APPENDIX F
CONSTRUCTION

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Appendix F

Construction Descriptions

Table F-1: Tentative Construction Schedule

Act ID	Description	Original Duration	Early Start	Early Finish	%
Area 1					
Site 1- 29 Months					
Commercial Building					
708 1st Avenue 45 Story Commercial Tower					
1010	Excavation	75	02JAN08	16APR08	0
1000	Foundations	114	17APR08	26SEP08	0
1030	Superstructure	130	29SEP08	30APR09	0
1040	Interiors	110	01MAY09	05OCT09	0
1050	Exteriors	60	06OCT09	29JAN10	0
1060	Comissioning	80	01FEB10	24MAY10	0
Site 1A- 7 Months					
Commercial Building					
709 1st Avenue Tower Underground Garage					
1080	Excavation/Finishes	140	14FEB08	29AUG08	0
Site 2- 18 Months					
Underground Garage					
Open Areas Underground Garage-Site 2, 3, 6, 7, 8					
1090	Excacation/Foundation/Finishes	380	27JUN08	24DEC09	0
Site 3- 15 Months					
Open Spaces					
Open Areas Landscaping, Fountains Work					
1150	Sitework/Landscaping/Fountain	315	13APR09	07JUL10	0
Area 2					
Site 4- 25 Months					
Apartment Building					
685 1st Avenue 69 Story Residential Tower					
1011	Excavation	67	29SEP08	02JAN09	0
1001	Foundations	73	05JAN09	16APR09	0
1031	Superstructure	100	17APR09	02DEC09	0
1041	Interiors	150	22SEP09	26APR10	0
1051	Exteriors	80	16MAR10	06JUL10	0
1061	Comissioning	80	07JUL10	27OCT10	0
Site 5- 5 Months					
Underground Garage					
685 1st Avenue 69 Story Residential Tower					
1070	Excavation/ Foundation/.Finishes	100	28OCT08	19MAR09	0
Area 3					
Site 6- 28 Months					
Apartment Building					
700 1st Avenue 66 Story Residential Tower					
1012	Excavation	60	03DEC09	01MAR10	0
1002	Foundations	60	02MAR10	24MAY10	0
1032	Superstructure	130	25MAY10	26NOV10	0
1042	Interiors	170	29NOV10	27JUL11	0
1052	Exteriors	100	28JUL11	15DEC11	0
1062	Comissioning	80	16DEC11	05APR12	0
Site 7- 28 Months					
Apartment Building					
700 1st Avenue 60 Story Residential Tower					
1013	Excavation	45	13APR10	15JUN10	0
1003	Foundations	135	16JUN10	24DEC10	0
1033	Superstructure	130	27DEC10	28JUN11	0
1043	Interiors	170	29JUN11	23FEB12	0
1053	Exteriors	100	24FEB12	13JUL12	0
1063	Comissioning	80	16JUL12	06NOV12	0
Site 8- 28 Months					
Apartment Building					
700 1st Avenue 57 Story Residential Tower					
1014	Excavation	50	28JUL10	05OCT10	0
1004	Foundations	70	06OCT10	14JAN11	0
1034	Superstructure	130	17JAN11	20JUL11	0
1044	Interiors	170	21JUL11	15MAR12	0
1054	Exteriors	100	16MAR12	03AUG12	0
1064	Comissioning	75	06AUG12	20NOV12	0
Area 4					
Site 9- 23 Months					
Apartment Building					
616 1st Avenue 47 Story Residential Tower					
1015	Excavation	50	21JUL11	27SEP11	0
1005	Foundations	70	28SEP11	05JAN12	0
1035	Superstructure	120	06JAN12	21JUN12	0
1045	Interiors	100	22JUN12	13NOV12	0
1055	Exteriors	80	14NOV12	12MAR13	0
1065	Comissioning	80	13MAR13	02JUL13	0
Site 10- 22 Months					
Apartment Building					
616 1st Avenue 32 Story Residential Tower					
1016	Excavation	45	06AUG12	09OCT12	0
1006	Foundations	75	10OCT12	28JAN13	0
1036	Superstructure	120	29JAN13	17JUL13	0
1046	Interiors	100	18JUL13	09DEC13	0
1056	Exteriors	80	10DEC13	03APR14	0
1066	Comissioning	60	06FEB14	01MAY14	0
Site 11- 19 Months					
Community Space					
616 1st Avenue 5 Story Community Building					
1017	Excavation	45	21DEC12	26FEB13	0
1007	Foundations	55	27FEB13	14MAY13	0
1037	Superstructure	120	15AUG13	05FEB14	0
1047	Interiors	95	06FEB14	20JUN14	0
1057	Exteriors	50	04APR14	13JUN14	0
1067	Comissioning	30	23MAY14	07JUL14	0
Site 12- 7 Months					
Underground Garage					
616 1st Avenue 5 Story Community Building					
1077	Excavation/Finishes	120	27FEB13	14AUG13	0
Site 13- 6 Months					
Open Spaces					
616 1st Avenue 5 Story Community Building					
1087	Sitework and Landscape	115	08JUL14	17DEC14	0

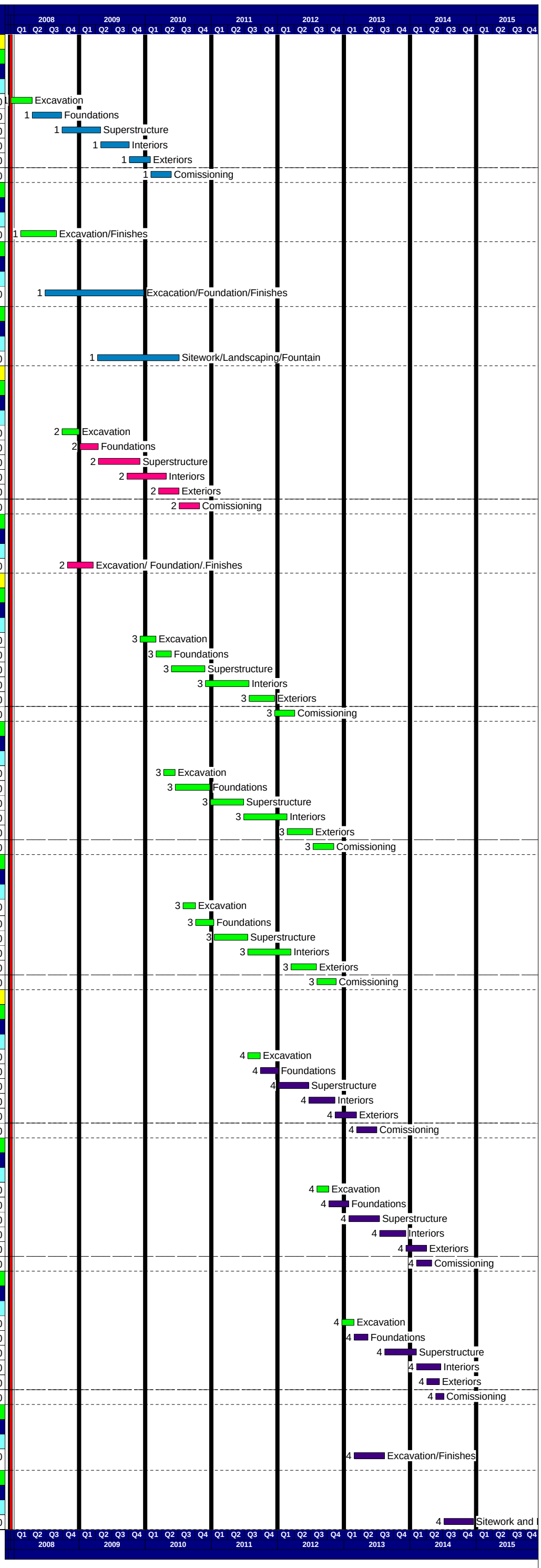


Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Excavation	Site 1	1/2/2008	2/12/2008	1	Generators	GR	Diesel	400	2	50%	100%
		1/2/2008	4/16/2008	1	Excavator	EX	Diesel	250	2	40%	80%
		1/2/2008	4/16/2008	1	Submersible Pump	SP	Electric	1	3	20%	50%
		1/2/2008	4/16/2008	1	Jack Hammer	JM	Electric	55	2	25%	70%
		1/2/2008	4/16/2008	1	Compactor	RC	Diesel	105	1	40%	50%
		1/2/2008	4/16/2008	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		1/2/2008	4/16/2008	1	Compressor	CP	Electric	125	1	10%	30%
		1/2/2008	4/16/2008	1	Backhoe/Loader	BH	Gasoline	60	2	20%	80%
		1/2/2008	4/16/2008	1	Bulldozer	BD	Diesel	205	2	20%	80%
		1/2/2008	4/16/2008	1	Pile Drives	PD	Diesel	310	1	75%	50%
		1/2/2008	4/16/2008	1	Demolition Hammer	DH	Electric	1	2	30%	40%
Foundations	Site 1	4/17/2008	9/26/2008	1	Concrete Pumps	CP	Diesel	400	3	50%	50%
		4/17/2008	9/26/2008	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		4/17/2008	9/26/2008	1	Core Drilling	CD	Electric	5	6	10%	40%
		4/17/2008	9/26/2008	1	Angle Grinder	AG	Electric	1	4	10%	20%
		4/17/2008	9/26/2008	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		4/17/2008	9/26/2008	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		4/17/2008	9/26/2008	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		4/17/2008	9/26/2008	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		4/17/2008	9/26/2008	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		4/17/2008	9/26/2008	1	Cut off saws	CS	Electric	2	2	10%	20%
		4/17/2008	9/26/2008	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Underground Garage	Site 1A	2/14/2008	8/29/2008	1	Excavator	EX	Diesel	250	1	40%	80%
		2/14/2008	8/29/2008	1	Submersible Pump	SP	Electric	1	3	20%	50%
		2/14/2008	8/29/2008	1	Jack Hammer	JM	Electric	55	1	25%	70%
		2/14/2008	8/29/2008	1	Compactor	RC	Diesel	105	1	40%	50%
		2/14/2008	8/29/2008	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		2/14/2008	8/29/2008	1	Compressor	CP	Electric	125	1	10%	30%
		2/14/2008	8/29/2008	1	Backhoe/Loader	BH	Gasoline	60	2	20%	80%
		2/14/2008	8/29/2008	1	Bulldozer	BD	Diesel	205	3	20%	80%
		2/14/2008	8/29/2008	1	Pile Drives	PD	Diesel	310	1	75%	50%
		2/14/2008	8/29/2008	1	Demolition Hammer	DH	Electric	1	2	30%	40%
		2/14/2008	8/29/2008	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		2/14/2008	8/29/2008	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		2/14/2008	8/29/2008	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		2/14/2008	8/29/2008	1	Cut off saws	CS	Electric	2	2	30%	20%
		2/14/2008	8/29/2008	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		2/14/2008	8/29/2008	1	Core Drilling	CD	Electric	5	3	10%	40%
		2/14/2008	8/29/2008	1	Angle Grinder	AG	Electric	1	4	10%	20%
		2/14/2008	8/29/2008	1	Towable Hole Digger	HD	Gasoline	8	4	3%	50%
		2/14/2008	8/29/2008	1	2 ton Chain Hoist	CH	manual	0	2	20%	20%
		2/14/2008	8/29/2008	1	Power Trowel	PT	Gasoline	8	5	20%	50%
		2/14/2008	8/29/2008	1	Concrete Pump	CP	Diesel	400	2	50%	30%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Superstructure	Site 1	9/29/2008	4/30/2009	1	Tower Crane	CR	Diesel	131	2	75%	100%
		9/29/2008	4/30/2009	1	Hoist	HT	Electric	100	2	75%	100%
		9/29/2008	4/30/2009	1	Jack Hammer	JM	Electric	55	3	50%	30%
		9/29/2008	4/30/2009	1	Concrete Pumps	CP	Diesel	400	3	50%	50%
		9/29/2008	4/30/2009	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		9/29/2008	4/30/2009	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		9/29/2008	4/30/2009	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		9/29/2008	4/30/2009	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		9/29/2008	4/30/2009	1	Cut off saws	CS	Electric	2	2	10%	20%
		9/29/2008	4/30/2009	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		9/29/2008	4/30/2009	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		9/29/2008	4/30/2009	1	Core Drilling	CD	Electric	5	6	10%	40%
		9/29/2008	4/30/2009	1	Impact Wrenches	IW	Electric	125	5	10%	30%
		9/29/2008	4/30/2009	1	Welders	WD	Electric	200amp	4	10%	30%
		9/29/2008	4/30/2009	1	Angle Grinder	AG	Electric	1	4	10%	20%
		9/29/2008	4/30/2009	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		9/29/2008	4/30/2009	1	Power Trowel	PT	Gasoline	8	5	25%	50%
		9/29/2008	4/30/2009	1	Compressor	CP	Electric	125	1	10%	30%
Interiors	Site 1	5/1/2009	10/5/2009	1	Drill	DR	Electric	4	7	40%	30%
		5/1/2009	10/5/2009	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		5/1/2009	10/5/2009	1	Cut off saws	CS	Electric	2	2	10%	20%
		5/1/2009	10/5/2009	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		5/1/2009	10/5/2009	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		5/1/2009	10/5/2009	1	Core Drilling	CD	Electric	5	6	10%	40%
		5/1/2009	10/5/2009	1	Fork Lift	FL	Diesel	5	2	20%	30%
		5/1/2009	10/5/2009	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 1	10/6/2009	1/29/2010	1	Compactor	RC	Diesel	105	1	50%	20%
		10/6/2009	1/29/2010	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		10/6/2009	1/29/2010	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		10/6/2009	1/29/2010	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 1	2/1/2010	5/24/2010		n/a						
Open Areas Underground	Site 2	6/27/2008	8/7/2008	1	Generators	GR	Diesel	400	0	50%	100%
Inclusive of sites 2,3,6,7,8		6/27/2008	12/24/2009	1	Concrete Pump	CP	Diesel	400	2	50%	30%
		6/27/2008	12/24/2009	1	Excavator	EX	Diesel	250	2	40%	80%
		6/27/2008	12/24/2009	1	Submersible Pump	SP	Electric	1	3	20%	50%
		6/27/2008	12/24/2009	1	Jack Hammer	JM	Electric	55	2	25%	70%
		6/27/2008	12/24/2009	1	Compactor	RC	Diesel	105	1	40%	50%
		6/27/2008	12/24/2009	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		6/27/2008	12/24/2009	1	Compressor	CP	Electric	125	1	10%	30%
		6/27/2008	12/24/2009	1	Backhoe/Loader	BH	Gasoline	60	2	20%	80%
		6/27/2008	12/24/2009	1	Bulldozer	BD	Diesel	205	2	20%	80%
		6/27/2008	12/24/2009	1	Pile Drives	PD	Diesel	310	2	75%	50%
		6/27/2008	12/24/2009	1	Demolition Hammer	DH	Electric	1	2	30%	40%
		6/27/2008	12/24/2009	1	Jack Hammer	JM	Electric	55	3	10%	30%
		6/27/2008	12/24/2009	1	Compactor	RC	Diesel	105	1	10%	50%
		6/27/2008	12/24/2009	1	Wheel Loader	WL	Diesel	50	3	10%	30%
		6/27/2008	12/24/2009	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		6/27/2008	12/24/2009	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		6/27/2008	12/24/2009	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		6/27/2008	12/24/2009	1	Cut off saws	CS	Electric	2	2	30%	20%
		6/27/2008	12/24/2009	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		6/27/2008	12/24/2009	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		6/27/2008	12/24/2009	1	Core Drilling	CD	Electric	5	3	10%	40%
		6/27/2008	12/24/2009	1	Angle Grinder	AG	Electric	1	4	10%	20%
		6/27/2008	12/24/2009	1	Towable Hole Digger	HD	Gasoline	8	4	3%	50%
		6/27/2008	12/24/2009	1	Compressor	CP	Electric	125	1	10%	30%
		6/27/2008	12/24/2009	1	2 ton Chain Hoist	CH	manual	0	2	20%	20%
		6/27/2008	12/24/2009	1	Power Trowel	PT	Gasoline	8	5	20%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Sitework/Landscape/Water Featur	Site 3	4/13/2009	7/7/2010	1	Compactor	RC	Diesel	105	1	10%	30%
		4/13/2009	7/7/2010	1	Wheel Loader	WL	Diesel	50	3	10%	30%
		4/13/2009	7/7/2010	1	Asphalt Paver	AP	Diesel	300	2	20%	20%
		4/13/2009	7/7/2010	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		4/13/2009	7/7/2010	1	Backhoe/Loader	BH	Diesel	160	1	30%	30%
		4/13/2009	7/7/2010	1	Small Tools	ST	Electric	110	1	40%	40%
Excavation	Site 4	9/29/2008	11/7/2008	1	Generators	GR	Diesel	400	1	50%	100%
		9/29/2008	1/2/2009	1	Excavator	EX	Diesel	250	1	40%	80%
		9/29/2008	1/2/2009	1	Jack Hammer	JM	Electric	55	3	25%	50%
		9/29/2008	1/2/2009	1	Compactor	RC	Diesel	105	1	40%	50%
		9/29/2008	1/2/2009	1	Compressor	CP	Electric	125	1	10%	30%
		9/29/2008	1/2/2009	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		9/29/2008	1/2/2009	1	Demolition Hammer	DH	Electric	1	4	30%	40%
		9/29/2008	1/2/2009	1	Submersible Pump	SP	Electric	1	6	20%	50%
		9/29/2008	1/2/2009	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		9/29/2008	1/2/2009	1	Bulldozer	BD	Diesel	205	1	20%	80%
Foundations	Site 4	1/5/2009	4/16/2009	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		1/5/2009	4/16/2009	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		1/5/2009	4/16/2009	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		1/5/2009	4/16/2009	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		1/5/2009	4/16/2009	1	Cut off saws	CS	Electric	2	2	10%	20%
		1/5/2009	4/16/2009	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		1/5/2009	4/16/2009	1	Core Drilling	CD	Electric	5	6	10%	40%
		1/5/2009	4/16/2009	1	Angle Grinder	AG	Electric	1	4	10%	20%
		1/5/2009	4/16/2009	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		1/5/2009	4/16/2009	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		1/5/2009	4/16/2009	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 4	4/17/2009	12/2/2009	1	Tower Crane	CR	Diesel	131	1	75%	100%
		4/17/2009	12/2/2009	1	Jack Hammer	JM	Electric	55	3	75%	30%
		4/17/2009	12/2/2009	1	Compactor	RC	Diesel	105	0	50%	50%
		4/17/2009	12/2/2009	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		4/17/2009	12/2/2009	1	Hoist	HT	Electric	100	2	75%	100%
		4/17/2009	12/2/2009	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		4/17/2009	12/2/2009	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		4/17/2009	12/2/2009	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		4/17/2009	12/2/2009	1	Compressor	CP	Electric	125	1	10%	30%
		4/17/2009	12/2/2009	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		4/17/2009	12/2/2009	1	Cut off saws	CS	Electric	2	2	10%	20%
		4/17/2009	12/2/2009	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		4/17/2009	12/2/2009	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		4/17/2009	12/2/2009	1	Core Drilling	CD	Electric	5	6	10%	40%
		4/17/2009	12/2/2009	1	Angle Grinder	AG	Electric	1	4	10%	20%
		4/17/2009	12/2/2009	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		4/17/2009	12/2/2009	1	Power Trowel	PT	Gasoline	8	5	25%	50%
Interiors	Site 4	9/22/2009	4/26/2010	1	Drill	DR	Electric	4	7	40%	30%
		9/22/2009	4/26/2010	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		9/22/2009	4/26/2010	1	Cut off saws	CS	Electric	2	2	10%	20%
		9/22/2009	4/26/2010	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		9/22/2009	4/26/2010	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		9/22/2009	4/26/2010	1	Core Drilling	CD	Electric	5	6	10%	40%
		9/22/2009	4/26/2010	1	Fork Lift	FL	Diesel	5	2	20%	30%
		9/22/2009	4/26/2010	1	Jack Hammer	JM	Electric	55	1	10%	30%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Exteriors	Site 4	3/16/2010	7/6/2010	1	Compactor	RC	Diesel	105	1	50%	20%
		3/16/2010	7/6/2010	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		3/16/2010	7/6/2010	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		3/16/2010	7/6/2010	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 4	7/7/2010	10/27/2010		n/a						
Parking Structure	Site 5	10/28/2008	3/19/2009	1	Concrete Pump	CP	Diesel	400	2	50%	30%
		10/28/2008	3/19/2009	1	Jack Hammer	JM	Electric	55	3	10%	30%
		10/28/2008	3/19/2009	1	Compactor	RC	Diesel	105	1	10%	50%
		10/28/2008	3/19/2009	1	Compressor	CP	Electric	125	1	10%	30%
		10/28/2008	3/19/2009	1	Wheel Loader	WL	Diesel	50	3	10%	30%
		10/28/2008	3/19/2009	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		10/28/2008	3/19/2009	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		10/28/2008	3/19/2009	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		10/28/2008	3/19/2009	1	Cut off saws	CS	Electric	2	2	30%	20%
		10/28/2008	3/19/2009	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		10/28/2008	3/19/2009	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		10/28/2008	3/19/2009	1	Core Drilling	CD	Electric	5	3	10%	40%
		10/28/2008	3/19/2009	1	Angle Grinder	AG	Electric	1	4	10%	20%
		10/28/2008	3/19/2009	1	Towable Hole Digger	HD	Gasoline	8	4	3%	50%
		10/28/2008	3/19/2009	1	2 ton Chain Hoist	CH	manual	0	2	20%	20%
		10/28/2008	3/19/2009	1	Submersible Pump	SP	Electric	1	0	20%	50%
		10/28/2008	3/19/2009	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Excavation	Site 6	12/3/2009	1/13/2010	1	Generators	GR	Diesel	400	1	50%	100%
		12/3/2009	3/1/2010	1	Excavator	EX	Diesel	250	1	40%	80%
		12/3/2009	3/1/2010	1	Jack Hammer	JM	Electric	55	3	25%	50%
		12/3/2009	3/1/2010	1	Compactor	RC	Diesel	105	1	40%	50%
		12/3/2009	3/1/2010	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		12/3/2009	3/1/2010	1	Demolition Hammer	DH	Electric	1	4	30%	40%
		12/3/2009	3/1/2010	1	Submersible Pump	SP	Electric	1	6	20%	50%
		12/3/2009	3/1/2010	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		12/3/2009	3/1/2010	1	Bulldozer	BD	Diesel	205	1	20%	80%
Foundations	Site 6	3/2/2010	5/24/2010	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		3/2/2010	5/24/2010	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		3/2/2010	5/24/2010	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		3/2/2010	5/24/2010	1	Cut off saws	CS	Electric	2	2	10%	20%
		3/2/2010	5/24/2010	1	Compressor	CP	Electric	125	1	10%	30%
		3/2/2010	5/24/2010	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		3/2/2010	5/24/2010	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		3/2/2010	5/24/2010	1	Core Drilling	CD	Electric	5	6	10%	40%
		3/2/2010	5/24/2010	1	Angle Grinder	AG	Electric	1	4	10%	20%
		3/2/2010	5/24/2010	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		3/2/2010	5/24/2010	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		3/2/2010	5/24/2010	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 6	5/25/2010	11/26/2010	1	Tower Crane	CR	Diesel	131	1	75%	100%
		5/25/2010	11/26/2010	1	Jack Hammer	JM	Electric	55	3	75%	30%
		5/25/2010	11/26/2010	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		5/25/2010	11/26/2010	1	Hoist	HT	Electric	100	2	75%	100%
		5/25/2010	11/26/2010	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		5/25/2010	11/26/2010	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		5/25/2010	11/26/2010	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		5/25/2010	11/26/2010	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		5/25/2010	11/26/2010	1	Compressor	CP	Electric	125	1	10%	30%
		5/25/2010	11/26/2010	1	Cut off saws	CS	Electric	2	2	10%	20%
		5/25/2010	11/26/2010	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		5/25/2010	11/26/2010	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		5/25/2010	11/26/2010	1	Core Drilling	CD	Electric	5	6	10%	40%
		5/25/2010	11/26/2010	1	Angle Grinder	AG	Electric	1	4	10%	20%
		5/25/2010	11/26/2010	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		5/25/2010	11/26/2010	1	Power Trowel	PT	Gasoline	8	5	25%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Interiors	Site 6	11/29/2010	7/27/2011	1	Drill	DR	Electric	4	7	40%	30%
		11/29/2010	7/27/2011	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		11/29/2010	7/27/2011	1	Cut off saws	CS	Electric	2	2	10%	20%
		11/29/2010	7/27/2011	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		11/29/2010	7/27/2011	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		11/29/2010	7/27/2011	1	Core Drilling	CD	Electric	5	6	10%	40%
		11/29/2010	7/27/2011	1	Fork Lift	FL	Diesel	5	2	20%	30%
		11/29/2010	7/27/2011	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 6	7/28/2011	12/15/2011	1	Compactor	RC	Diesel	105	1	50%	20%
		7/28/2011	12/15/2011	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		7/28/2011	12/15/2011	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		7/28/2011	12/15/2011	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 6	12/16/2011	4/5/2012		n/a						
Excavation	Site 7	4/13/2010	5/24/2010	1	Generators	GR	Diesel	400	1	50%	100%
		4/13/2010	6/15/2010	1	Excavator	EX	Diesel	250	1	40%	80%
		4/13/2010	6/15/2010	1	Jack Hammer	JM	Electric	55	3	25%	50%
		4/13/2010	6/15/2010	1	Compactor	RC	Diesel	105	1	40%	50%
		4/13/2010	6/15/2010	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		4/13/2010	6/15/2010	1	Pile Drives	PD	Diesel	310	1	75%	50%
		4/13/2010	6/15/2010	1	Demolition Hammer	DH	Electric	1	4	30%	40%
		4/13/2010	6/15/2010	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		4/13/2010	6/15/2010	1	Bulldozer	BD	Diesel	205	1	20%	80%
		4/13/2010	6/15/2010	1	Submersible Pump	SP	Electric	1	6	20%	50%
Foundation	Site 7	6/16/2010	12/24/2010	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		6/16/2010	12/24/2010	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		6/16/2010	12/24/2010	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		6/16/2010	12/24/2010	1	Cut off saws	CS	Electric	2	2	10%	20%
		6/16/2010	12/24/2010	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		6/16/2010	12/24/2010	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		6/16/2010	12/24/2010	1	Core Drilling	CD	Electric	5	6	10%	40%
		6/16/2010	12/24/2010	1	Angle Grinder	AG	Electric	1	4	10%	20%
		6/16/2010	12/24/2010	1	Compressor	CP	Electric	125	1	10%	30%
		6/16/2010	12/24/2010	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		6/16/2010	12/24/2010	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		6/16/2010	12/24/2010	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 7	12/27/2010	6/28/2011	1	Tower Crane	CR	Diesel	131	1	75%	100%
		12/27/2010	6/28/2011	1	Jack Hammer	JM	Electric	55	3	75%	30%
		12/27/2010	6/28/2011	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		12/27/2010	6/28/2011	1	Hoist	HT	Electric	100	2	75%	100%
		12/27/2010	6/28/2011	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		12/27/2010	6/28/2011	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		12/27/2010	6/28/2011	1	Compressor	CP	Electric	125	1	10%	30%
		12/27/2010	6/28/2011	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		12/27/2010	6/28/2011	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		12/27/2010	6/28/2011	1	Cut off saws	CS	Electric	2	2	10%	20%
		12/27/2010	6/28/2011	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		12/27/2010	6/28/2011	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		12/27/2010	6/28/2011	1	Core Drilling	CD	Electric	5	6	10%	40%
		12/27/2010	6/28/2011	1	Angle Grinder	AG	Electric	1	4	10%	20%
		12/27/2010	6/28/2011	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		12/27/2010	6/28/2011	1	Power Trowel	PT	Gasoline	8	5	25%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Interiors	Site 7	6/29/2011	2/23/2012	1	Drill	DR	Electric	4	7	40%	30%
		6/29/2011	2/23/2012	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		6/29/2011	2/23/2012	1	Cut off saws	CS	Electric	2	2	10%	20%
		6/29/2011	2/23/2012	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		6/29/2011	2/23/2012	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		6/29/2011	2/23/2012	1	Core Drilling	CD	Electric	5	6	10%	40%
		6/29/2011	2/23/2012	1	Fork Lift	FL	Diesel	5	2	20%	30%
		6/29/2011	2/23/2012	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 7	2/24/2012	7/13/2012	1	Compactor	RC	Diesel	105	1	50%	20%
		2/24/2012	7/13/2012	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		2/24/2012	7/13/2012	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		2/24/2012	7/13/2012	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 7	7/16/2012	11/6/2012		n/a						
Excavation	Site 8	7/28/2010	9/7/2010	1	Generators	GR	Diesel	400	1	50%	100%
		7/28/2010	10/5/2010	1	Excavator	EX	Diesel	250	1	40%	80%
		7/28/2010	10/5/2010	1	Jack Hammer	JM	Electric	55	3	25%	50%
		7/28/2010	10/5/2010	1	Compactor	RC	Diesel	105	1	40%	50%
		7/28/2010	10/5/2010	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		7/28/2010	10/5/2010	1	Demolition Hammer	DH	Electric	1	4	30%	40%
		7/28/2010	10/5/2010	1	Submersible Pump	SP	Electric	1	6	20%	50%
		7/28/2010	10/5/2010	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		7/28/2010	10/5/2010	1	Bulldozer	BD	Diesel	205	1	20%	80%
Foundation	Site 8	10/6/2010	1/14/2011	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		10/6/2010	1/14/2011	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		10/6/2010	1/14/2011	1	Compressor	CP	Electric	125	1	10%	30%
		10/6/2010	1/14/2011	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		10/6/2010	1/14/2011	1	Cut off saws	CS	Electric	2	2	10%	20%
		10/6/2010	1/14/2011	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		10/6/2010	1/14/2011	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		10/6/2010	1/14/2011	1	Core Drilling	CD	Electric	5	6	10%	40%
		10/6/2010	1/14/2011	1	Angle Grinder	AG	Electric	1	4	10%	20%
		10/6/2010	1/14/2011	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		10/6/2010	1/14/2011	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		10/6/2010	1/14/2011	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 8	1/17/2011	7/20/2011	1	Tower Crane	CR	Diesel	131	1	75%	100%
		1/17/2011	7/20/2011	1	Jack Hammer	JM	Electric	55	3	75%	30%
		1/17/2011	7/20/2011	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		1/17/2011	7/20/2011	1	Rebar Cutter	RB	Electric	120V	3	75%	20%
		1/17/2011	7/20/2011	1	Rebar Bender	RB	Electric	120V	2	0%	40%
		1/17/2011	7/20/2011	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		1/17/2011	7/20/2011	1	Hoist	HT	Electric	100	2	10%	100%
		1/17/2011	7/20/2011	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		1/17/2011	7/20/2011	1	Compressor	CP	Electric	125	1	10%	30%
		1/17/2011	7/20/2011	1	Cut off saws	CS	Electric	2	2	10%	20%
		1/17/2011	7/20/2011	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		1/17/2011	7/20/2011	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		1/17/2011	7/20/2011	1	Core Drilling	CD	Electric	5	6	10%	40%
		1/17/2011	7/20/2011	1	Angle Grinder	AG	Electric	1	4	10%	20%
		1/17/2011	7/20/2011	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		1/17/2011	7/20/2011	1	Power Trowel	PT	Gasoline	8	5	25%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Interiors	Site 8	7/21/2011	3/15/2012	1	Drill	DR	Electric	4	7	40%	30%
		7/21/2011	3/15/2012	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		7/21/2011	3/15/2012	1	Cut off saws	CS	Electric	2	2	10%	20%
		7/21/2011	3/15/2012	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		7/21/2011	3/15/2012	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		7/21/2011	3/15/2012	1	Core Drilling	CD	Electric	5	6	10%	40%
		7/21/2011	3/15/2012	1	Fork Lift	FL	Diesel	5	2	20%	30%
		7/21/2011	3/15/2012	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 8	3/16/2012	8/3/2012	1	Compactor	RC	Diesel	105	1	50%	20%
		3/16/2012	8/3/2012	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		3/16/2012	8/3/2012	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		3/16/2012	8/3/2012	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 8	8/6/2012	11/20/2012		n/a						
Excavation	Site 9	7/21/2011	8/31/2011	1	Generators	GR	Diesel	400	1	50%	100%
		7/21/2011	9/27/2011	1	Excavator	EX	Diesel	250	1	40%	80%
		7/21/2011	9/27/2011	1	Demolition Hammer	DH	Electric	1	4	30%	40%
		7/21/2011	9/27/2011	1	Jack Hammer	JM	Electric	55	3	25%	50%
		7/21/2011	9/27/2011	1	Compactor	RC	Diesel	105	1	40%	50%
		7/21/2011	9/27/2011	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		7/21/2011	9/27/2011	1	Submersible Pump	SP	Electric	1	6	20%	50%
		7/21/2011	9/27/2011	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		7/21/2011	9/27/2011	1	Bulldozer	BD	Diesel	205	1	20%	80%
Foundation	Site 9	9/28/2011	1/5/2012	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		9/28/2011	1/5/2012	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		9/28/2011	1/5/2012	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		9/28/2011	1/5/2012	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		9/28/2011	1/5/2012	1	Cut off saws	CS	Electric	2	2	10%	20%
		9/28/2011	1/5/2012	1	Compressor	CP	Electric	125	1	10%	30%
		9/28/2011	1/5/2012	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		9/28/2011	1/5/2012	1	Core Drilling	CD	Electric	5	6	10%	40%
		9/28/2011	1/5/2012	1	Angle Grinder	AG	Electric	1	4	10%	20%
		9/28/2011	1/5/2012	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		9/28/2011	1/5/2012	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		9/28/2011	1/5/2012	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 9	1/6/2012	6/21/2012	1	Tower Crane	CR	Diesel	131	1	75%	100%
		1/6/2012	6/21/2012	1	Jack Hammer	JM	Electric	55	3	75%	30%
		1/6/2012	6/21/2012	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		1/6/2012	6/21/2012	1	Rebar Cutter	RB	Electric	120V	3	75%	20%
		1/6/2012	6/21/2012	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		1/6/2012	6/21/2012	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		1/6/2012	6/21/2012	1	Hoist	HT	Electric	100	2	10%	100%
		1/6/2012	6/21/2012	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		1/6/2012	6/21/2012	1	Cut off saws	CS	Electric	2	2	10%	20%
		1/6/2012	6/21/2012	1	Compressor	CP	Electric	125	1	10%	30%
		1/6/2012	6/21/2012	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		1/6/2012	6/21/2012	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		1/6/2012	6/21/2012	1	Core Drilling	CD	Electric	5	6	10%	40%
		1/6/2012	6/21/2012	1	Angle Grinder	AG	Electric	1	4	10%	20%
		1/6/2012	6/21/2012	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		1/6/2012	6/21/2012	1	Power Trowel	PT	Gasoline	8	5	25%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Interiors	Site 9	6/22/2012	11/13/2012	1	Drill	DR	Electric	4	7	40%	30%
		6/22/2012	11/13/2012	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		6/22/2012	11/13/2012	1	Cut off saws	CS	Electric	2	2	10%	20%
		6/22/2012	11/13/2012	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		6/22/2012	11/13/2012	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		6/22/2012	11/13/2012	1	Core Drilling	CD	Electric	5	6	10%	40%
		6/22/2012	11/13/2012	1	Fork Lift	FL	Diesel	5	2	20%	30%
		6/22/2012	11/13/2012	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 9	11/14/2012	3/12/2013	1	Compactor	RC	Diesel	105	1	50%	20%
		11/14/2012	3/12/2013	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		11/14/2012	3/12/2013	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		11/14/2012	3/12/2013	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 9	3/13/2013	7/2/2013								
Excavation	Site 10	8/6/2012	10/9/2012	1	Generators	GR	Diesel	400	1	50%	100%
		8/6/2012	10/9/2012	1	Excavator	EX	Diesel	250	1	40%	80%
		8/6/2012	10/9/2012	1	Submersible Pump	SP	Electric	1	6	20%	50%
		8/6/2012	10/9/2012	1	Jack Hammer	JM	Electric	55	3	25%	50%
		8/6/2012	10/9/2012	1	Compactor	RC	Diesel	105	1	40%	50%
		8/6/2012	10/9/2012	1	Pile Drives	PD	Diesel	310	1	75%	50%
		8/6/2012	10/9/2012	1	Wheel Loader	WL	Diesel	50	1	10%	30%
		8/6/2012	10/9/2012	1	Demolition Hammer	DH	Electric	1	4	30%	40%
		8/6/2012	10/9/2012	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		8/6/2012	10/9/2012	1	Bulldozer	BD	Diesel	205	1	20%	80%
Foundation	Site 10	10/10/2012	1/28/2013	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		10/10/2012	1/28/2013	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		10/10/2012	1/28/2013	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		10/10/2012	1/28/2013	1	Cut off saws	CS	Electric	2	2	10%	20%
		10/10/2012	1/28/2013	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		10/10/2012	1/28/2013	1	Compressor	CP	Electric	125	1	10%	30%
		10/10/2012	1/28/2013	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		10/10/2012	1/28/2013	1	Core Drilling	CD	Electric	5	6	10%	40%
		10/10/2012	1/28/2013	1	Angle Grinder	AG	Electric	1	4	10%	20%
		10/10/2012	1/28/2013	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		10/10/2012	1/28/2013	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		10/10/2012	1/28/2013	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 10	1/29/2013	7/17/2013	1	Tower Crane	CR	Diesel	131	1	75%	100%
		1/29/2013	7/17/2013	1	Jack Hammer	JM	Electric	55	3	75%	30%
		1/29/2013	7/17/2013	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		1/29/2013	7/17/2013	1	Rebar Cutter	RB	Electric	120V	3	75%	20%
		1/29/2013	7/17/2013	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		1/29/2013	7/17/2013	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		1/29/2013	7/17/2013	1	Hoist	HT	Electric	100	2	10%	100%
		1/29/2013	7/17/2013	1	Compressor	CP	Electric	125	1	10%	30%
		1/29/2013	7/17/2013	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		1/29/2013	7/17/2013	1	Cut off saws	CS	Electric	2	2	10%	20%
		1/29/2013	7/17/2013	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		1/29/2013	7/17/2013	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		1/29/2013	7/17/2013	1	Core Drilling	CD	Electric	5	6	10%	40%
		1/29/2013	7/17/2013	1	Angle Grinder	AG	Electric	1	4	10%	20%
		1/29/2013	7/17/2013	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		1/29/2013	7/17/2013	1	Power Trowel	PT	Gasoline	8	5	25%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Interiors	Site 10	7/18/2013	12/9/2013	1	Drill	DR	Electric	4	7	40%	30%
		7/18/2013	12/9/2013	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		7/18/2013	12/9/2013	1	Cut off saws	CS	Electric	2	2	10%	20%
		7/18/2013	12/9/2013	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		7/18/2013	12/9/2013	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		7/18/2013	12/9/2013	1	Core Drilling	CD	Electric	5	6	10%	40%
		7/18/2013	12/9/2013	1	Fork Lift	FL	Diesel	5	2	20%	30%
		7/18/2013	12/9/2013	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 10	12/10/2013	4/3/2014	1	Compactor	RC	Diesel	105	1	50%	20%
		12/10/2013	4/3/2014	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		12/10/2013	4/3/2014	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		12/10/2013	4/3/2014	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 10	2/6/2014	5/1/2014								
Excavation	Site 11	12/21/2012	2/26/2013	1	Generators	GR	Diesel	400	1	50%	100%
		12/21/2012	2/26/2013	1	Excavator	EX	Diesel	250	2	40%	80%
		12/21/2012	2/26/2013	1	Demolition Hammer	DH	Electric	1	2	30%	40%
		12/21/2012	2/26/2013	1	Jack Hammer	JM	Electric	55	3	25%	50%
		12/21/2012	2/26/2013	1	Compactor	RC	Diesel	105	1	40%	50%
		12/21/2012	2/26/2013	1	Wheel Loader	WL	Diesel	50	2	10%	30%
		12/21/2012	2/26/2013	1	Submersible Pump	SP	Electric	1	3	20%	50%
		12/21/2012	2/26/2013	1	Backhoe/Loader	BH	Gasoline	60	1	20%	80%
		12/21/2012	2/26/2013	1	Bulldozer	BD	Diesel	205	2	20%	80%
Foundations	Site 11	2/27/2013	5/14/2013	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		2/27/2013	5/14/2013	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		2/27/2013	5/14/2013	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		2/27/2013	5/14/2013	1	Compressor	CP	Electric	125	1	10%	30%
		2/27/2013	5/14/2013	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		2/27/2013	5/14/2013	1	Cut off saws	CS	Electric	2	2	10%	20%
		2/27/2013	5/14/2013	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		2/27/2013	5/14/2013	1	Core Drilling	CD	Electric	5	6	10%	40%
		2/27/2013	5/14/2013	1	Angle Grinder	AG	Electric	1	4	10%	20%
		2/27/2013	5/14/2013	1	Towable Hole Digger	HD	Gasoline	8	5	10%	50%
		2/27/2013	5/14/2013	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		2/27/2013	5/14/2013	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Superstructure	Site 11	8/15/2013	2/5/2014	1	Tower Crane	CR	Diesel	131	2	75%	100%
		8/15/2013	2/5/2014	1	Jack Hammer	JM	Electric	55	3	75%	30%
		8/15/2013	2/5/2014	1	Wheel Loader	WL	Diesel	50	3	40%	30%
		8/15/2013	2/5/2014	1	Rebar Cutter	RB	Electric	120V	3	75%	20%
		8/15/2013	2/5/2014	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		8/15/2013	2/5/2014	1	Concrete Pumps	CP	Diesel	400	2	50%	50%
		8/15/2013	2/5/2014	1	Hoist	HT	Electric	100	2	10%	100%
		8/15/2013	2/5/2014	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		8/15/2013	2/5/2014	1	Compressor	CP	Electric	125	1	10%	30%
		8/15/2013	2/5/2014	1	Cut off saws	CS	Electric	2	2	10%	20%
		8/15/2013	2/5/2014	1	Demolition Hammer	DH	Electric	1	4	10%	40%
		8/15/2013	2/5/2014	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		8/15/2013	2/5/2014	1	Core Drilling	CD	Electric	5	6	10%	40%
		8/15/2013	2/5/2014	1	Angle Grinder	AG	Electric	1	4	10%	20%
		8/15/2013	2/5/2014	1	2 ton Chain Hoist	CH	manual	0	2	3%	20%
		8/15/2013	2/5/2014	1	Power Trowel	PT	Gasoline	8	5	25%	50%

