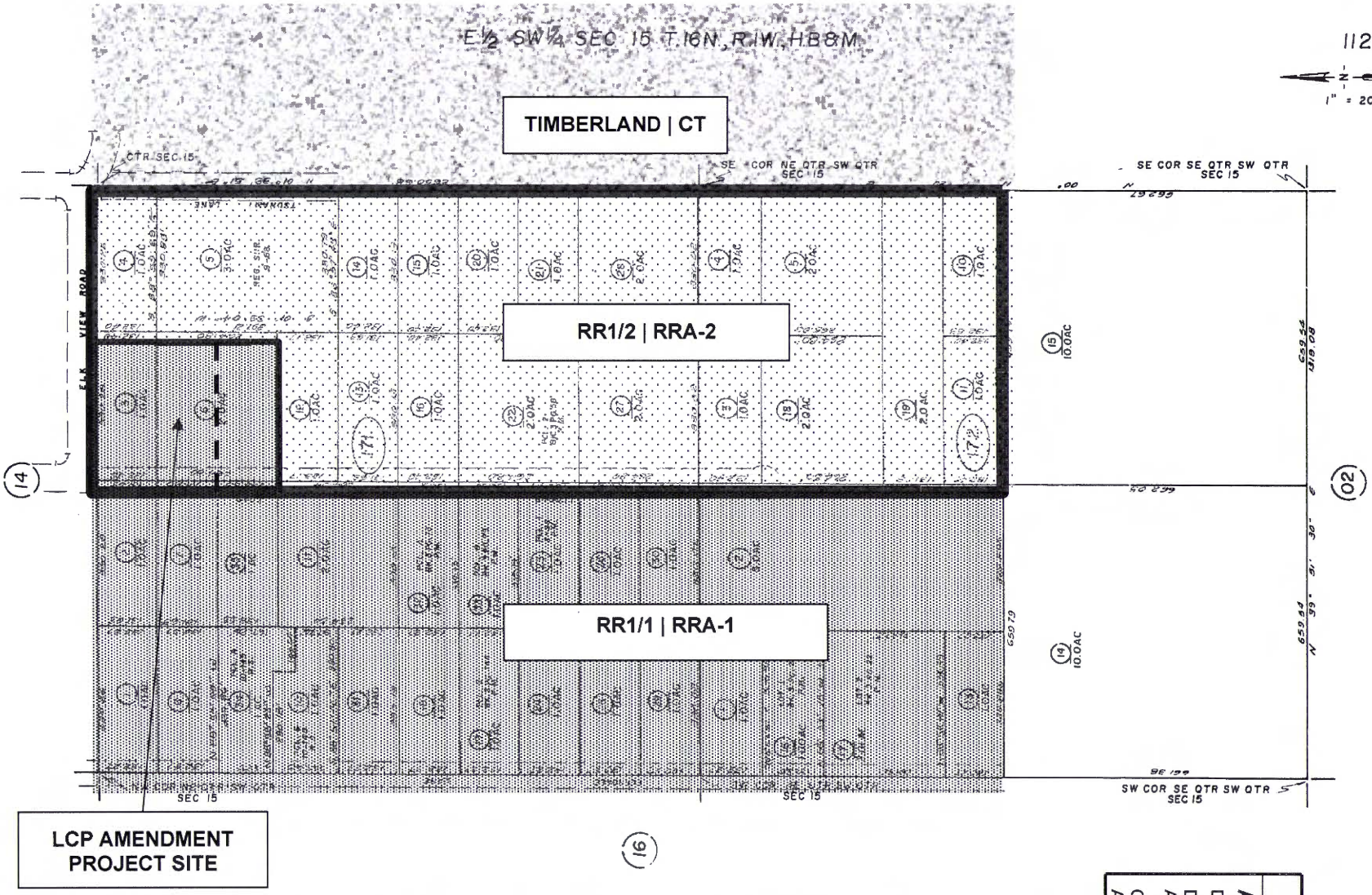


REDESIGNATION OF PROJECT SITE ONLY: 1 POTENTIAL NEW DWELLING SITE

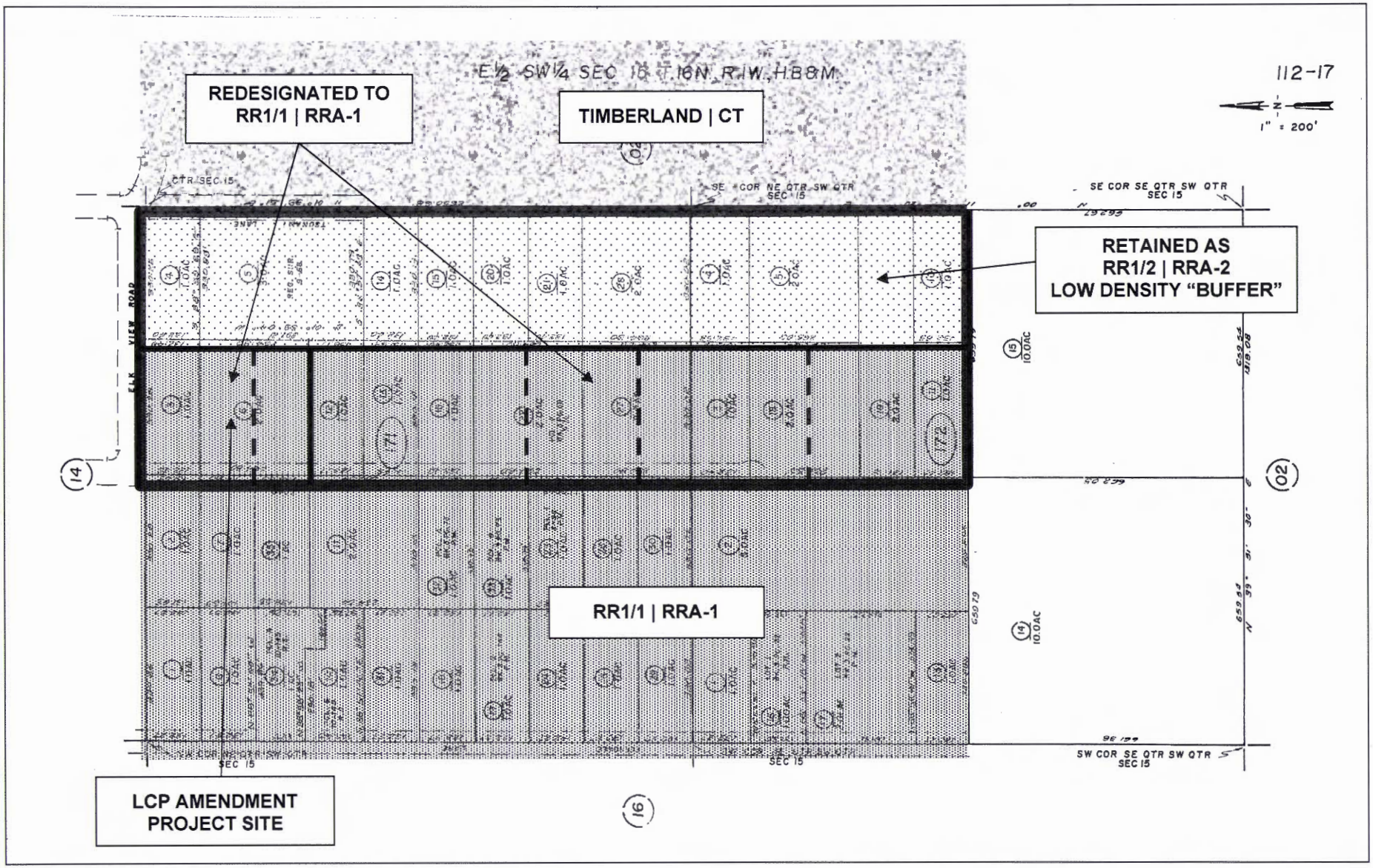
EXHIBIT NO. 13

APPLICATION NO.

DNC-MAJ-1-09

DEL NORTE COUNTY LCP AMENDMENT (HOGBERG)

CUMULATIVE IMPACT ANALYSIS (1 of 2)



PRECEDENT-DRIVEN REDESIGNATION OF PROJECT SITE AND SIMILAR PARCELS IN DUNDAS ROAD NEIGHBORHOOD AREA: 4 POTENTIAL NEW DWELLING SITES

292

PLANNING AREA NO. 4

Useable Parcels subject to Rural Land Division Standards

April 12, 2006

Parcels by Development	Number	Percentage
Developed Parcels	273	64.4%
Undeveloped Parcels	151	35.6%

Total parcels considered useable: 424

EXHIBIT NO. **14**

APPLICATION NO.

