



City of Sultan Comprehensive Plan

Appendix F Transportation

Appendix F: Traffic Forecasting Summary

Sultan Land Use Assumptions Residential

TAZ*	2007		2025		2007 - 2025 Growth	
	Housing Units	Population	Housing Units	Population	Housing Units	Population
1	122	211	162	283	40	72
2	17	41	26	66	9	25
3	577	1501	656	1662	79	161
4	129	352	193	492	64	140
5	99	285	173	418	74	133
6	75	227	125	366	50	139
7	30	78	331	916	301	838
8	30	89	330	924	300	835
9	34	105	234	662	200	557
10	131	338	251	672	120	334
11	166	461	296	823	130	362
12	98	237	119	295	21	58
13	37	86	37	86	0	0
14	78	217	251	698	173	482
15	14	39	239	665	225	626
16	10	26	188	522	178	496
17	15	33	15	33	0	0
18	73	187	73	187	0	0
19	13	35	250	695	237	660
20	16	46	218	608	202	562
21	15	45	157	362	142	317
22	3	8	3	8	0	0
23	6	12	6	12	0	0
Totals	1,788	4,657	4,333	11,454	2,545	6,797

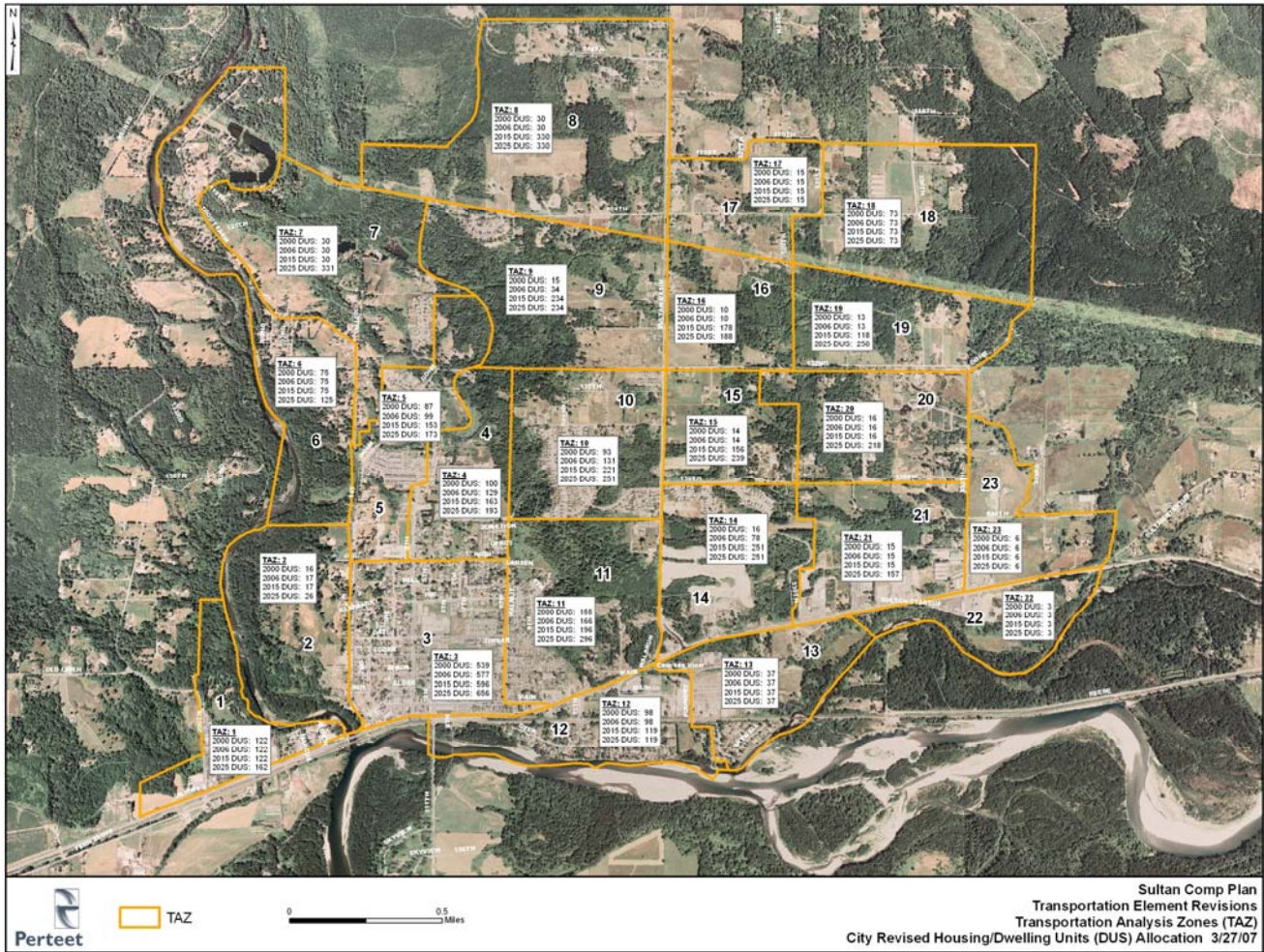
*Transportation analysis zone (TAZ) data is calculated on a total study area slightly larger than the City of Sultan's Urban Growth Area (UGA).

