TABLE 1.—*Summary of tests on construction materials of Wabaunsee County, Kans.*

[All correlations with geologic formations or members are by the U. S. Geological Survey. Authority for test data: HC, State Highway Commission of Kansas; GS, U. S. Geological Survey. Symbol nos. on plate 2: ca 1, coarse aggregate—sample 1; ma 1, mixed aggregate—sample 1; fa 1, fine aggregate—sample 1; cg 1, chert gravel—sample 1; lg 1, limestone gravel—sample 1; mf 1, mineral filler—sample 1; ls 1, limestone—sample 1. Classification of material: Coarse fraction, retained on No. 4 sieve; Fine fraction, passed through No. 4 sieve; Trace, in terms of percent composition.]

No. on plate 2	Location	Estimated amount of material (cubic yards)	Average thickness (feet): Material	Average thickness (feet): Overburden	Accessibility	Lithologic unit	Authority for test data	Date of test	Laboratory number	Description of material	Sieve analysis: Percent retained on sieve of size shown: No. 1½	No. 1	No. ¾	No. ⅜	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	Percent passed No. 200 (wash)	Gradational factor	Weight per (cubic foot) (Dry and rodded)	Laboratory test data: Specific gravity: Dry	Specific gravity: Wet	Water absorbed	Compression strength ratio: 1 day	Compression strength ratio: 3 days	Los Angeles: Percent wear	Los Angeles: Grading	Soundness (25 cycles)	Toughness	Remarks
ca 1	NE¼SE¼ Sec. 10, T. 12 S., R. 13 E.	50,000	20	4	Good	Glacial moraine ice-contact.	HC	1-40	38816	A mixture of silt and cemented particles of chert, granitic sand and gravel, and limestone pebbles.	6	12	17	33	46	59	74	87	90	92	6.8	5.04											Slaking 30+. PI=19. 10.2 percent oversize. Accepted for surface material under sec. 75, Kans. Hwy. Standard Specifications (ed. 1937). If oversize is removed and penalty applied as designed under art. 75.5. Cementation, 100+.
ca 2	NE¼NW¼ Sec. 7, T. 11 S., R. 12 E.	7,000	6	1	Good	Grand Island formation.	GS	9-48	60566	Chert gravel with red-brown clay.	0		3	11	19	28	38	44	55	65	32.68	2.63											
ma 1	NW¼NW¼ Sec. 9, T. 10 S., R. 10 E.	150,000			Good	Alluvium	HC	1-40	38819	Sand and gravel, granitic			3	6	15	37	80	95	99	100	0.4	4.35	108.0	2.60									Contains .09 percent mudballs.
	NW¼NW¼ Sec. 9, T. 10 S., R. 10 E.	3,500			Good	do	HC	12-46	49411	Sand and gravel, siliceous, contains flint and calcareous particles.	0	0	0	2	10	35	76	92	98	99	0.67	4.12		2.62			62	1.29	36.2	D	0.89		Clear; no mudballs or shale; sticks=.07 percent: Sampled from stockpile. Acceptable under Specifications 108, 110, and 112, Kans. Hwy. Standard Specifications (ed. 1945).
ma 2	NW¼SW¼ Sec. 20, T. 10 S., R. 10 E.	150,000			Fair	do	HC	3-42	44662	Sand and gravel; consists of siliceous and calcareous particles.			0	2	10	37	78	94	98	99	0.5	4.18											Acceptable under sec. 75, Kans. Hwy. Standard Specifications (ed. 1937).
fa 1	SE¼SW¼ Sec. 17, T. 10 S., R. 12 E.	5,000			Good	do	HC	2-37	30959	Sand, clean, fine, granitic	0	0	0	0	0	4	17	46	88	99	0.5	2.54					1.07	1.05					Straw-colored; acceptable under sec. 55, Kans. Hwy. Standard Specifications (ed. 1934).