Table F-2:

First Avenue Properties Rezoning - CONSTRUCTION EQUIPMENT LIST

Work Task	Location/Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Quantity	Daily Use	Average Use
Interiors	Site 11	2/6/2014	6/20/2014	1	Drill	DR	Electric	4	7	40%	30%
		2/6/2014	6/20/2014	1	Masonry Bench Saw	BS	Electric	2	4	10%	40%
		2/6/2014	6/20/2014	1	Cut off saws	CS	Electric	2	2	10%	20%
		2/6/2014	6/20/2014	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		2/6/2014	6/20/2014	1	Mortar Mixer	MM	Gasoline	8	5	50%	40%
		2/6/2014	6/20/2014	1	Core Drilling	CD	Electric	5	6	10%	40%
		2/6/2014	6/20/2014	1	Fork Lift	FL	Diesel	5	2	20%	30%
		2/6/2014	6/20/2014	1	Jack Hammer	JM	Electric	55	1	10%	30%
Exteriors	Site 11	4/4/2014	6/13/2014	1	Compactor	RC	Diesel	105	1	50%	20%
		4/4/2014	6/13/2014	1	Asphalt Paver	AP	Diesel	300	2	50%	20%
		4/4/2014	6/13/2014	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		4/4/2014	6/13/2014	1	Backhoe/Loader	BH	Diesel	160	1	30%	20%
Comissioning	Site 11	5/23/2014	7/7/2014								
Parking Structure	Site 12	2/27/2013	8/14/2013	1	Concrete Pump	CP	Diesel	400	2	50%	30%
		2/27/2013	8/14/2013	1	Jack Hammer	JM	Electric	55	3	10%	30%
		2/27/2013	8/14/2013	1	Compactor	RC	Diesel	105	1	10%	50%
		2/27/2013	8/14/2013	1	Wheel Loader	WL	Diesel	50	3	10%	30%
		2/27/2013	8/14/2013	1	Rebar Cutter	RB	Electric	120V	3	10%	20%
		2/27/2013	8/14/2013	1	Pile Drives	PD	Diesel	310	1	75%	50%
		2/27/2013	8/14/2013	1	Compressor	CP	Electric	125	1	10%	30%
		2/27/2013	8/14/2013	1	Rebar Bender	RB	Electric	120V	2	10%	40%
		2/27/2013	8/14/2013	1	Diaphragm Pump	DP	Gasoline	4	2	10%	20%
		2/27/2013	8/14/2013	1	Cut off saws	CS	Electric	2	2	30%	20%
		2/27/2013	8/14/2013	1	Demolition Hammer	DH	Electric	1	4	20%	40%
		2/27/2013	8/14/2013	1	Mortar Mixer	MM	Gasoline	8	5	10%	40%
		2/27/2013	8/14/2013	1	Core Drilling	CD	Electric	5	3	10%	40%
		2/27/2013	8/14/2013	1	Angle Grinder	AG	Electric	1	4	10%	20%
		2/27/2013	8/14/2013	1	Towable Hole Digger	HD	Gasoline	8	4	3%	50%
		2/27/2013	8/14/2013	1	2 ton Chain Hoist	CH	manual	0	2	20%	20%
		2/27/2013	8/14/2013	1	Power Trowel	PT	Gasoline	8	5	20%	50%
Sitework/Landscape	Site 13	7/8/2014	12/17/2014	1	Compactor	RC	Diesel	105	1	10%	30%
		7/8/2014	12/17/2014	1	Wheel Loader	WL	Diesel	50	3	10%	30%
		7/8/2014	12/17/2014	1	Asphalt Paver	AP	Diesel	300	2	20%	20%
		7/8/2014	12/17/2014	1	Asphalt Laying Equipment	AL	Diesel	300	2	20%	20%
		7/8/2014	12/17/2014	1	Backhoe/Loader	BH	Diesel	160	1	30%	30%
		7/8/2014	12/17/2014	1	Small Tools	ST	Electric	110	1	40%	40%

Table F-3 First Avenue Properties Rezoning - Equipment Deliveries and Material Removal

Work Task	Location/ Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Deliveries Peak Hour Maximum	Peak Deliveries per day	Total Deliveries per Period
Foundations	Site 1	1/2/2008	9/26/2008	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	2229
Foundations		1/2/2008	9/26/2008	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	376
Foundations		4/17/2008	9/26/2008	1	Concrete Truck 11 cy	CTT	Diesel	500	3	8.0	715
Underground Garage	Site 1 A	2/14/2008	8/28/2008	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	984
Underground Garage		2/14/2008	8/28/2008	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	376
Underground Garage		2/14/2008	8/28/2008	1	Concrete Truck 11 cy	CTT	Diesel	500	3	8.0	715
Superstructure	Site 1	9/29/2008	4/30/2009	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	294
Superstructure		9/29/2008	4/30/2009	1	Concrete Truck 11 cy	CTT	Diesel	500	12	30.0	4024
Interiors	Site 1	5/1/2009	10/5/2009	1	Articulated Dump Truck	DT	Diesel	205	2	5.0	550
Interiors		5/1/2009	10/5/2009	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	1.0	110
Interiors		5/1/2009	10/5/2009	1	Material Trucks	MT	Gasoline	60	2	5.0	550
Exteriors	Site 1	10/6/2009	1/29/2010	1	Articulated Dump Truck	DT	Diesel	205	2	5.0	312
Exteriors		10/6/2009	1/29/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	156
Exteriors		10/6/2009	1/29/2010	1	Material Trucks	MT	Gasoline	60	3	8.0	390
Comissioning	Site 1	2/1/2010	5/24/2010		N/A				0		
Open Areas Underground Garage	Site 2	6/27/2008	12/24/2009	1	Articulated Dump Truck	DT	Diesel	205	11	27.0	9734
Open Areas Underground Garage		6/27/2008	12/24/2009	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	5	12.0	1880
Open Areas Underground Garage		6/27/2008	12/24/2009	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	4425
Sitework/Landscape/Water Features	Site 3	4/13/2009	7/7/2010	1	Articulated Dump Truck	DT	Diesel	205	3	8.0	504
Sitework/Landscape/Water Features		4/13/2009	7/7/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	3	7.0	441
Foundations	Site 4	9/29/2008	4/16/2009	1	Articulated Dump Truck	DT	Diesel	205	3	8.0	299
Foundations		9/29/2008	4/16/2009	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	274
Foundations		1/5/2009	4/16/2009	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	629
Superstructure	Site 4	4/17/2009	12/2/2009	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	318
Superstructure		4/17/2009	12/2/2009	1	Concrete Truck 11 cy	CTT	Diesel	500	4	10.0	804
Interiors	Site 4	9/22/2009	4/26/2010	1	Articulated Dump Truck	DT	Diesel	205	2	4.0	592
Interiors		9/22/2009	4/26/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	296
Interiors		9/22/2009	4/26/2010	1	Material Trucks	MT	Gasoline	60	5	12.0	1480
Exteriors	Site 4	3/16/2010	7/6/2010	1	Articulated Dump Truck	DT	Diesel	205	2	5.0	320
Exteriors		3/16/2010	7/6/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	160
Exteriors		3/16/2010	7/6/2010	1	Material Trucks	MT	Gasoline	60	4	10.0	800
Comissioning	Site 4	7/7/2010	10/27/2010		n/a				0	0.0	
Parking Structure	Site 5	10/28/2008	3/19/2009	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	1117
Parking Structure		10/28/2008	3/19/2009	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	291
Parking Structure		10/28/2008	3/19/2009	1	Concrete Truck 11 cy	CTT	Diesel	500	8	20.0	1523
Foundations	Site 6	12/3/2009	5/24/2010	1	Articulated Dump Truck	DT	Diesel	205	2	4.0	394
Foundations		12/3/2009	5/24/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	238
Foundations		3/2/2010	5/24/2010	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	538
Superstructure	Site 6	5/25/2010	11/26/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	129
Superstructure		5/25/2010	11/26/2010	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	1774
Interiors	Site 6	11/29/2010	7/27/2011	1	Articulated Dump Truck	DT	Diesel	205	2	4.0	676
Interiors		11/29/2010	7/27/2011	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	338
Interiors		11/29/2010	7/27/2011	1	Material Trucks	MT	Gasoline	60	5	12.0	1352
Exteriors	Site 6	7/28/2011	12/15/2011	1	Articulated Dump Truck	DT	Diesel	205	2	5.0	388
Exteriors		7/28/2011	12/15/2011	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	194
Exteriors		7/28/2011	12/15/2011	1	Material Trucks	MT	Gasoline	60	4	10.0	679
Comissioning	Site 6	12/16/2011	4/5/2012		n/a				0	0.0	
Foundations	Site 7	4/13/2010	12/24/2010	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	736
Foundations		4/13/2010	12/24/2010	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	3	8.0	895
Foundations		6/16/2010	12/24/2010	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	1130
Superstructure	Site 7	12/27/2010	6/28/2011	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	2.0	194
Superstructure		12/27/2010	6/28/2011	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	1506
Interiors	Site 7	6/29/2011	2/23/2012	1	Articulated Dump Truck	DT	Diesel	205	2	4.0	660
Interiors		6/29/2011	2/23/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	165
Interiors		6/29/2011	2/23/2012	1	Material Trucks	MT	Gasoline	60	5	12.0	1320
Exteriors	Site 7	2/24/2012	7/13/2012	1	Articulated Dump Truck	DT	Diesel	205	2	6.0	396
Exteriors		2/24/2012	7/13/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	396
Exteriors		2/24/2012	7/13/2012	1	Material Trucks	MT	Gasoline	60	4	9.0	792
Comissioning	Site 7	7/16/2012	11/6/2012		n/a				0	0.0	
Foundations	Site 8	7/28/2010	2/14/2011	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	386
Foundations		7/28/2010	2/14/2011	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	396

Table F-3 (cont'd) First Avenue Properties Rezoning - Equipment Deliveries and Material Removal

Work Task	Location/ Site	Start Date	End Date	Shift	Equipment Type	Equipment Code	Engine Type	Size(hp)	Deliveries Peak Hour Maximum	Peak Deliveries per day	Total Deliveries per Period
Foundations		10/6/2010	2/14/2011	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	792
Superstructure	Site 8	1/17/2011	7/20/2011	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	258
Superstructure		1/17/2011	7/20/2011	1	Concrete Truck 11 cy	CTT	Diesel	500	6	14.0	1532
Interiors	Site 8	7/21/2011	3/15/2012	1	Articulated Dump Truck	DT	Diesel	205	4	9.0	1155
Interiors		7/21/2011	3/15/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	165
Interiors		7/21/2011	3/15/2012	1	Material Trucks	MT	Gasoline	60	5	12.0	1320
Exteriors	Site 8	3/16/2012	8/3/2012	1	Articulated Dump Truck	DT	Diesel	205	4	9.0	693
Exteriors		3/16/2012	8/3/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	4	9.0	99
Exteriors		3/16/2012	8/3/2012	1	Material Trucks	MT	Gasoline	60	4	9.0	792
Comissioning	Site 8	8/6/2012	11/20/2012		n/a				0	0.0	
Foundations	Site 9	7/21/2011	1/5/2012	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	815
Foundations		7/21/2011	1/5/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	468
Foundations		9/28/2011	1/5/2012	1	Concrete Truck 11 cy	CTT	Diesel	500	5	12.0	652
Superstructure	Site 9	1/6/2012	6/21/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	1	3.0	258
Superstructure		1/6/2012	6/21/2012	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	921
Interiors	Site 9	6/22/2012	11/13/2012	1	Articulated Dump Truck	DT	Diesel	205	3	7.0	660
Interiors		6/22/2012	11/13/2012	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	165
Interiors		6/22/2012	11/13/2012	1	Material Trucks	MT	Gasoline	60	6	14.0	1320
Exteriors	Site 9	11/14/2012	3/12/2013	1	Articulated Dump Truck	DT	Diesel	205	5	12.0	693
Exteriors		11/14/2012	3/12/2013	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	3	7.0	99
Exteriors		11/14/2012	3/12/2013	1	Material Trucks	MT	Gasoline	60	5	12.0	792
Comissioning	Site 9	3/13/2013	7/2/2013		n/a				0	0.0	
Foundations	Site 10	8/6/2012	1/28/2013	1	Articulated Dump Truck	DT	Diesel	205	2	5.0	326
Foundations		8/6/2012	1/28/2013	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	585
Foundations		10/10/2012	1/28/2013	1	Concrete Truck 11 cy	CTT	Diesel	500	4	10.0	445
Superstructure	Site 10	1/29/2013	7/17/2013	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	516
Superstructure		1/29/2013	7/17/2013	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	1001
Interiors	Site 10	7/18/2013	12/9/2013	1	Articulated Dump Truck	DT	Diesel	205	3	8.0	660
Interiors		7/18/2013	12/9/2013	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	4.0	165
Interiors		7/18/2013	12/9/2013	1	Material Trucks	MT	Gasoline	60	6	15.0	1320
Exteriors	Site 10	12/10/2013	4/3/2014	1	Articulated Dump Truck	DT	Diesel	205	5	12.0	99
Exteriors		12/10/2013	4/3/2014	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	6.0	99
Exteriors		12/10/2013	4/3/2014	1	Material Trucks	MT	Gasoline	60	6	14.0	495
Comissioning	Site 10	2/6/2014	5/1/2014		n/a				0	0.0	
Foundations	Site 11	12/21/2012	5/14/2013	1	Articulated Dump Truck	DT	Diesel	205	2	5.0	326
Foundations		12/21/2012	5/14/2013	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	234
Foundations		2/27/2013	5/14/2013	1	Concrete Truck 11 cy	CTT	Diesel	500	4	10.0	445
Superstructure	Site 11	8/15/2013	2/5/2014	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	2	5.0	129
Superstructure		8/15/2013	2/5/2014	1	Concrete Truck 11 cy	CTT	Diesel	500	6	15.0	126
Interiors	Site 11	2/6/2014	6/20/2014	1	Articulated Dump Truck	DT	Diesel	205	4	10.0	660
Interiors		2/6/2014	6/20/2014	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	4	10.0	660
Interiors		2/6/2014	6/20/2014	1	Material Trucks	MT	Gasoline	60	8	20.0	1320
Exteriors	Site 11	4/4/2014	6/13/2014	1	Articulated Dump Truck	DT	Diesel	205	7	18.0	495
Exteriors		4/4/2014	6/13/2014	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	6	15.0	495
Exteriors		4/4/2014	6/13/2014	1	Material Trucks	MT	Gasoline	60	8	20.0	792
Comissioning	Site 11	5/23/2014	7/7/2014		n/a				0	0.0	
Parking Structure	Site 12	2/27/2013	8/14/2013	1	Articulated Dump Truck	DT	Diesel	205	8	20.0	1675
Parking Structure		2/27/2013	8/14/2013	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	3	7.0	485
Parking Structure		2/27/2013	8/14/2013	1	Concrete Truck 11 cy	CTT	Diesel	500	11	28.0	2665
Sitework/Landscape	Site 13	7/8/2014	12/17/2014	1	Articulated Dump Truck	DT	Diesel	205	6	15.0	792
Sitework/Landscape		7/8/2014	12/17/2014	1	Straight Truck 6 wheel rack/fuel/water	ST	Gasoline	60	3	8.0	792
Sitework/Landscape		7/8/2014	12/17/2014	1	Material Trucks	MT	Gasoline	60	6	16.0	792

