Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Lafayette Pl. DATE: 6/20/2007 LOCATION: City of Culver

E-W STREET: Braddock Dr. DAY: WEDNESDAY PROJECT# 07-2328-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3	6	1	5	6	3	6	16	8	0	6	1	61
4:15 PM	6	3	0	1	10	4	1	18	5	1	8	2	59
4:30 PM	4	6	0	1	14	10	3	16	5	0	5	1	65
4:45 PM	7	6	3	3	10	8	4	14	7	2	6	1	71
5:00 PM	12	4	1	3	13	3	5	15	20	1	5	1	83
5:15 PM	13	4	3	2	12	6	2	22	23	0	8	2	97
5:30 PM	14	5	0	3	19	4	3	17	19	1	9	1	95
5:45 PM	11	4	2	2	13	2	3	14	13	2	6	1	73
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL 70	NT 38	NR 10	SL 20	ST 97	SR 40	EL 27	ET 132	ER 100	WL 7	WT 53	WR 10	TOTAL 604

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	50	17	6	10	57	15	13	68	75	4	28	5	348
PEAK HR. FACTOR:		0.913			0.788			0.830			0.841		0.897

CONTROL: 2-Way Stop N & S

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Irvine Pl. DATE: 6/20/2007 LOCATION: City of Culver

E-W STREET: Culver Blvd. DAY: WEDNESDAY PROJECT# 07-2328-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	13		20					169	3	2	250		457
7:15 AM	15		22					208	4	3	272		524
7:30 AM	25		29					310	6	7	417		794
7:45 AM	13		40					253	16	11	315		648
8:00 AM	24		46					387	19	19	299		794
8:15 AM	28		50					427	20	21	317		863
8:30 AM	31		64					439	11	9	410		964
8:45 AM	13		34					322	6	6	379		760
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES =	162	0	305	0	0	0	0	2515	85	78	2659	0	5804

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	96	0	194	0	0	0	0	1575	56	55	1405	0	3381
PEAK HR. FACTOR:		0.763			0.000			0.906			0.871		0.877

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Irvine Pl. DATE: 6/20/2007 LOCATION: City of Culver

E-W STREET: Culver Blvd. DAY: WEDNESDAY PROJECT# 07-2328-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	3	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	11		35					399	21	9	299		774
4:15 PM	13		29					354	35	13	358		802
4:30 PM	20		31					388	14	11	249		713
4:45 PM	22		23					449	15	4	366		879
5:00 PM	16		19					359	13	14	303		724
5:15 PM	17		34					467	6	19	384		927
5:30 PM	29		31					525	14	22	373		994
5:45 PM	13		31					469	9	11	314		847
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	141	0	233	0	0	0	0	3410	127	103	2646	0	6660

PM Peak Hr Begins at: 445 PM

PEAK													
VOLUMES =	84	0	107	0	0	0	0	1800	48	59	1426	0	3524
PEAK HR. FACTOR:		0.796			0.000			0.857			0.921		0.886

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Irvine Pl. DATE: 6/20/2007 LOCATION: City of Culver

E-W STREET: Braddock Dr. DAY: WEDNESDAY PROJECT# 07-2328-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	1	0	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	2	12					12						26
7:15 AM	8	12					10						30
7:30 AM	11	35					23						69
7:45 AM	14	37					46						97
8:00 AM	46	73					32						151
8:15 AM	18	76					58						152
8:30 AM	22	67					32						121
8:45 AM	12	28					14						54
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	133	340	0	0	0	0	227	0	0	0	0	0	700

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	100	253	0	0	0	0	168	0	0	0	0	0	521
PEAK HR. FACTOR:		0.742			0.000			0.724			0.000		0.857

CONTROL: 2-Way Stop N & E

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Irvine Pl. DATE: 6/20/2007 LOCATION: City of Culver

E-W STREET: Braddock Dr. DAY: WEDNESDAY PROJECT# 07-2328-003

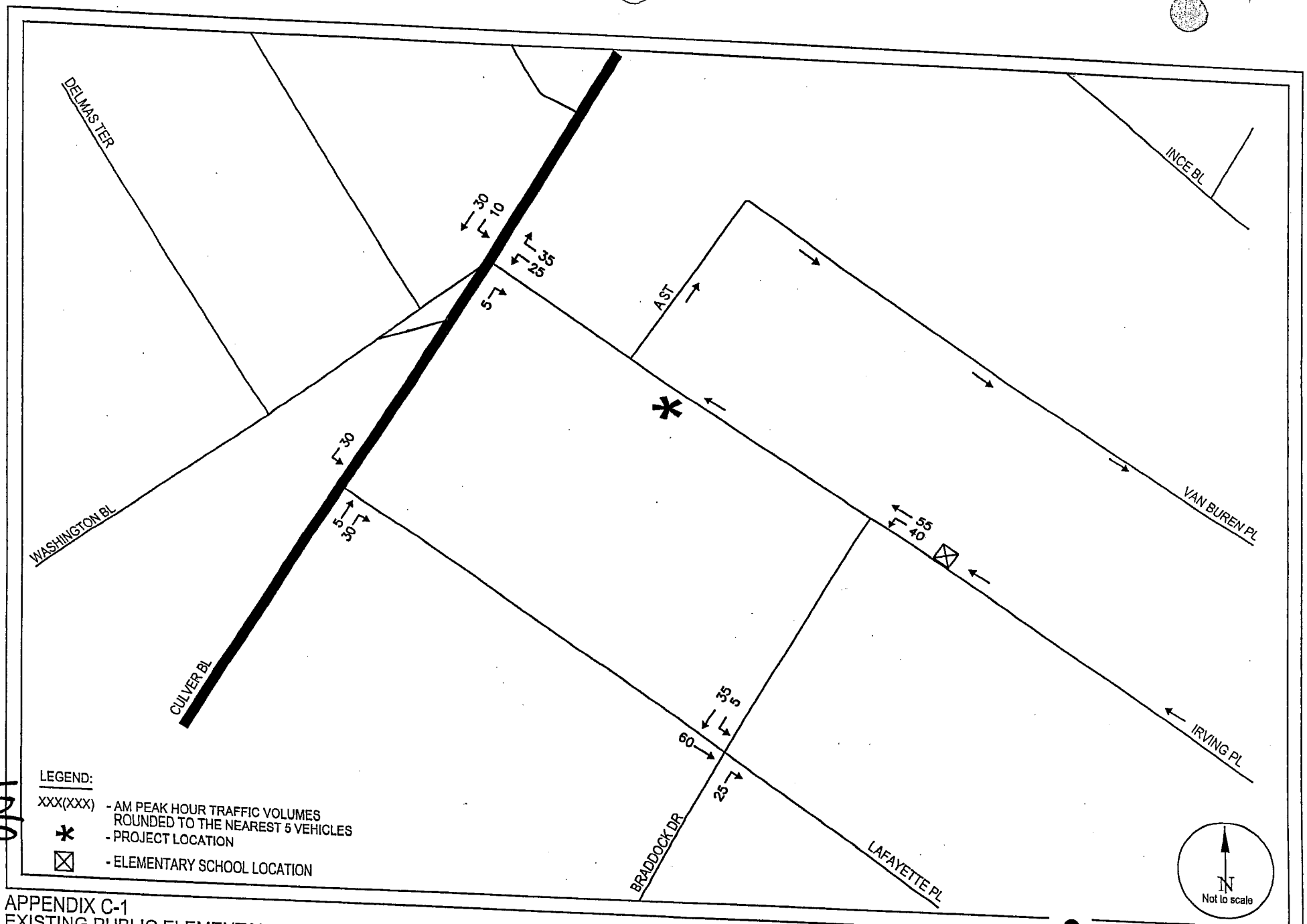
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	1	0	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	5	24					21						50
4:15 PM	4	21					23						48
4:30 PM	8	16					13						37
4:45 PM	10	31					20						61
5:00 PM	2	19					14						35
5:15 PM	10	33					29						72
5:30 PM	13	41					16						70
5:45 PM	12	50					26						88
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES =	64	235	0	0	0	0	162	0	0	0	0	0	461

