

MICHIGAN
STATE HIGHWAY DEPARTMENT
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State Highway Commissioner

COMPILATION OF DESIGN AND CONSTRUCTION DATA FOR CONCRETE
PAVEMENTS ON THE STATE TRUNKLINE SYSTEM

By

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Research Project 43 G-23

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PREFACE

This compilation of essential design and construction data pertaining to concrete pavements on the state trunk line system was prepared as a ready means of determining this information for any project or section of pavement.

In compiling this data considerable difficulty was encountered in obtaining complete and accurate information concerning certain projects due to the fact that the records available on those projects were not complete in every respect. This was especially true in the case of the older pavements and those constructed by county or municipal agencies. Also, it was necessary to resort to several different sources of information in order to obtain complete data on certain projects. In time, it is planned to supply the missing data and eliminate inaccuracies as much as possible by a continued search of all available sources of information.

The summary is presented in code form. Each item of information has been assigned a code number. The data contained in the summary is as follows:

- (a) The project designation, coded separately by county, project number and contract number.
- (b) The year pavement was built, acceptance date used.
- (c) Length of project to nearest 1/10 mile.
- (d) Thickness and width of pavement.
- (e) Whether reinforced or not.
- (f) Width and spacing of expansion joints.
- (g) Spacing of contraction and dummy joints.
- (h) Whether or not load transfer was used in expansion or contraction joints.
- (i) Type of finishing machine used.
- (j) Method of curing concrete.
- (k) Average daily traffic count based on 1936 state wide traffic survey by the Planning and Traffic Division.

- (l) Brand and source of cement.
- (m) Producer and source of fine and coarse aggregates.
- (n) Name and address of contractor.

It will be noted that certain information has been directly coded using actual figures as in the case of the project and contract number, year, length, thickness, width and average daily traffic; whereas for such information as reinforcement, joint data, finishing, curing, materials and contractor, it has been necessary to assign a different code number for each particular item.

The code system is fully explained on the following pages preceding the coded information.

COMPILATION OF
DESIGN AND CONSTRUCTION DATA
FOR CONCRETE PAVEMENTS
ON THE STATE TRUNKLINE SYSTEM

CODED DATA

1. COUNTY CODE

Counties numbered and coded in accordance with standard county number system.

- | | |
|--------------------|------------------|
| 1. Alcona | 43. Lake |
| 2. Alger | 44. Lapeer |
| 3. Allegan | 45. Leelanau |
| 4. Alpena | 46. Lenawee |
| 5. Antrim | 47. Livingston |
| 6. Arenac | 48. Luce |
| 7. Baraga | 49. Mackinac |
| 8. Barry | 50. Macomb |
| 9. Bay | 51. Manistee |
| 10. Benzie | 52. Marquette |
| 11. Berrien | 53. Mason |
| 12. Branch | 54. Mecosta |
| 13. Calhoun | 55. Menominee |
| 14. Cass | 56. Midland |
| 15. Charlevoix | 57. Missaukee |
| 16. Cheboygan | 58. Monroe |
| 17. Chippewa | 59. Montcalm |
| 18. Clare | 60. Montmorency |
| 19. Clinton | 61. Muskegon |
| 20. Crawford | 62. Newaygo |
| 21. Delta | 63. Oakland |
| 22. Dickinson | 64. Oceana |
| 23. Eaton | 65. Ogemaw |
| 24. Emmet | 66. Ontonagon |
| 25. Genesee | 67. Osceola |
| 26. Gladwin | 68. Oscoda |
| 27. Gogebic | 69. Otsego |
| 28. Grand Traverse | 70. Ottawa |
| 29. Gratiot | 71. Presque Isle |
| 30. Hillsdale | 72. Roscommon |
| 31. Houghton | 73. Saginaw |
| 32. Huron | 74. Sanilac |
| 33. Ingham | 75. Schoolcraft |
| 34. Ionia | 76. Shiawassee |
| 35. Iosco | 77. St. Clair |
| 36. Iron | 78. St. Joseph |
| 37. Isabella | 79. Tuscola |
| 38. Jackson | 80. Van Buren |
| 39. Kalamazoo | 81. Washtenaw |
| 40. Kalkaska | 82. Wayne |
| 41. Kent | 83. Wexford |
| 42. Keweenaw | 99. No Record |

2. PROJECT CODE

Project number coded direct.

Project 31 Coded 31

3. CONTRACT CODE

Contract C2 Coded 2

4. YEAR CODE

Year that project was accepted
is coded by last two digits of
that year.

