

APPENDIX E

CONSTRUCTION

- *Noise Level Projections*
- *Receptor Areas*

Phase	Sub-Phase	Equipment	Usage Factor	L _{max} Level	L _{max} Level (with shielding as needed)	ACME				OFFICE				
						Quantity	Quantity/Usage- Adjusted L _{eq} Level	Overall Level at 50 feet	Notes	Quantity	Quantity/Usage- Adjusted L _{eq} Level	Overall Level at 50 feet	Notes	
Demolition		Generator	0.5	82	82	1	79.0	87.0		2	82.0	89.6		
		Chipping Gun	0.2	73	73	15	77.8			15	77.8			
		Torches	0.4	73	73	3	73.8			3	73.8			
		Skid Steer	0.4	80	80	2	79.0			4	82.0			
		Excavator	0.4	85	85	2	84.0			4	87.0			
Foundation	Rock Excavation / Impact Pile Driving	Generator	0.5	82	82	1	79.0	94.0		2	82.0	94.4		
		Drill Rig	0.2	85	85	3	82.8			2	81.0			
		Rock Hammer or Impact Pile Driver	0.2	95	95	1	88.0			1	88.0			
		Air Compressor	0.4	80	80	1	76.0			1	76.0			
		Cherry Picker	0.16	85	85	1	77.0			1	77.0			
		Excavator	0.4	85	85	3	85.8			5	88.0			
		Rebar Bender	0.2	80	80	2	76.0			2	76.0			
		Concrete Truck	0.4	85	85	2	84.0			2	84.0			
		Concrete Pump	0.2	82	82	1	75.0			1	75.0			
		Chain Saw	0.2	85	85	3	82.8			3	82.8			
	Demo Saw	0.2	90	90	3	87.8	3	87.8						
		w/o Rock Drill or Pile Driving	Typical foundation construction will not require rock hammering or impact pile driving, but a rock hammer will be on standby in case of boulders and there may be some impact pile driving during dewatering. The aggregate use of both pieces would not be more than approximately 9 weeks.						92.7				93.3	
	Superstructure		Crane	0.16	85	85	1	77.0	89.3		3	81.8	90.2	
Generator			0.5	82	82	2	82.0	3			83.8			
Stud Welder			0.4	73	73	1	69.0	1			69.0			
Demo Saw / Grinder			0.2	90	90	3	87.8	3			87.8			
Torches			0.4	73	73	3	73.8	3			73.8			
Hoist			0.5	75	75	1	72.0	1			72.0			
Concrete		Rebar Bender	0.2	80	80	1	73.0	85.1		2	76.0	85.3		
		Concrete Trowel	0.5	67	67	6	71.8			12	74.8			
		Concrete Truck	0.4	85	85	2	84.0			2	84.0			
		Concrete Pump	0.2	82	82	1	75.0			1	75.0			
		Hoist	0.5	75	75	1	72.0			1	72.0			
Exterior and Interior		Mini Crane	0.16	85	85	1	77.0	78.5	Equipment operating within the building includes 25 dBA shielding for standard building attenuation.	2	80.1	80.9	Equipment operating within the building includes 25 dBA shielding for standard building attenuation.	
		Hoist	0.5	75	75	1	72.0			1	72.0			
		Man Lift	0.2	85	60	15	64.8			25	67.0			
		Pipe Welder	0.4	73	48	4	50.0			2	47.0			
		Masonry/Tile Saw	0.2	90	65	2	61.0			2	61.0			

SUMMARY		
Phase	Combined L _{eq} at 50 ft	
	Acme	Office
Demolition	87.0	89.6
Foundation	94.0	94.4
Foundation w/o Rock Drill or Impact Pile Driver	92.7	93.3
Superstructure	89.3	90.2
Concrete	85.1	85.3
Exterior and Interior	78.5	80.9

Receiver Number	Receiver Area	Survey Site	Increment Threshold	Existing Leq
1	Guernsey Street Residences	1	3	62
2	Dobbins Street Residences	1	3	62
3	North 13th Residence	4	3	62.2
4	Quay & Franklin Street Residences	2	3.5	61.5
5	Calyer Street Residences	2	3.5	61.5
6	Banker & Mesarole Street Residences	1	3	62
7	Meserole Ave & Dobbins Street Residences	1	3	62