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	37	143	0	0	0	0	85	0	0	0	0	0	265
PEAK HR. FACTOR:		0.726			0.000			0.733			0.000		0.753

CONTROL: 2-Way Stop N & E



APPENDIX C-1
EXISTING PUBLIC ELEMENTARY SCHOOL TRAFFIC VOLUMES

RAJU Associates, Inc.

APPENDIX D

Existing (2007) Baseline Conditions

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	LAFAYETTE PLACE
East/West Street:	CULVER BOULEVARD
Scenario:	EXISTING (2007) BASELINE CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.000
	TH	0.00	0	0	0.000 *	N-S(2):	0.041 *
	LT	0.00	0	0	0.000	E-W(1):	0.342 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.257
	TH	2.00	821	3,200	0.257		
	LT	1.00	47	1,600	0.029 *	V/C:	0.383
Northbound	RT	0.45	30	727	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	0.55	36	873	0.041 *		
Eastbound	RT	0.00	56	0	0.000	ICU:	0.483
	TH	2.00	946	3,200	0.313 *		
	LT	0.00	0	0	0.000	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.000
	TH	0.00	0	0	0.000 *	N-S(2):	0.031 *
	LT	0.00	0	0	0.000	E-W(1):	0.338 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.271
	TH	2.00	866	3,200	0.271		
	LT	1.00	36	1,600	0.023 *	V/C:	0.369
Northbound	RT	0.48	24	768	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	0.52	26	832	0.031 *		
Eastbound	RT	0.00	31	0	0.000	ICU:	0.469
	TH	2.00	977	3,200	0.315 *		
	LT	0.00	0	0	0.000	LOS:	A

* = Critical Movement

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Lafayette Pl/Braddock Dr [Existing Baseline - AM]

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: B[12.7]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	35	59	18	9	76	26	20	133	33	12	122	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	59	18	9	76	26	20	133	33	12	122	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	59	18	9	76	26	20	133	33	12	122	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	35	59	18	9	76	26	20	133	33	12	122	3
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	388	339	150	376	354	124	125	xxxx	xxxxx	166	xxxx	xxxxx
Potent Cap.:	574	586	902	585	575	933	1474	xxxx	xxxxx	1424	xxxx	xxxxx
Move Cap.:	492	573	902	520	562	933	1474	xxxx	xxxxx	1424	xxxx	xxxxx
Volume/Cap:	0.07	0.10	0.02	0.02	0.14	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	577	xxxxx	xxxx	615	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.7	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	12.7	xxxxx	xxxxx	12.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		12.7			12.1			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 Lafayette Pl/Braddock Dr [Existing Baseline - PM]

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: B[10.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	50	17	6	10	57	15	13	68	75	4	28	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	17	6	10	57	15	13	68	75	4	28	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	17	6	10	57	15	13	68	75	4	28	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	50	17	6	10	57	15	13	68	75	4	28	5
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	206	173	106	182	208	31	33	xxxx	xxxxx	143	xxxx	xxxxx
Potent Cap.:	756	724	954	784	693	1050	1592	xxxx	xxxxx	1452	xxxx	xxxxx
Move Cap.:	692	716	954	759	685	1050	1592	xxxx	xxxxx	1452	xxxx	xxxxx
Volume/Cap:	0.07	0.02	0.01	0.01	0.08	0.01	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	714	xxxxx	xxxx	741	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	10.6	xxxxx	xxxxx	10.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		10.6			10.5			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	IRVING PLACE
East/West Street:	CULVER BOULEVARD
Scenario:	EXISTING (2007) BASELINE CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.100 *
	TH	0.00	0	0	0.000	N-S(2):	0.075
	LT	0.00	0	0	0.000 *	E-W(1):	0.383 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.299
	TH	3.00	1,434	4,800	0.299		
	LT	1.00	67	1,600	0.042 *	V/C:	0.483
Northbound	RT	1.00	227	1,600	0.100 *	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	1.00	120	1,600	0.075		
Eastbound	RT	0.00	62	0	0.000	ICU:	0.583
	TH	3.00	1,575	4,800	0.341 *		
	LT	0.00	0	0	0.000	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.030
	TH	0.00	0	0	0.000 *	N-S(2):	0.053 *
	LT	0.00	0	0	0.000	E-W(1):	0.422 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.297
	TH	3.00	1,426	4,800	0.297		
	LT	1.00	59	1,600	0.037 *	V/C:	0.475
Northbound	RT	1.00	107	1,600	0.030	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	1.00	84	1,600	0.053 *		
Eastbound	RT	0.00	48	0	0.000	ICU:	0.575
	TH	3.00	1,800	4,800	0.385 *		
	LT	0.00	0	0	0.000	LOS:	A

* = Critical Movement

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #41 Irving Pl/Braddock Dr [Existing Baseline - PM]

Cycle (sec):	100	Critical Vol./Cap. (X):	0.209
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	8.1
Optimal Cycle:	0	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 0	0	0	0 0	1 0	0	0 0	0	0	0 0
Volume Module:												
Base Vol:	37	143	0	0	0	0	85	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	143	0	0	0	0	85	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	143	0	0	0	0	85	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	143	0	0	0	0	85	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	37	143	0	0	0	0	85	0	0	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.21	0.79	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	177	683	0	0	0	0	780	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	xxxx	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx
Crit Moves:	****						****					
Delay/Veh:	8.2	8.2	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	8.2	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	A	*	*	*	*	A	*	*	*	*	*
ApproachDel:	8.2			xxxxxx			8.0			xxxxxx		
Delay Adj:	1.00			xxxxx			1.00			xxxxx		
ApprAdjDel:	8.2			xxxxxx			8.0			xxxxxx		
LOS by Appr:	A			*			A			*		

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Irving Pl/Braddock Dr [Existing Baseline - AM]

Cycle (sec):	100	Critical Vol./Cap. (X):	0.555
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	11.8
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 0	0	0 0	0 0	1	0	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	138	310	0	0	0	0	168	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	310	0	0	0	0	168	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	138	310	0	0	0	0	168	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	310	0	0	0	0	168	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	138	310	0	0	0	0	168	0	0	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.31	0.69	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	249	559	0	0	0	0	668	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.56	0.56	xxxx	xxxx	xxxx	xxxx	0.25	xxxx	xxxx	xxxx	xxxx	xxxx
Crit Moves:		****					****					
Delay/Veh:	12.5	12.5	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	12.5	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0
LOS by Move:	B	B	*	*	*	*	A	*	*	*	*	*
ApproachDel:	12.5			xxxxxx			9.7			xxxxxx		
Delay Adj:	1.00			xxxxx			1.00			xxxxx		
ApprAdjDel:	12.5			xxxxxx			9.7			xxxxxx		
LOS by Appr:	B			*			A			*		