DNC-MAJ-1-09

DEL NORTE COUNTY LCP AMENDMENT (HOGBERG)

RURAL LAND DIVISION STUDY (1 of 10)

DNC-MAJ-1-05
Hogberg LCP Amendment
SURROUNDING AREA
Coastal Query MODIFIED

Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	

Surrounding Area Total Acreage	362.15
# OF USEABLE PARCELS	264
# of Parcels Developed	199
Parcel Size Average	1.37
Parcel Size Median	1.60
Parcel Size Mode	1.00

2 of 10

DNC - MAJ - 1 - 05
HOGBERG LCP AMENDMENT
ATTACHMENT

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	
3	11203202	Y	1	Y	1.20	
4	11203203	N		Y	0.08	
5	11203204	N		Y	0.37	
6	11203205	N		Y	0.19	
7	11203207	N		Y	0.19	
8	11203209	N		Y	0.83	
9	11203211	N		Y	0.18	
10	11203212	N		Y	0.37	
11	11203213	Y	1	Y	4.13	
12	11203501	N		Y	0.08	
13	11203502	N		Y	0.37	
14	11203506	N		Y	0.25	
15	11203507	N		Y	0.12	
16	11203509	Y	1	Y	0.83	
17	11203510	Y	1	Y	0.83	
18	11203511	N		Y	2.87	
19	11203512	N		Y	2.95	
20	11203608	Y	1	Y	0.83	
21	11203609	Y	1	Y	0.83	
22	11203611	N		Y	2.49	
23	11204003	Y	1	Y	2.00	
24	11204004	N		Y	1.00	
25	11204005	Y	1	Y	2.00	
26	11204006	N		Y	2.00	
27	11204020	Y	1	Y	0.99	
28	11204021	Y	1	Y	0.66	
29	11204022	Y	1	Y	0.99	
30	11204023	Y	1	Y	0.99	
31	11204026	Y	1	Y	2.50	
32	11204027	Y	1	Y	0.17	
33	11204028	Y	1	Y	0.43	
34	11204030	Y	1	Y	1.05	
35	11204032	Y	1	Y	2.50	
36	11204033	Y	1	Y	2.50	
37	11204045	N		Y	0.67	
38	11212105	N		Y	1.62	
39	11212106	Y	1	Y	1.00	
40	11212107	Y	1	Y	2.00	
41	11212108	N		Y	1.00	
42	11212109	N		Y	1.00	
43	11212110	N		Y	2.00	
44	11212111	Y	1	Y	1.00	

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	
45	11212112	Y	1	Y	2.00	
46	11212113	Y	1	Y	2.00	
47	11212114	Y	1	Y	1.00	
48	11212115	Y	1	Y	2.00	
49	11212120	Y	1	Y	1.00	
50	11212121	Y	1	Y	1.00	
51	11212122	Y	1	Y	1.00	
52	11212123	Y	1	Y	1.00	
53	11212124	Y	1	Y	1.00	
54	11212125	N		Y	1.00	
55	11212126	Y	1	Y	1.00	
56	11212127	Y	1	Y	2.00	
57	11212128	Y	1	Y	1.00	
58	11212129	Y	1	Y	1.00	
59	11212135	Y	1	Y	2.00	
60	11212136	Y	1	Y	1.47	
61	11212138	N		Y	2.00	
62	11212139	Y	1	Y	1.00	
63	11212140	N		Y	1.28	
64	11212141	Y	1	Y	1.74	
65	11212142	Y	1	Y	1.00	
66	11212143	Y	1	Y	1.00	
67	11212201	Y	1	Y	1.00	
68	11212202	Y	1	Y	1.00	
69	11212204	Y	1	Y	2.00	
70	11212205	N		Y	2.00	
71	11212206	Y	1	Y	1.00	
72	11212207	Y	1	Y	1.00	
73	11212208	Y	1	Y	1.00	
74	11212210	Y	1	Y	1.00	
75	11212211	N		Y	2.00	
76	11212212	N		Y	2.00	
77	11212214	Y	1	Y	5.00	
78	11212215	N		Y	10.00	
79	11212216	N		Y	1.00	
80	11212217	N		Y	3.00	
81	11212218	Y	1	Y	1.00	
82	11212219	N		Y	3.00	
83	11212220	Y	1	Y	2.01	
84	11212221	Y	1	Y	2.01	
85	11213105	Y	1	Y	1.62	
86	11213106	N		Y	1.62	

4 of 10

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	
87	11213109	N		Y	1.00	
88	11213110	Y	1	Y	1.00	
89	11213112	Y	1	Y	1.00	
90	11213113	N		Y	1.00	
91	11213114	N		Y	1.00	
92	11213115	Y	1	Y	1.00	
93	11213116	N		Y	1.00	
94	11213117	N		Y	1.00	
95	11213119	Y	1	Y	1.00	
96	11213121	Y	1	Y	1.00	
97	11213122	Y	1	Y	1.00	
98	11213126	N		Y	1.00	
99	11213127	Y	1	Y	1.00	
100	11213128	Y	1	Y	1.00	
101	11213129	Y	1	Y	1.00	
102	11213130	Y	1	Y	1.00	
103	11213131	N		Y	1.00	
104	11213132	Y	1	Y	1.50	
105	11213133	Y	1	Y	0.50	
106	11213137	Y	1	Y	2.07	
107	11213139	Y	1	Y	1.00	
108	11213140	Y	1	Y	1.00	
109	11213141	Y	1	Y	1.00	
110	11213142	Y	1	Y	1.00	
111	11213204	Y	1	Y	1.00	
112	11213207	Y	1	Y	1.00	
113	11213209	N		Y	1.00	
114	11213210	Y	1	Y	1.00	
115	11213211	N		Y	2.00	
116	11213212	Y	1	Y	2.00	
117	11213213	N		Y	1.00	
118	11213217	N		Y	1.00	
119	11213218	Y	1	Y	1.00	
120	11213219	N		Y	1.00	
121	11213220	Y	1	Y	1.00	
122	11213221	N		Y	1.00	
123	11213223	Y	1	Y	1.00	
124	11213227	Y	1	Y	2.01	
125	11213228	Y	1	Y	2.01	
126	11213229	N		Y	2.01	
127	11213231	Y	1	Y	1.00	
128	11213233	Y	1	Y	2.01	

5 of 10

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	if Y Parcel Size AC	
129	11213234	Y	1	Y	1.00	
130	11213235	Y	1	Y	8.04	
131	11213236	Y	1	Y	2.00	
132	11214125	Y	1	Y	1.00	
133	11214163	Y	1	Y	3.48	
134	11214164	N		Y	1.10	
135	11214203	Y	1	Y	0.52	
136	11214204	Y	1	Y	1.00	
137	11214205	Y	1	Y	1.00	
138	11214207	Y	1	Y	1.00	
139	11214208	Y	1	Y	2.00	
140	11214209	Y	1	Y	1.00	
141	11214210	Y	1	Y	1.00	
142	11214211	N		Y	1.00	
143	11214212	Y	1	Y	1.00	
144	11214214	Y	1	Y	1.00	
145	11214215	Y	1	Y	1.00	
146	11214217	Y	1	Y	1.00	
147	11214219	Y	1	Y	1.00	
148	11214220	Y	1	Y	1.00	
149	11214223	Y	1	Y	2.00	
150	11214228	Y	1	Y	1.01	
151	11214229	Y	1	Y	1.01	
152	11214230	Y	1	Y	1.01	
153	11214235	Y	1	Y	1.00	
154	11214236	Y	1	Y	1.14	
155	11214237	Y	1	Y	1.88	
156	11214238	Y	1	Y	1.51	
157	11214239	Y	1	Y	1.00	
158	11214240	Y	1	Y	1.00	
159	11214241	Y	1	Y	2.00	
160	11214242	Y	1	Y	0.79	
161	11214243	Y	1	Y	1.00	
162	11214244	Y	1	Y	1.00	
163	11214245	Y	1	Y	1.00	
164	11216102	Y	1	Y	1.00	
165	11216103	Y	1	Y	1.00	
166	11216104	Y	1	Y	1.00	
167	11216105	Y	1	Y	1.00	
168	11216109	Y	1	Y	3.65	
169	11216111	Y	1	Y	2.00	
170	11216112	Y	1	Y	1.00	

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	
171	11216113	N		Y	1.00	
172	11216116	Y	1	Y	1.00	
173	11216117	Y	1	Y	1.00	
174	11216118	Y	1	Y	1.00	
175	11216119	Y	1	Y	1.00	
176	11216120	Y	1	Y	1.00	
177	11216122	N		Y	1.00	
178	11216123	N		Y	1.00	
179	11216124	N		Y	1.00	
180	11216125	N		Y	1.00	
181	11216129	Y	1	Y	1.00	
182	11216138	Y	1	Y	1.00	
183	11216143	Y	1	Y	1.00	
184	11216144	Y	1	Y	1.50	
185	11216147	Y	1	Y	1.00	
186	11216148	Y	1	Y	1.00	
187	11216150	Y	1	Y	2.01	
188	11216153	Y	1	Y	1.00	
189	12116155	Y	1	Y	1.00	
190	11216156	Y	1	Y	1.00	
191	11216159	Y	1	Y	2.00	
192	11216160	Y	1	Y	2.00	
193	11216161	Y	1	Y	1.00	
194	11216162	Y	1	Y	1.00	
195	11216163	Y	1	Y	2.51	
196	11216165	Y	1	Y	1.00	
197	11216166	Y	1	Y	1.00	
198	11216201	Y	1	Y	1.00	
199	11216202	Y	1	Y	1.00	
200	11216203	Y	1	Y	1.00	
201	11216206	Y	1	Y	1.00	
202	11216207	Y	1	Y	1.00	
203	11216208	Y	1	Y	1.00	
204	11216209	Y	1	Y	1.00	
205	11216210	Y	1	Y	1.00	
206	11216211	Y	1	Y	1.00	
207	11216213	N		Y	1.00	
208	11216214	Y	1	Y	1.00	
209	11216215	Y	1	Y	1.00	
210	11216216	Y	1	Y	1.00	
211	11216217	Y	1	Y	1.00	
212	11216218	Y	1	Y	1.00	