Turner

First Avenue Properties

Table F-4 EIS Workforce Projections

Workers per day

3-22-07

		1Q 2008			2Q 2008			3Q 2008			4Q 2008			1Q 2009			2Q 2009			3Q 2009			4Q 2009			1Q 2010			2Q 2010		
Area	**Site**	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
1	Site 1	32	47	52	104	142	164	205	261	362	520	614	714	761	686	761	736	761	736	761	760	687	627	532	483	393	343	250	146	0	
	Site 2						8	95	118	144	204	304	394	424	546	484	468	484	468	430	387	330	274	182	73						
	Site 3																5	11	13	20	34	36	46	45	46	46	50	38	32	25	13
2	Site 4									6	210	245	292	342	475	545	726	962	810	1,111	1,145	1,108	1,145	1,108	1,145	1,145	1,292	1,013	903	885	761
	Site 5										3	47	133	159	142	35															
3	Site 6																								125	170	213	211	245	306	376
	Site 7																												66	122	134
	Site 8																														
4	Site 9																														
	Site 10																														
	Site 11																														
	Site 12																														
	Site 13																														
	Total	32	47	52	104	142	172	300	379	512	937	1,210	1,533	1,686	1,849	1,825	1,935	2,218	2,027	2,322	2,326	2,161	2,092	1,867	1,872	1,754	1,898	1,512	1,392	1,338	1,284
	Maximum			52			172			512			1,533			1,849			2,218			2,326			2,092			1,898			1,392

Turner

First Avenue Properties

Table F-4 (cont'd) EIS Workforce Projections

Workers per day

3-22-07

		3Q 2010			4Q 2010			1Q 2011			2Q 2011			3Q 2011			4Q 2011			1Q 2012			2Q 2012			3Q 2012			4Q 2012		
Area	**Site**	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
1	Site 1																														
	Site 2																														
	Site 3	2																													
2	Site 4	671	564	341	184																										
	Site 5																														
3	Site 6	525	660	576	700	761	787	787	888	787	761	787	761	737	649	613	578	516	441	387	296	156	21								
	Site 7	155	176	199	247	300	416	508	539	494	577	606	587	606	606	587	606	587	606	582	588	493	453	426	387	316	283	180	118	20	
	Site 8	114	144	155	180	208	259	328	489	554	503	563	638	665	665	643	665	643	665	665	769	552	523	512	446	414	347	267	161	73	
4	Site 9													20	73	84	101	120	160	224	353	281	336	371	359	371	371	359	371	352	307
	Site 10																										41	61	74	90	123
	Site 11																														9
	Site 12																														
	Site 13																														
	Total	1,467	1,544	1,271	1,311	1,269	1,462	1,623	1,916	1,835	1,841	1,956	1,986	2,028	1,993	1,927	1,950	1,866	1,872	1,858	2,006	1,482	1,333	1,309	1,192	1,101	1,042	867	724	535	439
	Maximum			1,544			1,462			1,916			1,986			2,028			1,950			2,006			1,333			1,101			724

Turner

First Avenue Properties

Table F-4 (cont'd) EIS Workforce Projections

Workers per day

3-22-07

		1Q 2013			2Q 2013			3Q 2013			4Q 2013			1Q 2014			2Q 2014			3Q 2014			4Q 2014		
Area	**Site**	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
1	Site 1																								
	Site 2																								
	Site 3																								
2	Site 4																								
	Site 5																								
3	Site 6																								
	Site 7																								
	Site 8																								
4	Site 9	296	301	238	187	133	71	4																	
	Site 10	179	269	222	271	284	275	284	284	275	267	225	218	192	171	114	55	2							
	Site 11	19	25	29	39	61	66	78	86	83	86	83	86	78	79	63	51	40	20	3					
	Site 12			15	211	590	665	506	95																
	Site 13																					70	65	51	27
	Total	494	595	504	708	1,068	1,077	872	465	358	353	308	304	270	250	177	106	42	20	3	0	70	65	51	27
	Maximum			595			1,077			872			353			270			106			70			65

Appendix F.1

Construction Traffic

Table F.1-1 FSM First Avenue Properties Construction Worker Vehicles by Month

| | | 1Q 2008 | | | 2Q 2008 | | | 3Q 2008 | | | 4Q 2008 | | | 1Q 2009 | | | 2Q 2009 | | | 3Q 2009 | | | 4Q 2009 | | | 1Q 2010 | | | 2Q 2010 | | | 3Q 2010 | | | 4Q 2010 | | | 1Q 2011 | | | 2Q 2011 | | | 3Q 2011 | | | 4Q 2011 | | | 1Q 2012 | | | 2Q 2012 | | | 3Q 2012 | | | 4Q 2012 | | | 1Q 2013 | | | 2Q 2013 | | | 3Q 2013 | | | 4Q 2013 | | | 1Q 2014 | | | 2Q 2014 | | | 3Q 2014 | | | 4Q 2014 | | |
|---|---|---

Table F.1-2: Construction Worker Vehicles by Rolling Quarterly and Annual Totals

Rolling Quarterly Totals	Jan-08 - Mar-08	Apr-08 - May-08	Jun-08 - Apr-08	May-08 - Jun-08	Jul-08 - Aug-08	Sep-08 - Oct-08	Nov-08 - Dec-08	Jan-09 - Feb-09	Mar-09 - Apr-09	May-09 - Jun-09	Jul-09 - Aug-09	Sep-09 - Oct-09	Nov-09 - Dec-09	Jan-10 - Feb-10	Mar-10 - Apr-10	May-10 - Jun-10	Jul-10 - Aug-10	Sep-10 - Oct-10	Nov-10 - Dec-10	Jan-11 - Feb-11	Mar-11 - Apr-11	May-11 - Jun-11	Jul-11 - Aug-11	Sep-11 - Oct-11	Nov-11 - Dec-11	Jan-12 - Feb-12	Mar-12 - Apr-12	May-12 - Jun-12	Jul-12 - Aug-12	Sep-12 - Oct-12	Nov-12 - Dec-12	Jan-13 - Feb-13	Mar-13 - Apr-13	May-13 - Jun-13	Jul-13 - Aug-13	Sep-13 - Oct-13	Nov-13 - Dec-13	Jan-14 - Feb-14	Mar-14 - Apr-14	May-14 - Jun-14	Jul-14 - Aug-14	Sep-14 - Oct-14	Nov-14 - Dec-14
6:00 AM - 7:00 AM	7	12	17	24	35	48	67	103	149	206	248	285	301	315	336	347	369	375	382	369	344	327	308	310	290	270	238	225	230	241	241	232	217	227	245	281	302	314	317	325	335	337	334	330	322	319	314	322	300	270	231	215	202	187	169	147	119	95	82	86	89	101	128	160	169	135	95	66	57	54	49	46	39	30	18	9	4	1	4	8	11	8
7:00 AM - 8:00 AM	2	3	4	6	9	12	17	26	37	52	62	71	75	79	84	87	92	94	96	92	86	82	77	78	73	67	59	56	57	60	60	58	54	56	61	70	75	78	79	81	84	84	83	82	81	80	79	81	75	68	58	54	50	47	42	37	30	24	21	21	23	26	32	40	42	34	24	17	14	13	12	12	10	7	4	2	1	0	1	2	3	2
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM - 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM - 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM - 1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM - 2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM - 3:00 PM	1	1	0	0	1	1	2	5	8	13	14	14	12	12	16	21	26	25	24	22	19	25	31	39	35	30	24	21	18	16	14	10	5	7	11	18	18	17	17	16	21	29	37	41	39	37	36	35	31	27	22	20	20	21	21	18	14	10	8	7	6	7	9	13	14	11	8	7	6	5	5	5	4	4	2	1	0	0	0	1	1	1
3:00 PM - 4:00 PM	7	6	3	0	6	12	20	38	65	103	112	117	100	94	126	166	207	203	193	178	155	201	246	310	278	244	195	166	146	127	112	78	38	55	89	139	139	137	131	130	164	231	297	324	310	298	286	280	252	216	176	155	161	167	169	143	110	79	60	54	50	55	77	104	111	91	65	52	43	40	36	37	35	30	18	9	4	1	4	8	11	8
4:00 PM - 5:00 PM	1	1	0	0	1	1	2	5	8	13	14	14	12	12	16	21	26	25	24	22	19	25	31	39	35	30	24	21	18	16	14	10	5	7	11	18	18	17	17	16	21	29	37	41	39	37	36	35	31	27	22	20	20	21	21	18	14	10	8	7	6	7	9	13	14	11	8	7	6	5	5	5	4	4	2	1	0	0	0	1	1	1
5:00 PM - 6:00 PM	0	1	3	6	7	9	12	16	21	26	34	42	50	55	53	46	41	43	47	48	47	32	16	0	3	6	11	15	21	28	32	38	44	43	39	35	41	44	46	49	43	27	9	1	3	5	7	10	12	14	14	15	10	5	0	1	2	4	6	8	10	12	13	14	15	11	7	4	3	4	3	2	1	0	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	6	14	23	29	36	47	64	84	104	136	167	201	221	209	181	162	172	189	191	189	127	62	0	12	26	43	60	84	114	129	154	178	173	156	143	164	177	185	195	172	106	37	6	12	21	28	41	48	54	55	60	41	20	0	4	9	16	22	32	39	46	51	56	59	44	30	14	14	14	14	9	4	0	0	0	0	0	0	0	0
Total	**18**	**30**	**41**	**59**	**88**	**119**	**167**	**257**	**372**	**517**	**620**	**710**	**751**	**788**	**840**	**869**	**923**	**937**	**955**	**922**	**859**	**819**	**771**	**776**	**726**	**673**	**594**	**564**	**574**	**602**	**602**	**580**	**541**	**568**	**612**	**704**	**757**	**784**	**792**	**812**	**840**	**843**	**834**	**825**	**806**	**797**	**786**	**804**	**749**	**676**	**578**	**539**	**504**	**468**	**422**	**368**	**298**	**238**	**207**	**215**	**223**	**254**	**319**	**400**	**424**	**337**	**237**	**167**	**143**	**135**	**124**	**116**	**97**	**75**	**44**	**22**	**9**	**2**	**9**	**20**	**27**	**20**

Rolling Annual Totals	Jan-08 - Dec-08	Feb-08 - Jan-09	Mar-08 - Feb-09	Apr-08 - Mar-09	May-08 - Apr-09	Jun-08 - May-09	Jul-08 - Jun-09	Aug-08 - Jul-09	Sep-08 - Aug-09	Oct-08 - Sep-09	Nov-08 - Oct-09	Dec-08 - Nov-09	Jan-09 - Dec-09	Feb-09 - Jan-10	Mar-09 - Feb-10	Apr-09 - Mar-10	May-09 - Apr-10	Jun-09 - May-10	Jul-09 - Jun-10	Aug-09 - Jul-10	Sep-09 - Aug-10	Oct-09 - Sep-10	Nov-09 - Oct-10	Dec-09 - Nov-10	Jan-10 - Dec-10	Feb-10 - Jan-11	Mar-10 - Feb-11	Apr-10 - Mar-11	May-10 - Apr-11	Jun-10 - May-11	Jul-10 - Jun-11	Aug-10 - Jul-11	Sep-10 - Aug-11	Oct-10 - Sep-11	Nov-10 - Oct-11	Dec-10 - Nov-11	Jan-11 - Dec-11	Feb-11 - Jan-12	Mar-11 - Feb-12	Apr-11 - Mar-12	May-11 - Apr-12	Jun-11 - May-12	Jul-11 - Jun-12	Aug-11 - Jul-12	Sep-11 - Aug-12	Oct-11 - Sep-12	Nov-11 - Oct-12	Dec-11 - Nov-12	Jan-12 - Dec-12	Jan-13 - Feb-13	Feb-12 - Mar-13	Mar-12 - Apr-13	Apr-12 - May-13	May-12 - Jun-13	Jun-12 - Jul-13	Jul-12 - Aug-13	Aug-12 - Sep-13	Sep-12 - Oct-13	Oct-12 - Nov-13	Nov-12 - Dec-13	Dec-12 - Jan-14	Jan-13 - Feb-14	Feb-13 - Mar-14	Mar-13 - Apr-14	Apr-13 - May-14	May-13 - Jun-14	Jun-13 - Jul-14	Jul-13 - Aug-14	Aug-13 - Sep-14	Sep-13 - Oct-14	Oct-13 - Nov-14	Nov-13 - Dec-14	Dec-13 - Jan-14
6:00 AM - 7:00 AM	76	99	125	150	175	204	230	259	286	309	325	335	339	340	341	337	329	317	306	294	283	271	260	252	246	244	244	249	255	264	274	282	288	297	306	314	320	323	325	319	312	303	292	279	266	251	233	215	195	175	156	142	133	130	128	125	117	110	105	102	100	96	92	87	79	64	49	37	31	27	23	19	15
7:00 AM - 8:00 AM	19	25	31	37	44	51	58	65	72	77	81	84	85	85	85	84	82	79	77	74	71	68	65	63	61	61	61	62	64	66	68	70	72	74	76	78	80	81	81	80	78	76	73	70	67	63	59	54	49	44	39	36	33	33	32	31	29	28	26	25	25	24	23	22	20	16	12	9	8	7	6	5	4
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM - 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM - 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM - 1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM - 2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM - 3:00 PM	4	5	6	7	8	10	12	14	16	18	18	19	21	23	25	26	27	27	26	25	25	24	22	21	19	17	16	15	14	14	14	15	17	20	23	26	27	29	30	31	31	31	31	31	29	27	25	23	21	18	16	14	13	13	13	12	10	9	9	8	8	8	8	7	6	5	4	3	3	2	2	2
3:00 PM - 4:00 PM	33	40	49	56	63	80	97	113	128	141	148	150	165	181	198	209	219	216	209	204	197	189	178	168	153	139	125	118	112	109	109	117	135	155	178	203	216	228	238	244	247	249	250	247	233	218	202	183	164	145	127	113	105	102	101	92	83	75	69	66	65	63	62	61	57	47	37	30	25	22	19	17	14
4:00 PM - 5:00 PM	4	5	6	7	8	10	12	14	16	18	18	19	21	23	25	26	27	27	26	25	25	24	22	21	19	17	16	15	14	14	14	15	17	20	23	26	27	29	30	31	31	31	31	31	29	27	25	23	21	18	16	14	13	13	13	12	10	9	9	8	8	8	8	7	6	5	4	3	3	2	2	2
5:00 PM - 6:00 PM	11	15	19	23	28	31	33	37	40	42	44	46	44	40	36	32	28	25	24	23	22	20	20	21	23	26	30	33	36	39	41	41	38	35	32	28	26	24	22	19	16	14	10	8	8	8	8	8	8	8	7	7	7	7	7	8	9	9	9	9	9	8	7	7	5	4	3	2	1	1	1	1	0
6:00 PM - 7:00 PM	43	59	75	94	113	124	133	146	158	169	177	184	174	159	143	127	110	101	97	91	87	82	82	84	93	105	120	131	143	155	165	165	153	142	128	112	104	96	86	75	65	54	42	32	32	32	32	31	31	30	29	29	28	28	28	33	34	35	35	35	35	33	29	26	22	17	12	7	6	5	3	2	1
Total	**190**	**248**	**311**	**374**	**439**	**510**	**575**	**648**	**716**	**774**	**811**	**837**	**849**	**851**	**853**	**841**	**822**	**792**	**765**	**736**	**710**	**678**	**649**	**630**	**614**	**609**	**612**	**623**	**638**	**661**	**685**	**705**	**720**	**743**	**766**	**787**	**800**	**810**	**812**	**799**	**780**	**758**	**729**	**698**	**664**	**626**	**584**	**537**	**489**	**438**	**390**	**355**	**332**	**326**	**322**	**313**	**292**	**275**	**262**	**253**	**250**	**240**	**229**	**219**	**197**	**160**	**123**	**93**	**77**	**68**	**56**	**48**	**38**

Table F.1-3 Construction Trucks and Hourly PCEs by Month

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Total	14	22	29	32	35	41	78	77	65	82	106	106	115	115	103	83	64	64	64	64	70	80	80	70	35	24	42	52	43	47	37	38	38	45	47	45	49	48	41	41	41	41	46	53	54	62	62	56	41	40	42	42	42	45	44	30	29	33	34	35	39	45	74	67	60	53	58	41	24	24	24	15	11	33	37	60	63	35	17	21	21	21	21	0
Regular Shift Monthly Average	0	8	15	15	15	21	58	57	43	48	73	73	73	73	61	45	57	57	57	57	62	73	73	65	29	19	28	32	19	19	4	0	0	0	2	14	14	14	14	14	14	16	33	42	42	42	42	36	29	30	32	32	32	38	44	24	21	21	21	20	20	26	48	41	41	41	51	40	22	22	22	12	9	32	37	60	63	35	17	21	21	21	21	0
Extended Shift Monthly Average	14	14	14	17	20	20	20	20	22	34	34	34	42	42	42	38	7	7	7	7	7	7	7	5	5	5	14	20	24	28	33	38	38	45	45	31	35	34	27	27	27	25	13	11	12	20	20	20	12	10	10	10	10	7	0	7	8	12	14	15	19	20	26	26	19	13	7	1	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0

PCE	2.00
In/Out Total	2.00
Effective PCE Factor	4.00

| | | |

Table F.1-4 Construction Truck PCEs by Rolling Quarterly and Annual Totals

| Rolling Quarterly Totals | Jan-08 - Mar-08 | Feb-08 - Apr-08 | Mar-08 - May-08 | Apr-08 - Jun-08 | May-08 - Jul-08 | Jun-08 - Aug-08 | Jul-08 - Sep-08 | Aug-08 - Oct-08 | Sep-08 - Nov-08 | Oct-08 - Dec-08 | Nov-08 - Jan-09 | Dec-08 - Feb-09 | Jan-09 - Mar-09 | Feb-09 - Apr-09 | Mar-09 - May-09 | Apr-09 - Jun-09 | May-09 - Jul-09 | Jun-09 - Aug-09 | Jul-09 - Sep-09 | Aug-09 - Oct-09 | Sep-09 - Nov-09 | Oct-09 - Dec-09 | Nov-09 - Jan-10 | Dec-09 - Feb-10 | Jan-10 - Mar-10 | Feb-10 - Apr-10 | Mar-10 - May-10 | Apr-10 - Jun-10 | May-10 - Jul-10 | Jun-10 - Aug-10 | Jul-10 - Sep-10 | Aug-10 - Oct-10 | Sep-10 - Nov-10 | Oct-10 - Dec-10 | Nov-10 - Jan-11 | Dec-10 - Feb-11 | Jan-11 - Mar-11 | Feb-11 - Apr-11 | Mar-11 - May-11 | Apr-11 - Jun-11 | May-11 - Jul-11 | Jun-11 - Aug-11 | Jul-11 - Sep-11 | Aug-11 - Oct-11 | Sep-11 - Nov-11 | Oct-11 - Dec-11 | Nov-11 - Jan-12 | Dec-11 - Feb-12 | Jan-12 - Mar-12 | Feb-12 - Apr-12 | Mar-12 - May-12 | Apr-12 - Jun-12 | May-12 - Jul-12 | Jun-12 - Aug-12 | Jul-12 - Sep-12 | Aug-12 - Oct-12 | Sep-12 - Nov-12 | Oct-12 - Dec-12 | Nov-12 - Jan-13 | Dec-12 - Feb-13 | Jan-13 - Mar-13 | Feb-13 - Apr-13 | Mar-13 - May-13 | Apr-13 - Jun-13 | May-13 - Jul-13 | Jun-13 - Aug-13 | Jul-13 - Sep-13 | Aug-13 - Oct-13 | Sep-13 - Nov-13 | Oct-13 - Dec-13 | Nov-13 - Jan-14 | Dec-13 - Feb-14 | Jan-14 - Mar-14 | Feb-14 - Apr-14 | Mar-14 - May-14 | Apr-14 - Jun-14 | May-14 - Jul-14 | Jun-14 - Aug-14 | Jul-14 - Sep-14 | Aug-14 - Oct-14 | Sep-14 - Nov-14 | Oct-14 - Dec-14 |
|---|---|---

Table F.1-5 Construction Worker Vehicles and Truck PCEs

Monthly Totals	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
6:00 AM - 7:00 AM	13	24	32	43	51	62	121	133	142	226	296	351	382	410	393	394	435	402	452	453	430	429	392	383
7:00 AM - 8:00 AM	7	11	14	17	20	23	44	47	47	72	93	106	117	124	118	115	120	111	124	124	119	120	111	107
8:00 AM - 9:00 AM	6	9	12	13	14	16	31	31	26	32	42	42	46	46	41	33	26	26	26	26	28	32	32	28
9:00 AM - 10:00 AM	6	9	12	13	14	16	31	31	26	32	42	42	46	46	41	33	26	26	26	26	28	32	32	28
10:00 AM - 11:00 AM	6	9	12	13	14	16	31	31	26	32	42	42	46	46	41	33	26	26	26	26	28	32	32	28
11:00 AM - 12:00 PM	6	9	12	13	14	16	31	31	26	32	42	42	46	46	41	33	26	26	26	26	28	32	32	28
12:00 PM - 1:00 PM	6	9	12	13	14	16	31	31	26	32	42	42	46	46	41	33	26	26	26	26	28	32	32	28
1:00 PM - 2:00 PM	3	6	9	9	10	12	27	27	21	26	36	36	37	37	32	26	24	24	24	24	26	30	30	27
2:00 PM - 3:00 PM	4	6	7	6	7	8	18	17	16	26	35	39	35	37	31	27	38	38	37	37	35	36	32	53
3:00 PM - 4:00 PM	8	11	12	3	4	5	20	24	29	77	107	145	106	124	95	88	213	206	205	200	178	160	129	316
4:00 PM - 5:00 PM	4	4	4	3	4	4	6	6	7	16	20	24	20	22	19	18	27	27	26	26	23	21	17	40
5:00 PM - 6:00 PM	3	3	3	7	10	11	13	15	19	29	33	37	54	57	63	70	42	35	48	49	48	49	48	1
6:00 PM - 7:00 PM	0	0	0	18	24	28	35	44	61	88	103	120	186	196	220	246	162	136	187	193	187	193	187	0
	72	110	141	171	200	233	439	468	472	720	933	1068	1167	1237	1176	1149	1191	1109	1233	1236	1186	1198	1106	1067
MAX 1,237																								

Monthly Totals	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
6:00 AM - 7:00 AM	327	342	291	278	259	252	272	283	238	248	243	280	309	358	340	340	360	365	383	385	374	382	368	363
7:00 AM - 8:00 AM	88	90	81	79	73	73	76	80	69	73	72	79	88	100	94	94	99	100	103	105	103	107	104	101
8:00 AM - 9:00 AM	14	10	17	21	17	19	14	15	15	18	19	18	20	20	17	17	17	16	18	21	22	25	25	22
9:00 AM - 10:00 AM	14	10	17	21	17	19	14	15	15	18	19	18	20	20	17	17	17	16	18	21	22	25	25	22
10:00 AM - 11:00 AM	14	10	17	21	17	19	14	15	15	18	19	18	20	20	17	17	17	16	18	21	22	25	25	22
11:00 AM - 12:00 PM	14	10	17	21	17	19	14	15	15	18	19	18	20	20	17	17	17	16	18	21	22	25	25	22
12:00 PM - 1:00 PM	14	10	17	21	17	19	14	15	15	18	19	18	20	20	17	17	17	16	18	21	22	25	25	22
1:00 PM - 2:00 PM	13	9	14	17	13	14	8	8	8	9	10	12	13	13	11	11	11	11	16	19	19	21	21	18
2:00 PM - 3:00 PM	44	45	36	34	31	26	25	23	18	13	9	26	27	29	25	24	25	24	39	52	51	51	49	47
3:00 PM - 4:00 PM	296	321	222	197	179	136	140	127	92	40	9	139	140	157	138	133	138	133	233	338	327	315	298	292
4:00 PM - 5:00 PM	38	41	30	28	27	22	24	23	18	13	9	23	24	26	22	21	22	21	32	44	43	43	41	40
5:00 PM - 6:00 PM	1	1	12	14	18	27	36	43	41	56	62	34	42	50	49	50	54	57	31	2	2	8	9	11
6:00 PM - 7:00 PM	0	0	36	41	52	86	115	141	131	190	214	114	141	173	177	182	197	206	112	0	0	17	20	27
	877	899	807	793	737	731	766	803	690	732	723	797	884	1006	941	940	991	997	1039	1050	1029	1069	1035	1009

Monthly Totals	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
6:00 AM - 7:00 AM	349	373	287	263	258	242	229	203	172	149	119	103	114	138	149	176	232	230	202	119	83	82	75	64
7:00 AM - 8:00 AM	95	101	80	73	72	68	64	56	49	44	36	32	37	43	52	57	69	66	59	36	25	25	22	19
8:00 AM - 9:00 AM	17	16	17	17	17	18	18	12	12	14	13	14	16	18	30	27	24	21	23	16	10	10	10	6
9:00 AM - 10:00 AM	17	16	17	17	17	18	18	12	12	14	13	14	16	18	30	27	24	21	23	16	10	10	10	6
10:00 AM - 11:00 AM	17	16	17	17	17	18	18	12	12	14	13	14	16	18	30	27	24	21	23	16	10	10	10	6
11:00 AM - 12:00 PM	17	16	17	17	17	18	18	12	12	14	13	14	16	18	30	27	24	21	23	16	10	10	10	6
12:00 PM - 1:00 PM	17	16	17	17	17	18	18	12	12	14	13	14	16	18	30	27	24	21	23	16	10	10	10	6
1:00 PM - 2:00 PM	14	14	15	15	15	16	18	10	11	11	11	11	12	14	24	21	20	19	21	16	9	9	9	5
2:00 PM - 3:00 PM	42	43	33	29	28	27	32	28	24	20	16	14	15	16	20	21	27	26	22	16	10	10	9	7
3:00 PM - 4:00 PM	277	280	204	170	160	141	185	176	148	111	78	56	57	59	48	72	126	127	87	64	46	45	38	37
4:00 PM - 5:00 PM	36	37	27	23	22	19	23	23	20	16	12	10	11	11	10	13	19	18	12	8	6	6	5	5
5:00 PM - 6:00 PM	11	17	14	16	18	16	0	1	2	5	7	8	12	15	16	18	19	17	16	4	3	4	3	4
6:00 PM - 7:00 PM	38	59	47	57	62	60	0	0	0	12	15	21	30	45	42	52	58	57	61	14	14	14	14	14
	947	1004	792	731	720	679	641	557	486	438	359	325	368	431	511	565	690	665	595	357	246	245	225	185

