Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Kanan Road (NS) / SR-101 NB Ramps/Canwood Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.957
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	0 1	2 0	1	1 0	0 0	1	1 1	0 0	2
Volume Module:												
Base Vol:	7	1215	458	0	981	518	53	0	178	263	63	743
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	7	1264	476	0	1020	539	55	0	185	274	66	773
Added Vol:	0	257	734	50	213	0	0	0	0	511	0	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	1521	1210	50	1233	539	55	0	185	785	66	782
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:	7	1521	1210	50	1233	539	55	0	185	785	66	782
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	1521	1210	50	1233	539	55	0	185	785	66	782
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
FinalVolume:	7	1521	1210	50	1233	539	55	0	185	785	66	782
OvlAdjVol:			785									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	1.00	2.00	1.00	0.12	2.88	1.00	1.00	0.00	1.00	1.85	0.15	2.00
Final Sat.:	1600	3200	1600	187	4613	1600	1600	0	1600	2953	247	3200
Capacity Analysis Module:												
Vol/Sat:	0.00	0.48	0.76	0.03	0.27	0.34	0.03	0.00	0.12	0.27	0.27	0.24
OvlAdjV/S:			0.49									
Crit Moves:		****							****		****	

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Kanan Road (NS) / SR-101 SB Ramps/Roadside Drive (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.968
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	2	0 1	1 0	2	0 1	1 0	1!	0 1	1 0	0	0 1
Volume Module:												
Base Vol:	0	493	30	124	1071	950	345	133	253	21	0	94
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	513	31	129	1114	988	359	138	263	22	0	98
Added Vol:	0	467	0	0	541	7	89	0	439	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	980	31	129	1655	995	448	138	702	22	0	98
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:	0	980	31	129	1655	995	448	138	702	22	0	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	980	31	129	1655	995	448	138	702	22	0	98
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
FinalVolume:	0	980	31	129	1655	995	448	138	702	22	0	98
OvlAdjVol:						651						
Saturation Flow Module:							1.3	0.4	1.3			
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	0.00	2.00	1.00	1.00	2.00	1.00	~~1.04~~	~~0.32~~	~~1.64~~	1.00	0.00	1.00
Final Sat.:	0	3200	1600	1600	3200	1600	2080	640	2080	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.02	0.08	0.52	0.62	0.22	0.22	0.34	0.01	0.00	0.06
OvlAdjV/S:						0.41						
Crit Moves:					****				****	****		

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Kanan Road (NS) / SR-101 SB Ramps/Roadside Drive (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.598
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	2 0	1	1 0	2 0	1	1 0	1! 0	1	1 0	0 0	1
Volume Module:												
Base Vol:	0	970	23	179	680	521	369	84	572	19	0	282
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	1009	24	186	707	542	384	87	595	20	0	293
Added Vol:	0	1633	0	0	661	32	53	0	536	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2642	24	186	1368	574	437	87	1131	20	0	293
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:	0	2642	24	186	1368	574	437	87	1131	20	0	293
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2642	24	186	1368	574	437	87	1131	20	0	293
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
FinalVolume:	0	2642	24	186	1368	574	437	87	1131	20	0	293
OvlAdjVol:						238						
Saturation Flow Module:							1.5	0.4	1.3			
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	0.00	2.00	1.00	1.00	2.00	1.00	~~1.00~~	~~0.01~~	~~1.99~~	1.00	0.00	1.00
Final Sat.:	0	3200	1600	1600	3200	1600	2080	640	2080	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.83	0.01	0.12	0.43	0.36	0.21	0.14	0.54	0.01	0.00	0.18
OvlAdjV/S:						0.15						
Crit Moves:		****		****					****	****		

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Morning Peak Hour

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

Intersection #3 Clareton Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[14.0]

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 0	0 0	0	0 0 1!	0 0		0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	55	0	39	128	271	0	0	65	83
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	57	0	41	133	282	0	0	68	86
Added Vol:	0	0	0	0	0	0	0	18	0	0	26	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	57	0	41	133	300	0	0	94	86
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:	0	0	0	57	0	41	133	300	0	0	94	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	57	0	41	133	300	0	0	94	86
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	703	703	137	180	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	407	365	917	1408	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	375	327	917	1408	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.15	0.00	0.04	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	497	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	14.0	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			14.0			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

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

Intersection #3 Clareton Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 9.1 Worst Case Level Of Service: C[23.0]

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 0	0 0		0 0 1!	0 0		0 1	0 0 0		0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	104	0	228	151	135	0	0	184	92
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	108	0	237	157	140	0	0	191	96
Added Vol:	0	0	0	0	0	0	0	47	0	0	43	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	108	0	237	157	187	0	0	234	96
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:	0	0	0	108	0	237	157	187	0	0	234	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	108	0	237	157	187	0	0	234	96
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	784	784	282	330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	365	327	762	1241	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	326	282	762	1241	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.33	0.00	0.31	0.13	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	537	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	4.5	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	23.0	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			23.0			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Morning Peak Hour

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

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Intersection #6 Derry Avenue (NS) / Canwood Street (EW)

****

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[11.7]

****

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 0 0 0			1 0 0 0 1			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	28	0	29	94	231	0	0	109	86
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	29	0	30	98	240	0	0	113	89
Added Vol:	0	0	0	0	0	0	0	18	0	0	26	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	29	0	30	98	258	0	0	139	89
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:	0	0	0	29	0	30	98	258	0	0	139	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	29	0	30	98	258	0	0	139	89
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	638	xxxx	184	229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	444	xxxx	863	1351	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	420	xxxx	863	1351	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.07	xxxx	0.03	0.07	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	0.1	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	14.2	xxxx	9.3	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.7			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Note: Queue reported is the number of cars per lane.

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Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

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

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Intersection #6 Derry Avenue (NS) / Canwood Street (EW)

****

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: B[13.1]

****

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 0	0 0		1 0 0	0 1		1 0 1	0 0		0 0 0	1 0	
Volume Module:												
Base Vol:	0	0	0	120	0	132	102	136	0	0	120	63
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	125	0	137	106	141	0	0	125	66
Added Vol:	0	0	0	0	0	0	0	47	0	0	43	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	125	0	137	106	188	0	0	168	66
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:	0	0	0	125	0	137	106	188	0	0	168	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	125	0	137	106	188	0	0	168	66
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	601	xxxx	201	233	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	466	xxxx	845	1346	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	438	xxxx	845	1346	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.28	xxxx	0.16	0.08	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	1.2	xxxx	0.6	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	16.4	xxxx	10.1	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	C	*	B	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			13.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

****

Note: Queue reported is the number of cars per lane.

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Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Morning Peak Hour

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

Intersection #7 Colodny Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[12.4]

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 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	33	0	17	45	198	0	0	148	10
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	34	0	18	47	206	0	0	154	10
Added Vol:	0	0	0	0	0	0	0	53	0	0	80	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	34	0	18	47	259	0	0	234	10
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:	0	0	0	34	0	18	47	259	0	0	234	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	34	0	18	47	259	0	0	234	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	592	592	239	244	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	472	422	805	1334	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	460	407	805	1334	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.07	0.00	0.02	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	538	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	12.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			12.4			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

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

Intersection #7 Colodny Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.5]

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 0	0 0	0	0 0 1!	0 0		1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	14	0	28	35	239	0	0	161	15
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	15	0	29	36	249	0	0	167	16
Added Vol:	0	0	0	0	0	0	0	98	0	0	86	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	15	0	29	36	347	0	0	253	16
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:	0	0	0	15	0	29	36	347	0	0	253	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	15	0	29	36	347	0	0	253	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	681	681	261	269	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	419	375	782	1306	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	410	365	782	1306	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.04	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	601	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Morning Peak Hour

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

Intersection #8 Chesebro Road (NS) / Driver Avenue (EW)

Cycle (sec): 0 Critical Vol./Cap.(X): 0.457
Loss Time (sec): 0 (Y+R=4.0 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:	1 0	0 1	0	0	0 1!	0 0	0	1 0	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	5	1	112	41	3	7	9	255	3	193	135	38
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	1	116	43	3	7	9	265	3	201	140	40
Added Vol:	0	18	35	0	26	0	0	0	0	54	1	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	19	151	43	29	7	9	265	3	255	141	41
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:	5	19	151	43	29	7	9	265	3	255	141	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	19	151	43	29	7	9	265	3	255	141	41
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
FinalVolume:	5	19	151	43	29	7	9	265	3	255	141	41
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:	1.00	0.11	0.89	0.54	0.37	0.09	0.03	0.97	1.00	1.00	0.78	0.22
Final Sat.:	486	64	512	268	183	46	20	580	673	576	499	143
Capacity Analysis Module:												
Vol/Sat:	0.01	0.30	0.30	0.16	0.16	0.16	0.46	0.46	0.00	0.44	0.28	0.28
Crit Moves:		****		****				****		****		
Delay/Veh:	9.7	10.7	10.7	10.8	10.8	10.8	13.1	13.1	7.8	13.3	10.2	10.2
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:	9.7	10.7	10.7	10.8	10.8	10.8	13.1	13.1	7.8	13.3	10.2	10.2
LOS by Move:	A	B	B	B	B	B	B	B	A	B	B	B
ApproachDel:		10.7			10.8			13.0			12.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.7			10.8			13.0			12.0	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.0	0.4	0.4	0.2	0.2	0.2	0.8	0.8	0.0	0.7	0.4	0.4

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

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

Intersection #8 Chesebro Road (NS) / Driver Avenue (EW)

Cycle (sec): 0 Critical Vol./Cap.(X): 0.805
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.4
Optimal Cycle: 0 Level Of Service: C

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:	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1	1 0	0 1	0
Volume Module:												
Base Vol:	11	5	252	27	6	9	11	177	12	112	387	50
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	11	5	262	28	6	9	11	184	12	116	402	52
Added Vol:	0	47	50	1	43	0	0	1	0	43	1	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	52	312	29	49	9	11	185	12	159	403	53
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:	11	52	312	29	49	9	11	185	12	159	403	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	52	312	29	49	9	11	185	12	159	403	53
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
FinalVolume:	11	52	312	29	49	9	11	185	12	159	403	53
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:	1.00	0.14	0.86	0.33	0.56	0.11	0.06	0.94	1.00	1.00	0.88	0.12
Final Sat.:	467	79	472	145	245	47	29	463	540	514	501	66
Capacity Analysis Module:												
Vol/Sat:	0.02	0.66	0.66	0.20	0.20	0.20	0.40	0.40	0.02	0.31	0.81	0.81
Crit Moves:		****			****			****			****	
Delay/Veh:	10.3	19.4	19.4	12.2	12.2	12.2	13.8	13.8	9.1	12.5	28.9	28.9
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:	10.3	19.4	19.4	12.2	12.2	12.2	13.8	13.8	9.1	12.5	28.9	28.9
LOS by Move:	B	C	C	B	B	B	B	B	A	B	D	D
ApproachDel:		19.2			12.2			13.6			24.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		19.2			12.2			13.6			24.7	
LOS by Appr:		C			B			B			C	
AllWayAvgQ:	0.0	1.6	1.6	0.2	0.2	0.2	0.6	0.6	0.0	0.4	3.1	3.1

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Morning Peak Hour

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

Intersection #9 Chesebro Road (NS) / SR-101 NB Ramps (EW)

Average Delay (sec/veh): 14.0 Worst Case Level Of Service: D[32.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 1	0	1	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	56 141	0		0 328	101		0 0	0		231	0	234
Growth Adj:	1.04 1.04	1.04		1.04 1.04	1.04		1.04 1.04	1.04		1.04 1.04	1.04	
Initial Bse:	58 147	0		0 341	105		0 0	0		240	0	243
Added Vol:	12 56	0		0 1	35		0 0	0		60	0	0
PasserByVol:	0 0	0		0 0	0		0 0	0		0	0	0
Initial Fut:	70 203	0		0 342	140		0 0	0		300	0	243
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:	70 203	0		0 342	140		0 0	0		300	0	243
Reduct Vol:	0 0	0		0 0	0		0 0	0		0	0	0
FinalVolume:	70 203	0		0 342	140		0 0	0		300	0	243
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		6.4 xxxx		6.2
FollowUpTim:	2.2 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		3.5 xxxx		3.3
Capacity Module:												
Cnflict Vol:	482 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		755 xxxx		203
Potent Cap.:	1091 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		379 xxxx		843
Move Cap.:	1091 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		360 xxxx		843
Volume/Cap:	0.06 xxxx	xxxx		xxxx xxxx	xxxx		xxxx xxxx	xxxx		0.83 xxxx		0.29
Level Of Service Module:												
2Way95thQ:	0.2 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		7.5 xxxx		1.2
Control Del:	8.5 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		49.5 xxxx		11.0
LOS by Move:	A	*		*	*		*	*		E	*	B
Movement:	LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT	
Shared Cap.:	xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx	
SharedQueue:	0.2 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx	
Shrd ConDel:	8.5 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx	
Shared LOS:	A	*		*	*		*	*		*	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			32.3		
ApproachLOS:	*			*			*			D		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis Without Project
Evening Peak Hour

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

Intersection #9 Chesebro Road (NS) / SR-101 NB Ramps (EW)

Average Delay (sec/veh): 116.4 Worst Case Level Of Service: F[381.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 1	0	1	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	264 255	0	0	378	126		0	0	0	220	0	268
Growth Adj:	1.04 1.04	1.04	1.04	1.04	1.04		1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	275 265	0	0	393	131		0	0	0	229	0	279
Added Vol:	64 44	0	0	2	50		0	0	0	16	0	0
PasserByVol:	0 0	0	0	0	0		0	0	0	0	0	0
Initial Fut:	339 309	0	0	395	181		0	0	0	245	0	279
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:	339 309	0	0	395	181		0	0	0	245	0	279
Reduct Vol:	0 0	0	0	0	0		0	0	0	0	0	0
FinalVolume:	339 309	0	0	395	181		0	0	0	245	0	279
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	2.2 xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	576 xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	1472	xxxx	309
Potent Cap.:	1007 xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	141	xxxx	736
Move Cap.:	1007 xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	96	xxxx	736
Volume/Cap:	0.34 xxxx	xxxx	xxxx	xxxx	xxxx		xxxx	xxxx	xxxx	2.56	xxxx	0.38
Level Of Service Module:												
2Way95thQ:	1.5 xxxx	xxxxx	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	22.7	xxxx	1.8
Control Del:	10.4 xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	801.9	xxxx	12.8
LOS by Move:	B	*	*	*	*		*	*	*	F	*	B
Movement:	LT - LTR	-	RT	LT - LTR	-	RT	LT - LTR	-	RT	LT - LTR	-	RT
Shared Cap.:	xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx	
SharedQueue:	1.5 xxxx	xxxxx	xxxxx	xxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx	
Shrd ConDel:	10.4 xxxx	xxxxx	xxxxx	xxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx	
Shared LOS:	B	*	*	*	*		*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			381.8		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Cumulative With Project

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Kanan Road (NS) / SR-101 NB Ramps/Canwood Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.891
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	0 1	2 0	1	1 0	0 0	1	1 1	0 0	2
Volume Module:												
Base Vol:	38	732	163	0	1605	486	48	0	100	540	34	466
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	40	761	170	0	1669	505	50	0	104	562	35	485
Added Vol:	0	162	204	35	143	0	0	0	0	415	0	35
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	923	374	35	1812	505	50	0	104	977	35	520
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:	40	923	374	35	1812	505	50	0	104	977	35	520
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	923	374	35	1812	505	50	0	104	977	35	520
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
FinalVolume:	40	923	374	35	1812	505	50	0	104	977	35	520
OvlAdjVol:			0									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	1.00	2.00	1.00	0.06	2.94	1.00	1.00	0.00	1.00	1.93	0.07	2.00
Final Sat.:	1600	3200	1600	91	4709	1600	1600	0	1600	3088	112	3200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.29	0.23	0.02	0.38	0.32	0.03	0.00	0.07	0.32	0.32	0.16
OvlAdjV/S:			0.00									
Crit Moves:	****				****				****	****		

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Kanan Road (NS) / SR-101 NB Ramps/Canwood Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.960
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	0 1	2 0	1	1 0	0 0	1	1 1	0 0	2
Volume Module:												
Base Vol:	7	1215	458	0	981	518	53	0	178	263	63	743
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	7	1264	476	0	1020	539	55	0	185	274	66	773
Added Vol:	0	267	734	50	226	0	0	0	0	511	0	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	1531	1210	50	1246	539	55	0	185	785	66	782
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:	7	1531	1210	50	1246	539	55	0	185	785	66	782
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	1531	1210	50	1246	539	55	0	185	785	66	782
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
FinalVolume:	7	1531	1210	50	1246	539	55	0	185	785	66	782
OvlAdjVol:			785									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	1.00	2.00	1.00	0.12	2.88	1.00	1.00	0.00	1.00	1.85	0.15	2.00
Final Sat.:	1600	3200	1600	185	4615	1600	1600	0	1600	2953	247	3200
Capacity Analysis Module:												
Vol/Sat:	0.00	0.48	0.76	0.03	0.27	0.34	0.03	0.00	0.12	0.27	0.27	0.24
OvlAdjV/S:			0.49									
Crit Moves:		****							****		****	

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

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Intersection #2 Kanan Road (NS) / SR-101 SB Ramps/Roadside Drive (EW)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.969
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	2	0 1	1 0	2	0 1	1 0	1!	0 1	1 0	0	0 1
Volume Module:												
Base Vol:	0	493	30	124	1071	950	345	133	253	21	0	94
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	513	31	129	1114	988	359	138	263	22	0	98
Added Vol:	0	469	0	0	542	7	94	0	439	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	982	31	129	1656	995	453	138	702	22	0	98
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:	0	982	31	129	1656	995	453	138	702	22	0	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	982	31	129	1656	995	453	138	702	22	0	98
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
FinalVolume:	0	982	31	129	1656	995	453	138	702	22	0	98
OvlAdjVol:						647						
Saturation Flow Module:							1.3	0.4	1.3			
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	0.00	2.00	1.00	1.00	2.00	1.00	~~1.05~~	~~0.32~~	~~1.63~~	1.00	0.00	1.00
Final Sat.:	0	3200	1600	1600	3200	1600	2080	640	2080	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.02	0.08	0.52	0.62	0.22	0.22	0.34	0.01	0.00	0.06
OvlAdjV/S:						0.40						
Crit Moves:				****					****	****		

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Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Kanan Road (NS) / SR-101 SB Ramps/Roadside Drive (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.599
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	2 0	1	1 0	2 0	1	1 0	1! 0	1	1 0	0 0	1
Volume Module:												
Base Vol:	0	970	23	179	680	521	369	84	572	19	0	282
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	1009	24	186	707	542	384	87	595	20	0	293
Added Vol:	0	1635	0	0	664	32	60	0	536	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2644	24	186	1371	574	444	87	1131	20	0	293
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:	0	2644	24	186	1371	574	444	87	1131	20	0	293
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2644	24	186	1371	574	444	87	1131	20	0	293
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
FinalVolume:	0	2644	24	186	1371	574	444	87	1131	20	0	293
OvlAdjVol:						232						
Saturation Flow Module:								1.3	0.4	1.3		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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:	0.00	2.00	1.00	1.00	2.00	1.00	~~1.00~~	~~0.01~~	~~1.99~~	1.00	0.00	1.00
Final Sat.:	0	3200	1600	1600	3200	1600	2080	640	2080	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.83	0.01	0.12	0.43	0.36	0.21	0.14	0.54	0.01	0.00	0.18
OvlAdjV/S:						0.15						
Crit Moves:		****		****					****	****		

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

Intersection #3 Clareton Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[14.3]

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 0	0 0	0	0 0 1!	0 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	55	0	39	128	271	0	0	65	83
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	57	0	41	133	282	0	0	68	86
Added Vol:	0	0	0	1	0	0	0	27	0	0	31	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	58	0	41	133	309	0	0	99	87
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:	0	0	0	58	0	41	133	309	0	0	99	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	58	0	41	133	309	0	0	99	87
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	717	717	142	186	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	399	358	911	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	368	321	911	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.16	0.00	0.04	0.10	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	487	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	14.3	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			14.3			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

Intersection #3 Clareton Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 9.4 Worst Case Level Of Service: C[24.7]

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 0	0 0	0	0 0 1!	0 0		0 1	0 0 0		0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	104	0	228	151	135	0	0	184	92
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	108	0	237	157	140	0	0	191	96
Added Vol:	0	0	0	1	0	0	0	60	0	0	58	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	109	0	237	157	200	0	0	249	98
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:	0	0	0	109	0	237	157	200	0	0	249	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	109	0	237	157	200	0	0	249	98
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	813	813	298	347	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	351	315	746	1223	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	313	271	746	1223	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.35	0.00	0.32	0.13	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	519	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	4.9	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	24.7	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			24.7			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

****

Intersection #4 Project Driveway (NS) / Canwood Street (EW)

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Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.2]

****

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 0	0 0		0 0 0	0 1		0 0	1 0 0		0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	326	0	0	148	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	0	0	339	0	0	154	0
Added Vol:	0	0	0	0	0	6	0	28	0	0	26	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	6	0	367	0	0	180	7
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:	0	0	0	0	0	6	0	367	0	0	180	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	6	0	367	0	0	180	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	183	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	864	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	864	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	*	*	*	*	*	*
Movement:	LT - LTR		RT	LT - LTR		RT	LT - LTR		RT	LT - LTR		RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

****

Note: Queue reported is the number of cars per lane.

