Appendix A

Summary of Existing (2003) 24 Hour Count Data

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Table A-1
Summary of 24 Hour Raw Tube Count Data
Shiloh Interchange - Exit 443

Location	Date of Count	Daily				AM Peak Hour		Noon Peak Hour		PM Peak Hour	
		Volume (veh/day)	Pass. Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)
Shiloh Rd N of Zoo Dr	Mon, 7/14/03	9,721	86.7	9.8	3.5	696	7.2	634	6.5	885	9.1
Zoo Dr N of I-90	Mon, 7/14/03	9,528	93.2	3.6	3.2	748	7.9	621	6.5	824	8.6
I-90 WB on-ramp	Mon, 7/14/03	2,509	94.4	3.7	1.8	103	4.1	173	6.9	284	11.3
I-90 WB off-ramp	Mon, 7/14/03	2,758	84.4	9.7	5.9	222	8.0	179	6.5	280	10.2
Zoo Dr. between I-90 ramps	Mon, 7/14/03	6,334	85.7	10.0	4.2	577	9.1	451	7.1	508	8.0
I-90 EB off-ramp	Tue, 8/19/03	2,560	90.4	7.7	1.8	179	7.0	190	7.4	185	7.2
I-90 EB on-ramp	Mon, 7/14/03	2,681	87.4	7.9	4.7	215	8.0	167	6.2	200	7.5
Zoo Dr. N of S.Frontage Rd.	Mon, 7/14/03	2,967	81.8	13.8	4.4	285	9.6	210	7.1	263	8.9
S. Frontage Rd W of Zoo Dr.	Mon, 7/14/03	3,232	87.4	7.1	5.4	281	8.7	230	7.1	266	8.2
S. Frontage Rd E of Zoo Dr.	Mon, 7/14/03	2,651	84.7	10.5	4.8	209	7.9	203	7.7	221	8.3

Source: 24 hour tube count data collected during project

Table A-2
Summary of 24 Hour Raw Tube Count Data
South Billings Boulevard Interchange - Exit 447

Location	Date of Count	Daily				AM Peak Hour		Noon Peak Hour		PM Peak Hour	
		Volume (veh/day)	Pass. Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)
S Billings Blvd N of King Ave	Wed, 12/17/03	7,281	92.8	6.0	1.2	623	8.6	520	7.1	576	7.9
King Ave W of Southgate Dr	Wed, 12/17/03	2,602	91.5	5.9	2.6	196	7.5	187	7.2	211	8.1
King Ave W of S. Billings Blvd	Wed, 12/17/03	6,605	93.6	4.9	1.4	481	7.3	549	8.3	502	7.6
King Ave E of S. Billings Blvd	Wed, 12/17/03	6,654	90.3	7.4	2.3	475	7.1	513	7.7	565	8.5
Southgate Dr S of King Ave	Tue, 8/19/03	2,839	89.7	8.3	2.0	197	6.9	261	9.2	205	7.2
S. Billings Blvd S of King Ave	Mon, 7/08/03	13,432	91.0	7.4	1.5	785	5.8	887	6.6	1,085	8.1
I-90 WB on-ramp	Mon, 7/08/03	4,552	92.1	6.3	1.6	346	7.6	308	6.8	335	7.4
I-90 WB off ramp	Mon, 7/08/03	2,306	79.7	15.9	4.3	187	8.1	146	6.3	206	8.9
S. Billings Blvd between I-90 ramps	Mon, 7/08/03	10,731	87.6	10.5	1.9	692	6.4	789	7.4	859	8.0
I-90 EB off-ramp	Wed, 7/09/03	4,449	89.6	9.0	1.4	193	4.3	309	6.9	374	8.4
I-90 EB on-ramp	Wed, 7/16/03	2,138	85.4	11.8	2.8	156	7.3	130	6.1	175	8.2
S. Billings Blvd S of I-90	Wed, 7/09/03	12,274	92.0	6.7	1.3	641	5.2	797	6.5	1,005	8.2
S Frontage Rd E of S Billings Rd	Wed, 7/09/03	2,922	89.9	8.1	2.0	114	3.9	186	6.4	280	9.6
S Billings Blvd S of S. Frontage Rd.	Wed, 7/09/03	9,490	86.9	10.6	2.5	605	6.4	604	6.4	766	8.1

Source: 24 hour tube count dat collected during project

Table A-3
Summary of 24 Hour Raw Tube Count Data
27th Street Interchange - Exit 450

Location	Date of Count	Daily				AM Peak Hour		Noon Peak Hour		PM Peak Hour	
		Volume (veh/day)	Pass. Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)
State Ave W of 27th St	Tue, 7/15/03	6,978	90.2	6.4	3.4	422	6.0	483	6.9	484	6.9
27th St W of State Ave	Tue, 7/15/03	13,236	92.6	5.1	2.3	911	6.9	919	6.9	995	7.5
27th St W of I-90	Wed, 12/17/03	12,176	84.8	11.7	3.5	893	7.3	878	7.2	1,012	8.3
I-90 WB on-ramp	Tue, 7/15/03	3,734	92.0	4.4	3.6	202	5.4	266	7.1	346	9.3
I-90 WB off-ramp	Tue, 7/15/03	2,972	93.1	3.6	3.3	307	10.3	184	6.2	209	7.0
27th St between I-90 ramps	Tue, 7/15/03	9,785	88.7	9.6	1.7	828	8.5	746	7.6	679	6.9
I-90 EB off-ramp	Tue, 7/15/03	3,753	93.6	3.7	2.7	243	6.5	256	6.8	225	6.0
I-90 EB on-ramp	Tue, 8/19/03	2,544	93.8	3.0	3.2	144	5.7	174	6.8	266	10.5
27th St E of I-90	Tue, 7/15/03	3,126	85.3	11.3	3.4	229	7.3	224	7.2	242	7.7

Source: 24 hour tube count data collected duing project

Table A-4
Summary of 24 Hour Raw Tube Count Data
US 87 Lockwood Interchange - Exit 452

Location	Date of Count	Daily				AM Peak Hour		Noon Peak Hour		PM Peak Hour	
		Volume (veh/day)	Pass. Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)
US 87 N of Lockwood Rd	Wed, 7/16/03	23,665	92.8	4.8	2.4	1,729	7.3	1,526	6.4	2,039	8.6
Lockwood Rd N of US 87	Wed, 7/16/03	7,360	86.7	8.3	5.0	468	6.4	524	7.1	745	10.1
N Frontage Rd E of Lockwood Rd	Wed, 7/16/03	2,950	86.1	11.3	2.5	154	5.2	199	6.7	228	7.7
US 87 S of Lockwood Rd	Wed, 7/16/03	21,607	91.2	5.8	3.0	1,322	6.1	1,356	6.3	1,809	8.4
I-90 WB on-ramp	Wed, 7/16/03	4,125	87.4	8.2	4.3	288	7.0	245	5.9	251	6.1
I-90 WB off-ramp	Wed, 7/16/03	5,041	89.5	6.3	4.2	361	7.2	319	6.3	461	9.1
US 87 between I-90 ramps	Wed, 7/16/03	18,016	92.8	5.1	2.1	1,042	5.8	1,121	6.2	1,412	7.8
I-90 EB off-ramp	Wed, 7/16/03	5,277	90.6	4.8	4.5	277	5.2	324	6.1	505	9.6
I-90 EB on-ramp	Wed, 7/16/03	3,805	92.2	4.3	3.4	161	4.2	233	6.1	389	10.2
US 87 S of I-90 EB ramps	Wed, 7/16/03	11,928	88.5	9.9	1.6	720	6.0	744	6.2	945	7.9
US 87 SE of Coburn Rd	Wed, 7/16/03	10,196	88.8	9.2	2.0	626	6.1	670	6.6	865	8.5
Coburn Rd S of Rosebud Ln	Wed, 7/16/03	591	84.3	12.9	2.9	46	7.8	48	8.1	53	9.0