Year 1939 Coded 39

5. LENGTH CODE

Length of project to 1/10 mile
coded direct.

Length 7.542 Coded 7.5

6. THICKNESS CODE

Thickness of pavement is coded
direct.

9"-7"-9" Coded Edge 9 Center 7
8" uniform Coded Edge 8 Center 8
Variable Coded Edge V Center V
No Record Coded Edge 99 Center 99

7. WIDTH CODE

Width of pavement to nearest foot
coded direct.

22 feet Coded 22
Variable Coded V

8. REINFORCEMENT CODE

<u>Reinforcement</u>	<u>Code</u>
Not reinforced	0
Reinforced, type not given	1
Part reinforced	2
Bar Mat	3
Expanded Metal	4
Wire Mesh	5
Several types of reinforcing	6
No Record	9

9. EXPANSION JOINT CODE

<u>Spacing</u>	<u>Code</u>
No Expansion Joint	0
30 feet	2
40 feet	3
50 feet	4
60 feet	5
90 feet	6
100 feet	7
120 feet	8
Variable	V
No Record	9

<u>Width</u>	<u>Code</u>
No joint	0
1 inch	1
3/4 inch	2
1/2 inch	3
3/8 inch	5
5/8 inch	6
1/4 inch	7
Variable	V
No Record	9

<u>Load Transfer</u>	<u>Code</u>
No Load Transfer	0
Load Transfer, type not given	1
Dowel bars	2
Double Dowel	3
J-bar	4
Tee-Gee bar	5
Translode Expansion Joint Base	6
Translode Angle-Unit	7
Wing Bearing	8
No Record	9

10. CONTRACTION JOINT CODE

<u>Spacing</u>	<u>Code</u>
None used	0
15 feet	1
30 feet	2
60 feet	3
25 feet	4
Variable	V
No Record	9

<u>Load Transfer</u>	<u>Code</u>
No Load Transfer	0
Load Transfer, type not given	1
Dowel bars	2
Tee-Gee bar	5
Transclude Angle Unit	7
Keylode	8
No Record	9

11. DUMMY JOINT OR PLANE OF WEAKNESS CODE

<u>Spacing</u>	<u>Code</u>
None used	0
15 feet	1
30 feet	2
20 feet	3
50 feet	5
25 feet	6
Variable	V
No Record	9

12. FINISHING CODE

<u>Finishing Machine</u>	<u>Code</u>
Blaw-Knox	0
Flex-Plane	1
Dunn	2
Hand	3
Lakewood	4
Heltzel	5
Machine, type not given	6
Ord	7
Rex	8
No Record	9

13. CURING CODE

<u>Curing Method</u>	<u>Code</u>
Wetted Fabric	0
Bituminous Emulsion	1
Calcium Chloride	2
Paper	3
Ponding	4
Wet Earth	5
Membrane	6
Straw	7
Several Methods	8
No Record	9

14. TRAFFIC CODE

Traffic volume coded direct

Traffic 8623	Coded 8623
No traffic record	Coded 0000

15. CEMENT CODE

The brand of cement, manufacturer and source are represented by the code number appearing before each item.

