONAL CONSTRUCTION RESILIENCY  
 1788 W. 95TH ST. JOLIET, IL 60438  
 815.831.8888  
 DESIGN BUILDER



**KING SYKES MEDICAL BUILDING**  
 555 SOUTH DR. MARTIN LUTHER KING JR. DR.  
 CHICAGO, IL 60618  
**KING SYKES II**  
 100 BELL VALLEY DRIVE  
 WOODSTOCK, IL 60098  
 PH: 312-883-8883  
 P.E. L. 100-07-C.C.D. 1825

EXCAVATION PLAN  
 PROJECT # 1808-110  
 DATE: 9-28-18  
**EX-1**



**1 EXCAVATION PLAN**  
 1/8" = 1'-0"

## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/7/16

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No. : 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface

Background 2437 cpm

Action Level: 4874 cpm  
2x Bkg

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

*All results in kcpm*



①	②	③	④	⑤						
				← scale →						
					<i>light pole</i>					
2.8	2.7	3.0	2.9	3.1	2.7	2.8	2.4	A		
1.8	1.6	1.6	1.8	2.2	2.6	2.1	1.8	B		
2.0	2.0	2.2	2.6	1.7	1.7	1.9	1.7	C		
1.9	1.8	1.7	2.0	2.1	2.2	1.9	1.6	D		
1.7	2.0	1.9	1.8	1.9	1.7	1.7	2.0	E		
2.1	1.8	1.7	2.1	2.0	1.8	1.6	1.7	F		
1.7	2.1	2.3	1.9	2.1	2.4	2.3	1.8	G		
1.8	2.3	1.9	2.2	1.9	2.1	2.3	2.0	H		

## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/7/16

Technician: Glen Huber

Inst Model: Ludlum 2221

Serial No. : 134542

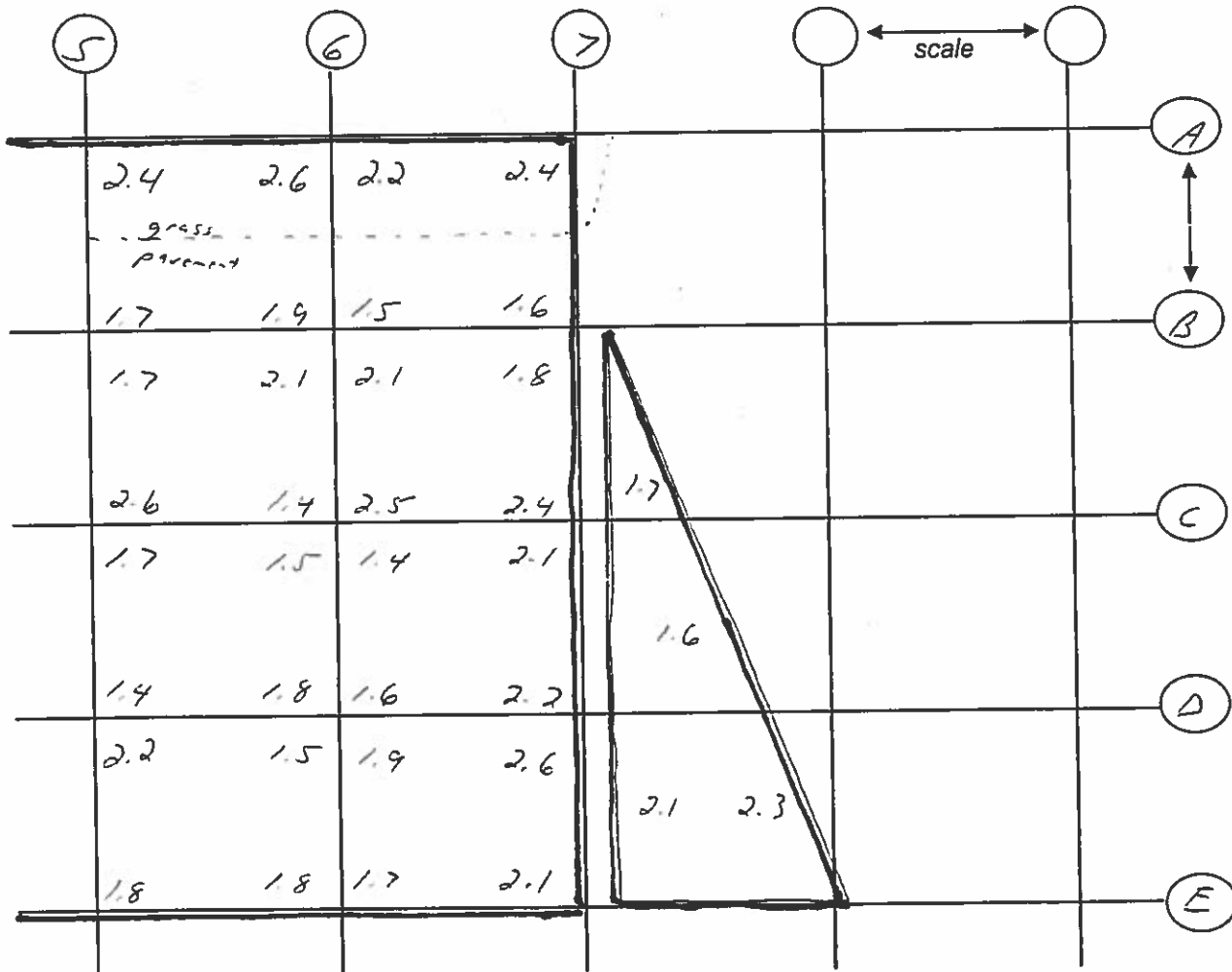
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface

Background 2437 cpm

Action Level: 4874 cpm

Write grid designations in circles. Record highest counts <sup>2x Bkg</sup> at grid intersections (if required). Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/7/16

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No. : 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface

Background 2437 cpm

Action Level: 4874 cpm  
*2x Bkg*

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

*All results in kcpm*



①	②	③	④	⑤					
				← scale →					
						<i>light pole</i>			
	2.8	2.7	3.0	2.9	3.1	2.7	2.8	2.4	A
	<i>grass</i>				⊗				↑
	<i>pavement</i>								↓
	1.8	1.6	1.6	1.8	2.2	2.6	2.1	1.8	B
	2.0	2.0	2.2	2.6	1.7	1.7	1.9	1.7	C
	1.9	1.8	1.7	2.0	2.1	2.2	1.9	1.6	D
	1.7	2.0	1.9	1.8	1.9	1.7	1.7	2.0	E
	2.1	1.8	1.7	2.1	2.0	1.8	1.6	1.7	
	1.7	2.1	2.3	1.9	2.1	2.4	2.3	1.8	
	1.8	2.3	1.9	2.2	1.9	2.1	2.3	2.0	

## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/7/16

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No. : 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

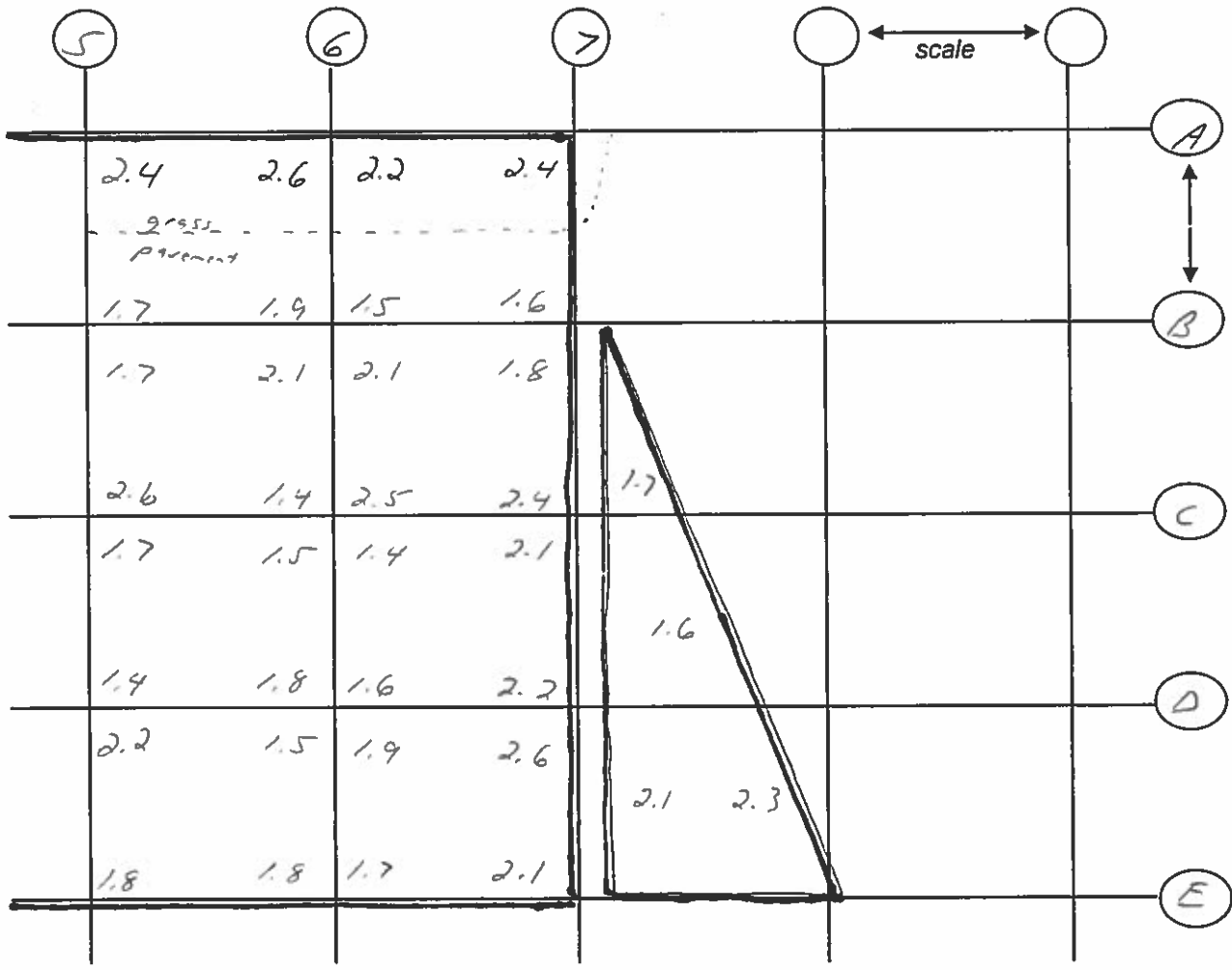
Lift Elevation: Surface

Background 2437 cpm

Action Level: 4874 cpm

*2x Bkg*

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/13/16

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No. : 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

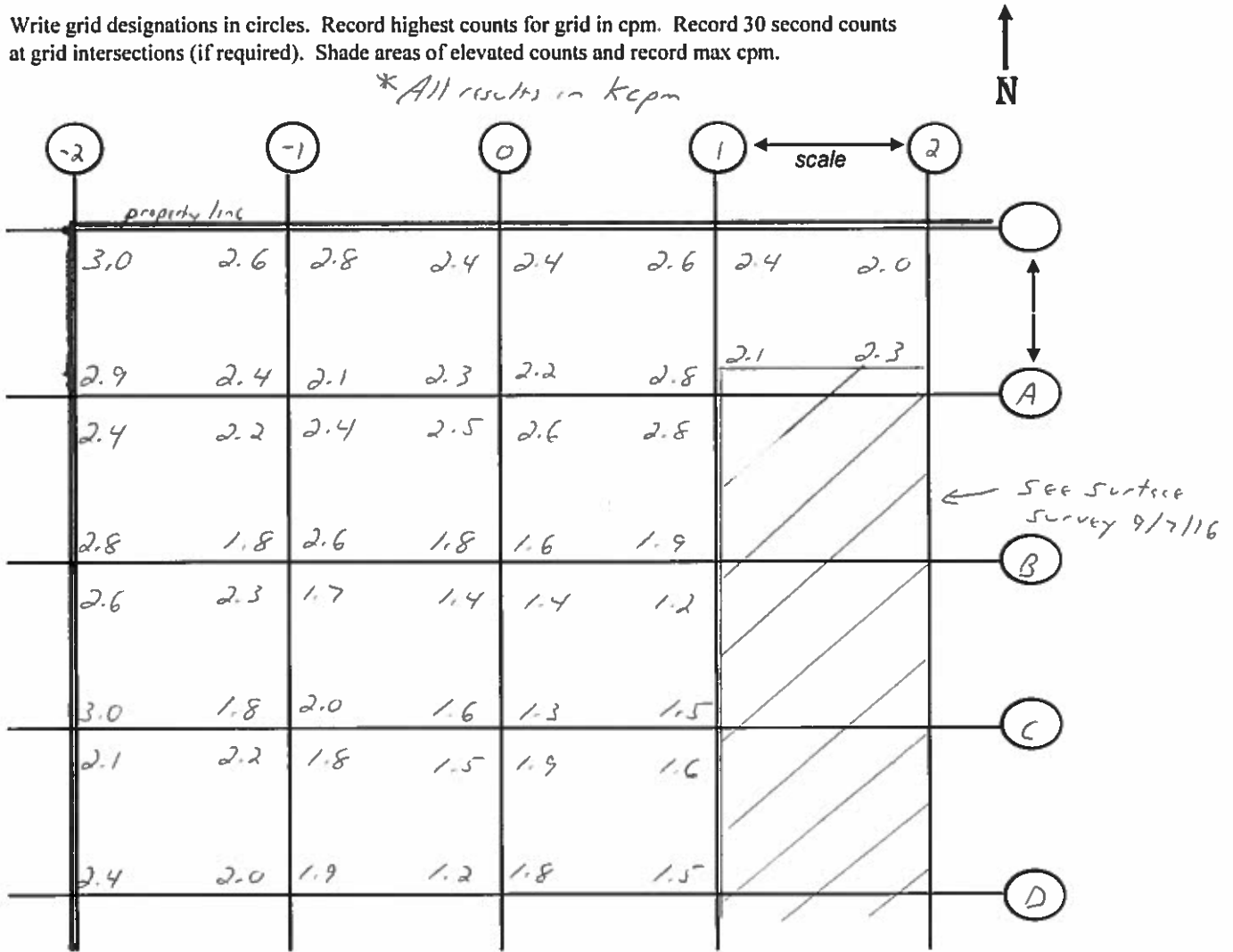
Lift Elevation: Surface

Background 2437 cpm

Action Level: <sup>2x Bk</sup> 4874 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

