

OKLAHOMA DEPARTMENT OF TRANSPORTATION		
STANDARD REVISIONS		
DESCRIPTION		DATE

SUPERELEVATION e_d	SUPERELEVATION TABLE ($e_{max.}=6\%$)																					SUPERELEVATION e_d
	$V_d=15$ mph			$V_d=20$ mph			$V_d=25$ mph			$V_d=30$ mph			$V_d=35$ mph			$V_d=40$ mph			$V_d=45$ mph			
	RADIUS (FT.)	L_r (FT.)		RADIUS (FT.)	L_r (FT.)		RADIUS (FT.)	L_r (FT.)		RADIUS (FT.)	L_r (FT.)		RADIUS (FT.)	L_r (FT.)		RADIUS (FT.)	L_r (FT.)		RADIUS (FT.)	L_r (FT.)		
		$n_f=1$	$n_f=2$		$n_f=1$	$n_f=2$		$n_f=1$	$n_f=2$		$n_f=1$	$n_f=2$		$n_f=1$	$n_f=2$		$n_f=1$	$n_f=2$		$n_f=1$	$n_f=2$	
-2.0 % (NC)	868	31	46	1,580	32	49	2,290	34	51	3,130	36	55	4,100	39	58	5,230	41	62	6,480	44	67	-2.0 % (NC)
2.0 % (RC)	614	31	46	1,120	32	49	1,630	34	51	2,240	36	55	2,950	39	58	3,770	41	62	4,680	44	67	2.0 % (RC)
2.2 %	543	34	51	991	36	54	1,450	38	57	2,000	40	60	2,630	43	64	3,370	46	68	4,190	49	73	2.2 %
2.4 %	482	37	55	884	39	58	1,300	41	62	1,790	44	65	2,360	46	70	3,030	50	74	3,770	53	80	2.4 %
2.6 %	430	40	60	791	42	63	1,170	45	67	1,610	47	71	2,130	50	75	2,740	54	81	3,420	58	87	2.6 %
2.8 %	384	43	65	709	45	68	1,050	48	72	1,460	51	76	1,930	54	81	2,490	58	87	3,110	62	93	2.8 %
3.0 %	341	46	69	635	49	73	944	51	77	1,320	55	82	1,760	58	87	2,270	62	93	2,840	67	100	3.0 %
3.2 %	300	49	74	566	52	78	850	55	82	1,200	58	87	1,600	62	93	2,080	66	99	2,600	71	107	3.2 %
3.4 %	256	52	78	498	55	83	761	58	87	1,080	62	93	1,460	66	99	1,900	70	106	2,390	76	113	3.4 %
3.6 %	209	55	83	422	58	88	673	62	93	972	65	98	1,320	70	105	1,740	74	112	2,190	80	120	3.6 %
3.8 %	176	58	88	358	62	92	583	65	98	864	69	104	1,190	74	110	1,590	79	118	2,010	84	127	3.8 %
4.0 %	151	62	92	309	65	97	511	69	103	766	73	109	1,070	77	116	1,440	83	124	1,840	89	133	4.0 %
4.2 %	131	65	97	270	68	102	452	72	108	684	76	115	960	81	122	1,310	87	130	1,680	93	140	4.2 %
4.4 %	116	68	102	238	71	107	402	75	113	615	80	120	868	85	128	1,190	91	137	1,540	98	147	4.4 %
4.6 %	102	71	106	212	75	112	360	79	118	555	84	125	788	89	134	1,090	95	143	1,410	102	153	4.6 %
4.8 %	91	74	111	189	78	117	324	82	123	502	87	131	718	93	139	995	99	149	1,300	107	160	4.8 %
5.0 %	82	77	115	169	81	122	292	86	129	456	91	136	654	97	145	911	103	155	1,190	111	167	5.0 %
5.2 %	73	80	120	152	84	126	264	89	134	413	95	142	595	101	151	833	108	161	1,090	116	173	5.2 %
5.4 %	65	83	125	136	88	131	237	93	139	373	98	147	540	105	157	759	112	168	995	120	180	5.4 %
5.6 %	58	86	129	121	91	136	212	96	144	335	102	153	487	108	163	687	116	174	903	124	187	5.6 %
5.8 %	51	89	134	106	94	141	186	99	149	296	105	158	431	112	168	611	120	180	806	129	193	5.8 %
6.0 %	39	92	138	81	97	146	144	103	154	231	109	164	340	116	174	485	124	186	643	133	200	6.0 %