APPENDIX E

Cumulative (2008) Base Conditions

APPENDIX E
RELATED PROJCETS TRIP GENERATION RATES [1]

Trip Rates [1]	Size	Daily	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Mini-Warehouse (ITE Land Use 151)	per 1,000 s.f.	2.50	59%	41%	0.15	51%	49%	0.26
Apartment (ITE Land Use 220)	per d.u.	6.72	20%	80%	0.51	65%	35%	0.62
Condominium (ITE Land Use 230)	per d.u.	5.86	17%	83%	0.44	67%	33%	0.52
Hotel (ITE Land Use 310)	per room	8.17	61%	39%	0.56	53%	47%	0.59
County Park (ITE Land Use 412)	per acre	2.28	80%	20%	0.01	41%	59%	0.06
Regional Park (ITE Land Use 417)	per acre	4.57	45%	55%	0.20	44%	56%	0.24
Theater (ITE Land Use 444)	per seat	1.76	50%	50%	0.01	39%	61%	0.07
Recreational Community Center (ITE Land Use 495)	per 1,000 s.f.	22.88	61%	39%	1.62	29%	71%	1.64
Private School K-12 (ITE Land Use 536)	per student	2.48	61%	39%	0.79	n/a	n/a	n/a
Clinic (ITE Land Use 630)	per 1,000 s.f.	31.45	n/a	n/a	n/a	50%	50%	5.18
General Office (ITE Land Use 710)	per 1,000 s.f.	11.01	88%	12%	1.55	17%	83%	1.49
Government Office Building (ITE Land Use 730)	per 1,000 s.f.	68.93	84%	16%	5.88	31%	69%	1.21
Retail (ITE Land Use 820)	per 1,000 s.f.	42.94	61%	39%	1.03	48%	52%	3.75
Restaurant (ITE Land Use 931)	per 1,000 s.f.	89.95	50%	50%	0.81	67%	33%	7.49
Auto Care Center (ITE Land Use 942)	per 1,000 s.f.	n/a	65%	35%	2.94	50%	50%	3.38
Gas Station (ITE Land Use 945)	per 1,000 s.f.	n/a	51%	49%	77.68	50%	50%	96.37

[1] ITE Trip Generation Manual, 7th Edition, 2003

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	LAFAYETTE PLACE
East/West Street:	CULVER BOULEVARD
Scenario:	CUMULATIVE (2008) BASE CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.000
	TH	0.00	0	0	0.000 *	N-S(2):	0.043 *
	LT	0.00	0	0	0.000	E-W(1):	0.377 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.314
	TH	2.00	1,004	3,200	0.314		
	LT	1.00	49	1,600	0.031 *	V/C:	0.420
Northbound	RT	0.46	31	729	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	0.54	37	871	0.043 *		
Eastbound	RT	0.00	57	0	0.000	ICU:	0.520
	TH	2.00	1,049	3,200	0.346 *		
	LT	0.00	0	0	0.000	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.000
	TH	0.00	0	0	0.000 *	N-S(2):	0.033 *
	LT	0.00	0	0	0.000	E-W(1):	0.395 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.304
	TH	2.00	972	3,200	0.304		
	LT	1.00	37	1,600	0.023 *	V/C:	0.428
Northbound	RT	0.49	26	785	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	0.51	27	815	0.033 *		
Eastbound	RT	0.00	32	0	0.000	ICU:	0.528
	TH	2.00	1,157	3,200	0.372 *		
	LT	0.00	0	0	0.000	LOS:	A

* = Critical Movement

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Lafayette Pl/Braddock Dr [Cumulative (2008) Base - AM]

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: B[12.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	37	62	18	9	78	27	20	134	35	12	125	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	62	18	9	78	27	20	134	35	12	125	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	62	18	9	78	27	20	134	35	12	125	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	37	62	18	9	78	27	20	134	35	12	125	3
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	395	344	152	382	360	127	128	xxxx	xxxxx	169	xxxx	xxxxx
Potent Cap.:	569	582	900	580	570	929	1470	xxxx	xxxxx	1421	xxxx	xxxxx
Move Cap.:	485	569	900	512	558	929	1470	xxxx	xxxxx	1421	xxxx	xxxxx
Volume/Cap:	0.08	0.11	0.02	0.02	0.14	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	570	xxxxx	xxxx	611	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.8	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	12.9	xxxxx	xxxxx	12.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		12.9			12.2			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 Lafayette Pl/Braddock Dr [Cumulative (2008) Base - PM]

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: B[10.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	52	18	6	10	59	16	15	69	80	4	29	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	18	6	10	59	16	15	69	80	4	29	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	18	6	10	59	16	15	69	80	4	29	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	52	18	6	10	59	16	15	69	80	4	29	5
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	216	181	109	191	219	32	34	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	745	717	950	774	683	1048	1591	xxxx	xxxxx	1445	xxxx	xxxxx
Move Cap.:	678	708	950	747	675	1048	1591	xxxx	xxxxx	1445	xxxx	xxxxx
Volume/Cap:	0.08	0.03	0.01	0.01	0.09	0.02	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	701	xxxxx	xxxx	732	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.4	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	10.8	xxxxx	xxxxx	10.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		10.8			10.6			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	LAFAYETTE PLACE
East/West Street:	BRADDOCK DRIVE
Scenario:	CUMULATIVE (2008) BASE CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	27	0	0.000	N-S(1):	0.079
	TH	1.00	78	1,600	0.071 *	N-S(2):	0.094 *
	LT	0.00	9	1,600	0.006	E-W(1):	0.126 *
Westbound	RT	0.00	3	0	0.000	E-W(2):	0.101
	TH	1.00	125	1,600	0.088		
	LT	0.00	12	1,600	0.008 *	V/C:	0.220
Northbound	RT	0.00	18	0	0.000	Lost Time:	0.100
	TH	1.00	62	1,600	0.073		
	LT	0.00	37	1,600	0.023 *		
Eastbound	RT	0.00	35	0	0.000	ICU:	0.320
	TH	1.00	134	1,600	0.118 *		
	LT	0.00	20	1,600	0.013	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	16	0	0.000	N-S(1):	0.054
	TH	1.00	59	1,600	0.053 *	N-S(2):	0.086 *
	LT	0.00	10	1,600	0.006	E-W(1):	0.106 *
Westbound	RT	0.00	5	0	0.000	E-W(2):	0.033
	TH	1.00	29	1,600	0.024		
	LT	0.00	4	1,600	0.003 *	V/C:	0.192
Northbound	RT	0.00	6	0	0.000	Lost Time:	0.100
	TH	1.00	18	1,600	0.048		
	LT	0.00	52	1,600	0.033 *		
Eastbound	RT	0.00	80	0	0.000	ICU:	0.292
	TH	1.00	69	1,600	0.103 *		
	LT	0.00	15	1,600	0.009	LOS:	A