Variables Recepor:1 Demolition (Office)89.582 Distance (15 increment):216.3 Distance (20 increment):120.3 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:1 Rock Excavation / Impact Pile Driving (Office)94.401 Distance (15 increment):376.7 Distance (20 increment):209.5 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:1 Foundation w/o rock drills or pile driving (Office)93.268 Distance (15 increment):330.6 Distance (20 increment):183.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0
Variables Recepor:4 Demolition (Office)89.582 Distance (15 increment):229.11 Distance (20 increment):127.4 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq61.5	Variables Recepor:4 Rock Excavation / Impact Pile Driving (Office)94.401 Distance (15 increment):399 Distance (20 increment):221.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq61.5	Variables Recepor:4 Foundation w/o rock drills (Office)93.268 Distance (15 increment):350.2 Distance (20 increment):194.8 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq61.5
Variables Recepor:6 Demolition (Office)89.582 Distance (15 increment):216.3 Distance (20 increment):120.3 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:6 Rock Excavation / Impact Pile Driving (Office)94.401 Distance (15 increment):376.7 Distance (20 increment):209.5 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:6 Foundation w/o rock drills (Office)93.268 Distance (15 increment):330.6 Distance (20 increment):183.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0
Variables Recepor:6 Demolition (ACME)87.0 Distance (15 increment):159.8 Distance (20 increment):88.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:6 Rock Excavation / Impact Pile Driving (ACME)94.0 Distance (15 increment):357.8 Distance (20 increment):199.0 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:6 Foundation w/o rock drills (ACME)92.7 Distance (15 increment):309.0 Distance (20 increment):171.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0
Variables Recepor:7 Demolition (Office)89.582 Distance (15 increment):216.3 Distance (20 increment):120.3 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:7 Rock Excavation / Impact Pile Driving (Office)94.401 Distance (15 increment):376.7 Distance (20 increment):209.5 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:7 Foundation w/o rock drills (Office)93.268 Distance (15 increment):330.6 Distance (20 increment):183.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0
Variables Recepor:7 Demolition (ACME)87.0 Distance (15 increment):159.8 Distance (20 increment):88.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:7 Rock Excavation / Impact Pile Driving (ACME)94.0 Distance (15 increment):357.8 Distance (20 increment):199.0 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0	Variables Recepor:7 Foundation w/o rock drills (ACME)92.7 Distance (15 increment):309.0 Distance (20 increment):171.9 15 Increment Check15.00 20 Increment Check20.00	Resulting Existing Leq62.0

Distance Attenuation Formula:
 $Leq_{50ft} - 20 \cdot \log(\text{newdistance}/50)$

Increment Formula:
 $10 \cdot \log(10^{(\text{Leq}_{exist}/10)} + 10^{(\text{Leq}_{constr}/10)}) - \text{Leq}_{exist}$

Increment Formula incorporating Distance Attenuation Formula
 $10 \cdot \log(10^{(\text{Leq}_{exist}/10)} + 10^{((\text{Leq}_{50ft} - 20 \cdot \log(\text{newdistance}/50))/10)}) - \text{Leq}_{exist}$