fa 2	NW¼NW¼ Sec. 9, T. 10 S., R. 10 E.	150,000			Good	do	HC	1-40	38817	Sand, granitic.			0	1	4	13	38	69	93	100		3.18	112.0	2.62			1.19	1.14			3.17		Accepted for use as a fine aggregate under sec 65, Kans. Hwy. Standard Specifications (ed 1947)
cg 1	NW¼SW¼ Sec. 26, T. 10 S., R. 9 E.	3,000	3	3	Poor	Sanborn formation.	GS	9-48	60565	Flint granules and pebbles, brown and white; in brown clay.	7		40	58	70	78	82	83	84	84	15.3	5.86		2.39	2.45				20.3	A	0.97		
cg 2	NE¼NE¼ Sec. 6, T. 11 S., R. 12 E.	10,000	7	4	Good	Older gravel	HC	5-40	39807	Chert gravel; some fragments of limestone in a clay matrix.	5	12	27	53	71	82	90	94	98	100	25.0	6.20											Deval=11.2. 38.70 percent insoluble in HC 18 (av.) slaking. Accepted under sec. 74, Kans. Hwy. Standard Specifications (ed. 1937). Cementation 100+.
cg 3	SW¼SW¼ Sec. 1, T. 11 S., R. 11 E.	10,000	4	0	Fair	do	HC	5-40	39806		5	15	26	55	79	92	97	98	99	100	15.4	6.51											Deval=8.3. 96.54 percent insoluble in HCL. 18 (av.) slaking. Accepted under sec. 74, Kans. Hwy. Standard Specifications (ed. 1937). Cementation 100+.
cg 4	SE¼SE¼ Sec. 25, T. 11 S., R. 10 E.	12,000	8	1	Good	do	GS	9-48	60564		6		24	37	50	58	64	67	69	70	29.8	4.45		2.21	2.34				20.4	A	0.97		Coarse fraction 3: 100 percent chert and chalcedony. Fine fraction: limestone trace, 40 percent shale, 60 percent chert and chalcedony.
cg 5	SE¼NW¼ Sec. 10, T. 12 S., R. 10 E.	15,000	6	3	Good	do	GS	9-48	60569	Chert gravel with red-brown clay.	9		33	58	70	78	83	85	86	87	11.32	5.89		2.18	2.31				20.4	A	0.94		
cg 6	NW¼NW¼ Sec. 12, T. 12 S., R. 11 E.	15,000	6	3	Good	Sanborn formation.	GS	9-48	60567		23		36	46	55	64	74	82	87	88	11.9	5.55							32.8	A			Coarse fraction: 5 percent limestone, 95 percent chert and chalcedony. Fine fraction: 5 percent limestone, 5 percent shale, 90 percent chert and chalcedony.
cg 7	NE¼SE¼ Sec. 18, T. 12 S., R. 9 E.	3,000	6	0	Good	Alluvium	GS	9-48	60570		30		50	68	82	90	93	95	96	97	3.17	7.15		2.10	2.28				24.8	A	0.94		Coarse fraction: limestone trace, 100 percent chert and chalcedony. Fine fraction: 5 percent limestone, trace of shale, 95 percent chert and chalcedony.
cg 8	SW¼SW¼ Sec. 6, T. 13 S., R. 9 E.	8,000	1-6	0	Good	Terrace deposit	GS	9-48	60571		27		58	76	83	87	90	92	93	93	6.24	6.99		2.17	2.32				29.6	A	0.88		Coarse fraction: none. Fine fraction: 10 percent limestone, 90 percent chert and chalcedony.