Source: 24 hour tube count dat collected during project

Table A-5
Summary of 24 Hour Raw Tube Count Data
Johnson Lane Interchange - Exit 455

Location	Date of Count	Daily				AM Peak Hour		Noon Peak Hour		PM Peak Hour	
		Volume (veh/day)	Pass. Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)	Volume (veh/day)	% of Daily (%)
Johnson Ln N of N Frontage Rd	Wed, 7/09/03	700	80.4	13.9	5.7	51	7.3	62	8.9	54	7.7
N Frontage Rd W of Johnson Ln	Wed, 7/09/03	2,693	88.5	7.2	4.3	195	7.2	191	7.1	224	8.3
N Frontage Rd E of Johnson Ln	Wed, 7/09/03	370	87.2	6.4	6.3	21	5.7	35	9.5	34	9.2
Johnson Ln N of I-90	Wed, 12/17/03	2,874	79.1	16.3	4.6	236	8.2	237	8.2	258	9.0
I-90 WB on-ramp	Wed, 7/09/03	4,872	88.7	4.0	7.3	548	11.2	311	6.4	306	6.3
I-90 WB off-ramp	Wed, 7/09/03	1,369	78.2	6.9	14.8	96	7.0	121	8.8	115	8.4
Johnson Ln between I-90 ramps	Wed, 7/09/03	8,436	84.3	8.3	7.4	778	9.2	572	6.8	587	7.0
I-90 EB off-ramp	Wed, 7/09/03	***4,976***	83.8	8.4	7.8	164	3.3	275	5.5	487	9.8
I-90 EB on-ramp	Wed, 7/09/03	1,945	72.3	11.8	15.9	85	4.4	137	7.0	167	8.6
Johnson Ln S of I-90	Wed, 7/09/03	14,443	83.3	9.6	7.1	963	6.7	881	6.1	1,167	8.1
Old Hardin Rd W of Johnson Ln	Wed, 7/09/03	6,373	76.3	8.6	15.1	287	4.5	394	6.2	421	6.6
Old Hardin Rd E of Johnson Ln	Wed, 7/09/03	10,955	92.6	5.2	2.2	719	6.6	631	5.8	1,017	9.3
Old Hardin Rd E of Becraft Ln	Wed, 7/09/03	6,677	98.2	1.8	0.0	475	7.1	379	5.7	614	9.2
Johnson Ln S of Old Hardin Rd	Wed, 7/09/03	2,372	85.6	11.7	2.7	145	6.1	160	6.7	182	7.7
Becraft Ln S of Old Hardin Rd	Wed, 7/09/03	4,162	88.8	9.6	1.5	298	7.2	226	5.4	390	9.4

Source: 24 hour tube count dat collected during project
Note: I-90 EB off ramp volumes are estimates based on 8 hour turning movement count - there have been two bad project tube counts

Table A-6
Summary of 24 Hour Raw 2003 Count Data
MDT I-90 Permanent Count Stations

Location	Direction	Week of Counts	Daily Volume (veh/day)	AM Peak Hour Volume (veh/day)	AM Peak Hour % of Daily (%)	Noon Peak Hour Volume (veh/day)	Noon Peak Hour % of Daily (%)	PM Peak Hour Volume (veh/day)	PM Peak Hour % of Daily (%)
I-90 at MP 441.0, Sta A-209	EB	Mon - Fri	13,852	1,163	8.4	841	6.1	839	6.1
(Mossmain Pre-Pass W of Zoo / Shiloh)	WB	7/7/03 - 7/11/03	13,822	561	4.1	901	6.5	1,400	10.1
	Both		27,674	1,724	6.2	1,742	6.3	2,239	8.1
I-90 at MP 447.8, Sta A-203	EB	Mon - Fri	14,498	839	5.8	890	6.1	1,182	8.2
(Between S Billings Blvd & 27th St)	WB	7/14/03 - 7/18/03	14,218	957	6.7	928	6.5	1,150	8.1
	Both		28,716	1,796	6.3	1,818	6.3	2,332	8.1

Source : MDT Permanent Count Station Data

Table A-7
Summary of MDT 2003 Monthly Factors

Location	MDT Functional Classification	2003 Monthly Factors		
		July	August	December
Shiloh Interchange (Exit 443)				
I-90 and ramps	Urban Interstate	0.84	0.85	1.10
Zoo Dr.	Urban Principal Arterial	0.89	0.88	1.03
S. Frontage Rd	Urban Minor Arterial	0.94	0.95	0.98
Shiloh Rd	Ubran Minor Arterial	0.94	0.95	0.98
S. Billings Blvd Interchange (Exit 447)				
I-90 and ramps	Urban Interstate	0.84	0.85	1.10
King Ave	Urban Minor Arterial	0.94	0.95	0.98
S. Billings Blvd	Urban Minor Arterial	0.94	0.95	0.98
Southgate Dr	Urban Local Route	0.94	0.95	0.98
S. Frontage Rd	Urban Collector	0.94	0.95	0.98
27th Street Interchange (Exit 450)				
I-90 and ramps	Urban Interstate	0.84	0.85	1.10
State Ave	Urban Minor Arterial	0.94	0.95	0.98
27th Street - W Of I-90 EB ramp	Urban Principal Arterial	0.89	0.88	1.03
27th Street - E of I-90 EB ramps	Urban Local Route	0.94	0.95	0.98
Garden Ave.	Urban Local Route	0.94	0.95	0.98
US 87 Lockwood Interchange (Exit 452)				
I-90 and ramps	Urban Interstate	0.84	0.85	1.10
US 87 - N of I-90 EB ramps	Urban Principal Arterial	0.89	0.88	1.03
US - 87 - S of I-90 EB ramps	Urban Minor Arterial	0.94	0.95	0.98
Lockwood Rd	Urban Local Route	0.94	0.95	0.98
Coburn Rd	Urban Collector	0.94	0.95	0.98
N.Frontage Rd	Urban Collector	0.94	0.95	0.98
Johnson Lane Interchange (Exit 455)				
I-90 and ramps	Urban Interstate	0.84	0.85	1.10
N Frontage Rd - W of Johnson Ln	Urban Collector	0.94	0.95	0.98
N Frontage Rd - E of Johnson Ln	Urban Local Route	0.94	0.95	0.98
Johnson Ln - N of N Frontage Rd	Urban Local Route	0.94	0.95	0.98
Johnson Ln - N Frontage Rd to Old Hardin Rd	Urban Minor Arterial	0.94	0.95	0.98
Johnson Ln - S of Old Hardin Rd	Urban Collector	0.94	0.95	0.98
Old Hardin Rd - W of Johnson Lane	Urban Minor Arterial	0.94	0.95	0.98
Old Hardin Rd - E of Johnson Ln	Urban Collector	0.94	0.95	0.98
Becraft Ln	Urban Collector	0.94	0.95	0.98

Source : Montana Department of Transportation Seasonal / Daily Factors for 2003

Table A-8
Summary of 24 Hour Factored ADT Count Data
Shiloh Interchange - Exit 443