Variables Recepor: 6 Demolition (ACME) 86.955 Distance (15 increment): 159.8 Distance (20 increment): 88.9 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Rock Excavation / Impact Pile Driving (ACME) 93.955 Distance (15 increment): 357.8 Distance (20 increment): 199.0 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Foundation w/o rock drills (ACME) 92.680 Distance (15 increment): 309.0 Distance (20 increment): 171.9 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Superstructure (ACME) 89.329 Distance (15 increment): 210.1 Distance (20 increment): 116.8 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Concrete (ACME) 85.058 Distance (15 increment): 128.5 Distance (20 increment): 71.5 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Exteriors+Interiors (ACME) 78.499 Distance (15 increment): 60.4 Distance (20 increment): 33.6 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0
Variables Recepor: 6 Demolition (Office) 89.582 Distance (15 increment): 216.3 Distance (20 increment): 120.3 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Rock Excavation / Impact Pile Driving (Office) 94.401 Distance (15 increment): 376.7 Distance (20 increment): 209.5 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Foundation w/o rock drills (Office) 93.268 Distance (15 increment): 330.6 Distance (20 increment): 183.9 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Superstructure+Concrete (Office) 91.342 Distance (15 increment): 264.9 Distance (20 increment): 147.3 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 6 Exteriors+Interiors (Office) 80.910 Distance (15 increment): 79.7 Distance (20 increment): 44.3 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0		
Variables Recepor: 7 Demolition (ACME) 86.955 Distance (15 increment): 159.8 Distance (20 increment): 88.9 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Rock Excavation / Impact Pile Driving (ACME) 93.955 Distance (15 increment): 357.8 Distance (20 increment): 199.0 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Foundation w/o rock drills (ACME) 92.680 Distance (15 increment): 309.0 Distance (20 increment): 171.9 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Superstructure (ACME) 89.329 Distance (15 increment): 210.1 Distance (20 increment): 116.8 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Concrete (ACME) 85.058 Distance (15 increment): 128.5 Distance (20 increment): 71.5 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Exteriors+Interiors (ACME) 78.499 Distance (15 increment): 60.4 Distance (20 increment): 33.6 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0
Variables Recepor: 7 Demolition (Office) 89.582 Distance (15 increment): 216.3 Distance (20 increment): 120.3 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Rock Excavation / Impact Pile Driving (Office) 94.401 Distance (15 increment): 376.7 Distance (20 increment): 209.5 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Foundation w/o rock drills (Office) 93.268 Distance (15 increment): 330.6 Distance (20 increment): 183.9 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Superstructure+Concrete (Office) 91.342 Distance (15 increment): 264.9 Distance (20 increment): 147.3 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0	Variables Recepor: 7 Exteriors+Interiors (Office) 80.910 Distance (15 increment): 79.7 Distance (20 increment): 44.3 15 Increment Check 15.00 20 Increment Check 20.00	Resulting Existing Leq 62.0		

Distance Attenuation Formula:

$Leq_{50ft-20} = 10 \cdot \log(\frac{newdistance}{50})$

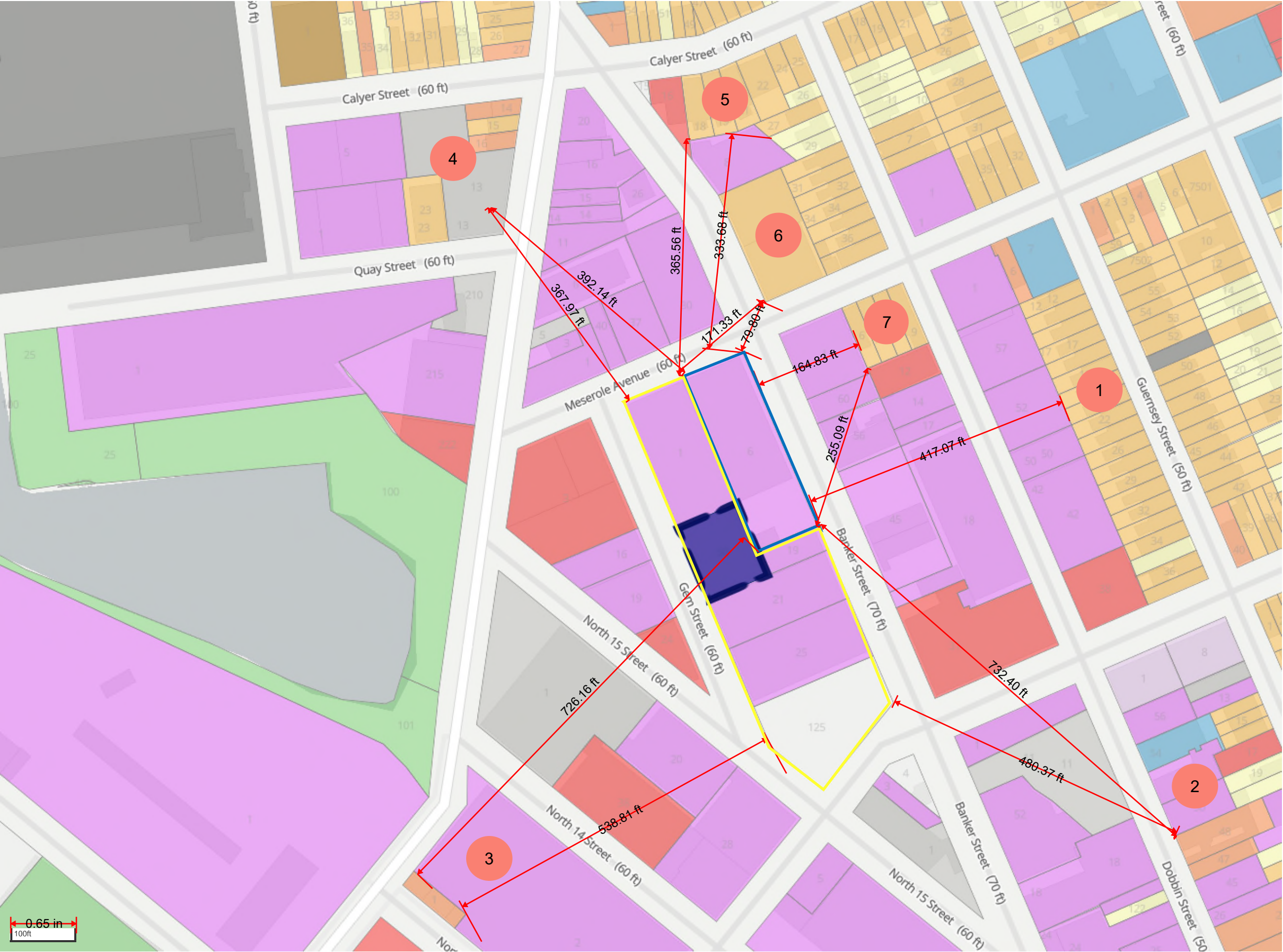
Increment Formula:

$10 \cdot \log(10^{\frac{Leq_{exist}}{10}} + 10^{\frac{Leq_{constr}}{10}}) - Leq_{exist}$

Increment Formula incorporating Distance Attenuation Formula

$10 \cdot \log(10^{\frac{Leq_{exist}}{10}} + 10^{\frac{(Leq_{50ft-20} \cdot \log(\frac{newdistance}{50}))}{10}}) - Leq_{exist}$

		ACME								Office						
Receptor		Demo	Rock Excavation / Imact Pile Driving	Foundation	Superstructure	Concrete	Exteriors (w/ Interiors Overlap)	Interiors + Move-in	Total (Excluding Interiors / Move-In)	Demo	Rock Excavation / Impact Pile Driving	Foundation	Superstructure	Exteriors (w/ Interiors Overlap)	Interiors	Total (Excluding Interiors)
	Duration (months):	3	2.5	4	4	1	3	9	15	3	2.5	5	7	6	9	21
6	Obj Distance	160	358	309	210	128	60	60		216	377	331	265	80	80	
	V Obj Distance	89	199	172	117	71	34	34		120	210	184	147	44	44	
	% Site Obj	19%	100%	81%	42%	7%	0%	0%		3%	28%	21%	10%	0%	0%	
	% Site V Obj	0%	38%	25%	4%	0%	0%	0%		0%	2%	0%	0%	0%	0%	
	Duration Obj	0.6	2.5	1.5	1.7	0.1	0	0	6.4	0.1	0.7	1.1	0.7	0	0	2.6
	Duration V Obj	0	0.9	1.0	0.2	0	0	0	2.1	0	0.1	0	0	0	0	0.1
7	Obj Distance	160	358	309	210	128	60	60		216	377	331	265	80	80	
	V Obj Distance	89	199	172	117	71	34	34		120	210	184	147	44	44	
	% Site Obj	0%	100%	100%	27%	0%	0%	0%		0%	45%	22%	0%	0%	0%	
	% Site V Obj	0%	20%	2%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	
	Duration Obj	0	2.5	1.5	1.1	0	0	0	5.1	0	1.1	1.1	0	0	0	2.2
	Duration V Obj	0	0.5	0.1	0	0	0	0	0.6	0	0	0	0	0	0	0



Zoning and Land Use

Tax Lots ☐

- One & Two Family Buildings
- Multi-Family Walk-Up Buildings
- Multi-Family Elevator Buildings
- Mixed Residential & Commercial Buildings
- Commercial & Office Buildings
- Industrial & Manufacturing
- Transportation & Utility
- Public Facilities & Institutions
- Open Space & Outdoor Recreation
- Parking Facilities
- Vacant Land
- Other

Basemaps

Subways ☒

Building Footprints ☐