cg 9	SE¼SE¼ Sec. 27, T. 14 S., R. 10 E.	18,000	5	2	Good	Sanborn formation.	GS	9-48	60573		19		45	60	74	82	85	88	89	90	9.48	6.32		2.24	2.36				20.2	A	0.94		
lg 1	SW¼NE¼ Sec. 25, T. 11 S., R. 12 E.	2,000	1-4	0	Fair	Alluvium	HC	12-47	57918	Gravel contains flat and irregular limestone pebbles.	3		25	56	73	84	91	96	98	98	1.6	6.24	100.6	2.46					22.7	A	0.96		Trace mudballs, no shale or sticks. Acceptable under secs. 107 to 110, and 112, Kans. Hwy. Standard Specifications (ed. 1945).
lg 2	NE¼SE¼ Sec. 26, T. 11 S., R. 12 E.	15,000	5	5	Good	Sanborn formation.	GS	10-48	60837		23		46	59	67	74	80	85	87	89	6.10	6.10							36.6	A			
lg 3	SE¼NE¼ Sec. 26, T. 11 S., R. 10 E.	3,000	6	2	Good	Grand Island formation.	GS	9-48	60563		10		34	51	65	74	80	83	84	85	14.71	5.66		2.18					38.3	A	0.99		Coarse fraction: none. Fine fraction, 85 percent limestone, 5 percent chert and chalcedony, 10 percent silt.
lg 4	NE¼NW¼ Sec. 5, T. 13 S., R. 13 E.	10,000	7	1	Good	do(?)	GS	9-48	60568		14		29	43	55	64	72	77	80	82	16.33	5.16											Coarse fraction: limestone, 100 percent. Fine fraction: 85 percent limestone, 15 percent silt.
lg 5	NW¼SE¼ Sec. 24, T. 13 S., R. 9 E.	5,000	1-5	0	Good	Terrace deposit	HC	3-43	30208	Limestone and chert; some gray silt and clay.			0	34	60	78	86	90	92	93	7.0	5.33							24.8	B			Sieve analysis was made of material after material retained on ¾ inch sieve was crushed to pass ¾ inch sieve.
lg 6	NW¼NE¼ Sec. 35, T. 13 S., R. 9 E.	5,000	1-5	0	Good	Sanborn formation.	HC	3-43	30209	Do.			0	47	74	87	91	94	95	96	3.6	5.84							22.6	B	0.91		Sieve analysis was made of material after material retained on ¾ inch sieve was crushed to pass ¾ inch sieve.
mf 1	SE¼NW¼ Sec. 23, T. 12 S., R. 10 E.	100,000	30	7	Good	Terrace deposit	GS	6-19	33397	Clay, tan.							0	0	2	5	93.4		84.2	2.62									Cementation: 100+.
ls 1	NE¼NE¼ Sec. 36, T. 10 S., R. 9 E.	20,000	4	3	Good	Tarkio limestone member.	HC	7-48	59772	Limestone, hard, massive, dark-brown, weathers to large blocks; fossiliferous.														2.58	2.62	1.62			31.9	A	0.94		Acceptable under supplemental Specifications 45-255 and under secs. 108 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 2	NE¼NE¼ Sec. 27, T. 11 S., R. 13 E.	20,000	4-7	4	Good	do	GS	10-48	60899	Limestone, hard, massive, brown, fossiliferous.														2.39	2.51	5.08			35.0	A	0.90		
ls 3	SW¼SE¼ Sec. 27, T. 11 S., R. 13 E.	2,000	1-2	4	Good	Maple Hill limestone member.	GS	10-48	60900	Limestone, hard, massive, brown to gray, fossiliferous.														2.55	2.61	2.29			25.0	A	0.91		
ls 4	SE¼SE¼ Sec. 28, T. 11 S., R. 13 E.	10,000	5-7	4	Good	Dover limestone member.	GS	10-48	60901	Limestone, massive, brown to gray, fossiliferous.														2.46	2.54	2.95			31.8	A	0.84		
ls 5	SE¼SW¼ Sec. 30, T. 11 S., R. 13 E.	3,000	2	5	Good	Grandhaven limestone member.	GS	10-48	60898	Limestone, massive, brown to tan; weathers platy in lower part.														2.44	2.53	3.89			27.2	A	0.77		