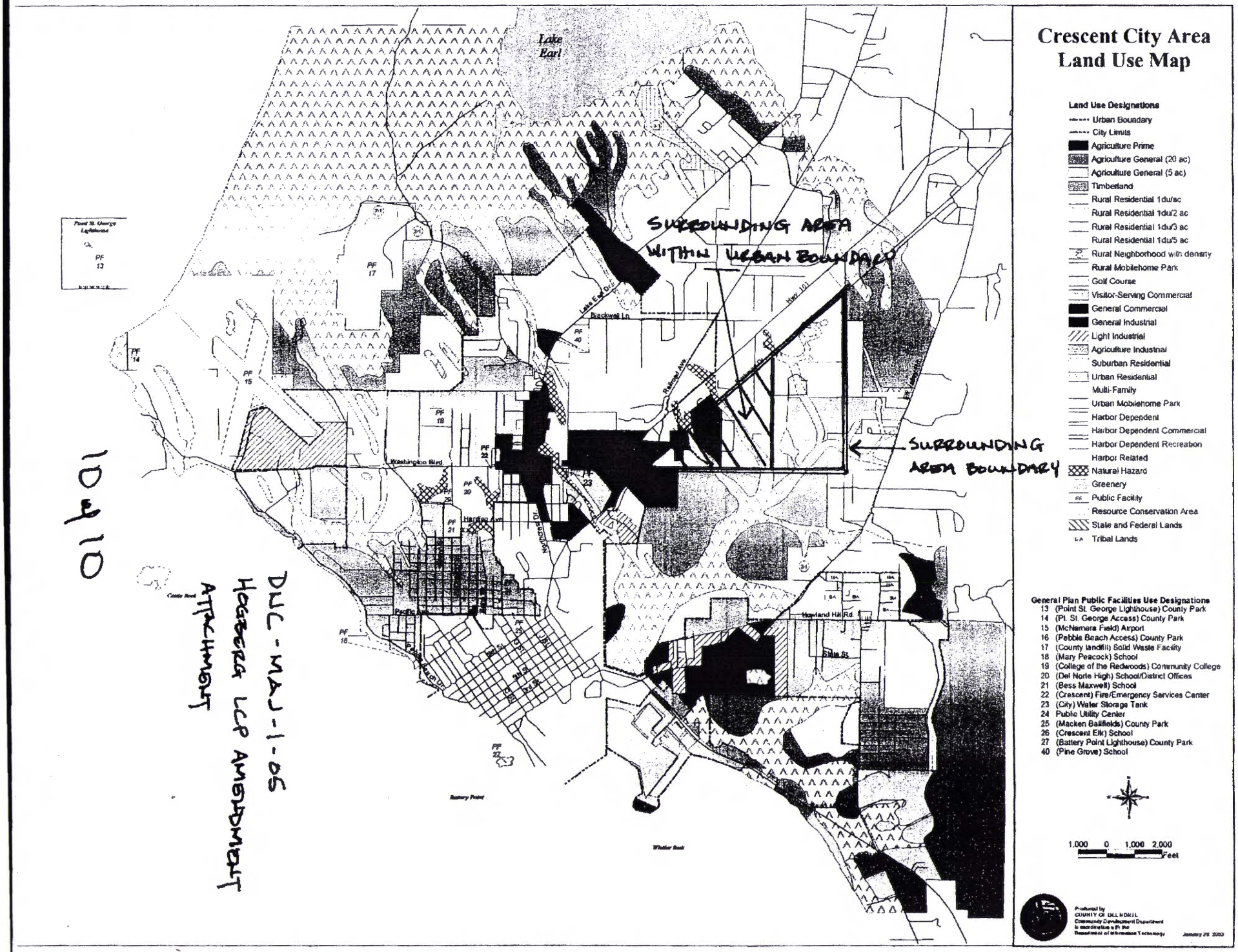
7410

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	
213	11216219	Y	1	Y	1.00	
214	11216221	Y	1	Y	1.00	
215	11216222	Y	1	Y	1.00	
216	11216223	Y	1	Y	2.00	
217	11216224	Y	1	Y	1.00	
218	11216226	Y	1	Y	1.00	
219	11216227	N		Y	1.00	
220	11216228	Y	1	Y	1.00	
221	11216229	Y	1	Y	1.00	
222	11216230	Y	1	Y	4.00	
223	11216231	Y	1	Y	1.06	
224	11216232	Y	1	Y	2.00	
225	11217101	Y	1	Y	1.00	
226	11217102	Y	1	Y	1.00	
227	11217103	Y	1	Y	1.00	
228	11217104	Y	1	Y	1.00	
229	11217105	Y	1	Y	3.00	
230	11217106	N		Y	2.00	
231	11217107	N		Y	1.00	
232	11217108	Y	1	Y	1.00	
233	11217110	Y	1	Y	1.00	
234	11217111	Y	1	Y	2.00	
235	11217112	Y	1	Y	1.00	
236	11217113	Y	1	Y	1.00	
237	11217114	Y	1	Y	1.00	
238	11217115	Y	1	Y	1.00	
239	11217116	Y	1	Y	1.00	
240	11217118	Y	1	Y	1.00	
241	11217119	Y	1	Y	1.00	
242	11217120	?		Y	1.00	
243	11217122	Y	1	Y	2.00	
244	11217123	Y	1	Y	1.00	
245	11217124	Y	1	Y	1.00	
246	11217125	Y	1	Y	1.00	
247	11217126	Y	1	Y	1.00	
248	11217127	Y	1	Y	2.00	
249	11217129	Y	1	Y	1.00	
250	11217130	N		Y	1.00	
251	11217131	Y	1	Y	1.00	
252	11217132	Y	1	Y	1.00	
253	11217133	Y	1	Y	1.00	
254	11217134	Y	1	Y	1.00	

8 of 10

	A	B	C	D	E	F
1	DNC-MAJ-1-05 Hogberg LCP Amendment SURROUNDING AREA Coastal Query MODIFIED					
2	Parcel Number	Developed	count if Y	Within Surrounding Area Y or N	If Y Parcel Size AC	
255	11217135	Y	1	Y	1.00	
256	11217201	N		Y	1.00	
257	11217202	N		Y	5.00	
258	11217203	N		Y	1.00	
259	11217205	N		Y	2.00	
260	11217210	N		Y	1.00	
261	11217211	Y	1	Y	1.00	
262	11217215	N		Y	10.00	
263	11217216	Y	1	Y	1.00	
264	11217217	Y	1	Y	2.01	
265	11217218	Y	1	Y	2.00	
266	11217219	Y	1	Y	2.00	

9 of 10


Crescent City Area
Land Use Map
Land Use Designations
Urban Boundary
City Limits
Agriculture Prime
Agriculture General (20 ac)
Agriculture General (5 ac)
Timberland
Rural Residential 1du/ac
Rural Residential 1du/2 ac
Rural Residential 1du/3 ac
Rural Residential 1du/5 ac
Rural Neighborhood with density
Rural Mobilehome Park
Golf Course
Visitor-Serving Commercial
General Commercial
General Industrial
Light Industrial
Agriculture Industrial
Suburban Residential
Urban Residential
Multi-Family
Urban Mobilehome Park
Harbor Dependent
Harbor Dependent Commercial
Harbor Dependent Recreation
Harbor Related
Natural Hazard
Greenery
Public Facility
Resource Conservation Area
State and Federal Lands
Tribal Lands
General Plan Public Facilities Use Designations
13 (Point St. George Lighthouse) County Park
14 (Pt. St. George Access) County Park
15 (McNamara Field) Airport
16 (Pebble Beach Access) County Park
17 (County landfill) Solid Waste Facility
18 (Mary Peacock) School
19 (College of the Redwoods) Community College
20 (Del Norte High) School/District Offices
21 (Bess Maxwell) School
22 (Crescent) Fire/Emergency Services Center
23 (City) Water Storage Tank
24 Public Utility Center
25 (Macken Ballfields) County Park
26 (Crescent Elk) School
27 (Battery Point Lighthouse) County Park
40 (Pine Grove) School
1,000 0 1,000 2,000
Feet
Produced by
COUNTY OF DEL NORTE
Community Development Department
in coordination with the
Department of Information Technology
January 28 2003
Lake Earl
SURROUNDING AREA WITHIN URBAN BOUNDARY
SURROUNDING AREA BOUNDARY
Lake Earl Dr.
Blackwell Ln.
Washington Blvd.
Harding Ave.
Northcrest Dr.
Railroad Ave.
Howland Hill Rd.
State St.
Battery Point
Whaler Rock
Castle Rock
Point St. George Lighthouse
PF 13
PF 14
PF 15
PF 16
PF 17
PF 18
PF 20
PF 21
PF 22
PF 23
PF 27
PF 40
10 of 10
DNC-MAJ-1-05
HOGBERG LCP AMENDMENT
ATTACHMENT