Location	Date of Count	MDT Monthly Factor	Raw Daily Counts (veh/day)	Average Daily Traffic (ADT)				AM Peak Hr		Noon Peak Hr		PM Peak Hr	
				Factored Volume (veh/day)	Pass Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)
Shiloh Rd N of Zoo Dr	Mon, 7/14/03	0.94	9,721	9,138	86.7	9.8	3.5	654	7.2	596	6.5	832	9.1
Zoo Dr N of I-90	Mon, 7/14/03	0.89	9,528	8,480	93.2	3.6	3.2	666	7.9	553	6.5	733	8.6
I-90 WB on-ramp	Mon, 7/14/03	0.84	2,509	2,108	94.4	3.7	1.8	87	4.1	145	6.9	239	11.3
I-90 WB off-ramp	Mon, 7/14/03	0.84	2,758	2,317	84.4	9.7	5.9	186	8.0	150	6.5	235	10.2
Zoo Dr. between I-90 ramps	Mon, 7/14/03	0.89	6,334	5,637	85.7	10.0	4.2	514	9.1	401	7.1	452	8.0
I-90 EB off-ramp	Tue, 8/19/03	0.85	2,560	2,176	90.4	7.7	1.8	152	7.0	162	7.4	157	7.2
I-90 EB on-ramp	Mon, 7/14/03	0.84	2,681	2,252	87.4	7.9	4.7	181	8.0	140	6.2	168	7.5
Zoo Dr. N of S.Frontage Rd.	Mon, 7/14/03	0.89	2,967	2,641	81.8	13.8	4.4	254	9.6	187	7.1	234	8.9
S. Frontage Rd W of Zoo Dr.	Mon, 7/14/03	0.94	3,232	3,038	87.4	7.1	5.4	264	8.7	216	7.1	250	8.2
S. Frontage Rd E of Zoo Dr.	Mon, 7/14/03	0.94	2,651	2,492	84.7	10.5	4.8	196	7.9	191	7.7	208	8.3

Source: 24 hour tube count data collected duing project

Table A-9
Summary of 24 Hour Factored ADT Count Data
South Billings Boulevard Interchange - Exit 447

Location	Date of Count	MDT Monthly Factor	Raw Daily Counts (veh/day)	Average Daily Traffic (ADT)				AM Peak Hr		Noon Peak Hr		PM Peak Hr	
				Factored Volume (veh/day)	Pass Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)
S Billings Blvd N of King Ave	Wed, 12/17/03	0.98	7,281	7,135	92.8	6.0	1.2	611	8.6	510	7.1	564	7.9
King Ave W of Southgate Dr	Wed, 12/17/03	0.98	2,602	2,550	91.5	5.9	2.6	192	7.5	183	7.2	207	8.1
King Ave W of S. Billings Blvd	Wed, 12/17/03	0.98	6,605	6,473	93.6	4.9	1.4	471	7.3	538	8.3	492	7.6
King Ave E of S. Billings Blvd	Wed, 12/17/03	0.98	6,654	6,521	90.3	7.4	2.3	466	7.1	503	7.7	554	8.5
Southgate Dr S of King Ave	Tue, 8/19/03	0.95	2,839	2,697	89.7	8.3	2.0	187	6.9	248	9.2	195	7.2
S. Billings Blvd S of King Ave	Mon, 7/08/03	0.94	13,432	12,626	91.0	7.4	1.5	738	5.8	834	6.6	1,020	8.1
I-90 WB on-ramp	Mon, 7/08/03	0.84	4,552	3,824	92.1	6.3	1.6	291	7.6	259	6.8	281	7.4
I-90 WB off ramp	Mon, 7/08/03	0.84	2,306	1,937	79.7	15.9	4.3	157	8.1	123	6.3	173	8.9
S. Billings Blvd between I-90 ramps	Mon, 7/08/03	0.94	10,731	10,087	87.6	10.5	1.9	650	6.4	742	7.4	807	8.0
I-90 EB off-ramp	Wed, 7/09/03	0.84	4,449	3,737	89.6	9.0	1.4	162	4.3	260	6.9	314	8.4
I-90 EB on-ramp	Wed, 7/16/03	0.84	2,138	1,796	85.4	11.8	2.8	131	7.3	109	6.1	147	8.2
S. Billings Blvd S of I-90	Wed, 7/09/03	0.94	12,274	11,538	92.0	6.7	1.3	603	5.2	749	6.5	945	8.2
S Frontage Rd E of S Billings Rd	Wed, 7/09/03	0.94	2,922	2,747	89.9	8.1	2.0	107	3.9	175	6.4	263	9.6
S Billings Blvd S of S. Frontage Rd.	Wed, 7/09/03	0.94	9,490	8,921	86.9	10.6	2.5	569	6.4	568	6.4	720	8.1

Source: 24 hour tube count data collected during project

Table A-10
Summary of 24 Hour Factored ADT Count Data
27th Street Interchange - Exit 450

Location	Date of Count	MDT Monthly Factor	Raw Daily Counts (veh/day)	Average Daily Traffic (ADT)				AM Peak Hr		Noon Peak Hr		PM Peak Hr	
				Factored Volume (veh/day)	Pass Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)
State Ave W of 27th St	Tue, 7/15/03	0.94	6,978	6,559	90.2	6.4	3.4	397	6.0	454	6.9	455	6.9
27th St W of State Ave	Tue, 7/15/03	0.89	13,236	11,780	92.6	5.1	2.3	811	6.9	818	6.9	886	7.5
27th St W of I-90	Wed, 12/17/03	1.03	12,176	12,541	84.8	11.7	3.5	920	7.3	904	7.2	1,042	8.3
I-90 WB on-ramp	Tue, 7/15/03	0.84	3,734	3,137	92.0	4.4	3.6	170	5.4	223	7.1	291	9.3
I-90 WB off-ramp	Tue, 7/15/03	0.84	2,972	2,496	93.1	3.6	3.3	258	10.3	155	6.2	176	7.0
27th St between I-90 ramps	Tue, 7/15/03	0.89	9,785	8,709	88.7	9.6	1.7	737	8.5	664	7.6	604	6.9
I-90 EB off-ramp	Tue, 7/15/03	0.84	3,753	3,153	93.6	3.7	2.7	204	6.5	215	6.8	189	6.0
I-90 EB on-ramp	Tue, 8/19/03	0.85	2,544	2,162	93.8	3.0	3.2	122	5.7	148	6.8	226	10.5
27th St E of I-90	Tue, 7/15/03	0.94	3,126	2,938	85.3	11.3	3.4	215	7.3	211	7.2	227	7.7

Source: 24 hour tube count data collected duing project

Table A-11
Summary of 24 Hour Factored ADT Count Data
US 87 Lockwood Interchange - Exit 452

Location	Date of Count	MDT Monthly Factor	Raw Daily Counts (veh/day)	Average Daily Traffic (ADT)				AM Peak Hr		Noon Peak Hr		PM Peak Hr	
				Factored Volume (veh/day)	Pass Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)
US 87 N of Lockwood Rd	Wed, 7/16/03	0.89	23,665	21,062	92.8	4.8	2.4	1,539	7.3	1,358	6.4	1,815	8.6
Lockwood Rd N of US 87	Wed, 7/16/03	0.94	7,360	6,918	86.7	8.3	5.0	440	6.4	493	7.1	700	10.1
N Frontage Rd E of Lockwood Rd	Wed, 7/16/03	0.94	2,950	2,773	86.1	11.3	2.5	145	5.2	187	6.7	214	7.7
US 87 S of Lockwood Rd	Wed, 7/16/03	0.94	21,607	20,311	91.2	5.8	3.0	1,243	6.1	1,275	6.3	1,700	8.4
I-90 WB on-ramp	Wed, 7/16/03	0.84	4,125	3,465	87.4	8.2	4.3	242	7.0	206	5.9	211	6.1
I-90 WB off-ramp	Wed, 7/16/03	0.84	5,041	4,234	89.5	6.3	4.2	303	7.2	268	6.3	387	9.1
US 87 between I-90 ramps	Wed, 7/16/03	0.89	18,016	16,034	92.8	5.1	2.1	927	5.8	998	6.2	1,257	7.8
I-90 EB off-ramp	Wed, 7/16/03	0.84	5,277	4,433	90.6	4.8	4.5	233	5.2	272	6.1	424	9.6
I-90 EB on-ramp	Wed, 7/16/03	0.84	3,805	3,196	92.2	4.3	3.4	135	4.2	196	6.1	327	10.2
US 87 S of I-90 EB ramps	Wed, 7/16/03	0.94	11,928	11,212	88.5	9.9	1.6	677	6.0	699	6.2	888	7.9
US 87 SE of Coburn Rd	Wed, 7/16/03	0.94	10,196	9,584	88.8	9.2	2.0	588	6.1	630	6.6	813	8.5
Coburn Rd S of Rosebud Ln	Wed, 7/16/03	0.94	591	556	84.3	12.9	2.9	43	7.8	45	8.1	50	9.0