Rolling Quarterly Totals	Jan-08 - Mar-08	Feb-08 - Apr-08	Mar-08 - May-08	Apr-08 - Jun-08	May-08 - Jul-08	Jun-08 - Aug-08	Jul-08 - Sep-08	Aug-08 - Oct-08	Sep-08 - Nov-08	Oct-08 - Dec-08	Nov-08 - Jan-09	Dec-08 - Feb-09	Jan-09 - Mar-09	Feb-09 - Apr-09	Mar-09 - May-09	Apr-09 - Jun-09	May-09 - Jul-09	Jun-09 - Aug-09	Jul-09 - Sep-09	Aug-09 - Oct-09	Sep-09 - Nov-09	Oct-09 - Dec-09	Nov-09 - Jan-10	Dec-09 - Feb-10
6:00 AM - 7:00 AM	23	33	42	52	78	105	132	167	221	291	343	381	395	399	408	410	430	436	445	437	417	401	367	351
7:00 AM - 8:00 AM	11	14	17	20	29	38	46	56	70	91	105	116	119	119	117	115	118	120	123	121	117	113	102	95
8:00 AM - 9:00 AM	9	11	13	14	20	26	29	30	33	39	43	45	44	40	33	28	26	26	27	29	31	31	25	17
9:00 AM - 10:00 AM	9	11	13	14	20	26	29	30	33	39	43	45	44	40	33	28	26	26	27	29	31	31	25	17
10:00 AM - 11:00 AM	9	11	13	14	20	26	29	30	33	39	43	45	44	40	33	28	26	26	27	29	31	31	25	17
11:00 AM - 12:00 PM	9	11	13	14	20	26	29	30	33	39	43	45	44	40	33	28	26	26	27	29	31	31	25	17
12:00 PM - 1:00 PM	9	11	13	14	20	26	29	30	33	39	43	45	44	40	33	28	26	26	27	29	31	31	25	17
1:00 PM - 2:00 PM	6	8	9	10	16	22	25	25	28	33	36	37	35	32	27	25	24	24	25	27	29	29	23	16
2:00 PM - 3:00 PM	6	7	6	7	11	14	17	20	25	33	36	37	34	32	32	35	38	37	36	36	34	40	43	48
3:00 PM - 4:00 PM	10	9	6	4	10	16	24	43	71	110	119	125	108	102	132	169	208	204	194	179	156	202	247	311
4:00 PM - 5:00 PM	4	4	3	4	5	5	6	10	14	20	21	22	20	20	22	24	27	26	25	23	20	26	32	40
5:00 PM - 6:00 PM	3	4	6	10	11	13	16	21	27	33	41	50	58	63	59	49	42	44	48	49	48	33	17	1
6:00 PM - 7:00 PM	0	6	14	23	29	36	47	64	84	104	136	167	201	221	209	181	162	172	189	191	189	127	62	0
	108	140	168	200	289	379	458	556	705	910	1052	1160	1190	1188	1171	1148	1179	1193	1220	1208	1165	1126	1018	947
MAX 1,220																								

Rolling Quarterly Totals	Jan-10 - Mar-10	Feb-10 - Apr-10	Mar-10 - May-10	Apr-10 - Jun-10	May-10 - Jul-10	Jun-10 - Aug-10	Jul-10 - Sep-10	Aug-10 - Oct-10	Sep-10 - Nov-10	Oct-10 - Dec-10	Nov-10 - Jan-11	Dec-10 - Feb-11	Jan-11 - Mar-11	Feb-11 - Apr-11	Mar-11 - May-11	Apr-11 - Jun-11	May-11 - Jul-11	Jun-11 - Aug-11	Jul-11 - Sep-11	Aug-11 - Oct-11	Sep-11 - Nov-11	Oct-11 - Dec-11	Nov-11 - Jan-12	Dec-11 - Feb-12
6:00 AM - 7:00 AM	304	276	263	261	269	264	256	243	257	277	315	335	346	347	355	369	377	380	381	374	371	360	362	337
7:00 AM - 8:00 AM	83	77	75	74	76	75	74	71	74	80	89	94	96	96	98	101	102	103	105	105	104	100	99	92
8:00 AM - 9:00 AM	16	18	19	17	16	15	16	17	18	19	19	19	18	17	17	17	18	20	23	24	24	21	18	17
9:00 AM - 10:00 AM	16	18	19	17	16	15	16	17	18	19	19	19	18	17	17	17	18	20	23	24	24	21	18	17
10:00 AM - 11:00 AM	16	18	19	17	16	15	16	17	18	19	19	19	18	17	17	17	18	20	23	24	24	21	18	17
11:00 AM - 12:00 PM	16	18	19	17	16	15	16	17	18	19	19	19	18	17	17	17	18	20	23	24	24	21	18	17
12:00 PM - 1:00 PM	16	18	19	17	16	15	16	17	18	19	19	19	18	17	17	17	18	20	23	24	24	21	18	17
1:00 PM - 2:00 PM	12	8	8	9	10	12	12	11	11	13	15	18	20	20	20	18	15	14	15	15	15	16	15	13
2:00 PM - 3:00 PM	38	33	31	27	25	22	18	14	16	20	28	27	25	24	30	38	47	52	50	49	35	30	28	29
3:00 PM - 4:00 PM	247	199	171	152	134	120	86	47	63	96	146	145	143	136	135	168	234	299	327	313	302	289	283	254
4:00 PM - 5:00 PM	25	23	22	21	23	22	18	14	15	18	25	24	23	22	21	25	32	39	44	42	41	39	38	33
5:00 PM - 6:00 PM	50	51	54	47	30	11	4	6	9	10	13	14	16	16	17	11	6	1	3	4	7	9	12	14
6:00 PM - 7:00 PM	177	185	195	172	106	37	6	12	21	28	41	48	54	55	60	41	20	0	4	9	16	22	32	39
	833	776	756	746	766	755	740	714	749	800	896	943	963	958	978	1010	1024	1034	1054	1042	1037	995	985	916

Rolling Quarterly Totals	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
6:00 AM - 7:00 AM	307	269	254	243	225	202	174	147	124	112	119	133	154	186	213	221	183	135	95	80	74	64
7:00 AM - 8:00 AM	85	75	71	68	63	56	50	43	38	35	37	44	51	59	64	65	54	40	29	24	22	19
8:00 AM - 9:00 AM	17	17	17	18	16	14	13	13	14	14	16	21	25	27	24	23	20	16	12	10	9	7
9:00 AM - 10:00 AM	17	17	17	18	16	14	13	13	14	14	16	21	25	27	24	23	20	16	12	10	9	7
10:00 AM - 11:00 AM	17	17	17	18	16	14	13	13	14	14	16	21	25	27	24	23	20	16	12	10	9	7
11:00 AM - 12:00 PM	17	17	17	18	16	14	13	13	14	14	16	21	25	27	24	23	20	16	12	10	9	7
12:00 PM - 1:00 PM	17	17	17	18	16	14	13	13	14	14	16	21	25	27	24	23	20	16	12	10	9	7
1:00 PM - 2:00 PM	15	15	15	16	15	13	11	11	11	11	12	17	20	22	20	20	19	15	11	9	8	6
2:00 PM - 3:00 PM	42	46	44	39	35	30	28	24	20	17	15	15	17	19	22	25	21	16	12	10	8	8
3:00 PM - 4:00 PM	234	218	178	157	162	168	170	145	112	82	63	58	54	60	82	108	114	92	65	52	43	40
4:00 PM - 5:00 PM	39	38	33	29	24	22	22	20	16	13	11	11	10	12	14	17	17	12	8	7	6	5
5:00 PM - 6:00 PM	16	16	17	11	6	1	3	4	7	9	12	14	17	18	18	18	12	7	4	3	4	3
6:00 PM - 7:00 PM	107	106	37	6	12	21	28	41	48	54	55	60	41	20	0	4	9	16	22	32	39	46
	844	747	709	681	628	562	496	427	378	348	376	433	504	589	641	654	537	396	284	239	220	190

Rolling Annual Totals	Jan-08 - Dec-08	Feb-08 - Jan-09	Mar-08 - Feb-09	Apr-08 - Mar-09	May-08 - Apr-09	Jun-08 - May-09	Jul-08 - Jun-09	Aug-08 - Jul-09	Sep-08 - Aug-09	Oct-08 - Sep-09	Nov-08 - Oct-09	Dec-08 - Nov-09	Jan-09 - Dec-09	Feb-09 - Jan-10	Mar-09 - Feb-10	Apr-09 - Mar-10	May-09 - Apr-10	Jun-09 - May-10	Jul-09 - Jun-10	Aug-09 - Jul-10	Sep-09 - Aug-10	Oct-09 - Sep-10	Nov-09 - Oct-10	Dec-09 - Nov-10
6:00 AM - 7:00 AM	124	155	188	218	247	278	307	335	361	385	402	411	413	408	403	395	385	370	357	342	328	312	297	285
7:00 AM - 8:00 AM	42	51	60	69	77	85	93	100	106	112	116	118	118	115	112	109	106	102	100	96	92	88	83	80
8:00 AM - 9:00 AM	23	26	29	32	33	34	35	35	34	35	35	34	33	30	27	25	24	23	23	22	21	20	18	17
9:00 AM - 10:00 AM	23	26	29	32	33	34	35	35	34	35	35	34	33	30	27	25	24	23	23	22	21	20	18	17
10:00 AM - 11:00 AM	23	26	29	32	33	34	35	35	34	35	35	34	33	30	27	25	24	23	23	22	21	20	18	17
11:00 AM - 12:00 PM	23	26	29	32	33	34	35	35	34	35	35	34	33	30	27	25	24	23	23	22	21	20	18	17
12:00 PM - 1:00 PM	23	26	29	32	33	34	35	35	34	35	35	34	33	30	27	25	24	23	23	22	21	20	18	17
1:00 PM - 2:00 PM	19	21	24	26	27	28	29	29	29	29	30	29	28	26	24	23	22	21	20	19	17	16	14	13
2:00 PM - 3:00 PM	16	18	21	23	25	27	30	31	33	35	35	36	37	38	38	38	39	38	37	36	35	34	31	30
3:00 PM - 4:00 PM	37	45	54	62	69	86	103	118	133	146	152	154	168	184	200	211	220	218	211	207	200	193	183	173
4:00 PM - 5:00 PM	8	10	11	13	14	16	18	19	21	23	22	23	24	26	27	28	28	29	28	28	28	28	27	26
5:00 PM - 6:00 PM	15	20	24	29	34	37	39	42	45	47	48	50	47	43	38	34	29	27	26	26	25	24	25	26
6:00 PM - 7:00 PM	43	59	75	94	113	124	133	146	158	169	177	184	174	159	143	127	110	101	97	91	87	82	82	84
	419	509	602	694	771	851	927	995	1056	1121	1157	1175	1174	1149	1120	1090	1059	1021	991	955	917	877	832	802

Rolling Annual Totals	Jan-10 - Dec-10	Feb-10 - Jan-11	Mar-10 - Feb-11	Apr-10 - Mar-11	May-10 - Apr-11	Jun-10 - May-11	Jul-10 - Jun-11	Aug-10 - Jul-11	Sep-10 - Aug-11	Oct-10 - Sep-11	Nov-10 - Oct-11	Dec-10 - Nov-11	Jan-11 - Dec-11	Feb-11 - Jan-12	Mar-11 - Feb-12	Apr-11 - Mar-12	May-11 - Apr-12	Jun-11 - May-12	Jul-11 - Jun-12	Aug-11 - Jul-12	Sep-11 - Aug-12	Oct-11 - Sep-12	Nov-11 - Oct-12	Dec-11 - Nov-12
6:00 AM - 7:00 AM	276	274	276	280	285	294	303	313	321	332	343	353	361	364	366	360	354	346	336	323	308	291	271	251
7:00 AM - 8:00 AM	77	78	79	80	81	83	85	88	90	93	95	98	100	101	100	99	97	95	93	90	86	81	76	70
8:00 AM - 9:00 AM	16	17	18	18	17	17	17	18	18	19	19	20	20	20	19	19	19	19	20	20	19	18	17	16
9:00 AM - 10:00 AM	16	17	18	18	17	17	17	18	18	19	19	20	20	20	19	19	19	19	20	20	19	18	17	16
10:00 AM - 11:00 AM	16	17	18	18	17	17	17	18	18	19	19	20	20	20	19	19	19	19	20	20	19	18	17	16
11:00 AM - 12:00 PM	16	17	18	18	17	17	17	18	18	19	19	20	20	20	19	19	19	19	20	20	19	18	17	16
12:00 PM - 1:00 PM	16	17	18	18	17	17	17	18	18	19	19	20	20	20	19	19	19	19	20	20	19	18	17	16
1:00 PM - 2:00 PM	11	11	12	11	11	11	10	11	12	13	14	15	15	15	16	16	16	17	17	17	16	16	15	14
2:00 PM - 3:00 PM	27	26	25	24	23	23	23	24	26	29	32	36	37	39	39	40	40	40	41	40	38	36	33	31
3:00 PM - 4:00 PM	159	145	132	125	119	116	116	123	141	160	183	208	220	232	242	247	250	252	253	249	235	220	204	185
4:00 PM - 5:00 PM	25	23	23	22	21	21	21	21	23	25	28	31	31	33	34	34	34	34	34	33	31	29	27	25
5:00 PM - 6:00 PM	29	32	37	40	43	46	48	47	44	40	37	33	30	28	26	22	19	17	13	10	10	10	10	10
6:00 PM - 7:00 PM	93	105	120	131	143	155	165	165	153	142	128	112	104	96	86	75	65	54	42	32	32	32	32	31
	777	779	794	803	811	834	856	882	900	929	955	986	998	1008	1004	988	970	950	929	894	851	805	753	697

Rolling Annual Totals	Jan-12 - Dec-12	Feb-12 - Jan-13	Mar-12 - Feb-13	Apr-12 - Mar-13	May-12 - Apr-13	Jun-12 - May-13	Jul-12 - Jun-13	Aug-12 - Jul-13	Sep-12 - Aug-13	Oct-12 - Sep-13	Nov-12 - Oct-13	Dec-12 - Nov-13	Jan-13 - Dec-13	Feb-13 - Jan-14
6:00 AM - 7:00 AM	229	209	190	178	171	169	168	166	159	151	146	142	139	133
7:00 AM - 8:00 AM	64	59	55	53	50	51	50	50	48	47	45	43	43	41
8:00 AM - 9:00 AM	15	15	16	17	17	18	18	19	19	19	19	18	18	17
9:00 AM - 10:00 AM	15	15	16	17	17	18	18	19	19	19	19	18	18	17
10:00 AM - 11:00 AM	15	15	16	17	17	18	18	19	19	19	19	18	18	17
11:00 AM - 12:00 PM	15	15	16	17	17	18	18	19	19	19	19	18	18	17
12:00 PM - 1:00 PM	15	15	16	17	17	18	18	19	19	19	19	18	18	17
1:00 PM - 2:00 PM	13	13	13	14	15	15	15	15	16	16	16	15	15	14
2:00 PM - 3:00 PM

Appendix F.2

Construction Air

Short Term Emissions					Source Parameters					NONROAD Emission Factor (g/hp-hr)					Short Term Nonroad Engine Emissions (g/s)				Grading Operation	Grading Operation
Work Task	Location/Site	Start Date	End Date	Equipment Type	Abbreviation	Engine	Power Output (hp)	Nonroad Engines	Daily Use (%)	$PM_{2.5}$	PM_{10}	CO	CO	NO_x	$PM_{2.5}$	PM_{10}	CO 1-Hr	CO 8-Hr	$PM_{2.5}$	PM_{10}
Superstructure	Site 1	9/29/2008	4/30/2009	Tower Crane	C	Diesel	131	2	75%	0.017	0.018	0.475	0.475	2.121	9.49E-04	9.78E-04	3.46E-02	2.60E-02		
		9/29/2008	4/30/2009	Concrete Pumps	OCE	Diesel	400	3	50%	0.004	0.039	1.708	1.708	3.398	6.53E-04	6.49E-03	5.69E-01	2.85E-01		
		9/29/2008	4/30/2009	Wheel Loader	TLB	Diesel	50	3	40%	0.202	0.208	1.301	1.301	1.207	3.36E-03	3.46E-03	5.42E-02	2.17E-02		
		9/29/2008	4/30/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	5.484	5.960	289.618	289.618	0.499	1.22E-03	1.32E-03	6.44E-01	6.44E-02		
		9/29/2008	4/30/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	0.067	0.072	400.067	400.067	1.887	7.41E-05	8.05E-05	4.45E+00	4.45E-01		
		9/29/2008	4/30/2009	Power Trowel	PE	Gasoline	8	5	25%	0.062	0.067	423.319	423.319	1.669	1.72E-04	1.87E-04	4.70E+00	1.18E+00		
Open Areas Underground (Inclusive of sites 2,3,6,7,)	Site 2	6/27/2008	12/24/2009	Concrete Pump	OCE	Diesel	400	2	50%	0.004	0.039	1.708	1.708	3.398	4.35E-04	4.33E-03	3.79E-01	1.90E-01		
		6/27/2008	12/24/2009	Excavator	E	Diesel	250	2	40%	0.023	0.023	0.728	0.728	2.339	1.26E-03	1.30E-03	1.01E-01	4.05E-02		
		6/27/2008	12/24/2009	Compactor	R	Diesel	105	1	40%	0.030	0.031	0.973	0.973	2.743	3.46E-04	3.57E-04	2.84E-02	1.13E-02		
		6/27/2008	12/24/2009	Wheel Loader	TLB	Diesel	50	1	10%	0.202	0.208	1.301	1.301	1.207	2.80E-04	2.89E-04	1.81E-02	1.81E-03		
		6/27/2008	12/24/2009	BackhoeLoader	TLB	Gasoline	60	2	20%	0.031	0.033	50.707	50.707	2.100	2.05E-04	2.23E-04	1.69E+00	3.38E-01		
		6/27/2008	12/24/2009	Bulldozer	CTD	Diesel	205	2	20%	0.024	0.024	0.758	0.758	2.452	5.36E-04	5.53E-04	8.63E-02	1.73E-02	2.96E-05	7.30E-04
		6/27/2008	12/24/2009	Pile Drives	C	Diesel	310	2	75%	0.018	0.018	0.664	0.664	2.402	2.30E-03	2.38E-03	1.14E-01	8.58E-02		
		6/27/2008	12/24/2009	Compactor	R	Diesel	105	1	10%	0.030	0.031	0.973	0.973	2.743	8.65E-05	8.92E-05	2.84E-02	2.84E-03		
		6/27/2008	12/24/2009	Wheel Loader	TLB	Diesel	50	3	10%	0.202	0.208	1.301	1.301	1.207	8.40E-04	8.66E-04	5.42E-02	5.42E-03		
		6/27/2008	12/24/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	5.484	5.960	289.618	289.618	0.499	1.22E-03	1.32E-03	6.44E-01	6.44E-02		
		6/27/2008	12/24/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	0.067	0.072	400.067	400.067	1.887	7.41E-05	8.05E-05	4.45E+00	4.45E-01		
		6/27/2008	12/24/2009	Towable Hole Digger	OCE	Gasoline	8	4	3%	0.051	0.055	343.543	343.543	1.372	1.35E-05	1.47E-05	3.05E+00	9.16E-02		
		6/27/2008	12/24/2009	Power Trowel	PE	Gasoline	8	5	20%	0.062	0.067	423.319	423.319	1.669	1.37E-04	1.49E-04	4.70E+00	9.41E-01		
Foundations	Site 4	1/5/2009	4/16/2009	Concrete Pumps	OCE	Diesel	400	2	50%	0.004	0.039	1.608	1.608	3.234	4.35E-04	4.33E-03	3.57E-01	1.79E-01		
		1/5/2009	4/16/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	5.501	5.979	243.803	243.803	0.496	1.22E-03	1.33E-03	5.42E-01	5.42E-02		
		1/5/2009	4/16/2009	Mortar Mixer	CMM	Gasoline	8	5	50%	0.065	0.070	403.183	403.183	1.820	3.59E-04	3.90E-04	4.48E+00	2.24E+00		
		1/5/2009	4/16/2009	Towable Hole Digger	OCE	Gasoline	8	5	10%	0.050	0.054	344.761	344.761	1.347	5.56E-05	6.04E-05	3.83E+00	3.83E-01		
		1/5/2009	4/16/2009	Power Trowel	PE	Gasoline	8	5	20%	0.061	0.067	424.203	424.203	1.650	1.36E-04	1.48E-04	4.71E+00	9.43E-01		
Parking Structure	Site 5	10/28/2008	3/19/2009	Concrete Pump	OCE	Diesel	400	2	50%	0.004	0.039	1.708	1.708	3.398	4.35E-04	4.33E-03	3.79E-01	1.90E-01		
		10/28/2008	3/19/2009	Compactor	R	Diesel	105	1	10%	0.030	0.031	0.973	0.973	2.743	8.65E-05	8.92E-05	2.84E-02	2.84E-03		
		10/28/2008	3/19/2009	Wheel Loader	TLB	Diesel	50	3	10%	0.202	0.208	1.301	1.301	1.207	8.40E-04	8.66E-04	5.42E-02	5.42E-03		
		10/28/2008	3/19/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	5.484	5.960	289.618	289.618	0.499	1.22E-03	1.32E-03	6.44E-01	6.44E-02		
		10/28/2008	3/19/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	0.067	0.072	400.067	400.067	1.887	7.41E-05	8.05E-05	4.45E+00	4.45E-01		
		10/28/2008	3/19/2009	Towable Hole Digger	OCE	Gasoline	8	4	3%	0.051	0.055	343.543	343.543	1.372	1.35E-05	1.47E-05	3.05E+00	9.16E-02		
		10/28/2008	3/19/2009	Power Trowel	PE	Gasoline	8	5	20%	0.062	0.067	423.319	423.319	1.669	1.37E-04	1.49E-04	4.70E+00	9.41E-01		

Work Task	Location/ Site	Start Date	End Date	Equipment Type	Abbreviation	Power Output (hp)	Deliveries Peak Hour Maximum	Peak Deliveries per day	Total Deliveries per Period	Trucks Idling Emissions (g/s)	Trucks Engine Emissions (g/s)	ST PM_{10} Road Dust	ST $PM_{2.5}$ Transfer Operation Dust	ST PM_{10} Transfer Operation Dust	COUHR Trucks Idling Emissions (g/s)	COUHR Trucks Engine Emissions	
Superstructure	Site 1	9/29/2008	4/30/2009	Straight Truck 6 wheel	ST	60	2	4	294	1.47E-05	2.66E-06	4.98E-03			5.88E-05	1.06E-05	
Superstructure	Site 1	9/29/2008	4/30/2009	Concrete Truck 11 cy	CT	500	12	30	4024	1.24E-04	2.99E-06	5.64E-02			3.97E-04	9.58E-06	
Open Areas Underground Garag	Site 2	6/27/2008	12/24/2009	Articulated Dump Truck	DT	205	11	27	9734	1.65E-04	1.80E-05	5.44E-02	3.16E-03	6.70E-03	5.39E-04	5.85E-05	
Open Areas Underground Garag	Site 2	6/27/2008	12/24/2009	Straight Truck 6 wheel	ST	60	5	12	1880	4.41E-05	7.98E-06	1.49E-02			1.47E-04	2.66E-05	
Open Areas Underground Garag	Site 2	6/27/2008	12/24/2009	Concrete Truck 11 cy	CT	500	6	15	4425	6.20E-05	1.50E-06	2.82E-02			1.98E-04	4.79E-06	
Foundations	Site 4	9/29/2008	4/16/2009	Articulated Dump Truck	DT	205	3	8	299	4.90E-05	2.57E-06	7.80E-03	9.36E-04	1.99E-03	1.47E-04	7.72E-06	
Foundations	Site 4	9/29/2008	4/16/2009	Straight Truck 6 wheel	ST	60	1	3	274	1.10E-05	9.65E-07	1.81E-03			2.94E-05	2.57E-06	
Foundations	Site 4	1/5/2009	4/16/2009	Concrete Truck 11 cy	CT	500	6	15	629	6.20E-05	7.24E-07	1.37E-02			1.98E-04	2.32E-06	
Parking Structure	Site 5	10/28/2008	3/19/2009	Articulated Dump Truck	DT	205	6	15	1117	9.18E-05	4.83E-06	1.46E-02	1.75E-03	3.72E-03	2.94E-04	1.54E-05	
Parking Structure	Site 5	10/28/2008	3/19/2009	Straight Truck 6 wheel	ST	60	2	5	291	1.84E-05	1.61E-06	3.01E-03			5.88E-05	5.15E-06	
Parking Structure	Site 5	10/28/2008	3/19/2009	Concrete Truck 11 cy	CT	500	8	20	1523	8.27E-05	9.65E-07	1.82E-02			2.65E-04	3.09E-06	