STOVER ENGINEERING

Civil Engineers and Consultants

PO Box 783 - 711 H Street
Crescent City CA 95531
Tel: 707.465.6742
Fax: 707.465.5922
info@stovereng.com

HEIDI KUNSTAL, PLANNER
DEL NORTE COUNTY
COMMUNITY DEVELOPMENT DEPT.
981 H STREET
CRESCENT CITY, CA 95531

Job Number: 3668

26 April 2005

RE: R0504C—Traffic Evaluation for APN 112-171-06

Dear Heidi:

You requested that we demonstrate the adequacy of Dundas Road for handling the additional traffic that would be potentially created by rezoning the above-referenced parcel from RRA-2-MFH to RRA-1-MFH. The proposed rezone area consists of seven parcels (refer to attached map of the proposed rezone area). The rezone potentially would permit the creation of three additional residential lots in the area: two 1-acre parcels on Tsunami and one 1-acre parcel on Dundas Road. It is my opinion that the proposed rezoning will not adversely impact the current level of service at the intersection of Dundas Road and Elk View Road. Development other than that contemplated in this letter may require additional study..

The proposed rezone area is serviced by Dundas Road on the west, Elk View Road on the north and Tsunami Lane on the east. The traffic study area consists of 26 existing parcels plus 3 new parcels under the proposed rezone. It is assumed that at full development for the proposed rezone area, all trip ends generated will run directly to Dundas Road. The existing trips generated and the trips generated due to the proposed rezone for am and pm times of the day were analyzed at the intersection of Dundas Road and Elk View Road. Attached trip generation estimates were developed using the ITE Trip Generation Manual, 5th Edition. Under the existing zoning, the estimated maximum trip generation is 3 entering (PM) and 3 exiting (AM). The same is estimated with the proposed addition of 3 residences. There are no measurable changes between the current zoning and the proposed. No other turning patterns were estimated for this traffic evaluation.

This rezone will not adversely affect the existing level of service on Dundas Road. I trust this provides the documentation you require. Please feel free to contact me if you have any questions.

Very truly yours,

STOVER ENGINEERING

Erik Weber

Erik Weber, PE
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
ERIK WEBER
EW
No. C 62547
Exp. 12/31/05
4/29/05

Enclosures: 12 pages

EXHIBIT NO. 15
APPLICATION NO.
DNC-MAJ-1-09
DEL NORTE COUNTY LCP AMENDMENT (HOGBERG)
TRAFFIC IMPACT STUDY (1 of 14)

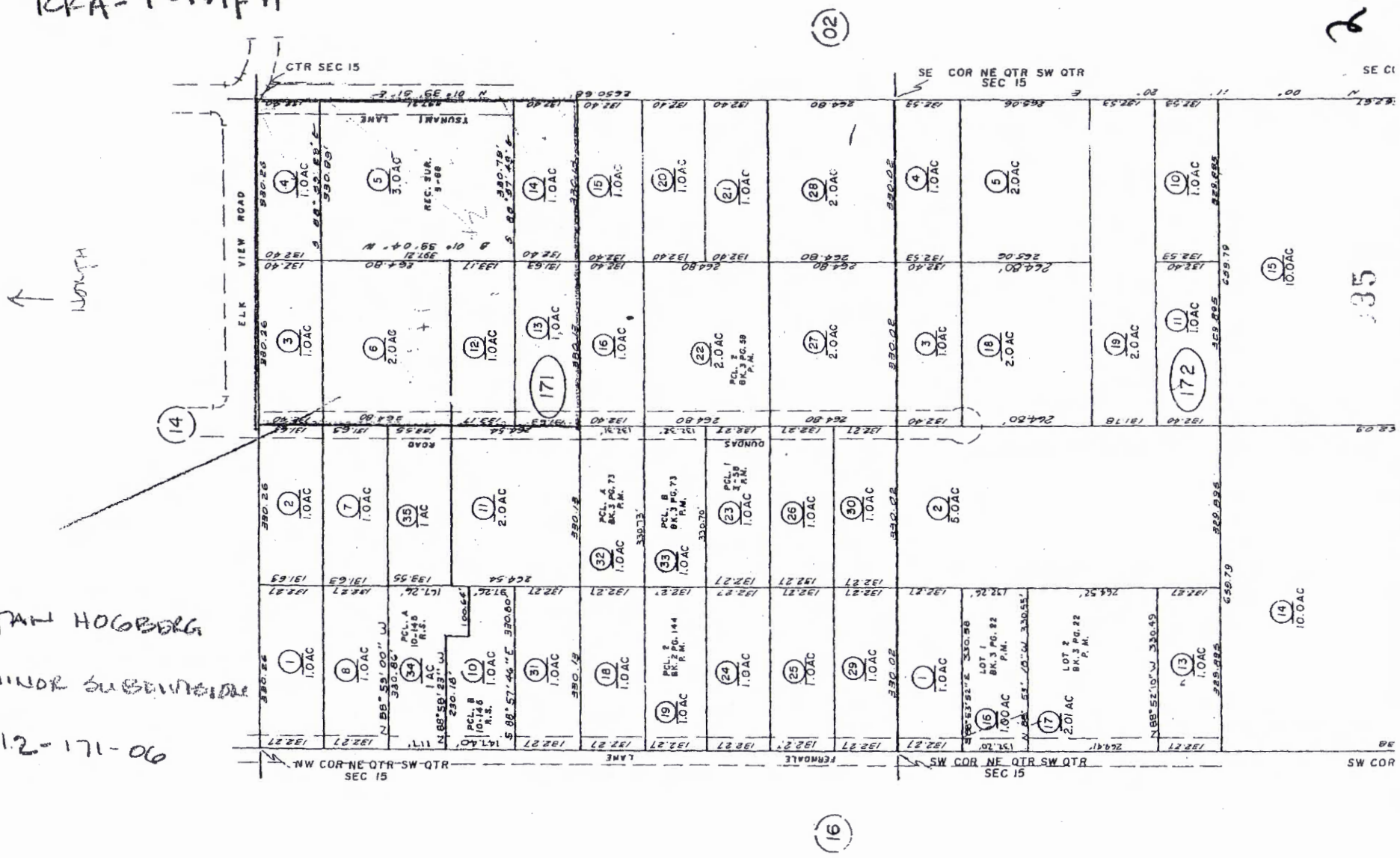
S:\3668 - Stan Hogburn\trafficanalysis.doc

REZONE FROM

RRA-2-MFH TO

RRA-1-MFH

E½ SW¼ SEC 15 T.16N., R.1W., H.B.&M.



STAN HOGBERG

MINOR SUBDIVISION

112-171-06

Page 2

35

STOVER ENGINEERING
711 H Street
Crescent City, CA 95531
(707) 465-6742 Fax (707) 465-5922

JOB 3668 - TRAFFIC IMPACT ANALYSIS
SHEET NO. 1 OF 5
CALCULATED BY RS DATE 4-25-05
CHECKED BY _____ DATE _____
SCALE _____

DISCUSSION W/ COMMUNITY DEVELOPMENT DEPT RESULTED IN DEFINITION OF PROPOSED REZONE BOUNDARY (REFER TO ATTACHED SHT. 4/5) & REQUEST THAT INTERSECTION OF ELK VIEW RD. & DUNDAS BE ANALYZED & THAT GENERATED TRIPS FROM PROPOSED TOWNHOME PARCELS ARE ASSUMED TO BE 100% DIRECTED TO THAT INTERSECTION, DUNDAS & ELK VIEW RD.

IMPACT @ DUNDAS & ELK VIEW RD. INTERSECTION

EXISTING CONDITION = ZONING, RRA-2-MFH

"ADJACENT" (SOUTH OF ELK VIEW)
DWELLING UNITS 1. FROM TOWNHOME/ELK VIEW RD TO DUNDAS-ELK VIEW RD INTERSECTION = 6 EA
(DU)

"STREET" (SOUTH OF ELK VIEW)
2. FROM DUNDAS TO DUNDAS-ELK VIEW RD INTERSECTION = 20 EA

- REFER TO SHT. 2 OF 5 FOR THE STUDY AREA BOUNDARY.

PROPOSED CONDITION = ZONING, RRA-1-MFH

REFER TO SHT. 4/5 FOR PROPOSED REZONE AREA

#1 - DU = 8 EA, ADJACENT = PARCELS ON TOWNHOME SO. OF ELK VIEW & ON ELK VIEW N & S, BETWEEN TOWNHOME & DUNDAS

#2 - DU = 31 EA, STREET = PARCELS ON DUNDAS, SOUTH OF ELK VIEW RD.