*\*All results in Keqpm*



## Radiation Survey Form

Location/ Project ID: Kingslykes Medical Building

Date: 9/13/16

Technician: Glenn Huber

Inst Model: 2416-2221

Serial No.: 134542

Probe Type: 1"x1" NaI  2"x2" NaI   
 Shielded  Not Shielded

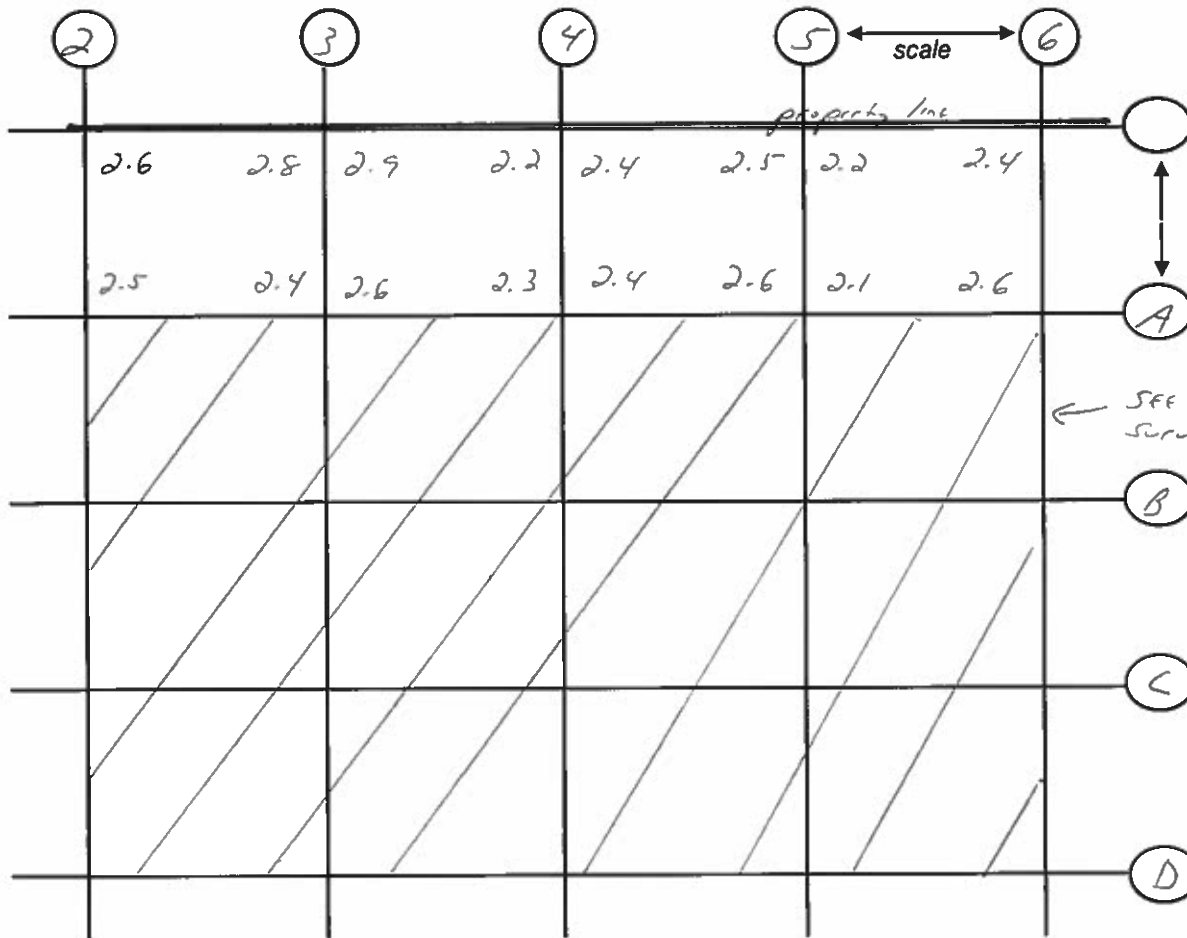
Lift Elevation: Surface

Background 2437 cpm

<sup>2x 0.5</sup> Action Level: 4874 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

*\*All results in kepm*



## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/13/16

Technician: Glenn Huber

Inst Model: Ludl-2221

Serial No.: 134542

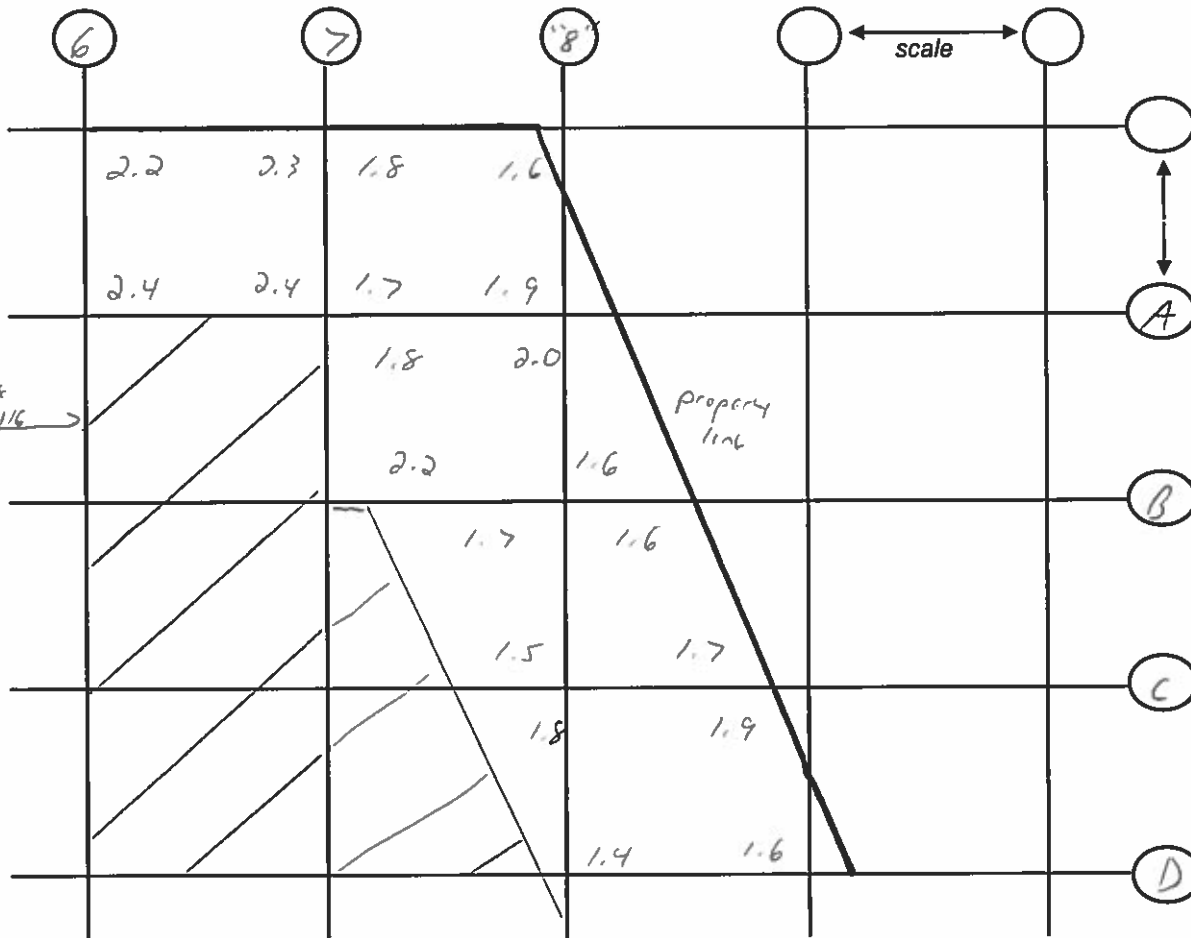
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface

Background 2437 cpm

Action Level: 4874 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/13/16

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No. : 134542

Probe Type: 1"x1" NaI  2"x2" NaI  
 Shielded / Not Shielded

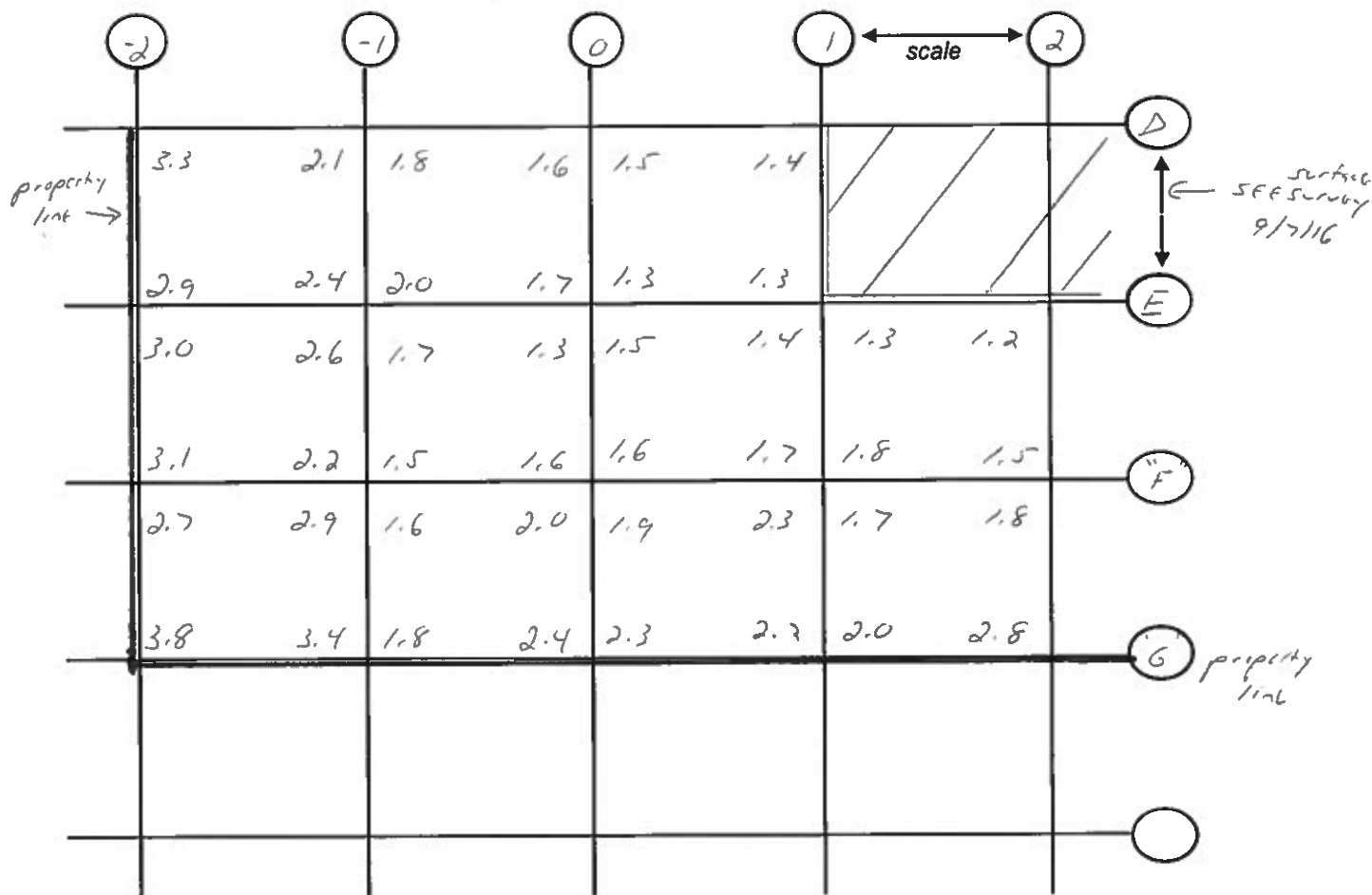
Lift Elevation: Surface

Background 2437 cpm

<sup>2.0 Bq</sup>  
Action Level: 4874 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