Short Term Emissions						
Source Code	**Description**	**Short-Term Source Area (m2)**	**PM2.5**	**PM10**	**CO 1-Hr**	**CO 8-HR**
S1SSCP1	Site 1 - Superstructures (Concrete Pump 1)		2.18E-04	2.16E-03	1.90E-01	9.49E-02
S1SSCP2	Site 1 - Superstructures (Concrete Pump 2)		2.18E-04	2.16E-03	1.90E-01	9.49E-02
S1SSCP3	Site 1 - Superstructures (Concrete Pump 3)		2.18E-04	2.16E-03	1.90E-01	9.49E-02
S1SSCS1	Site 1 - Superstructures (Cut Off Saw 1)		0.00E+00	0.00E+00	0.00E+00	0.00E+00
S1SSCS2	Site 1 - Superstructures (Cut Off Saw 2)		0.00E+00	0.00E+00	0.00E+00	0.00E+00
S1SSCT1	Site 1 - Superstructures (Concrete Truck 1)		2.12E-05	2.31E-05	2.18E-03	6.80E-04
S1SSCT2	Site 1 - Superstructures (Concrete Truck 2)		2.12E-05	2.31E-05	2.18E-03	6.80E-04
S1SSCT3	Site 1 - Superstructures (Concrete Truck 3)		2.12E-05	2.31E-05	2.18E-03	6.80E-04
S1SSCT4	Site 1 - Superstructures (Concrete Truck 4)		2.12E-05	2.31E-05	2.18E-03	6.80E-04
S1SSCT5	Site 1 - Superstructures (Concrete Truck 5)		2.12E-05	2.31E-05	2.18E-03	6.80E-04
S1SSCT6	Site 1 - Superstructures (Concrete Truck 6)		2.12E-05	2.31E-05	2.18E-03	6.80E-04
S1SSDP1	Site 1 - Superstructures (Diaphragm Pump 1)		6.09E-04	6.62E-04	3.22E-01	3.22E-02
S1SSDP2	Site 1 - Superstructures (Diaphragm Pump 2)		6.09E-04	6.62E-04	3.22E-01	3.22E-02
S1SSINT	Site 1 - Superstructures (Interior Equipments)	3,398.1	1.04E-06	1.07E-06	1.40E-03	3.52E-04
S1SSMM1	Site 1 - Superstructures (Mortar Mixer 1)		1.48E-05	1.61E-05	8.89E-01	8.89E-02
S1SSMM2	Site 1 - Superstructures (Mortar Mixer 2)		1.48E-05	1.61E-05	8.89E-01	8.89E-02
S1SSMM3	Site 1 - Superstructures (Mortar Mixer 3)		1.48E-05	1.61E-05	8.89E-01	8.89E-02
S1SSMM4	Site 1 - Superstructures (Mortar Mixer 4)		1.48E-05	1.61E-05	8.89E-01	8.89E-02
S1SSMM5	Site 1 - Superstructures (Mortar Mixer 5)		1.48E-05	1.61E-05	8.89E-01	8.89E-02
S1SSTC1	Site 1 - Superstructures (Tower Crane 1)		4.75E-04	4.89E-04	1.73E-02	1.30E-02
S1SSTC2	Site 1 - Superstructures (Tower Crane 2)		4.75E-04	4.89E-04	1.73E-02	1.30E-02
S1SSTK1	Site 1 - Superstructures (Trucks)	826.1	2.10E-08	2.33E-08	2.84E-06	7.09E-07
S1SSTRD	Site 1 - Superstructures (Truck Road Dust)	826.1	0.00E+00	7.43E-05	0.00E+00	0.00E+00
S2PSCP1	Site 4 - Parking Structures (Concrete Pump 1)		2.18E-04	2.16E-03	1.90E-01	9.49E-02
S2PSCP2	Site 4 - Parking Structures (Concrete Pump 2)		2.18E-04	2.16E-03	1.90E-01	9.49E-02
S2PSCT1	Site 2 - Parking Structures (Concrete Truck 1)		1.59E-05	1.73E-05	1.63E-03	5.10E-04
S2PSCT2	Site 2 - Parking Structures (Concrete Truck 2)		1.59E-05	1.73E-05	1.63E-03	5.10E-04
S2PSCT3	Site 2 - Parking Structures (Concrete Truck 3)		1.59E-05	1.73E-05	1.63E-03	5.10E-04
S2PSCT4	Site 2 - Parking Structures (Concrete Truck 4)		1.59E-05	1.73E-05	1.63E-03	5.10E-04
S2PSPDE	Site 4 - Parking Structures (Pile Driver)	1,644.0	1.40E-06	1.45E-06	6.96E-05	5.22E-05
S2PSPTE	Site 4 - Parking Structures (Excavation Pit)	4,499.4	5.90E-07	7.66E-07	4.28E-04	9.09E-05
S2PSPTF	Site 4 - Parking Structures (Finishes Pit)	9,380.8	2.53E-07	2.69E-07	1.38E-03	1.65E-04
S2PSTK1	Site 2 - Parking Structures (Trucks)	671.3	7.76E-08	8.59E-08	8.73E-06	2.62E-06
S2PSTO1	Site 2 - Parking Structures (TO + DT)	13,925.2	2.40E-07	4.40E-06	1.42E-06	4.35E-07
S2PSTRD	Site 2 - Parking Structures (Truck Road Dust)	671.3	0.00E+00	6.43E-05	0.00E+00	0.00E+00
S4FDCP1	Site 4 - Foundations (Concrete Pump 1)		2.18E-04	2.16E-03	1.79E-01	8.93E-02
S4FDCT1	Site 4 - Foundations (Concrete Truck 1)		1.57E-05	1.71E-05	1.61E-03	5.02E-04
S4FDCT2	Site 4 - Foundations (Concrete Truck 2)		1.57E-05	1.71E-05	1.61E-03	5.02E-04
S4FDPIT	Site 4 - Foundations (Pit Equipments)	1,305.5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S4FDTK1	Site 4 - Foundations (Trucks)	74.1	1.62E-07	1.78E-07	1.42E-05	5.31E-06
S4FDTO1	Site 4 - Foundations (TO + DT)	1,305.5	7.56E-07	7.54E-06	3.85E-06	1.28E-06
S4FDTRD	Site 4 - Foundations (Truck Road Dust)	74.1	0.00E+00	2.09E-04	0.00E+00	0.00E+00
S5PSCP1	Site 5 - Parking Structures (Concrete Pump 1)		2.18E-04	2.16E-03	1.90E-01	9.49E-02
S5PSCT1	Site 5 - Parking Structures (Concrete Truck 1)		2.09E-05	2.28E-05	2.14E-03	6.69E-04
S5PSCT2	Site 5 - Parking Structures (Concrete Truck 2)		2.09E-05	2.28E-05	2.14E-03	6.69E-04
S5PSPIT	Site 4, 5 - Found/Parking (Pit Equipments)	2,955.0	9.14E-07	9.76E-07	4.62E-03	1.23E-03
S5PSTK1	Site 5 - Parking Structures (Trucks)	74.6	2.68E-07	2.94E-07	2.82E-05	8.80E-06
S5PSTO1	Site 5 - Parking Structures (TO + DT)	2955	6.27E-07	6.25E-06	3.40E-06	1.06E-06
S5PSTRD	Site 5 - Parking Structures (Truck Road Dust)	74.6	0.00E+00	2.84E-04	0.00E+00	0.00E+00

Annual Work Task	Location/Site	Start Date	End Date	Equipment Type	Source Parameters: Abbreviation	Engine	Power Output (hp)	Nonroad Engines	Usage Factor (%)	Average Use (%)	Annual Fraction	NONROAD Emission Factor (g/hp-hr): $PM_{2.5}$	PM_{10}	NO_x	Annual Nonroad Engine Emissions (g/s): $PM_{2.5}$	PM_{10}	NOx	Grading Operation $PM_{2.5}$	Grading Operation PM_{10}
Foundations	Site 1	4/17/2008	9/26/2008	Concrete Pumps	OCE	Diesel	400	3	50%	50%	0.17	0.004	0.039	3.398	5.63E-05	5.60E-04	4.89E-02		
		4/17/2008	9/26/2008	Mortar Mixer	CMM	Gasoline	8	5	50%	40%	0.17	0.067	0.072	1.887	2.56E-05	2.78E-05	7.24E-04		
		4/17/2008	9/26/2008	Towable Hole Digger	OCE	Gasoline	8	5	10%	50%	0.17	0.051	0.055	1.372	4.86E-06	5.28E-06	1.32E-04		
		4/17/2008	9/26/2008	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.17	5.484	5.960	0.499	4.21E-05	4.57E-05	3.82E-06		
		4/17/2008	9/26/2008	Power Trowel	PE	Gasoline	8	5	20%	50%	0.17	0.062	0.067	1.669	1.19E-05	1.29E-05	3.20E-04		
Underground Garage	Site 1A	2/14/2008	8/29/2008	Excavator	E	Diesel	250	1	40%	80%	0.12	0.023	0.023	2.339	6.06E-05	6.24E-05	6.27E-03		
		2/14/2008	8/29/2008	Compactor	R	Diesel	105	1	40%	50%	0.12	0.030	0.031	2.743	2.09E-05	2.15E-05	1.93E-03		
		2/14/2008	8/29/2008	Wheel Loader	TLB	Diesel	50	1	10%	30%	0.12	0.202	0.208	1.207	1.01E-05	1.04E-05	6.06E-05		
		2/14/2008	8/29/2008	Backhoe/Loader	TLB	Gasoline	60	2	20%	80%	0.12	0.031	0.033	2.100	1.98E-05	2.15E-05	1.35E-03		
		2/14/2008	8/29/2008	Bulldozer	CTD	Diesel	205	3	20%	80%	0.12	0.024	0.024	2.452	7.76E-05	8.00E-05	8.08E-03	8.56E-07	2.11E-05
		2/14/2008	8/29/2008	Pile Drives	C	Diesel	310	1	75%	50%	0.12	0.018	0.018	2.402	6.95E-05	7.16E-05	9.35E-03		
		2/14/2008	8/29/2008	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.12	5.484	5.960	0.499	2.94E-05	3.19E-05	2.67E-06		
		2/14/2008	8/29/2008	Mortar Mixer	CMM	Gasoline	8	5	10%	40%	0.12	0.067	0.072	1.887	3.57E-06	3.88E-06	1.01E-04		
		2/14/2008	8/29/2008	Towable Hole Digger	OCE	Gasoline	8	4	3%	50%	0.12	0.051	0.055	1.372	8.15E-07	8.86E-07	2.20E-05		
		2/14/2008	8/29/2008	Power Trowel	PE	Gasoline	8	5	20%	50%	0.12	0.062	0.067	1.669	8.29E-06	9.01E-06	2.24E-04		
		2/14/2008	8/29/2008	Concrete Pump	OCE	Diesel	400	2	50%	30%	0.12	0.004	0.039	3.398	1.57E-05	1.57E-04	1.37E-02		
Superstructure	Site 1	9/29/2008	4/30/2009	Tower Crane	C	Diesel	131	2	75%	100%	0.41	0.017	0.018	2.121	3.90E-04	4.02E-04	4.76E-02		
		9/29/2008	4/30/2009	Concrete Pumps	OCE	Diesel	400	3	50%	50%	0.41	0.004	0.039	3.398	1.34E-04	1.33E-03	1.16E-01		
		9/29/2008	4/30/2009	Wheel Loader	TLB	Diesel	50	3	40%	30%	0.41	0.202	0.208	1.207	4.14E-04	4.27E-04	2.48E-03		
		9/29/2008	4/30/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.41	5.484	5.960	0.499	1.00E-04	1.09E-04	9.11E-06		
		9/29/2008	4/30/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	40%	0.41	0.067	0.072	1.887	1.22E-05	1.32E-05	3.45E-04		
		9/29/2008	4/30/2009	Power Trowel	PE	Gasoline	8	5	25%	50%	0.41	0.062	0.067	1.669	3.53E-05	3.84E-05	9.53E-04		
Interiors	Site 1	5/1/2009	10/5/2009	Mortar Mixer	CMM	Gasoline	8	5	50%	40%	0.11	0.065	0.070	1.820	1.61E-05	1.75E-05	4.54E-04		
		5/1/2009	10/5/2009	Fork Lift	FL	Diesel	5	2	20%	30%	0.11	0.213	0.220	2.594	3.99E-06	4.12E-06	4.86E-05		
Open Areas Underground Inclusive of sites 2,3,6,7,(	Site 2	6/27/2008	8/7/2008	Generators	LCGS	Diesel	400	1	50%	100%	0.08	0.024	0.025	2.600					
		6/27/2008	12/24/2009	Concrete Pump	OCE	Diesel	400	2	50%	30%	0.70	0.004	0.039	3.398	9.12E-05	9.07E-04	7.91E-02		
		6/27/2008	12/24/2009	Excavator	E	Diesel	250	2	40%	80%	0.70	0.023	0.023	2.339	7.02E-04	7.24E-04	7.26E-02		
		6/27/2008	12/24/2009	Compactor	R	Diesel	105	1	40%	50%	0.70	0.030	0.031	2.743	1.21E-04	1.25E-04	1.12E-02		
		6/27/2008	12/24/2009	Wheel Loader	TLB	Diesel	50	1	10%	30%	0.70	0.202	0.208	1.207	5.87E-05	6.05E-05	3.51E-04		
		6/27/2008	12/24/2009	Backhoe/Loader	TLB	Gasoline	60	2	20%	80%	0.70	0.031	0.033	2.100	1.15E-04	1.25E-04	7.83E-03		
		6/27/2008	12/24/2009	Bulldozer	CTD	Diesel	205	2	20%	80%	0.70	0.024	0.024	2.452	3.00E-04	3.09E-04	3.12E-02	3.31E-06	8.16E-05
		6/27/2008	12/24/2009	Pile Drives	C	Diesel	310	2	75%	50%	0.70	0.018	0.018	2.402	8.05E-04	8.30E-04	1.08E-01		
		6/27/2008	12/24/2009	Compactor	R	Diesel	105	1	10%	50%	0.70	0.030	0.031	2.743	3.02E-05	3.12E-05	2.79E-03		
		6/27/2008	12/24/2009	Wheel Loader	TLB	Diesel	50	3	10%	30%	0.70	0.202	0.208	1.207	1.76E-04	1.82E-04	1.05E-03		
		6/27/2008	12/24/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.70	5.484	5.960	0.499	1.70E-04	1.85E-04	1.55E-05		
		6/27/2008	12/24/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	40%	0.70	0.067	0.072	1.887	2.07E-05	2.25E-05	5.86E-04		
		6/27/2008	12/24/2009	Towable Hole Digger	OCE	Gasoline	8	4	3%	50%	0.70	0.051	0.055	1.372	4.72E-06	5.13E-06	1.28E-04		
		6/27/2008	12/24/2009	Power Trowel	PE	Gasoline	8	5	20%	50%	0.70	0.062	0.067	1.669	4.80E-05	5.22E-05	1.30E-03		
Sitework/Landscape/Water Feature	Site 3	4/13/2009	7/7/2010	Compactor	R	Diesel	105	1	10%	30%	0.15	0.030	0.031	2.568	3.84E-06	3.96E-06	3.32E-04		
		4/13/2009	7/7/2010	Wheel Loader	TLB	Diesel	50	3	10%	30%	0.15	0.177	0.183	1.166	3.28E-05	3.38E-05	2.16E-04		
		4/13/2009	7/7/2010	Asphalt Paver	P	Diesel	300	2	20%	20%	0.15	0.024	0.025	2.385	2.41E-05	2.49E-05	2.35E-03		
		4/13/2009	7/7/2010	Asphalt Laying Equipmen	PE	Diesel	300	2	20%	20%	0.15	0.029	0.030	2.633	2.88E-05	2.97E-05	2.60E-03		
		4/13/2009	7/7/2010	Backhoe/Loader	TLB	Diesel	160	1	30%	30%	0.15	0.024	0.025	1.376	1.41E-05	1.45E-05	8.14E-04		
Excavation	Site 4	9/29/2008	11/7/2008	Generators	LCGS	Diesel	400	1	50%	100%	0.07	0.024	0.025	2.600	9.92E-05	1.02E-04	1.07E-02		
		9/29/2008	1/2/2009	Excavator	E	Diesel	250	1	40%	80%	0.18	0.023	0.023	2.339	9.09E-05	9.37E-05	9.40E-03		
		9/29/2008	1/2/2009	Compactor	R	Diesel	105	1	40%	50%	0.18	0.030	0.031	2.743	3.13E-05	3.23E-05	2.89E-03		
		9/29/2008	1/2/2009	Wheel Loader	TLB	Diesel	50	1	10%	30%	0.18	0.202	0.208	1.207	1.52E-05	1.57E-05	9.10E-05		
		9/29/2008	1/2/2009	Backhoe/Loader	TLB	Gasoline	60	1	20%	80%	0.18	0.031	0.033	2.100	1.48E-05	1.61E-05	1.01E-03		
		9/29/2008	1/2/2009	Bulldozer	CTD	Diesel	205	1	20%	80%	0.18	0.024	0.024	2.452	3.88E-05	4.00E-05	4.04E-03	4.28E-07	1.06E-05
Foundations	Site 4	1/5/2009	4/16/2009	Concrete Pumps	OCE	Diesel	400	2	50%	50%	0.33	0.004	0.039	3.234	2.27E-05	7.23E-04	6.00E-02		
		1/5/2009	4/16/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.33	5.501	5.979	0.496	8.17E-05	8.88E-05	7.37E-06		
		1/5/2009	4/16/2009	Mortar Mixer	CMM	Gasoline	8	5	50%	40%	0.33	0.065	0.070	1.820	4.80E-05	5.22E-05	1.35E-03		
		1/5/2009	4/16/2009	Towable Hole Digger	OCE	Gasoline	8	5	10%	50%	0.33	0.050	0.054	1.347	9.29E-06	1.01E-05	2.50E-04		
		1/5/2009	4/16/2009	Power Trowel	PE	Gasoline	8	5	20%	50%	0.33	0.061	0.067	1.650	2.28E-05	2.48E-05	6.13E-04		
Superstructure	Site 4	4/17/2009	12/2/2009	Tower Crane	C	Diesel	131	1	75%	100%	0.14	0.017	0.018	1.977	6.63E-05	6.84E-05	7.54E-03		
		4/17/2009	12/2/2009	Compactor	R	Diesel	105	1	50%	50%	0.14	0.030	0.031	2.568					
		4/17/2009	12/2/2009	Concrete Pumps	OCE	Diesel	400	2	50%	50%	0.14	0.004	0.039	3.234	3.04E-05	3.02E-04	2.51E-02		
		4/17/2009	12/2/2009	Wheel Loader	TLB	Diesel	50	3	40%	30%	0.14	0.177	0.183	1.166	1.24E-04	1.28E-04	8.14E-04		
		4/17/2009	12/2/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.14	5.501	5.979	0.496	3.42E-05	3.71E-05	3.08E-06		
		4/17/2009	12/2/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	40%	0.14	0.065	0.070	1.820	4.01E-05	4.36E-05	1.13E-04		
		4/17/2009	12/2/2009	Power Trowel	PE	Gasoline	8	5	25%	50%	0.14	0.061	0.067	1.650	1.19E-05	1.29E-05	3.20E-04		
Parking Structure	Site 5	10/28/2008	3/19/2009	Concrete Pump	OCE	Diesel	400	2	50%	30%	0.00	0.004	0.039	3.234					
		10/28/2008	3/19/2009	Compactor	R	Diesel	105	1	10%	50%	0.28	0.030	0.031	2.568	1.21E-05	1.25E-05	1.05E-03		
		10/28/2008	3/19/2009	Wheel Loader	TLB	Diesel	50	3	10%	30%	0.28	0.177	0.183	1.166	6.20E-05	6.39E-05	4.07E-04		
		10/28/2008	3/19/2009	Diaphragm Pump	LCP	Gasoline	4	2	10%	20%	0.00	5.501	5.979	0.496					
		10/28/2008	3/19/2009	Mortar Mixer	CMM	Gasoline	8	5	10%	40%	0.00	0.065	0.070	1.820					
		10/28/2008	3/19/2009	Towable Hole Digger	OCE	Gasoline	8	4	3%	50%	0.00	0.050	0.054	1.347					
		10/28/2008	3/19/2009	Power Trowel	PE	Gasoline	8	5	20%	50%	0.00	0.061	0.067	1.650					

Work Task	Location/ Site	Start Date	End Date	Equipment Type	Annual Fraction	Abbreviation	Power Output (hp)	Deliveries Peak Hour Maximum	Peak Deliveries per day	Total Deliveries per Period	Trucks Idling Emissions (g/s)	Trucks Engine Emissions (g/s)	Annual PM_{10} Road Dust	Annual $PM_{2.5}$ Transfer Operation	Annual PM_{10} Transfer Operation Dust		
Foundations	Site 1	1/2/2008	9/26/2008	Articulated Dump Truck	0.17	DT	205	6	15	2229	1.24E-05	1.35E-06	4.08E-03	3.03E-04	6.42E-04		
Foundations	Site 1	1/2/2008	9/26/2008	Straight Truck 6 wheel	0.17	ST	60	1	3	376	1.25E-06	3.41E-08	4.25E-04				
Foundations	Site 1	4/17/2008	9/26/2008	Concrete Truck 11 cy	0.17	CT	500	3	8	715	4.47E-06	7.20E-07	2.04E-03				
Underground Garage	Site 1	2/14/2008	8/28/2008	Articulated Dump Truck	0.12	DT	205	0	15	984	5.19E-06	5.64E-07	1.71E-03	2.12E-04	4.49E-04		
Underground Garage	Site 1	2/14/2008	8/28/2008	Straight Truck 6 wheel	0.12	ST	60	0	3	376	1.19E-06	2.15E-07	4.03E-04				
Underground Garage	Site 1	2/14/2008	8/28/2008	Concrete Truck 11 cy	0.12	CT	500	0	8	715	2.54E-06	4.09E-07	1.16E-03				
Superstructure	Site 1	9/29/2008	4/30/2009	Straight Truck 6 wheel	0.41	ST	60	2	4	294	2.96E-06	5.36E-07	1.00E-03				
Superstructure	Site 1	9/29/2008	4/30/2009	Concrete Truck 11 cy	0.41	CT	500	12	30	4024	4.56E-05	7.33E-06	2.07E-02				
Interiors	Site 1	5/1/2009	10/5/2009	Articulated Dump Truck	0.11	DT	205	2	5	550	3.38E-06	3.67E-07	1.11E-03	6.57E-05	1.39E-04		
Interiors	Site 1	5/1/2009	10/5/2009	Straight Truck 6 wheel	0.11	ST	60	1	1	110	4.05E-07	7.34E-08	1.37E-04				
Interiors	Site 1	5/1/2009	10/5/2009	Material Trucks	0.11	MT	60	2	5	550	2.03E-06	3.67E-07	6.87E-04				
Open Areas Underground Garag	Site 2	6/27/2008	12/24/2009	Articulated Dump Truck	0.70	DT	205	11	27	9734	1.08E-04	1.18E-05	3.57E-02	2.21E-03	4.68E-03		
Open Areas Underground Garag	Site 2	6/27/2008	12/24/2009	Straight Truck 6 wheel	0.70	ST	60	5	12	1880	1.28E-05	3.41E-07	4.36E-03				
Open Areas Underground Garag	Site 2	6/27/2008	12/24/2009	Concrete Truck 11 cy	0.70	CT	500	6	15	4425	3.33E-05	5.35E-06	1.51E-02				
Sitework/Landscape/Water Feature	Site 3	4/13/2009	7/7/2010	Articulated Dump Truck	0.15	DT	205	3	8	504	1.42E-06	2.31E-08	4.67E-04	1.38E-04	2.94E-04		
Sitework/Landscape/Water Feature	Site 3	4/13/2009	7/7/2010	Straight Truck 6 wheel	0.15	ST	60	3	7	441	7.44E-07	1.35E-07	2.52E-04				
Foundations	Site 4	9/29/2008	4/16/2009	Articulated Dump Truck	0.38	DT	205	3	8	299	5.02E-06	2.64E-07	7.99E-04	3.59E-04	7.61E-04		
Foundations	Site 4	9/29/2008	4/16/2009	Straight Truck 6 wheel	0.38	ST	60	1	3	274	2.76E-06	2.42E-07	4.52E-04				
Foundations	Site 4	1/5/2009	4/16/2009	Concrete Truck 11 cy	0.20	CT	500	6	15	629	7.12E-06	5.55E-07	1.57E-03				
Superstructure	Site 4	4/17/2009	12/2/2009	Straight Truck 6 wheel	0.14	ST	60	2	4	318	9.95E-07	8.72E-08	1.63E-04				
Superstructure	Site 4	4/17/2009	12/2/2009	Concrete Truck 11 cy	0.14	CT	500	4	10	804	2.83E-06	2.20E-07	6.23E-04				
Parking Structure	Site 5	10/28/2008	3/19/2009	Articulated Dump Truck	0.28	DT	205	6	15	1117	1.87E-05	9.85E-07	2.98E-03	4.90E-04	1.04E-03		
Parking Structure	Site 5	10/28/2008	3/19/2009	Straight Truck 6 wheel	0.28	ST	60	2	5	291	2.93E-06	3.85E-08	4.80E-04				
Parking Structure	Site 5	10/28/2008	3/19/2009	Concrete Truck 11 cy	0.28	CT	500	8	20	1523	1.72E-05	1.34E-06	3.80E-03				

Table F.2-4

Annual Emissions				
Source Code	**Description**	**Annual Source Area (m^2)**	**$PM_{2.5}$**	**NOx**
A1FDCMT	Site 1 - Foundations (Concrete Trucks + MT)	826.1	7.85E-09	3.10E-07
A1FDCP1	Site 1 - Foundations (Concrete Pumps)	753.7	7.47E-08	6.48E-05
A1FDPIT	Site 1 - Foundations (Equipments Inside Pit)	3398.1	2.48E-08	3.47E-07
A1FDTO1	Site 1 - Foundations (Transfer Operations)	3398.1	9.32E-08	1.59E-07
A1FDTRD	Site 1 - Foundations (Truck Road Dust)	826.1	0.00E+00	0.00E+00
A1INCMT	Site 1 - Interiors (Concrete Trucks + MT + DT)	826.1	8.75E-08	3.18E-07
A1ININT	Site 1 - Interiors (Interior Equipments)	3398.1	5.92E-09	1.48E-07
A1INTRD	Site 1 - Interiors (Truck Road Dust)	826.1	0.00E+00	0.00E+00
A1PSCMT	Site 1 - Parking Structures (Concrete Trucks + MT)	826.1	5.28E-09	2.12E-07
A1PSCP1	Site 1 - Parking Structures (Concrete Pumps)	753.7	2.09E-08	1.81E-05
A1PSPD1	Site 1 - Parking Structures (Pile Driver)	1279.9	5.43E-08	7.31E-06
A1PSPIT	Site 1 - Parking Structures (Equipments Inside Pit)	3398.1	6.82E-08	5.31E-06
A1PSTO1	Site 1 - Parking Structures (Transfer Operations)	3398.1	6.39E-08	6.63E-08
A1PSTRD	Site 1 - Parking Structures (Truck Road Dust)	826.1	0.00E+00	0.00E+00
A1SSCMT	Site 1 - Superstructures (Concrete Trucks + MT)	826.1	6.83E-08	2.73E-06
A1SSCP1	Site 1 - Superstructures (Concrete Pumps)	753.7	1.78E-07	1.54E-04
A1SSINT	Site 1 - Superstructures (Interior Equipments)	3398.1	2.80E-07	1.51E-05
A1SSTRD	Site 1 - Superstructures (Truck Road Dust)	826.1	0.00E+00	0.00E+00
A2PSCMT	Site 2 - Parking Structures (Concrete Trucks + MT)	671.3	7.68E-08	3.03E-06
A2PSCP1	Site 2 - Parking Structures (Concrete Pumps)	485.3	1.88E-07	1.63E-04
A2PSPD1	Site 2 - Parking Structures (Pile Driver)	7439.1	1.08E-07	1.46E-05
A2PSPIT	Site 2 - Parking Structures (Equipments Inside Pit)	13925.2	1.26E-07	9.27E-06
A2PSTO1	Site 2 - Parking Structures (Transfer Operations)	13925.2	1.67E-07	3.38E-07
A2PSTRD	Site 2 - Parking Structures (Truck Road Dust)	671.3	0.00E+00	0.00E+00
A3LSEQP	Site 3 - Landscaping (General Equipments)	6298.6	3.87E-08	1.03E-06
A4EXGR1	Site 4 - Excavations Generator 1		9.92E-05	1.07E-02
A4EXPIT	Site 4 - Excavations (Equipments Inside Pit)	2955	6.48E-08	5.90E-06
A4FDCMT	Site 4 - Foundations (Concrete Trucks + MT)	150.6	7.09E-08	2.75E-06
A4FDCP1	Site 4 - Foundations (Concrete Pumps)	150.6	4.83E-07	3.99E-04
A4FDPIT	Site 4 - Foundations (Equipments Inside Pit)	1305.5	0.00E+00	0.00E+00
A4FDTO1	Site 4 - Foundations (Transfer Operations)	1305.5	2.79E-07	1.55E-07
A4FDTRD	Site 4 - Foundations (Truck Road Dust)	150.6	0.00E+00	0.00E+00
A4SSCMT	Site 4 - Superstructures (Concrete Trucks + MT)	150.6	2.74E-08	1.06E-06
A4SSCP1	Site 4 - Superstructures (Concrete Pumps)	150.6	2.02E-07	1.67E-04
A4SSINT	Site 4 - Superstructures (Interior Equipments)	1305.5	1.84E-07	6.73E-06
A4SSTRD	Site 4 - Superstructures (Truck Road Dust)	150.6	0.00E+00	0.00E+00
A5PSCMT	Site 5 - Parking Structures (Concrete Trucks + MT)	150.6	1.43E-07	5.51E-06
A5PSCP1	Site 5 - Parking Structures (Concrete Pumps)	150.6	0.00E+00	0.00E+00
A5PSPIT	Site 4 + 5 - Found/Parking (Interior Equipments)	2955	7.98E-08	1.24E-06
A5PSTO1	Site 5 - Parking Structures (Transfer Operations)	2955	1.73E-07	2.55E-07
A5PSTRD	Site 5 - Parking Structures (Truck Road Dust)	150.6	0.00E+00	0.00E+00

Estimated Peak-Hour Emission Rates
Fugitive Dust Sources - PM_{10}
Mobile Equipment Operating on Unpaved Roads

		Analysis Period	Surface Type	k	s (% silt)	W	PM_{10} Emission Factor g/VMT
Concrete Truck	CT	Short Term	Unpaved	1.5	8.5	30	1405.95
Dump Truck	DT	Short Term	Unpaved	1.5	8.5	35	1506.94
Heavy Truck		Short Term	Unpaved	1.5	8.5	12	930.89
Concrete Truck	CT	Annual[b]	Unpaved	1.5	8.5	30	1004.25
Dump Truck	DT	Annual[b]	Unpaved	1.5	8.5	35	1076.39
Heavy Truck		Annual[b]	Unpaved	1.5	8.5	12	664.92

Notes: a. Road dust emissions were not calculated on a per vehicle basis but rather on a fleet-wide basis. Excavators, lo backhoes move about in small incremental steps as the excavation progresses (i.e., minimal distances) and wo generate negligible amounts of fugitive dust.
b. Annual emissions were multiplied by 5/7 to account for a five day work week.

