

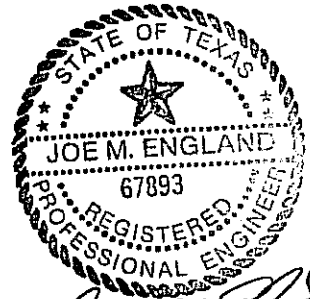
Joe M. England, P.E.
County Engineer



3151 SE Inner Loop, Suite B
Georgetown, Texas 78626
Telephone (512) 943-3336
Fax (512) 943-3335

**Williamson County
Unified Road System**

To: Williamson County Commissioners' Court
From: Joe M. England P.E., County Engineer
Date: November 24, 2009
Subject: Proposed Speed Limit on Shell Spur



Joe M. England
11/25/09

According to the 2006 edition of the Texas Manual on Uniform Traffic Control Devices the following factors should form the basis of an engineering and traffic investigation for determining the proper numerical value for a speed zone. The factors are as follows:

When a speed limit is to be posted, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic.

Option:

Other factors that may be considered when establishing speed limits are the following:

- A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
- B. The pace speed;
- C. Roadside development and environment;
- D. Parking practices and pedestrian activity; and
- E. Reported crash experience for at least a 12-month period.

Upon my field investigation, I found that the section of Shell Spur from Logan Ranch to Shell Road consist of a rural street design within a rural environment with no currently posted speed limit.

November 25, 2009

Page Two

The section of Shell Spur from Logan Ranch to Shell Road consist of approximately 50 feet of right-of-way (ROW), 22 feet of pavement, and no shoulders. The grade is flat with few horizontal curves. There is little roadside development and culture (agricultural along with single family) which generates restrained roadside friction. Parking is off of the right-of-way. There was no observed pedestrian activity. To this date, I have no accident information for the last 12-month period that would dictate any certain speed limit.

A speed study was conducted from October 20 to October 21, 2009 on the section of Shell Spur from Logan Ranch to Shell Road. The result of this study shows an 85% speed of 50 MPH. The 10 MPH pace speed was 41-50 MPH.

The pace speeds would indicate a proposed posting of either 45 or 50 MPH with the 85% suggesting the upper limit of this range. However, due to the horizontal curvature of the road and it leading into a neighborhood, it is my professional opinion that a posting of 45 MPH is proper for the section of Shell Spur from Logan Ranch to Shell Road.

Williamson County Unified Road System

3151 SE Inner Loop, Suite B
Georgetown, Texas 78626
512-943-3330

Site Code: SHELL SPUR
Station ID:

Direction 1, Direction 2		Latitude: 0' 0.000 South																															
Start	Time	15	16	20	21	26	30	31	35	36	40	41	45	46	50	51	55	56	60	61	65	66	70	71	75	76	Total	Pace	Speed	In	Number		
10/20/09	01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	10:00	0	0	0	1	2	2	2	2	17	56	48	49	49	49	49	17	3	3	0	0	0	0	0	0	0	147	41-50	105				
	11:00	0	0	0	0	0	0	3	3	21	48	44	44	44	44	44	16	7	7	0	0	0	0	0	0	0	139	41-50	92				
12 PM		0	0	0	0	0	0	3	3	28	76	45	45	45	45	45	12	1	1	1	1	1	1	1	1	0	166	41-50	121				
	13:00	0	0	0	0	0	0	3	3	19	60	60	60	60	60	60	16	4	4	1	1	1	1	1	1	0	164	41-50	120				
	14:00	0	0	0	0	1	0	5	3	39	72	46	46	46	46	46	18	5	5	1	1	1	1	1	1	0	188	41-50	118				
	15:00	0	0	0	0	0	0	8	3	26	93	59	59	59	59	59	17	8	8	0	0	0	0	0	0	0	211	41-50	152				
	16:00	0	0	0	0	0	0	3	3	35	71	88	88	88	88	88	28	7	7	1	1	1	1	1	1	0	233	41-50	159				
	17:00	0	0	0	0	1	0	3	3	32	126	114	114	114	114	114	43	5	5	1	1	1	1	1	1	0	326	41-50	240				
	18:00	0	0	0	0	1	0	3	3	35	109	76	76	76	76	76	33	3	3	2	2	2	2	2	2	0	263	41-50	185				
	19:00	0	0	0	0	1	0	7	7	36	57	51	51	51	51	51	18	1	1	0	0	0	0	0	0	0	171	41-50	108				
	20:00	0	0	0	4	0	0	9	9	28	45	36	36	36	36	36	9	2	2	0	0	0	0	0	0	0	133	41-50	81				
	21:00	0	0	0	0	0	0	3	3	13	35	16	16	16	16	16	12	1	1	0	0	0	0	0	0	0	80	38-47	51				
	22:00	0	0	0	0	0	0	1	1	5	10	12	12	12	12	12	9	0	0	0	0	0	0	0	0	0	37	41-50	22				
	23:00	0	0	0	0	0	0	0	0	3	1	3	3	3	3	3	1	0	0	0	0	0	0	0	0	0	8	42-51	5				
Total		0	0	0	5	6	6	53	337	699	699	699	699	699	699	699	249	47	47	7	7	7	4	4	0	0	2265						
Percent		0.0%	0.0%	0.0%	0.2%	0.3%	0.3%	2.3%	14.9%	37.9%	37.9%	37.9%	37.9%	37.9%	37.9%	37.9%	11.0%	2.1%	2.1%	0.3%	0.3%	0.2%	0.2%	0.0%	0.0%	0.0%							
AM Peak		10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	11:00	11:00								10:00						
Vol.		1	2	3	3	21	21	21	21	21	21	21	21	21	21	21	17	7	7								147						
PM Peak		20:00	14:00	20:00	20:00	14:00	14:00	14:00	14:00	14:00	14:00	14:00	14:00	14:00	14:00	14:00	17:00	17:00	15:00	18:00	18:00	13:00	13:00			17:00							
Vol.		4	1	9	9	39	39	39	39	39	39	39	39	39	39	39	43	8	8	2	2	1	1			326							