*\* All results in Keq*



## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/13/16

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No.: 134542

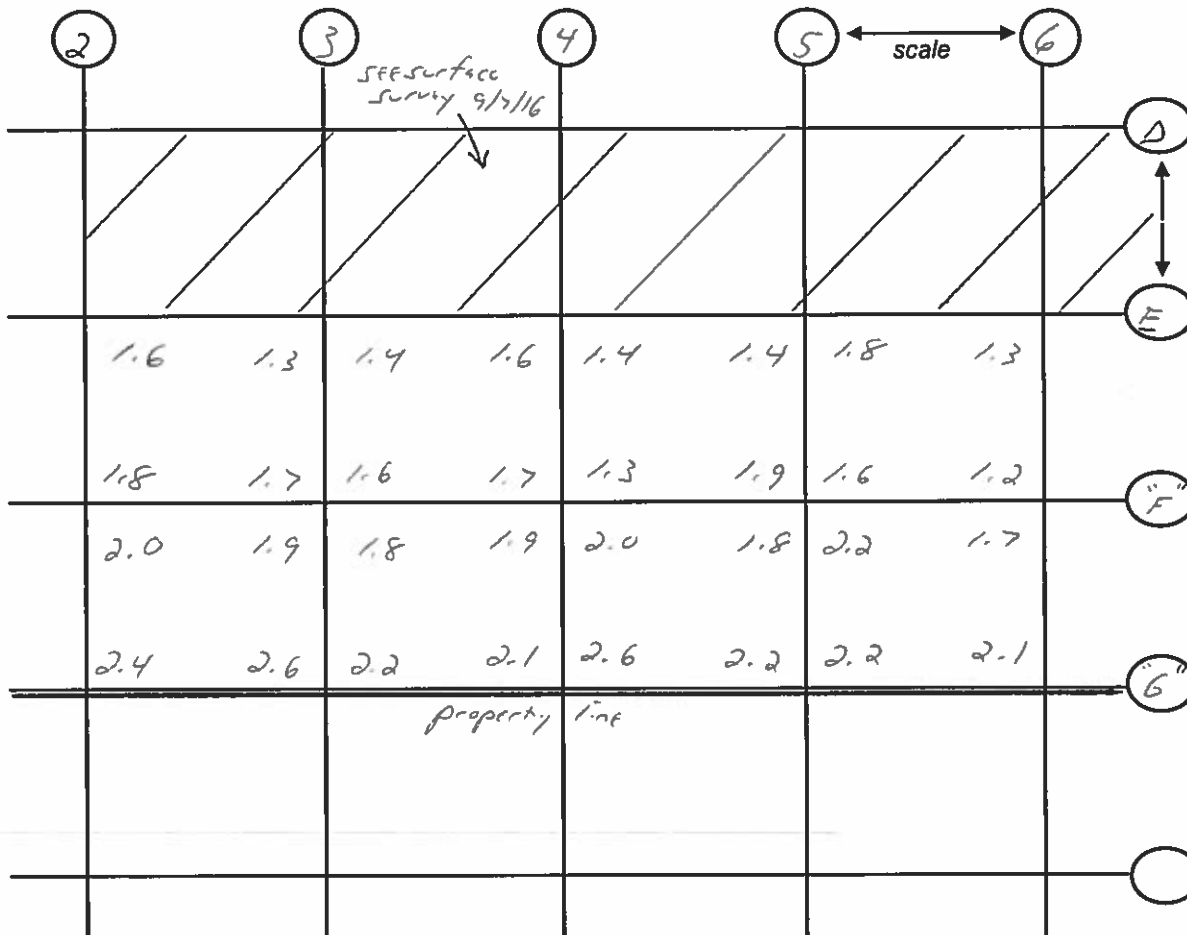
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface

Background 2437 cpm

<sup>2x Bks</sup> Action Level: 4874 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



## Radiation Survey Form

Location/ Project ID:

Date: 9/13/16

Technician: Glen Huber

Inst Model: Ludlum 2201

Serial No. : 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

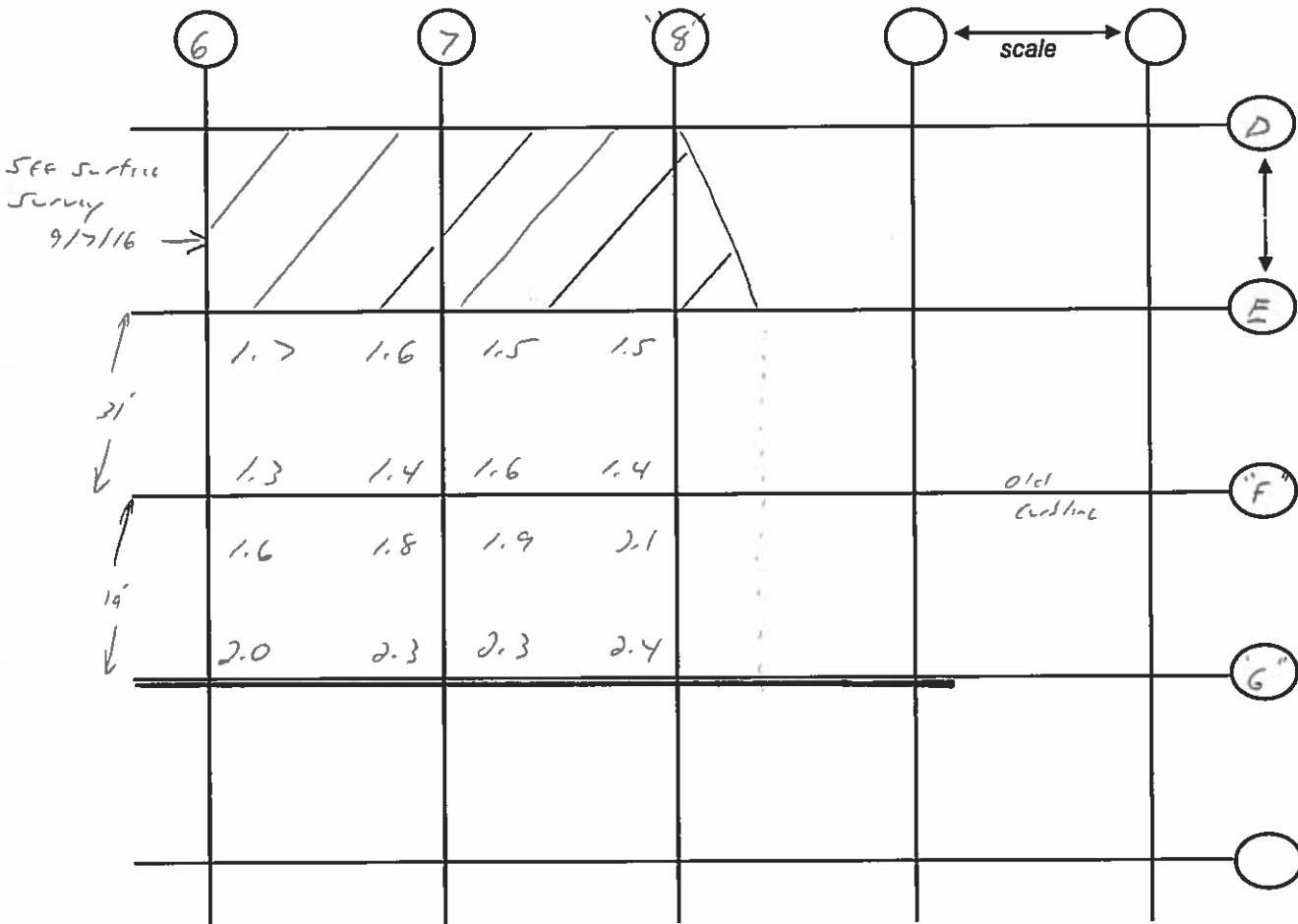
Lift Elevation: Surface

Background 2432 cpm

Action Level: 4874 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

*\* All results in keps*





Attachment B

Site Grading

King Sykes Medical Building  
2535 South Dr. Martin Luther King Jr. Drive  
Chicago, IL 60616

*Stan A. Huber Consultants, Inc.  
200 N. Cedar Road  
New Lenox, IL 60451*

## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/15/16

Technician: Steven Kowalczyk

Inst Model: Ludlum 2221

Serial No.: 127242 Probe SN: 168144

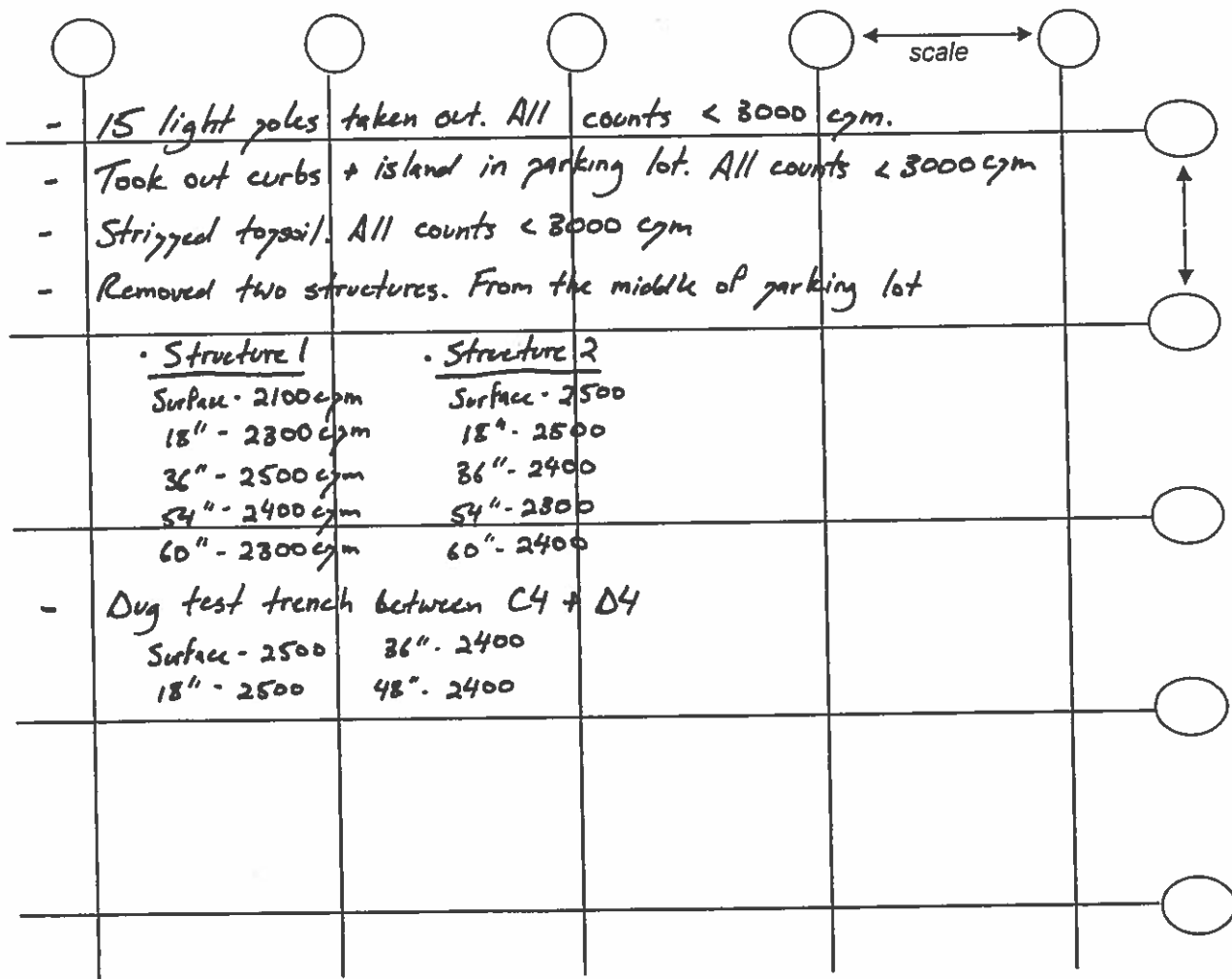
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface - 60"

Background 1956 cpm

Action Level: 6,738 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 9/16/15

Technician: Steven Kowalczyk

Inst Model: Ludlum 2221

Serial No. : 127242 Probe SN: 168144

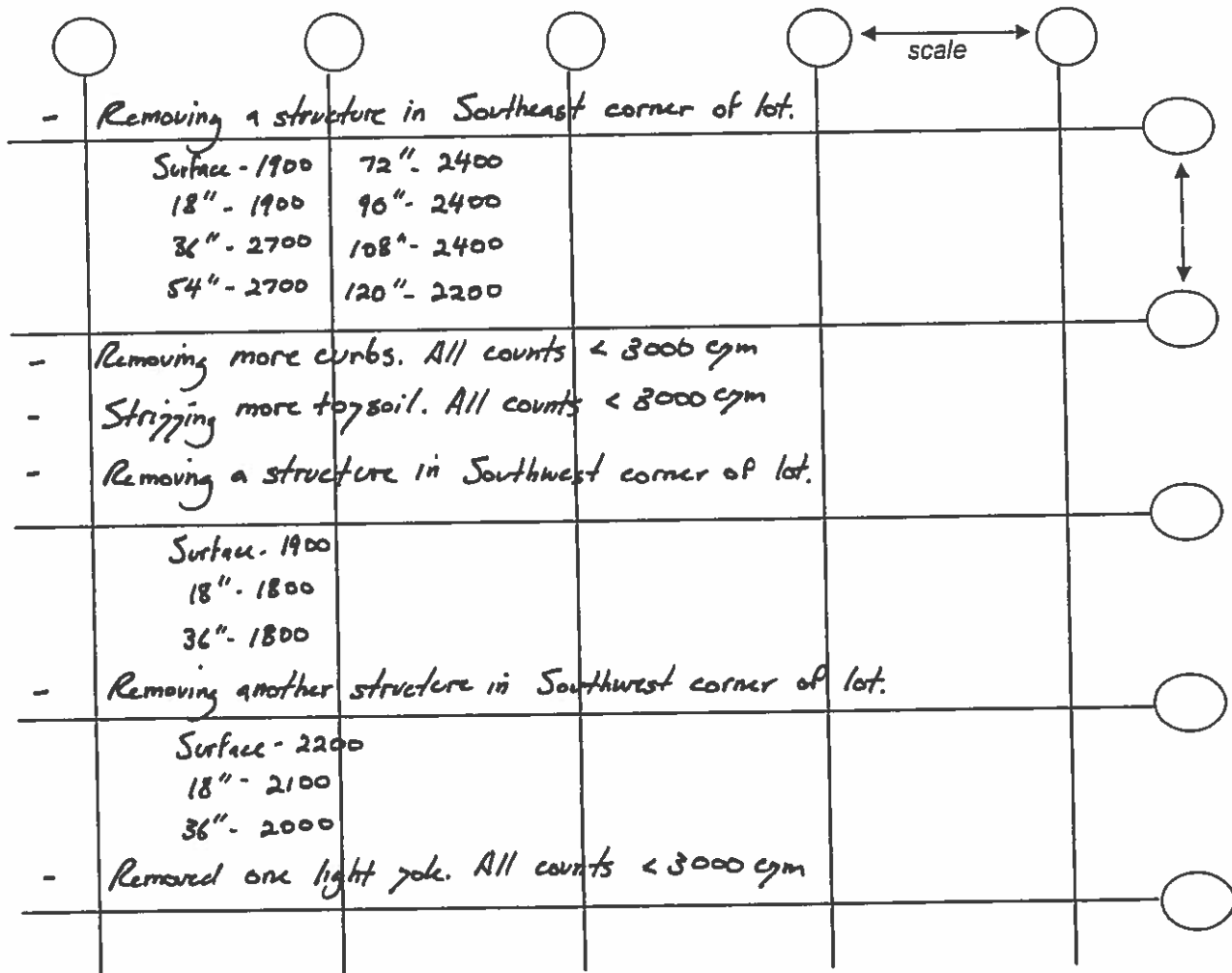
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