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Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

Intersection #4 Project Driveway (NS) / Canwood Street (EW)

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[10.2]

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 0	0 0		0 0 0	0 1		0 0 1	0 0		0 0 0	1 0	
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	239	0	0	276	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	0	0	249	0	0	287	0
Added Vol:	0	0	0	0	0	17	0	61	0	0	43	10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	17	0	310	0	0	330	10
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:	0	0	0	0	0	17	0	310	0	0	330	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	17	0	310	0	0	330	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	335	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	712	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	712	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			10.2			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

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Intersection #5 Derry Avenue (NS) / Project Driveway (EW)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 0	1 0	0	0 1!	0 0	0	0 0	0 0 0
Volume Module:												
Base Vol:	0	180	0	0	57	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	187	0	0	59	0	0	0	0	0	0	0
Added Vol:	9	0	0	0	0	1	1	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	187	0	0	59	1	1	0	4	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:	9	187	0	0	59	1	1	0	4	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	187	0	0	59	1	1	0	4	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	60	xxxx	xxxxx	xxxx	xxxx	xxxxx	265	265	60	xxxx	xxxx	xxxxx
Potent Cap.:	1556	xxxx	xxxxx	xxxx	xxxx	xxxxx	728	644	1011	xxxx	xxxx	xxxxx
Move Cap.:	1556	xxxx	xxxxx	xxxx	xxxx	xxxxx	725	640	1011	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	937	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

****

Note: Queue reported is the number of cars per lane.

****

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

****

Intersection #5 Derry Avenue (NS) / Project Driveway (EW)

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[10.0]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	165	0	0	252	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	172	0	0	262	0	0	0	0	0	0	0
Added Vol:	14	0	0	0	0	1	2	0	12	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	172	0	0	262	1	2	0	12	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:	14	172	0	0	262	1	2	0	12	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	172	0	0	262	1	2	0	12	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	263	xxxx	xxxxx	xxxx	xxxx	xxxxx	462	462	263	xxxx	xxxx	xxxxx
Potent Cap.:	1313	xxxx	xxxxx	xxxx	xxxx	xxxxx	561	500	781	xxxx	xxxx	xxxxx
Move Cap.:	1313	xxxx	xxxxx	xxxx	xxxx	xxxxx	557	494	781	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.02	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	738	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.0			xxxxxx		
ApproachLOS:	*			*			A			*		

****

Note: Queue reported is the number of cars per lane.

****

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

Intersection #6 Derry Avenue (NS) / Canwood Street (EW)

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[12.2]

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 0 0 0			1 0 0 0 1			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	28	0	29	94	231	0	0	109	86
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	29	0	30	98	240	0	0	113	89
Added Vol:	0	0	0	4	0	0	9	18	0	0	33	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	33	0	30	107	258	0	0	146	89
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:	0	0	0	33	0	30	107	258	0	0	146	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	33	0	30	107	258	0	0	146	89
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	663	xxxx	191	236	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	429	xxxx	856	1343	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	403	xxxx	856	1343	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.08	xxxx	0.04	0.08	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.3	xxxx	0.1	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	14.7	xxxx	9.4	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	A	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			12.2			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

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Intersection #6 Derry Avenue (NS) / Canwood Street (EW)

****

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: B[14.1]

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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 0 0 0			1 0 0 0 1			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	120	0	132	102	136	0	0	120	63
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	125	0	137	106	141	0	0	125	66
Added Vol:	0	0	0	12	0	0	14	47	0	0	53	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	137	0	137	120	188	0	0	178	66
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:	0	0	0	137	0	137	120	188	0	0	178	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	137	0	137	120	188	0	0	178	66
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	639	xxxx	211	243	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	443	xxxx	835	1335	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	413	xxxx	835	1335	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.33	xxxx	0.16	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	1.4	xxxx	0.6	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	18.0	xxxx	10.2	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	C	*	B	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			14.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Note: Queue reported is the number of cars per lane.

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Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

****

Intersection #7 Colodny Drive (NS) / Canwood Street (EW)

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Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[12.5]

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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 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	33	0	17	45	198	0	0	148	10
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	34	0	18	47	206	0	0	154	10
Added Vol:	0	0	0	0	0	1	1	57	0	0	86	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	34	0	19	48	263	0	0	240	10
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:	0	0	0	34	0	19	48	263	0	0	240	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	34	0	19	48	263	0	0	240	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	604	604	245	250	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	465	415	799	1327	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	452	400	799	1327	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.08	0.00	0.02	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	534	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	12.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			12.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Note: Queue reported is the number of cars per lane.

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Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

Intersection #7 Colodny Drive (NS) / Canwood Street (EW)

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.6]

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 0	0 0	0	0 0 1!	0 0		1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	14	0	28	35	239	0	0	161	15
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	15	0	29	36	249	0	0	167	16
Added Vol:	0	0	0	0	0	1	2	108	0	0	95	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	15	0	30	38	357	0	0	262	16
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:	0	0	0	15	0	30	38	357	0	0	262	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	15	0	30	38	357	0	0	262	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	704	704	270	278	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	407	364	773	1296	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	397	353	773	1296	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.04	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	591	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.6			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

Intersection #8 Chesebro Road (NS) / Driver Avenue (EW)

Cycle (sec): 0 Critical Vol./Cap.(X): 0.459
Loss Time (sec): 0 (Y+R=4.0 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:	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1	1 0	0 1	0
Volume Module:												
Base Vol:	5	1	112	41	3	7	9	255	3	193	135	38
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	1	116	43	3	7	9	265	3	201	140	40
Added Vol:	0	18	39	0	26	0	0	0	0	60	1	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	19	155	43	29	7	9	265	3	261	141	41
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:	5	19	155	43	29	7	9	265	3	261	141	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	19	155	43	29	7	9	265	3	261	141	41
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
FinalVolume:	5	19	155	43	29	7	9	265	3	261	141	41
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:	1.00	0.11	0.89	0.54	0.37	0.09	0.03	0.97	1.00	1.00	0.78	0.22
Final Sat.:	485	63	512	267	182	46	20	577	670	575	497	143
Capacity Analysis Module:												
Vol/Sat:	0.01	0.30	0.30	0.16	0.16	0.16	0.46	0.46	0.00	0.45	0.28	0.28
Crit Moves:			****			****		****		****		
Delay/Veh:	9.7	10.8	10.8	10.8	10.8	10.8	13.1	13.1	7.8	13.6	10.2	10.2
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:	9.7	10.8	10.8	10.8	10.8	10.8	13.1	13.1	7.8	13.6	10.2	10.2
LOS by Move:	A	B	B	B	B	B	B	B	A	B	B	B
ApproachDel:		10.8			10.8			13.1			12.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.8			10.8			13.1			12.2	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.0	0.4	0.4	0.2	0.2	0.2	0.8	0.8	0.0	0.8	0.4	0.4

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

Intersection #8 Chesebro Road (NS) / Driver Avenue (EW)

Cycle (sec): 0 Critical Vol./Cap.(X): 0.811
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.0
Optimal Cycle: 0 Level Of Service: C

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:	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1	1 0	0 1	0
Volume Module:												
Base Vol:	11	5	252	27	6	9	11	177	12	112	387	50
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	11	5	262	28	6	9	11	184	12	116	402	52
Added Vol:	0	47	61	1	43	0	0	1	0	52	1	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	52	323	29	49	9	11	185	12	168	403	53
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:	11	52	323	29	49	9	11	185	12	168	403	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	52	323	29	49	9	11	185	12	168	403	53
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
FinalVolume:	11	52	323	29	49	9	11	185	12	168	403	53
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:	1.00	0.14	0.86	0.33	0.56	0.11	0.06	0.94	1.00	1.00	0.88	0.12
Final Sat.:	466	77	474	144	244	46	28	459	535	511	498	65
Capacity Analysis Module:												
Vol/Sat:	0.02	0.68	0.68	0.20	0.20	0.20	0.40	0.40	0.02	0.33	0.81	0.81
Crit Moves:		****			****			****			****	
Delay/Veh:	10.3	20.5	20.5	12.3	12.3	12.3	14.0	14.0	9.1	12.8	29.7	29.7
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:	10.3	20.5	20.5	12.3	12.3	12.3	14.0	14.0	9.1	12.8	29.7	29.7
LOS by Move:	B	C	C	B	B	B	B	B	A	B	D	D
ApproachDel:		20.2			12.3			13.7			25.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		20.2			12.3			13.7			25.1	
LOS by Appr:		C			B			B			D	
AllWayAvgQ:	0.0	1.7	1.7	0.2	0.2	0.2	0.6	0.6	0.0	0.5	3.2	3.2

Note: Queue reported is the number of cars per lane.

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Morning Peak Hour

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

****

Intersection #9 Chesebro Road (NS) / SR-101 NB Ramps (EW)

****

Average Delay (sec/veh): 14.1 Worst Case Level Of Service: D[32.6]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 1	0	1	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	56 141	0		0 328	101		0 0	0		231	0	234
Growth Adj:	1.04 1.04	1.04		1.04 1.04	1.04		1.04 1.04	1.04		1.04 1.04	1.04	
Initial Bse:	58 147	0		0 341	105		0 0	0		240	0	243
Added Vol:	12 57	0		0 4	35		0 0	0		60	0	5
PasserByVol:	0 0	0		0 0	0		0 0	0		0	0	0
Initial Fut:	70 204	0		0 345	140		0 0	0		300	0	248
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:	70 204	0		0 345	140		0 0	0		300	0	248
Reduct Vol:	0 0	0		0 0	0		0 0	0		0	0	0
FinalVolume:	70 204	0		0 345	140		0 0	0		300	0	248
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		6.4 xxxx		6.2
FollowUpTim:	2.2 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		3.5 xxxx		3.3
Capacity Module:												
Cnflict Vol:	485 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		759 xxxx		204
Potent Cap.:	1088 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		377 xxxx		842
Move Cap.:	1088 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		358 xxxx		842
Volume/Cap:	0.06 xxxx	xxxx		xxxx xxxx	xxxx		xxxx xxxx	xxxx		0.84 xxxx		0.29
Level Of Service Module:												
2Way95thQ:	0.2 xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		7.6 xxxx		1.2
Control Del:	8.5 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		50.4 xxxx		11.1
LOS by Move:	A	*		*	*		*	*		F	*	B
Movement:	LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT	
Shared Cap.:	xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx	xxxxx		xxxx xxxx		xxxxx
SharedQueue:	0.2 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx		xxxxx
Shrd ConDel:	8.5 xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx	xxxxx		xxxxx xxxx		xxxxx
Shared LOS:	A	*		*	*		*	*		*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			32.6		
ApproachLOS:	*			*			*			D		

****

Note: Queue reported is the number of cars per lane.

****

Derry Avenue / Canwood Street Retail (Revised)
Cumulative Analysis With Project
Evening Peak Hour

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

Intersection #9 Chesebro Road (NS) / SR-101 NB Ramps (EW)

Average Delay (sec/veh): 119.0 Worst Case Level Of Service: F[389.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0	0	0 1	0	0	0	0 0	1	0	0 0 1
Volume Module:												
Base Vol:	264 255	0		0	378	126	0	0	0	220	0	268
Growth Adj:	1.04 1.04	1.04		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	275 265	0		0	393	131	0	0	0	229	0	279
Added Vol:	64 46	0		0	13	50	0	0	0	16	0	8
PasserByVol:	0 0	0		0	0	0	0	0	0	0	0	0
Initial Fut:	339 311	0		0	406	181	0	0	0	245	0	287
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:	339 311	0		0	406	181	0	0	0	245	0	287
Reduct Vol:	0 0	0		0	0	0	0	0	0	0	0	0
FinalVolume:	339 311	0		0	406	181	0	0	0	245	0	287
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	2.2 xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	587 xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1485	xxxx	311
Potent Cap.:	998 xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	139	xxxx	734
Move Cap.:	998 xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	93	xxxx	734
Volume/Cap:	0.34 xxxx	xxxx		xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	2.62	xxxx	0.39
Level Of Service Module:												
2Way95thQ:	1.5 xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	22.9	xxxx	1.9
Control Del:	10.4 xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	830.1	xxxx	13.0
LOS by Move:	B	*		*	*	*	*	*	*	F	*	B
Movement:	LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT	
Shared Cap.:	xxxx xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	1.5 xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	10.4 xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*		*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			389.3		
ApproachLOS:	*			*			*			F		

Note: Queue reported is the number of cars per lane.

Appendix C

Geotechnical Study

GEOTECHNICAL UPDATE
AND EVALUATION OF REVISED SITE DEVELOPMENT
AGOURA BUSINESS CENTER, 5301 DERRY AVENUE
CITY OF AGOURA HILLS, CALIFORNIA

FOR

DALE POE REAL ESTATE GROUP
5331 DERRY AVENUE, SUITE Q
AGOURA HILLS, CALIFORNIA 91301
ATTENTION: MR. RICK OTA, JR.

Work Order: 1037-3-0-100
May 9, 2007

GORIAN & ASSOCIATES, INC.

TABLE OF CONTENTS

ATTACHMENTS: References

Logs of Subsurface Data (Appendix A)
Laboratory Testing (Appendix B)
Geotechnical Map (Plate 1)
Vicinity Map (Figure 1)
Regional Geologic Map (Figure 2)

GORIAN & ASSOCIATES, INC.

Applied Earth Sciences
Geotechnical
Engineers
and Geologists

3595 Old Conejo Road
Thousand Oaks
California 91320-2122
805 375-9262
818 889-2137
805 375-9263 fax

May 9, 2007

Dale Poe Real Estate Group
5331 Derry Avenue, Suite Q
Agoura Hills, California 91301

Work Order 1037-3-0-100

Attention: Mr. Richard M. Ota, Jr.

Subject: **Geotechnical Update and Evaluation of Revised Site Development, 5301 Derry Avenue, Northwest Corner of Canwood Street and Derry Avenue, Agoura Business Center, City of Agoura Hills, California.**

Mr. Ota:

The following report contains the results of our geotechnical update and evaluation for the site located at 5301 Derry Avenue in the City of Agoura Hills, California. The geotechnical evaluation was based on a recent site visit, discussions with you regarding the proposed development, a review of a geotechnical report for the site prepared by Geotechnologies, Inc. (GI), and a review of the preliminary concept plan prepared by Pacific Coast Civil, Inc. at a scale of 1"=20', dated 3/14/2007. This plan serves as the base for our attached Geotechnical Map (Plate 1).

PROPOSED DEVELOPMENT

Based on a review of the current development plans, the proposed development includes construction of three (3) buildings with paved parking areas surrounding the buildings on a regraded building pad. The new building pad will be constructed by excavating from an upper pad and placing fill on a lower pad area. A proposed soil-nail retaining wall approximately 17 feet high will be constructed along the north side of the proposed pad area. Fill slopes, constructed at a slope gradient of 2(h):1(v), will be constructed along the south side of the proposed pad to a maximum height of approximately 15 feet. We anticipate that the buildings will be constructed using wood or metal framing or tilt-up concrete construction with conventional foundations and slabs-on-grade. Conventional cut and fill grading and removal and recompaction of surficial soils will be necessary to construct the building pad and provide access and suitable site drainage.

SCOPE OF SERVICES

Gorian and Associates, Inc., conducted the geotechnical update evaluation in accordance with our proposal (Proposal Number 4605-10, dated June 30, 2006). All phases of the evaluation were

conducted by or under the direct supervision of a State licensed geotechnical engineer and a certified engineering geologist. This evaluation included the following:

1. **Archival Review**

   Review of pertinent reference material in our files and geotechnical reports supplied to us by the client.

2. **Field Investigation**

   Four (4) backhoe trenches were excavated to depths ranging from 7 feet to 13 feet below the existing ground surface to evaluate the subsurface soil and groundwater conditions. The trenches were excavated by a subcontractor supplied and operated backhoe. Selected relatively undisturbed drive and bulk soil samples were obtained from selected excavations for laboratory testing. The trenches were logged by a geologist from our office.

   Upon completion of logging, the trenches were backfilled by the backhoe. However, the backfill could settle through time. The site owner or owner's representative should periodically check the site and backfill any depressions should they develop.

3. **Laboratory Testing**

   A program of laboratory testing was performed to evaluate the geotechnical properties of selected bedrock and soil samples obtained during the subsurface exploration. The testing was performed to determine the expansion, consolidation potential, shear strength, and the in-situ moisture content and dry density. In addition, chemical and corrosion testing of one (1) near surface soil sample was performed under subcontract

4. **Geotechnical Engineering Analysis and Report Preparation**

   The results of the field and laboratory programs were used in engineering analyses to develop geotechnical recommendations for site development and construction. The results of our findings are provided in this formal report that includes:

   a. A description of soil, and groundwater conditions, as encountered during the subsurface exploration, including Logs of Subsurface Data (Appendix A) and a Geotechnical Map (Plate 1).

   b. A description of the laboratory testing program, including tests results (Appendix B).

   c. Discussion and additional recommendations regarding:

      i) Site preparation and grading; including clearing, grubbing, the need for remedial earthwork, fill placement and compaction requirements for the support of structures, and temporary and permanent excavations;

      ii) Foundation design and construction, including a preliminary settlement analysis and discussion of expansive soils;

      iii) Lateral earth pressures for the design of conventional retaining walls, including backfill, compaction and subdrainage, and their requirements;

      iv) Seismic setting of the site and seismic design criteria.

BACKGROUND

Based on a review of archival materials, the Agoura Business Center development was graded with substantial engineered fills placed under the observations and testing of Tierra Tech Laboratory, Inc.

(Tierra Tech, 1979). Grading operations on the site included oversized rock fills with a minimum of 10 feet of cover and cut slopes aligned at 1½(h):1(v) exposing both volcanic bedrock and sedimentary bedrock. Geologic conditions were reported to be favorable with bedding plane orientations inclined towards the north.

The site was investigated by Geotechnologies, Inc. in 2004 for the construction of industrial structures (GI, 2004). Their investigation included the drilling, sampling and logging of 4 (four) 8-inch diameter hollow stem auger borings extended to depths ranging from 35 (B-2, B-3 and B-4) to 50 (B-1) feet below the existing ground surface. Based on a review of their boring logs the engineered fill depths encountered ranged from 30 feet (B-1) to 25 feet (B-2, B-3 and B-4) below the graded pad surface. Groundwater was encountered as seepage below 30 feet in borings B-1 and B-3). Subsequent laboratory testing of the engineered fill indicated that the fill materials were compacted to a minimum of 90% of the maximum density and therefore are considered suitable for structural support.

SITE CONDITIONS

SITE DESCRIPTION

The site consists of a graded upper and lower pad located in the southwestern portion of the Agoura Business Center, located at the northwest corner of Canwood Street and Derry Avenue, in the City of Agoura Hills, California. As previously described, the site was graded in 1979 resulting in a nearly level rectangular shaped elevated pad (upper) at the northwest corner of Derry Avenue and Canwood Street in the City of Agoura Hills (see Vicinity Map, Figure 1). This graded upper pad occupies 2/3 of the site and is situated at approximate elevation 902.0. The graded pad is located at the southwestern corner of the Agoura Business Center which consists of several commercial buildings with paved parking and drive areas located north of the subject site on the east and west sides of Derry Avenue. Descending slopes bound the subject upper pad on the east, west and southern sides with slopes aligned at gradients of 1½(h):1(v) on the order of 20 to 26 feet in height. The slopes are covered with a sparse growth of seasonal weeds and grasses and scattered pine trees and appear to be performing adequately.

The southernmost portion of the site was intended to be used in the construction of Canwood Street, however Canwood Street was realigned leaving this nearly level triangular shaped lower pad at approximate elevation 875.0 at the toe of the ascending south facing fill slope. This lower pad area has numerous buried utilities including, sewer, water, reclaimed water, storm drain, irrigation lines, SBC telephone, and SCE electricity. The surface of the lower pad is covered with a sparse growth of seasonal weeds and grasses. We understand that the utilities will be removed and relocated prior to additional on-site grading operations.