Unpaved Road Emission Factor - Sample Calculation (Short Term):

$E_f = k * (s/12)^a * (W/3)^b$ Equation 1a from Section 13.2.2 of USEPA's AP-42

where:

E_f = size specific emission factor in pounds per vehicle mile traveled (lb/VMT)

k = an empirical constant selected from AP-42 Table 13.2.2-2 for PM_{10}

s = surface material silt content in percent silt selected from AP-42 Table 13.2.2-1 (for a construction site)

a = an empirical constant selected from AP-42 Table 13.2.2-2 for PM_{10}

W = mean vehicle weight in tons

b = an empirical constant selected from AP-42 Table 13.2.2-2 for PM_{10}

$E_f = 1.5 * (8.5/12)^{0.9} * (30/3)^{0.45} * 453.59$

E_f = 1406 g/VMT

Estimated Peak-Hour Short-Term Emission Rates
Fugitive Dust Sources - PM10 and PM2.5
Transfer Operations

Activity	Emission Factor[2] lb/ton	Number of Trucks (Peak day)	Volume Removed Hourly cubic yards[1]	Default Soil Density lbs/cubic yard	Tons Removed Hourly	PM_{10} Emission Rate lb/hr	PM_{10} Emission Rate g/s	$PM_{2.5}$ Emission Rate lb/hr	$PM_{2.5}$ Emission Rate g/s
Transfers to 15 cy Truck	5.39E-04	5	9.4	2,600	12	0.010	1.24E-03	4.6E-03	5.8E-04
Transfers to 15 cy Truck	5.39E-04	8	15.0	2,600	20	0.016	1.99E-03	7.4E-03	9.4E-04
Transfers to 15 cy Truck	5.39E-04	15	28.1	2,600	37	0.030	3.72E-03	1.4E-02	1.8E-03
Transfers to 15 cy Truck	5.39E-04	27	50.6	2,600	66	0.053	6.70E-03	2.5E-02	3.2E-03

Notes:
1. A maximum "excavation" transfer is based on…..
2. Emission factors for soil transfer operations are based on Equation 1 from Section 13.2.4 of AP-42. Emission factor calculations are provided below.

Transfer/Drop Operation Emission Factor - Sample Calculation for PM_{10}:

$E_f = k * (0.0032) * (U/5)^{1.3} / (M/2)^{1.4}$

where:

E_f = size specific emission factor in pounds per ton (lb/ton)

k = an empirical constant selected from AP-42 (0.35 for PM_{10} and 0.11 for $PM_{2.5}$)

U = mean wind speed in miles per hour (mph)

M = material moisture content in percent moisture (%) from Table 13.2.4-1 of AP-42 (for overburden)

$E_f = 0.35 * (0.0032) * (12.5/5)^{1.3} / (7.9/2)^{1.4}$

E_f = 5.39E-04 lb/ton

Sample Emission Rate Calculation for PM_{10} (loader):

$E_R = E_f\ PM_{10}$ * (soil volume * soil density / 2,000 lbs/ton) * 453.59 / 60 / 60

where:

E_R = PM_{10} emission rate in grams per second

$E_f\ PM_{10}$ = PM_{10} emission factor in lb/ton

soil volume = volume of soil handled in cubic yards per hour

soil density = 2,600 lbs/YD^3

1.5 = material handling factor (accounts for multiple handling)

E_R = 5.39E-04 * (9.4 * 2,600 / 2,000) * 1.5 * 453.59 / 60 / 60

E_R = 1.24E-03 g/s

Estimated Peak-Hour Short-Term Emission Rates
Fugitive Dust Sources - PM_{10}
Grading Operations

Construction Equipment	Miles Traveled per Vehicle max per hr[1]	PM_{10} Factor lb/VMT	Uncontrolled Emissions[2]	
			PM_{10} Emissions lb/hr **per veh**	PM_{10} Emissions g/sec **per veh**
Bull Dozers	0.0947	0.0306	2.9E-03	3.7E-04

Notes:
1. 0.0947 miles is equal to 500 feet. *Best engineering judgement; based on the distance traveled back and forth by
2. Emission factors for grading operations are based on equations presented in Table 11.9-1 of AP-42. Emission Factor calculations are provided below.

Grading Operation Emission Factor - Sample Calculation for PM_{10}:

$E_f = 0.051 * (S)^{2.0} * PM_{10}$ scaling factor

where:

E_f = size specific emission factor in pounds per vehicle mile traveled (lb/VMT)

S = mean vehicle speed in miles per hour (mph)

PM_{10} scaling factor = an empirical constant selected from AP-42 for PM_{10}

$E_f = 0.051 * (1.0)^{2.0} * 0.60$

$E_f = 0.0306$ lb/VMT

Sample Emission Rate Calculation for PM_{10} (Dozer):

$E_R = E_f\ PM_{10}$ * miles traveled * 453.59 / 60 / 60

where:

$E_R = PM_{10}$ emission rate in grams per second

$E_f\ PM_{10} = PM_{10}$ emission factor in lb/VMT

$E_R = 0.0306 * 0.0947 * 453.59 / 60 / 60$

$E_R = 3.7E\text{-}04$ g/s

Estimated Peak-Hour Short-Term Emission Rates
Fugitive Dust Sources - $PM_{2.5}$
Grading Operations

Construction Equipment	Miles Traveled per Vehicle max per hr[1]	Paved $PM_{2.5}$ Factor lb/VMT	Uncontrolled Emissions	
			$PM_{2.5}$ Emissions lb/hr **per veh**	$PM_{2.5}$ Emissions g/sec **per veh**
Bull Dozers	0.0947	0.00124	1.2E-04	1.5E-05

Notes:
1. 0.0947 miles is equal to 500 feet.
2. Emission factors for grading operations are based on equations presented in Table 11.9-1 of AP-42. Emission Factor calculations are provided below.

Grading Operation Emission Factor - Sample Calculation for $PM_{2.5}$:

$E_f = 0.040 * (S)^{2.5} * PM_{2.5}$ scaling factor

where:

E_f = size specific emission factor in pounds per vehicle mile traveled (lb/VMT)

S = mean vehicle speed in miles per hour (mph)

$PM_{2.5}$ scaling factor = an empirical constant selected from AP-42 for $PM_{2.5}$

$E_f = 0.040 * (1.0)^{2.5} * 0.031$

$E_f = 0.00124$ lb/VMT

Sample Emission Rate Calculation for $PM_{2.5}$ (Dozer):

$E_R = E_f\ PM_{2.5}$ * miles traveled * 453.59 / 60 / 60

where:

$E_R = PM_{2.5}$ emission rate in grams per second

$E_f\ PM_{2.5} = PM_{2.5}$ emission factor in lb/VMT

$E_R = 0.00124 * 0.0947 * 453.59 / 60 / 60$

$E_R = 1.5E\text{-}05$ g/s

Appendix F.3

Construction Noise

Table F.3-1a Construction Noise Results

	Existing	2Q -2008			3Q-2009			2Q-2010			4Q-2011			3Q-2012			1Q-2013			3Q-2014		
Noise Receptor	dBA	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change
Receptor A	71.4	55.1	71.5	0.1	55.6	71.5	0.1	56.1	71.5	0.1	66.2	72.5	1.1	66.9	72.7	1.3	60.3	71.7	0.3	60	71.7	0.3
Receptor B (1fl)	64.3	43.3	64.3	0.0	46.6	64.4	0.1	47	64.4	0.1	65.2	67.8	3.5	66.9	68.8	4.5	70.8	71.7	7.4	63.9	67.1	2.8
Receptor B (3fl)	65.4	45	65.4	0.0	47.8	65.5	0.1	48.7	65.5	0.1	71.4	72.4	7.0	71.7	72.6	7.2	75.5	75.9	10.5	71.3	72.3	6.9
Receptor B (5fl)	65.4	45.4	65.4	0.0	47.8	65.5	0.1	47.8	65.5	0.1	74.6	75.1	9.7	75.4	75.8	10.4	77.1	77.4	12.0	74.2	74.7	9.3
Receptor B (10fl)	65.3	45.6	65.3	0.0	47.7	65.4	0.1	48.2	65.4	0.1	74.6	75.1	9.8	75.6	76.0	10.7	76.8	77.1	11.8	73	73.7	8.4
Receptor B (15fl)	65.2	44.9	65.2	0.0	46.9	65.3	0.1	47.8	65.3	0.1	73.4	74.0	8.8	74.5	75.0	9.8	75.9	76.3	11.1	71.6	72.5	7.3
Receptor B (20fl)	64.9	44.6	64.9	0.0	46.8	65.0	0.1	47.6	65.0	0.1	72.2	72.9	8.0	73.3	73.9	9.0	74.7	75.1	10.2	70.2	71.3	6.4
Receptor B (25fl)	64.8	44.2	64.8	0.0	46.6	64.9	0.1	47.4	64.9	0.1	71	71.9	7.1	72.1	72.8	8.0	73.7	74.2	9.4	68.9	70.3	5.5
Receptor B (30fl)	64.6	43.5	64.6	0.0	46.3	64.7	0.1	47	64.7	0.1	69.9	71.0	6.4	70.9	71.8	7.2	73	73.6	9.0	67.7	69.4	4.8
Receptor B (35fl)	64.6	43.2	64.6	0.0	46	64.7	0.1	46.7	64.7	0.1	68.9	70.3	5.7	69.7	70.9	6.3	71.8	72.6	8.0	66.6	68.7	4.1
Receptor C (1fl)	71.8	55.9	71.9	0.1	56.2	71.9	0.1	56.4	71.9	0.1	62.1	72.2	0.4	62.1	72.2	0.4	63.6	72.4	0.6	58.1	72.0	0.2
Receptor C (3fl)	72.0	55.2	72.1	0.1	55.9	72.1	0.1	55.9	72.1	0.1	63.8	72.6	0.6	65.3	72.8	0.8	66.4	73.1	1.1	59.4	72.2	0.2
Receptor C (5fl)	71.7	53.6	71.8	0.1	54.3	71.8	0.1	54.4	71.8	0.1	65.9	72.7	1.0	66.2	72.8	1.1	67.6	73.1	1.4	61.4	72.1	0.4
Receptor C (10fl)	71.7	52.4	71.8	0.1	52.8	71.8	0.1	53.1	71.8	0.1	67.6	73.1	1.4	66.5	72.8	1.1	69.4	73.7	2.0	63	72.2	0.5
Receptor C (14fl)	71.5	51.6	71.5	0.0	51.6	71.5	0.0	52.3	71.6	0.1	68.1	73.1	1.6	66.7	72.7	1.2	69.3	73.5	2.0	63.1	72.1	0.6
Receptor D (1fl)	71.7	54.5	71.8	0.1	54.7	71.8	0.1	54.9	71.8	0.1	59.3	71.9	0.2	58.2	71.9	0.2	59.8	72.0	0.3	57.4	71.9	0.2
Receptor D (3fl)	72.0	54.2	72.1	0.1	54.7	72.1	0.1	54.8	72.1	0.1	60.5	72.3	0.3	61.1	72.3	0.3	61.7	72.4	0.4	58.5	72.2	0.2
Receptor D (5fl)	71.7	52.6	71.8	0.1	53.3	71.8	0.1	53.5	71.8	0.1	61	72.1	0.4	61.4	72.1	0.4	62.7	72.2	0.5	59.2	71.9	0.2
Receptor D (10fl)	71.5	50.3	71.5	0.0	50.4	71.5	0.0	51.3	71.5	0.0	62.7	72.0	0.5	62	72.0	0.5	63.9	72.2	0.7	60.8	71.9	0.4
Receptor D (15fl)	71.7	49.7	71.7	0.0	50.3	71.7	0.0	50.7	71.7	0.0	63	72.2	0.5	62.1	72.2	0.5	64.7	72.5	0.8	61.2	72.1	0.4
Receptor D (20fl)	71.5	49.6	71.5	0.0	49.8	71.5	0.0	50.3	71.5	0.0	63.3	72.1	0.6	62.1	72.0	0.5	64.6	72.3	0.8	61.2	71.9	0.4
Receptor D (25fl)	71.3	49.2	71.3	0.0	49.1	71.3	0.0	50.6	71.3	0.0	63.5	72.0	0.7	62.1	71.8	0.5	64.3	72.1	0.8	61	71.7	0.4
Receptor D (30fl)	71.3	49.4	71.3	0.0	48.8	71.3	0.0	50.6	71.3	0.0	63.7	72.0	0.7	62	71.8	0.5	64.1	72.1	0.8	60.7	71.7	0.4
Receptor D (35fl)	71.1	49	71.1	0.0	48.3	71.1	0.0	50.3	71.1	0.0	63.5	71.8	0.7	61.8	71.6	0.5	63.8	71.8	0.7	60.4	71.5	0.4
Receptor E (1fl)	69.0	40.7	69.0	0.0	46.4	69.0	0.0	42.6	69.0	0.0	54.5	69.2	0.2	53.4	69.1	0.1	47.6	69.0	0.0	43.6	69.0	0.0
Receptor E (3fl)	69.3	42.2	69.3	0.0	50.4	69.4	0.1	44.5	69.3	0.0	56.1	69.5	0.2	57.4	69.6	0.3	48	69.3	0.0	44.4	69.3	0.0
Receptor E (5fl)	69.1	44	69.1	0.0	47.7	69.1	0.0	45.6	69.1	0.0	58.5	69.5	0.4	57.7	69.4	0.3	48.7	69.1	0.0	47.5	69.1	0.0
Receptor E (8fl)	68.9	44.5	68.9	0.0	46.2	68.9	0.0	45.3	68.9	0.0	59.9	69.4	0.5	58.2	69.3	0.4	50.7	69.0	0.1	49.3	68.9	0.0
Receptor F (1fl)	68.3	46.5	68.3	0.0	48.2	68.3	0.0	48.3	68.3	0.0	64.7	69.9	1.6	66.7	70.6	2.3	69.7	72.1	3.8	65.8	70.2	1.9
Receptor F (3fl)	68.6	49.1	68.6	0.0	50.8	68.7	0.1	51.3	68.7	0.1	69.9	72.3	3.7	71.2	73.1	4.5	75.5	76.3	7.7	70.8	72.8	4.2
Receptor F (5fl)	68.3	49.1	68.4	0.1	50.2	68.4	0.1	51.1	68.4	0.1	73	74.3	6.0	72.7	74.0	5.7	78.5	78.9	10.6	73.8	74.9	6.6
Receptor F (10fl)	68.1	49.1	68.2	0.1	50	68.2	0.1	51.9	68.2	0.1	73.6	74.7	6.6	73	74.2	6.1	77.7	78.2	10.1	72.9	74.1	6.0
Receptor F (15fl)	67.9	47.8	67.9	0.0	50.2	68.0	0.1	52.1	68.0	0.1	73	74.2	6.3	72.5	73.8	5.9	76.4	77.0	9.1	71.5	73.1	5.2
Receptor F (20fl)	67.7	47.6	67.7	0.0	50.1	67.8	0.1	52	67.8	0.1	71.9	73.3	5.6	71.8	73.2	5.5	75.1	75.8	8.1	70.1	72.1	4.4
Receptor F (25fl)	67.7	46.6	67.7	0.0	49.9	67.8	0.1	51.6	67.8	0.1	70.8	72.5	4.8	70.9	72.6	4.9	73.8	74.8	7.1	68.8	71.3	3.6
Receptor F (30fl)	67.5	46.2	67.5	0.0	49.9	67.6	0.1	51.5	67.6	0.1	69.8	71.8	4.3	69.9	71.9	4.4	72.7	73.8	6.3	67.7	70.6	3.1
Receptor G (1fl)	65.5	55.2	65.9	0.4	58.2	66.2	0.7	63.5	67.6	2.1	61.2	66.9	1.4	57.3	66.1	0.6	60.1	66.6	1.1	56.5	66.0	0.5
Receptor G (3fl)	66.0	58.6	66.7	0.7	60.5	67.1	1.1	66.3	69.2	3.2	63.5	67.9	1.9	61	67.2	1.2	62.6	67.6	1.6	58.6	66.7	0.7
Receptor G (5fl)	65.9	60.4	67.0	1.1	63.3	67.8	1.9	69	70.7	4.8	64.9	68.4	2.5	61.3	67.2	1.3	63	67.7	1.8	59.8	66.9	1.0
Receptor G (10fl)	65.5	61.2	66.9	1.4	65.9	68.7	3.2	69.4	70.9	5.4	65.7	68.6	3.1	61.3	66.9	1.4	64.4	68.0	2.5	60.7	66.7	1.2
Receptor G (15fl)	65.4	61.8	67.0	1.6	67.1	69.3	3.9	69.6	71.0	5.6	65.9	68.7	3.3	61.3	66.8	1.4	64.3	67.9	2.5	60.7	66.7	1.3
Receptor G (20fl)	65.2	62	66.9	1.7	67.1	69.3	4.1	69.5	70.9	5.7	66	68.6	3.4	61.2	66.7	1.5	64	67.7	2.5	60.3	66.4	1.2
Receptor G (25fl)	65.3	62	67.0	1.7	66.8	69.1	3.8	69.4	70.8	5.5	65.9	68.6	3.3	61.2	66.7	1.4	63.7	67.6	2.3	60	66.4	1.1
Receptor G (30fl)	65.4	61.9	67.0	1.6	66.5	69.0	3.6	68.9	70.5	5.1	65.9	68.7	3.3	61.1	66.8	1.4	63.5	67.6	2.2	59.6	66.4	1.0
Receptor H (1fl)	69.6	67	71.5	1.9	61.5	70.2	0.6	64.4	70.7	1.1	61.9	70.3	0.7	54.2	69.7	0.1	53.4	69.7	0.1	53.4	69.7	0.1
Receptor H (3fl)	69.8	71.1	73.5	3.7	64.6	70.9	1.1	68.2	72.1	2.3	65.3	71.1	1.3	55.7	70.0	0.2	53.7	69.9	0.1	53.6	69.9	0.1
Receptor H (5fl)	69.6	71.9	73.9	4.3	64.5	70.8	1.2	68.1	71.9	2.3	65.2	70.9	1.3	54.5	69.7	0.1	51.4	69.7	0.1	51.3	69.7	0.1
Receptor H (10fl)	69.4	71.6	73.6	4.2	64.8	70.7	1.3	68	71.8	2.4	65.2	70.8	1.4	53.8	69.5	0.1	50	69.4	0.0	49.8	69.4	0.0
Receptor H (15fl)	69.4	70.8	73.2	3.8	64.8	70.7	1.3	67.8	71.7	2.3	65	70.7	1.3	53	69.5	0.1	48.9	69.4	0.0	48.6	69.4	0.0
Receptor H (20fl)	69.2	69.9	72.6	3.4	64.7	70.5	1.3	67.5	71.4	2.2	64.8	70.5	1.3	52.3	69.3	0.1	47.2	69.2	0.0	46.8	69.2	0.0
Receptor I (1fl)	66.9	59.8	67.7	0.8	48.7	67.0	0.1	55.7	67.2	0.3	52.6	67.1	0.2	39.1	66.9	0.0	39.1	66.9	0.0	36.9	66.9	0.0
Receptor I (3fl)	67.6	65.3	69.6	2.0	54.7	67.8	0.2	60.6	68.4	0.8	57.6	68.0	0.4	46.7	67.6	0.0	46.3	67.6	0.0	46	67.6	0.0
Receptor I (5fl)	67.5	67.2	70.4	2.9	56.1	67.8	0.3	60.9	68.4	0.9	58.2	68.0	0.5	48.8	67.6	0.1	48.5	67.6	0.1	48.3	67.6	0.1
Receptor I (10fl)	67.2	67.7	70.5	3.3	56.3	67.5	0.3	60.8	68.1	0.9	58.5	67.7	0.5	47.9	67.3	0.1	47.5	67.2	0.0	47.3	67.2	0.0
Receptor I (15fl)	67.0	67.4	70.2	3.2	56.6	67.4	0.4	60.7	67.9	0.9	58.2	67.5	0.5	46.4	67.0	0.0	46.5	67.0	0.0	46.1	67.0	0.0
Receptor I (23fl)	67.0	66.7	69.9	2.9	57.3	67.4	0.4	60.5	67.9	0.9	57.9	67.5	0.5	49.8	67.1	0.1	44.2	67.0	0.0	43.5	67.0	0.0
Receptor J (1fl)	66.2	55.9	66.6	0.4	47.5	66.3	0.1	51.7	66.4	0.2	49.6	66.3	0.1	44.6	66.2	0.0	40.1	66.2	0.0	39.1	66.2	0.0
Receptor J (3fl)	66.9	58.2	67.4	0.5	49.1	67.0	0.1	54.7	67.2	0.3	53.3	67.1	0.2	48.8	67.0	0.1	41.8	66.9	0.0	41.1	66.9	0.0
Receptor J (5fl)	66.8	60.1	67.6	0.8	51.1	66.9	0.1	57	67.2	0.4	54	67.0	0.2	49.1	66.9	0.1	43.4	66.8	0.0	42.9	66.8	0.0
Receptor J (10fl)	66.7	61.8	67.9	1.2	51.6	66.8	0.1	57.2	67.2	0.5	54.3	66.9	0.2	49.4	66.8	0.1	43.4	66.7	0.0	42.9	66.7	0.0
Receptor J (15fl)	66.5	63	68.1	1.6	51.9	66.6	0.1	57.2	67.0	0.5	54.5	66.8	0.3	48.5	66.6	0.1	43.3	66.5	0.0	42.7	66.5	0.0
Receptor J (20fl)	66.4	63.1	68.1	1.7	52	66.6	0.2	57	66.9	0.5	54.3	66.7	0.3	48.6	66.5	0.1	42.2	66.4	0.0	41.5	66.4	0.0
Receptor J (25fl)	66.5	63.3	68.2	1.7	52.5	66.7	0.2	57	67.0	0.5	54.4	66.8	0.3	48.2	66.6	0.1	41.8	66.5	0.0	41.1	66.5	0.0
Receptor K (1fl)	65.7	55.1	66.1	0.4	58.3	66.4	0.7	63.5	67.7	2.0	60.2	66.8	1.1	47.9	65.8	0.1	48	65.8	0.1	47.6	65.8	0.1
Receptor K (3fl)	66.2	58.3	66.9	0.7	61.7	67.5	1.3	68.9	70.8	4.6	64.3	68.4	2.2	50.6	66.3	0.1	50.6	66.3	0.1	50.4	66.3	0.1
Receptor K (5fl)	66.0	62.9	67.7	1.7	64.4	68.3	2.3	72.8	73.6	7.6	64.6	68.4	2.4	50.5	66.1	0.1	50.5	66.1	0.1	50.3	66.1	0.1
Receptor K (10fl)	65.7	62.9	67.5	1.8	64.9	68.3	2.6	71.4	72.4	6.7	64.6	68.2	2.5	49.2	65.8	0.1	49	65.8	0.1	48.7	65.8	0.1
Receptor K (15fl)	65.4	62.4	67.2	1.8	65	68.2	2.8	70.2	71.4	6.0	64.5	68.0	2.6	47.2	65.5	0.1	47.4	65.5	0.1	46.9	65.5	0.1
Receptor K (20fl)	66.0	62	67.5	1.5	65	68.5	2.5	69.2	70.9	4.9	64.3	68.2	2.2	46	66.0	0.0	46.5	66.0	0.0	45.8	66.0	0.0
Receptor L (1fl)	70.2	56.7	70.4	0.2	62	70.8	0.6	59.1	70.5	0.3	59.8	70.6	0.4	41.3	70.2	0.0	42.7	70.2	0.0	40.2	70.2	0.0
Receptor L (3fl)	70.2	59.4	70.5	0.3	65.5	71.5	1.3	65.5	71.5	1.3	63.2	71.0	0.8	42.6	70.2	0.0	43.8	70.2	0.0	41.7	70.2	0.0
Receptor L (5fl)	70.1	62.6	70.8	0.7	69.7	72.9	2.8	67.2	71.9	1.8	64.5	71.2	1.1	43.7	70.1	0.0	44.7	70.1	0.0	43	70.1	0.0
Receptor L (10fl)	70.4	64.3	71.4	1.0	71.2	73.8	3.4	67.7	72.3	1.9	66.3	71.8	1.4	43.6	70.4	0.0	44.3	70.4	0.0	42.7	70.4	0.0
Receptor L (15fl)	70.1	64.8	71.2	1.1	71	73.6	3.5	68	72.2	2.1	66.4	71.6	1.5	43.8	70.1	0.0	44.4	70.1	0.0	43.9	70.1	0.0
Receptor L (20fl)	69.9	64.8	71.1	1.2	71.1	73.6	3.7	69	72.5	2.6	67	71.7	1.8	43.6	69.9	0.0	44.1	69.9	0.0	43.4	69.9	0.0
Receptor L (25fl)	69.8	64.6	70.9	1.1	71	73.5	3.7	68.7	72.3	2.5	66.8	71.6	1.8	43.3	69.8	0.0	43.8	69.8	0.0	43	69.8	0.0
Receptor L (30fl)	69.6	64.3	70.7	1.1	70.4	73.0	3.4	68.2	72.0	2.4	66.4	71.3	1.7	42.7	69.6	0.0	43.3	69.6	0.0	42.4	69.6	0.0
Receptor L (35fl)	69.5	64	70.6	1.1	70	72.8	3.3	67.6	71.7	2.2	65.9	71.1	1.6	43	69.5	0.0	43.2	69.5	0.0	42.4	69.5	0.0
Receptor M (1fl)	69.1	53	69.2	0.1	62.5	70.0	0.9	68.8	72.0	2.9	60.8	69.7	0.6	62.3	69.9	0.8	62.3	69.9	0.8	62.3	69.9	0.8
Receptor N (5fl)	67.8	61.9	68.8	1.0	71.5	73.0	5.2	76.3	76.9	9.1	65.4	69.8	2.0	49.5	67.9	0.1	50.3	67.9	0.1	48.9	67.9	0.1
Receptor N (10fl)	67.7	63.1	69.0	1.3	73.3	74.4	6.7	76	76.6	8.9	65.5	69.7	2.0	52.6	67.8	0.1	53	67.8	0.1	52.3	67.8	0.1
Receptor N (15fl)	67.6	63.6	69.1	1.5	72.6	73.8	6.2	75.2	75.9	8.3	64.7	69.4	1.8	51.5	67.7	0.1	52	67.7	0.1	51.1	67.7	0.1
Receptor N (20fl)	67.4	63.7	68.9	1.5	71.7	73.1	5.7	74.2	75.0	7.6	64.2	69.1	1.7	50.8	67.5	0.1	51.4	67.5	0.1	50.3	67.5	0.1
Receptor N (25fl)	67.2	63.7	68.8	1.6	70.7	72.3	5.1	73.3	74.3	7.1	63.6	68.8	1.6	50.1	67.3	0.1	50.7	67.3	0.1	49.6	67.3	0.1
Receptor N (30fl)	67.1	63.5	68.7	1.6	69.9	71.7	4.6	72.3	73.4	6.3	62.9	68.5	1.4	48.8	67.2	0.1	49.5	67.2	0.1	48	67.2	0.1
Receptor N (35fl)	67.0	63.2	68.5	1.5	69.1	71.2	4.2	71.3	72.7	5.7	62.1	68.2	1.2	48	67.1	0.1	48.9	67.1	0.1	47.2	67.0	0.0
Receptor N (40fl)	67.5	63	68.8	1.3	68.4	71.0	3.5	70.4	72.2	4.7	61.3	68.4	0.9	47.5	67.5	0.0	48.3	67.6	0.1	46.5	67.5	0.0
Receptor O (1fl)	71.8	64	72.5	0.7	48.6	71.8	0.0	47.2	71.8	0.0	46.4	71.8	0.0	39.8	71.8	0.0	40.7	71.8	0.0	38.9	71.8	0.0
Receptor P (1fl)	71.5	50	71.5	0.0	46.8	71.5	0.0	45.2	71.5	0.0	44.6	71.5	0.0	38.9	71.5	0.0	39.6	71.5	0.0	38.1	71.5	0.0
Receptor Q (5fl)	65.6	55.6	66.0	0.4	53.3	65.8	0.2	55.3	66.0	0.4	54.3	65.9	0.3	36.5	65.6	0.0	37.3	65.6	0.0	34.3	65.6	0.0
Receptor Q (10fl)	66.6	58.3	67.2	0.6	54.5	66.9	0.3	55.8	66.9	0.3	54.4	66.9	0.3	39	66.6	0.0	39.4	66.6	0.0	37.9	66.6	0.0
Receptor Q (15fl)	66.4	58.6	67.1	0.7	54.9	66.7	0.3	55.8	66.8	0.4	54.3	66.7	0.3	39.1	66.4	0.0	40	66.4	0.0	38.5	66.4	0.0
Receptor Q (20fl)	66.7	59.8	67.5	0.8	55.5	67.0	0.3	55.9	67.0	0.3	54.3	66.9	0.2	39.1	66.7	0.0	40.9	66.7	0.0	38.6	66.7	0.0
Receptor Q (25fl)	66.8	61.8	68.0	1.2	55.6	67.1	0.3	55.8	67.1	0.3	54.2	67.0	0.2	39.2	66.8	0.0	41	66.8	0.0	38.7	66.8	0.0
Receptor Q (30fl)	66.5	63	68.1	1.6	55.6	66.8	0.3	55.8	66.9	0.4	54	66.7	0.2	39.3	66.5	0.0	41.2	66.5	0.0	38.8	66.5	0.0
Receptor Q (35fl)	66.4	63.6	68.2	1.8	55.5	66.7	0.3	55.6	66.7	0.3	53.9	66.6	0.2	40.7	66.4	0.0	41.1	66.4	0.0	38.7	66.4	0.0
Receptor Q (40fl)	66.3	63.7	68.2	1.9	55.5	66.6	0.3	55.5	66.6	0.3	53.7	66.5	0.2	40.6	66.3	0.0	41	66.3	0.0	38.5	66.3	0.0
Receptor Q (45fl)	66.1	63.5	68.0	1.9	55.4	66.5	0.4	55.3	66.4	0.3	53.5	66.3	0.2	40.5	66.1	0.0	40.9	66.1	0.0	38.4	66.1	0.0
Receptor Q (50fl)	66.0	63.2	67.8	1.8	55.2	66.3	0.3	55	66.3	0.3	53.3	66.2	0.2	40.4	66.0	0.0	41.2	66.0	0.0	38.2	66.0	0.0
Receptor R (1fl)	69.3	47.1	69.3	0.0	48.3	69.3	0.0	49.4	69.3	0.0	56.4	69.5	0.2	52.1	69.4	0.1	59.8	69.8	0.5	40.8	69.3	0.0
Receptor S (1fl)	61.2	41.5	61.2	0.0	49.2	61.5	0.3	45	61.3	0.1	46.2	61.3	0.1	37.5	61.2	0.0	39.2	61.2	0.0	35.1	61.2	0.0
Receptor S (3fl)	61.4	45.3	61.5	0.1	50.6	61.7	0.3	46.6	61.5	0.1	49.2	61.7	0.3	38.6	61.4	0.0	39.9	61.4	0.0	36	61.4	0.0
Receptor S (5fl)	61.6	56.7	62.8	1.2	54.9	62.4	0.8	54.2	62.3	0.7	49.4	61.9	0.3	39.5	61.6	0.0	40.8	61.6	0.0	37.4	61.6	0.0
Receptor S (10fl)	61.4	59.5	63.6	2.2	58.4	63.2	1.8	59.3	63.5	2.1	50.8	61.8	0.4	41.1	61.4	0.0	41.9	61.4	0.0	40	61.4	0.0
Receptor S (15fl)	61.6	60.5	64.1	2.5	60.3	64.0	2.4	61.1	64.4	2.8	51.6	62.0	0.4	41.4	61.6	0.0	42.1	61.6	0.0	40.3	61.6	0.0
Receptor S (20fl)	61.9	60.8	64.4	2.5	61.2	64.6	2.7	61.3	64.6	2.7	52.1	62.3	0.4	41.5	61.9	0.0	42.1	61.9	0.0	40.4	61.9	0.0
Receptor S (25fl)	62.0	60.8	64.5	2.5	61.2	64.6	2.6	61.8	64.9	2.9	53.7	62.6	0.6	41.9	62.0	0.0	42.3	62.0	0.0	40.6	62.0	0.0
Receptor S (30fl)	62.0	60.7	64.4	2.4	61.7	64.9	2.9	62.4	65.2	3.2	54.8	62.8	0.8	42	62.0	0.0	42.4	62.0	0.0	40.6	62.0	0.0