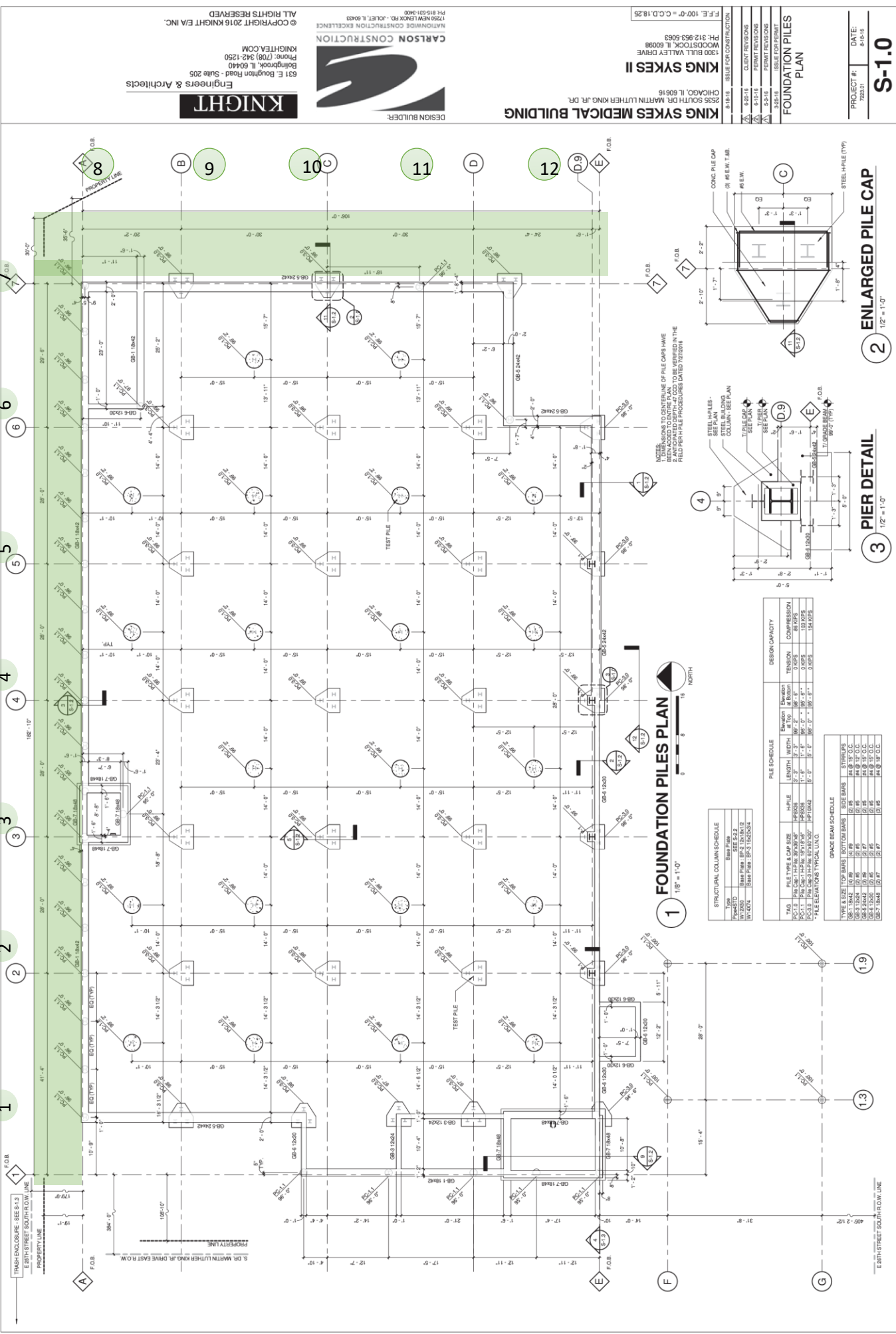
Lift Elevation: Surface - 120"

Background 1895 cpm

Action Level: 6,738 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.





**1 FOUNDATION PILES PLAN**  
1/8" = 1'-0"

**3 PIER DETAIL**  
1/2" = 1'-0"

**2 ENLARGED PILE CAP**  
1/2" = 1'-0"

STRUCTURAL COLUMN SCHEDULE

ID	PILE TYPE	PILE SIZE	MAXIMUM TENSION	MAXIMUM COMPRESSION
PC1.0	PC1.0	18" x 18" x 13.5	100 KIPS	150 KIPS
PC2.0	PC2.0	18" x 18" x 13.5	100 KIPS	150 KIPS
PC3.0	PC3.0	18" x 18" x 13.5	100 KIPS	150 KIPS
PC4.0	PC4.0	18" x 18" x 13.5	100 KIPS	150 KIPS

PILE SCHEDULE

TAG	PILE TYPE & CAP SIZE	LENGTH	SECTION	DESIGN CAPACITY
PC1.0	PC1.0 18" x 18" x 13.5	30'-0"	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
PC2.0	PC2.0 18" x 18" x 13.5	30'-0"	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
PC3.0	PC3.0 18" x 18" x 13.5	30'-0"	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
PC4.0	PC4.0 18" x 18" x 13.5	30'-0"	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION

GRADE BEAM SCHEDULE

ID	BEAM TYPE	SECTION	DESIGN CAPACITY
GB1.0	GB1.0	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
GB2.0	GB2.0	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
GB3.0	GB3.0	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
GB4.0	GB4.0	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION
GB5.0	GB5.0	18" x 18" x 13.5	100 KIPS TENSION / 150 KIPS COMPRESSION

**KING SYKES II**  
3236 SOUTH MARTIN LUTHER KING JR. DR.  
CHICAGO, IL 60616  
F.F.E. 100'-0" C.C.D. 18.25

**FOUNDATION PILES PLAN**  
ISSUE FOR CONSTRUCTION  
ISSUE FOR PERMITS  
ISSUE FOR FINISH

PROJECT #:  
DATE:  
**S-1.0**

**KNIGHT**  
Engineers & Architects  
631 E. Boughman Road - Suite 205  
Bolingbrook, IL 60440  
Phone: (708) 342-1250  
KNIGHTEA.COM

**CARLSON CONSTRUCTION**  
NATIONWIDE CONSTRUCTION EXCELLENCE  
17501 W. 150TH ST. - JOLIET, IL 60438  
PH: 815.831.3400

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## Radiation Survey Form

Location/Project ID: King Sykes Medical Building - Sewer and Water Grading  
 HP Technician: Steven Kowalczyk  
 Instrument ID: Ludlum 2221 w/ 44-10, serial no. 127272  
 Background = 2393 cpm  
 2X Background FAL = 4786 cpm

### Sections 1-7 (North) \*\*30 feet per section\*\*

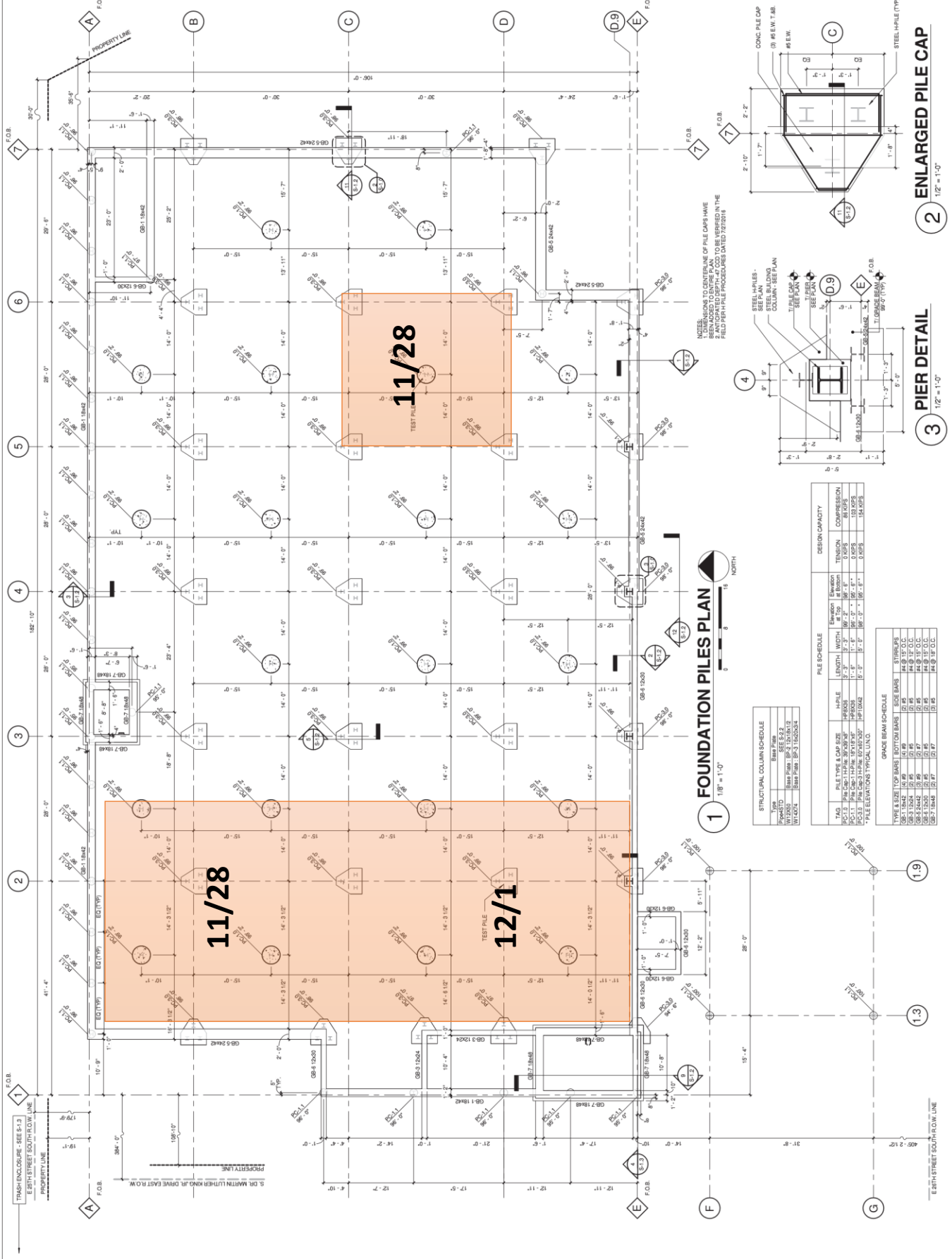
1	Surface CPM	18"	36"	
	2600	3400	3300	
2	Surface CPM	18"	36"	
	2700	3300	3300	
3	Surface CPM	18"	36"	48"
	3400	3300	3300	3100
4	Surface CPM	18"	36"	48"
	3100	2900	2800	2900
5	Surface CPM	18"	36"	48"
	2900	2200	2100	3300
6	Surface CPM	18"	36"	48"
	2000	2700	3000	3000
7	Surface CPM	18"	36"	54"
	2900	2800	3200	3400

### Sections 8-12 (East) \*\*21 feet each\*\*

8	Surface CPM	18"	36"	54"
	2500	2800	3400	3100
9	Surface CPM	18"	36"	54"
	2500	2300	3400	3300
10	Surface CPM	18"	36"	54"
	2200	3000	2900	3500

	Surface CPM	18"	36"	54"
11	2100	3600	3100	4100
	Surface CPM	18"	36"	54"
12	2400	2600	2700	3500

N= 213 feet= 7 sections at 30 feet each  
E=105 feet= 5 sections at 21 feet each



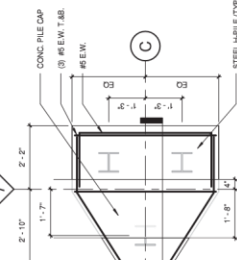
**1 FOUNDATION PILES PLAN**  
1/8" = 1'-0"

TYPE	PILE TYPE	PILE SIZE	WALL	LENGTH	WIDTH	SECTION	DESIGN CAPACITY
OB 1	OB 1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 2	OB 2	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 3	OB 3	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 4	OB 4	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 5	OB 5	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 6	OB 6	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 7	OB 7	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS

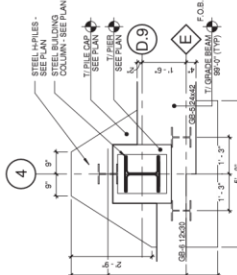
TAG	PILE TYPE	PILE SIZE	WALL	LENGTH	WIDTH	SECTION	DESIGN CAPACITY
PC 1.1	PC 1.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
PC 2.1	PC 2.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
PC 3.1	PC 3.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
PC 4.1	PC 4.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
PC 5.1	PC 5.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
PC 6.1	PC 6.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
PC 7.1	PC 7.1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS

TYPE	PILE TYPE	PILE SIZE	WALL	LENGTH	WIDTH	SECTION	DESIGN CAPACITY
OB 1	OB 1	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 2	OB 2	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 3	OB 3	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 4	OB 4	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 5	OB 5	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 6	OB 6	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS
OB 7	OB 7	18x18	18x18	12'-2"	12'-2"	18x18	TENSION 88 KIPS COMPRESSION 153 KIPS

NOTES: SEE PLAN FOR LOCATION OF PILE CAPS HAVE BEEN ADDED TO THIS PLAN. FIELD DIMENSIONS INDICATED ON THIS PLAN.