SITE GEOLOGY

The site is underlain at depth by Miocene-age sedimentary bedrock of the Topanga Formation mantled with engineered fill (Tierra Tech, 1979) and Quaternary-age alluvium (See Regional Geologic Map, Figure 2). Bedrock was not encountered during our recent subsurface exploration program and therefore will not be described herein, however descriptions of the encountered earth units are presented below and on the Logs of Subsurface Data (Appendix A).

Engineered/Artificial Fill

Previously engineered fill on the order of 25 feet in thickness underlies the upper pad with observations and testing provided by Tierra Tech in 1979. These fill soils were evaluated by GI in 2004 and we excavated trench T-4 in these engineered fills to also evaluate these soils. Our trench T-4 was situated

entirely in these engineered fills which extended a minimum of 7 feet below the existing pad grade. As encountered in our exploratory trench (T-4) the engineered fill generally consisted of yellowish brown silty clay with common siltstone and claystone fragments in a moist and very stiff condition. The fill soils were observed to be well blended and homogeneous. The upper 18 inches of the engineered fill was noted to be weathered with minor roots.

At this time there are no records of certification of the artificial fill and trench backfills located on the lower pad. The fill soils encountered on the lower pad are generally variable and mottled. Artificial fill was encountered to a depth of 6 feet below the existing ground surface in trench T-2 and generally consists of yellowish brown sandy silty clay to brown silty clay in a damp to very moist and very stiff condition. Trenches T-1 and T-3 encountered similar soils locally mottled with asphaltic concrete and layers of aggregate base, however these excavations were terminated when fill sand associated with buried utilities was encountered.

Alluvium

Quaternary-age alluvium was encountered under the artificial fill situated on the lower pad. As encountered in T-2 the alluvium contact was observed at 6 feet below the ground surface. These native soils generally consist of grayish brown silty clay in a very moist and very stiff condition. The moisture content appears to increase with depth and locally calcium carbonate veinlets were observed.

GROUNDWATER

No groundwater was encountered to the maximum depth explored (13 feet, T-2). However, groundwater seepage was encountered in our Trench T-3 at 6 feet emanating from fill sand around an existing utility. Additionally, Geotechnologies encountered seepage in their deep borings at depths below 30 feet (approximate elevation 872) in borings B-1 and B-3.

LANDSLIDES

No landslides are present within the immediate area that will affect the proposed development nor are any shown on regional geologic maps.

FAULTING AND SEISMICITY

Active or potentially active faults identified by the State Geologist are not known to be present near the subject property (Hart, et al; 1999). The site, however, is situated in the seismically active Transverse Ranges Geomorphic Province, and like any other site in the Agoura area, will experience strong ground motion from earthquakes generated on regional faults as evidenced from the magnitude 6.7 1994 Northridge earthquake (Barrows, et al., 1994). Ground shaking parameters and distances to regional faults are presented in the referenced GI report.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

Geotechnical recommendations concerning the construction of the proposed commercial buildings indicated on the reviewed plans are presented below. The recommendations should be reviewed with respect to specific development plans and any changes in the proposed development or site conditions, should they occur.

Grading for the proposed development will consist of clearing existing vegetation, removal and recompaction of the upper fill soils, removal of existing utilities in the lower pad area and backfill, and conventional cut and fill grading to construct a larger pad at approximately elevation 885. Recommendations for this grading are addressed in the Site Preparation and Grading Section of this report.

Foundations for the proposed structures should be founded in certified compacted fill. The upper fill soils should be removed and recompacted as described in the Site Preparation and Grading section to provide the certified compacted fill.

A soil-nail retaining wall approximately 17 feet in height will be constructed along the north side of the proposed building pad. The wall will be evaluated and designed by others. When the plans are prepared, they should be provided to this office for review. Additional analysis, including a global stability analysis will be necessary at that time.

SEISMIC DESIGN PARAMETERS

As previously discussed, active faults as identified by the State are not present on-site nor is the site within an Alquist-Priolo Earthquake Fault Zone (formerly Special Studies Zone). Nevertheless, the site is within a seismically active region prone to occasional damaging earthquakes. Therefore, as a minimum the structure should be designed per the current City of Agoura Hills and California Building Code (CBC). The purpose of the CBC earthquake provisions is primarily to safeguard against major structural failures and loss of life, not to limit damage or maintain function. Therefore, the values provided in the CBC should be considered minimum design values. Cracking of walls and possible structural damage should be anticipated in a significant seismic event.

CBC – CHAPTER 16 TABLE NO.	SEISMIC PARAMETER	VALUE PER 2001 CALIFORNIA BUILDING CODE
16 - I	Seismic Zone Factor, Z	0.40
16 - J	Soil Profile Type	S_c
16 - Q	Seismic Coefficient, C_a	$0.40N_a$
16 - R	Seismic Coefficient, C_v	$0.56N_v$
16 - S	Near-Source Acceleration Factor, N_a	1.0
16 - T	Near-Source Velocity Factor, N_v	1.1
16 – U (Map L-32)	Seismic Source Type (fault, distance)	B (Malibu Coast Fault, ~8 km)

SOIL CORROSION

A sample of the upper soils was obtained during the field investigation for soil chemistry analyses. Atlantic Consultants performed the soil chemistry analyses and provided the Soil Chemistry Analysis report presented in Appendix B. The soil samples tested were found to be corrosive to copper piping, very corrosive to metals, and severely corrosive to concrete due to sulfate exposure. The corrosion classes and requirements to mitigate the effects of concrete exposure to sulfate and chlorides are shown in the following UBC Table 19-A-4. Where required, recommendations to protect steel and copper piping in contact with corrosive soils should be provided by a corrosion engineer such as Atlantic Consultants.

TABLE 19-A-4 REQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS

SULFATE EXPOSURE	WATER-SOLUBLE SULFATE (SO4) IN SOIL, PERCENTAGE BY WEIGHT	SULFATE (SO4) IN WATER, ppm	CEMENT TYPE	MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO, BY WEIGHT, NORMAL-WEIGHT AGGREGATE CONCRETE 1	MINIMUM f'c, NORMAL-WEIGHT AND LIGHTWEIGHT AGGREGATE CONCRETE, psi x 0.00688 for MPa
Negligible	0.00-0.10	0-150	-	-	-
Moderate[2]	0.10-0.20	150-1,500	II, IP(MS), IS (MS)	0.50	4,000
Severe	0.20-2.00	1,500-10,000	V	0.45	4,500
Very severe	Over 2.00	Over 10,000	V plus pozzolan[3]	0.45	4,500

[1]A lower water-cementitious materials ratio or higher strength may be required for low permeability or for protection against corrosion of embedded items or freezing and thawing (Table 19-A-2).
[2]Seawater.
[3]Pozzolan that bas been determined by test or service record to improve sulfate resistance when used in concrete containing Type V cement.

FILL AND SURFICIAL SOIL DEPOSITS

Based on our observations and laboratory testing of the fill soils, the existing fill is well compact and based on the GI data (Goetechnologies 2004), the relative compaction of the existing fill exceeds 90 percent of the maximum density. Due to weathering of the upper 18 inches of fill in the upper pad area and significant variations in the fills on the lower pad area due to the existence of underground utilities, we recommend removal and recompaction of the fills in the lower pad area and undercutting of the fill in the lower pad area to provide a uniform fill cap for support of the proposed site improvements. Removals should be made in accordance with the Soil Removals section.

SITE PREPARATION AND GRADING

General

The existing pad areas (both upper and lower) are underlain by engineered fill soils and alluvium and bedrock at depth. The upper fill soils should be removed and recompacted and transition areas undercut and recompacted according to the recommendations in the following section to provide a more uniform supporting fill cap. All aspects of grading including site preparation and fill placement should be in accordance with the City of Agoura Hills standards. Recommendations concerning site preparation and grading follow.

Vegetation/Debris Removal

Prior to any construction, major vegetation, trash and debris should be removed from all areas of construction. Minor vegetation may be blended with the native soils during processing.

Soil Removals

In the lower pad area, existing utility lines should be removed down to competent fill or native soils. We anticipate that the depth of this removal will be as great as 10 feet below existing grade. In the upper pad and slope areas, weathered soils should be removed to expose competent native or previously compacted fill soils. We anticipate that removals of 18 inches and 36 inches below existing grade will be necessary in pad and slope areas, respectively. All or portions of the proposed buildings will be located in transition areas. Additional removals will be necessary as described in the Undercutting and Transition Pads sections. A rock disposal area was previously identified in the upper pad area (Tierra Tech 1979). Proposed excavation in the upper pad area may expose this rock disposal area or reduce

the cover to less than 10 feet. The rock disposal area should be located and if the cover is reduced to less than 10 feet, the area should be removed to competent native soils, all rock completely removed and disposed of off site and backfilled with suitable soils.

The existing upper pad area will be excavated on the order of 15 to 18 feet and will likely expose previously compacted fill soils. In proposed parking and drive areas, hardscape areas and areas to receive fill in the upper pad area, we recommend the exposed subgrade be evaluated during grading and additional removals be performed as necessary.

The bottom of the removal area must be observed by the geotechnical consultant prior to placing fill. Deeper removals or additional in-place soil processing may be necessary subsequent to the removal of existing utilities in the lower pad area.

Undercutting

Where transition (i.e., cut/fill) pad areas result from proposed grading, any cut areas should be overexcavated (undercut) and capped with engineered compacted fill. In building pad areas, the existing fill areas should be undercut a minimum five (5) feet below proposed pad grade or one-third of the maximum fill thickness, whichever is deeper. The undercut should be performed within the building area and 10 feet beyond. The excavated soil may be reused as fill providing it is mixed and blended and does not contain rocks over 8 inches in maximum dimension.

Transition Pads

Removals are recommended where transitions between contrasting materials (fill/alluvium, existing fill/future engineered compacted fill) cross the foot print of settlement sensitive structures. For transition pads which incorporate both these contrasting materials, the cut portions within building areas and 10 feet beyond the building perimeters should be undercut and capped with certified compacted fill. The undercut should be a minimum five (5) feet below proposed pad grade or one-third of the maximum fill thickness, whichever is deeper. The purpose of the undercut is to reduce the potential for significant differential settlement or uplift between these contrasting materials.

In-Place Soil Processing

Prior to placing fill, the exposed surface should be processed. Processing consists of (1) scarifying the exposed surface to a depth of 6 to 8 inches until the surface is free from uneven features that would prevent uniform compaction, (2) conditioning the scarified soil to slightly above the optimum moisture content, and (3) recompacting the scarified soil to at least 90% of the maximum dry density as determined per ASTM D 1557.

Fill Placement and Compaction

Most of the site soils may be re-used as fill. Fill soils should be cleansed of major vegetation, trash, debris, and rocks larger than 6 inches in maximum dimension, placed in thin (8 inch) uniform lifts, brought to slightly above optimum moisture content and compacted to at least 90% of the maximum dry soil density as determined by ASTM D 1557.

Retaining Walls and Utility Trenches

It is recommended that the backfill of all retaining walls and utility trenches be compacted to at least 90% of the maximum dry soil density according to the recommendations presented above.

Excavations

Excavations for removal and recompaction of the upper fill soils will be on the order of 10 feet below existing grade. These excavations may be made vertical to a maximum height of 4 feet and the remainder should be laid back at a 1(h):1(v) gradient.

Shallow excavations for foundation construction made in future compacted fill soils should stand with vertical sides. Trench excavations deeper than 4 feet should be shored or sloped.

Excavations for the soil-nail retaining wall will be approximately 18 feet deep. These excavations will expose previously compacted fill soils (Tierra Tech 1979). When the soil-nail wall plans are prepared, the temporary excavation for the wall should be evaluated.

During construction the contractor is responsible for the excavation and maintenance of safe and stable slope angles considering the subsurface conditions and the methods of operations. Surcharge loads should be setback from the top of temporary excavations a minimum horizontal distance of 10 feet.

MANUFACTURED SLOPE CONSTRUCTION AND MAINTENANCE

General

Presently cut and fill slopes are proposed at a maximum gradient of 2(h):1(v). This slope gradient is acceptable from a geotechnical standpoint. All cut slopes and retaining wall backcuts should be observed by the project engineering geologist. All manufactured slopes will require maintenance as discussed below.

Cut Slopes

Cut slopes may be constructed at a maximum gradient of 2(h):1(v). The stability of all cut slopes should be evaluated at the grading plan review. All cut slopes must be observed by the project geotechnical consultant to verify absence of adverse geologic conditions. Where topsoil or weathered soils are present at the top of a cut slope, the top of the slope should be "laid back" or rounded.

Fill Slopes

Fill slopes may be constructed at a maximum gradient of 2(h):1(v). Fill slopes should be keyed and benched into firm in-place soil or bedrock. Fill slope keyways should be a minimum of 15 feet wide and cut to a minimum depth of 2 feet at the toe into competent in-place materials. The keyway should be tilted into the slope and should be at least 3 feet deep at the heel (measured from below the slope toe elevation). The keyway should be observed by the project geotechnical consultant prior to placing any fill.

Where possible, the outer slope faces should be overfilled and trimmed back to provide for firm, well-compacted surfaces. If the slopes are not overfilled and trimmed, it will be necessary to sheepsfoot and/or grid roll the slopes. Slope faces should be tested and reworked as necessary to achieve the required 90 percent relative compaction. Select grading may be necessary to ensure that fill slopes are constructed with materials with adequate surficial stability. It is recommended the outer portions of slopes be constructed with material that has at least 250 psf of cohesion and a friction angle of 30 degrees.

Depending on the conditions encountered during keying and benching operations, fill slopes should be constructed with a backdrain consisting of a 24 inch square section of rock (1/2"-3/4") wrapped in filter cloth. A perforated 4 inch diameter PVC schedule 40 pipe should be installed at the base of the gravel material with non-perforated outlet pipes. The outlets should be roughly 12 inches above the toe of slope or tied into the storm drain system. The outlets at the surface should be protected with a concrete monument and the ends covered with a slotted cap to prevent rodent entry.

Slope Maintenance

All slopes will require maintenance to reduce the risk of erosion and degradation with time due to natural or man-made conditions. Future performance of the slopes will depend on the control of the burrowing

animals and maintenance of the brow ditches, drainage structures, and the slope vegetation as discussed below.

All graded or exposed natural slopes should be maintained with dense, deep rooting (minimum 2± feet deep), drought resistant groundcover and shrubs or trees. Where necessary a reliable irrigation system should be installed on the slopes, adjusted so over watering does not occur, and periodically checked for leakage. Excess watering of the slopes can cause erosion and surficial failures, and should be avoided. Care should be taken to maintain a uniform, near optimum moisture content in the slopes, and to avoid over drying, or excess irrigation; this can reduce the potential for soil softening and strength loss that can lead to slumping of the slope face. Slopes should not be over watered and should not be watered before forecasted rain.

All existing and proposed drainage structures (including those at the surface and buried) should be kept in good condition and clean the entire length to the outlet in an approved drainage course. Final grading of the site should provide positive drainage away from slopes, and water should not be allowed to pond or gather above a slope area. Burrowing animals, particularly ground squirrels, can destroy slopes; therefore, where present, immediate measures should be taken to evict them.

SOIL EXPANSIVENESS

For preliminary foundation design purposes, the fill soils at the site should be considered highly expansive (91-130 expansion index range). A soil expansion test should be performed at the completion of proposed grading on each of the future building pad areas.

Expansive soils contain clay particles that change in volume (shrink or swell) due to change in the soil moisture content. The amount of volume change depends upon: (1) the soil swell potential; (2) the availability of water; and (3) the restraining pressure on the soil. Swelling occurs when clay soils become wet due to excessive water. Excessive water can be caused by poor surface drainage, over-irrigation of lawns and planters, and sprinkler or plumbing leaks.

Swelling clay soils can cause distress to residential construction (generally as uplift). Construction on expansive soil has an inherent risk that should be acknowledged and understood by the developer/property owner. The geotechnical recommendations presented herein are intended to reduce the potential for expansive soil action. However, these recommendations are not intended, nor designed to provide complete and full mitigation of expansive soil conditions. If requested, additional recommendations can be provided to further reduce the risk of expansive soil movement. Soil movement can be roughly 1 to 2+ inches. Therefore, the following should be maintained within the lot.

a) Positive drainage should be consistently provided and maintained away from all structures. Drainage should not be changed creating an adverse drainage condition.

b) Landscape watering should be held to a minimum and irrigation systems are maintained. Sprinkler or plumbing leaks should be immediately repaired so the subgrade soils underlying or adjacent the structures do not become saturated. Trees should be spaced so that roots will not extend under foundations or slabs.

c) Water should not be allowed to pond or accumulate around hardscape and planters allowing water migration into the subgrade. All caulking should be maintained between hardscape joints, and the interfaces between the hardscape and the adjoining structures.

d) Information regarding the care and maintenance of improvements located on expansive soils should be passed on to future owners of the property and property management contractors.

CONVENTIONAL FOUNDATION DESIGN

General

As discussed previously, foundations for the proposed structures shall be supported entirely in engineered compacted fill. Conventional foundations may be supported in engineered compacted fill prepared in accordance with the recommendations of the previous Site Preparation and Grading section.

Design Data – Engineered Fill

The proposed structures may be supported on continuous and isolated footings. If the footings are embedded entirely in engineered compacted fill, the footings may be designed to impose an allowable bearing pressure of 2000 pounds per square foot (psf). This bearing pressure applies for dead plus live loads and may be increased by one-third when considering wind or seismic loads. Continuous and isolated footings should have minimum widths of 12 and 24 inches, respectively. The footings should be embedded a minimum of 30 inches into engineered compacted fill for interior and exterior footings as measured from the lowest adjacent grade, interior or exterior. The above embedments are for footings embedded into materials having an expansion index of less than 130. Steel reinforcement should be per the structural engineer's recommendations, however, minimum continuous footing reinforcement should consist of 2 #5 bars in the top and bottom (total of 4 bars). Shallow footings adjacent to retaining walls should be included in the design of the walls or stepped down below a 2(h):1(v) plane projecting upward from the bottom of the retaining wall footings.

Lateral forces on foundations may be resisted by passive earth pressure and base friction. Lateral passive earth pressure may be considered equal to a fluid weighing 300 pounds per cubic foot (pcf) where the footing is located on level ground. Base friction may be computed at 0.40 times the normal load. Base friction and passive earth pressure may be combined without reduction.

Settlement

Settlement of the footings embedded in engineered fill should be minimal, roughly ¼ to ½ inch, depending upon the foundation loading and size. The settlements are anticipated to occur rapidly as the foundations are loaded. No long term settlement is anticipated for properly constructed foundations embedded in the recommended bearing materials.

Footings on or Adjacent Slopes

Footings on or near slopes that are sensitive to differential movement should be deepened to provide setback to the slope face. The minimum setback should be per Chapter 18 of the Uniform Building Code (UBC). The minimum slope setback is 5 feet, however, we recommend a minimum setback of 7 feet to account for future weathering of the slope face.

Accessory structures such as concrete walkways, garden walls, and fences that are sensitive to differential movement should be supported foundations meeting the setback criteria. A structure near the descending slopes not meeting the setback requirements such as fences could move laterally.

Footing Excavations

All footings should be cut square and level and cleaned of all slough. Soil excavated from the footing trenches (including utility trenches) should not be spread over any areas of construction, unless properly compacted. The footing excavations should be observed by the project geotechnical consultant before placing reinforcing steel. Soils silted into the footing excavations during the premoistening operations should be removed to the required depth before casting the concrete. The footings should be cast as soon as possible to avoid deep desiccation of the footing subsoils.

CONVENTIONAL SLABS-ON-GRADE

Subgrade Preparation

The subgrade for all slabs-on-grade should consist of engineered compacted fill for interior or exterior slabs. If disturbed during foundation and utility construction, the subgrade soils should be processed and compacted according to the recommendations of the previous Fill Placement and Compaction section before placement of any aggregate (sand) base. Any loose soils should be removed to firm in-place material, the exposed subgrade processed, and the material replaced as engineered compacted fill as described above.

Design Data

The concrete slabs-on-grade within the building interiors should be a minimum of 5 inches thick. Reinforcement should consist of a minimum of No. 4 bars at 16 inches on center in both directions or per the structural engineer's design. The slab steel reinforcement should be extended into the foundations to within 3 inches of the footing bottom at 36 inches on center. The slab should be underlain by 4 inches of clean sand.

Concrete mixing, placement, finishing, and curing should be performed per the American Concrete Institute Guide for Concrete Floor and Slab Construction (ACI 302.1R-89). The concrete slump for a Class 1 Floor is 5 inches in the ACI 302.1R-89 guide. Concrete slump in the Portland Concrete Association Design and Control of Concrete Mixtures bulletin is recommended at 4 inches for reinforced slabs. These published concrete slumps should be considered in the design of the concrete slabs-on-grade. Concrete shrinkage cracks could become excessive if water is added to the concrete above the allowable limit, and proper finishing and curing practices are not followed.