Sultan Land Use Assumptions Commercial

TAZ*	2007	2007 - 2025 Growth	2007 - 2025 Growth	2007 - 2025 Growth	2007 - 2025 Growth
	Employees	Retail	Office	Industrial	Total Employees
1	Estimates by TAZ unavailable	70	20	0	90
2		0	0	0	0
3		29	69	0	98
4		0	0	0	0
5		0	0	0	0
6		0	0	0	0
7		0	0	0	0
8		0	0	0	0
9		0	0	0	0
10		0	0	0	0
11		30	20	0	50
12		0	20	40	59
13		20	40	59	118
14		10	20	20	50
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		79	40	30	148
22		79	0	0	79
23		267	30	0	297
Totals	1,010	584	258	148	990

*Transportation analysis zone (TAZ) data is calculated on a total study area slightly larger than the City of Sultan's Urban Growth Area (UGA).

Sultan Transportation Analysis Zones (TAZs)



Sultan Traffic Forecasting Model Trip Generation Results

Zone No.	Land Use	Estimated Future Additional Development		Net New Trips						Assumptions/Comments
		Residential (Dwelling Units)	Commercial (Employees)	Average Daily Trips			PM Peak Hour Trips			
				Total	Inbound	Outbound	Total	Inbound	Outbound	
1	SFDU ITE code 210 SF Detached Housing			0	0	0	0	0	0	
	MFDU ITE code 220 Apartment	40		269	134	134	27	16	10	
	Retail code 814 Specialty Retail		70	1,174	587	587	133	74	58	ITE only had a pm pk rate in sqft so I took the relationship of that to sqft daily for use with the daily emp based rate (11.3%). Assumed 25% pass-by for Retail trips.
	Office code 710 Gen Office Bld		20	66	33	33	9	2	8	
	Industrial Code 110 Gen Lt Ind			0	0	0	0	0	0	
Totals	40	90	1,509	755	755	169	92	77		
2	SFDU	9		86	43	43	9	6	3	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	9	0	86	43	43	9	6	3		
3	SFDU	19		182	91	91	19	12	7	
	MFDU	60		403	202	202	40	25	16	
	Retail		29	486	243	243	55	31	24	Assumed 25% pass-by for Retail trips
	Office		69	229	115	115	32	5	26	
	Industrial			0	0	0	0	0	0	
Totals	79	98	1,300	650	650	146	73	73		
4	SFDU	25		239	120	120	26	16	9	
	MFDU	39		262	131	131	26	16	10	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	64	0	501	251	251	52	32	19		
5	SFDU			0	0	0	0	0	0	
	MFDU	74		497	249	249	50	30	19	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	74	0	497	249	249	50	30	19		
6	SFDU	50		479	239	239	51	33	18	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	50	0	479	239	239	51	33	18		
7	SFDU	301		2,881	1,440	1,440	307	196	111	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	301	0	2,881	1,440	1,440	307	196	111		
8	SFDU	300		2,871	1,436	1,436	306	196	110	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	300	0	2,871	1,436	1,436	306	196	110		
9	SFDU	200		1,914	957	957	204	131	73	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	200	0	1,914	957	957	204	131	73		
10	SFDU	120		1,148	574	574	122	78	44	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals	120	0	1,148	574	574	122	78	44		
11	SFDU	130		1,244	622	622	133	85	48	
	MFDU			0	0	0	0	0	0	
	Retail		30	503	252	252	57	32	25	Assumed 25% pass-by for Retail trips
	Office		20	66	33	33	9	2	8	
	Industrial			0	0	0	0	0	0	
Totals	130	50	1,814	907	907	199	118	80		

Sultan Traffic Forecasting Model Trip Generation Results (continued)