**2 ENLARGED PILE CAP**  
1/2" = 1'-0"



**3 PIER DETAIL**  
1/2" = 1'-0"

**KNIGHT**  
Engineers & Architects  
631 E. Boughn Road - Suite 205  
Bolingbrook, IL 60440  
Phone: (708) 342-1250  
KNIGHTEA.COM

**CARLSON CONSTRUCTION**  
NATIONWIDE CONSTRUCTION EXCELLENCE  
17500 W. LEXINGTON RD. - JOLIET, IL 60438  
PH: 815.831.3400  
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**DESIGN BUILDER**

**KING SYKES II**  
2368 SOUTH DR. MARTIN LUTHER KING JR. DR.  
CHICAGO, IL 60616

**FOUNDATION PILES PLAN**  
ISSUE FOR PERMIT  
ISSUE FOR CONSTRUCTION  
F.F.E. 1007 - C.C.D. 18.25

PROJECT #: 202401  
DATE: 8-24-16  
**S-1.0**

## Radiation Survey Form

Location/Project ID: King Sykes Medical Building - Grading Inside Building  
HP Technician: Steven Kowalczyk  
Instrument ID: Ludlum 2221 w/ 44-10, serial no. 127272  
Background = 2393 cpm  
2X Background FAL = 4786 cpm

Northwest Corner (11/28) CPM  
2600  
2600  
2800  
2400  
2800  
2400

Southeast Corner (11/28) CPM  
2500  
2400  
2400

Southwest Corner (12/1) CPM  
2000  
2100  
2100  
2300  
2400  
2300

\*\*\*Each graded section had a few inches to one foot taken off\*\*\*



## Radiation Survey Form

Location/ Project ID: King Sykes Medical Building

Date: 11/29/16 + 12/2/16

Technician: Steven Kowalezyk

Inst Model: Codlum 2221

Serial No. : 127242 Probe SN: 168144

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

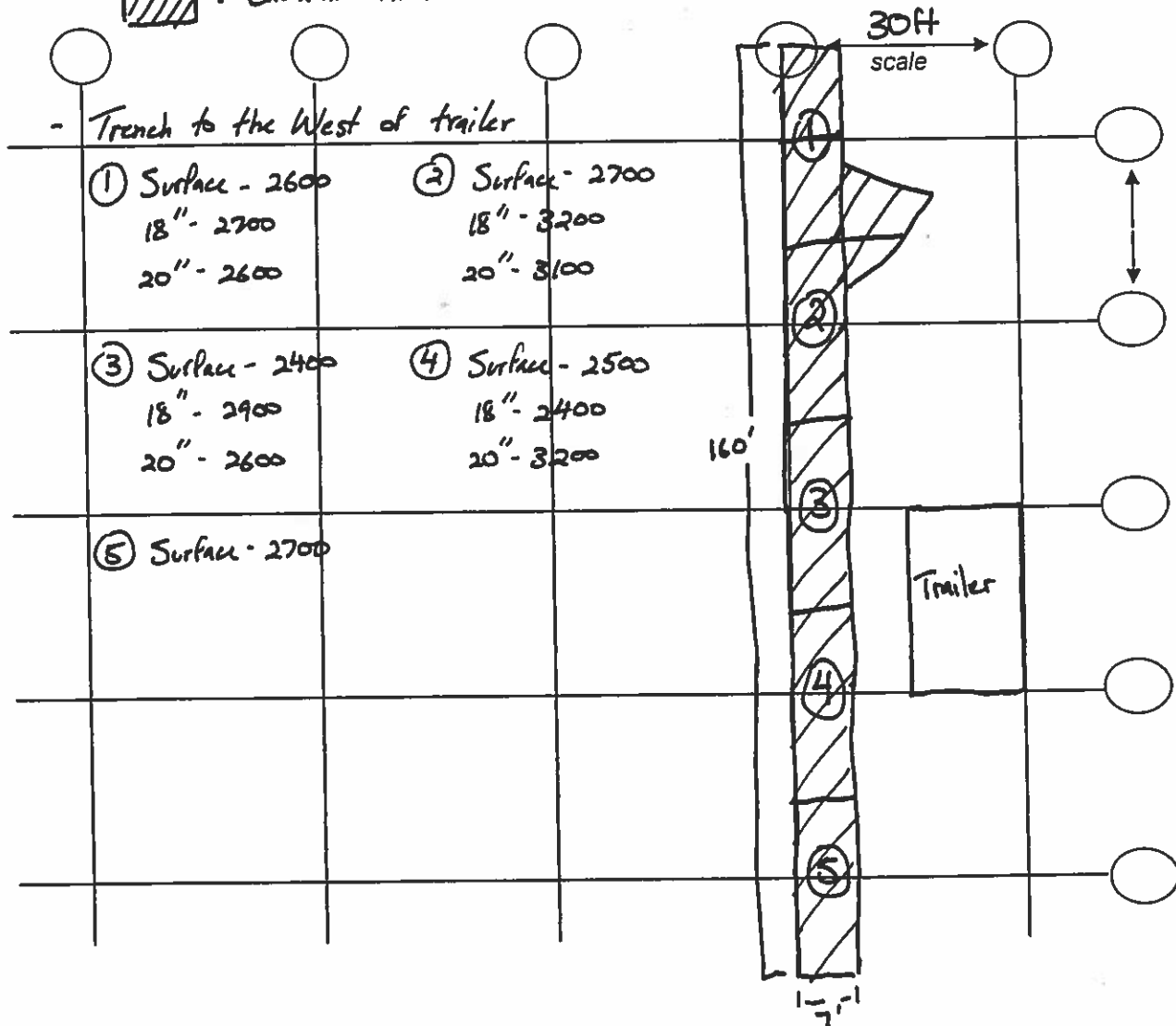
Lift Elevation: Surface - 20"

Background 1,676 cpm

Action Level: 6,788 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.

= Excavated Area

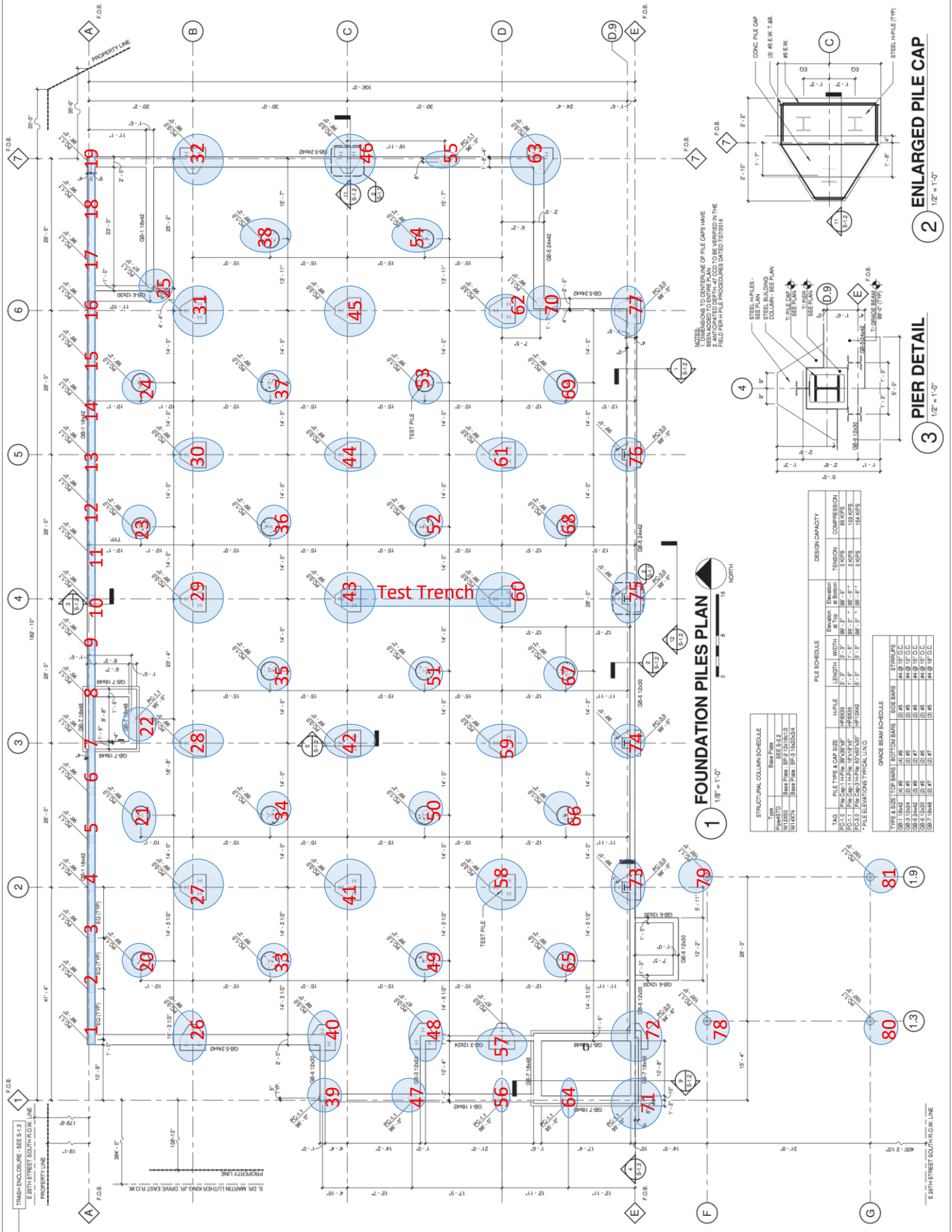


Attachment C

Potholing of Foundation Piles

King Sykes Medical Building  
2535 South Dr. Martin Luther King Jr. Drive  
Chicago, IL 60616

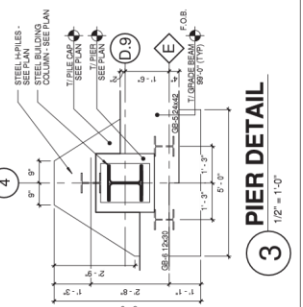
*Stan A. Huber Consultants, Inc.  
200 N. Cedar Road  
New Lenox, IL 60451*



**1 FOUNDATION PILES PLAN**  
1/8" = 1'-0"

PILE TAG	PILE TYPE & CAP SIZE	HAIR LENGTH	WIDTH	ELEVATION	TENSION CAPACITY	COMPRESSION CAPACITY
OB-1.18x42	OB-1.18x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-1.32x42	OB-1.32x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-1.46x42	OB-1.46x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-1.60x42	OB-1.60x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-1.74x42	OB-1.74x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-1.88x42	OB-1.88x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.02x42	OB-2.02x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.16x42	OB-2.16x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.30x42	OB-2.30x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.44x42	OB-2.44x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.58x42	OB-2.58x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.72x42	OB-2.72x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-2.86x42	OB-2.86x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.00x42	OB-3.00x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.14x42	OB-3.14x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.28x42	OB-3.28x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.42x42	OB-3.42x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.56x42	OB-3.56x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.70x42	OB-3.70x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.84x42	OB-3.84x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-3.98x42	OB-3.98x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.12x42	OB-4.12x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.26x42	OB-4.26x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.40x42	OB-4.40x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.54x42	OB-4.54x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.68x42	OB-4.68x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.82x42	OB-4.82x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-4.96x42	OB-4.96x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.10x42	OB-5.10x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.24x42	OB-5.24x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.38x42	OB-5.38x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.52x42	OB-5.52x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.66x42	OB-5.66x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.80x42	OB-5.80x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-5.94x42	OB-5.94x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.08x42	OB-6.08x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.22x42	OB-6.22x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.36x42	OB-6.36x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.50x42	OB-6.50x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.64x42	OB-6.64x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.78x42	OB-6.78x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-6.92x42	OB-6.92x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.06x42	OB-7.06x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.20x42	OB-7.20x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.34x42	OB-7.34x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.48x42	OB-7.48x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.62x42	OB-7.62x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.76x42	OB-7.76x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-7.90x42	OB-7.90x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.04x42	OB-8.04x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.18x42	OB-8.18x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.32x42	OB-8.32x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.46x42	OB-8.46x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.60x42	OB-8.60x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.74x42	OB-8.74x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-8.88x42	OB-8.88x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.02x42	OB-9.02x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.16x42	OB-9.16x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.30x42	OB-9.30x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.44x42	OB-9.44x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.58x42	OB-9.58x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.72x42	OB-9.72x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-9.86x42	OB-9.86x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS
OB-10.00x42	OB-10.00x42	12'-0"	18"	101'-0"	0.0 KIPS	15.0 KIPS

**2 ENLARGED PILE CAP**  
1/2" = 1'-0"



**3 PIER DETAIL**  
1/2" = 1'-0"



**KING SYKES II**  
CHICAGO, IL 60616  
2326 SOUTH DR. MARTIN LUTHER KING, JR. DR.  
WOODSTOCK, IL 60090  
TH: 312-953-5063  
F.F.E. 100'-0" = C.D. 18.25

**FOUNDATION PILES PLAN**

**CLIENT REVISIONS**  
DATE: 8-28-13  
PROJECT #: 120201

**FOUNDATION PILES PLAN**

**ENGINEERS & ARCHITECTS**  
631 E. Boughton Road - Suite 205  
Bolingbrook, IL 60440  
Phone: (708) 342-1250  
KNIGHTEAM.COM

**KNIGHT**  
DESIGN BUILDER  
CARLSON CONSTRUCTION  
NATIONWIDE CONSTRUCTION EXCELLENCE  
1750 N. WENDELL BOULEVARD - JOLIET, IL 60431  
PH: 815-621-3400  
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## Radiation Survey Form

Location/Project ID: King Sykes Medical Building - Foundation Pile Potholes

HP Technician: See Below

Instrument ID: Ludlum 2221 w/ 44-10, serial no. 127272 and 134542

Background = 2393 & 2437 cpm

2X Background FAL = 4786 & 4874 cpm

Pile Number	Max Count	Date	Technician
1	1900	9/30/2016	James Hatten
2	1800	9/30/2016	James Hatten
3	1900	9/30/2016	James Hatten
4	2000	9/30/2016	James Hatten
5	2100	9/30/2016	James Hatten
6	1900	9/30/2016	James Hatten
7	1800	9/30/2016	James Hatten
8	1800	9/30/2016	James Hatten
9	1900	9/30/2016	James Hatten
10	2000	9/30/2016	James Hatten
11	2000	10/3/2016	James Hatten
12	2000	10/3/2016	James Hatten
13	2100	10/3/2016	James Hatten
14	1800	10/3/2016	James Hatten
15	1800	10/3/2016	James Hatten
16	1900	10/3/2016	James Hatten
17	1900	10/3/2016	James Hatten
18	2000	10/3/2016	James Hatten
19	2000	10/3/2016	James Hatten
20	2300	10/5/2016	Glenn Huber
21	2400	10/5/2016	Glenn Huber
22	2400	10/5/2016	Glenn Huber
23	2300	10/5/2016	Glenn Huber
24	2100	10/3/2016	James Hatten
25	2000	10/3/2016	James Hatten
26	2500	10/5/2016	Glenn Huber
27	2500	10/5/2016	Glenn Huber
28	2700	10/5/2016	Glenn Huber
29	2700	10/5/2016	Glenn Huber
30	2800	10/11/2016	Steven Kowalczyk
31	2700	10/11/2016	Steven Kowalczyk