* = Critical Movement

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	IRVING PLACE
East/West Street:	CULVER BOULEVARD
Scenario:	CUMULATIVE (2008) BASE CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.101 *
	TH	0.00	0	0	0.000	N-S(2):	0.077
	LT	0.00	0	0	0.000 *	E-W(1):	0.424 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.353
	TH	3.00	1,695	4,800	0.353		
	LT	1.00	69	1,600	0.043 *	V/C:	0.525
Northbound	RT	1.00	231	1,600	0.101 *	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	1.00	123	1,600	0.077		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.625
	TH	3.00	1,767	4,800	0.381 *		
	LT	0.00	0	0	0.000	LOS:	B

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.029
	TH	0.00	0	0	0.000 *	N-S(2):	0.054 *
	LT	0.00	0	0	0.000	E-W(1):	0.478 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.323
	TH	3.00	1,552	4,800	0.323		
	LT	1.00	64	1,600	0.040 *	V/C:	0.532
Northbound	RT	1.00	110	1,600	0.029	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	1.00	86	1,600	0.054 *		
Eastbound	RT	0.00	49	0	0.000	ICU:	0.632
	TH	3.00	2,055	4,800	0.438 *		
	LT	0.00	0	0	0.000	LOS:	B

* = Critical Movement

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Irving Pl/Braddock Dr [Cumulative (2008) Base - AM]

Cycle (sec):	100	Critical Vol./Cap. (X):	0.568
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	12.0
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 0	0	0	0 0	1 0	0	0 0	0	0	0 0
Volume Module:												
Base Vol:	141	317	0	0	0	0	170	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	141	317	0	0	0	0	170	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	141	317	0	0	0	0	170	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	141	317	0	0	0	0	170	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	141	317	0	0	0	0	170	0	0	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.31	0.69	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	248	558	0	0	0	0	664	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.57	0.57	xxxx	xxxx	xxxx	xxxx	0.26	xxxx	xxxx	xxxx	xxxx	xxxx
Crit Moves:	****						****					
Delay/Veh:	12.8	12.8	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.8	12.8	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0
LOS by Move:	B	B	*	*	*	*	A	*	*	*	*	*
ApproachDel:	12.8			xxxxxx			9.7			xxxxxx		
Delay Adj:	1.00			xxxxx			1.00			xxxxx		
ApprAdjDel:	12.8			xxxxxx			9.7			xxxxxx		
LOS by Appr:	B			*			A			*		

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #41 Irving Pl/Braddock Dr [Cumulative (2008) Base - PM]

Cycle (sec):	100	Critical Vol./Cap. (X):	0.216
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	8.2
Optimal Cycle:	0	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	0 0		0 0 0	0 0		1 0	0 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	38	147	0	0	0	0	86	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	147	0	0	0	0	86	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	147	0	0	0	0	86	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	147	0	0	0	0	86	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	38	147	0	0	0	0	86	0	0	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.21	0.79	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	176	681	0	0	0	0	778	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	xxxx	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx
Crit Moves:		****					****					
Delay/Veh:	8.2	8.2	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	8.2	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	A	*	*	*	*	A	*	*	*	*	*
ApproachDel:	8.2			xxxxxx			8.0			xxxxxx		
Delay Adj:	1.00			xxxxx			1.00			xxxxx		
ApprAdjDel:	8.2			xxxxxx			8.0			xxxxxx		
LOS by Appr:	A			*			A			*		

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	IRVING PLACE
East/West Street:	BRADDOCK DRIVE
Scenario:	CUMULATIVE (2008) BASE CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.286 *
	TH	0.00	0	0	0.000	N-S(2):	0.088
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.106 *
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000	V/C:	0.392
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	1.00	317	1,600	0.286 *		
	LT	0.00	141	1,600	0.088		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.492
	TH	0.00	0	0	0.000		
	LT	1.00	170	1,600	0.106 *	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.116 *
	TH	0.00	0	0	0.000	N-S(2):	0.024
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.054 *
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000	V/C:	0.170
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	1.00	147	1,600	0.116 *		
	LT	0.00	38	1,600	0.024		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.270
	TH	0.00	0	0	0.000		
	LT	1.00	86	1,600	0.054 *	LOS:	A

* = Critical Movement

APPENDIX F

Cumulative (2008) Plus Project Conditions

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	LAFAYETTE PLACE
East/West Street:	CULVER BOULEVARD
Scenario:	CUMULATIVE (2008) PLUS PROJECT CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.000
	TH	0.00	0	0	0.000 *	N-S(2):	0.043 *
	LT	0.00	0	0	0.000	E-W(1):	0.378 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.315
	TH	2.00	1,009	3,200	0.315		
	LT	1.00	51	1,600	0.032 *	V/C:	0.421
Northbound	RT	0.46	31	729	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	0.54	37	871	0.043 *		
Eastbound	RT	0.00	59	0	0.000	ICU:	0.521
	TH	2.00	1,049	3,200	0.346 *		
	LT	0.00	0	0	0.000	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.000
	TH	0.00	0	0	0.000 *	N-S(2):	0.033 *
	LT	0.00	0	0	0.000	E-W(1):	0.399 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.305
	TH	2.00	976	3,200	0.305		
	LT	1.00	41	1,600	0.026 *	V/C:	0.432
Northbound	RT	0.49	26	785	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	0.51	27	815	0.033 *		
Eastbound	RT	0.00	35	0	0.000	ICU:	0.532
	TH	2.00	1,157	3,200	0.373 *		
	LT	0.00	0	0	0.000	LOS:	A

* = Critical Movement

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Lafayette Pl/Braddock Dr [Cumulative (2008) Plus Project - AM]

Average Delay (sec/veh): 5.7 Worst Case Level Of Service: B[13.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	37	62	18	13	78	27	20	135	35	12	125	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	62	18	13	78	27	20	135	35	12	125	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	62	18	13	78	27	20	135	35	12	125	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	37	62	18	13	78	27	20	135	35	12	125	3
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	396	345	153	383	361	127	128	xxxx	xxxxx	170	xxxx	xxxxx
Potent Cap.:	568	582	899	579	570	929	1470	xxxx	xxxxx	1420	xxxx	xxxxx
Move Cap.:	484	569	899	511	557	929	1470	xxxx	xxxxx	1420	xxxx	xxxxx
Volume/Cap:	0.08	0.11	0.02	0.03	0.14	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	569	xxxxx	xxxx	607	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.8	xxxxx	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	13.0	xxxxx	xxxxx	12.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		13.0			12.4			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 Lafayette Pl/Braddock Dr [Cumulative (2008) Plus Project - PM]

Average Delay (sec/veh): 5.2 Worst Case Level Of Service: B[10.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	52	18	6	17	59	16	15	71	80	4	29	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	18	6	17	59	16	15	71	80	4	29	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	18	6	17	59	16	15	71	80	4	29	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	52	18	6	17	59	16	15	71	80	4	29	5
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	218	183	111	193	221	32	34	xxxx	xxxxx	151	xxxx	xxxxx
Potent Cap.:	743	715	948	772	681	1048	1591	xxxx	xxxxx	1442	xxxx	xxxxx
Move Cap.:	676	706	948	745	673	1048	1591	xxxx	xxxxx	1442	xxxx	xxxxx
Volume/Cap:	0.08	0.03	0.01	0.02	0.09	0.02	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	699	xxxxx	xxxx	732	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.4	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	10.8	xxxxx	xxxxx	10.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		10.8			10.6			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Project: 4043 IRVING PLACE MIXED-USE PROJECT