ls 6	SE¼SW¼ Sec. 28, T. 11 S., R. 12 E.	2,000	4	4	Good	Aspinwall limestone member.	HC	5-39	37350	Limestone, hard, massive, light- to dark-brown.													149.8	2.40	2.48	3.7					Sound	13	French coeff.=7.4; Deval=7.4; Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 7	NE¼NE¼ Sec. 36, T. 11 S., R. 11 E.	2,000	0.5	6	Good	Hughes Creek shale member upper limestone.	HC	4-39	37020	Limestone, hard, massive, blue-gray, fossiliferous.													159.1	2.55	2.60	2.0					Sound	12	French coeff.=7.3; Deval=5.5; Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
		2,000	0.8	6	Good	Hughes Creek shale member lower limestone.	HC	4-39	37021	Limestone, hard, light-blue-gray, fossiliferous.													152.3	2.44	2.53	3.6					Unsound	8	French coeff.=7.4; Deval=5.4; Not accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 8	NE¼NE¼ Sec. 36, T. 11 S., R. 11 E.	1,000	3	10	Good	Americus limestone member.	HC	5-39	37240	Limestone, hard, light-gray, fossiliferous.													143.5	2.30	2.42	5.2					Sound	6	French coeff.=6.7; Deval=6.0; Accepted under secs. 68 to 71, 73, 76, and 74, art. 74.4, Kans. Hwy. Standard Specifications (ed. 1937).
ls 9	SW¼SE¼ Sec. 3, T. 11 S., R. 10 E.	10,000	6	3	Good	Cottonwood limestone member.	HC	4-46	50859	Limestone, hard, massive, gray; some chert nodules; fossiliferous.														2.07	2.21	6.76			61.0	A	0.66		Not acceptable under secs. 107 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 10	NE¼SE¼ Sec. 27, T. 11 S., R. 10 E.	30,000	4	4	Good	do	HC	11-45	49071	Limestone, hard, massive, light-gray; scattered chert nodules; fossiliferous.														2.32	2.42	4.17			23.0	A	0.93		Accepted under secs. 108 to 112, Kans. Hwy. Standard Specifications (ed. 1945). Accepted as wash check under sec. 91 (ed. 1937).
ls 11	SE¼NE¼ Sec. 30, SW¼NW¼ Sec. 29, T. 11 S., R. 10 E.	60,000	10	5	Poor	Crouse limestone	HC	12-45	49037	Limestone, hard, platy to massive, light-gray.														2.30	2.39	3.98			38.6	A	0.97		Accepted under secs. 107 to 112, Kans. Hwy. Standard Specifications (ed. 1945).
ls 12	SE¼NE¼ Sec. 32, T. 12 S., R. 13 E.	2,000	1	5	Good	Grayhorse limestone member.	GS	10-48	60903	Limestone, hard, massive, gray-brown; contains iron nodules; fossiliferous.														2.46	2.53	3.02			28.8	A	0.92		
ls 13	NE¼NE¼ Sec. 13, T. 12 S., R. 11 E.	8,000	5	6	Good	Americus limestone member.	GS	10-48	60897	Limestone, hard, massive, wavy; separated by shale partings.														2.28	2.39	4.71			37.0	A	0.79		
ls 14	NE¼NE¼ Sec. 13, T. 12 S., R. 11 E.	8,000	3	3	Good	do	GS	10-48	60835	Limestone, two beds of hard, massive, dense, blue-gray; separated by a shale parting.														2.46	2.54	3.23			32.3	A	0.80		
ls 15	NE¼NE¼ Sec. 31, T. 12 S., R. 12 E.	12,000	5	2	Good	Neva limestone member.	GS	10-48	60836	Limestone, hard, light-gray; weathers platy.														2.43	2.51	3.18			31.9	A	0.95		
ls 16	NE¼SE¼ Sec. 36, T. 12 S., R. 12 E.	5,000	3	5	Good	Brownville limestone member.	GS	10-48	60902	Limestone, medium-hard, massive, brown to tan-brown; weathers to irregular blocks.														2.52	2.60	2.91			24.6	A	0.85		
ls 17	SE¼NW¼ Sec. 10, T. 12 S., R. 10 E.	5,000	5	4	Good	Cottonwood limestone member.	HC	11-45	49036	Limestone, hard, massive, gray; contains chert nodules.														2.26	2.38	5.21			48.9	A	0.79		Not acceptable under secs. 107 to 112, Kans. Hwy. Standard Specifications (ed. 1945).