Moisture Vapor Retarder Layer

Concrete slabs-on-grade should be underlain by a minimum 10 mil plastic moisture vapor retarder layer placed mid-height in the sand base layer. The layer should be installed so that edges of the plastic sheet overlay at least 12 inches onto any adjacent sheet. Installation of plastic sheeting within the sand below the slab is a common practice. However, this plastic layer is not a vapor or moisture barrier. If a waterproof slab is required, a waterproofing consultant should be contracted for design and construction recommendations. Concrete slabs on which organic floor coverings will be used such as wool flooring or wool carpet should be tested for moisture per the flooring manufacturer's specifications. The concrete surface should be sealed per the manufacturer's specifications if the moisture readings are excessive.

The following should be considered to reduce the amount of moisture vapor emissions through the slab.

- Seal designed perforations in the moisture barrier such as at pipes, conduits, columns, grade beams, and wall footing penetrations.
- Repair and seal any tears or punctures in the moisture barrier that may result from the construction process prior to concrete placement.
- Minimizing shrinkage cracks in the slab on-grade can further minimize moisture vapor emissions. A properly cured slab utilizing low-slump concrete will reduce the risk of shrinkage cracks in the slab as described in the following "Concrete Placement and Cracking" section.

Provide proper drainage and elevation of ground adjacent the slab (that is the ground surface should be at least 6 inches below the wall plate). In addition, the landscaping should not be overwatered resulting in excess moisture below the slab.

Concrete Slab Moisture Content

Moisture within the concrete slabs on-grade can be detrimental to flooring materials containing natural fibers such as oak flooring or wool carpets. Therefore, slabs on-grade should be tested for moisture per the flooring manufacture's recommendations prior to placing the flooring. Floor sealers approved by the flooring manufacture may be required if the slabs have excessive moisture.

Tile Flooring

Tile flooring can crack, reflecting cracks in the concrete slab below the tile. Therefore, the slab designer should consider additional steel reinforcement of concrete slabs on-grade where tile will be placed. The tile installer should consider installation methods that reduce possible tile cracking. A vinyl crack isolation membrane (approved by the Tile Council of America/Ceramic Tile Institute) is recommended between tile and concrete slabs on grade.

Moisture Penetration

Conventional footing and slab on-grade subgrade soils should be moistened to a minimum of 3% over the optimum moisture content to a minimum depth of 24 inches. The above moisture should be obtained and maintained at least a suggested 2 days prior to casting the concrete. The subgrade soil premoistening should be observed by the project geotechnical consultant prior to casting the concrete. Soils silted into the footing excavations during the premoistening operations should be removed prior to casting the concrete.

CONVENTIONAL RETAINING WALL DESIGN

Foundations

Continuous reinforced concrete retaining wall footings founded below level ground may be designed to impose a uniform allowable soil bearing pressure of 2000 psf. Retaining wall footings should be embedded a minimum of 24 inches into engineered compacted fill and have a minimum width of 24 inches. Deeper embedments will be required for footings on or near descending slopes to conform with setback requirements (see previous section). Footing reinforcement should be per the structural engineer's recommendations.

Active Pressures

Retaining walls should be designed to resist an active pressure exerted by compacted backfill or retained soil. Retaining walls that may yield at the top should be designed for an equivalent fluid pressure equal to 45 and 60 pounds per cubic foot (pcf) for a level backfill and 2(h):1(v) sloping backfill, respectively. Footings located behind retaining walls should be embedded below a 2(h):1(v) line extending up from the base of the wall or the wall should be designed to support the footing surcharge.

The above active pressures are not designed to resist expansion of the backfill. Therefore, if water is allowed to saturate backfill or backcut materials consisting of clayey soils, the expansion pressure could exceed the active pressures provided.

In addition to the active pressures discussed above, any retaining walls greater than 10 feet in height shall be designed to resist applicable vertical and horizontal seismic forces. The wall design should be based on the seismic factors presented in the Faulting and Seismicity section from above.

Retaining wall backcuts should be observed for adverse conditions by the project geotechnical consultant. The above active pressures are not designed to retain an adverse geologic condition.

Lateral Resistance

Lateral forces exerted by retained soil or compacted fill may be resisted by passive soil pressure and friction. To develop full passive earth pressure, level ground consisting of competent native material or engineered compacted fill should extend a distance of at least 3 times the footing depth in front of the footing. The passive soil pressure may be taken as an equivalent fluid pressure of 300 pcf where the footing is on level ground. Where footings are on a slope (below the wall) the passive pressure should be limited to 200 pcf, not to exceed 1500 psf. Friction between the bottom of the footings and soil may be taken as 0.4. Passive resistance and friction may be combined with no reduction.

Retaining Wall Drainage and Backfill

Retaining walls should be provided with a drainage system behind the wall consisting of a continuous minimum 1 foot wide section of clean rock (½ to ¾ inch) wrapped in filter fabric or equivalent drain material. The drain material should extend from the base of the wall to the top of the wall or to within 2 feet of the top of wall for interior and exterior walls, respectively. The material should be drained by a perforated 4 inch diameter pipe (3/8 inch perforations, perforations down). The invert of the drain pipe should be at least 6 inches below any adjacent slab-on-grade. Surface drainage systems and the retaining wall backdrain should not share a common outlet pipe. All outlet pipe locations should be surveyed in and recorded.

If a conventional masonry block wall is considered, the back of the wall should be waterproofed to resist moisture infiltration through the wall. The upper 2 feet of exterior wall backfill should consist of compacted native soils. A layer of filter cloth is suggested between the drain material and 2 foot soil cap to minimize the migration of soil into the drain material.

All wall backfill should be compacted to a minimum of 90% of the maximum soil density using light equipment. The retaining wall backfill should be benched into the backcut where the backcut is shallower than 3/4(h):1(v).

SOIL-NAILRETAINING WALL DESIGN

General

A soil-nail retaining wall is proposed along the north side of the proposed building pad. The wall will be up to 17 feet in height. The wall will be designed by others.

Geotechnical Design Criteria

The following geotechnical criteria may be used in the wall design.

Retained Zone	ϕ	23°
	C	500 psf
	γ	125 pcf
Foundation Zone	ϕ	23°
	C	500 psf
	γ	125 pcf

The wall plans should be provided to this office for review. Additional review, analysis and recommendations may be provided when the plans are completed.

Seismic Design Criteria

In addition to the active pressures discussed above, the retaining walls shall be designed to resist applicable vertical and horizontal seismic forces. The wall design should be based on the seismic factors presented in the Seismicity section from above.

Lateral Resistance

Lateral forces exerted by retained soil or compacted fill may be resisted by passive soil pressure and friction. To develop full passive earth pressure, level ground consisting of competent native material or engineered compacted fill should extend a distance of at least 3 times the footing depth in front of the footing. The passive soil pressure may be taken as an equivalent fluid pressure of 300 pcf where the footing is on level ground. Friction between the bottom of the footings and soil may be taken as 0.4. Passive resistance and friction may be combined with no reduction.

Wall Drainage

Drainage for the soil-nail wall should be specified by the wall designer. We recommend a suitable drainage system be provided. The drainage system should be reviewed by this office when wall plans area prepared.

EXTERIOR SLABS AND WALKWAYS

All exterior concrete slabs-on-grade and walkways should be a minimum of 4 inches thick and underlain by a minimum of 4 inches of sand. Exterior slabs should be reinforced with a minimum of #3 bars on 24 inch centers in each direction. All slabs should have crack control joints (full depth joints) at intervals of 10 to 15 feet. Sidewalks may consist of unreinforced concrete provided the walks are provided with crack control joints at spacing equal to the panel width.

Concrete subgrade soils should be properly placed and compacted for the support of the concrete flatwork. Prior to placing concrete, the subgrade soils should be premoistened to a minimum of 3% over the optimum moisture content for a minimum depth of 24 inches. Proper premoistening can reduce the risk of slab subgrade expansion, if used in addition to other preventive measures. Where critical, the subgrade soil premoistening should be observed by the project geotechnical consultant prior to placing the concrete.

Exterior slabs can experience differential uplift caused by non-uniform expansion of the subgrade soils due to varied migration of water beneath the slab. Differential uplift can occur at the corner, edge or center of slab. Therefore, all planter areas should be graded so excess water drains positively away from the hardscape or possibly onto the adjacent concrete flatwork and not below the hardscape. Also, a reinforced deepened perimeter edge should be considered on all slabs to minimize non-uniform moisture migration and where surface water could infiltrate the sand layer under the slab. The perimeter edge should extend a minimum of 12 inches below the bottom of the slab and have a width of 8 inches. A deeper edge would further reduce the risk of deep water migration into the slab subsoils. Where a slab or walkway is adjacent a descending slope (within 2 feet) the slope side edge should be equipped with a minimum 24 inch deep, 12 inch wide perimeter edge reinforced with at least 1 - #4 bar in the top and bottom.

Concrete shrinkage cracks will become excessive if water is added to the concrete above the allowable limit, and proper finishing and curing practices are not followed. Finishing and curing should be performed per the Portland Cement Association Guidelines. The concrete slump should not exceed 6 inches unless otherwise specified by the structural engineer.

PRELIMINARY PAVEMENT DESIGN

Parking lots (parking stalls and adjacent auto aisles) may be designed for a Traffic Index of 4½ and a Traffic Index of 6 may be used for drive aisles to handle large moving trucks. Using an R-value of 9, a structural section of 3 inches of asphalt on 8 inches of aggregate base may be used for the parking lots. The structural section should be increased to 3 inches of asphalt on 13 inches of aggregate base for

drive aisles. The structural sections should be confirmed at the conclusion of grading based on R-Value tests performed on the actual subgrade soils. The upper 6 inches of the subgrade should be compacted to at least 90 percent relative compaction prior to placing the base material. The base material should be compacted to at least 95 percent relative compaction just prior to placing the asphalt.

A concrete structural section should be used for apron areas in front of trash enclosures exposed to repeated heavy loads and high abrasion loads from dumpsters and truck startups and stops. In addition, a similar section may be used for drive entrances. The concrete slab on-grade should be a minimum of 7½ inches thick with No. 3 bars at 18 inches on centers in both directions underlain by 6 inches of aggregate base. The thickness should be increased by 1/2 inch to 8 inches where the concrete is scored / stamped with a pattern. Similarly, the section may be reduced by 1/2 inch to 6-1 /2 inch where 2-inch thick stone pavers are placed over the concrete section. Concrete for traffic structural sections should have a minimum 28-day compressive strength of 3500 psi. Concrete mixing, placement, finishing, and curing should be performed per the American Concrete Institute. The slump during concrete placement should not exceed 5 inches. Concrete shrinkage cracks could become excessive if water is added to the concrete above the allowable limit, and proper finishing and curing practices are not followed.

Planter areas adjacent the asphalt should be graded so excess water drains onto and not beneath the adjacent AC pavement and curbs. Ponding of water adjacent paved areas could result in excessive moisture infiltration beneath concrete and pavement resulting in unstable subgrade soils and/or expansive uplift action.

SITE DRAINAGE

The site drainage plan should be consistent with the regional drainage pattern, and the entire site should be graded to drain surface water in a non-erosive manner to appropriate disposal areas. Landscaped areas should be sloped to drain toward drain inlets to avoid ponding of water. Landscaped planting and trees should be located to avoid roots extending beneath foundations and slabs; storm drain pipes, irrigation lines and landscape watering should be kept away from flatwork.

During construction, positive drainage of the site should be maintained and ponded water should not be permitted. In addition, provisions will need to be made for erosion protection and desilting of runoff before draining to proper disposal.

GUTTERS AND DOWNSPOUTS

Gutters and downspouts should be installed on structures on soils having an expansion index greater than 50 to collect roof water. Downspouts should drain into PVC collector pipes that will carry the water away from the building or other positive drainage should be constructed.

PLAN REVIEW

As the development process continues and final detailed grading, site/foundation, retaining wall and soil-nail wall plans and specifications are developed, they should be reviewed by Gorian and Associates, Inc. Additional geotechnical recommendations may be warranted at that time.

CLOSURE

This report was prepared within the scope of generally accepted geotechnical practices under the direction of a registered geotechnical engineer. No warranty, expressed or implied, is made as to conclusions and professional advice included in this report. Gorian and Associates, Inc. waives any and all responsibility and liability for problems which may occur if the recommendations presented in this report are not followed.

This report has been prepared for Dale Poe Real Estate Group and their design consultants, to be used solely in the design and construction of the development described herein. This report may not contain sufficient information for other uses or the purposes of other parties. The recommendations are based on interpretations of the subsurface conditions concluded from information gained from subsurface explorations and a surficial site reconnaissance. The interpretations may differ from actual subsurface conditions, which can vary horizontally and vertically across the site. Due to possible subsurface variations, all aspects of field construction addressed in this report should be observed by the project geotechnical consultant.

Any person using this report for bidding or construction purposes should perform such independent investigations as they deem necessary to satisfy themselves as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project.

We recommended that all earthwork be observed and tested by the project geotechnical consultant including site stripping, removals and placement of compacted fill as well as floor slab subgrades, and footing excavations. The work should be performed in accordance with the current City of Agoura Hills Building Code. However, the services of the geotechnical consultant should not be construed to relieve the owner or contractors of their responsibilities or liabilities.

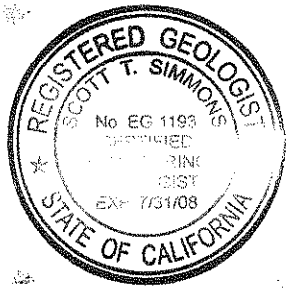
Please call if you have any questions regarding this report or require additional information.

Respectfully,

GORIAN AND ASSOCIATES, INC.

Randal L. Wendt
Senior Geotechnical Engineer

Scott T. Simmons, CEG 1193
Principal Engineering Geologist



Distribution: Addressee (6)

REFERENCES

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APPENDIX A

LOGS OF SUBSURFACE DATA

GORIAN & ASSOCIATES, INC.

Project: Agoura Business Center West, 5301 Derry Ave, Agoura **SUBSURFACE LOG**

Work Order: 1037-3-0-100

Excavation Number: T-1

Page Number: 1

Date(s) Excavated 3/23/07	Logged By CHD	Excavation Location See Geotechnical Map	Approximate Surface Elevation 876½'±
Excavation Dimension 24"	Equipment Contractor Dennis Carroll	Equipment Type Backhoe	Hammer Data Hand Sampler

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0 / 875	■					CL		ARTIFICIAL FILL: Yellowish brown sandy CLAY (damp, very stiff). Mottled. Some Asphaltic Concrete and Concrete.	
							■	Aggregate Base (damp, medium dense).	
	■		28	26.7	96	CL		Yellowish brown silty CLAY mottled with grayish brown silty clay (very moist, very stiff). Some Asphaltic Concrete.	
	■		33	28.2	94	CL		Dark gray silty CLAY (very moist, very stiff). Mottled.	
5 / 870						SP		Light yellowish brown silty fine to coarse fill SAND (moist, dense). Probed to 7'; all sand. Excavation stopped.	
								Total Depth 7' (Practical Refusal) No caving, No groundwater	
10 / 865									
15 / 860									
20 / 855									
25 / 850									
30 / 845									
35 / 840									

GORIAN & ASSOCIATES, INC.

Project: Agoura Business Center West, 5301 Derry Ave, Agoura **SUBSURFACE LOG**

Work Order: 1037-3-0-100

Excavation Number: T-2

Page Number: 1

Date(s) Excavated 3/23/07	Logged By CHD	Excavation Location See Geotechnical Map	Approximate Surface Elevation 877½'±
Excavation Dimension 24"	Equipment Contractor Dennis Carroll	Equipment Type Backhoe	Hammer Data Hand Sampler

Elevation / Depth (ft.)	Bulk Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0 / 875		36	22.1	101	CL		ARTIFICIAL FILL: Yellowish brown sandy silty CLAY (damp to moist, very stiff). Mottled. Some gravel. At 2'; becoming very moist.	
5		40	20.9	96	CL		Brown silty CLAY mottled with yellowish brown sandy silty clay (very moist, very stiff).	
870		25	24.2	96	CL		ALLUVIUM: Grayish brown silty CLAY (very moist, very stiff). Some calcium carbonate veinlets.	Pocket Penetrometer @ 8'; P.P. = 1.75 @ 10'; P.P. = 1.75
10 / 865							At 10'; common calcium carbonate veinlets. Increasing moisture content with depth.	
15 / 860							Total Depth 13' (Maximum extent of backhoe) No caving, No groundwater	
20 / 855								
25 / 850								
30 / 845								
35 / 840								

Project: Agoura Business Center West, 5301 Derry Ave, Agoura **SUBSURFACE LOG**

Work Order: 1037-3-0-100

Excavation Number: T-3

Page Number: 1

Date(s) Excavated 3/23/07	Logged By CHD	Excavation Location See Geotechnical Map	Approximate Surface Elevation 879'±
Excavation Dimension 24"	Equipment Contractor Dennis Carroll	Equipment Type Backhoe	Hammer Data

Elevation / Depth (ft.)	Bulk Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0					CL		ARTIFICIAL FILL: Grayish brown silty CLAY mottled with yellowish brown sandy silty clay (very moist, very stiff). Some siltstone fragments.	
		27	27.7	92				
875								
5		25	28.0	92	CL		Brown silty CLAY locally mottled with yellowish brown silty clay (very moist, very stiff).	Pocket Penetrometer @ 4'; P.P. = 1.5 to 1.75
					SP		Fill sand; light yellowish brown fine to coarse SAND (saturated, medium dense) . Excavation stopped.	
							Total Depth 7' (Practical Refusal) Seepage at 6' No caving	
870								
10								
865								
15								
860								
20								
855								
25								
850								
30								
845								
35								
840								

Project: Agoura Business Center West, 5301 Derry Ave, Agoura **SUBSURFACE LOG**

Work Order: 1037-3-0-100

Excavation Number: T-4

Page Number: 1

Date(s) Excavated 3/23/07	Logged By CHD	Excavation Location See Geotechnical Map	Approximate Surface Elevation 903.2'±
Excavation Dimension 24"	Equipment Contractor Dennis Carroll	Equipment Type Backhoe	Hammer Data Hand Sampler

Elevation / Depth (ft.)	Bulk Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0					CL		ARTIFICIAL FILL: Yellowish brown silty CLAY (moist, very stiff). Common siltstone and claystone fragments. Homogeneous. Upper 18" weathered with roots.	
		27	21.7	82				
900								
		55	21.4	91				
5								
		30	27.6	88				
895							Total Depth 7' No caving, no groundwater	
10								
890								
15								
885								
20								
880								
25								
875								
30								
870								
35								
865								

APPENDIX B

LABORATORY TESTING

General

Laboratory test results on selected relatively undisturbed drive and bulk samples are presented below. Tests were performed to evaluate the physical and engineering properties of the encountered earth materials, including field moisture and density, compaction characteristics, expansion potential, and shear strength. Soil corrosivity testing was performed under subcontract and the results are attached.

Field Density and Moisture Tests

In situ dry density and moisture content were determined from the relatively undisturbed drive samples obtained during the exploratory operations. The test results and a detailed description of the earth materials encountered are shown on the attached Logs of Subsurface Data, Appendix A.