Exceed CEQR noise criteria

Table F.3-1b Construction Noise Results - Alternative Construction Scenario

	Existing	3Q -2008			3Q-2009			2Q-2010			4Q-2011			3Q-2012			1Q-2013			3Q-2014		
Noise Receptor	dBA	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change	Con. dBA	Total dBA	Change
Receptor A	71.4	55.4	71.5	0.1	55.4	71.5	0.1	56.9	71.6	0.2	66.2	72.5	1.1	66.9	72.7	1.3	60.3	71.7	0.3	60.0	71.7	0.3
Receptor B (1fl)	64.3	44.8	64.3	0.0	46.4	64.4	0.1	46.7	64.4	0.1	65.2	67.8	**3.5**	66.9	68.8	**4.5**	70.8	71.7	**7.4**	63.9	67.1	2.8
Receptor B (3fl)	65.4	46.5	65.5	0.1	47.5	65.5	0.1	48.3	65.5	0.1	71.4	72.4	**7.0**	71.7	72.6	**7.2**	75.5	75.9	**10.5**	71.3	72.3	**6.9**
Receptor B (5fl)	65.4	46.4	65.5	0.1	47.5	65.5	0.1	47.6	65.5	0.1	74.6	75.1	**9.7**	75.4	75.8	**10.4**	77.1	77.4	**12.0**	74.2	74.7	**9.3**
Receptor B (10fl)	65.3	46.2	65.4	0.1	47.3	65.4	0.1	47.9	65.4	0.1	74.6	75.1	**9.8**	75.6	76.0	**10.7**	76.8	77.1	**11.8**	73.0	73.7	**8.4**
Receptor B (15fl)	65.2	45.7	65.2	0.0	46.6	65.3	0.1	47.5	65.3	0.1	73.4	74.0	**8.8**	74.5	75.0	**9.8**	75.9	76.3	**11.1**	71.6	72.5	**7.3**
Receptor B (20fl)	64.9	45.4	64.9	0.0	46.6	65.0	0.1	47.3	65.0	0.1	72.2	72.9	**8.0**	73.3	73.9	**9.0**	74.7	75.1	**10.2**	70.2	71.3	**6.4**
Receptor B (25fl)	64.8	45.1	64.8	0.0	46.4	64.9	0.1	46.9	64.9	0.1	71.0	71.9	**7.1**	72.1	72.8	**8.0**	73.7	74.2	**9.4**	68.9	70.3	**5.5**
Receptor B (30fl)	64.6	44.6	64.6	0.0	46.0	64.7	0.1	46.6	64.7	0.1	69.9	71.0	**6.4**	70.9	71.8	**7.2**	73.0	73.6	**9.0**	67.7	69.4	**4.8**
Receptor B (35fl)	64.6	44.4	64.6	0.0	45.8	64.7	0.1	46.3	64.7	0.1	68.9	70.3	**5.7**	69.7	70.9	**6.3**	71.8	72.6	**8.0**	66.6	68.7	**4.1**
Receptor C (1fl)	71.8	56.3	71.9	0.1	56.1	71.9	0.1	56.7	71.9	0.1	62.1	72.2	0.4	62.1	72.2	0.4	63.6	72.4	0.6	58.1	72.0	0.2
Receptor C (3fl)	72.0	55.7	72.1	0.1	55.5	72.1	0.1	56.6	72.1	0.1	63.8	72.6	0.6	65.3	72.8	0.8	66.4	73.1	1.1	59.4	72.2	0.2
Receptor C (5fl)	71.7	53.7	71.8	0.1	53.6	71.8	0.1	56.0	71.8	0.1	65.9	72.7	1.0	66.2	72.8	1.1	67.6	73.1	1.4	61.4	72.1	0.4
Receptor C (10fl)	71.7	52.7	71.8	0.1	52.2	71.7	0.0	56.2	71.8	0.1	67.6	73.1	1.4	66.5	72.8	1.1	69.4	73.7	2.0	63.0	72.2	0.5
Receptor C (14fl)	71.5	52.1	71.5	0.0	50.7	71.5	0.0	56.2	71.6	0.1	68.1	73.1	1.6	66.7	72.7	1.2	69.3	73.5	2.0	63.1	72.1	0.6
Receptor D (1fl)	71.7	54.9	71.8	0.1	54.6	71.8	0.1	55.2	71.8	0.1	59.3	71.9	0.2	58.2	71.9	0.2	59.8	72.0	0.3	57.4	71.9	0.2
Receptor D (3fl)	72.0	55.4	72.1	0.1	54.4	72.1	0.1	55.4	72.1	0.1	60.5	72.3	0.3	61.1	72.3	0.3	61.7	72.4	0.4	58.5	72.2	0.2
Receptor D (5fl)	71.7	53.7	71.8	0.1	52.9	71.8	0.1	54.8	71.8	0.1	61.0	72.1	0.4	61.4	72.1	0.4	62.7	72.2	0.5	59.2	71.9	0.2
Receptor D (10fl)	71.5	50.7	71.5	0.0	50.2	71.5	0.0	53.8	71.6	0.1	62.7	72.0	0.5	62.0	72.0	0.5	63.9	72.2	0.7	60.8	71.9	0.4
Receptor D (15fl)	71.7	50.2	71.7	0.0	49.2	71.7	0.0	53.8	71.8	0.1	63.0	72.2	0.5	62.1	72.2	0.5	64.7	72.5	0.8	61.2	72.1	0.4
Receptor D (20fl)	71.5	50.2	71.5	0.0	48.6	71.5	0.0	54.0	71.6	0.1	63.3	72.1	0.6	62.1	72.0	0.5	64.6	72.3	0.8	61.2	71.9	0.4
Receptor D (25fl)	71.3	49.6	71.3	0.0	47.6	71.3	0.0	54.8	71.4	0.1	63.5	72.0	0.7	62.1	71.8	0.5	64.3	72.1	0.8	61.0	71.7	0.4
Receptor D (30fl)	71.3	49.8	71.3	0.0	47.1	71.3	0.0	54.7	71.4	0.1	63.7	72.0	0.7	62.0	71.8	0.5	64.1	72.1	0.8	60.7	71.7	0.4
Receptor D (35fl)	71.1	49.6	71.1	0.0	46.4	71.1	0.0	54.5	71.2	0.1	63.5	71.8	0.7	61.8	71.6	0.5	63.8	71.8	0.7	60.4	71.5	0.4
Receptor E (1fl)	69.0	46.0	69.0	0.0	42.6	69.0	0.0	42.4	69.0	0.0	54.5	69.2	0.2	53.4	69.1	0.1	47.6	69.0	0.0	43.6	69.0	0.0
Receptor E (3fl)	69.3	49.9	69.3	0.0	44.6	69.3	0.0	44.2	69.3	0.0	56.1	69.5	0.2	57.4	69.6	0.3	48.0	69.3	0.0	44.4	69.3	0.0
Receptor E (5fl)	69.1	50.3	69.2	0.1	45.8	69.1	0.0	45.4	69.1	0.0	58.5	69.5	0.4	57.7	69.4	0.3	48.7	69.1	0.0	47.5	69.1	0.0
Receptor E (8fl)	68.9	45.5	68.9	0.0	45.1	68.9	0.0	45.3	68.9	0.0	59.9	69.4	0.5	58.2	69.3	0.4	50.7	69.0	0.1	49.3	68.9	0.0
Receptor F (1fl)	68.3	48.6	68.3	0.0	48.5	68.3	0.0	48.0	68.3	0.0	64.7	69.9	1.6	66.7	70.6	2.3	69.7	72.1	**3.8**	65.8	70.2	1.9
Receptor F (3fl)	68.6	52.1	68.7	0.1	51.6	68.7	0.1	50.9	68.7	0.1	69.9	72.3	**3.7**	71.2	73.1	**4.5**	75.5	76.3	**7.7**	70.8	72.8	**4.2**
Receptor F (5fl)	68.3	51.9	68.4	0.1	51.3	68.4	0.1	49.7	68.4	0.1	73.0	74.3	**6.0**	72.7	74.0	**5.7**	78.5	78.9	**10.6**	73.8	74.9	**6.6**
Receptor F (10fl)	68.1	48.3	68.1	0.0	49.5	68.2	0.1	49.1	68.2	0.1	73.6	74.7	**6.6**	73.0	74.2	**6.1**	77.7	78.2	**10.1**	72.9	74.1	**6.0**
Receptor F (15fl)	67.9	46.7	67.9	0.0	49.9	68.0	0.1	47.9	67.9	0.0	73.0	74.2	**6.3**	72.5	73.8	**5.9**	76.4	77.0	**9.1**	71.5	73.1	**5.2**
Receptor F (20fl)	67.7	46.4	67.7	0.0	49.8	67.8	0.1	47.7	67.7	0.0	71.9	73.3	**5.6**	71.8	73.2	**5.5**	75.1	75.8	**8.1**	70.1	72.1	**4.4**
Receptor F (25fl)	67.7	45.2	67.7	0.0	49.5	67.8	0.1	46.8	67.7	0.0	70.8	72.5	**4.8**	70.9	72.6	**4.9**	73.8	74.8	**7.1**	68.8	71.3	**3.6**
Receptor F (30fl)	67.5	44.7	67.5	0.0	49.5	67.6	0.1	46.4	67.5	0.0	69.8	71.8	**4.3**	69.9	71.9	**4.4**	72.7	73.8	**6.3**	67.7	70.6	**3.1**
Receptor G (1fl)	65.5	54.2	65.8	0.3	56.8	66.0	0.5	63.6	67.7	2.2	61.2	66.9	1.4	57.3	66.1	0.6	60.1	66.6	1.1	56.5	66.0	0.5
Receptor G (3fl)	66.0	57.2	66.5	0.5	59.0	66.8	0.8	66.3	69.2	**3.2**	63.5	67.9	1.9	61.0	67.2	1.2	62.6	67.6	1.6	58.6	66.7	0.7
Receptor G (5fl)	65.9	58.5	66.6	0.7	61.8	67.3	1.4	69.0	70.7	**4.8**	64.9	68.4	2.5	61.3	67.2	1.3	63.0	67.7	1.8	59.8	66.9	1.0
Receptor G (10fl)	65.5	59.1	66.4	0.9	65.2	68.4	2.9	69.3	70.8	**5.3**	65.7	68.6	**3.1**	61.3	66.9	1.4	64.4	68.0	2.5	60.7	66.7	1.2
Receptor G (15fl)	65.4	60.1	66.5	1.1	66.5	69.0	**3.6**	69.7	71.1	**5.7**	65.9	68.7	**3.3**	61.3	66.8	1.4	64.3	67.9	2.5	60.7	66.7	1.3
Receptor G (20fl)	65.2	60.5	66.5	1.3	66.5	68.9	**3.7**	69.6	70.9	**5.7**	66.0	68.6	**3.4**	61.2	66.7	1.5	64.0	67.7	2.5	60.3	66.4	1.2
Receptor G (25fl)	65.3	61.5	66.8	1.5	66.1	68.7	**3.4**	69.4	70.8	**5.5**	65.9	68.6	**3.3**	61.2	66.7	1.4	63.7	67.6	2.3	60.0	66.4	1.1
Receptor G (30fl)	65.4	62.7	67.3	1.9	65.8	68.6	**3.2**	69.0	70.6	**5.2**	65.9	68.7	**3.3**	61.1	66.8	1.4	63.5	67.6	2.2	59.6	66.4	1.0
Receptor H (1fl)	69.6	65.2	70.9	1.3	60.4	70.1	0.5	69.8	72.7	**3.1**	61.9	70.3	0.7	54.2	69.7	0.1	53.4	69.7	0.1	53.4	69.7	0.1
Receptor H (3fl)	69.8	69.7	72.8	**3.0**	62.0	70.5	0.7	73.4	75.0	**5.2**	65.3	71.1	1.3	55.7	70.0	0.2	53.7	69.9	0.1	53.6	69.9	0.1
Receptor H (5fl)	69.6	70.6	73.1	**3.5**	62.0	70.3	0.7	73.7	75.1	**5.5**	65.2	70.9	1.3	54.5	69.7	0.1	51.4	69.7	0.1	51.3	69.7	0.1
Receptor H (10fl)	69.4	70.2	72.8	**3.4**	62.7	70.2	0.8	73.1	74.6	**5.2**	65.2	70.8	1.4	53.8	69.5	0.1	50.0	69.4	0.0	49.8	69.4	0.0
Receptor H (15fl)	69.4	69.3	72.4	**3.0**	63.6	70.4	1.0	72.4	74.2	**4.8**	65.0	70.7	1.3	53.0	69.5	0.1	48.9	69.4	0.0	48.6	69.4	0.0
Receptor H (20fl)	69.2	68.4	71.8	2.6	67.3	71.4	2.2	71.6	73.6	**4.4**	64.8	70.5	1.3	52.3	69.3	0.1	47.2	69.2	0.0	46.8	69.2	0.0
Receptor I (1fl)	66.9	56.4	67.3	0.4	54.5	67.1	0.2	57.8	67.4	0.5	52.6	67.1	0.2	39.1	66.9	0.0	39.1	66.9	0.0	36.9	66.9	0.0
Receptor I (3fl)	67.6	62.1	68.7	1.1	58.6	68.1	0.5	63.3	69.0	1.4	57.6	68.0	0.4	46.7	67.6	0.0	46.3	67.6	0.0	46.0	67.6	0.0
Receptor I (5fl)	67.5	64.6	69.3	1.8	59.3	68.1	0.6	64.0	69.1	1.6	58.2	68.0	0.5	48.8	67.6	0.1	48.5	67.6	0.1	48.3	67.6	0.1
Receptor I (10fl)	67.2	65.5	69.4	2.2	59.3	67.9	0.7	64.1	68.9	1.7	58.5	67.7	0.5	47.9	67.3	0.1	47.5	67.2	0.0	47.3	67.2	0.0
Receptor I (15fl)	67.0	65.1	69.2	2.2	59.6	67.7	0.7	64.0	68.8	1.8	58.2	67.5	0.5	46.4	67.0	0.0	46.5	67.0	0.0	46.1	67.0	0.0
Receptor I (23fl)	67.0	64.3	68.9	1.9	61.4	68.1	1.1	63.8	68.7	1.7	57.9	67.5	0.5	49.8	67.1	0.1	44.2	67.0	0.0	43.5	67.0	0.0
Receptor J (1fl)	66.2	52.9	66.4	0.2	50.9	66.3	0.1	52.5	66.4	0.2	49.6	66.3	0.1	44.6	66.2	0.0	40.1	66.2	0.0	39.1	66.2	0.0
Receptor J (3fl)	66.9	54.6	67.1	0.2	53.7	67.1	0.2	55.8	67.2	0.3	53.3	67.1	0.2	48.8	67.0	0.1	41.8	66.9	0.0	41.1	66.9	0.0
Receptor J (5fl)	66.8	56.9	67.2	0.4	54.5	67.0	0.2	57.8	67.3	0.5	54.0	67.0	0.2	49.1	66.9	0.1	43.4	66.8	0.0	42.9	66.8	0.0
Receptor J (10fl)	66.7	58.6	67.3	0.6	54.7	67.0	0.3	58.6	67.3	0.6	54.3	66.9	0.2	49.4	66.8	0.1	43.4	66.7	0.0	42.9	66.7	0.0
Receptor J (15fl)	66.5	60.1	67.4	0.9	54.9	66.8	0.3	58.7	67.2	0.7	54.5	66.8	0.3	48.5	66.6	0.1	43.3	66.5	0.0	42.7	66.5	0.0
Receptor J (20fl)	66.4	60.5	67.4	1.0	54.8	66.7	0.3	58.5	67.1	0.7	54.3	66.7	0.3	48.6	66.5	0.1	42.2	66.4	0.0	41.5	66.4	0.0
Receptor J (25fl)	66.5	60.8	67.5	1.0	55.2	66.8	0.3	58.4	67.1	0.6	54.4	66.8	0.3	48.2	66.6	0.1	41.8	66.5	0.0	41.1	66.5	0.0
Receptor K (1fl)	65.7	67.4	69.6	**3.9**	54.8	66.0	0.3	64.5	68.2	2.5	60.2	66.8	1.1	47.9	65.8	0.1	48.0	65.8	0.1	47.6	65.8	0.1
Receptor K (3fl)	66.2	75.6	76.1	**9.9**	58.2	66.8	0.6	68.9	70.8	**4.6**	64.3	68.4	2.2	50.6	66.3	0.1	50.6	66.3	0.1	50.4	66.3	0.1
Receptor K (5fl)	66.0	77.0	77.3	**11.3**	61.6	67.3	1.3	71.9	72.9	**6.9**	64.6	68.4	2.4	50.5	66.1	0.1	50.5	66.1	0.1	50.3	66.1	0.1
Receptor K (10fl)	65.7	75.8	76.2	**10.5**	62.4	67.4	1.7	72.3	73.2	**7.5**	64.6	68.2	2.5	49.2	65.8	0.1	49.0	65.8	0.1	48.7	65.8	0.1
Receptor K (15fl)	65.4	74.5	75.0	**9.6**	62.7	67.3	1.9	71.7	72.6	**7.2**	64.5	68.0	2.6	47.2	65.5	0.1	47.4	65.5	0.1	46.9	65.5	0.1
Receptor K (20fl)	66.0	73.3	74.0	**8.0**	62.7	67.7	1.7	71.1	72.3	**6.3**	64.3	68.2	2.2	46.0	66.0	0.0	46.5	66.0	0.0	45.8	66.0	0.0
Receptor L (1fl)	70.2	67.9	72.2	2.0	55.4	70.3	0.1	53.8	70.3	0.1	59.8	70.6	0.4	41.3	70.2	0.0	42.7	70.2	0.0	40.2	70.2	0.0
Receptor L (3fl)	70.2	73.7	75.3	**5.1**	57.0	70.4	0.2	59.1	70.5	0.3	63.2	71.0	0.8	42.6	70.2	0.0	43.8	70.2	0.0	41.7	70.2	0.0
Receptor L (5fl)	70.1	77.4	78.1	**8.0**	60.5	70.6	0.5	59.3	70.4	0.3	64.5	71.2	1.1	43.7	70.1	0.0	44.7	70.1	0.0	43.0	70.1	0.0
Receptor L (10fl)	70.4	77.4	78.2	**7.8**	61.5	70.9	0.5	60.1	70.8	0.4	66.3	71.8	1.4	43.6	70.4	0.0	44.3	70.4	0.0	42.7	70.4	0.0
Receptor L (15fl)	70.1	76.8	77.6	**7.5**	64.0	71.1	1.0	61.3	70.6	0.5	66.4	71.6	1.5	43.8	70.1	0.0	44.4	70.1	0.0	43.9	70.1	0.0
Receptor L (20fl)	69.9	75.3	76.4	**6.5**	65.6	71.3	1.4	64.8	71.1	1.2	67.0	71.7	1.8	43.6	69.9	0.0	44.1	69.9	0.0	43.4	69.9	0.0
Receptor L (25fl)	69.8	73.9	75.3	**5.5**	65.7	71.2	1.4	65.3	71.1	1.3	66.8	71.6	1.8	43.3	69.8	0.0	43.8	69.8	0.0	43.0	69.8	0.0
Receptor L (30fl)	69.6	72.6	74.4	**4.8**	65.3	71.0	1.4	65.0	70.9	1.3	66.4	71.3	1.7	42.7	69.6	0.0	43.3	69.6	0.0	42.4	69.6	0.0
Receptor L (35fl)	69.5	71.5	73.6	**4.1**	64.7	70.7	1.2	64.5	70.7	1.2	65.9	71.1	1.6	43.0	69.5	0.0	43.2	69.5	0.0	42.4	69.5	0.0
Receptor M (1fl)	69.1	53.4	69.2	0.1	62.2	69.9	0.8	68.4	71.8	2.7	60.8	69.7	0.6	62.3	69.9	0.8	62.3	69.9	0.8	62.3	69.9	0.8
Receptor N (5fl)	67.8	61.7	68.8	1.0	71.3	72.9	**5.1**	75.5	76.2	**8.4**	65.4	69.8	2.0	49.5	67.9	0.1	50.3	67.9	0.1	48.9	67.9	0.1
Receptor N (10fl)	67.7	63.7	69.2	1.5	73.1	74.2	**6.5**	75.3	76.0	**8.3**	65.5	69.7	2.0	52.6	67.8	0.1	53.0	67.8	0.1	52.3	67.8	0.1
Receptor N (15fl)	67.6	64.2	69.2	1.6	72.4	73.6	**6.0**	74.5	75.3	**7.7**	64.7	69.4	1.8	51.5	67.7	0.1	52.0	67.7	0.1	51.1	67.7	0.1
Receptor N (20fl)	67.4	64.5	69.2	1.8	71.5	72.9	**5.5**	73.6	74.5	**7.1**	64.2	69.1	1.7	50.8	67.5	0.1	51.4	67.5	0.1	50.3	67.5	0.1
Receptor N (25fl)	67.2	64.6	69.1	1.9	70.4	72.1	**4.9**	72.7	73.8	**6.6**	63.6	68.8	1.6	50.1	67.3	0.1	50.7	67.3	0.1	49.6	67.3	0.1
Receptor N (30fl)	67.1	64.6	69.0	1.9	69.6	71.5	**4.4**	71.8	73.1	**6.0**	62.9	68.5	1.4	48.8	67.2	0.1	49.5	67.2	0.1	48.0	67.2	0.1
Receptor N (35fl)	67.0	64.6	69.0	2.0	68.8	71.0	**4.0**	70.9	72.4	**5.4**	62.1	68.2	1.2	48.0	67.1	0.1	48.9	67.1	0.1	47.2	67.0	0.0
Receptor N (40fl)	67.5	64.5	69.3	1.8	68.0	70.8	**3.3**	70.1	72.0	**4.5**	61.3	68.4	0.9	47.5	67.5	0.0	48.3	67.6	0.1	46.5	67.5	0.0
Receptor O (1fl)	71.8	61.2	72.2	0.4	62.8	72.3	0.5	56.9	71.9	0.1	46.4	71.8	0.0	39.8	71.8	0.0	40.7	71.8	0.0	38.9	71.8	0.0
Receptor P (1fl)	71.5	53.9	71.6	0.1	51.2	71.5	0.0	47.1	71.5	0.0	44.6	71.5	0.0	38.9	71.5	0.0	39.6	71.5	0.0	38.1	71.5	0.0
Receptor Q (5fl)	65.6	54.7	65.9	0.3	53.6	65.9	0.3	51.3	65.8	0.2	54.3	65.9	0.3	36.5	65.6	0.0	37.3	65.6	0.0	34.3	65.6	0.0
Receptor Q (10fl)	66.6	58.3	67.2	0.6	54.8	66.9	0.3	52.6	66.8	0.2	54.4	66.9	0.3	39.0	66.6	0.0	39.4	66.6	0.0	37.9	66.6	0.0
Receptor Q (15fl)	66.4	59.9	67.3	0.9	56.2	66.8	0.4	52.5	66.6	0.2	54.3	66.7	0.3	39.1	66.4	0.0	40.0	66.4	0.0	38.5	66.4	0.0
Receptor Q (20fl)	66.7	60.5	67.6	0.9	56.8	67.1	0.4	52.5	66.9	0.2	54.3	66.9	0.2	39.1	66.7	0.0	40.9	66.7	0.0	38.6	66.7	0.0
Receptor Q (25fl)	66.8	61.7	68.0	1.2	57.0	67.2	0.4	52.4	67.0	0.2	54.2	67.0	0.2	39.2	66.8	0.0	41.0	66.8	0.0	38.7	66.8	0.0
Receptor Q (30fl)	66.5	62.4	67.9	1.4	57.4	67.0	0.5	52.3	66.7	0.2	54.0	66.7	0.2	39.3	66.5	0.0	41.2	66.5	0.0	38.8	66.5	0.0
Receptor Q (35fl)	66.4	63.0	68.0	1.6	58.3	67.0	0.6	52.4	66.6	0.2	53.9	66.6	0.2	40.7	66.4	0.0	41.1	66.4	0.0	38.7	66.4	0.0
Receptor Q (40fl)	66.3	63.2	68.0	1.7	59.5	67.1	0.8	52.5	66.5	0.2	53.7	66.5	0.2	40.6	66.3	0.0	41.0	66.3	0.0	38.5	66.3	0.0
Receptor Q (45fl)	66.1	63.1	67.9	1.8	59.8	67.0	0.9	52.7	66.3	0.2	53.5	66.3	0.2	40.5	66.1	0.0	40.9	66.1	0.0	38.4	66.1	0.0
Receptor Q (50fl)	66.0	62.9	67.7	1.7	61.2	67.2	1.2	53.0	66.2	0.2	53.3	66.2	0.2	40.4	66.0	0.0	41.2	66.0	0.0	38.2	66.0	0.0
Receptor R (1fl)	69.3	44.2	69.3	0.0	49.0	69.3	0.0	51.3	69.4	0.1	56.4	69.5	0.2	52.1	69.4	0.1	59.8	69.8	0.5	40.8	69.3	0.0
Receptor S (1fl)	61.2	47.8	61.4	0.2	46.0	61.3	0.1	45.0	61.3	0.1	46.2	61.3	0.1	37.5	61.2	0.0	39.2	61.2	0.0	35.1	61.2	0.0
Receptor S (3fl)	61.4	51.5	61.8	0.4	48.5	61.6	0.2	48.0	61.6	0.2	49.2	61.7	0.3	38.6	61.4	0.0	39.9	61.4	0.0	36.0	61.4	0.0
Receptor S (5fl)	61.6	62.3	65.0	**3.4**	55.6	62.6	1.0	58.3	63.3	1.7	49.4	61.9	0.3	39.5	61.6	0.0	40.8	61.6	0.0	37.4	61.6	0.0
Receptor S (10fl)	61.4	68.1	68.9	**7.5**	58.1	63.1	1.7	60.8	64.1	2.7	50.8	61.8	0.4	41.1	61.4	0.0	41.9	61.4	0.0	40.0	61.4	0.0
Receptor S (15fl)	61.6	69.4	70.1	**8.5**	58.9	63.5	1.9	61.6	64.6	**3.0**	51.6	62.0	0.4	41.4	61.6	0.0	42.1	61.6	0.0	40.3	61.6	0.0
Receptor S (20fl)	61.9	69.1	69.9	**8.0**	59.7	63.9	2.0	61.8	64.9	**3.0**	52.1	62.3	0.4	41.5	61.9	0.0	42.1	61.9	0.0	40.4	61.9	0.0
Receptor S (25fl)	62.0	68.7	69.5	**7.5**	59.9	64.1	2.1	62.4	65.2	**3.2**	53.7	62.6	0.6	41.9	62.0	0.0	42.3	62.0	0.0	40.6	62.0	0.0
Receptor S (30fl)	62.0	68.2	69.1	**7.1**	60.6	64.4	2.4	62.8	65.4	**3.4**	54.8	62.8	0.8	42.0	62.0	0.0	42.4	62.0	0.0	40.6	62.0	0.0