32	1900	10/3/2016	James Hatten
33	2200	10/5/2016	Glenn Huber
34	2000	10/5/2016	Glenn Huber
35	2000	10/5/2016	Glenn Huber
36	2900	10/5/2016	Glenn Huber
37	4100	10/11/2016	Steven Kowalczyk
38	2300	10/5/2016	Glenn Huber
39	2000	10/6/2016	Glenn Huber
40	2200	10/6/2016	Glenn Huber
41	2200	10/6/2016	Glenn Huber
42	2400	10/6/2016	Glenn Huber
43	2500	9/15/2016	Steven Kowalczyk
44	2600	10/11/2016	Steven Kowalczyk
45	2100	10/11/2016	Steven Kowalczyk
46	2300	10/5/2016	Glenn Huber
47	2200	10/6/2016	Glenn Huber
48	2200	10/6/2016	Glenn Huber
49	2400	10/6/2016	Glenn Huber
50	2500	10/6/2016	Glenn Huber
51	2500	10/6/2016	Glenn Huber
52	2600	10/6/2016	Glenn Huber
53	2700	10/6/2016	Glenn Huber
54	2700	10/5/2016	Glenn Huber
55	2100	10/5/2016	Glenn Huber
56	2100	10/6/2016	Glenn Huber
57	2300	10/7/2016	Steven Kowalczyk
58	2000	10/7/2016	Steven Kowalczyk
59	1800	10/7/2016	Steven Kowalczyk
60	2500	9/15/2016	Steven Kowalczyk
61	2000	10/7/2016	Steven Kowalczyk
62	2100	10/7/2016	Steven Kowalczyk
63	2000	10/10/2016	Glenn Huber
64	1900	10/10/2016	Glenn Huber
65	2100	10/10/2016	Glenn Huber
66	2100	10/10/2016	Glenn Huber
67	1600	10/7/2016	Steven Kowalczyk
68	1700	10/7/2016	Steven Kowalczyk
69	2200	10/7/2016	Steven Kowalczyk
70	2300	10/6/2016	Glenn Huber
71	2200	10/10/2016	Steven Kowalczyk
72	2500	10/10/2016	Glenn Huber

73	2600	10/10/2016	Glenn Huber
74	2000	10/7/2016	Steven Kowalczyk
75	2300	10/7/2016	Steven Kowalczyk
76	2300	10/7/2016	Steven Kowalczyk
77	2500	10/10/2016	Steven Kowalczyk
78	2300	10/10/2016	Steven Kowalczyk
79	2100	10/11/2016	Steven Kowalczyk
80	2700	10/11/2016	Steven Kowalczyk
81	2600	10/10/2016	Steven Kowalczyk

Test Trench

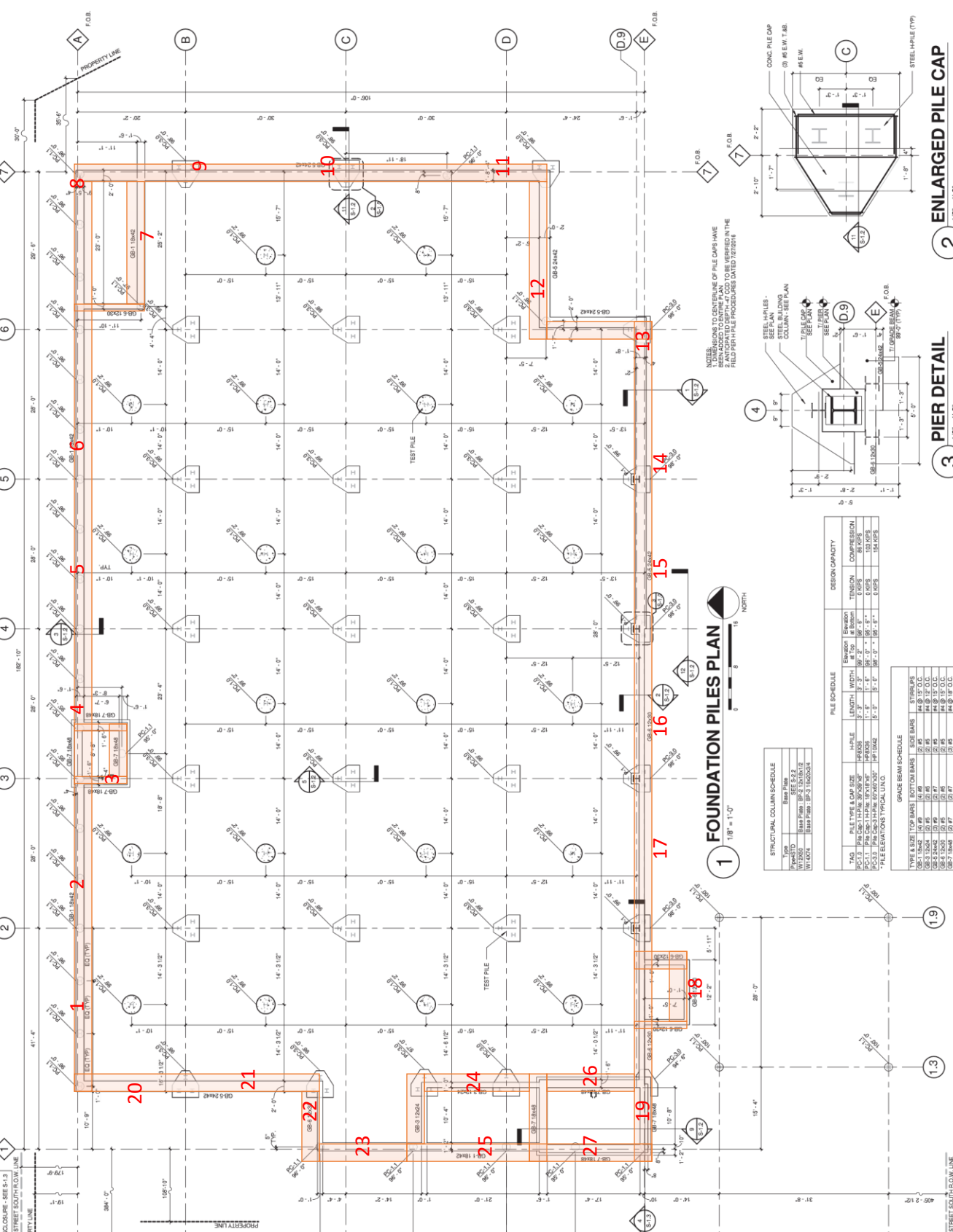
Surface CPM	2500
18"	2500
36"	2400
48"	2400

Attachment D.1

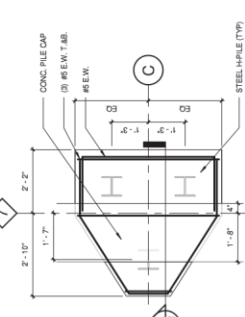
Grade Beam Trenching

King Sykes Medical Building  
2535 South Dr. Martin Luther King Jr. Drive  
Chicago, IL 60616

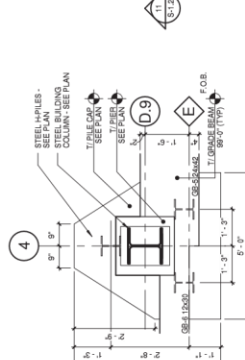
*Stan A. Huber Consultants, Inc.  
200 N. Cedar Road  
New Lenox, IL 60451*



**1 FOUNDATION PILES PLAN**  
1/8" = 1'-0"



**2 ENLARGED PILE CAP**  
1/2" = 1'-0"



**3 PIER DETAIL**  
1/2" = 1'-0"

**1 FOUNDATION PILES PLAN**  
1/8" = 1'-0"

STRUCTURAL COLUMN SCHEDULE		PILE SCHEDULE		DESIGN CAPACITY	
TYPE	PILE TYPE / SIZE	DEPTH	ELEVATION	TENSION	COMPRESSION
PC-1.1	PC-1.1 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.2	PC-1.2 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.3	PC-1.3 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.4	PC-1.4 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.5	PC-1.5 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.6	PC-1.6 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.7	PC-1.7 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.8	PC-1.8 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.9	PC-1.9 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.10	PC-1.10 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.11	PC-1.11 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.12	PC-1.12 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.13	PC-1.13 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.14	PC-1.14 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.15	PC-1.15 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.16	PC-1.16 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.17	PC-1.17 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.18	PC-1.18 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.19	PC-1.19 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.20	PC-1.20 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.21	PC-1.21 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS
PC-1.22	PC-1.22 Pile Cap - 11.0" x 11.0" x 11.0"	11'-0"	11'-0"	0.00 KIPS	180.0 KIPS



## Radiation Survey Form

Location/Project ID: King Sykes Medical Building - Grade Beam Trenching

HP Technician: Steven Kowalczyk

Instrument ID: Ludlum 2221 w/ 44-10, serial no. 127272

Background = 2393 cpm

2X Background FAL = 4786 cpm

Sections 1-9 (North) \*\*27 feet per section\*\*

1	Surface CPM	18"	36"	
	2600	3400	3300	
2	Surface CPM	18"	36"	
	2700	3300	3300	
3	Surface CPM	18"	36"	48"
	3400	3300	3300	3100
4	Surface CPM	18"	36"	48"
	3100	2900	2800	2900
5	Surface CPM	18"	36"	48"
	2900	2200	2100	3300
6	Surface CPM	18"	36"	48"
	2000	2700	3000	3000
7	Surface CPM	18"	36"	54"
	2900	2800	3200	3400
8	Surface CPM	18"	36"	54"
	2500	2800	3400	3100
9	Surface CPM	18"	36"	54"
	2500	2300	3400	3300

Section 10-13 (East) \*\*22 feet per section\*\*

10	Surface CPM	18"	36"	54"
	2500	2200	3000	2900

	Surface CPM	18"	36"	54"
11	2100	3600	3100	4100
	Surface CPM	18"	36"	54"
12	2400	2600	2700	3500
	Surface CPM	18"	36"	54"
13	2300	2000	2100	3100

Section 14-21 (South) \*\*27 feet per section\*\*

	Surface CPM	18"	36"	54"
14	2300	2700	2400	2300
	Surface CPM	18"	36"	54"
15	2500	1900	3200	3000
	Surface CPM	18"	36"	54"
16	2800	2400	3200	2900
	Surface CPM	18"	36"	54"
17	2200	2300	2700	2400
	Surface CPM	18"	36"	54"
18	2100	2100	1900	2500
	Surface CPM	18"	36"	54"
19	2200	2400	2500	2500
	Surface CPM	18"	36"	54"
20	2500	2400	2600	3300
	Surface CPM	18"	36"	54"
21	2300	2500	2900	2600

Sections 22-27 (West) \*\*30 feet per section\*\*

	Surface CPM	18"	36"	54"
22	2800	2400	3200	3000
	Surface CPM	18"	36"	54"
23	2200	2300	2700	2400

24	Surface CPM 2100	18" 2100	36" 1900	54" 2500			
25	Surface CPM 2200	18" 2400	36" 2500	54" 2500	69" 2500		
26	Surface CPM 2500	18" 2400	36" 2600	54" 3300	69" 2900		
27	Surface CPM 2300	18" 2500	36" 2900	54' 2600	72' 2700	90" 2500	96" 2800

N Section 1-9= 243 feet total= 9 sections at 27 feet each  
 E 10-13= 88 feet total=4 sections at 22 feet each  
 S 14-21= 215 feet total= 8 sections at 27 feet each  
 W 22-27= 178 feet total= 6 sections at 30 feet each

Attachment D.2

Sewer and Water Trenching

King Sykes Medical Building  
2535 South Dr. Martin Luther King Jr. Drive  
Chicago, IL 60616

*Stan A. Huber Consultants, Inc.  
200 N. Cedar Road  
New Lenox, IL 60451*

# WATERMAIN PROFILE AT CITY OF CHICAGO RIGHT OF WAY

**WATERMAIN NOTES:**

- FITTINGS AND THEIR LOCATIONS INDICATED ON THE DRAWINGS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. NO ADDITIONAL PAYMENT WILL BE MADE FOR DEVIATIONS FROM THE INDICATED FITTINGS.
- THE CONTRACTOR MUST PROVIDE THURST RESTRAINTS IN ACCORDANCE WITH THE SPECIFICATION. THE CONTRACTOR MUST FURNISH AND INSTALL MECHANICAL JOINT THURST RESTRAINT GUNDS AT ALL FITTINGS AND MECHANICAL JOINTS.
- ALL VALVE VAULTS MUST BE CONSTRUCTED OF PRE-CAST REINFORCED CONCRETE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- SWAY PIPE AND FITTINGS THAT WILL NOT BE PRESSURE TESTED OR CHLORINATED TO PREVENT SOIL AND DEBRIS FROM ENTERING THE MAIN LINE SHALL BE INSTALLED WITH A FLUOROPOLYMER LINING WHEN POSSIBLE. WHEN CONNECTING NEW PIPE TO THE EXISTING WATER SYSTEM, USE OPERATING PRESSURE TO VISUALLY INSPECT FOR LEAKS. WHEN FABRICATING, PERFORM BACKWASH AND RECORDS OF THE BUREAU OF WATER QUALITY (137) 2443 194.
- WATERMAIN CONSTRUCTION INCLUDING SERVICE, ON SITE SHALL CONFORM TO STANDARD SPECIFICATIONS DETAIL.