Maximum Density-Optimum Moisture

A maximum density/optimum moisture test (compaction characteristics) was performed on a selected sample of the encountered materials. The test was performed per ASTM D 1557 test method. The results are as follows:

Sample	Depth (feet)	Visual Soil Classification	Maximum Dry Density-pcf	Optimum Moisture Content-%
T-1	2.5	Dk. Gray brown silty clay	116.0	14.5

Soil Expansion Tests

A sample of the encountered soil was tested for expansiveness using the Expansion Index Test method (UBC 29-2). The results are as follows:

Sample	Depth (feet)	Expansion Index	Expansion Index Range
T-1	2.5	120	91-130

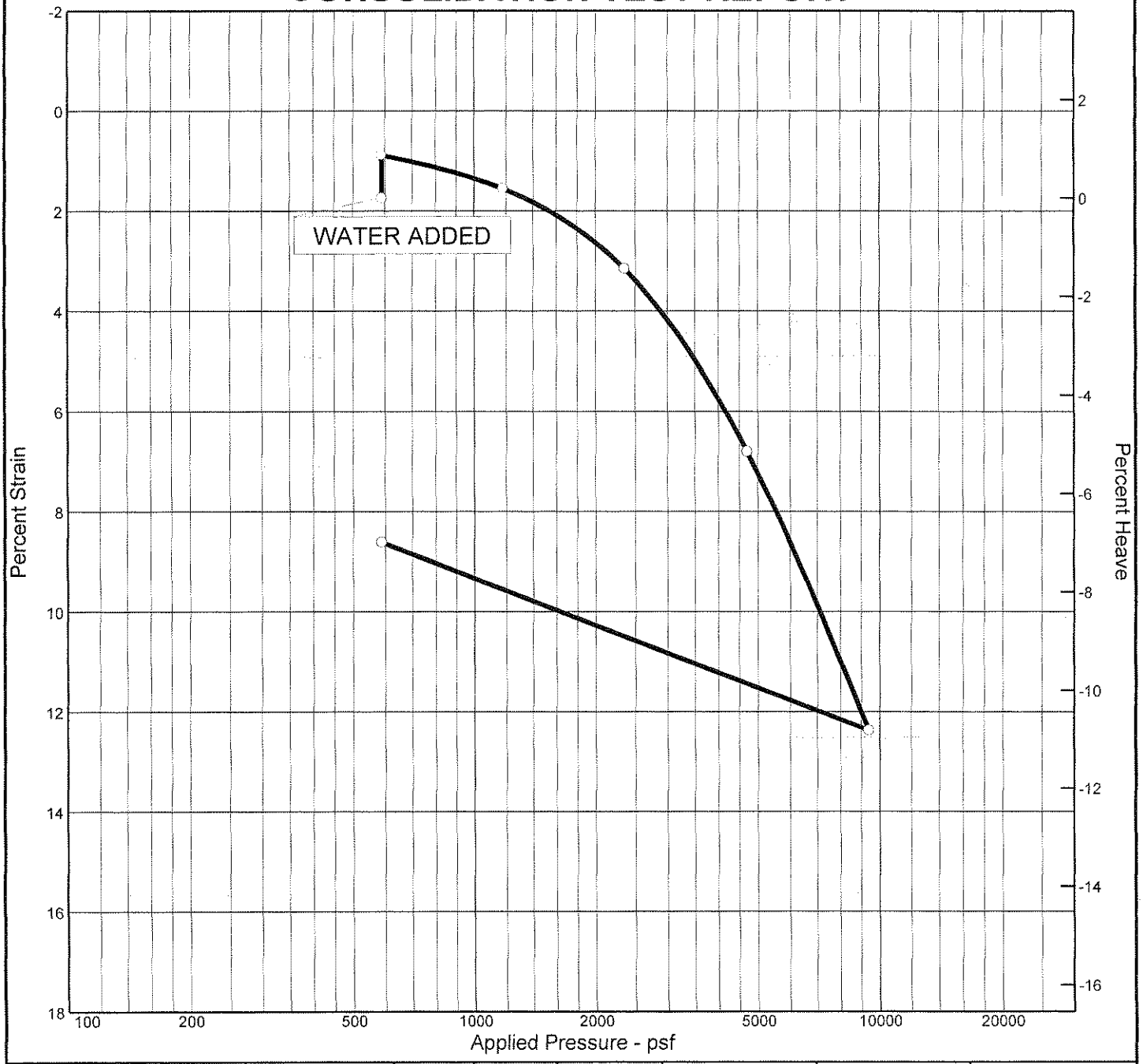
Load-Consolidation Tests

Load-consolidation tests were conducted on relatively undisturbed soil samples. Test loads were added in increments to a maximum of 8,000 psf or 9,400 psf. Water was added at axial loads ranging from 2,000 psf or 4,700 psf to study the effect of moisture infiltration on potential consolidation behavior. The results are attached as graphic summaries.

Direct Shear Tests

Direct shear tests were performed on relatively undisturbed and remolded samples of the earth materials encountered during our exploratory program. The sample sets were saturated before being sheared under axial loads ranging from 900 to 3,600 psf at a rate of 0.05 inches per minute. The shear strength results are attached as graphic summaries.

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
96.8 %	34.4 %	85.1			2.65			0.943

MATERIAL DESCRIPTION

Graysih Brown Silty CLAY

Project No. 1037-3-0- **Client:** Agoura Business Center West, LLC

Project: Agoura Business Center West, 5301 Derry Ave, Agoura

Location: T-1 @ 4'

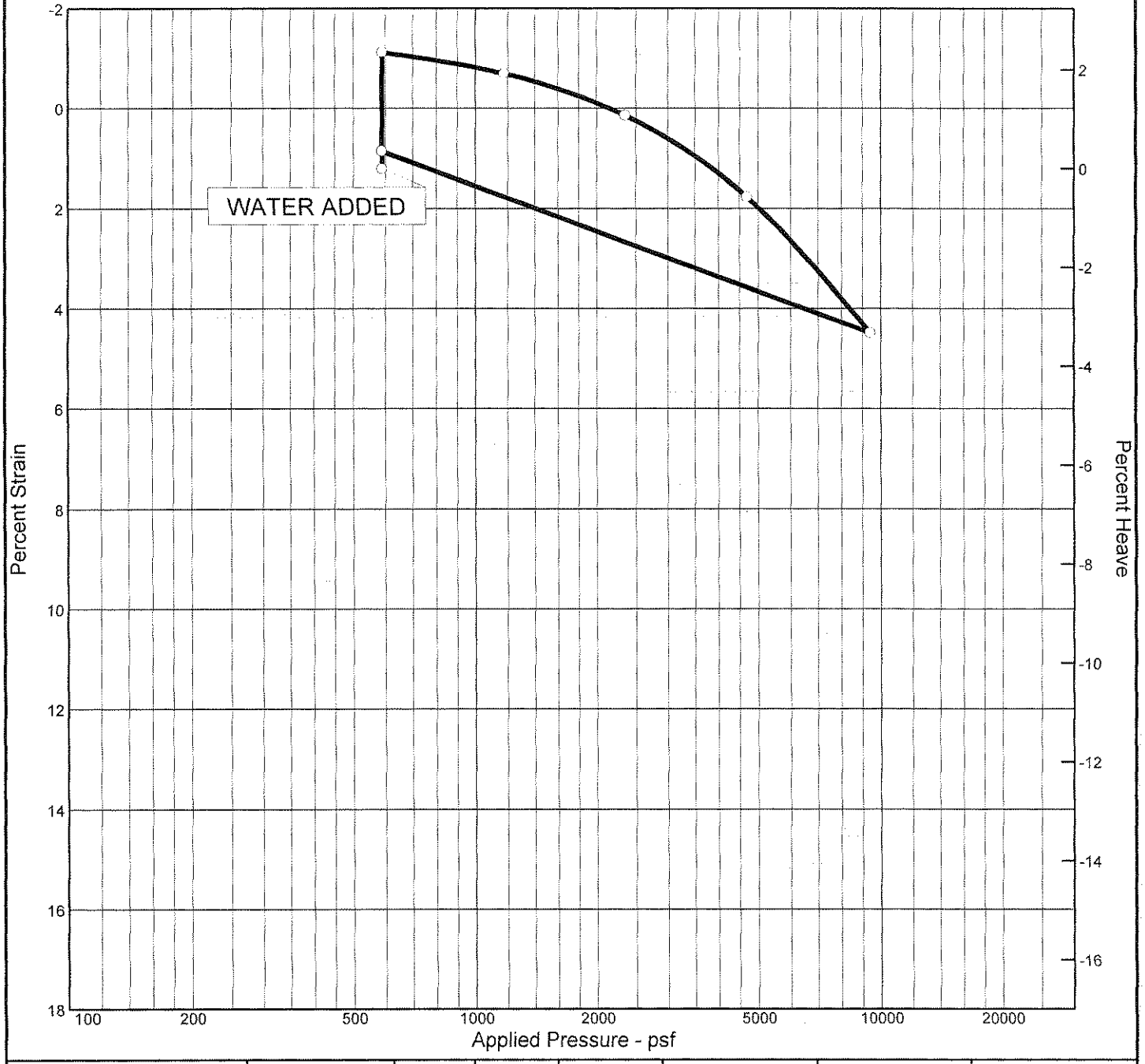
Remarks:

CONSOLIDATION TEST REPORT

GORIAN & ASSOCIATES, INC.

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
95.9 %	22.3 %	102.4			2.65			0.616

MATERIAL DESCRIPTION

Brown Silty CLAY

Project No. 1037-3-0- **Client:** Agoura Business Center West, LLC

Project: Agoura Business Center West, 5301 Derry Ave, Agoura

Location: T-2 @ 4'

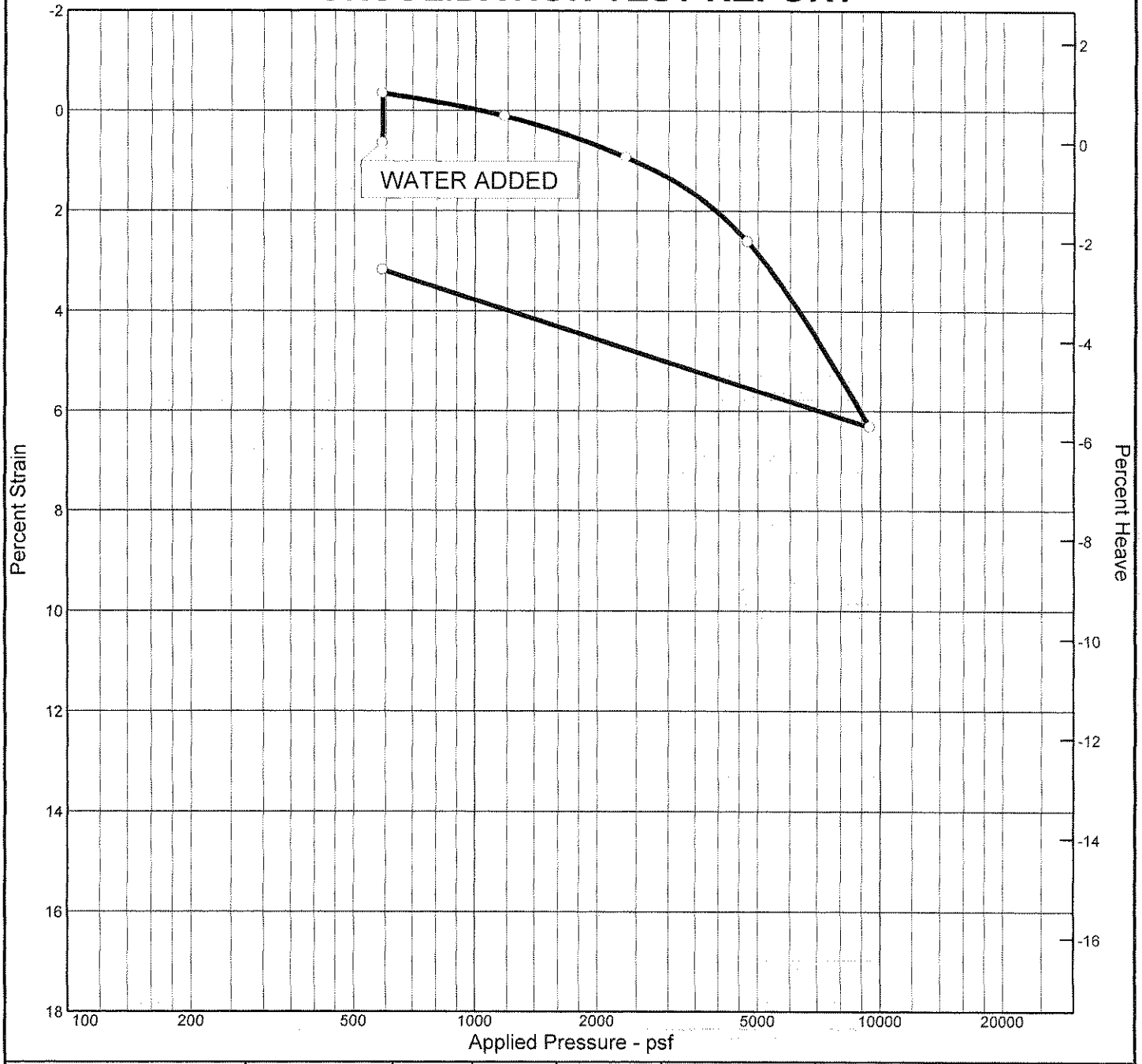
Remarks:

CONSOLIDATION TEST REPORT

GORIAN & ASSOCIATES, INC.

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
96.9 %	23.9 %	100.1			2.65			0.652

MATERIAL DESCRIPTION

Grayish Brown Silty CLAY

Project No. 1037-3-0- **Client:** Agoura Business Center West, LLC

Project: Agoura Business Center West, 5301 Derry Ave, Agoura

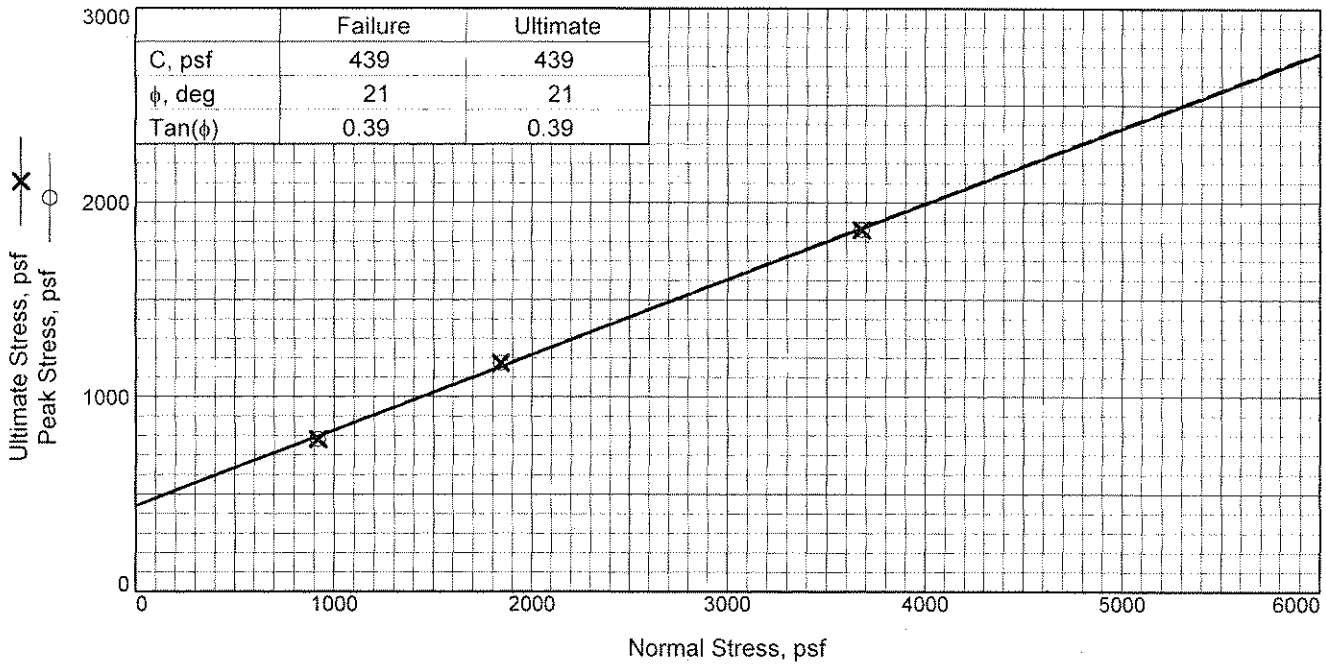
Location: T-2 @ 6'

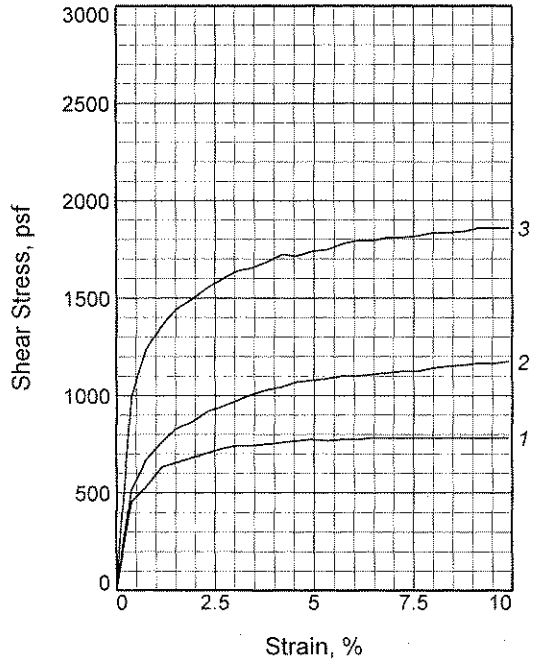
Remarks:

CONSOLIDATION TEST REPORT

GORIAN & ASSOCIATES, INC.

Figure





Sample No.		1	2	3
Initial	Water Content, %	26.7	26.7	26.7
	Dry Density, pcf	95.4	95.4	95.1
	Saturation, %	96.4	96.4	95.8
	Void Ratio	0.7337	0.7337	0.7387
	Diameter, in.	2.62	2.62	2.62
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	31.4	30.6	27.5
	Dry Density, pcf	95.4	95.4	95.1
	Saturation, %	113.4	110.6	98.6
	Void Ratio	0.7337	0.7337	0.7387
	Diameter, in.	2.62	2.62	2.62
	Height, in.	1.00	1.00	1.00
Normal Stress, psf		920	1840	3680
Peak Stress, psf		782	1172	1858
Strain, %		9.9	9.9	9.9
Ultimate Stress, psf		782	1172	1858
Strain, %		9.9	9.9	9.9
Strain rate, in./min.		0.02	0.02	0.02

Sample Type: Saturated, Remolded
Description: Brown Silty CLAY

LL= **PL=** **PI=**
Assumed Specific Gravity= 2.65
Remarks: Manual Shear

Figure _____

Client: Agoura Business Center West, LLC

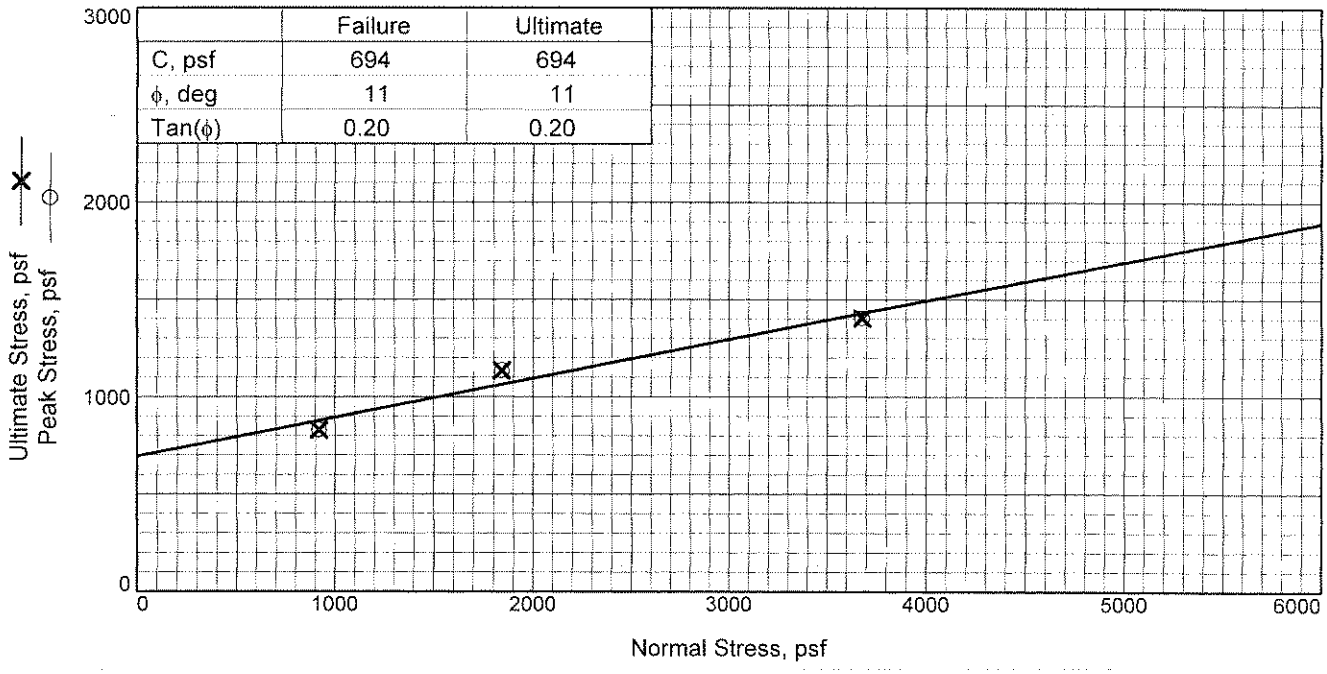
Project: Agoura Business Center West, 5301 Derry Ave, Agoura

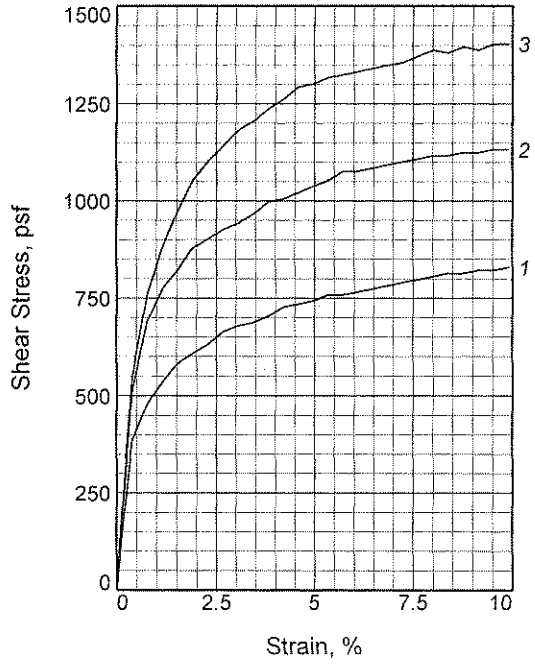
Location: T-1 @ 2.5'

Proj. No.: 1037-3-0-100 **Date:**

DIRECT SHEAR TEST REPORT

GORIAN & ASSOCIATES, INC.