North/South Street: LAFAYETTE PLACE
East/West Street: BRADDOCK DRIVE

Scenario: CUMULATIVE (2008) PLUS PROJECT CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	27	0	0.000	N-S(1):	0.081
	TH	1.00	78	1,600	0.074 *	N-S(2):	0.097 *
	LT	0.00	13	1,600	0.008	E-W(1):	0.127 *
Westbound	RT	0.00	3	0	0.000	E-W(2):	0.101
	TH	1.00	125	1,600	0.088		
	LT	0.00	12	1,600	0.008 *	V/C:	0.224
Northbound	RT	0.00	18	0	0.000	Lost Time:	0.100
	TH	1.00	62	1,600	0.073		
	LT	0.00	37	1,600	0.023 *		
Eastbound	RT	0.00	35	0	0.000	ICU:	0.324
	TH	1.00	135	1,600	0.119 *		
	LT	0.00	20	1,600	0.013	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	16	0	0.000	N-S(1):	0.059
	TH	1.00	59	1,600	0.058 *	N-S(2):	0.091 *
	LT	0.00	17	1,600	0.011	E-W(1):	0.107 *
Westbound	RT	0.00	5	0	0.000	E-W(2):	0.033
	TH	1.00	29	1,600	0.024		
	LT	0.00	4	1,600	0.003 *	V/C:	0.198
Northbound	RT	0.00	6	0	0.000	Lost Time:	0.100
	TH	1.00	18	1,600	0.048		
	LT	0.00	52	1,600	0.033 *		
Eastbound	RT	0.00	80	0	0.000	ICU:	0.298
	TH	1.00	71	1,600	0.104 *		
	LT	0.00	15	1,600	0.009	LOS:	A

* = Critical Movement

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	IRVING PLACE
East/West Street:	CULVER BOULEVARD
Scenario:	CUMULATIVE (2008) PLUS PROJECT CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.104 *
	TH	0.00	0	0	0.000	N-S(2):	0.081
	LT	0.00	0	0	0.000 *	E-W(1):	0.424 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.354
	TH	3.00	1,697	4,800	0.354		
	LT	1.00	69	1,600	0.043 *	V/C:	0.528
Northbound	RT	1.00	235	1,600	0.104 *	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	1.00	129	1,600	0.081		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.628
	TH	3.00	1,767	4,800	0.381 *		
	LT	0.00	0	0	0.000	LOS:	B

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.031
	TH	0.00	0	0	0.000 *	N-S(2):	0.057 *
	LT	0.00	0	0	0.000	E-W(1):	0.478 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.324
	TH	3.00	1,556	4,800	0.324		
	LT	1.00	64	1,600	0.040 *	V/C:	0.535
Northbound	RT	1.00	114	1,600	0.031	Lost Time:	0.100
	TH	0.00	0	0	0.000		
	LT	1.00	91	1,600	0.057 *		
Eastbound	RT	0.00	49	0	0.000	ICU:	0.635
	TH	3.00	2,055	4,800	0.438 *		
	LT	0.00	0	0	0.000	LOS:	B

* = Critical Movement

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Irving Pl/Braddock Dr [Cumulative (2008) Plus Project - AM]

Cycle (sec):	100	Critical Vol./Cap. (X):	0.571
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	12.1
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0	0 0		0 0 0	0 0		1 0 0	0 0		0 0 0	0 0	
Volume Module:												
Base Vol:	141	318	0	0	0	0	175	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	141	318	0	0	0	0	175	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	141	318	0	0	0	0	175	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	141	318	0	0	0	0	175	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	141	318	0	0	0	0	175	0	0	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.31	0.69	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	247	557	0	0	0	0	664	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.57	0.57	xxxx	xxxx	xxxx	xxxx	0.26	xxxx	xxxx	xxxx	xxxx	xxxx
Crit Moves:		****					****					
Delay/Veh:	12.9	12.9	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	12.9	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0
LOS by Move:	B	B	*	*	*	*	A	*	*	*	*	*
ApproachDel:	12.9			xxxxxx			9.8			xxxxxx		
Delay Adj:	1.00			xxxxx			1.00			xxxxx		
ApprAdjDel:	12.9			xxxxxx			9.8			xxxxxx		
LOS by Appr:	B			*			A			*		

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #41 Irving Pl/Braddock Dr [Cumulative (2008) Plus Project - PM]

Cycle (sec):	100	Critical Vol./Cap. (X):	0.218
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	8.2
Optimal Cycle:	0	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	0	0	0 0	0 0 0	1	0 0	0 0 0	0	0 0	0 0 0
Volume Module:												
Base Vol:	38	148	0	0	0	0	95	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	148	0	0	0	0	95	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	148	0	0	0	0	95	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	148	0	0	0	0	95	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	38	148	0	0	0	0	95	0	0	0	0	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.20	0.80	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	174	679	0	0	0	0	776	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	xxxx	xxxx	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Crit Moves:		****					****					
Delay/Veh:	8.3	8.3	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.3	8.3	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	A	*	*	*	*	A	*	*	*	*	*
ApproachDel:		8.3			xxxxxx			8.1			xxxxxx	
Delay Adj:		1.00			xxxxx			1.00			xxxxx	
ApprAdjDel:		8.3			xxxxxx			8.1			xxxxxx	
LOS by Appr:		A			*			A			*	

Project:	4043 IRVING PLACE MIXED-USE PROJECT
North/South Street:	IRVING PLACE
East/West Street:	BRADDOCK DRIVE
Scenario:	CUMULATIVE (2008) PLUS PROJECT CONDITIONS

Thru Lane:	1600 vph	N-S Split Phase :	N
Left-Turn Lane:	1600 vph	E-W Split Phase :	N
Dual LT Penalty:	10 %	Lost Time (% of cycle) :	10

Peak Period: AM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.287 *
	TH	0.00	0	0	0.000	N-S(2):	0.088
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.109 *
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000	V/C:	0.396
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	1.00	318	1,600	0.287 *		
	LT	0.00	141	1,600	0.088		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.496
	TH	0.00	0	0	0.000		
	LT	1.00	175	1,600	0.109 *	LOS:	A

Peak Period: PM PEAK HOUR

Approach	Movement	Lanes	Volume	Capacity	V/C	ICU ANALYSIS	
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.116 *
	TH	0.00	0	0	0.000	N-S(2):	0.024
	LT	0.00	0	0	0.000 *	E-W(1):	0.000
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.059 *
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000	V/C:	0.175
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	1.00	148	1,600	0.116 *		
	LT	0.00	38	1,600	0.024		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.275
	TH	0.00	0	0	0.000		
	LT	1.00	95	1,600	0.059 *	LOS:	A

* = Critical Movement

REPORT

PRELIMINARY SOIL INVESTIGATION

Proposed Apartment Complex
Lots 3, 20 and 21, Block 21, Track No. 1775
4043 Irving Place
Culver City, California

for

Metro Real Estates & Development
10866 Washington Boulevard, #512
Culver City, California 90232

JS Egan Design Inc.
Architect

Project No. HA-5887-1
April 17, 2007

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HU ASSOCIATES, INC.