Source: 24 hour tube count data collected during project

Table A-12
Summary of 24 Hour Factored ADT Count Data
Johnson Lane Interchange - Exit 455

Location	Date of Count	MDT Monthly Factor	Raw Daily Counts (veh/day)	Average Daily Traffic (ADT)				AM Peak Hr		Noon Peak Hr		PM Peak Hr	
				Factored Volume (veh/day)	Pass Vehs (%)	Light Trucks (%)	Heavy Trucks (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)	Factored Volume (veh/day)	% of Daily (%)
Johnson Ln N of N Frontage Rd	Wed, 7/09/03	0.94	700	658	80.4	13.9	5.7	48	7.3	58	8.9	51	7.7
N Frontage Rd W of Johnson Ln	Wed, 7/09/03	0.94	2,693	2,531	88.5	7.2	4.3	183	7.2	180	7.1	211	8.3
N Frontage Rd E of Johnson Ln	Wed, 7/09/03	0.94	370	348	87.2	6.4	6.3	20	5.7	33	9.5	32	9.2
Johnson Ln N of I-90	Wed, 12/17/03	0.98	2,874	2,817	79.1	16.3	4.6	231	8.2	232	8.2	253	9.0
I-90 WB on-ramp	Wed, 7/09/03	0.84	4,872	4,092	88.7	4.0	7.3	460	11.2	261	6.4	257	6.3
I-90 WB off-ramp	Wed, 7/09/03	0.84	1,369	1,150	78.2	6.9	14.8	81	7.0	102	8.8	97	8.4
Johnson Ln between I-90 ramps	Wed, 7/09/03	0.94	8,436	7,930	84.3	8.3	7.4	731	9.2	538	6.8	552	7.0
I-90 EB off-ramp	Wed, 7/09/03	0.84	4,976	4,180	83.8	8.4	7.8	138	3.3	231	5.5	409	9.8
I-90 EB on-ramp	Wed, 7/09/03	0.84	1,945	1,634	72.3	11.8	15.9	71	4.4	115	7.0	140	8.6
Johnson Ln S of I-90	Wed, 7/09/03	0.94	14,443	13,576	83.3	9.6	7.1	905	6.7	828	6.1	1,097	8.1
Old Hardin Rd W of Johnson Ln	Wed, 7/09/03	0.94	6,373	5,991	76.3	8.6	15.1	270	4.5	370	6.2	396	6.6
Old Hardin Rd E of Johnson Ln	Wed, 7/09/03	0.94	10,955	10,298	92.6	5.2	2.2	676	6.6	593	5.8	956	9.3
Old Hardin Rd E of Becraft Ln	Wed, 7/09/03	0.94	6,677	6,276	98.2	1.8	0.0	447	7.1	356	5.7	577	9.2
Johnson Ln S of Old Hardin Rd	Wed, 7/09/03	0.94	2,372	2,230	85.6	11.7	2.7	136	6.1	150	6.7	171	7.7
Becraft Ln S of Old Hardin Rd	Wed, 7/09/03	0.94	4,162	3,912	88.8	9.6	1.5	280	7.2	212	5.4	367	9.4

Source: 24 hour tube count data collected during project

Table A-13
Summary of 24 Hour Factored ADT Count Data
MDT I-90 Permanent Count Stations

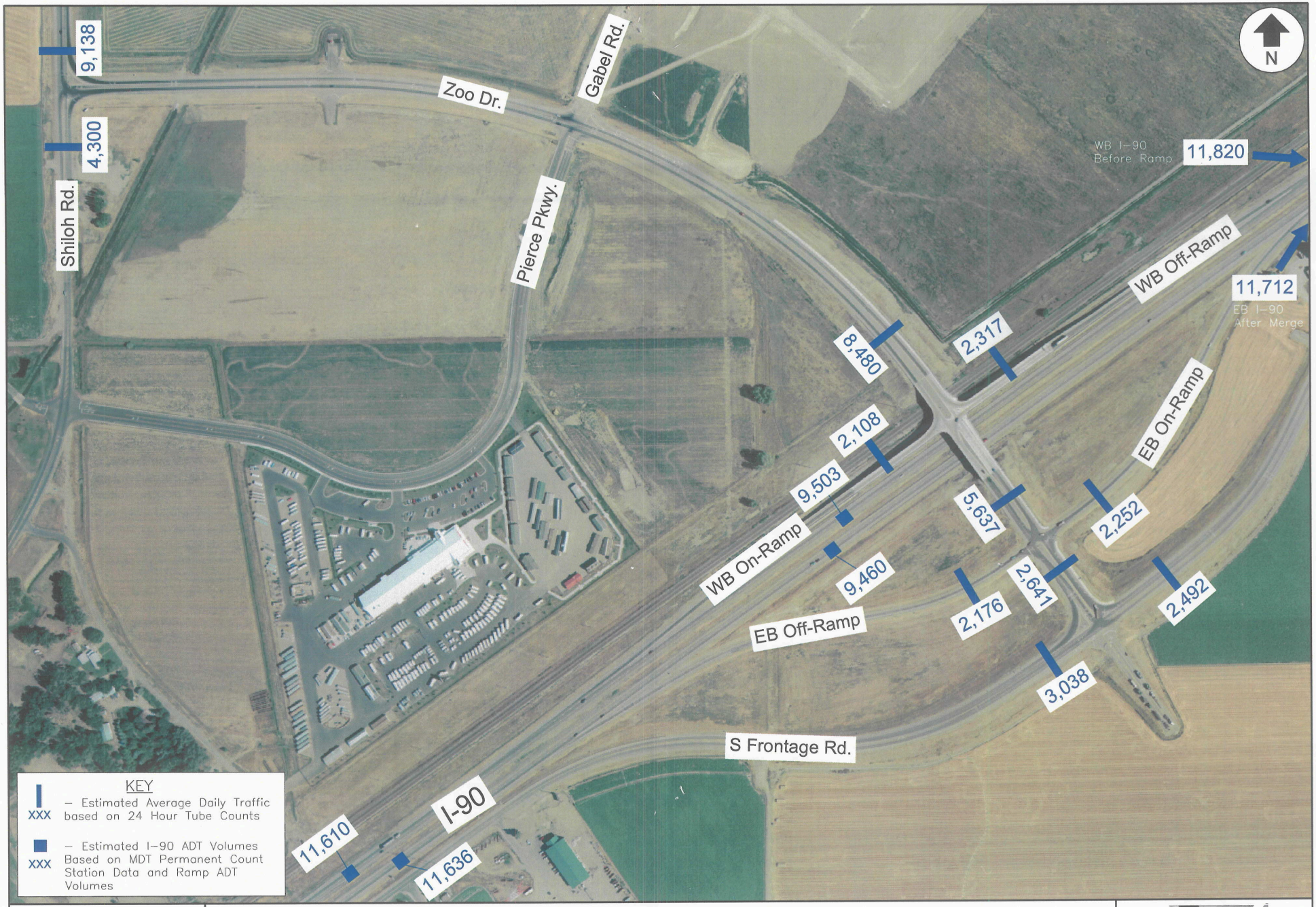
Location	Direction	Monthly Factor	Daily Factored Volumes (veh / day)	AM Pk Hour Factored Volumes (veh / hr)	AM Pk Hour % of Daily (%)	Noon Pk Hour Factored Volumes (veh / hr)	Noon Pk Hour % of Daily (%)	PM Pk Hour Factored Volumes (veh / hr)	PM Pk Hour % of Daily (%)
I-90 at MP 441.0, Sta A-209	EB	0.84	11,636	977	8.4	706	6.1	705	6.1
(Mossmain Pre-Pass W of Zoo / Shiloh)	WB	0.84	11,610	471	4.1	757	6.5	1,176	10.1
	Both	0.84	23,246	1,448	6.2	1,463	6.3	1,881	8.1
I-90 at MP 447.8, Sta A-203	EB	0.84	12,178	705	5.8	748	6.1	993	8.2
(Between S Billings Blvd & 27th St	WB	0.84	11,943	804	6.7	780	6.5	966	8.1
	Both	0.84	24,121	1,509	6.3	1,527	6.3	1,959	8.1

