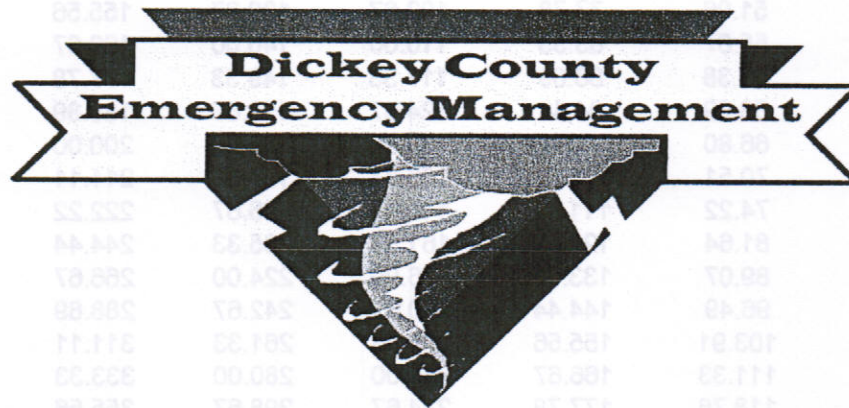


GRAVEL CONVERSION CHARTS



OFFICE OF EMERGENCY MANAGEMENT
DICKEY COUNTY NORTH DAKOTA

Quantity Calculations Chart
 convert tons to yds tons divided by 1.35 =yds

conversion of inches 1"=.08 2"=.167 3"=.25 4"=.33 5"=.33 6"=.42 7"=.58

Length of damage x width of damage/road x material inches to place divided by 27 = yds needed

width of damage 22 ft	Material depth (inches) to be placed					
	2"	3"	4"	5"	6"	7"
	yards	yards	yards	yards	yards	yards
50	6.80	10.19	13.44	17.11	20.37	23.63
75	10.21	15.28	20.17	25.67	30.56	35.44
100	13.61	20.37	26.89	34.22	40.74	47.26
125	17.01	25.46	33.61	42.78	50.93	59.07
150	20.41	30.56	40.33	51.33	61.11	70.89
175	23.81	35.65	47.06	59.89	71.30	82.70
200	27.21	40.74	53.78	68.44	81.48	94.52
225	30.62	45.83	60.50	77.00	91.67	106.33
250	34.02	50.93	67.22	85.56	101.85	118.15
275	37.42	56.02	73.94	94.11	112.04	129.96
300	40.82	61.11	80.67	102.67	122.22	141.78
325	44.22	66.20	87.39	111.22	132.41	153.59
350	47.63	71.30	94.11	119.78	142.59	165.41
375	51.03	76.39	100.83	128.33	152.78	177.22
400	54.43	81.48	107.56	136.89	162.96	189.04
425	57.83	86.57	114.28	145.44	173.15	200.85
450	61.23	91.67	121.00	154.00	183.33	212.67
475	64.64	96.76	127.72	162.56	193.52	224.48
500	68.04	101.85	134.44	171.11	203.70	236.30
550	74.84	112.04	147.89	188.22	224.07	259.93
600	81.64	122.22	161.33	205.33	244.44	283.56
650	88.45	132.41	174.78	222.44	264.81	307.19
700	95.25	142.59	188.22	239.56	285.19	330.81
750	102.06	152.78	201.67	256.67	305.56	354.44
800	108.86	162.96	215.11	273.78	325.93	378.07
850	115.66	173.15	228.56	290.89	346.30	401.70
900	122.47	183.33	242.00	308.00	366.67	425.33
950	129.27	193.52	255.44	325.11	387.04	448.96
1000	136.07	203.70	268.89	342.22	407.41	472.59
2640	359.24	537.78	709.87	903.47	1075.56	1247.64

Length of damage x width of damage/road x material inches to place divided by 27 = yds needed

Quantity Calculations Chart
 convert tons to yds tons divided by 1.35 =yds

conversion of inches 1"=.08 2"=.167 3"=.25 4"=.33 5"=.33 6"=.42 7"=.58

Length of damage x width of damage/road x material inches to place divided by 27 = yds needed

Material depth (inches) to be placed

width of damage	2"	3"	4"	5"	6"	7"
18 ft						
	yards	yards	yards	yards	yards	yards
50	5.57	8.33	11.00	14.00	16.67	19.33
75	8.35	12.50	16.50	21.00	25.00	29.00
100	11.13	16.67	22.00	28.00	33.33	38.67
125	13.92	20.83	27.50	35.00	41.67	48.33
150	16.70	25.00	33.00	42.00	50.00	58.00
175	19.48	29.17	38.50	49.00	58.33	67.67
200	22.27	33.33	44.00	56.00	66.67	77.33
225	25.05	37.50	49.50	63.00	75.00	87.00
250	27.83	41.67	55.00	70.00	83.33	96.67
275	30.62	45.83	60.50	77.00	91.67	106.33
300	33.40	50.00	66.00	84.00	100.00	116.00
325	36.18	54.17	71.50	91.00	108.33	125.67
350	38.97	58.33	77.00	98.00	116.67	135.33
375	41.75	62.50	82.50	105.00	125.00	145.00
400	44.53	66.67	88.00	112.00	133.33	154.67
425	47.32	70.83	93.50	119.00	141.67	164.33
450	50.10	75.00	99.00	126.00	150.00	174.00
475	52.88	79.17	104.50	133.00	158.33	183.67
500	55.67	83.33	110.00	140.00	166.67	193.33
550	61.23	91.67	121.00	154.00	183.33	212.67
600	66.80	100.00	132.00	168.00	200.00	232.00
650	72.37	108.33	143.00	182.00	216.67	251.33
700	77.93	116.67	154.00	196.00	233.33	270.67
750	83.50	125.00	165.00	210.00	250.00	290.00
800	89.07	133.33	176.00	224.00	266.67	309.33
850	94.63	141.67	187.00	238.00	283.33	328.67
900	100.20	150.00	198.00	252.00	300.00	348.00
950	105.77	158.33	209.00	266.00	316.67	367.33
1000	111.33	166.67	220.00	280.00	333.33	386.67
2640	293.92	440.00	580.80	739.20	880.00	1020.80