**PLAN NOTES**

- THE CONTRACTOR SHALL DETERMINE THE EXISTENCE, NATURE AND EXACT LOCATION OF ALL UTILITY LINES AND APPURTENANCES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL BE NOTIFIED TO THE EARLIEST PRACTICAL LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- SEE ARCH. DRAWINGS FOR BUILDING STUD O.U.T.S.
- STORM SEWER PIPE 14" SHALL DIRECT CORRECT INTO 30" STORM SEWER AT NEAREST LOCATION, S.A.U.T. FOR CATCH DOWNSPOUT LOCATION.
- A 4" L.P.F. FRAME REQUIRED. MEDIUM FOUNDARY (ASBEST. INSULATION OR EQUIVALENT)
- SEE ELECTRICAL PLANS FOR INFORMATION ON LIGHTING FACILITIES AND TRANSFORMER PAD.
- SEE SUBSTITUTION DETAIL SHEET FOR CONSTRUCTION INFORMATION.
- FOR DRAWING INFORMATION, SEE GRADING PLANS.

ALL DOWNSTREAM EXISTING SEWER TO BE REUSED FOR THIS PROJECT BETWEEN 100' AND 300'. DR. MARTIN LUTHER KING JR. DR. MUST BE TELEPHONED IN THE PRESENCE OF A CITY SEWER INSPECTOR AND STRUCTURES MUST BE CLEANED OUT AS PART OF THIS PROJECT.

**LEGEND**

- EXISTING LIGHT STANDARD
- EXISTING POWER POLE
- EXISTING MANHOLE
- EXISTING STORM CATCH BASIN
- EXISTING AERIAL WIRES
- PROPOSED STORM SEWER
- PROPOSED SANITARY MAIN
- PROPOSED WATER MAIN
- PROPOSED STORM CATCH BASIN
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED ELECTRICAL TRANSFORMER
- PROPOSED LIGHT STANDARD
- OVERLAP ROUTE
- HIGH POINT

**STORM & SANITARY PIPES**

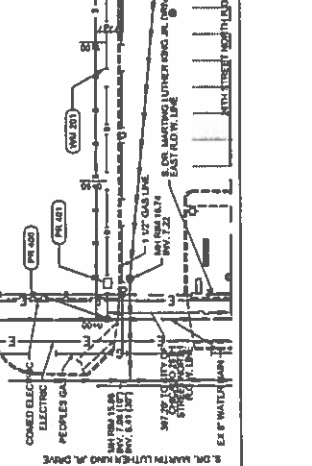
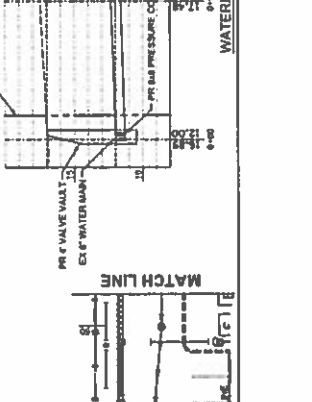
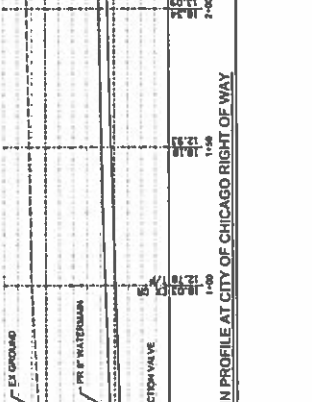
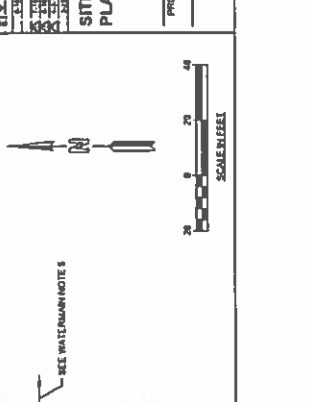
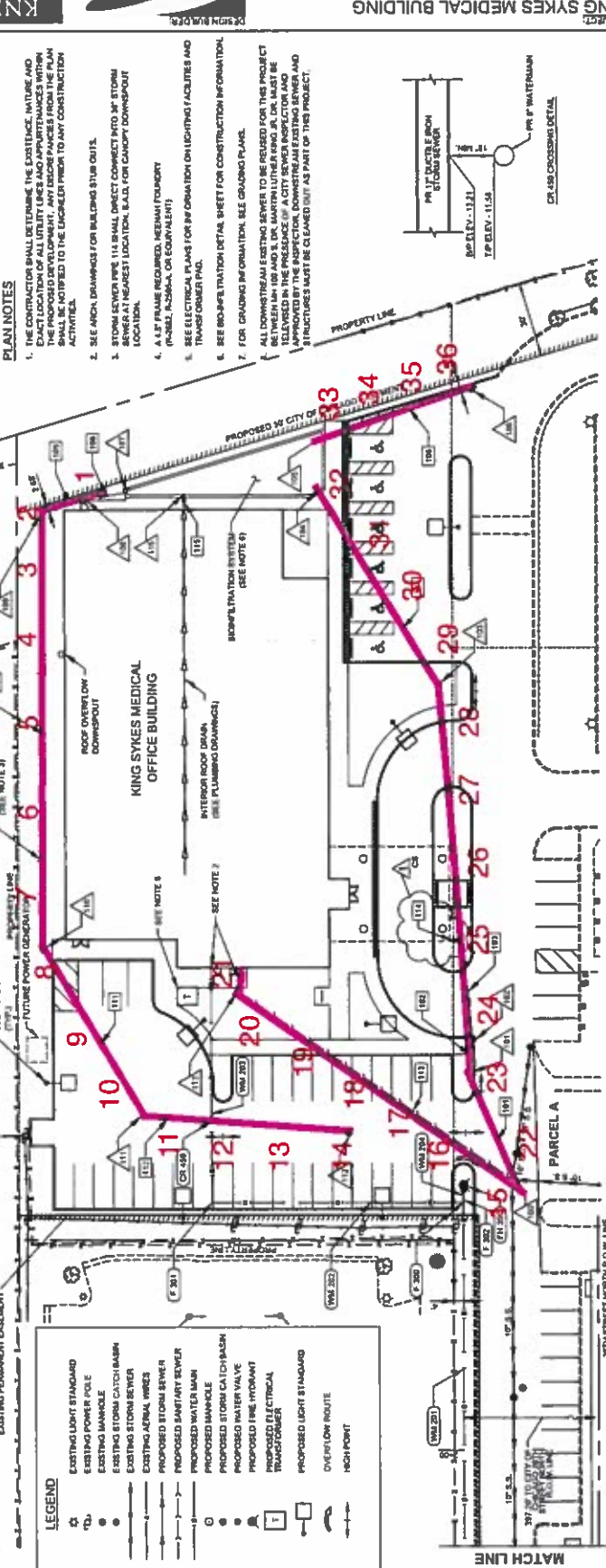
101	12" - 12" VCP @ 0.11%
102	12" - 12" RCP @ 0.11%
103	12" - 12" RCP @ 0.11%
104	12" - 12" RCP @ 0.11%
105	12" - 12" RCP @ 0.11%
106	12" - 12" RCP @ 0.11%
107	12" - 12" RCP @ 0.11%
108	12" - 12" RCP @ 0.11%
109	12" - 12" RCP @ 0.11%
110	12" - 12" RCP @ 0.11%
111	12" - 12" RCP @ 0.11%
112	12" - 12" RCP @ 0.11%
113	12" - 12" RCP @ 0.11%
114	12" - 12" RCP @ 0.11%
115	12" - 12" RCP @ 0.11%
116	12" - 12" RCP @ 0.11%
117	12" - 12" RCP @ 0.11%
118	12" - 12" RCP @ 0.11%
119	12" - 12" RCP @ 0.11%
120	12" - 12" RCP @ 0.11%

**STORM & SANITARY STRUCTURES**

101	EXISTING MANHOLE
102	EXISTING MANHOLE
103	EXISTING MANHOLE
104	EXISTING MANHOLE
105	EXISTING MANHOLE
106	EXISTING MANHOLE
107	EXISTING MANHOLE
108	EXISTING MANHOLE
109	EXISTING MANHOLE
110	EXISTING MANHOLE
111	EXISTING MANHOLE
112	EXISTING MANHOLE
113	EXISTING MANHOLE
114	EXISTING MANHOLE
115	EXISTING MANHOLE
116	EXISTING MANHOLE
117	EXISTING MANHOLE
118	EXISTING MANHOLE
119	EXISTING MANHOLE
120	EXISTING MANHOLE

**WATER MAIN PIPE, FITTINGS, VALVES & PRESSURE CONNECTIONS**

W-201	12" WATER MAIN
W-202	12" WATER MAIN
W-203	12" WATER MAIN
W-204	12" WATER MAIN
W-205	12" WATER MAIN
W-206	12" WATER MAIN
W-207	12" WATER MAIN
W-208	12" WATER MAIN
W-209	12" WATER MAIN
W-210	12" WATER MAIN
W-211	12" WATER MAIN
W-212	12" WATER MAIN
W-213	12" WATER MAIN
W-214	12" WATER MAIN
W-215	12" WATER MAIN
W-216	12" WATER MAIN
W-217	12" WATER MAIN
W-218	12" WATER MAIN
W-219	12" WATER MAIN
W-220	12" WATER MAIN



**KNIGHT**  
Engineers & Architects  
631 E. Bayshore Road - Suite 205  
Deerfield, IL 60015  
Phone: (708) 342-1250  
Fax: (708) 342-1250  
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**CARLSON CONSTRUCTION**  
17290 NEW LEXON ROAD  
JOLIET, IL 60433  
815-431-1400

**KING SYKES II**  
DR. KING SYKES II  
1300 BULL VALLEY DRIVE  
CHICAGO, IL 60608  
CHICAGO, IL 60618  
PROJECT: KING SYKES MEDICAL BUILDING  
255 SOUTH DR. MARTIN LUTHER KING JR. DR.  
CHICAGO, IL 60618

**SITE UTILITY PLAN**  
PROJECT: KING SYKES II  
DATE: 8-14-16  
PROJECT P: 7223

**C-5.0**

## Radiation Survey Form

Location/Project ID: King Sykes Medical Building - Sewer and Water Trenching

HP Technician: Steven Kowalczyk

Instrument ID: Ludlum 2221 w/ 44-10, serial no. 127272

Background = 2393 cpm

2X Background FAL = 4786 cpm

Sections of Pipe 108-112 \*\*26.4 feet per section\*\*

	Surface CPM	18"	36"	54"	72"	78"
1	2300	2400	3700	3500	4200	3800
	Surface CPM	18"	36"	54"	72"	84"
2	3000	2300	2400	3100	3000	4800
	Surface CPM	18"	36"	54"	63"	
3	2800	3000	3100	3300	4200	
	Surface CPM	18"	36"	54"	61"	
4	2300	4100	4000	4000	3700	
	Surface CPM	18"	36"	54"	60"	
5	2600	2800	3500	3200	2900	
	Surface CPM	18"	36"	54"	57"	
6	2900	3500	3500	3200	3100	
	Surface CPM	18"	36"	54"		
7	2800	2800	3700	3400		
	Surface CPM	18"	36"	54"	64"	
8	2600	2900	3200	3500	3400	
	Surface CPM	18"	36"	54"	72"	
9	1800	2100	2200	2400	2300	
	Surface CPM	18"	36"	54"	72"	82"
10	2400	2000	2600	2900	2700	2700

11	Surface CPM 1900	18" 2000	36" 2400	48" 2400		
12	Surface CPM 2000	18" 2400	36" 3000	48" 2700		
13	Surface CPM 2200	18" 2500	36" 3000	48" 2500		
14	Surface CPM 2200	18" 2300	36" 2800	54" 3100	66" 3400	

Pipe 113 \*\*18.8 feet per section\*\*

15	Surface CPM 2000	18" 2300	36" 2500	54" 2900	72" 2700	77" 2600
16	Surface CPM 2100	18" 2300	36" 2200	54" 2200	72" 2600	77" 2700
17	Surface CPM 2100	18" 2500	36" 1900	54" 2300	72" 2700	77" 2600
18	Surface CPM 2100	18" 2700	36" 2600	54" 3600	72" 4300	77" 4200
19	Surface CPM 2600	18" 3100	36" 3100	54" 3600	72" 2700	77" 2700
20	Surface CPM 2700	18" 2100	36" 2000	54" 3100	72" 3000	77" 2900
21	Surface CPM 1900	18" 2200	36" 2400	54" 2600	72" 2600	77" 2700

Sections of Pipe 101-104 \*\*26.7 feet per section\*\*

22	Surface CPM 1800	18" 2400	36" 2300	54" 2200	72" 2200	77" 2400	
23	Surface CPM 2100	18" 3000	36" 2600	54" 2500	72" 2600	90" 2000	108" 2000

24	Surface CPM 2500	18" 2300	36" 2600	54" 3100	72" 2800	90" 2900	108" 2900
25	Surface CPM 2100	18" 2500	36" 2600	54" 2700	72" 2800	77" 2600	
26	Surface CPM 2000	18" 2200	36" 3100	54" 2800	72" 3100	77" 2600	
27	Surface CPM 2600	18" 2300	36" 2400	54" 3100	72" 3000	77" 2800	
28	Surface CPM 2200	18" 2400	36" 2300	54" 2400	72" 2200	90" 1900	108" 2300
29	Surface CPM 2200	18" 2300	36" 2300	54" 2400	72" 3300	77" 3800	
30	Surface CPM 2200	18" 2800	36" 2700	54" 3300	72" 3700	77" 3800	
31	Surface CPM 2500	18" 2400	36" 2700	54" 3200	64" 3300		
32	Surface CPM 2400	18" 2100	36" 3100	54" 2800	64" 3200		