- REFER TO SHT. 2 OF 5 FOR THE STUDY AREA BOUNDARY.

TRIP GENERATIONS - USING ITE, 5TH EDITION TRIP GENERATION MANUAL CHART 210 FOR "ADJACENT TRAFFIC" & "PEAK HOUR"

ANALYZE EXISTING & PROPOSED @ INTERSECTION OF DUNDAS & ELK VIEW RD.

AM - "ADJACENT TRAFFIC"

1. EXISTING CONDITION, DU = 6 EA.
FROM CHART, FITTED CURVE = $\ln(T) = .867 \ln(X) + .238$
T = 2 TRIPS, EXISTING "ADJACENT" AM

TRAFFIC STUDY AREA

SHT. 2 OF 5

DWELLING UNITS - BASIS FOR "EXISTING" DU's

" " "PROPOSED" DU's

EXISTING

DUNDAS - DU = 20 ////

ADJACENT - DU = 6

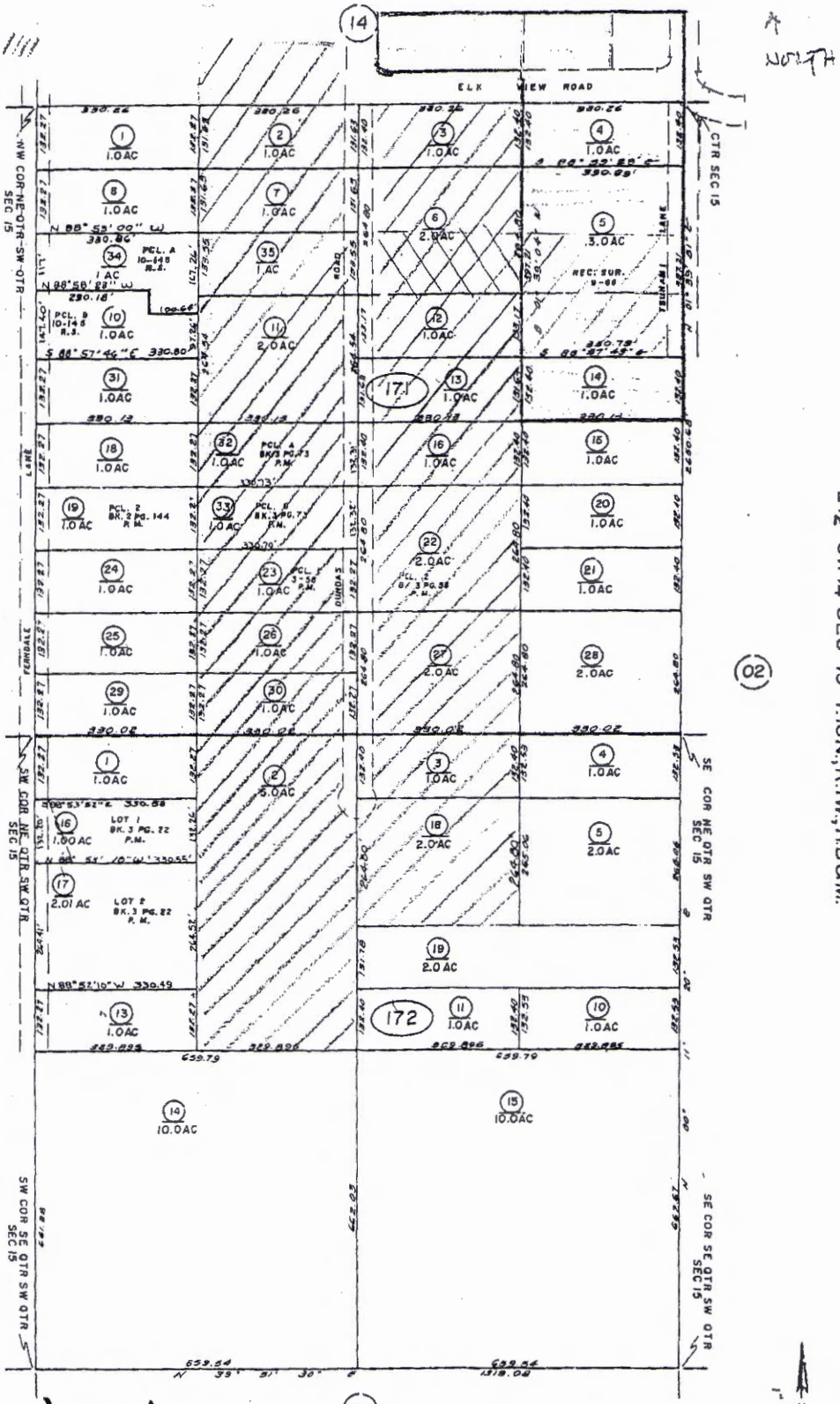
PROPOSED

DUNDAS - DU = 21

//// +

ADJACENT - DU = 8

+



4 of 14

112-17

STOVER ENGINEERING
711 H Street
Crescent City, CA 95531
(707) 465-6742 Fax (707) 465-5922

JOB 3668 - TRAFFIC IMPACT ANALYSIS
SHEET NO. 3 OF 5
CALCULATED BY RS DATE 4-25-05
CHECKED BY _____ DATE _____
SCALE _____

TRIP GENERATION
- CONTINUED - FROM SHT. 1 OF 5

AM - "ADJACENT TRAFFIC" - CONTINUED
2. PROPOSED - DUs = 8
FROM FITTED CURVE, T = 2 TRIPS, PROPOSED ADJACENT AM

PM - "ADJACENT TRAFFIC"
1. EXISTING, DUs = 6
FROM FITTED CURVE, Ln(T) = .502 Ln(x) + .528
T = 2 TRIPS, EXISTING ADJACENT PM
2. PROPOSED, DUs = 8
FROM FITTED CURVE, T = 2 TRIPS PROPOSED ADJACENT PM

AM - "STREET" - FROM DUNONS, SOUTH OF ELK VIEW RD.
1. EXISTING, DUs. = 20 EA.
FROM FITTED CURVE, Ln(T) = .858 Ln(x) + .464
T = 3 EA. EXIST. STREET AM
2. PROPOSED, DUs = 21 EA.
FROM FITTED CURVE, T = 3 EA PROPOSED STREET AM

PM - "STREET"
1. EXISTING, DUs = 20
FITTED CURVE: Ln(T) = .832 Ln(x) + .590
T = 3 EA. EXIST. STREET PM
2. PROPOSED, DUs = 21, FITTED CURVE: T = 3 EA PROPOSED STREET PM