Source : MDT 2003 Permanent Count Station Data

Table A-14
Summary of 24 Hour Factored ADT Volumes
I-90 Mainline

Location	Daily Volume (veh / day)	AM Peak Hour Volume (veh / hr)	AM Peak Hour % of Daily (%)	Noon Peak Hour Volume (veh / hr)	Noon Peak Hour % of Daily (%)	PM Peak Hour Volume (veh / hr)	PM Peak Hour % of Daily (%)
I-90 EB							
W of Zoo / Shiloh	***11,636***	***977***	***8.4***	***706***	***6.1***	***705***	***6.1***
Under Zoo / Shiloh	9,460	825	8.7	545	5.8	548	5.8
E of Zoo / Shiloh	11,712	1,005	8.6	685	5.9	716	6.1
W of S Billings Blvd	14,120	736	5.2	898	6.4	1,160	8.2
Under S Billings Blvd	10,382	574	5.5	638	6.1	846	8.1
S Billings Blvd - 27th St	***12,178***	***705***	***5.8***	***748***	***6.1***	***993***	***8.2***
Under 27th St	9,026	501	5.5	533	5.9	804	8.9
27th St - US 87 (Lockwood)	11,188	623	5.6	680	6.1	1,030	9.2
Under US 87 (Lockwood)	6,756	390	5.8	408	6.0	606	9.0
US 87 (Lockwood) - Johnson Ln	9,952	526	5.3	604	6.1	933	9.4
Over Johnson Ln	5,772	388	6.7	373	6.5	523	9.1
E of Johnson Ln	7,406	459	6.2	488	6.6	664	9.0
I-90 WB							
E of Johnson Ln	9,130	574	6.3	613	6.7	867	9.5
Over Johnson Ln	7,980	493	6.2	512	6.4	770	9.7
US 87 (Lockwood) - Johnson Ln	12,072	953	7.9	773	6.4	1,027	8.5
Under US 87 (Lockwood)	7,838	650	8.3	505	6.4	640	8.2
27th St - US 87 (Lockwood)	11,303	892	7.9	711	6.3	851	7.5
Under 27th St	8,807	634	7.2	556	6.3	675	7.7
S Billings Blvd - 27th St	***11,943***	***804***	***6.7***	***780***	***6.5***	***966***	***8.1***
Under S Billings Blvd	10,006	647	6.5	657	6.6	793	7.9
W of S Billings Blvd	13,830	937	6.8	916	6.6	1,074	7.8
E of Zoo / Shiloh	11,820	571	4.8	762	6.4	1,173	9.9
Under Zoo / Shiloh	9,503	385	4.0	612	6.4	937	9.9
W of Zoo / Shiloh	***11,610***	***471***	***4.1***	***757***	***6.5***	***1,176***	***10.1***

Note - MDT I-90 Permanent Count Station 2003 ADT Volumes shown in ***Bold / Italic***



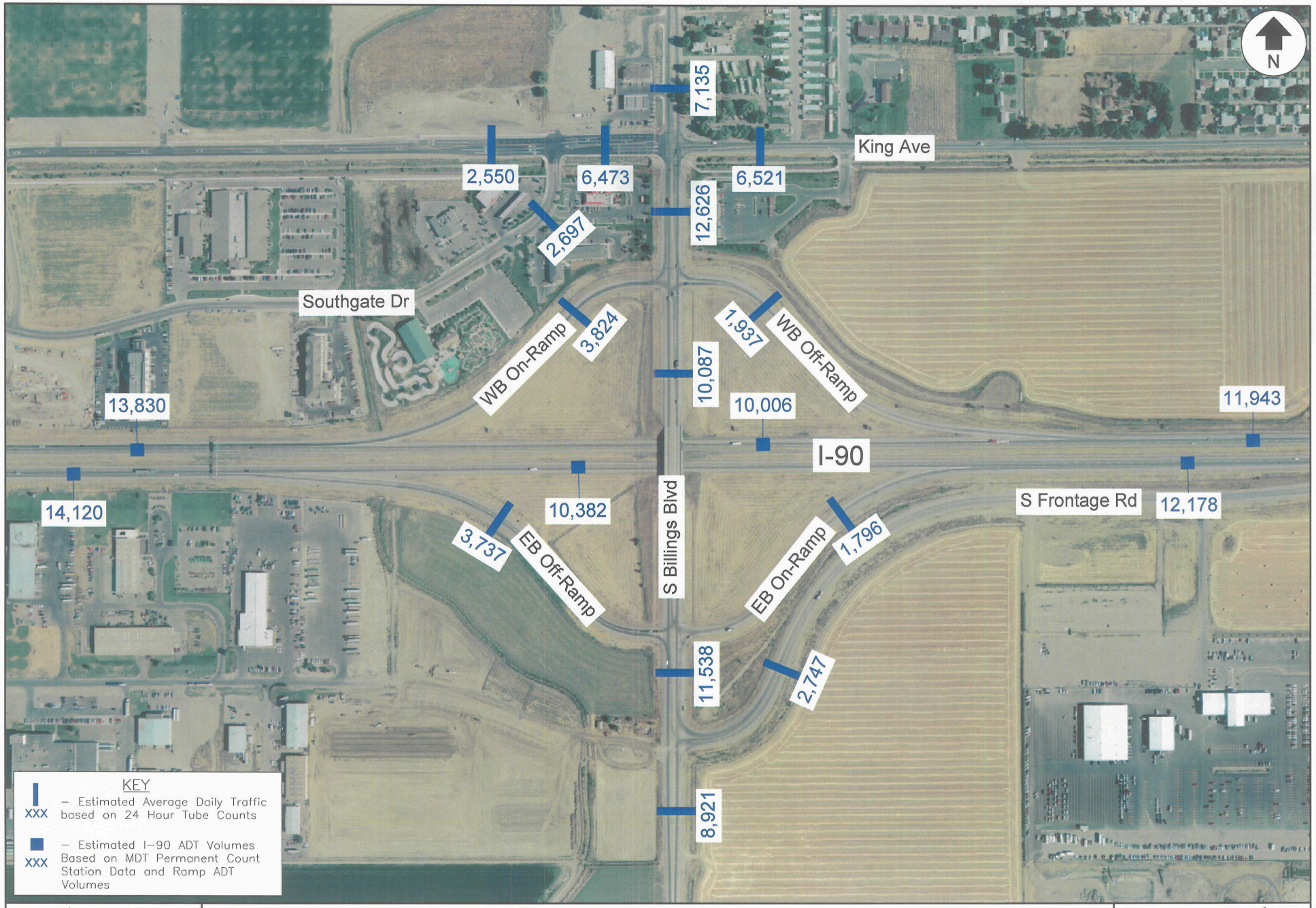
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BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 ADT VOLUMES - SHILOH INTERCHANGE EXIT 443