1. Aetna, Aetna Cement Co., Bay City
2. Aetna, Vinsol Resin, Aetna Cement Co., Bay City
4. Aetna, Aetna Cement Co., Bay City - Admixture Orvus
5. Aetna, Aetna Cement Co., Fenton
6. Alpha, Alpha Cement Co., Bellevue
7. Badger, Medusa Cement Co., Manitowoc
8. Burt, Burt Portland Cement Co., Bellevue
15. Ford, Ford Cement Co., Detroit
16. Ford, Ford Cement Co., Detroit - Admixture Orvus
19. Huron, Huron Portland Cement Co., Alpena
20. Huron, Huron Portland Cement Co., Alpena - Admixture Orvus
22. Huron Vinsol Resin, Huron Portland Cement Co., Alpena
25. Lehigh, Lehigh Cement Co., Allentown, Pa.
29. Medusa, Medusa Cement Co., Silica, Ohio
32. Michigan, Michigan Portland Cement Co., Chelsea
36. Newaygo, Newaygo Portland Cement Co., Newaygo
37. New Egyptian, Peerless Portland Cement Co., Fenton
38. New Egyptian, Peerless Portland Cement Co., Port Huron
40. Peerless Egyptian, Peerless Portland Cement Co., Port Huron
41. Peerless, Peerless Portland Cement Co., Detroit - Admixture Orvus
42. Peerless Vinsol Resin, Peerless Portland Cement Co., Detroit
43. Peerless, Peerless Portland Cement Co., Detroit
44. Peerless, Peerless Portland Cement Co., Union City
45. Peninsular Vinsol Resin, Consolidated Cement Co., Cement City
46. Peninsular, Consolidated Cement Co., Cement City - Admixture Orvus
47. Peninsular, Consolidated Cement Co., Cement City
48. Petoskey, Petoskey Portland Cement Co., Petoskey
49. Petoskey Vinsol Resin, Petoskey Portland Cement Co., Petoskey
50. Petoskey, Petoskey Portland Cement Co., Petoskey - Admixture Orvus
51. Petoskey, Petoskey Portland Cement Co., Petoskey - Admixture
Vinsol Resin Emulsion
55. Sandusky, Medusa Cement Co., Sandusky, Ohio
64. Universal, Universal Atlas Cement Co., Buffington, Indiana
65. Universal, Universal Atlas Cement Co., Duluth, Minnesota
66. Universal, Universal Atlas Cement Co., Buffington, Indiana - Admixture
Orvus
67. Universal Vinsol Resin, Universal Atlas Cement Co., Buffington, Indiana
70. Velo High Early, Universal Atlas Cement Co., Universal, Pennsylvania
73. Wabash, Wabash Cement Co., Osborne, Ohio
74. Wabash, Wabash Cement Co., Stroh, Indiana
75. Wabash, Wabash Cement Co., Wabash, Indiana
76. Wolverine, Wolverine Cement Co., Coldwater
78. Wolverine, Wolverine Cement Co., Quincy
79. Wolverine, Wolverine Cement Co., Quincy - Admixture Orvus

602
566

- 80. Wolverine Vinsol Resin, Wolverine Cement CO., Quincy
- 85. Wyandotte, Huron Portland Cement Co., Wyandotte
- 86. Wyandotte, Huron Portland Cement Co., Wyandotte - Admixture Orvus
- 87. Wyandotte Vinsol Resin, Huron Portland Cement Co., Wyandotte
- 95. Two brands
- 96. Three brands
- 97. Four brands
- 98. Several, Michigan Test Road
- 99. No record

16. FINE AGGREGATE CODE

The manufacturer and source of fine aggregate material are represented by the code number appearing before each item.

	1. Acme Sand & Gravel Co.	River Bottom at Clinton
	2. Alba Local Pit	Near Alba
X	3. Alpena Gravel Co. <i>sand &</i>	Alpena - Big Cut
	4. Acme Concrete Products Co.	Cement City
	5. Alpena Local Pit	Local Pit near Alpena
	6. American Sand & Gravel Co.	St. Joseph River
X	7. American Aggregates Corp.	Athens
X	8. American Aggregates Corp.	Kalamazoo
X	9. American Aggregates Corp.	Pit 3 Mi. S. of Burnside
X	10. American Aggregates Corp.	Green Oak
X	11. American Aggregates Corp.	Oxford
	12. Anderson Sand & Gravel Co.	Vassar
	13. Anderson Pit	1/2 Mi. E. of Hesperia
	35. Baker, J. H. & Sons	Sullivan Pit
	36. Benton Harbor Sand & Gravel Co.	Benton Harbor
	37. Bass River	Bass River near Grand River
	38. Baker, J. H. & Sons	Farver Pit
	39. Baker, J. H. & Sons	Lake Huron Shore Sand
	40. Baker, J. H. & Sons	Local Pit near Lexington
	41. Banhagle Pit	Ionia
	42. Battle Creek Gravel Co.	Sheffner Pit
	43. Beaverton Sand & Gravel Co.	Beaverton
	44. Belknap Cement Products Co.	Greenville
	45. Belmont Sand & Gravel Co.	Mecosta County
	46. Benton Harbor Local Sand	Benton Harbor
X	47. Benton Township Pit <i>Eaton County</i>	Local Pit <i>Eaton County</i>
	48. Bertrand Sand & Gravel Co.	Berrien County
X	49. Bichler Bros. Gravel Co.	Escanaba - Groos
	50. Becker Pit	Somerset Twp., Hillsdale County
	53. Bowen Pit	Traverse City
	54. Bowen, Tom	Local Pit near West Branch
	55. Boyne City Pit	Near Boyne City
	56. Brady, E. P.	Pit 4 Mi. W. of Marion
	57. Brand & Diele Co.	Elkhart, Indiana
	59. Breen Gravel Co.	Grand Rapids
	60. Brooks Construction Co.	Jonesville
	61. Brown Gordon Co.	Lansing
	62. Brown Ice Co.	Battle Creek, Pit in Calhoun County
	63. Brown & Rosenbarger Co.	Battle Creek
	64. Brown & Rosenbarger Co.	Beulah Pit
	65. Brown & Rosenbarger Co.	Bertrand, Pit No. 11
	66. Brown & Rosenbarger Co.	Coldwater
	67. Brown & Rosenbarger Co.	Petoskey
	68. Brown & Rosenbarger Co.	Sears, Pit No. 4
	69. Brown & Rosenbarger Co.	Union City
	70. Brown & Rosenbarger Co.	Local Pit near Manton
	71. Brown & Rosenbarger Co.	Muir
	72. Brownlee Park Gravel Co.	Battle Creek