Zone No.	Land Use	Estimated Future Additional Development		Net New Trips						Assumptions/Comments
		Residential (Dwelling Units)	Commercial (Employees)	Average Daily Trips			PM Peak Hour Trips			
				Total	Inbound	Outbound	Total	Inbound	Outbound	
12	SFDU	21		201	100	100	21	14	8	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office		20	66	33	33	9	2	8	
	Industrial		40	120	60	60	20	6	14	
Totals		21	59	386	193	193	51	21	30	
13	SFDU			0	0	0	0	0	0	
	MFDU			0	0	0	0	0	0	
	Retail		20	332	166	166	38	21	17	Assumed 25% pass-by for Retail trips
	Office		40	131	66	66	18	3	15	
	Industrial		59	179	90	90	30	9	22	
Totals		0	119	643	321	321	86	33	53	
14	SFDU	173		1,656	828	828	176	113	64	
	MFDU			0	0	0	0	0	0	
	Retail		10	168	84	84	19	11	8	Assumed 25% pass-by for Retail trips
	Office		20	66	33	33	9	2	8	
	Industrial		20	60	30	30	10	3	7	
Totals		173	50	1,950	975	975	215	128	87	
15	SFDU	225		2,153	1,077	1,077	230	147	83	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		225	0	2,153	1,077	1,077	230	147	83	
16	SFDU	178		1,703	852	852	182	116	65	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		178	0	1,703	852	852	182	116	65	
17	SFDU			0	0	0	0	0	0	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		0	0	0	0	0	0	0	0	
18	SFDU			0	0	0	0	0	0	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		0	0	0	0	0	0	0	0	
19	SFDU	237		2,268	1,134	1,134	242	155	87	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		237	0	2,268	1,134	1,134	242	155	87	
20	SFDU	202		1,933	967	967	206	132	74	
	MFDU			0	0	0	0	0	0	
	Retail			0	0	0	0	0	0	
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		202	0	1,933	967	967	206	132	74	
21	SFDU	62		593	297	297	63	40	23	
	MFDU	80		538	269	269	54	33	21	
	Retail		79	1,328	664	664	150	84	66	Assumed 25% pass-by for Retail trips
	Office		40	131	66	66	18	3	15	
	Industrial		30	90	45	45	15	4	11	
Totals		142	149	2,680	1,340	1,340	300	165	136	
22	SFDU			0	0	0	0	0	0	
	MFDU			0	0	0	0	0	0	
	Retail		79	1,328	664	664	150	84	66	Assumed 25% pass-by for Retail trips
	Office			0	0	0	0	0	0	
	Industrial			0	0	0	0	0	0	
Totals		0	79	1,328	664	664	150	84	66	
23	SFDU			0	0	0	0	0	0	
	MFDU			0	0	0	0	0	0	
	Retail		267	4,483	2,241	2,241	507	284	223	Assumed 25% pass-by for Retail trips
	Office		30	99	49	49	14	2	11	
	Industrial			0	0	0	0	0	0	
Totals		0	297	4,581	2,291	2,291	521	286	235	
Total		2,545	991	34,627	17,313	17,313	3,797	2,253	1,544	

Sultan Traffic Forecasting Model Trip Distribution

Zone Group	Land Use	Estimated Future Additional Development		Gross New Trips			Intrazonal %	Intrazonal Trips	Net New Trips						
		Residential (Dwelling Units)	Commercial (Employees)	PM Peak Hour Trips					PM Peak Hour Trips			External - Internal	Internal- External	Internal- Internal	Internal- Internal
				Total	Inbound	Outbound			Total	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
A	Residential	1,148	0	1,170	749	421	3%	29	1,141	734	407	434	215	300	192
B	Mixed Uses	695	223	935	557	378	15%	140	795	487	308	288	163	199	145
C1	Residential	425	0	408	259	148	3%	10	397	254	143	150	76	104	67
C2	DT Mixed Uses	217	123	307	170	136	20%	61	245	140	105	83	56	57	50
D	Mixed Uses	21	178	137	54	83	5%	7	130	51	79	30	42	21	37
E	Commercial	0	376	671	371	301	3%	17	654	362	292	214	155	148	138
F	Mixed Uses	40	90	169	92	77	15%	25	144	80	64	47	34	33	30
Totals		2,545	991	3,797	2,253	1,544	7.6%	290	3,507	2,108	1,399	1,247	740	861	659

Zone Group Equivalencies

Zone Group	TAZ
A	8-10, 16-19
B	11, 14, 15, 20, 21
C1	5-7
C2	2-4
D	12-13
E	22, 23
F	1

Table 7: City of Sultan Recommended Arterial Street Design Standards

Street Type	Traffic Lanes	Parking Pockets	Bike Lane	Street Width	Landscape	Sidewalks	Right of Way
COLLECTOR							
2 Lane w/Parking	2-11'	8'	n/a	38'	5'	6'	60'
2 Lane w/Multi Purpose Trail and Parking	2-11'	8'	n/a	38'	5'	1- 6', 1-12'	66'
2 lane w/Bike Route and Parking Pockets	2-11'	12' w/bike	n/a	46'	5'	6'	68'
INDUSTRIAL COLLECTOR							
2 Lane	2-12 to 14'	n/a	n/a	24-28'	4'	6'	44-48'
3 Lane	1-12', 2-12'	n/a	n/a	36'	4'	6'	56'
MINOR ARTERIAL							
2 Lane	2-12'	n/a	n/a	24'	5'	6'	46'
2 Lane w/Multi Purpose Trail	2-12'	n/a	n/a	24'	5'	1-6', 1-12'	52'
2 Lane w/Bike Lane	2-12'	n/a	5'	34'	5'	6'	56'
3 Lane	1-12', 2-12'	n/a	n/a	36'	5'	6'	58'
3 Lane w/Multi Purpose Trail	1-12', 2-12'	n/a	n/a	36'	5'	1-6', 1-12'	64'
3 Lane w/Bike Lane	1-12', 2-11'	n/a	5'	45'	5'	6'	67'