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-1

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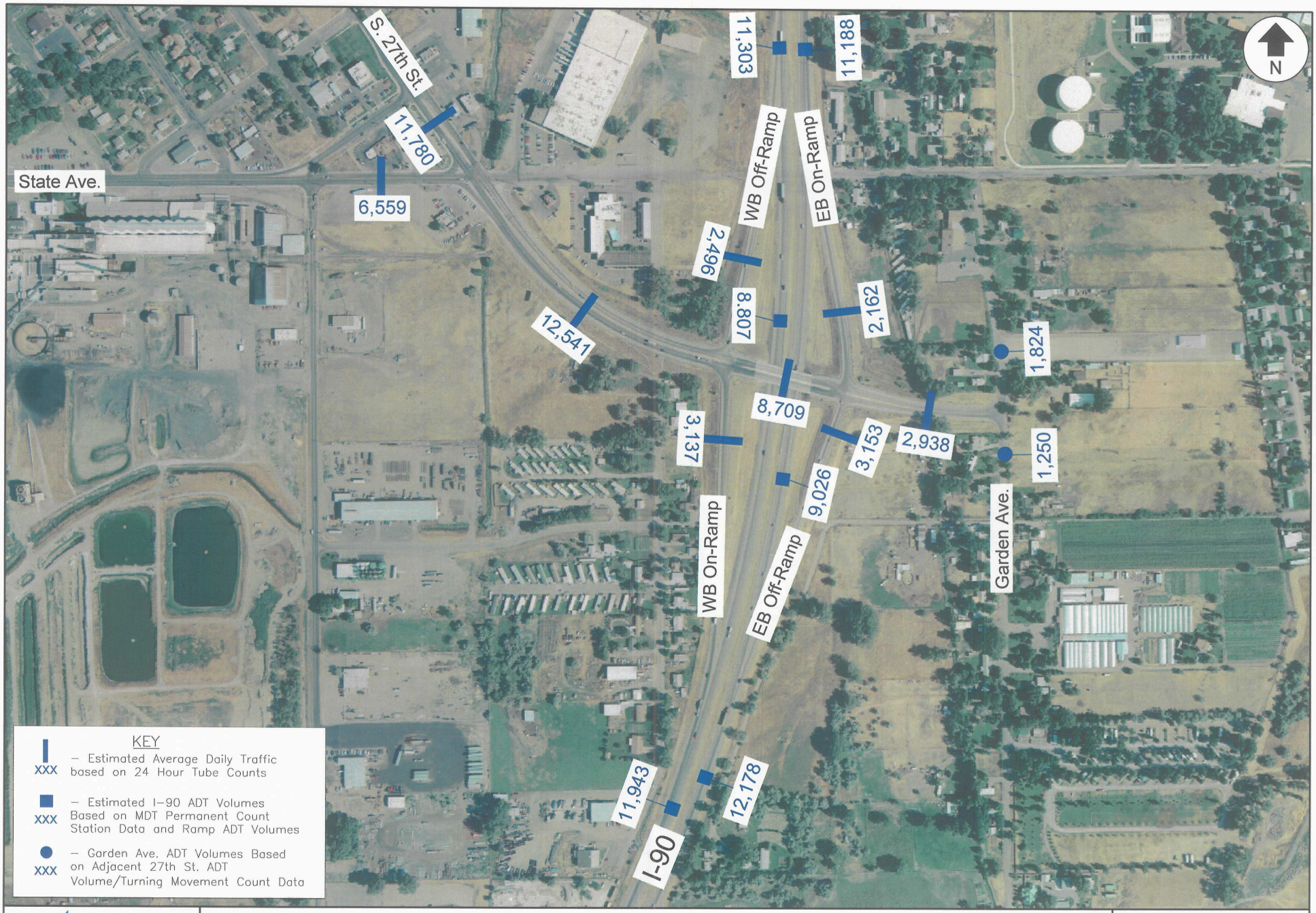
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Project # AMTDOT0306

BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 ADT VOLUMES - SOUTH BILLINGS BOULEVARD INTERCHANGE EXIT 447

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-2

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EXISTING 2003 ADT VOLUMES - 27TH STREET INTERCHANGE EXIT 450

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-3

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EXISTING 2003 ADT VOLUMES - US87 LOCKWOOD INTERCHANGE EXIT 452

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-4

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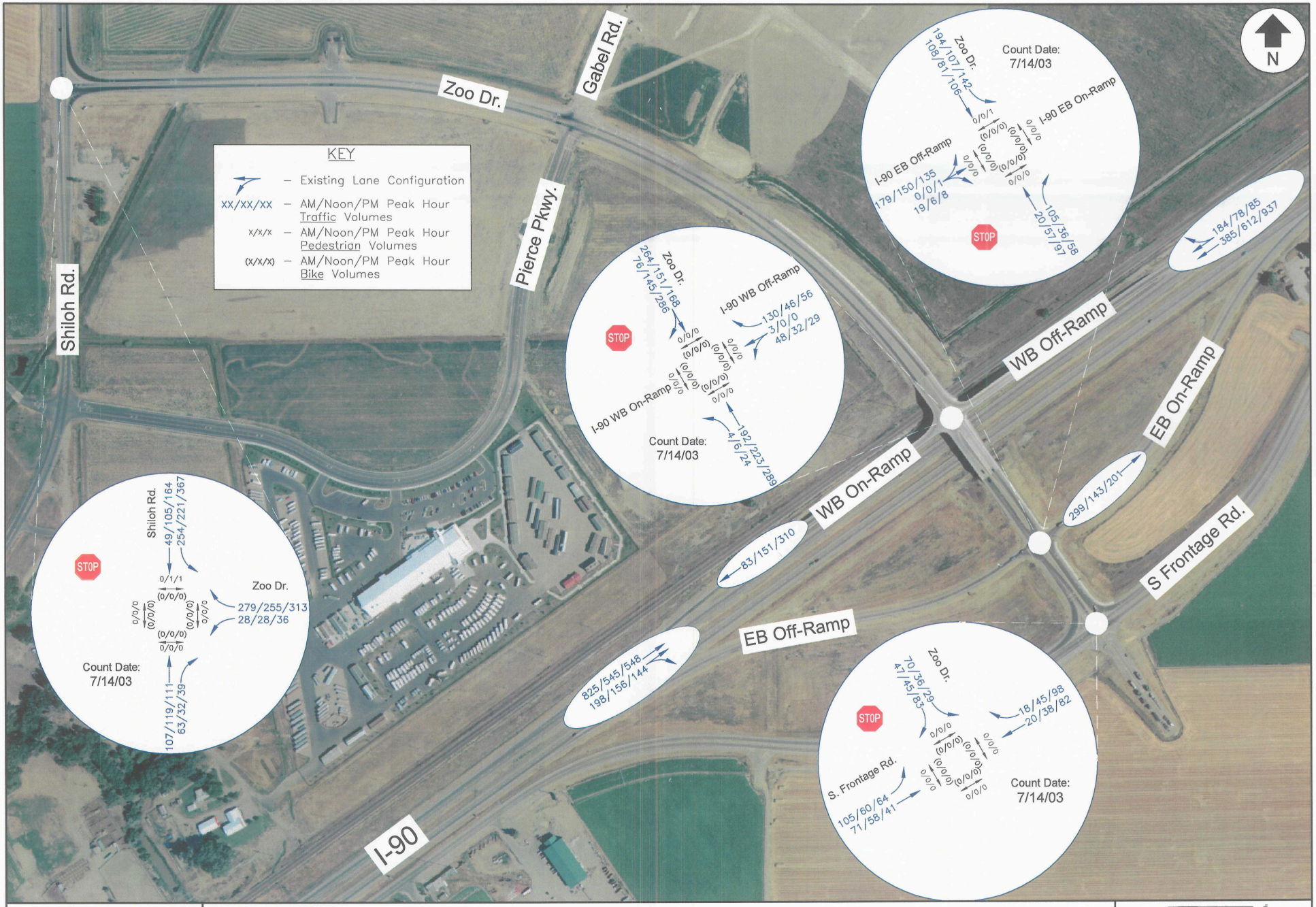
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Project # AMTDOT0306

BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 ADT VOLUMES - JOHNSON LANE INTERCHANGE EXIT 455

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-5

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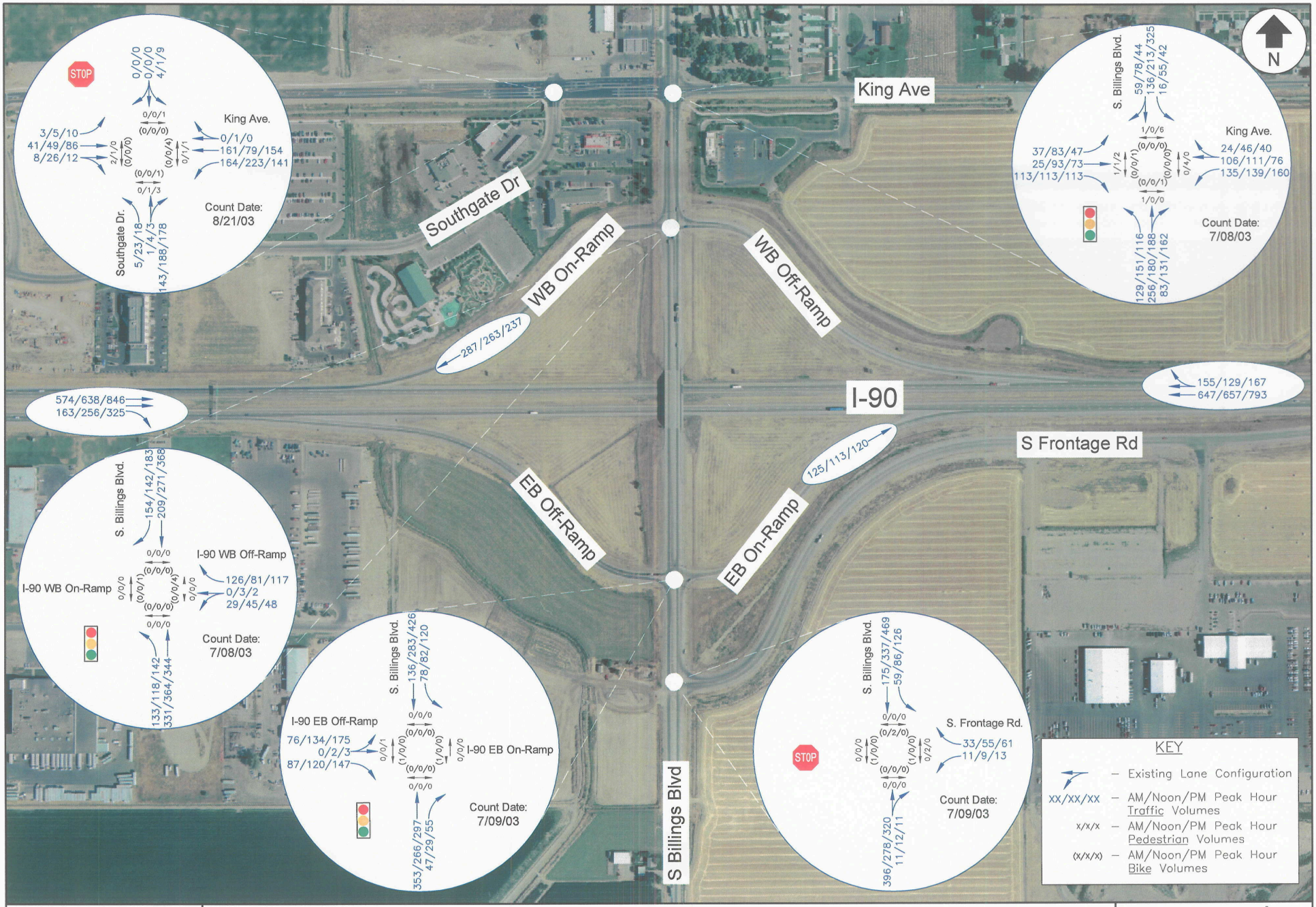
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Project # AMTDOT0306

BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 TURNING MOVEMENT VOLUMES - SHILOH INTERCHANGE EXIT 443

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-6

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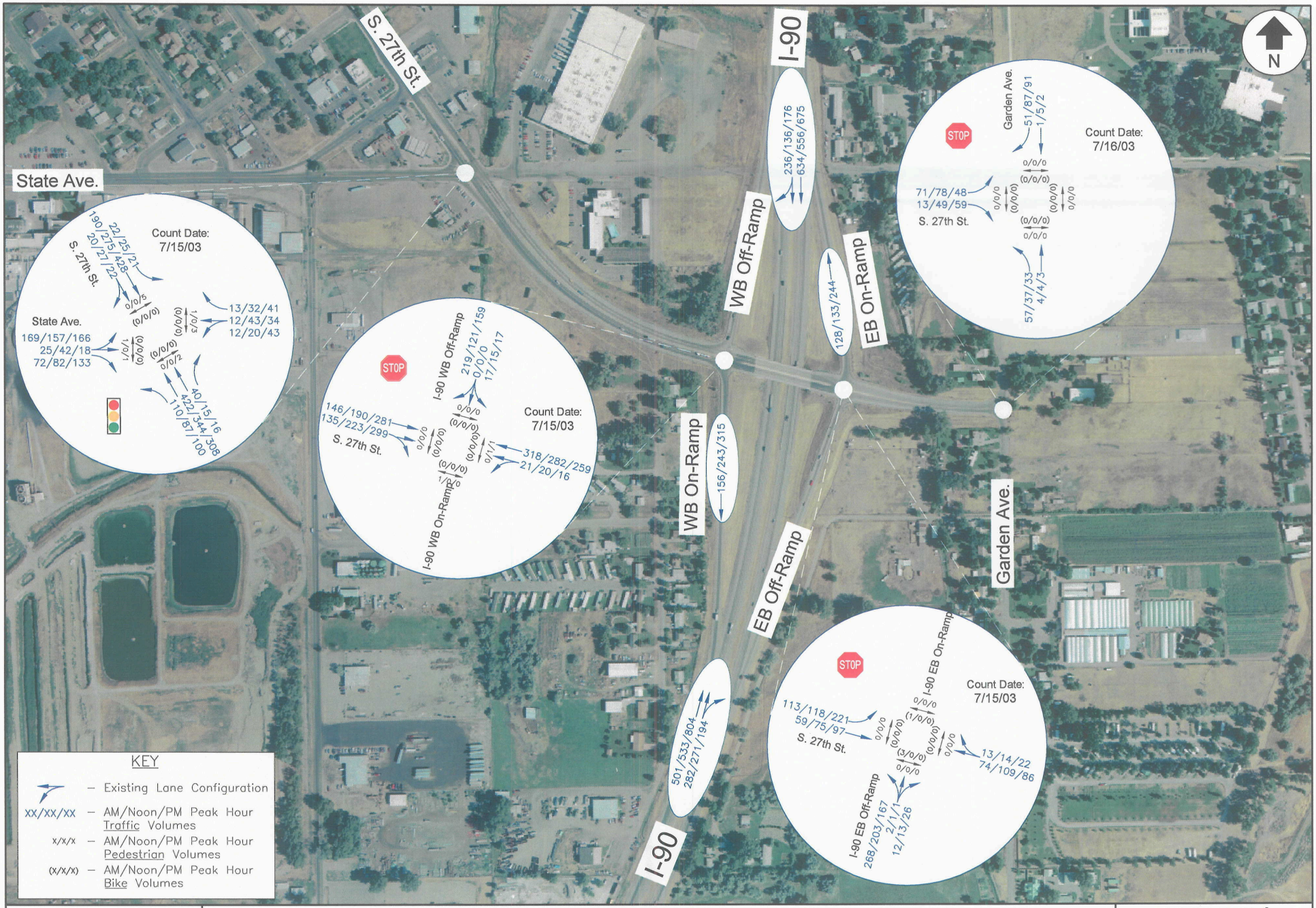
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Project # AMTDOT0306

BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 TURNING MOVEMENT VOLUMES - S. BILLINGS BOULEVARD INTERCHANGE EXIT 447