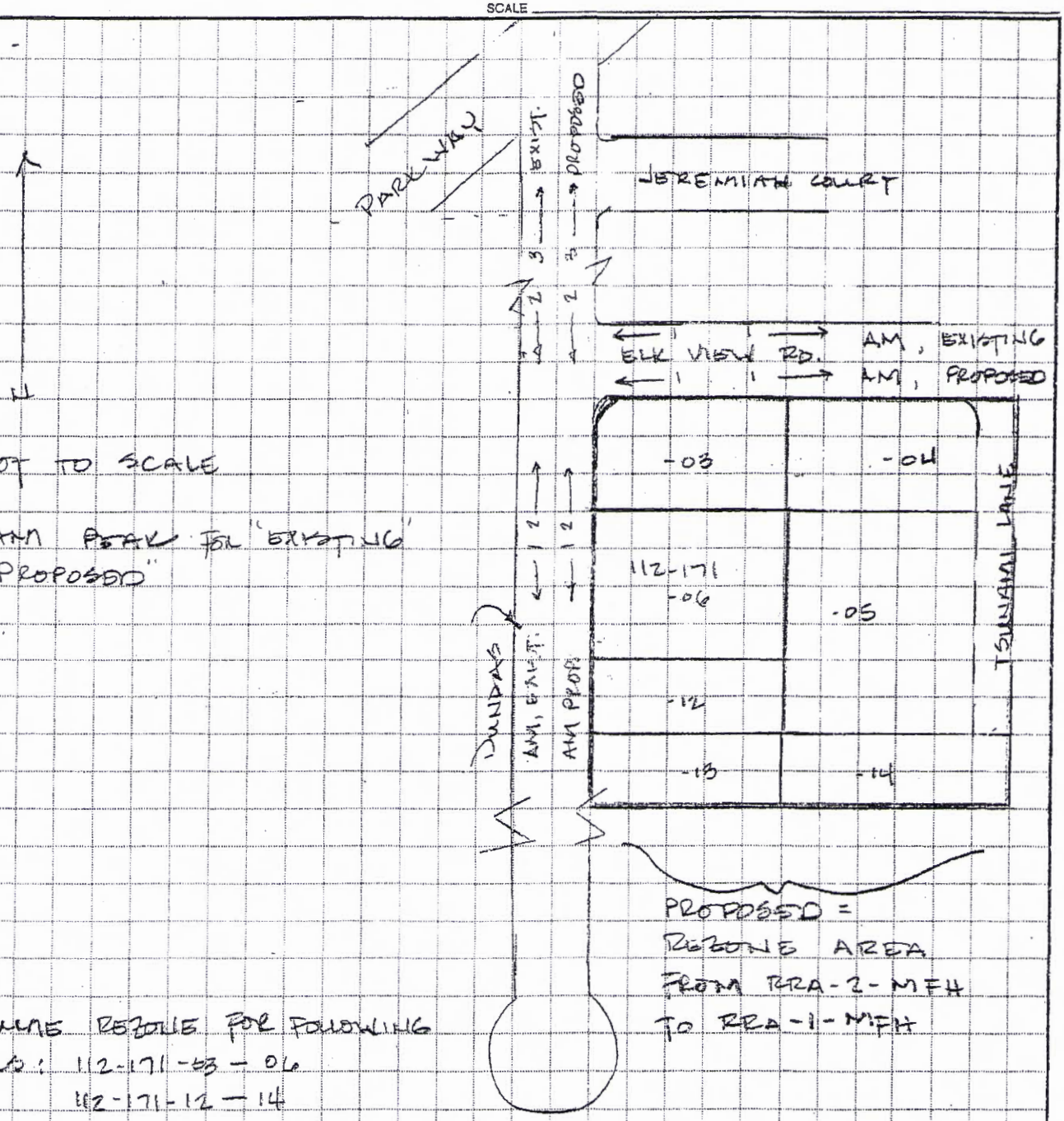
SUMMARY — NUMBER OF TRIPS

	EXISTING		PROPOSED	
	AM	PM	AM	PM
ADJACENT	2	2	2	2
STREET	3	3	3	3

STOVER ENGINEERING
711 H Street
Crescent City, CA 95531
(707) 465-6742 Fax (707) 465-5922

JOB 36668 TRAFFIC ANALYSIS, AM
SHEET NO. 4 OF 5
CALCULATED BY DATE 4-15-05
CHECKED BY DATE
SCALE

AM -



NOT TO SCALE

AM PEAK FOR "EXISTING" & "PROPOSED"

PROPOSED = REZONE AREA FROM RRA-2-MFH TO RRA-1-MFH

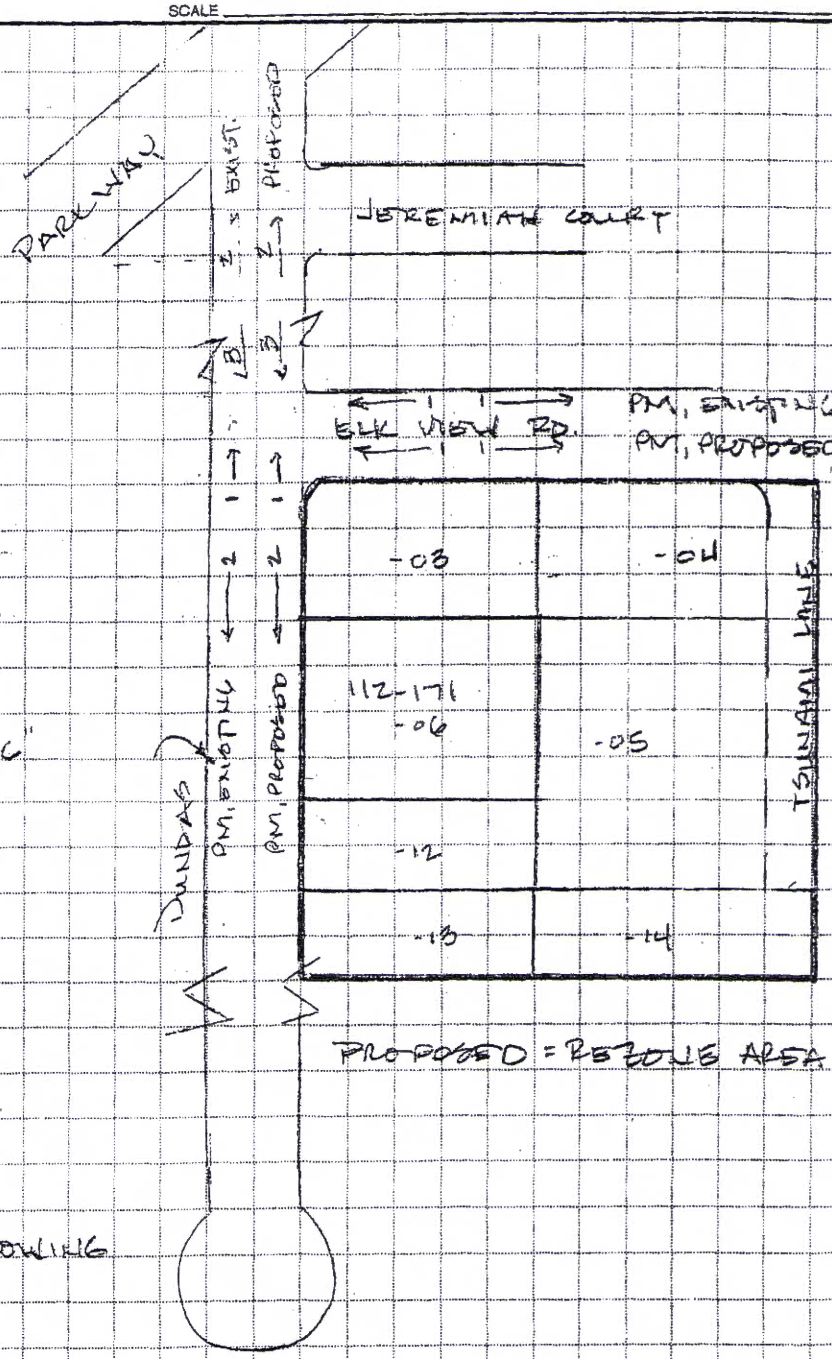
ASSUME REZONE FOR FOLLOWING PARCELS: 112-171-53 - 06
112-171-12 - 14

NO TURNING INFO - ASSUMES ALL TRIPS GENERATED FROM PARCELS FRONTING DUNDAS & TSUNAMI. REZONE WOULD CREATE 1 ADD'L DWELLING UNIT (DU) ON DUNDAS & 2 ADD'L DUS ON TSUNAMI.

STOVER ENGINEERING
711 H Street
Crescent City, CA 95531
(707) 465-6742 Fax (707) 465-5922

JOB 3668 TRAFFIC ANALYSIS, PM
SHEET NO. 5 OF 5
CALCULATED BY RS DATE 4-15-05
CHECKED BY DATE
SCALE

PM -



NOT TO SCALE

PM PEAK FOR "EXISTING" & "PROPOSED"

ASSUME REZONE FOR FOLLOWING PARCELS: 112-171-03 – 06
112-171-12 – 14

NO TURNING INFO – ASSUMES ALL TRIPS GENERATED FROM PARCELS FRONTING DUNDAS & TSUNAMI

8414

Land Use: 210
Single-Family Detached Housing

Description

Any single family detached home on an individual lot is included in this land use category. A typical site surveyed is a suburban subdivision.

Additional Data

Information on transit trip ends is not available.

Information on person trip ends is not available.

Information on truck trips is not available.

Information on vehicle occupancy is not available.

Peak hours of the generator typically coincide with the peak hours of the adjacent street traffic.

Average development density:
3.5 dwelling units per acre
3.7 persons per dwelling unit

Average automobile ownership:
1.6 vehicles per dwelling unit

The studies were conducted at sites throughout the United States and Canada in the late 1960's through late 1980's.

Independent variables:

Although the number of vehicles and number of residents have high correlations with average weekday vehicle trip ends, these variables have limited use. This is because the number of vehicles and residents is difficult to obtain, many studies did not contain these data, and these data are difficult to predict. The number of dwelling units has a high correlation with average weekday vehicle trip ends, and is generally the independent variable of choice because it is contained in most studies, is easy to project, and convenient to use.

Adjustment factors:

This land use includes data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there is as wide a variation in trips generated within this category as there is between different residential land uses. As expected, dwelling units that were larger in size, more expensive, or farther away from the central business district (CBD) had a higher rate of trip generation per unit than those smaller in size, less expensive, or closer to the CBD. However, other factors, such as geographic location and type of adjacent and nearby development, also had an effect on the site trip generation.

9414

342

Single-family detached units have the highest trip generation rate per dwelling unit of all residential uses because they are the largest units in size and have more residents and more vehicles per unit than other residential land uses; they are generally located further away from shopping centers, employment areas, and other trip attractors than are other residential land uses; and they have fewer alternate modes of transportation available because they are not as concentrated as other residential land uses.

A study performed for the Federal Highway Administration[1] developed adjustment factors for average weekday vehicle trip rates for residential land uses and their associated demographic characteristics. These characteristics included household size, vehicle ownership, and dwelling density. The adjustment factors shown below are to be added to or subtracted from the average weekday trip generation rates, using dwelling units as the independent variable. Any combination of adjustment factors may be applied to the trip generation rate. However, if residential characteristics are not available, then the average rate or equation would be utilized. Peak hour trip generation rates can be adjusted by the ratio of the average weekday adjusted trip rate to the average weekday trip rate.