ls 18	SW¼SE¼ Sec. 13, T. 12 S., R. 10 E.	5,000	2	5	Good	Middleburg limestone member.	GS	10-48	60907	Limestone, hard, massive, gray; weathers blocky to platy.														2.49	2.57	3.19			29.2	A	0.78		
ls 19	SW¼SE¼ Sec. 13, T. 12 S., R. 10 E.	10,000	2-3	4	Good	Eiss limestone member.	GS	10-48	60906	Limestone, hard, massive, gray, porous; weathers to 1-foot square blocks.														2.50	2.56	2.31			32.8	A	0.88		
ls 20	SE¼NE¼ Sec. 36, T. 12 S., R. 10 E.	64,500	5	3	Good	Cottonwood limestone member.	HC	5-46	49588	Limestone, hard, massive, light-gray, contains chert nodules; weathers to large blocks.														2.26	2.39	5.67			39.0	A	0.82		Accepted under secs. 110 to 112, Kans. Hwy Standard Specifications (ed. 1945).
ls 21	SW¼NE¼ Sec. 13, T. 12 S., R. 9 E.	25,000	6	5	Good	Funston limestone.	HC	4-46	49584	Limestone, medium-hard, massive, gray, porous; weathers to large blocks.														2.23	2.34	4.76			39.7	A	0.94		Accepted under secs. 107 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 22	NW¼NW¼ Sec. 7, T. 13 S., R. 12 E.	14,500	7	2	Good	Threemile limestone member.	HC	12-39	38655	Limestone, medium-hard, massive, gray, cherty; thick limestone in upper part.													138.5	2.22	2.34	5.5					Sound	5	Deval=6.8. Accepted under secs. 68, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 23	NW¼NW¼ Sec. 14, T. 13 S., R. 12 E.	8,000	5	5	Good	Five Point limestone member.	GS	10-48	60838	Limestone, massive at top, oatmeal texture; alternating soft limestone and shale at base.														2.05	2.21	7.66			46.0		0.92		
ls 24	NW¼NW¼ Sec. 28, T. 13 S., R. 12 E.	4,000	7	8	Fair	Neva limestone member.	HC	9-38	35436	Limestone, massive, hard, gray, with shale parting; sparsely fossiliferous.													140.9	2.29	2.41	5.2					Sound	9	Deval=6.7. French coeff.=6.0. Accepted as an aggregate under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
									35435	Limestone, massive, soft, gray													140.4	2.25	2.38	5.9					Unsound	10	Deval=6.8. French coeff.=5.9. Not accepted as an aggregate under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 25	SW¼SE¼ Sec. 28, T. 13 S., R. 12 E.	10,000	5-6	6	Good	Cottonwood limestone member.	HC		38654	Limestone, hard, massive, gray; some chert nodules; weathers to large blocks.														2.27	2.40	5.5					Sound	6	Deval=5.4. French coeff.=7.4. Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 26	SE¼SE¼ Sec. 29, T. 13 S., R. 12 E.	4,000	5	5	Poor	do	HC	9-38	35439	Limestone, hard, massive, light-gray; weathers blocky; some chert nodules; fossiliferous.													146.6	2.35	2.44	4.1					Sound	7	Deval=6.9. French coeff.=5.8. Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 27	SW¼NW¼ Sec. 23, T. 13 S., R. 10 E.	25,000	5	3	Good	do	HC	12-46	49590	Limestone, hard, massive, porous; some chert nodules; weathers to large blocks.														2.18	2.32	6.12			45.2	A	0.77		Not acceptable under secs. 107 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
									49589															2.15	2.29	6.57			44.8	A	0.85		Acceptable under secs. 108, 109, 111, 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 28	NE¼SE¼ Sec. 4, T. 13 S., R. 9 E.	5,000	3	4	Good	Threemile limestone member.	HC	1-38	33270	Limestone, medium-hard, massive, light-gray; weathers blocky.													129.79	2.08	2.17	4.3					Sound	4	Deval=10.63. French coeff.=3.76. Accepted as aggregate under secs. 68, 69, 71, and 72. Kans. Hwy. Standard Specifications (ed. 1937).