Sample No.		1	2	3
Initial	Water Content, %	28.0	28.0	28.0
	Dry Density, pcf	87.9	88.6	90.4
	Saturation, %	84.2	85.6	89.5
	Void Ratio	0.8812	0.8671	0.8295
	Diameter, in.	2.62	2.62	2.62
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	33.6	31.5	30.4
	Dry Density, pcf	87.9	88.6	90.4
	Saturation, %	101.0	96.2	97.0
	Void Ratio	0.8812	0.8671	0.8295
	Diameter, in.	2.62	2.62	2.62
	Height, in.	1.00	1.00	1.00
Normal Stress, psf		920	1840	3680
Peak Stress, psf		829	1132	1404
Strain, %		9.9	9.9	9.9
Ultimate Stress, psf		829	1132	1404
Strain, %		9.9	9.9	9.9
Strain rate, in./min.		0.02	0.02	0.02

Sample Type: Undisturbed, Saturated
Description: Brown Silty CLAY

LL= **PL=** **PI=**
Assumed Specific Gravity= 2.65
Remarks: MAnual Shear Test

Figure _____

Client: Agoura Business Center West, LLC

Project: Agoura Business Center West, 5301 Derry Ave, Agoura

Location: T-3 @ 4'

Proj. No.: 1037-3-0-100 **Date:**

DIRECT SHEAR TEST REPORT

GORIAN & ASSOCIATES, INC.

Atlantic Consultants

112 Bunker Court
Folsom, CA 95630
(ph) 916.849.6420 (fax) 916.983.1838
Kerri@AtlanticCorrosionEngineers.com
corrprincess@ardennet.com
www.AtlanticCorrosionEngineers.com

April 20, 2007

Gorian and Associates, Inc.
Attention: Charles Devault
3595 Old Conejo Road
Thousand Oaks, CA 91320

Atlantic Job No.: 2007-031

Subject: Soil Chemistry Analysis for Gorian Job # 1037-3-0-100
1 Sample:T-2 @ 4' (Agoura Business Center West, LLC, 5301 Derry Avenue, Agoura, CA)

Sample Number	As Rec'd Resistivity (ohm-cm)	[1]Minimum Resistivity (ohm-cm)	[2]pH	[3]Sulfate %	[3]Chloride %	[4]Ammonia %	[5]Keldahl Nitrogen %	(As Rec'd) Description
T-2	1,840	480	6.83	0.4210	0.0110	0.0025	0.0480	Med. Brn. Heavy Clay, moist

NOTE: SAMPLES WERE ANALYZED IN ACCORDANCE WITH THE FOLLOWING METHODS.
1. MINIMUM RESISTIVITY DETERMINED BY SOIL BOX METHOD, (PER ASTM G-57)
2. PH MEASURED BY POTENTIOMETRIC METHOD USING STANDARD ELECTRODES. (PER CAL TRANS. #643)
3. CHLORIDE AND SULFATE WERE ANALYZED IN ACCORDANCE WITH EPA METHODS FOR CHEMICAL ANALYSIS FOR WATER AND WASTE, NO. 300 EPA-600/4-79-020. CONCENTRATION BY WEIGHT OF DRY SOIL.
4. AMMONIA WAS ANALYZED IN ACCORDANCE WITH EPA METHOD 350.2
5. KELDAHL NITROGEN WAS ANALYZED IN ACCORDANCE WITH EPA METHOD 351.2

CONCLUSIONS:

Material	Corrosion Class
Concrete	Severely corrosive for Sulfate exposure. Negligibly corrosive for Chloride exposure pH is neutral to slightly acidic. (UBC Table 19-A-4)
Steel Cast/Ductile Iron Mortar Coated Steel Pipe or Other Buried Ferrous Metal	Very Corrosive
Copper Piping	Corrosive due to presence of nitrogen and ammonia in soils.

The test results and corrosion classifications are based on the sample submitted, which may not be representative of overall site conditions. Additional sampling may be required to more fully characterize soil conditions. If recommendations are required which are based upon the results of the testing, please feel free to contact our office.

Sincerely,

Kerri M. Howell, P.E., President

PACIFIC MATERIALS LABORATORY, INC.

April 26, 2007
Lab No. 33119-3
File No. 07-7492-3

Gorian & Associates
3595 Old Conejo Road
Thousand Oaks, CA 91320

SUBJECT: R-Value Testing
Samples Delivered to Laboratory

Gentlemen:

Pursuant to your request, R-Value testing was performed on soil samples delivered to this laboratory. The R-Value testing was performed in accordance with California Test 301-F. The test results follow:

R-VALUE RESULTS

PROJECT: Agoura Business Center
LOCATION: 5301 Derry Avenue, City of Agoura
T-4 @ 2.0'

Soil Description: Yellow Brown Silty Clay

ITEM	1	2	3
Compaction Pressure - psi	150/150	100/100	75/75
Initial Moisture - %	21.2	21.2	21.2
Moisture at Compaction - %	22.7	24.7	26.3
Density - pcf	102.3	98.2	95.9
R-Value	19	11	9
Exudation Pressure - psi	517	430	298
Expansion Pressure	0.57*	0.47	0.17

Assigned R-Value: 9

* Verify correct R-value based on expansion

Thank you for allowing *Pacific Materials Laboratory, Inc.* to be of service. If we may be of further service regarding this or other geotechnical issues, please do not hesitate to call (805) 482-9801, fax (805) 445-6551 or write.

Respectfully Submitted,
PACIFIC MATERIALS LABORATORY, INC.

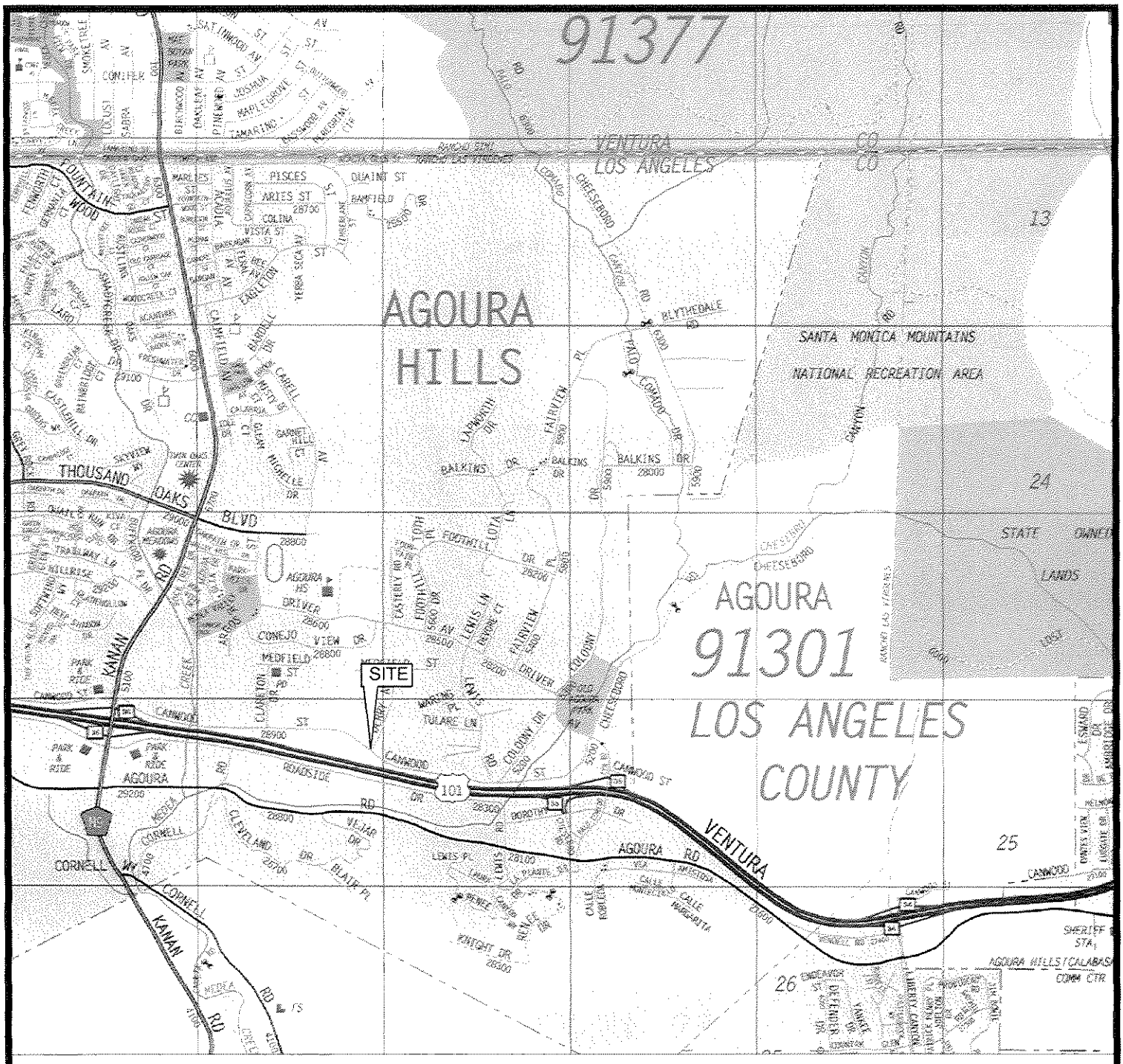
Douglas C. Papay, GE 664
President

REGISTERED PROFESSIONAL ENGINEER
DOUGLAS C PAPAY
GE 664
Exp 3/31/09
GEOTECHNICAL
STATE OF CALIFORNIA

DCP:ma
cc: Addressee (3)

150 Wood Road, Suite B, Camarillo, CA 93010 Phone: (805) 482-9801 Fax: (805) 445-6551

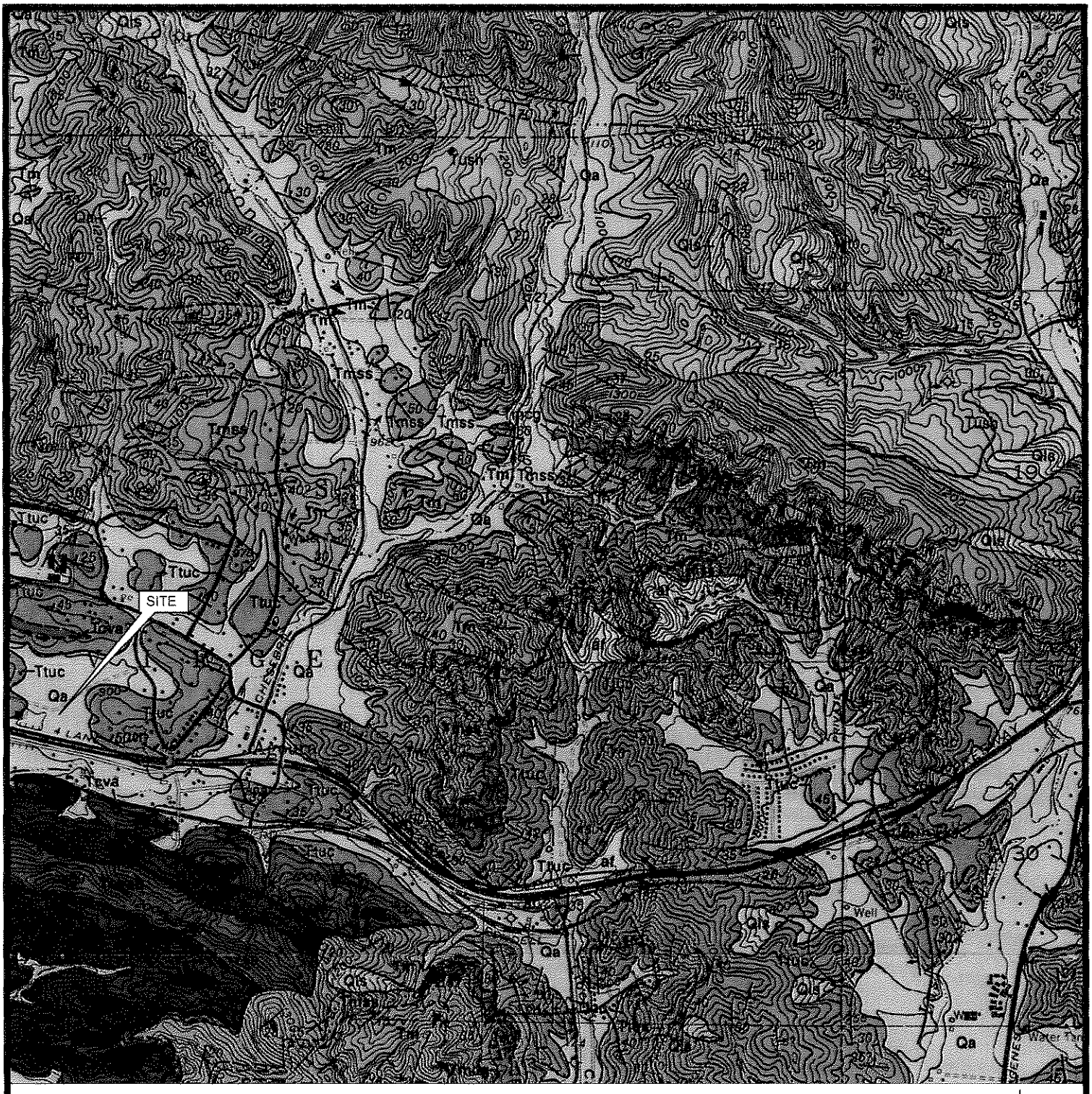
E-mail: pacificmaterialslab@msn.com



VICINITY MAP

Proposed Development
5301 Derry Ave
City of Agoura Hills, California.

GORIAN & ASSOCIATES, INC. APPLIED EARTH SCIENCES		
Job No: 1037-3-0-100		
Scale:1"=2000'	Drawn by: TC Approved by:	Figure 1



Explanation

Qa - Alluvium. Gravel, sand and clay of valley areas

Ttuc - Upper Topanga Formation. Gray claystone

Source

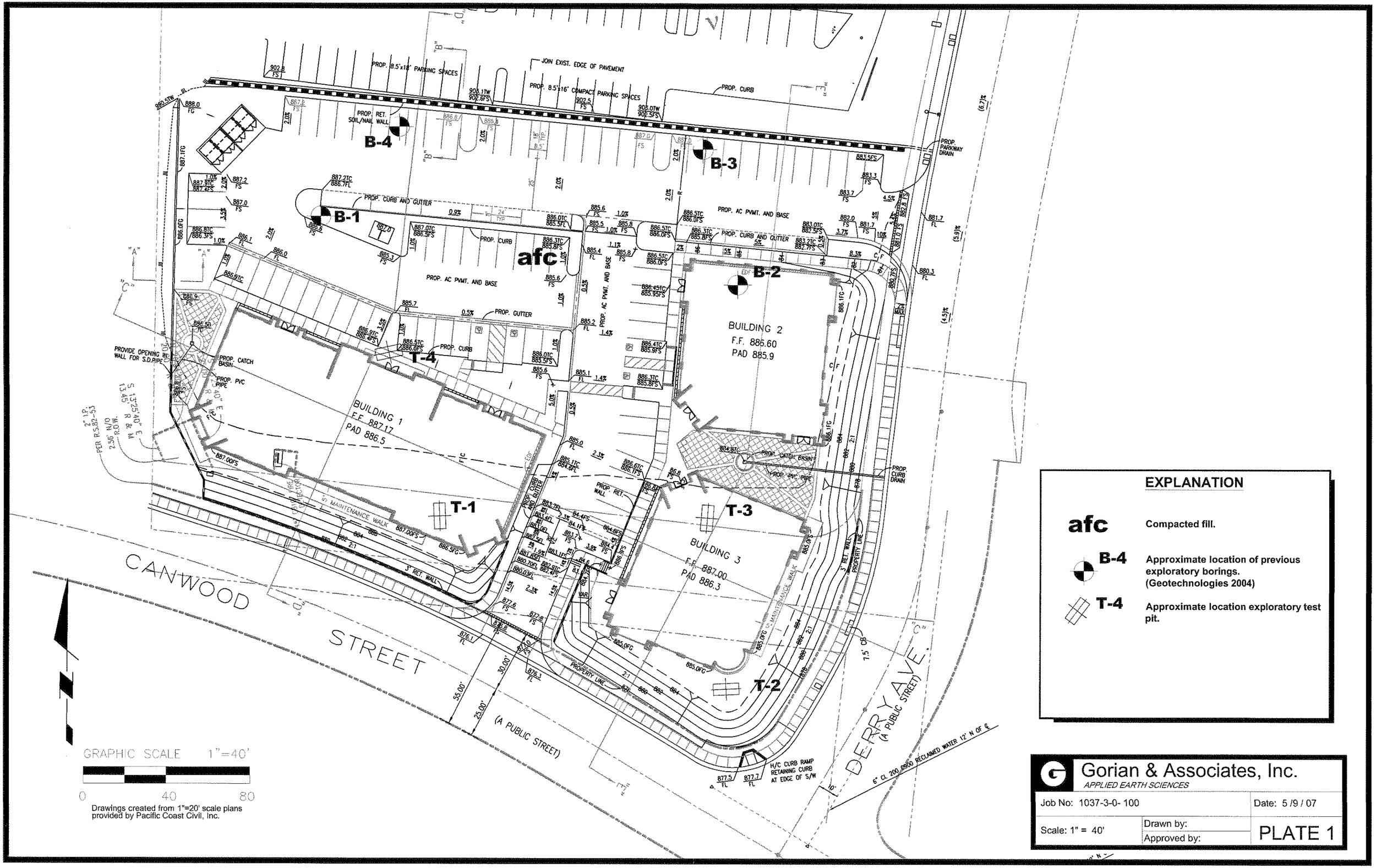
Dibblee, Thomas W. Jr., & Ehrenspeck, Helmut E., 1992. Geologic Map of the Calabasas Quadrangle, Ventura and Los Angeles Counties, California.
Dibblee Geotechnical Foundation Map # 37

REGIONAL GEOLOGIC MAP

Proposed Development
5301 Derry Ave
City of Agoura Hills, California

GORIAN & ASSOCIATES, INC.
APPLIED EARTH SCIENCES

Job No: 1037-3-0-100		
Scale: 1" = 2000'	Drawn by: TC Approved by:	Figure 2



Drawings created from 1"=20' scale plans provided by Pacific Coast Civil, Inc.

EXPLANATION

afc	Compacted fill.
B-4	Approximate location of previous exploratory borings. (Geotechnologies 2004)
T-4	Approximate location exploratory test pit.

Gorian & Associates, Inc.
APPLIED EARTH SCIENCES

Job No: 1037-3-0- 100		Date: 5 /9 / 07
Scale: 1" = 40'	Drawn by:	PLATE 1
	Approved by:	

Z:\gorian\GORIAN MASTER FILES\1037 Dale Poe Agoura Business Center\1037-3\locmap.dwg, 5/14/2007 12:33:07 PM

Appendix D

Drainage Report

DRAINAGE REPORT
FOR
AGOURA BUSINESS CENTER WEST
5301 DERRY AVENUE
AGOURA HILLS, CA 91301

DP 89-648
DPM 06-70585

PREPARED FOR:

AGOURA BUSINESS CENTER WEST, LLC
5304 DERRY AVENUE – STE A
Agoura Hills, CA 91301
TEL: 818.889.2822 x114

PREPARED BY:

WESTLAND CIVIL, INC.
550 ST. CHARLES DRIVE, SUITE 208
THOUSAND OAKS, CA 91360
TEL: 805-495-1330
FAX: 805-446-9125

JUNE, 2008
Revised: Nov. 2008

PREPARED UNDER THE SUPERVISION OF:

11/18/08

DONALD G. WAITE **DATE**

TABLE OF CONTENTS:

INTRODUCTION:

The proposed project is located in the City of Agoura Hills, County of Los Angeles, at the north west corner of Canwood Street and Derry Avenue. The proposed site is for a new 20,661 square foot retail building and parking lot on approximately 2.01 acre site. The site is presently undeveloped.