Characteristic: Household Size	***Adjustment Factor[2]***
1-2	-3.4
2-3	-1.8
>3	0.0
Characteristic: Vehicles Owned	***Adjustment Factor[2]***
0-1	-1.5
1-2	0.0
>2	+2.9
Characteristic: Density (D.U. per Acre)	***Adjustment Factor[2]***
0-3	0.0
3-5	0.0
>5	-0.1

Source Numbers

1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 16, 19, 20, 21, 26, 34, 35, 36, 38, 40, 71, 72, 84, 91, 98, 100, 105, 108, 110, 114, 117, 119, 157, 167, 177, 187, 192, 207, 211, 246, 275, 283, 293, 300, 319, 320

[1]U.S. Department of Transportation, Federal Highway Administration. *Development and Application of Trip Generation Rates.* Kellerco, January 1985.

[2]Adjustment factor to be added to (or subtracted from) the average weekday vehicle trip generation rate per dwelling unit.

343 1Dag 14

APN 112-171-06

Single-Family Detached Housing (< 300 Units)
(210)

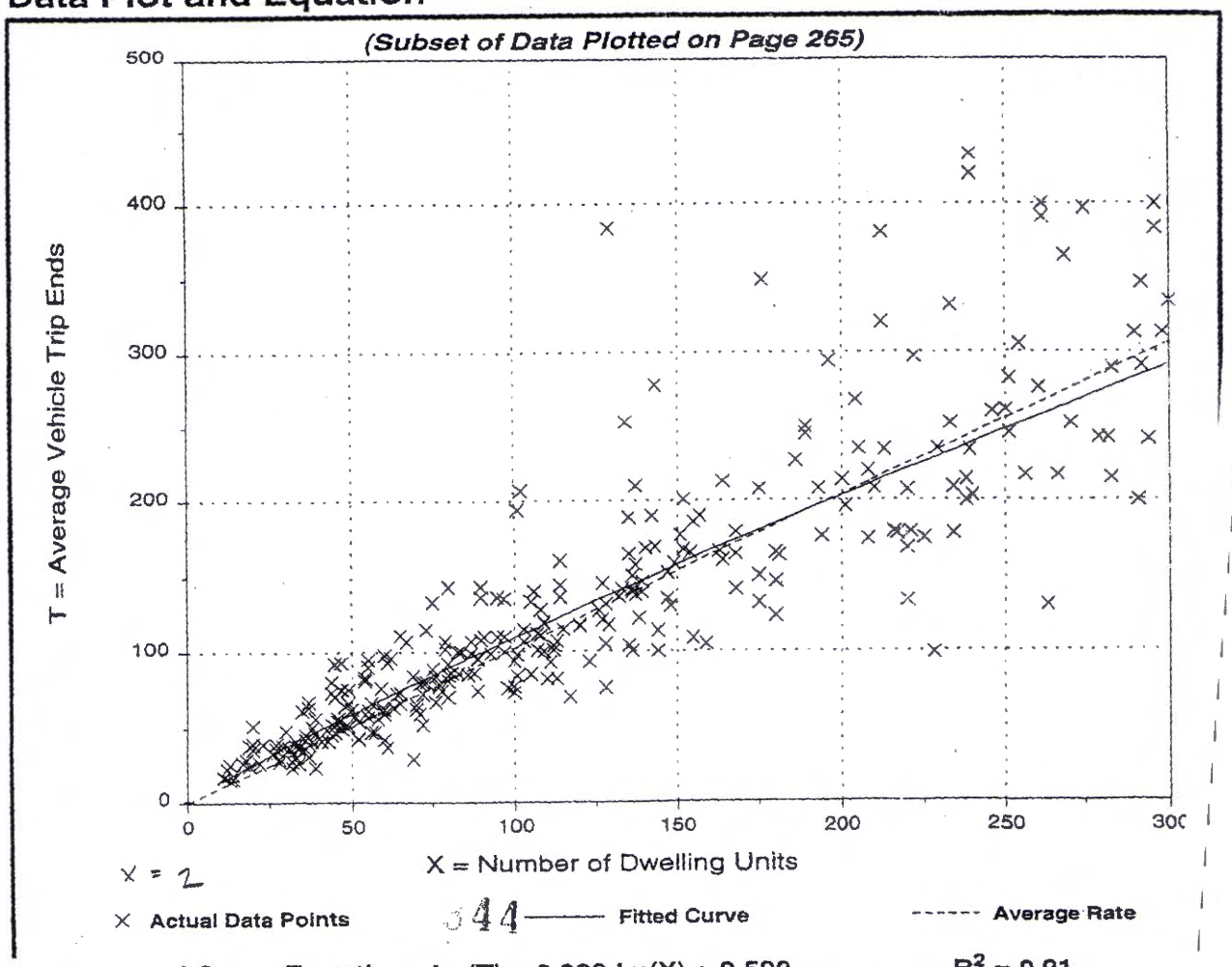
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 357
Average Number of Dwelling Units: 183
Directional Distribution: 64% entering, 36% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
1.02	0.42 - 2.98	1.05

Data Plot and Equation



Curve Equation: Ln(T) = 0.892 Ln(X) + 0.590 $R^2 = 0.91$

1414

AM

Single-Family Detached Housing (< 300 Units)
(210)

Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
A.M. Peak Hour of Generator

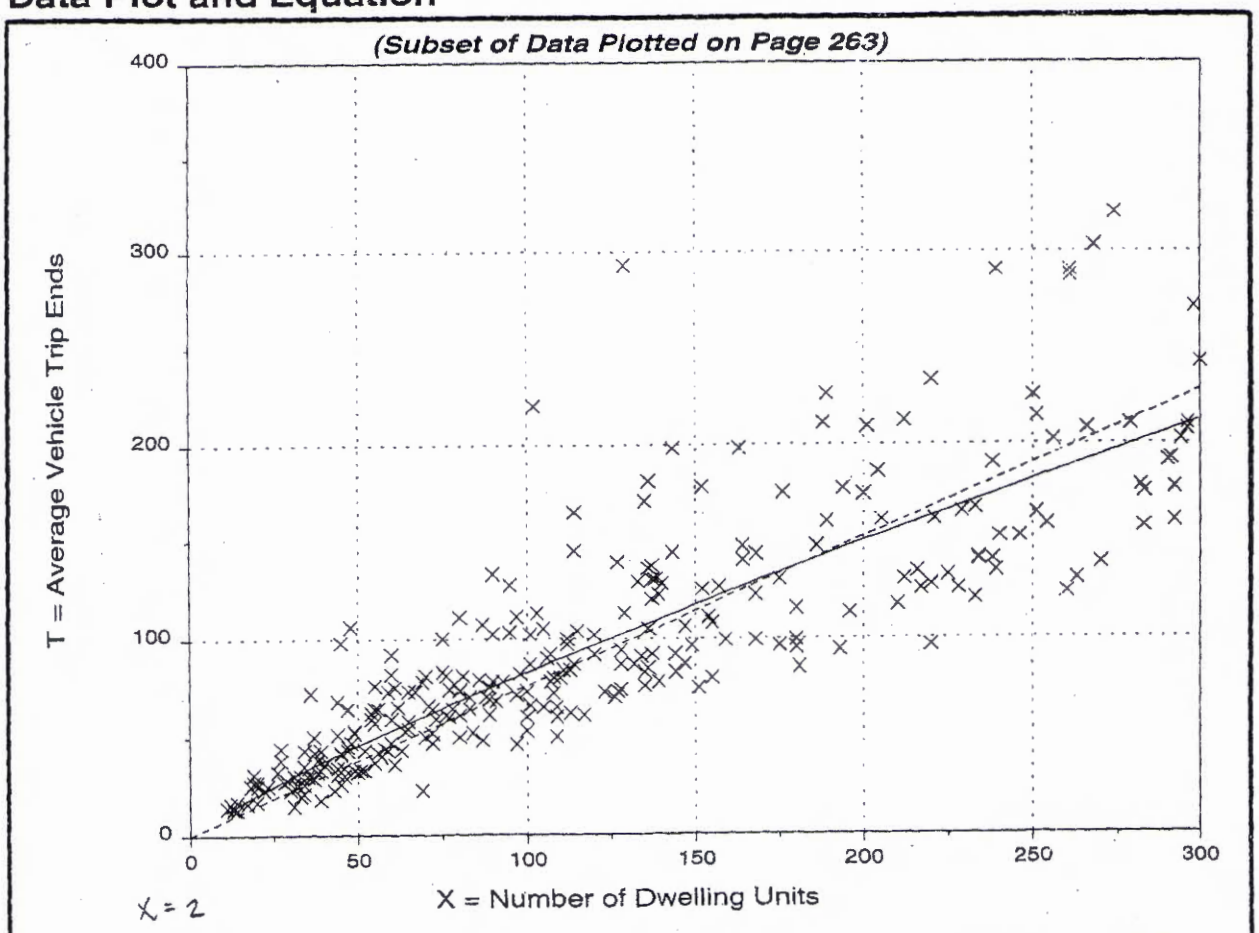
APN - 112-171-06

Number of Studies: 339
Average Number of Dwelling Units: 190
Directional Distribution: 26% entering, 74% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.76	0.33 - 2.27	0.91