Pipe 106 \*\*15.7 feet per section\*\*

33	Surface CPM 2300	18" 2400	36" 2800	54" 4000	60" 3800		
34	Surface CPM 2300	18" 2300	36" 2700	54" 2600	60" 2900		
35	Surface CPM 2400	18" 2600	36" 2700	54" 3000	60" 2900		
36	Surface CPM 2100	18" 1900	36" 2100	54" 2300	72" 2200	84" 2300	



108, 109,110,111,112= \*\*370 feet total\*\*

113= \*\*132 feet total\*\*

101,102,103,104= \*\*294 feet total\*\*

106= \*\*63 feet total\*\*

Attachment D.3

Building Plumbing

King Sykes Medical Building  
2535 South Dr. Martin Luther King Jr. Drive  
Chicago, IL 60616

*Stan A. Huber Consultants, Inc.  
200 N. Cedar Road  
New Lenox, IL 60451*

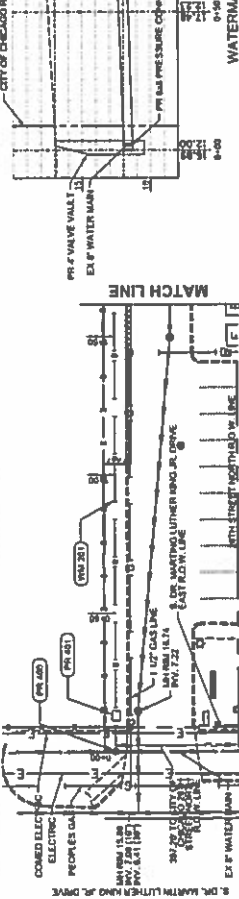
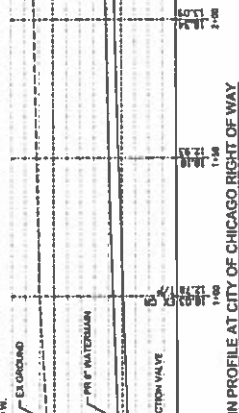
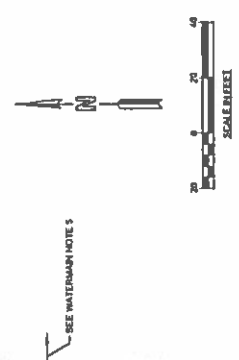
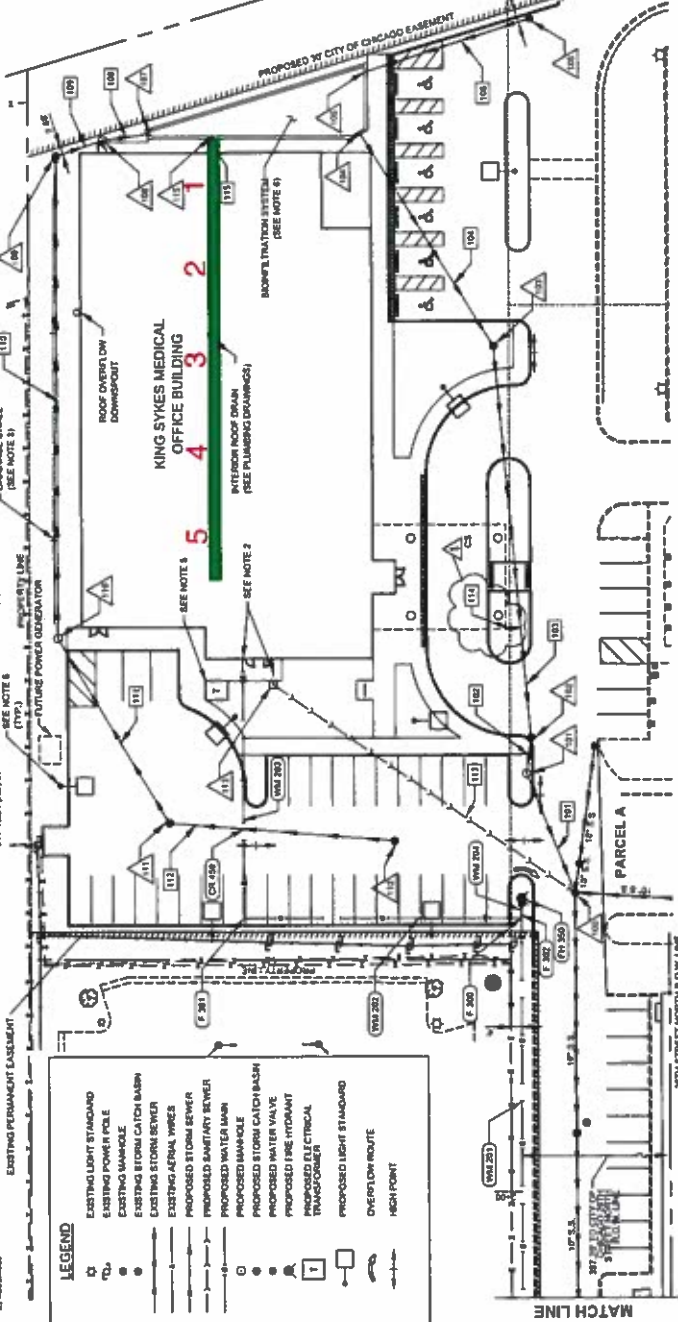
**WATERMAIN NOTES:**

- FITTINGS AND THEIR LOCATIONS INDICATED ON THE DRAWINGS ARE INTENTIVE. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS. NO ADDITIONAL PAYMENT WILL BE MADE FOR DEVIATIONS FROM THE INDICATED FITTINGS.
- THE CONTRACTOR MUST PROVIDE THURST RESTRAINTS IN ACCORDANCE WITH THE SPECIFICATION. THE CONTRACTOR MUST FURNISH AND INSTALL MECHANICAL JOINT THROUGHT RESTRAINT CLASPS AT ALL FITTINGS AND BE CHEMICAL JOINTS.
- ALL VALVE VALVES MUST BE CONSTRUCTED OF PVC-CAST REINFORCED CONCRETE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- SWAB PIPE AND FITTINGS THAT WILL NOT BE PRESSURE TESTED OR CHLORINATED WITH CHLORINE SOLUTION DURING INSTALLATION AND USE EXHAUSTIVE CARE TO PREVENT SOIL AND DEBRIS FROM ENTERING THE PIPE. IF NECESSARY, THE CONTRACTOR SHALL PLUG THE EXISTING WATER SYSTEM, WHEN CONNECTING NEW PIPE TO THE EXISTING WATER SYSTEM, USE OPERATING PRESSURE TO VISUALLY INSPECT FOR LEAKS. WHEN FEASIBLE, PERFORM PRESSURE AND LEAK TESTS ON ALL NEW PIPE AND FITTINGS. RECORDINGS AND REQUIREMENTS OF THE BUREAU OF WATER QUALITY (312) 744-1194.
- WATERMAIN CONSTRUCTION INCLUDING DEPTHS, ON SITE SHALL CONFORM TO STANDARD UNIFORM WATER MAIN.

**PLAN NOTES**

- THE CONTRACTOR SHALL DETERMINE THE EXISTENCE, NATURE AND EXACT LOCATION OF ALL UTILITY LINES AND APPURTENANCES WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AND SHALL BE NOTIFIED TO THE ENGINEER PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- SEE ARCH. DRAWINGS FOR BUILDING STUD OUTS.
- STORM SEWER PIPE 14" SHALL DIRECTLY CONNECT INTO THE STORM SEWER AT NEAREST LOCATION, S.A.D. FOR CATCH DOWNSPOUT LOCATION.
- A 4" FRAME REQUIRED. MEDIAN FOOTING (R-202, R-203, OR EQUIVALENT)
- SEE ELECTRICAL PLANS FOR INFORMATION ON LIGHTING FACILITIES AND TRANSFORMER PAD.
- SEE BOUNDARY DETAIL SHEET FOR CONSTRUCTION INFORMATION.
- FOR GRADING INFORMATION, SEE GRADING PLANS.
- ALL DOWNSTREAM EXISTING SEWER TO BE REUSED FOR THIS PROJECT BETWEEN 400' AND 500'. DR. MARTIN LUTHER KING JR. DR. MUST BE FOLLOWED BY THE PRESENCE OF A CITY SEWER INSPECTOR AND ALL STRUCTURES MUST BE CLEANED OUT AS PART OF THIS PROJECT.

WATER MAIN PIPE, FITTINGS, VALVES & PRESSURE CONNECTIONS	
(WV 201)	12" DIA. WATER MAIN
(WV 202)	18" DIA. WATER MAIN
(WV 203)	24" DIA. WATER MAIN
(WV 204)	30" DIA. WATER MAIN
(WV 205)	36" DIA. WATER MAIN
(WV 206)	42" DIA. WATER MAIN
(WV 207)	48" DIA. WATER MAIN
(WV 208)	54" DIA. WATER MAIN
(WV 209)	60" DIA. WATER MAIN
(WV 210)	66" DIA. WATER MAIN
(WV 211)	72" DIA. WATER MAIN
(WV 212)	78" DIA. WATER MAIN
(WV 213)	84" DIA. WATER MAIN
(WV 214)	90" DIA. WATER MAIN
(WV 215)	96" DIA. WATER MAIN
(WV 216)	102" DIA. WATER MAIN
(WV 217)	108" DIA. WATER MAIN
(WV 218)	114" DIA. WATER MAIN
(WV 219)	120" DIA. WATER MAIN
(WV 220)	126" DIA. WATER MAIN
(WV 221)	132" DIA. WATER MAIN
(WV 222)	138" DIA. WATER MAIN
(WV 223)	144" DIA. WATER MAIN
(WV 224)	150" DIA. WATER MAIN
(WV 225)	156" DIA. WATER MAIN
(WV 226)	162" DIA. WATER MAIN
(WV 227)	168" DIA. WATER MAIN
(WV 228)	174" DIA. WATER MAIN
(WV 229)	180" DIA. WATER MAIN
(WV 230)	186" DIA. WATER MAIN
(WV 231)	192" DIA. WATER MAIN
(WV 232)	198" DIA. WATER MAIN
(WV 233)	204" DIA. WATER MAIN
(WV 234)	210" DIA. WATER MAIN
(WV 235)	216" DIA. WATER MAIN
(WV 236)	222" DIA. WATER MAIN
(WV 237)	228" DIA. WATER MAIN
(WV 238)	234" DIA. WATER MAIN
(WV 239)	240" DIA. WATER MAIN
(WV 240)	246" DIA. WATER MAIN
(WV 241)	252" DIA. WATER MAIN
(WV 242)	258" DIA. WATER MAIN
(WV 243)	264" DIA. WATER MAIN
(WV 244)	270" DIA. WATER MAIN
(WV 245)	276" DIA. WATER MAIN
(WV 246)	282" DIA. WATER MAIN
(WV 247)	288" DIA. WATER MAIN
(WV 248)	294" DIA. WATER MAIN
(WV 249)	300" DIA. WATER MAIN
(WV 250)	306" DIA. WATER MAIN
(WV 251)	312" DIA. WATER MAIN
(WV 252)	318" DIA. WATER MAIN
(WV 253)	324" DIA. WATER MAIN
(WV 254)	330" DIA. WATER MAIN
(WV 255)	336" DIA. WATER MAIN
(WV 256)	342" DIA. WATER MAIN
(WV 257)	348" DIA. WATER MAIN
(WV 258)	354" DIA. WATER MAIN
(WV 259)	360" DIA. WATER MAIN
(WV 260)	366" DIA. WATER MAIN
(WV 261)	372" DIA. WATER MAIN
(WV 262)	378" DIA. WATER MAIN
(WV 263)	384" DIA. WATER MAIN
(WV 264)	390" DIA. WATER MAIN
(WV 265)	396" DIA. WATER MAIN
(WV 266)	402" DIA. WATER MAIN
(WV 267)	408" DIA. WATER MAIN
(WV 268)	414" DIA. WATER MAIN
(WV 269)	420" DIA. WATER MAIN
(WV 270)	426" DIA. WATER MAIN
(WV 271)	432" DIA. WATER MAIN
(WV 272)	438" DIA. WATER MAIN
(WV 273)	444" DIA. WATER MAIN
(WV 274)	450" DIA. WATER MAIN
(WV 275)	456" DIA. WATER MAIN
(WV 276)	462" DIA. WATER MAIN
(WV 277)	468" DIA. WATER MAIN
(WV 278)	474" DIA. WATER MAIN
(WV 279)	480" DIA. WATER MAIN
(WV 280)	486" DIA. WATER MAIN
(WV 281)	492" DIA. WATER MAIN
(WV 282)	498" DIA. WATER MAIN
(WV 283)	504" DIA. WATER MAIN
(WV 284)	510" DIA. WATER MAIN
(WV 285)	516" DIA. WATER MAIN
(WV 286)	522" DIA. WATER MAIN
(WV 287)	528" DIA. WATER MAIN
(WV 288)	534" DIA. WATER MAIN
(WV 289)	540" DIA. WATER MAIN
(WV 290)	546" DIA. WATER MAIN
(WV 291)	552" DIA. WATER MAIN
(WV 292)	558" DIA. WATER MAIN
(WV 293)	564" DIA. WATER MAIN
(WV 294)	570" DIA. WATER MAIN
(WV 295)	576" DIA. WATER MAIN
(WV 296)	582" DIA. WATER MAIN
(WV 297)	588" DIA. WATER MAIN
(WV 298)	594" DIA. WATER MAIN
(WV 299)	600" DIA. WATER MAIN
(WV 300)	606" DIA. WATER MAIN



## Radiation Survey Form

Location/Project ID: King Sykes Medical Building - Building Plumbing

HP Technician: Steven Kowalczyk

Instrument ID: Ludlum 2221 w/ 44-10, serial no. 127272

Background = 2393 cpm

2X Background FAL = 4786 cpm

Section of Trench	Surface CPM	18"	36"	54"	60"
1	1700	2500	2900	2400	2500
2	1800	2500	2300	4000	2700
3	1900	2100	2600	2500	2500
4	2000	2500	2900	2700	2600
5	1800	2100	2000	1900	N/A

Pipe 115

**\*\*28 feet per section\*\***

**\*\*140 feet total\*\***