GEOTECHNICAL / ENVIRONMENTAL ENGINEERING CONSULTANTS

11955 RIVERA ROAD • SANTA FE SPRINGS, CA 90670-2209 • TELEPHONE (562) 696-6062 (562) 693-6114 FAX (562) 698-5771

April 17, 2007
HA-5887-1

Metro Real Estates & Development
10866 Washington Boulevard, #512
Culver City, California 90232

Attention: Mr. Sal Gonzales

SUBJECT: **PRELIMINARY SOIL INVESTIGATION**
Proposed Apartment Complex
Lots 3, 20, and 21, Block 21, Tract No. 1775
4043 Irving Place
Culver City, California

Gentlemen:

In accordance with our proposal of February 28, 2007, we have conducted a preliminary soil investigation for the proposed apartment complex to be located at 4043 Irving Place, in the Culver City, County of Los Angeles, California.

Based on the findings and observations of this investigation, it is concluded that the proposed development at the subject property for the intended use is feasible from the geotechnical engineering viewpoint, provided the specific recommendations set forth herein are followed. The proposed structure may be supported by conventional spread footings rested on competent undisturbed natural soil at the proposed subterranean garage level.

The accompanying report represents relevant conclusions and recommendations for the preliminary planning and foundation designs.

We thank you for entrusting us to undertake this investigation and look forward to future association. If any questions arise concerning the interpretation of the report, please do not hesitate to call.

Very truly yours,
HU ASSOCIATES, INC.

Richard E. Hu, Ph.D.
President
REH/ps

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REPORT

PRELIMINARY SOIL INVESTIGATION

PROPOSED APARTMENT COMPLEX

LOTS 3, 20 AND 21, BLOCK 21, TRACT NO. 1775

4043 IRVING PLACE

CULVER CITY, CALIFORNIA

FOR

METRO REAL ESTATES & DEVELOPMENT

INTRODUCTION

The following report presents the results of a preliminary soil investigation conducted in the area of the proposed apartment complex to be located at 4043 Irving Place, in the Culver City, County of Los Angeles, California. The location of the site relative to surrounding streets and landmarks is shown on Plate 1, Vicinity Map.

The purpose of this investigation was to obtain the geotechnical engineering properties of the subsurface soils at the subject site on which to base conclusions and recommendations for foundations support and other geotechnical matters pertinent to the proposed construction. Implementation of the recommendations made in this report is intended to reduce certain risks associated with construction projects. The scope of this investigation does not include the work related in any way to identify asbestos and/or hazardous waste material.

This report has been prepared for use in design of the described project. It may not contain sufficient information for other purposes. Our professional services have been performed in accordance with generally accepted engineering procedures under similar circumstances. No other warranty, expressed or implied, is made as to the professional advice included in this report.

PROPOSED DEVELOPMENT

It is understood that the subject properties will be utilized for the development of a 31-unit apartment complex at the location shown on Plate 2. The proposed structure will be three-story wood frame over a subterranean parking garage, constructed of masonry walls with slab on grade.

The finish grade of the proposed subterranean garage floor will be at approximately 10 feet below the existing ground surface. Thus, cut on the order of 12 feet including footings will be required for constructing the proposed subterranean garage. Based on the current design plan available to us, the proposed garage walls will be located right on the property lines in all directions. No detailed grading plan and design loads are available at the time of this investigation.

FIELD EXPLORATIONS AND LABORATORY TESTING

Field explorations were performed to establish the geotechnical conditions of the site. Five (5) test borings were excavated at the locations shown on Plate 2. The explorations were logged by our field engineer and relatively undisturbed samples were obtained for laboratory testing and inspection. A detailed description of the exploration procedures and the logs of test borings are presented in the Appendix.

Laboratory tests were performed to evaluate static soil properties. A description of the test procedures and the test results are also presented in the Appendix.

SITE CONDITIONS

The subject property is located on the south side of Irving Place, north side of La Fayette Place, between Culver Boulevard and Braddock Drive, in the Culver City, County of Los Angeles, California.

The site is bordered by a fire department building and a parking lot on the west side, by one- and two-story apartments and houses on the east side and by La Fayette Place to the south.

The site consists of three relatively level; rectangular-shaped residential lots that measured approximately 50 feet wide by 160 feet deep in plan dimensions for each lot. At the time of this investigation, the site was vacant of structures and was utilized as a parking lot. No surface vegetation was observed at the site.

SUBSURFACE CONDITIONS

Soil Conditions

In general, the natural soils disclosed in the test borings consist of stiff to very stiff, very fine to fine sandy, silty clay with occasional rock fragments to depths of 6 to 9 feet, underlain by dense to very dense, very fine to coarse, silty to slightly silty, very gravelly sand with pebbles to depths of 10 to 16 feet, underlain in turn by the alternating layers of firm, very fine sandy, slightly clayey to very clayey silt and medium dense to very dense, fine to coarse, slightly silty to clean, gravelly sand to the depths explored of 30 to 51 feet in Test Boring Nos. 2, 3, 4, and 5, and to a depth of 45 feet in Test Boring No. 1. Below this in Test Boring No. 1 is dense, fine, silty sand to a depth of 50 feet, followed by firm, very fine to fine sandy silt to the depth explored of 51 feet.

Fill was also encountered in all test borings to depths of 2 to 3 feet. It consists of medium dense to dense, very fine-to-fine, silty, slightly clayey sand and stiff, very fine to fine sandy, silty clay.

Groundwater

Groundwater was encountered at a depth of 39 feet in Test Boring No. 1, and at a depth of 38 feet in Test Boring No. 2. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. This data has been reviewed and interpretation made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors not evident at the time measurements were made and reported herein.

According to the report published by the State of California, Department of Conservation, Division of Mines and Geology, Open-File Report 98-14, Seismic Hazard Evaluation of the Beverly Hills Quad (Plate 1.2, OFR 98-14), the historically highest groundwater table in the vicinity of the site is at 20 feet below the ground surface. A copy of the historically highest groundwater contours map is shown on Plate 3.

EARTHQUAKE HAZARDS

Seismicity

The subject property lies within the seismically active southern California region. As with all sites in southern California, the property will probably experience ground shaking from both near and distant earthquake sources during the life of the proposed structure. The type and magnitude of seismic hazard affecting the site are dependent on the distance of causative faults and the intensity and magnitude of the seismic event.

Surface Rupture

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. No faults, active or potentially active, are known to exist within the site. The probability of surface rupture at the site is, therefore, considered very low.

Ground Shaking

Based on "Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada" by California Department of Conservation, the closest fault zone to the site is the Newport-Inglewood Fault Zone located at approximately 2.4 km to the northeast of the site. It is our opinion that the intensity of future ground shaking at the site is not expected to be greater than any other sites in the immediate vicinity. The proposed structures shall be designed in accordance with the Earthquake Regulations of the Uniform Building Code and the seismic design parameters provided in the other section of this report.

Soil Liquefaction Evaluation

The site is located in the area as delineated by the State Geologist to have potential of soil liquefaction during strong earthquakes.

Earthquake-induced liquefaction is a phenomenon in which loose to medium dense saturated cohesionless soils undergo extreme losses in shear strength due to earthquake shaking. The liquefaction potential is directly related to the groundwater conditions at the site, as well as to the characteristics of the underlying soil deposits. Loose to medium dense sands below groundwater level are generally considered to be susceptible to liquefaction under strong ground shaking conditions.