Length of damage in ft

TABLE XV-25
CUBIC YARDS OF MATERIAL REQUIRED FOR VARIOUS WIDTHS
AND DEPTHS PER 100 LINEAR FEET AND PER MILE

Width, Feet	Depth—Inches											
	1	2	3	4	5	6	7	8	9	10	11	12
1	0.31	0.62	0.93	1.23	1.54	1.85	2.16	2.47	2.78	3.09	3.40	3.70
2	0.62	1.23	1.85	2.47	3.09	3.70	4.32	4.94	5.56	6.17	6.79	7.41
3	0.93	1.85	2.78	3.70	4.63	5.56	6.48	7.41	8.33	9.26	10.2	11.1
4	1.23	2.47	3.70	4.94	6.17	7.41	8.64	9.88	11.1	12.3	13.6	14.8
5	1.54	3.09	4.63	6.17	7.72	9.26	10.8	12.3	13.9	15.4	17.0	18.5
6	1.85	3.70	5.56	7.41	9.26	11.1	13.0	14.8	16.7	18.5	20.4	22.2
7	2.16	4.32	6.48	8.64	10.8	13.0	15.1	17.3	19.4	21.6	23.8	25.9
8	2.47	4.94	7.41	9.88	12.3	14.8	17.3	19.8	22.3	24.7	27.2	29.6
9	2.78	5.56	8.33	11.1	13.9	16.7	19.4	22.2	25.0	27.8	30.6	33.3
10	3.09	6.17	9.26	12.3	15.4	18.5	21.6	24.7	27.8	30.9	34.0	37.0
20	6.17	12.3	18.5	24.7	30.9	37.0	43.2	49.4	55.6	61.7	67.9	74.1
30	9.26	18.5	27.8	37.0	46.3	55.6	64.8	74.1	83.3	92.6	102	111
40	12.3	24.7	37.0	49.4	61.7	74.1	86.4	98.8	111	123	136	148
50	15.4	30.9	46.3	61.7	77.2	92.6	108	123	139	154	170	185
60	18.5	37.0	55.6	74.1	92.6	111	130	148	167	185	204	222
70	21.6	43.2	64.8	86.4	108	130	151	173	194	216	238	259
80	24.7	49.4	74.1	98.8	123	148	173	198	223	247	272	296
90	27.8	55.6	83.3	111	139	167	194	222	250	278	306	333
100	30.9	61.7	92.6	123	154	185	216	247	278	309	340	370

PER MILE	Width, Feet	Depth—Inches											
		1	2	3	4	5	6	7	8	9	10	11	12
PER 100 LINEAR FEET	1	16.3	32.6	48.9	65.2	81.5	97.8	114	130	147	163	179	196
	2	32.6	65.2	97.8	130	163	196	228	261	293	326	359	391
	3	48.9	97.8	147	196	244	293	342	391	440	489	538	587
	4	65.2	130	196	261	326	391	456	521	587	652	717	782
	5	81.5	163	244	326	407	489	570	652	733	815	896	978
PER MILE	6	97.8	196	293	391	489	587	684	782	880	978	1076	1173
	7	114	228	342	456	570	684	799	913	1027	1141	1255	1369
	8	130	261	391	521	652	782	913	1043	1173	1304	1434	1564
	9	147	293	440	587	733	880	1027	1173	1320	1467	1613	1760
	10	163	326	489	652	815	978	1141	1304	1467	1630	1793	1956
PER MILE	20	326	652	978	1304	1630	1956	2281	2607	2933	3259	3585	3911
	30	489	978	1467	1956	2444	2933	3422	3911	4400	4889	5378	5867
	40	652	1304	1956	2607	3259	3911	4563	5215	5867	6519	7170	7822
	50	815	1630	2444	3259	4074	4889	5704	6519	7333	8148	8963	9778
	60	978	1956	2933	3911	4889	5867	6844	7822	8800	9778	10756	11733
PER MILE	70	1141	2281	3422	4563	5704	6844	7985	9126	10267	11407	12548	13689
	80	1304	2607	3911	5215	6519	7822	9126	10430	11733	13037	14341	15644
	90	1467	2933	4400	5867	7333	8800	10267	11733	13200	14667	16133	17600
	100	163	3259	4889	6519	8148	9778	11407	13037	14667	16296	17926	19556

Note: Formulas used for calculation:

Per 100 Lin Ft: $a = \left(\frac{D}{36}\right)\left(\frac{W}{3}\right)\left(\frac{100}{3}\right) = 0.3086DW$

Per Miles: $a = \left(\frac{D}{36}\right)\left(\frac{W}{3}\right)\left(\frac{5280}{3}\right) = 16.2963DW$

Where: a = Quantity of material in cubic yards
 D = Depth in inches
 W = Width in feet

$$\frac{L \times W \times D}{27} = CY$$

6" = .5
3" = .25

27