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-7

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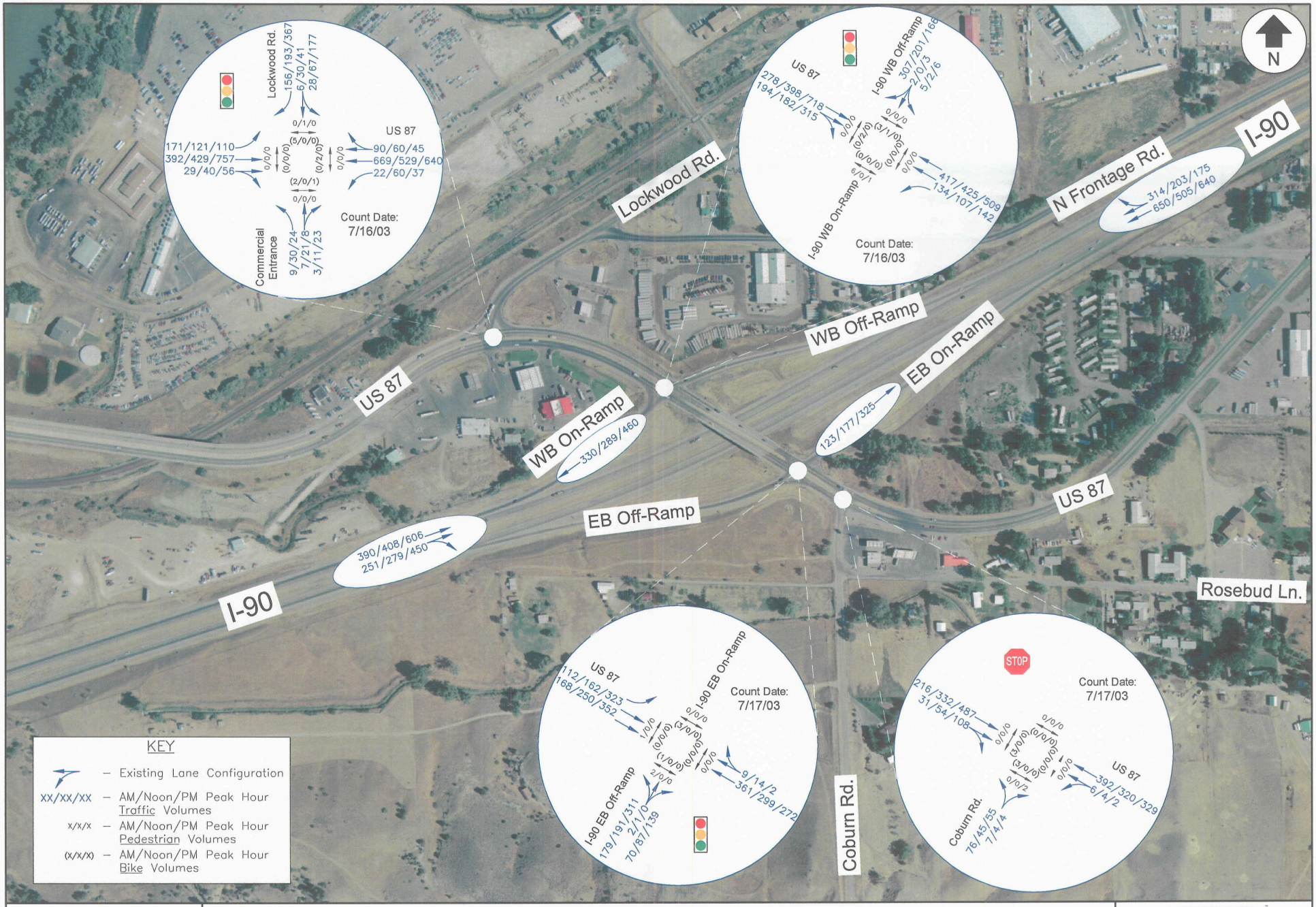
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Project # AMTDOT0306

BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 TURNING MOVEMENT VOLUMES - 27TH STREET INTERCHANGE EXIT 450

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-8

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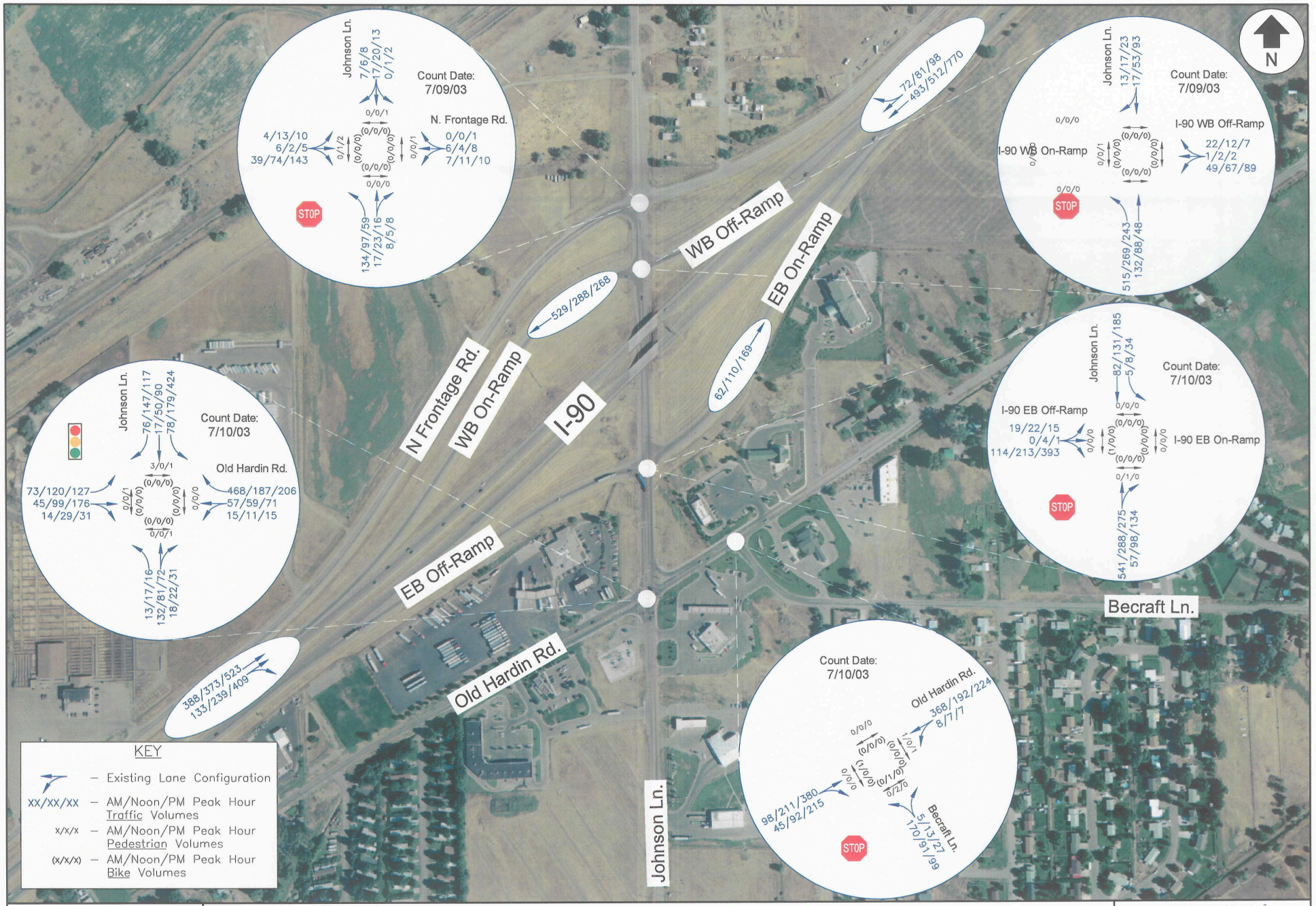
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Project # AMTDOT0306

BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 TURNING MOVEMENT VOLUMES - US87 LOCKWOOD INTERCHANGE EXIT 452

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-9

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BILLINGS I-90 INTERCHANGE STUDY

EXISTING 2003 TURNING MOVEMENT VOLUMES - JOHNSON LANE INTERCHANGE EXIT 455

Scale	1"=500'	Date	March 2006	Drawn by	RAC	Figure	A-10

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