Past data show that uniformly graded cohesionless soils are most susceptible to liquefaction and this type of soil is most easily characterized by the grain size distribution or fines content. Cohesive soils having clay content over 15 percent are not considered prone to soil liquefaction (SP 117, Page 2 of Chapter 6). Thus grain size analysis was performed on representative samples taken from the test boring. The tests are performed in accordance with the ASTM D-422 laboratory test procedures. Results of the grain size distribution analysis defining percent of fines content and clay contents are presented on Plates A-17 through A-22.

The seismic design parameters used in the liquefaction analysis depend largely upon the source of information available at the time the analysis is performed and not all information sources available agree on all items due to the "state of the art" at the present time. Based on the report published by the State of California, Department of Conservation, Division of Mines and Geology, Open-File Report 98-14, "Seismic Hazard Evaluation of the Beverly Hills Quad (Figures 3.3 and 3.4, OFR 98-14)", the predominant earthquake magnitude contributed most to the hazard at 10% probability of exceedance in 50 years at the site is 6.7 and a peak ground acceleration at 10 % probability of exceedance in 50 years at the site is 0.47g.

Per the State of California Seismic Hazard zone Map, Beverly Hills Quadrangle (Plate 1.2, OFR 98-14), the historically highest groundwater table in the vicinity of the site is at approximately 20 feet below ground surface. Although groundwater was encountered at a depth of 39 feet in Test Boring No.1 and 38 feet in Test Boring No.2, the calculations for liquefaction potential were performed for the soils below a historically highest groundwater table in accordance with the method outlined by the State of California Division of Mines and Geology "Special Publication 117" dated 1997 and "Recommended Procedure for Implementation of DMG Special Publication 117" dated March 1999 using a historically highest groundwater table of 20 feet. A summary of calculations is presented in Tables One and Two.

The results of soil liquefaction calculations presented on Tables One and Two indicate that the onsite subsurface soil layers are considered non-liquefiable due to high fine or clay content and high SPT blow counts.

CONCLUSIONS AND RECOMMENDATIONS

General

Based on an evaluation of the site conditions and findings of this investigation, it is concluded that the subject properties are suitable for the proposed development from a geotechnical engineering viewpoint provided the following conclusions and recommendations are

incorporated into design criteria and project specifications and are implemented during construction.

Conventional spread footings rested on competent undisturbed natural soils at the subterranean garage level will provide adequate support for the proposed structure.

Due to relatively sandy nature of the onsite soil below depths of 6 to 7 feet and the proximity location of the adjacent buildings, it is anticipated that shoring with lagging will be required for temporary basement excavation during construction. Please refer to 'Excavation' sections of this report for detail specifications

Site Preparation

General

Precautions should be taken during the performance of all work under the following sections, especially if construction is performed during the rainy season of approximately October 15 to April 15. Protection should be provided to the work site, particularly excavated areas, from flooding, ponding, and inundation due to poor or improper temporary surface drainage.

During periods of impending inclement weather, temporary provisions should be made to adequately direct surface drainage, from all sources, away from and off the work site and to provide adequate pumps and sumps to handle any flow into the excavations.

Site Clearing

Clearing and grubbing should consist of the removal of vegetation such as brush, grass, woods, stumps, trees, roots of trees and otherwise deleterious natural materials from the areas to be graded. Clearing and grubbing should extend to the outside of all proposed excavation and fill areas.

Debris generated during clearing, grubbing and/or demolition operations should be wasted from areas to be graded and disposed of off-site. During site grading, laborers should clear any roots, tree branches, and other deleterious materials missed during clearing and grubbing operations from all areas to receive fill.

The depths of excavation should be reviewed by the Soils Engineer during actual construction. Any surface or subsurface obstructions, or questionable material, encountered during grading should be brought immediately to the attention of the Soils Engineer for proper exposure, removal or processing as directed. No underground obstructions or facilities should remain in any structural areas.

Fill Placement

All new fill shall be brought to near optimum moisture, placed in layers not exceeding 8 inches thick, and compacted to at least 90 percent of the maximum laboratory density.

Compaction characteristics of all fill soils shall be determined by ASTM D-1557-02 standard. The field density and degree of compaction shall be determined by ASTM D-1556, or by other ASTM standard methods that are acceptable to the governing public agency.

Seismic Design Parameters

Based on the results of this preliminary soil investigation and in accordance with Chapter 16, Division IV of the 1997 Uniform Building Code, the following seismic data are applicable to the subject site.

Seismic Zone Factor, Z	0.4
Soil Profile Type	S_D
Seismic Source Type (Newport-Inglewood Fault)	B
Near-Source Factor, N_a	1.26
Near-Source Factor, N_v	1.55
Seismic Coefficient, C_a	0.55
Seismic Coefficient, C_v	0.99

Earthquake Induced Hazards

Liquefaction Induced Settlement

The results of liquefaction analyses indicate that the onsite subsurface soil layers are considered non-liquefiable due to high fine or clay content and high SPT blow counts.

Liquefaction Induced Settlement Due to Sand Boil

One of the possible hazards due to soil liquefaction is the formation of "sand boils". Due to the relatively thin and weak surface soil layer, the liquefied sand could push its way to the ground surface. Movement of sand from beneath shallow footings could result in a large settlement, which would cause the building to settlement and/or tilt.

At the subject site, the potential for liquefaction-induced damage at the ground surface due to sand boils or ground rupture is considered very low.

Liquefaction Induced Settlement Due to Lateral Spreading

Another possible hazard due to liquefaction is lateral spreading. Seismically triggered lateral spreading is a common expression of the phenomenon of liquefaction. When the sandy soils liquefy, the upper soil mass would tend to move toward a "free face" such as a slope or a lower ground. Lateral spreading would generally cause ground cracking and subsidence, or as an extreme, portion of the soil mass above the liquefied sand could slide into the low area. The horizontal and vertical movements associated with lateral spreading could result in severe damage to structures founded on or above the liquefied layer. Since the topography of the subject site and surrounding area is relatively flat, the possibility of lateral spreading caused by soil liquefaction at the site is remote.

Earthquake-Induced Flooding

This is flooding caused by failure of dams or other water-retaining structures up gradient of the site as a result of an earthquake. Review of the area adjacent to the site indicates that there are no significant up-gradient lakes or reservoirs with the potential of flooding the site.

Foundation Recommendations

Allowable Bearing Value

An allowable bearing value of 2200 pounds per square foot is recommended for spread footings of at least 18 inches in width, placed at a depth of at least 1.5 feet below the lowest adjacent finish grade, rested on undisturbed natural soils at the proposed subterranean garage level. This value may be increased by 200 pounds per square foot for each additional foot in width and 250 pounds per square foot for each additional foot in depth over the minimum, to a maximum of 3000 pounds per square foot.

The bearing value is for dead plus live load and may be increased by one-third for momentary wind or seismic loads.

Footing Settlement

Maximum ultimate settlement of footings up to 4 feet wide continuous and 6 feet square under the recommended bearing pressure is not expected to exceed one inch. Differential settlement between adjacent footings is not expected to exceed 1/4 of an inch within a span of 40 feet. Settlement will be approximately in direct proportion to the width of the footings and actual applied load.

Footing Reinforcement

Continuous footings should be reinforced with at least four No. 4 bars, two near the top and two near the bottom of the footings. Reinforcement of isolated footings shall be utilized as deemed necessary by the Structural Engineer for the project. This reinforcement is based on soil characteristics and is not intended to be in lieu of reinforcement necessary to satisfy structural considerations.