Williamson County Unified Road System

3151 SE Inner Loop, Suite B
Georgetown, Texas 78626
512-943-3330

Site Code: SHELL SPUR
Station ID:

Latitude: 0' 0.000 South

Latitude: 0° 0.000 South																											
Direction 1, Direction 2																											
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Speed	Number									
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999				In Pace									
10/21/09	0	0	0	0	1	2	5	1	3	0	0	0	0	0	12	35-44	7										
01:00	0	0	0	0	1	2	2	0	1	0	0	0	0	0	6	33-42	5										
02:00	0	0	0	0	1	1	0	1	0	0	0	0	0	0	3	27-36	2										
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*										
04:00	0	0	0	0	0	4	4	1	2	0	0	0	0	0	11	35-44	8										
05:00	0	0	0	0	1	3	8	11	6	1	1	1	0	0	30	42-51	20										
06:00	0	0	0	0	4	22	41	15	10	1	1	0	0	0	94	36-45	63										
07:00	0	0	0	0	11	57	81	33	14	1	0	0	0	0	187	36-45	138										
08:00	0	0	1	2	8	56	95	26	8	3	0	0	0	0	199	36-45	151										
09:00	0	0	0	1	8	47	63	28	9	2	1	0	0	0	159	36-45	110										
10:00	0	0	0	0	8	30	51	29	15	1	0	0	0	0	134	36-45	81										
11:00	3	0	1	2	11	20	51	24	6	1	0	0	0	0	119	40-49	75										
12 PM	1	1	4	6	12	21	18	8	0	1	1	0	0	0	73	34-43	39										
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*									
Total	4	1	6	11	66	265	419	177	74	11	3	0	0	0	1037												
Percent	0.4%	0.1%	0.6%	1.1%	6.4%	25.6%	40.4%	17.1%	7.1%	1.1%	0.3%	0.0%	0.0%	0.0%													
AM Peak	11:00		08:00	08:00	07:00	07:00	08:00	07:00	10:00	08:00	06:00				08:00												
Vol.	3		1	2	11	57	95	33	15	3	1				199												
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00				12:00												
Vol.	1	1	4	6	12	21	18	8	1	1	1				73												
Total	4	1	11	17	119	602	1278	876	323	58	10	4	0	0	3303												
Percent	0.1%	0.0%	0.3%	0.5%	3.6%	18.2%	38.7%	26.5%	9.8%	1.8%	0.3%	0.1%	0.0%	0.0%													

Stats
10 MPH Pace Speed : 41-50 MPH
Number In Pace : 2154
Percent In Pace : 65.2%
Number of Vehicles > 60 MPH : 14
Percent of Vehicles > 60 MPH : 0.4%
Mean Speed(Average) : 44 MPH