Exceed CEQR noise criteria

Figure F.3-2 Vibration Calculations

Construction Vibration Damage Criterion

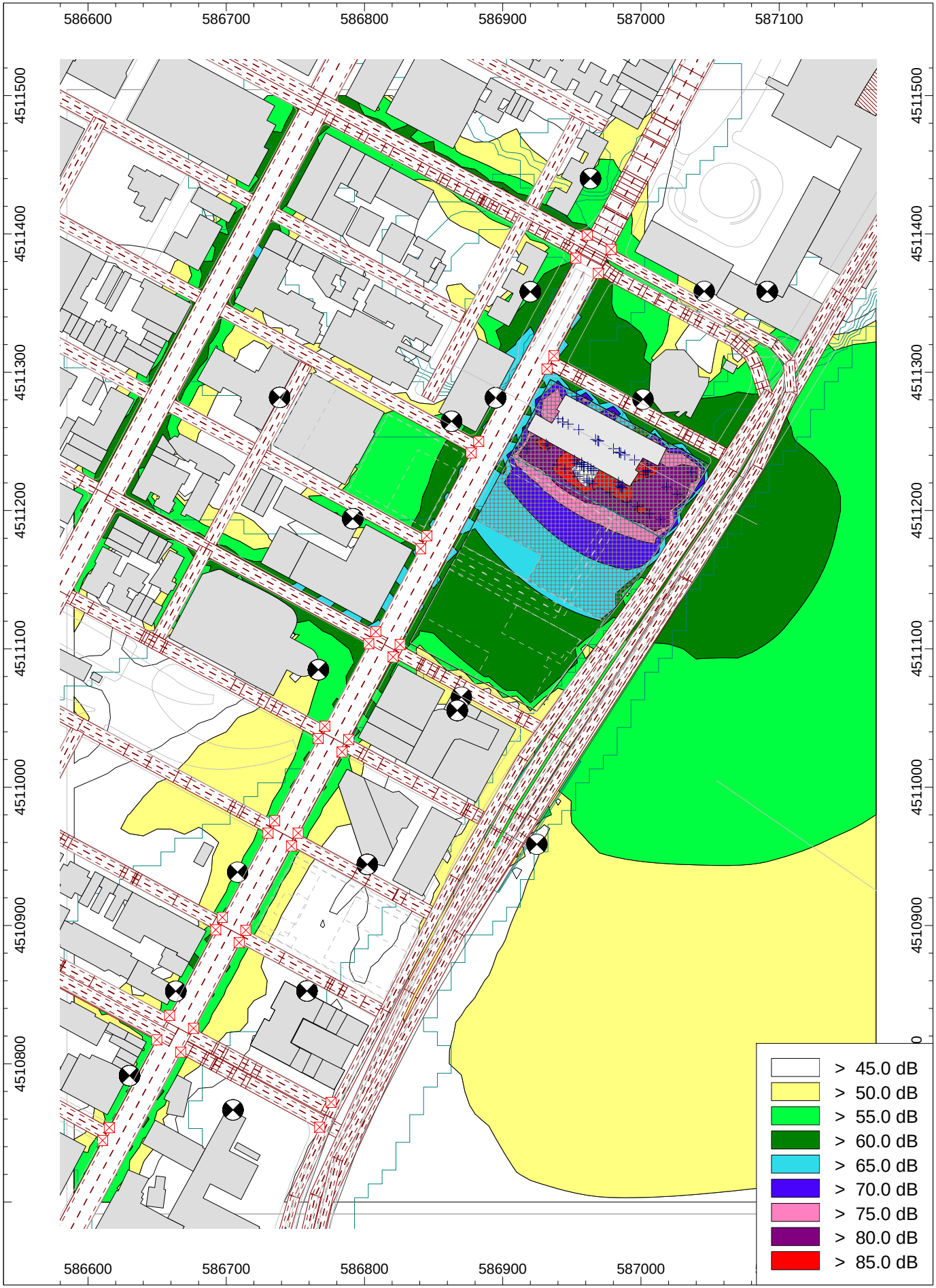
$$PPV_{equioment} = PPV_{ref} * (25/D)^{1.5}$$

Equipment		PPVr	Criterion PPV	Impact Distance (ft)	PPVe
	uper range	0.734	0.5	32	0.497
Pile Driver (Sonic)	typical	0.170	0.5	12	0.499

Ground-Boren Vibration Impact Criterion

Lv(D) = Lv(25ft) - 30 log(D/25)

Equipment		Lv(25ft)	Criterion VdB	Impact Distance (ft)	Lv(D)
	uper range	105	65	539	65.0
Pile Driver (Sonic)	typical	93	65	214	65.0



FIRST AVENUE PROPERTIES REZONING

Figure F.3-3a
2008 Noise Contour Map at 1.5 Meters Above Ground Level

FIRST AVENUE PROPERTIES REZONING

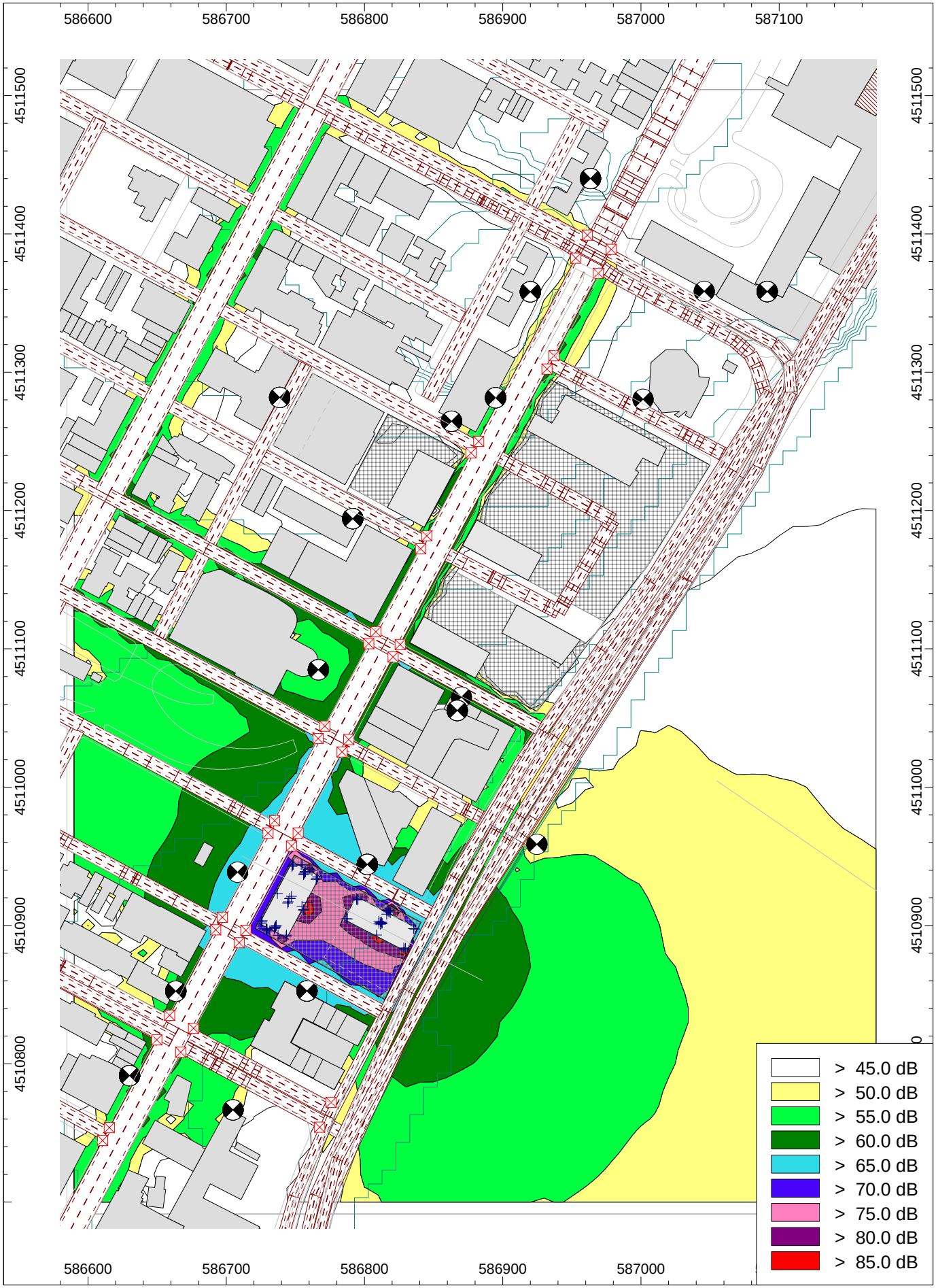
Figure F.3-3b
2009 Noise Contour Map at 1.5 Meters Above Ground Level

FIRST AVENUE PROPERTIES REZONING

Figure F.3-3c
2010 Noise Contour Map at 1.5 Meters Above Ground Level

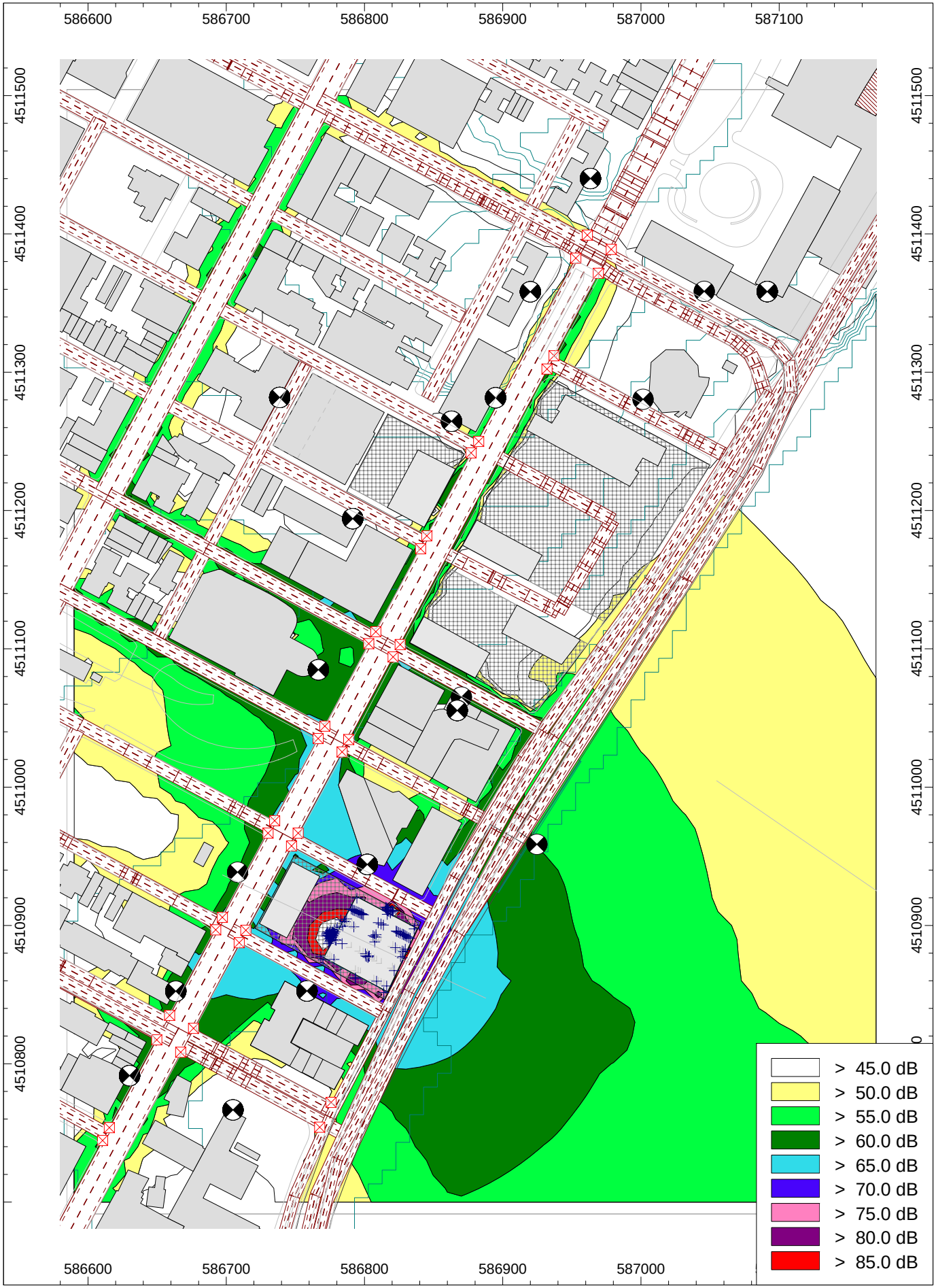
FIRST AVENUE PROPERTIES REZONING

Figure F.3-3d
2011 Noise Contour Map at 1.5 Meters Above Ground Level



FIRST AVENUE PROPERTIES REZONING

Figure F.3-3e
2012 Noise Contour Map at 1.5 Meters Above Ground Level

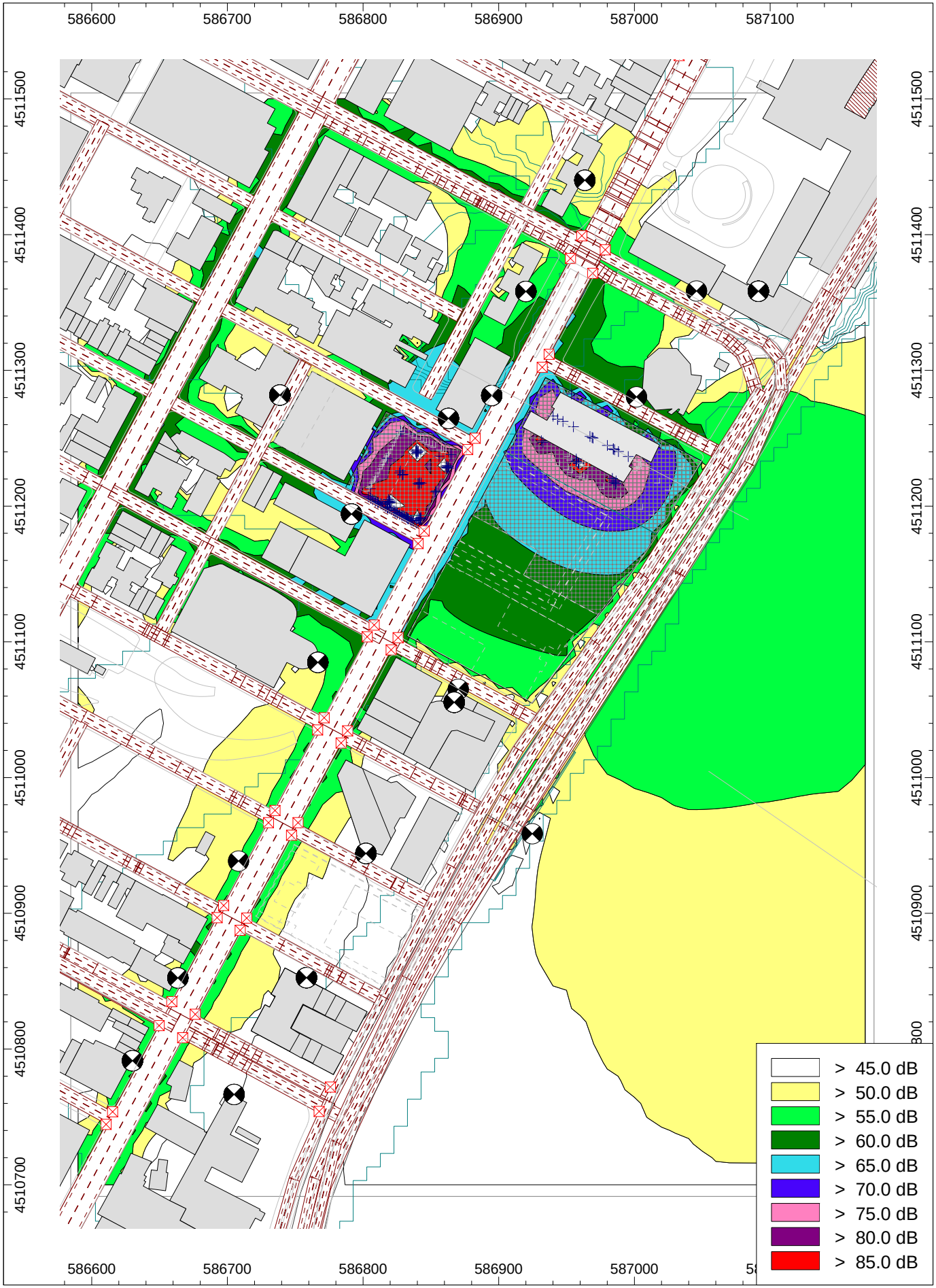


FIRST AVENUE PROPERTIES REZONING

Figure F.3-3f
2013 Noise Contour Map at 1.5 Meters Above Ground Level

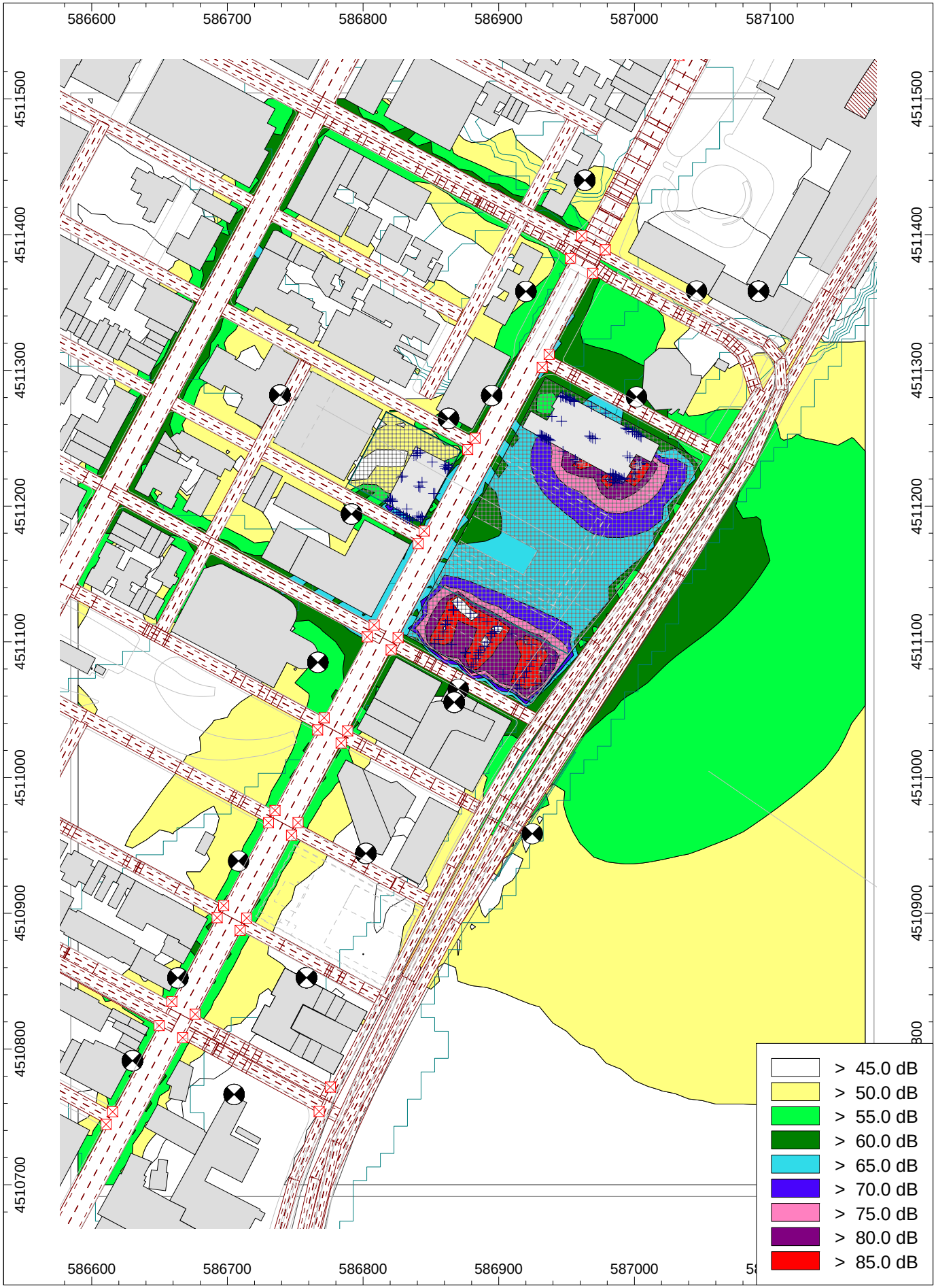
FIRST AVENUE PROPERTIES REZONING

Figure F.3-3g
2014 Noise Contour Map at 1.5 Meters Above Ground Level



FIRST AVENUE PROPERTIES REZONING

Figure F.3-4a
Alternative 2008 Noise Contour Map at 1.5 Meters Above Ground Level



FIRST AVENUE PROPERTIES REZONING

Figure F.3-4b
Alternative 2009 Noise Contour Map at 1.5 Meters Above Ground Level

FIRST AVENUE PROPERTIES REZONING

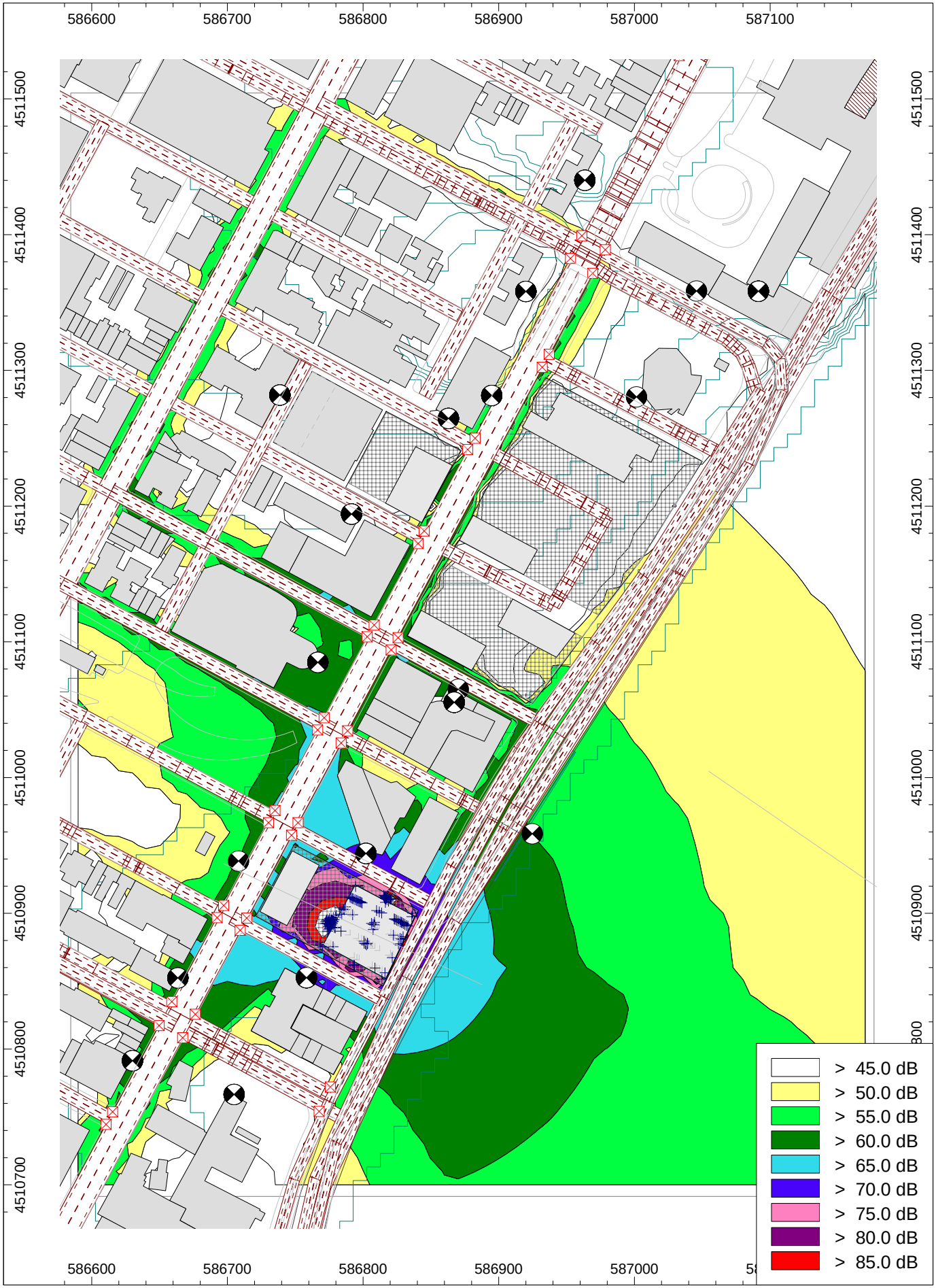
Figure F.3-4c
Alternative 2010 Noise Contour Map at 1.5 Meters Above Ground Level

FIRST AVENUE PROPERTIES REZONING

Figure F.3-4d
Alternative 2011 Noise Contour Map at 1.5 Meters Above Ground Level

FIRST AVENUE PROPERTIES REZONING

Figure F.3-4e
Alternative 2012 Noise Contour Map at 1.5 Meters Above Ground Level



FIRST AVENUE PROPERTIES REZONING

Figure F.3-4f
Alternative 2013 Noise Contour Map at 1.5 Meters Above Ground Level

FIRST AVENUE PROPERTIES REZONING

Figure F.3-4g
Alternative 2014 Noise Contour Map at 1.5 Meters Above Ground Level