ls 29	SE¼NW¼ Sec. 6, T. 13 S., R. 9 E.	29,800	2-8	4	Good	Fort Riley limestone member.	HC	12-39	38641	Limestone, hard, massive, gray, porous; weathers to large blocks.													119.6	1.92	2.05	6.8						6	Deval=19.4. French coeff.=2.1. Not acceptable under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 30	NE¼NE¼ Sec. 16, T. 13 S., R. 9 E.	10,000	6	6	Poor	Threemile limestone member.	HC	12-39	38643	Limestone, medium-hard, massive bed at top, light-gray; many chert nodules and lenses.													136.7	2.19	2.36	7.6					Sound	5	Deval=3.0. French coeff.=3.1. Acceptable under Specifications 37-299, dated 5-19-39, Kans. Hwy. Standard Specifications.
ls 31	SE¼NE¼ Sec. 18, T. 13 S., R. 9 E.	20,000	8	4	Poor	Florence limestone member.	HC	12-40	38642	Limestone, medium-hard, massive, gray; many chert nodules and lenses.													137.3	2.20	2.33	6.0					Sound	4	Deval=15.2. French coeff.=2.6. Not acceptable under secs. 68 to 73, and 76, Kans. Hwy Standard Specifications (ed. 1937).
ls 32	NW¼NE¼ Sec. 24, T. 13, S., R. 9 E.	8,000	22	4	Good	Funston limestone.	GS	11-48	61300	Limestone, soft, massive, light-gray, fossiliferous.														1.88	1.99	6.24			63.2	A	0.93		
ls 33	NW¼NE¼ Sec. 35, T. 13 S., R. 9 E.	50,000	33	4	Good	Threemile limestone member.	GS	11-48	61301	Limestone, soft, massive, light-gray; some chert lenses near base; some fossils.														1.94	2.19	13.00			55.2	A	0.92		
ls 34	SE¼SE¼ Sec. 36, T. 13 S., R. 8 E.	15,000	5	6	Good	Fort Riley limestone member.	HC	1-46	49580	Limestone, hard, massive, gray; porous; weathers to large blocks.														2.22	2.36	6.29			39.4	A	0.87		Accepted under secs. 108 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 35	SW¼SE¼ Sec. 21, T. 14 S., R. 13 E.	8,000	4	2	Good	Grandhaven limestone member.	GS	10-48	60905	Limestone, hard, massive, brown; weathers to irregular blocks; fossiliferous.														2.52	2.60	3.04			27.4	A	0.83		
ls 36	NE¼NE¼ Sec. 21, 14 S., R. 12 E.	5,000	8	6	Good	Howe limestone member.	HC	4-37	31320	Limestone, hard, massive, gray and brown; weathers to large blocks.													148.4	2.33	2.43	4.3					Sound	8	Deval=6.7. French coeff.=6.0. Accepted as aggregate under secs. 58 to 61, Kans. Hwy. Standard Specifications (ed. 1934).