SUPERELEVATION e_d	SUPERELEVATION TABLE ($e_{max.}=6\%$)																				SUPERELEVATION e_d								
	$V_d=50$ mph				$V_d=55$ mph				$V_d=60$ mph				$V_d=65$ mph				$V_d=70$ mph					$V_d=75$ mph				$V_d=80$ mph			
	RADIUS (FT.)		L_r (FT.)		RADIUS (FT.)		L_r (FT.)		RADIUS (FT.)		L_r (FT.)		RADIUS (FT.)		L_r (FT.)		RADIUS (FT.)		L_r (FT.)			RADIUS (FT.)		L_r (FT.)					
			$n_f=1$	$n_f=2$			$n_f=1$	$n_f=2$			$n_f=1$	$n_f=2$			$n_f=1$	$n_f=2$			$n_f=1$	$n_f=2$				$n_f=1$	$n_f=2$	$n_f=1$	$n_f=2$		
-2.0 % (NC)	7,870	48	72	9,410	51	77	11,100	53	80	12,600	56	84	14,100	60	90	15,700	63	95	17,400	69	103	-2.0 % (NC)							
2.0 % (RC)	5,700	48	72	6,820	51	77	8,060	53	80	9,130	56	84	10,300	60	90	11,500	63	95	12,900	69	103	2.0 % (RC)							
2.2 %	5,100	53	79	6,110	56	84	7,230	59	88	8,200	61	92	9,240	66	99	10,400	69	104	11,600	75	113	2.2 %							
2.4 %	4,600	58	86	5,520	61	92	6,540	64	96	7,430	67	100	8,380	72	108	9,420	76	114	10,600	82	123	2.4 %							
2.6 %	4,170	62	94	5,020	66	100	5,950	69	104	6,770	73	109	7,660	78	117	8,620	82	123	9,670	89	134	2.6 %							
2.8 %	3,800	67	101	4,580	71	107	5,440	75	112	6,200	78	117	7,030	84	126	7,930	88	133	8,910	96	144	2.8 %							
3.0 %	3,480	72	108	4,200	77	115	4,990	80	120	5,710	84	126	6,490	90	135	7,330	95	142	8,260	103	154	3.0 %							
3.2 %	3,200	77	115	3,860	82	123	4,600	85	128	5,280	89	134	6,010	96	144	6,810	101	152	7,680	110	165	3.2 %							
3.4 %	2,940	82	122	3,560	87	130	4,250	91	136	4,890	95	142	5,580	102	153	6,340	107	161	7,180	117	175	3.4 %							
3.6 %	2,710	86	130	3,290	92	138	3,940	96	144	4,540	100	151	5,210	108	162	5,930	114	171	6,720	123	185	3.6 %							
3.8 %	2,490	91	137	3,040	97	146	3,650	101	152	4,230	106	159	4,860	114	171	5,560	120	180	6,320	130	195	3.8 %							
4.0 %	2,300	96	144	2,810	102	153	3,390	107	160	3,950	112	167	4,550	120	180	5,220	126	189	5,950	137	206	4.0 %							
4.2 %	2,110	101	151	2,590	107	161	3,140	112	168	3,680	117	176	4,270	126	189	4,910	133	199	5,620	144	216	4.2 %							
4.4 %	1,940	106	158	2,400	112	169	2,920	117	176	3,440	123	184	4,010	132	198	4,630	139	208	5,320	151	226	4.4 %							
4.6 %	1,780	110	166	2,210	117	176	2,710	123	184	3,220	128	193	3,770	138	207	4,380	145	218	5,040	158	237	4.6 %							
4.8 %	1,640	115	173	2,050	123	184	2,510	128	192	3,000	134	201	3,550	144	216	4,140	152	227	4,790	165	247	4.8 %							
5.0 %	1,510	120	180	1,890	128	191	2,330	133	200	2,800	140	209	3,330	150	225	3,910	158	237	4,550	171	257	5.0 %							
5.2 %	1,390	125	187	1,750	133	199	2,160	139	208	2,610	145	218	3,120	156	234	3,690	164	246	4,320	178	267	5.2 %							
5.4 %	1,280	130	194	1,610	138	207	1,990	144	216	2,420	151	226	2,910	162	243	3,460	171	256	4,090	185	278	5.4 %							
5.6 %	1,160	134	202	1,470	143	214	1,830	149	224	2,230	156	234	2,700	168	252	3,230	177	265	3,840	192	288	5.6 %							
5.8 %	1,040	139	209	1,320	148	222	1,650	155	232	2,020	162	243	2,460	174	261	2,970	183	275	3,560	199	298	5.8 %							
6.0 %	833	144	216	1,060	153	230	1,330	160	240	1,660	167	251	2,040	180	270	2,500	189	284	3,050	206	309	6.0 %							

NOTES:

- THE VALUES LISTED IN THE SUPERELEVATION TABLES WERE CALCULATED USING DISTRIBUTION METHOD 5.
- THE SUPERELEVATION RUNOFF LENGTH (L_r) WAS BASED ON THE NUMBER OF LANES ROTATED. SINGLE LANE ROTATED IS TYPICAL OF 2 LANE HIGHWAYS, AND TWO LANES ROTATED IS TYPICAL OF 4 LANE HIGHWAYS.
- FOR THE TANGENT RUNOUT LENGTH (L_t), USE THE FORMULA: $\frac{2.0\%(0.01)}{K}$, WHERE K IS $\frac{e_d(0.01)}{L_r(FT)}$.
- VALUES OF RADIUS AND SUPERELEVATION RUNOFF LENGTHS SHALL NOT BE INTERPOLATED OR ROUNDED UP.



APPROVED BY
ROADWAY ENGINEER: *Calvin F. A.* DATE: *04/16/15*

ROADWAY DESIGN DIVISION STANDARD

SUPERELEVATION TABLES
($e_{max.} = 6\%$)

OKLAHOMA DEPARTMENT OF TRANSPORTATION
2009 SPECIFICATIONS

SUEL3-3

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R-72