EXISTING SITE CONDITION:

There presently is a graded level pad, approximately 25' above the intersection of Derry and Canwood. This pad was graded for a future industrial building and parking lot as a part of TR 33249. There is a lower area (south of the pad) which is the old vacated Canwood right-of-way. Canwood Street was realigned in 1991 as a part of extending Canwood Street to Cheseboro Canyon Road. The 36" RCP remained in the old Canwood right-of-way. This storm drain (P.D. No. 1693) is apparently owned by the City but is maintained by L.A. County Flood Control Department. This storm drain is proposed to be relocated as a part of the development. There is also another existing 30" storm drain in new Canwood Street, MTD 1184, which was installed when new Canwood Street was realigned and constructed. It is also maintained by L.A. County Flood Control Department and is proposed to remain in its present location.

The upper graded pad drains in a north east to an existing onsite catch basin on Derry Avenue and drains into a 45" R.C. storm drain pipe (P.D. No. 1693). Drainage runoff from the lower pad sheet flows on to Canwood Street and Derry Avenue. See Exhibit "B", existing onsite drainage conditions.

HYDROLOGIC ANALYSIS:

A. Onsite

Hydrologic analysis for this project was performed in accordance with the procedures presented in Los Angeles County Flood Control District Hydrology Manual Design.

Flows are based on criteria set forth in L.A.C.D.P.W. appendix M- Peak Q's For Small Developed Drainage Areas. The Capital Flood design flow was found to be 7.6 cfs based on an area of 2.0 acres. Since the project is located in an urban area, the flood level adjustment factor of 0.855 was used giving a total site design flow of 6.5 cfs. The entire project is located within Soils No. 28 classification and Rainfall Zone K. See Exhibit "A", Hydrology Map.

B. Offsite

No Hydrology analysis was performed since the drainage shed tributary to existing 36" storm drain (P.D. No. 1693) has not changed westerly of the development. The existing 30" R.C.P. storm drain MTD 1184 in the realigned Canwood Street apparently was designed to handle all existing drainage onto Canwood Street from the high point on Canwood Street to Derry Avenue. No Hydrology Map was discovered by research at City and County Records. See Exhibit "C" for Off Site drainage areas.

A portion of the drainage area tributary to P.D. No. 1693 is part of the proposed Komar Industrial development, recently approved by the City. The remaining drainage area immediately to the West and Northwest is owned by the City of Agoura Hills. At this time, it is not clear what the City is proposing for development on this site. See Exhibit "C".

PROPOSED DRAINAGE:

The existing Upper Pad will be lowered 15'-20' and will be replaced with a parking lot for the retail building. The retail building will be constructed on the corner of Canwood Street and Derry Avenue.

The west portion of the parking lot will drain to a catch basins at the west driveway entrance on Canwood Street, and drain into the relocated 36" storm drain (PD No. 1693) which crosses under the proposed driveway. The relocated storm drain is proposed On

Site along the Northerly R/W line of Canwood Street. An easement will be dedicated to City of Agoura Hills for all portions within private property.
The east portion of the parking lot will drain to onsite catch basins and drainage pipes on Derry Avenue.

The south portion of the building roof, sidewalk, and landscape area along Canwood Street will drain in to several on site catch basins along south and east side of the building and onto Derry Street via a parkway drain and drainage to existing C.B. or Canwood Street near westerly driveway. See Exhibit "A" Hydrology Map (On Site) for more detail of drainage areas.

All onsite storm pipes and catch basins will be sized to meet County/City Hydrology/Hydraulic criteria.

SUSMP & SWPCP REQUIREMENTS:

The project falls under the County guidelines for Standard Urban Stormwater Mitigation Plan (SUSMP) since the development will create more than 25 parking spaces and falls under State Storm Water Pollution Control (SWPCP) Guidelines for construction activities greater than 1-acre.

A SUSMP Plan will be prepared to mitigate post construction storm water pollution activities by providing catch basin filters "FloGard +Plus" inserts along with other BMP Treatment control where feasible. The proposed project drainage connects to existing storm drains on Canwood Street and Derry Avenue non-erosive channels. Therefore, **no** storm water detention is required pursuant to latest County SUSMP guidelines.

A Notice of Intent (N.O.I.) and a SWPCP will be prepared based on Statewide General Permit Guides as administered by the State Water Quality Resources Control Board.

SUMMARY:

The existing 45" storm drain in Derry Avenue was designed to accommodate storm water runoff from the proposed pad for industrial development (TR 33249). Also, the relocated 30" storm drain system in Canwood Street to accommodate the stormwater runoff along the front portions of the property. The new development will either directly or indirectly tie into both storm drain systems. Provisions will be provided for allowing extension of and/or modification of the existing 36" drain inlet at west property line to accommodate drainage runoff to the west from both City and Komar Development.

Development of this site along with the relocation of the 36" storm drain (P.D. 1693) is not dependent on any proposed development in the drainage shed to the west of the development.

Based on this report and the Preliminary Hydrology and Hydraulic calculations, the proposed project will satisfy L.A. County and City of Agoura Hills drainage criteria.

APPENDIX "A"

CHARTS
&
SUPPORTIVE DOCUMENTS

LEGEND

- SOIL CLASSIFICATION AREA
- DEBRIS POTENTIAL AREA
- RAINFALL ZONE
- 12 — 50-YEAR ISOHYET (MAX. 24-HOUR AMOUNT)

LACFCD *hydrology manual*

N

0 FEET 5000

CALABASAS 1952 *hydrologic map*

Figure C-1.25

Area (Acres)	Capital Flood Q's by Rainfall Zone:				
	I	J	K	L	M
0.5	1.8	1.4	2.1	2.6	3.0
1.0	3.3	2.6	4.0	4.9	5.7
1.5	4.8	3.7	5.8	7.1	8.2
2.0	6.2	4.9	7.6	9.2	11.0
2.5	7.6	6.0	9.4	11.0	13.0
3.0	8.9	7.0	11.0	13.0	15.0
3.5	10.0	8.1	13.0	15.0	18.0
4.0	12.0	9.2	14.0	17.0	20.0
4.5	13.0	10.0	16.0	19.0	22.0
5.0	14.0	11.0	18.0	21.0	24.0
5.5	15.0	12.0	19.0	23.0	27.0
6.0	17.0	13.0	21.0	25.0	29.0
6.5	18.0	14.0	23.0	27.0	31.0
7.0	19.0	15.0	24.0	29.0	33.0
7.5	20.0	16.0	26.0	31.0	35.0
8.0	21.0	17.0	27.0	33.0	37.0
8.5	23.0	18.0	29.0	35.0	40.0
9.0	24.0	19.0	30.0	36.0	42.0
9.5	25.0	20.0	32.0	38.0	44.0
10.0	26.0	21.0	34.0	40.0	46.0

NOT for use for Areas Greater Than 10 Acres.

QAREA3.TAB

Flood Level Adjustment	
Flood Level	Factor
10 Yrs.	0.696
Urban	0.855

To Adjust from a Capital Flood to a 10-Year or Urban Flood, Multiply the Table Q by the Factor.

Los Angeles County
Department of Public Works

CAPITAL FLOOD Q'S FOR SMALL DEVELOPED DRAINAGE AREAS
-
RUNOFF COEFFICIENT GROUP B

APPENDIX "B"

HYDROLOGY/DRAINAGE MAPS

PRELIMINARY GRADING

EXISTING SITE MAPS

See Exhibit "C" For Offsite Hydrology

28661 CANWOOD ST APN #2048-012-025 VACANT LOT

EXIST. 2-STORY BLDG PROPERTY UNDER SAME OWNER 2048-012-029

A-1

A-2

A-3

A-4

A-5

A-6

CB #1

CB #2

CB #3

CB #4

CB #5

8" SD

12" SD

LINE "A-1" 12" PVC

EXIST. 36" S.D. & INLET PER PD 1693

PROP BUILDING

EXIST. CB

EXIST. RCP SD PER CITY DWG #C03-42-03 SHT 14 OF 25

CANWOOD STREET

28610 CANWOOD ST APN #2048-012-016

DERRY AVENUE

AGOURA BUSINESS CENTER 5308 DERRY AVE APN #2048-012-019

EXIST. SD PER PD #1693

AGOURA BUSINESS CENTER 5304 DERRY AVE APN #2048-012-019

EXIST. CB

EXIST. CB

CANWOOD ST APN #2048-012-029

PARKWAY DRAIN

LEGEND

A-1 DRAINAGE AREA NO.

DRAINAGE AREA

PROP. CATCH BASIN

PROPOSED ON-SITE STORM DRAIN PIPE, SIZE AS SHOWN.

DRIANAGE AREA:	AREA [AC]	Q_{50}
A-1	0.40	1.50
A-2	0.20	0.76
A-3	0.59	2.32
A-4	0.08	0.29
A-5	0.33	1.25
A-6	0.25	0.95

PREPARED FOR:
AGOURA BUSINESS CENTER WEST
5304 Derry avenue - suite "A"
Agoura Hills, CA 91301
ph: (818) 889-0421

50 0
SCALE: 1" = 50'

EXHIBIT "A"
HYDROLOGY MAP

PREPARED BY: ID #: ABCW.Derry

WESTLAND CIVIL, INC.
CIVIL ENGINEERS PLANNING / DESIGN LAND SURVEYORS
550 ST. CHARLES DR, SUITE 208, THOUSAND OAKS, CA, 91360
(805) 495-1330 FAX: (805) 446-9125

MP-1-1304

NOTES:

1. THIS MAP HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. ADDITIONAL EASEMENTS (IF ANY) ARE NOT SHOWN.
2. THE ELEVATIONS SHOWN HEREON ARE ON AN CITY DATUM.
3. UNDERGROUND UTILITIES (IF ANY) ARE NOT SHOWN.
4. LANDSCAPING AND LANDSCAPE IRRIGATION DEVICES EXIST WITHIN THE PROPERTY AND ARE NOT SHOWN.
5. TREELINE CANOPIES ARE NOT ACCURATE

EXIST. INDUSTRIAL BUILDING

EXISTING BUILDING

PRIVATE FIRE LANE DRIVEWAY

PARKING SPACES

TR. 33249
LOT 2

UPPER PAD

TR. 33249
LOT 1

DERRY DRIVE (PRIVATE STREET)

EASEMENT FOR THE COUNTY OF LOS ANGELES STORM DRAIN AND STORM DRAIN INGRESS AND EGRESS PURPOSES.

EASEMENT TO THE COUNTY OF LOS ANGELES FOR STORM DRAIN INGRESS AND EGRESS PURPOSES. SEE TRACT MAP 33249

CANWOOD ST. (VACATED)

POR. LOT 2

CANWOOD STREET

WROUGHT IRON FENCE

CHAIN LINK FENCE

N

DETAIL "A"

DETAIL "B"

DETAIL "C"

DETAIL "D"

DETAIL "E"

DETAIL "F"

DETAIL "G"

DETAIL "H"

DETAIL "I"

DETAIL "K"

DETAIL "M"

STORM DRAIN AND SANITARY SEWER MANHOLE DETAILS
NOT TO SCALE

SITE

VICINITY MAP
NOT TO SCALE

LEGEND:

FLOW LINE
BOUNDARY EXIST.
O.H. LINES
CONCRETE
EXIST. BLDGS.
WALL
CONCRETE
OVERHANG

FS ..... FINISH SURFACE
TC ..... TOP OF CURB
FF ..... FINISH FLOOR
AC ..... ASPHALT PAVEMENT
CONC ..... CONCRETE
O.H. ..... OVERHEAD
H/C ..... HANDICAP
I.C.V. ..... IRRIGATION CONTROL VALVE
P ..... PARKING SPACE (STANDARD)
PLANTER ..... PLANTER
WM ..... WATER METER
WV ..... WATER VALVE
CO ..... SANITARY SEWER CLEANOUT
SSMH ..... SANITARY SEWER SEWER MANHOLE

VERTICAL DATUM:

BENCH MARK NO. 9969
DATUM: MALIBU
YEAR: 2003
ELEVATION: 879.56'
DESCRIPTION: RDBM TAG IN W END C & G SOR SE COR GRADE AVE & ARGOS ST 15N E & 63N S/O CL INT

EXHIBIT "B"

EXIST. SITE CONDITIONS

TOPOGRAPHIC SURVEY
POR. OF LOT 2, TRACT NO. 33249

5311-5341 DERRY AVE.
AGOURA HILLS, CALIFORNIA

PREPARED FOR:
WESTLAND CIVIL, INC.
C/O DALE POE REAL ESTATE GROUP
550 ST. CHARLES DR. #208
THOUSAND OAKS, CALIFORNIA 91360

PREPARED BY:
Chris Nelson & Associates, Inc.
PROFESSIONAL LAND SURVEYORS
21509 Via Gobea Bvld., 104 Westlake Village, CA. 91362
Voice: 818.991.1040 Fax: 818.991.0014

JOB NO. 08-1789
SCALE: 1" = 20'
DATE: FEB. 2008

SHEET NO.
1
OF 1 SHEETS

60 0 20 40 80
SCALE 1" = 20'

EXHIBIT "C"

DESIGN FREQUENCY Q50

SOIL TYPE 02B

RAINFALL INTENSITY K

CALC. BY ANGVIRE 9-10-81

CHECKED BY

HYDROLOGIC CALCULATION

AREA NO.	AREA ACRES	LAND USE	RUN-OFF COEFF.	EQUIV. 100% IMPERVIOUS AREA ACRES	RAINFALL INTENSITY IN/HR	Q C.F.S.	ΣQ C.F.S.	CONDUIT TYPE & SIZE	SLOPE	V F.P.S.	LENGTH FT.	t_t MIN.	t_c MIN.	LOCATION	REMARKS
1	4.0	U_2	.68	48	3.18	7.9									
2	0.3	ST.	.87	90	"	0.8	10.7								
3	4.2	IND	.87	90		11.6	22.3								
4	11.2	U_2	.68	48		24.2	46.5								
5	4.3	IND	.87	90		11.9	58.4								
6	9.2	U_2	.68	48		19.9	78.3								
7	4.5	"	.87	90		12.5									
8	3.7	"	.87	"		10.2	101								
9	2.4	"	.87	"		6.6									
10	4.6	"	.87	"		12.7									
11	2.1	"	.87	"		5.8	120								
12	4.5	"	.87	"		12.5	139								
13	2.2	"	.87	"		6.1	145								
14	8.0	COM	.86	"		21.9	167								
15	13.8	IND	.87	"		38.2									
16	0.6	IND	.87	"		1.7									
17	7.3	COM	.86	"		20.0	227								
18	4.8	FNY	.87	"		13.2	240								
19	1.7	"	.87	"		4.7	245								
20	3.3	"	.87	"		9.1	254								

DEPARTMENT OF COUNTY ENGINEER/FACILITIES
Environmental Development Division
RECEIVED
OCT 05 1981

978

928

SCALE 1"=500'

CHESEBRO

DRIVE

CONEJO VIEW

TR. No 28415

DRAIN AREA TO
36" S.D. (PD 1693)
Q=38.2 CFS

CITY PROPERTY

930

KOMAR DEVELOPMENT

CANWOOD

PROJECT SITE

ΣA = 87.5 AC.
Tc = 10 MIN
ΣQ = 227

101 FREEWAY

EX 66" RCP

BM 854

ROAD

Junction

APPROVED HYDROLOGY STUDY

APPROVED
Date 7/14/81
By: [signature]
ENVIRONMENTAL DEVELOPMENT

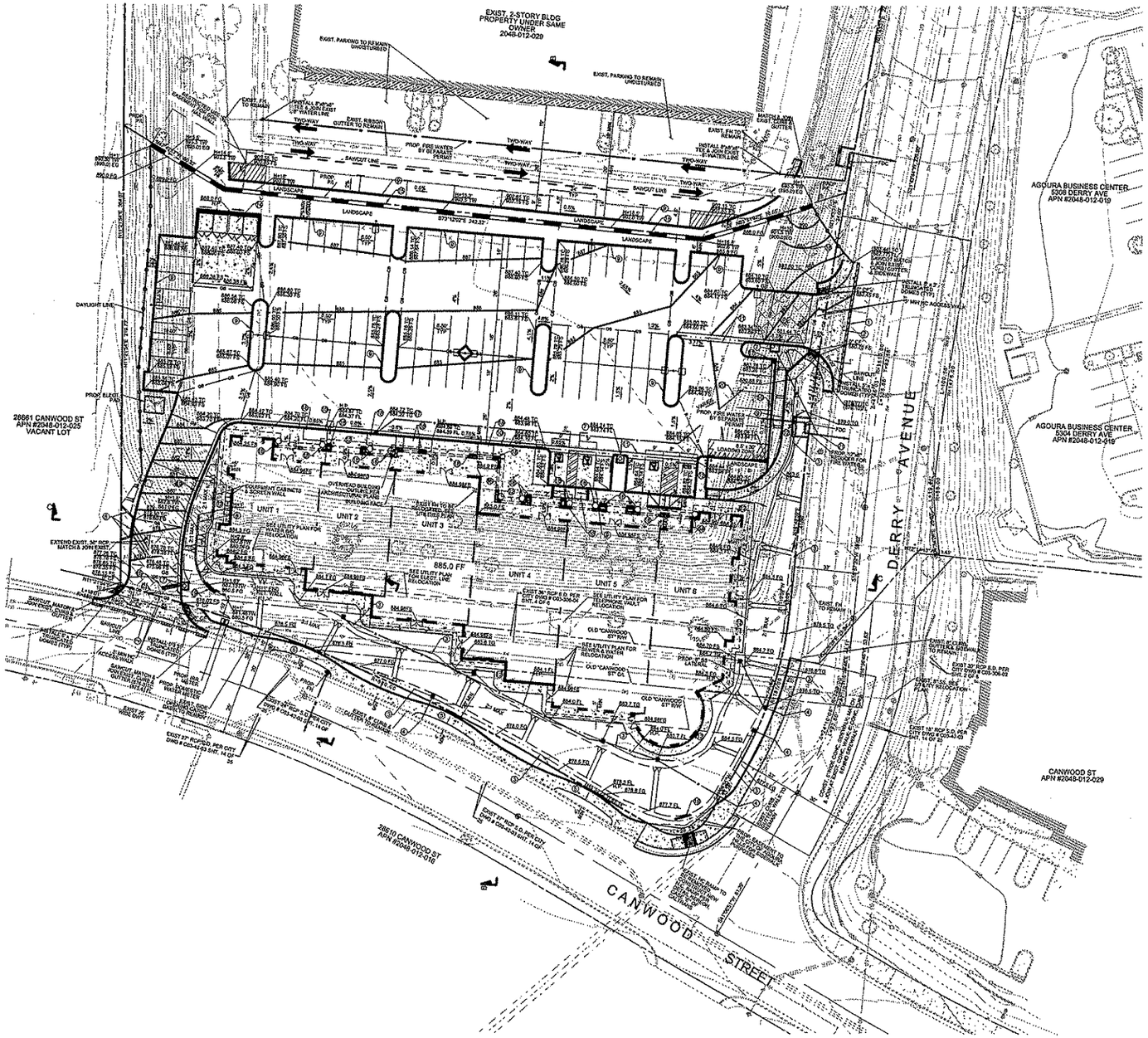
DEPARTMENT OF
COUNTY ENGINEER-FACILITIES
Environmental Development Division
RECEIVED
JUL 14 1981

APPROVED HYDROLOGY PD 1693

TRACT NO. 33249 DRAINAGE STUDY

C-29-81

EXHIBIT "C"



LEGEND:

- EXIST. WATER LINE.
- EXIST SEWER LINE
- EXIST. ELECT. LINE
- EXIST. TELEPHONE LINE
- EXIST GAS LINE
- EXIST STORM DRAIN
- EXIST. RECLAIMED WATER LINE
- PROP. DRAINAGE LINE
- PROP. SEWER LINE, MIN 1% SLOPE
- PROP. WATER LINE & SERVISE
- PROP. FIRE WATER LINE
- PROP DOMESTIC WATER LINE
- PROP. ELECT. LINE
- PROP. COMMUNICATION LINE (TELEPHONE, CABLE TV)
- PROP. RECLAIMED WATER LINE
- PROPERTY LINE
- EXIST ELEVATION
- C.O PROP. SEWER CLEAN OUT.
- SMH PROP. SEWER MANHOLE
- EXIST. SEWER MANHOLE
- C/L CENTERLINE
- PROP. PARKING LIGHTS BY OTHERS