ls 37	NW¼NW¼ Sec. 24, T. 14 S., R. 12 E.	8,000	4	6	Good	Five Point limestone member.	HC	9-47	56851	Limestone, soft, massive, gray														2.27	2.41	6.20			41.9	A	0.65		Not accepted under secs. 107 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 38	SE¼NE¼ Sec. 28, T. 14 S., R. 12 E.	6,500	10	4	Good	Red Eagle limestone.	HC	1-39	38653	Limestone, hard, massive, tan-brown; porous.													145.	2.33	2.43	4.3						11	Deval=4.7. French coeff.=8.3. Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 39	SE¼SW¼ Sec. 30, T. 14 S., R. 12 E.	20,000	12	3	Good	do	HC	12-39	38648	Limestone, hard, massive, tan-brown, porous; contains some chert nodules.													149.1	2.39	2.46	3.0						7	Deval=7.5. French coeff.=5.3. Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 40	NW¼NW¼ Sec. 31, T. 14, S., R. 12 E.	50,000	12	6	Good	do	HC	1-49	61765	Limestone, hard, massive, tan-brown, porous; contains some chert nodules.														2.53	2.59	2.01			28.5	A	0.96		Accepted under secs. 108 to 112, and 114, Kans Hwy. Standard Specifications (ed. 1945), and Supplement 45-255.
ls 41	SW¼SW¼ Sec. 33, T. 14 S., R. 12 E.	5,000	6-8	8	Good	do	HC	10-44	48037	Limestone, large, massive, tan-gray, porous; weathers to large blocks.														2.23	2.35	5.4			39.6	A	0.96		Accepted under secs. 68, 69, 71, 73, and 76, and Supplements 37-671 and 37-701, Kans. Hwy. Standard Specifications (ed. 1937).
ls 42	NE¼NW¼ Sec. 4, T. 14 S., R. 11 E.	15,000	6	6	Good	(Upper 3 feet) Cottonwood limestone member.	HC	10-50	69522	Limestone, massive, light-gray, porous, fossiliferous.														2.17	2.31	6.10			41.2	A	0.91		Not accepted under secs. 108, 109, 111, 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
						(Lower 3 feet)			69521	Limestone, medium-hard, massive, light-gray.														2.31	2.42	4.66			34.2	A	0.91		Accepted under secs. 108 to 112, and 114, Kans. Hwy. Standard Specifications (ed. 1945).
ls 43	NE¼SW¼ Sec. 4, T. 14 S., R. 11 E.	2,000	6	4	Good	Neva limestone member.	HC	6-35	25958	Limestone, hard, light-gray; beds separated by shale partings.													152.0	2.43	2.48	1.84					Sound	6	Deval=7.34. French coeff.=5.45. Accepted as aggregate and riprap under secs. 58, 59, 61, 63, and 78, Kans. Hwy. Standard Specifications (ed. 1937).
ls 44	SW¼NW¼ Sec. 3, T. 15 S., R. 13 E.	10,000	5	5	Good	Dover limestone member.	GS	10-48	60904	Limestone, medium-hard, massive, gray to brown.														2.51	2.59	3.46			26.2	A	0.82		
ls 45	SW¼SW¼ Sec. 8, T. 15 S., R. 13 E.	2,080	5	4	Good	Aspinwall limestone member.	HC	12-41	44050	Limestone, hard, dense, massive, brown.													166.0	2.66	2.68	0.9			29.4	A			Accepted under secs. 68, 69, 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).
ls 46	SE¼NE¼ Sec. 11, T. 15 S., R. 11 E.	3,000	7	3	Good	Neva limestone member.	HC	12-41	44047	Limestone, hard, massive, gray; beds separated by shale partings.													154.1	2.47	2.55	2.5			31.1	A	Sound	5	Accepted under secs. 68 to 71, 73, and 76, Kans. Hwy. Standard Specifications (ed. 1937).