Footing Inspections

All foundation excavations should be inspected and approved by the Soils Engineer prior to placement of forms, reinforcement or concrete. The excavations should be trimmed neat, level and square. All loose, sloughed and moisture softened materials should be removed prior to the placement of concrete.

Footings should be located below a line measured upward at a 45-degree angle from the bottom of the adjacent footings or utility trench, unless review and approved by the Soils Engineer.

Materials from footings excavations should not be spread in slab-on-grade areas unless they are compacted and tested.

Lateral Design

An allowable lateral bearing value against the sides of footings of 250 pounds per square foot per foot of depth, to a maximum of 2500 pounds per square foot, may be used provided there is positive contact between the vertical bearing surface and undisturbed natural soil. Friction between the base of the footings and/or floor slabs and the underlying soil may be assumed to be 0.4 times the dead load. When combining passive pressure and friction for lateral resistance, the passive component should be reduced by one-third.

Slabs On Grade

Floor Slabs

Slabs on grade should be cast over properly prepared subgrade. Any loosened or over-excavated soils should be wasted from the site or properly compacted in-place.

Subgrade soils disturbed due to installation of utility lines should either be completely removed or be properly compacted prior to concrete pour. The subgrade fill soils should be moisture-conditioned to obtain near optimum water content and then compacted to at least 90 percent of the maximum dry density as determined by the ASTM D-1557-02 compaction test method.

It should be recognized that minor cracks normally occur in concrete slabs due to shrinkage during curing or redistribution of stresses and thus, some cracks should be anticipated. Such cracks are not necessarily indicative of excessive vertical movements.

Slab Reinforcement

Floor slabs constructed on-grade should be a minimum thickness of 4 inches and be reinforced with at least No. 3 bars spaced 24 inches on centers, both ways. All slab reinforcement should be supported on concrete chairs or brick to ensure the desired placement near mid-depth.

The above criteria are recommended to minimize potential distress to floor slabs related to the effects of subgrade soil conditions. The Structural Engineer for the project may need to address other factors that may require modification of the above recommendations.

Moisture Barrier

A moisture barrier beneath slabs-on-grade, consisting of a waterproof vapor barrier, such as a plastic membrane of at least 10 mils in thickness, is recommended in areas where slab moisture would be detrimental. The membrane should be overlain by a minimum of 2 inches of clean sands to provide a working surface and aid in concrete curing.

It is important that the soil subgrade, which will support the concrete slab, is maintained at the "as-graded" or has a sufficient soil water content. Prior to slab construction, the water content of the soil subgrade should be measured to verify that the subgrade has not dried out significantly. It is suggested that slab areas be thoroughly moistened prior to placing of moisture barrier and pouring of concrete.

Corrosivity

A representative sample of the site soil was tested for electrical resistivity, pH, sulfate and chloride concentration in order to assess corrosivity effects on underground utilities and concrete foundations. Tests were performed by Environmental Geotechnology Laboratory, Santa Fe Springs, California. Results of the tests are summarized below.

Analyte	Test Method (Caltrans)	Result
pH	643	7.73
Resistivity	532	850 ohm-cm
Water Soluble Sulfate	417	0.017%
Water Soluble Chloride	422	100 ppm

The concentration of water-soluble sulfate in the soil sample was determined to be 0.017%. The on-site soil is considered low deleterious to concrete. Standard construction practices and concrete mixes may be used for concrete in contact with these soils using Type I or II cement.

The on-site soil is considered severely corrosive to ferrous metals. Underground steel utilities should be blasted and given a high quality protective coating. Buried steel piping should be electrically insulated from dissimilar metals, cement-mortar or concrete coated steel, and above ground steel pipe. It is recommended that a corrosion specialist be consulted.

Retaining Wall

Wall Footings

Retaining wall footings rested on competent undisturbed natural soil may be designed for the same allowable bearing value as given in the previous sections for building foundations.

Active Earth Pressure

Retaining walls should be designed to resist lateral earth pressure exerted by the retained compacted backfill plus any additional lateral forces that will be applied to the walls due to surface loads placed at or near the wall.

It is recommended that retaining walls that are free to rotate be designed for an assumed earth pressure equivalent to that exerted by a fluid weighing of 42 pounds per cubic foot. The recommended earth pressure is for walls retaining drained earth with level backfill.

Walls that are restrained against movement or rotation at the top should be designed for the at-rest equivalent fluid pressure. An at-rest equivalent fluid pressure of 60 pounds per cubic foot can be used for walls with level soil backfill.

The lateral earth pressures assume that a permanent drainage system will be installed so that hydrostatic water pressure will not be developed against the walls. If a drainage system is not provided, the walls should be designed to resist an external hydrostatic pressure due to water in addition to the lateral earth pressure.

Wall Drainage

All retaining walls should be waterproofed and/or damp-proofed, depending on the desired moisture protection. The walls should be provided with perforated pipe and gravel subdrain to prevent entrapment of water in the backfill.

Any water that may accumulate in the drainage material should be collected and discharged by a 4-inch diameter, perforated PVC Schedule 40 or ABS SDR-35 pipe placed near the bottom of the drainage material but at least one foot below the interior floor. The pipe perforations should be placed with the holes down, and should not be greater than ¼ inch in diameter.

The subdrain should outlet at appropriate discharge locations that will ensure all discharge will not scour or erode the surrounding soil, and the pipe will not become damaged or clogged. The outlet pipe should be a solid pipe that meets minimum specification set forth above for the subdrain pipe.

The drainage material that will be used to backfill the wall should consist of 3/4 to 1-1/2 inch clean durable, coarse aggregate. The drainage material should be separated from all adjacent soil by Mirafi 140NL, or approved equivalent. The fabric should be handled in accordance with the respective manufacturers requirements, and should be constructed such that all fabric overlaps are a minimum of 12 inches.

Alternatively, commercially available drainage fabric, such as MiraDrain, could be used. The fabric manufacturer's recommendations should be followed in the installation of a drainage fabric backdrain.

Wall Backfill

Prior to backfilling, the excavation between retaining walls and the temporary cut bank should be cleared of all loose materials, debris, and construction materials, etc.

Proper compaction of the backfill will be necessary to reduce settlement of the backfill. Some settlement of the backfill should be anticipated and any utilities and sidewalks supported therein should be designed to accept differential settlement, particularly at the points of entry to the structure.

All wall backfill should be placed in horizontal lifts not more than 8 inches in thickness, watered as necessary to achieve near optimum moisture conditions, and mechanically compacted to at least 90 percent of the ASTM D-1557-02 standard. Flooding or jetting of backfill materials should be avoided. Probing and testing should be performed by the project soils engineer to verify proper compaction.

Where space limitations do not allow for conventional backfill compaction operations, the space should be backfilled with pea gravel. The pea gravel backfill should be placed in lifts of no more than 2 feet in thickness and should be compacted with vibratory equipment. Ideally, the top of two feet of backfill, exposed to water infiltration should be consisting of clayey material so that a relatively impervious condition is developed.

Contractors should be informed that the use of heavy compaction equipment within close proximity to retaining walls could cause excessive wall movement and/or earth pressure in excess of design values.

Waterproofing

Rooms located below grade have a history of moisture intrusion, seepage, and leakage. Conventional waterproofing materials, such as asphalt emulsion, have often proved ineffective. Certain precautions can be taken to reduce the possibility of future seepage problems.