ABBREVIATIONS:

CONC.	CONCRETE
Cb	CURB
D	DRAIN PIPE
EG	EXISTING GROUND
ES	EXISTING SURFACE
FL	FLOW LINE
FG	FINISH GRADE
FS	FINISH SURFACE
GB	GRADE BREAK
Hw	HEIGHT OF RETAINING
HP	HIGH POINT
INV	INVERT
LIP	CONC. GUTTER LIP
L.P.	LOW POINT
P/L	PROPERTY LINE
PP	POWER POLE
PVMT	PAVEMENT
R/W	RIGHT OF WAY
TC	TOP OF CURB

CONTRUCTION NOTES:

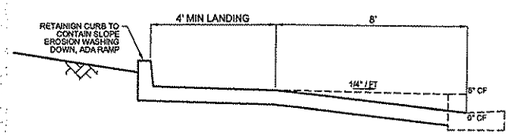
1. SAWCUT AND REMOVE EXISTING PAVEMENT SECTION. 4" A.C. ON 6" A.B. MIN. OR AS RECOMMENDED BY THE SOILS ENGINEER.
2. CONSTRUCT COMMERCIAL DRIVEWAY APPROACH PER A.P.W.A. STD 110-1, TYPE C, 6" THICK PCC, MODIFIED WITH 20' RADIUS, W=28'
3. GRADE 2' WIDE GRASS LINED 4" DEEP SWALE.
4. CONSTRUCT PARKWAY DRAIN PER A.P.W.A. STD PLAN 150-2, CASE II INLET.
5. CONSTRUCT 5' MEANDERING SIDEWALK WITH 6" SLOUGH CURB BEHIND SIDEWALK AND THICKENED EDGES PER CITY STANDARDS.
6. CONSTRUCT CONC. HEADWALL AND WINGWALL PER CALTRANS STD D 86 B. PIPE DIA = 36" R.C.P. REMOVE EXIST. CONC. HEADWALL AND WINGWALL, JOIN EX. 36" R.C.P. WITH NEW 36" R.C.P. TO PROP HEADWALL.
7. CONST. 3.5' SIDE OPENING CATCH BASIN PER A.P.W.A. 300-2.
8. CONST. RETAINING WALL BY SEPARATE PERMIT, 6' HIGH MAX.
9. CONST. 6" CONC. CURB.
10. CONST. 6" CONC. CURB AND GUTTER.
11. CONST. 3' WIDE CONC. GUTTER.
12. CONST. 4.5' WIDE, 4" THICK CONC. SIDEWALK, MODIFIED TO 5' WIDE AROUND BUILDING.
13. CONST. H.C. RAMP PER STATE TITLE 24 A.D.A. STDS.
14. PROP. TRASH ENCLOSURE PER ARCHITECTURAL PLANS.
15. CONST. SOIL/NAIL RETAINING WALL BY SEPARATE PERMIT.
16. INSTALL 18" R.C.P. S.D. WITH JUNDTION STRUCTURE, CONNECT TO EXIST. 36" R.C.P. S.D.
17. CONST. 24"X24" BROOKS CB OR EQUAL.
18. PROP. TREE WELL, VINE POCKETS, SEE LANDSCAPE PLANS.
19. MONUMENT SIGN PER ARCHITECTURAL PLANS.
20. INSTALL 12" PVC STORM DRAIN PIPE.
21. CONNECT DRAIN PIPE TO EXIST CB.

NOTE:

1. SEE UTILITY RELOCATION PLAN FOR ABANDOMENT OF CONFLICTING PUBLIC UTILITIES
2. NO OAK TREES ON CONSTRUCTION SITE.

LIGHTING:

PROP. PARKING LIGHTS BY OTHERS



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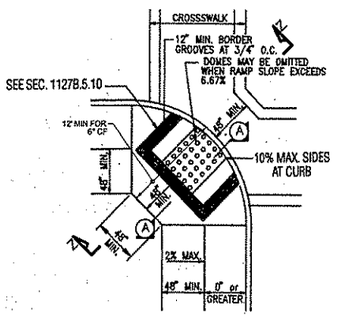
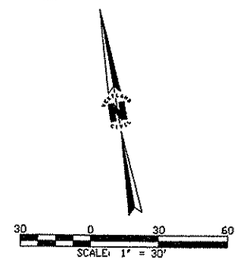


CASE "E" HC RAMP DETAIL

NTS



REGISTERED PROFESSIONAL ENGINEER
DONALD G. VAITE
No. 27364
Exp. 31 MAR 2009
CIVIL
STATE OF CALIFORNIA

UNDERGROUND SERVICE ALERT

CALL TOLL FREE
1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

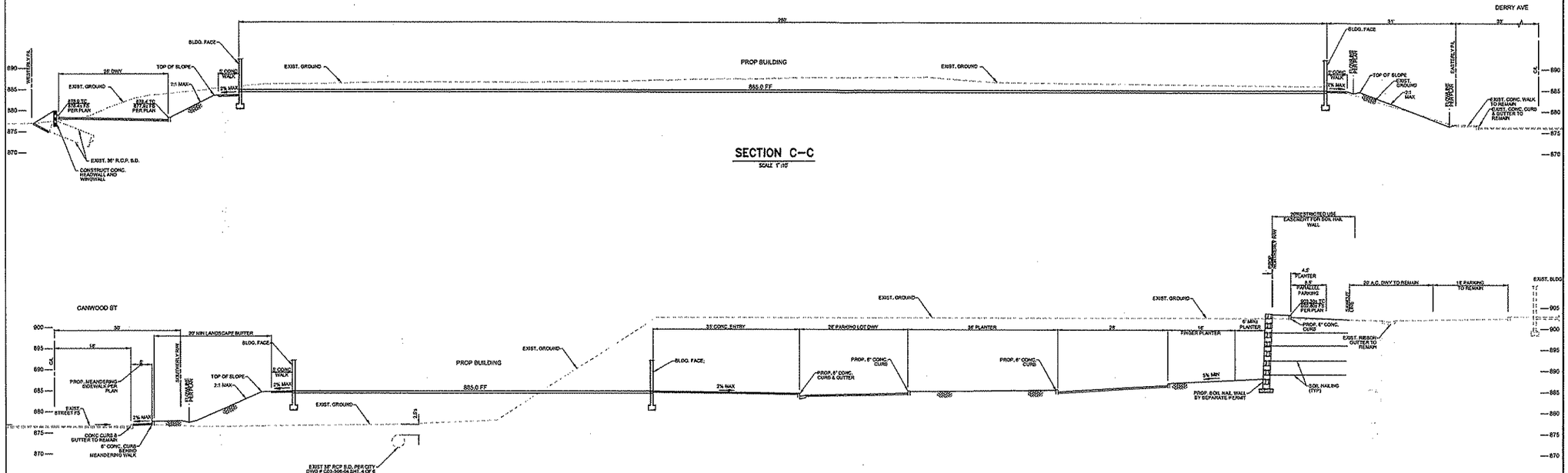
PREPARED BY
WESTLAND CIVIL, INC.
CIVIL ENGINEERS PLANNING / DESIGN LAND SURVEYORS
350 ST. CHARLES DR, STATE 208, THOUSAND OAKS, CA, 91360
(805) 495-1330 FAX: (805) 446-9125

ID#: ABCW.Derry

CITY OF AGOURA HILLS

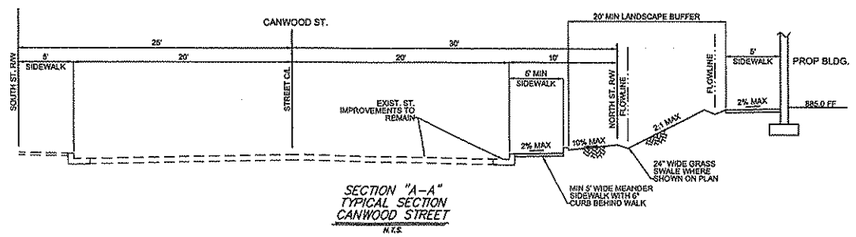
PRELIMINARY GRADING / DRAINAGE PLAN

AGOURA BUSINESS CENTER WEST, LLC
5301 DERRY AVENUE,
AGOURA HILLS, CALIFORNIA



SECTION C–C
SCALE 1":10'

SECTION B–B
SCALE 1":10'



SECTION "A–A"
TYPICAL SECTION
CANWOOD STREET
N.T.S.

PREPARED BY

WESTLAND CIVIL, INC.
CIVIL ENGINEERS PLANNERS / SURVEY LAND SURVEYORS
300 ST. CHARLES DR. SUITE 306, THOUSAND OAKS, CA. 91360
(805) 495-1220 FAX (805) 644-9153

REGISTERED ENGINEER NO. 27304 DATE

I.D.#: ABCW.Derry

AGOURA BUSINESS CENTER WEST, LLC

AGOURA BUSINESS CENTER WEST

5301 DERRY AVENUE
AGOURA HILLS, CALIFORNIA

DATE	REMARKS	DATE	REMARKS

PA / PM:	
DRAWN BY:	
JOB NO.:	

SHEET
SHT. 2 OF 2

GR-E-1260

11/10/2008

NEW HEADWALL & INLET STRUCTURE

EXIST 36" RCP S.D. PER CITY DWG # C03-306-04 SHT. 4 OF 6

ST. STA 24+44.4± JOIN TO EXIST STORM DRAIN (870.34)± INV, 36" RCP WITH CONC.

EXIST. UNDERGROUND ELECT. PER SCE PLANS

RELOCATE EXIST. VAULT

PROP. TELEPHONE VAULT, SEE PACIFIC BELL PLANS (APPROX. LOCATION)

EXIST R/W

PROP. TELE. LINE SEE PACIFIC BELL PLANS

EXIST EP

JOIN EXIST 36" SD

869.90±INV

EXIST SD M.H.

PROP. 6" RECLAIMED WATER

HOT TAP GATE VALVE

EXIST 8" CURB & GUTTER

EXIST 6" PVC WATER LATERAL PER LVMWD DWG. 07446

EXIST FH

EXIST 6" PVC WATER LATERAL PER LVMWD DWG. 07446

EXIST 2" WATER LATERAL PER LVMWD DWG. 07446

EXIST EP

EXIST 27" RCP S.D. PER CITY DWG # C03-42-03 SHT. 14 OF 25, MTD #1184

REMOVE EXIST. PRIVATE BACK FLOW DEVICE, SERVICE TO BLDGS A, B & C PER LVMWD 00438 SHT 2 OF 6

TELEPHONE LINE PER PACIFIC BELL PLANS (APPROX. LOCATION)

EXIST 6" RECLAIM WATER LINE PER LAS VIRGENES MUNICIPAL WATER DISTRICT DWG NO. S-095 SHEET 7 OF 47

EXIST 12" WATER LINE PER LAS VIRGENES MUNICIPAL WATER DISTRICT BEWO 5639-15 SHEET 48 & 49 OF 58

EXIST 8" V.C.P. SEWER PER P.C. 9999 PAGE 2

EXIST 24" RCP S.D. PER CITY DWG # C03-42-03 SHT. 14 OF 25

PROP. ELECT. VAULT, SEE SCE PLANS

PROP. ELECT. LINE SEE SCE PLANS

PROP. 36" R.C.P. STORM DRAIN LOCATION (SEE NOTE 8)

PROP. TELE. LINE SEE PACIFIC BELL PLANS

EXIST 27" RCP S.D. PER CITY DWG # C03-42-03 SHT. 14 OF 25, MTD#1184

PROP. FH

PROP. 8" SEWER

PROP. 6" RECLAIMED WATER

EXIST FH TO BE REMOVED

PARCEL 1
TENTATIVE PARCEL MAP #65503
TOTAL AREA 2.01 AC

PROPOSED BUILDING
885.0 FF

EXIST 36" RCP S.D. PER CITY DWG # C03-306-04 SHT. 4 OF 6 PD# 1693

EXIST. UNDERGROUND ELECT. LINE ABANDON ??? PER SCE PLANS DWG 0043118

EXIST 2-18" RCP S.D. PER CITY DWG # C03-306-04 SHT. 4 OF 6

OLD "CANWOOD ST" R/W LINE

EXIST. 6" WYE

OLD "CANWOOD ST" C/L

OLD "CANWOOD ST" R/W LINE

EXIST. 7'x9'x5' DEEP CONC. BLOCK PER PER LAS VIRGENES MUNICIPAL WATER DISTRICT BEWO 5639-15 SHEET 48 & 49 OF 58

EXIST 18" RCP S.D. PER CITY DWG # C03-42-03 SHT. 14 OF 25, MTD #1184

EXIST.12" PVC, CL 200, C900 WATERLINE PER LVMWD DWG 07446

EXIST 63" RCP S.D. P.D. #1693 PER SHT. 2 OF 6, TR 33249

PROP. 8" SEWER 300' RADIUS

SMH

PROP. 12" WATER

EXIST 63" RCP S.D. P.D. #1693 PER SHT. 2 OF 6, TR 33249

REMOVE EXIST. 12"-90° ELBOW, INSTALL 12"x12" TEE, 12" GV

EXIST.12" PVC, CL 200, C900 WATERLINE PER LVMWD DWG 07446

INSTALL 6"x6" TEE, 3-6" G.V. 3' STUB & END CAP WITHRUST BLOCK

EXIST 30" RCP S.D. PER CITY DWG # C03-42-03 SHT. 14 OF 25, MTD #1184

EXIST. FH

EXIST 18" RCP S.D. P.D. #1693 PER SHT. 2 OF 6, TR 33249

EXIST. UNDERGROUND ELECT. PER SCE PLANS

EXIST 12" WATER LINE PER LAS VIRGENES MUNICIPAL WATER DISTRICT BEWO 5639-15 SHEET 48 & 49 OF 58

EXIST. FH TO REMAIN

PROP. ELECT. LINE, SEE SCE PLANS

PROP. TELE. LINE SEE PACIFIC BELL PLANS

EXIST 45" RCP S.D. P.D. #1693 PER SHT. 2 OF 6, TR 33249

PROP. TELE. VAULT SEE PACIFIC BELL PLANS

DERRY

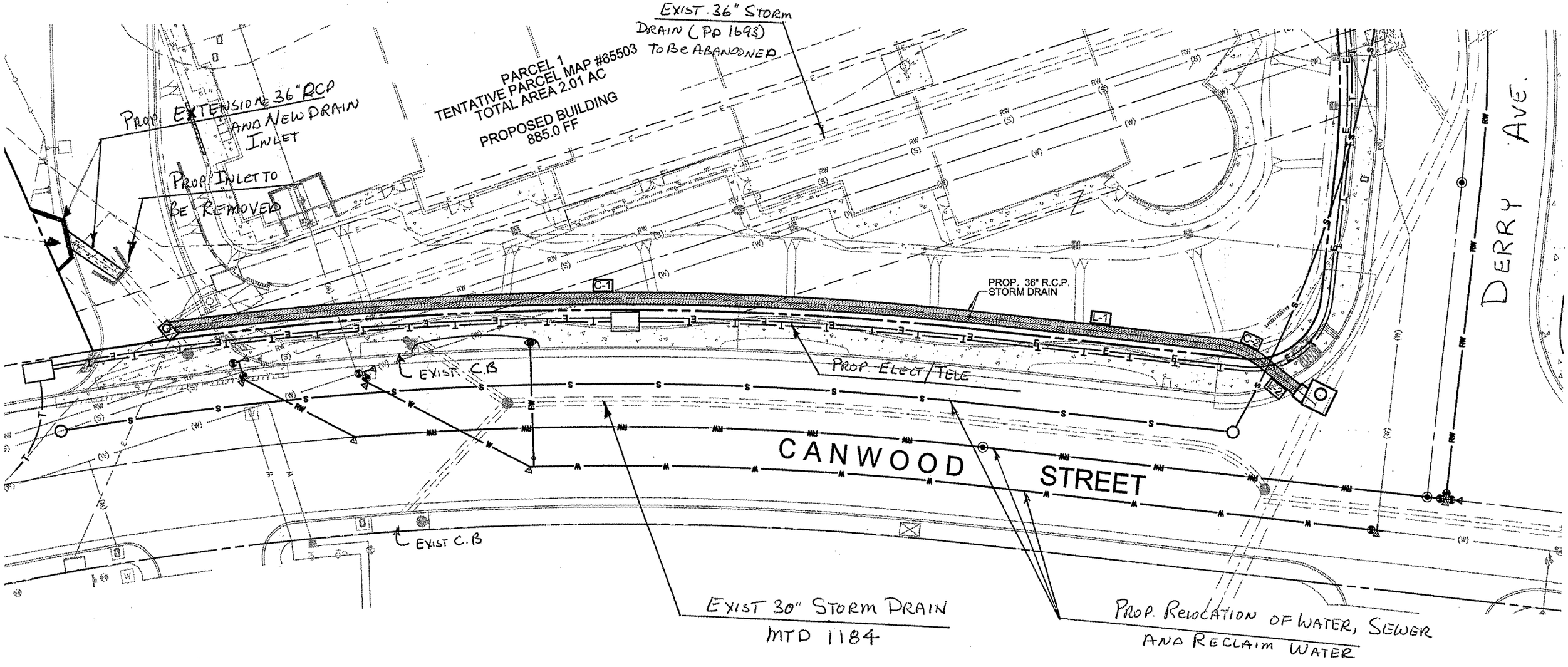
PROP. 6" RECLAIMED WATER

EXIST 18" RCP S.D. PER CITY DWG # C03-42-03 SHT. 14 OF 25

EXIST 18" RCP S DWG # C03-42-0

CANWOOD STREET

STORM DRAIN / ULTILITY RELOCATION EXHIBIT



STORM DRIAN RELOCATION EXHIBIT

Appendix E

Noise Measurments and Modeling Results

Agoura Business Center West Project - Onsite Noise Measurments

C:\LARDAV\SLMUTIL\BUSCTR.bin Event Data
*

Meas Site	Max Date	Max Time	Lmax	Duration	Leq	SEL	Lmax	Peak	Uwpk	Sym	Decay	Type
0	30Dec 08	14:09:51	14:16:49	554.6	68.1	95.5	88.3	100.1	110.1	75.4	0	0
0	30Dec 08	14:19:11	14:20:03	640.1	67.8	95.9	83.3	100.7	105.4	8.2	0	0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Clareton&Proj Dr Cum W/Out Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	601.0
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	12.5
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	12.5
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Clareton&Proj Dr Cum W/Out Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Clareton&Proj Drive Cum

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	630.7
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	13.1
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	13.1
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Clareton&Proj Drive Cum

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Clareton&Proj Drive

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	494.4
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	10.3
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	10.3
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Clareton&Proj Drive

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	65.4

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Clareton&Proj Drive Project

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	29.8
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	0.6
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	0.6
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Clareton&Proj Drive Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	53.2

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Derry&Colodny Cum W/Out Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	581.8
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	12.1
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	12.1
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Derry&Colodny Cum W/Out Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.1

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Derry&Colodny Cum

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	602.9
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	12.6
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	12.6
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Derry&Colodny Cum

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Derry&Colodny Existing

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	432.9
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	9.0
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	9.0
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Derry&Colodny Existing

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	64.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Derry&Colodny Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	22.1
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	0.5
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	0.5
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Derry&Colodny Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	51.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Proj Dr&Derry Cum W/Out Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	588.5
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	12.3
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	12.3
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Proj Dr&Derry Cum W/Out Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.2

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Proj Drive&Derry Cum

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	611.5
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	12.7
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	12.7
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Proj Drive&Derry Cum

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	66.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Proj Drive&Derry Existing

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	482.8
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	10.1
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	10.1
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Proj Drive&Derry Existing

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	65.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Canwood btw Proj Drive&Derry Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	23.0
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	0.5
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	0.5
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Canwood btw Proj Drive&Derry Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	52.1

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Derry btw Proj Drive&Canwood Cum W/Out Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	416.6
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	8.7
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	8.7
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Derry btw Proj Drive&Canwood Cum W/Out Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	64.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Derry btw Proj Drive&Canwood Cum

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	441.6
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	9.2
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	9.2
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Derry btw Proj Drive&Canwood Cum

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	64.9

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Derry btw Proj Drive&Canwood Existing

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	400.3
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	8.3
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	8.3
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Derry btw Proj Drive&Canwood Existing

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	64.5

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Derry btw Proj Drive&Canwood Proj

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	25.0
Average automobile speed (mph):	45.0
Medium truck volume (v/h):	0.5
Average medium truck speed (mph):	40.0
Heavy truck volume (v/h):	0.5
Average heavy truck speed (mph):	40.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

Derry btw Proj Drive&Canwood Proj

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	52.4