Data Plot and Equation



Fitted Curve Equation: $Ln(T) = 0.858\ Ln(X) + 0.464$ $R^2 = 0.89$

12414

Single-Family Detached Housing (< 300 Units)
(210)

Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

1. ON TSUNAMI, SOUTH OF ELK VIEW RD, + PARCELS N & S OF ELK " " TO DUNDAS & ELK VIEW RD INTERSECTION

Number of Studies: 280
Average Number of Dwelling Units: 210 DU = 6 EACH, EXIST.
Directional Distribution: 26% entering, 74% exiting

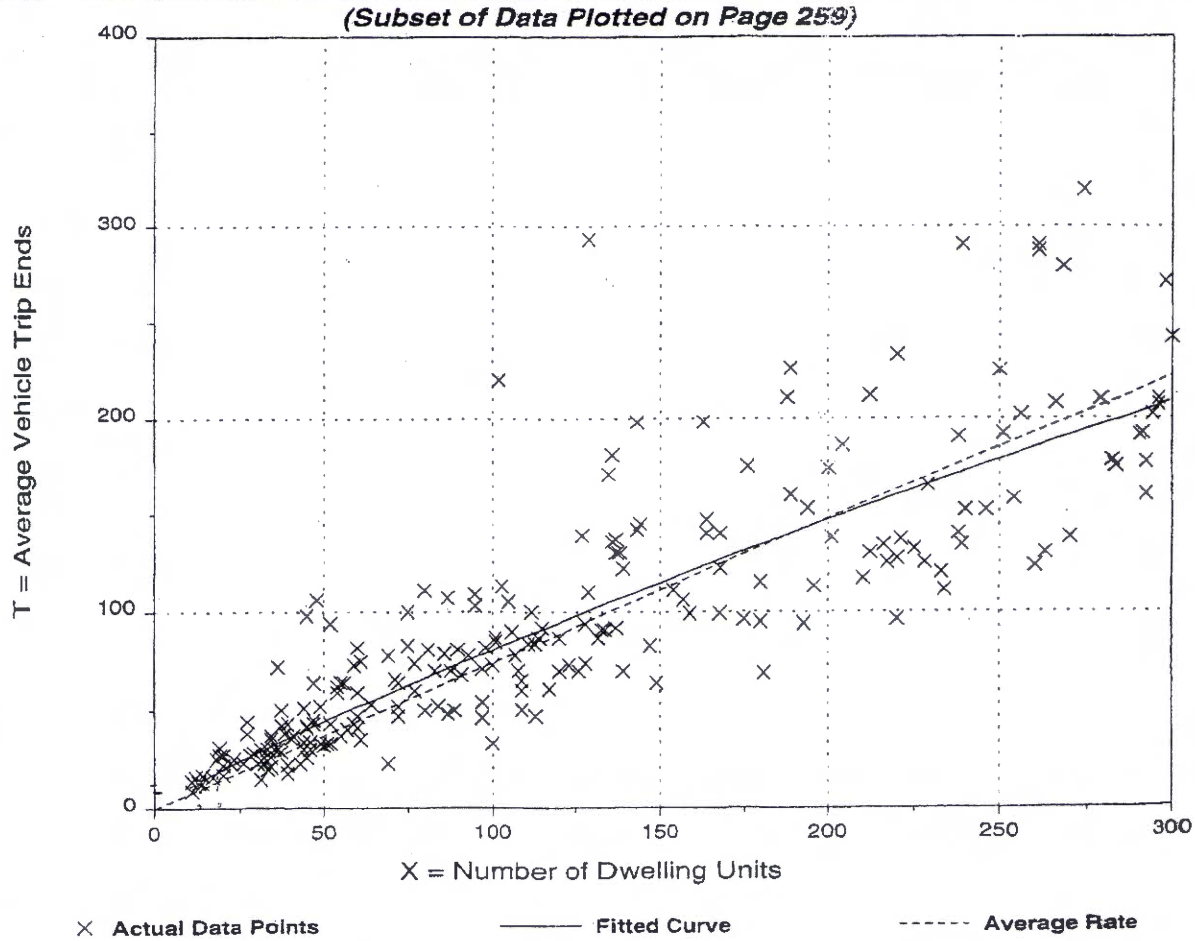
DU = 8 EA, PROPOSED

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.90

Data Plot and Equation

(Subset of Data Plotted on Page 259)



Fitted Curve Equation: Ln(T) = 0.867 Ln(X) + 0.398 **R^2 = 0.89**

13 of 14

46

Single-Family Detached Housing (< 300 Units)
(210)

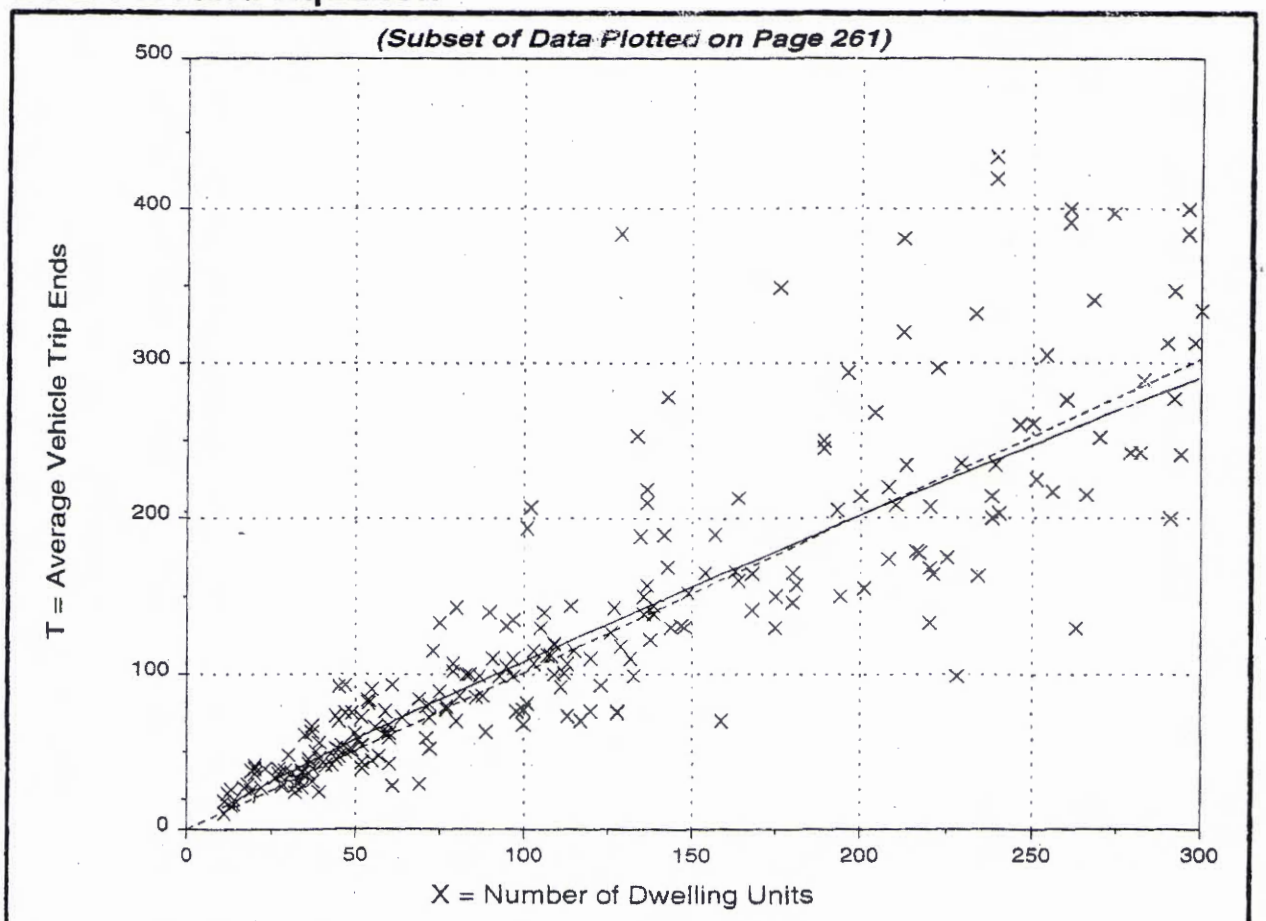
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 301
Average Number of Dwelling Units: 222
Directional Distribution: 64% entering, 36% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
1.01	0.42 - 2.98	1.05

Data Plot and Equation



Fitted Curve Equation: $Ln(T) = 0.902\ Ln(X) + 0.528$ $R^2 = 0.92$

14 of 14