73.	Brown & Rosenbarger Co.	The Heights
74.	Brown & Rosenbarger Co.	Six Lakes
75.	Boichot Sand & Gravel Co.	Lansing
76.	Brodie Pit	Unknown
77.	Brown & Rosenbarger Co.	Irving, Roadside Pit
78.	Brown & Rosenbarger Co.	Levering
79.	Brownell Improvement Co.	Chicago - Thornton, Illinois
80.	Bunker, G. N. Co.	Kelly Siding, Kent County
81.	Brown Bros.	Homer
82.	Brown, J. C. Pit	Emmet
94.	Cadillac, City Pit	Cadillac
95.	Calumet & Hecla Mining Co.	Hubbell - Tamarack - Lake Linden
96.	Cadillac Sand & Gravel Co.	Fleming Creek - Detroit
97.	Cameron Steamship Co.	Detroit
99.	Campbell, E. A.	Pit at Cascade
100.	Campbell, E. A.	Local Pit near Hastings
101.	Caro Pit	Local Pit near Caro
102.	Carr, S. S.	Pit near Paris
103.	Case, Allen	Local Pit near Frankfort
104.	Chapman Sand & Gravel Co.	Lenmon
105.	Cass City Sand & Gravel Co.	Cass City
106.	Cass City & Tuscola Sand & Gravel Co.	Cass City
107.	Cement City	Local Pit
108.	Centerville Gravel Co.	Centerville
109.	Champion Gravel Co.	Moon Lake Pit, Iron Mountain
110.	Champion Gravel Co.	Beechwood
111.	Construction Aggregate Co.	Grand Haven
112.	Champion Gravel Co.	Dishneau Pit, Champion
113.	Champion Gravel Co.	Loretto
114.	Clark Co. Pit	Eaton County
115.	Clinton River Bottom	Clinton
116.	Comstock Hill Pit	St. Clair County near Port Huron
118.	Construction Materials Corp.	Big Cut Pit
119.	Construction Materials Corp.	Grand Haven
121.	Consumers Co.	Ginger Hill, S. of South Bend, Indiana
X 122.	Counihan, Barnum & Prosch	Local Pit - Iron River
123.	Crescent Gravel Co.	Beulah
124.	Crescent Gravel Co.	Grand Rapids
125.	Crescent Gravel Co.	Hersey
126.	Crescent Gravel Co.	Magnus Pit, Clare
127.	Crescent Gravel Co.	Reed City
128.	Crystal Falls Pit	Local Pit near Crystal Falls
129.	Chicago Gravel Co.	Unknown
130.	City Gravel Co.	Kent County
131.	Consumers Co.	Grand Rapids
155.	Delaware Mine Co.	Delaware Mine
156.	Dolomite Corp.	Sarnia, Ontario, Canada
157.	Dwyer, H. M. Pit	Reed City
158.	Detroit Washed Sand & Gravel Co.	Detroit
159.	Durand Sand & Gravel Co.	Durand
181.	Eaton County Road Commission	Eaton County
182.	Eberts Co.	Lake Erie - Lake St. Clair
183.	Eckfield, Wm.	Saginaw Bay Shore Sand

	184. Emmett County Pit	2 Mi. E. of Harbor Springs
	185. Everleigh L.	Unknown
x	186. Edison, W. , Coombs Pit	Cadillac
	208. Federal Sand & Gravel Co.	Greenbush
	209. Federal Sand & Gravel Co.	Stinson
	210. Fenton Village Pit	Fenton
	211. Foley & Beardsley Gravel Co.	Clarkston
	212. France Stone Co.	Monroe
x	213. Friedrich, H. Wm.	Coldwater - Jonesville
	214. Fuller & Becker	Oxford
	215. Franks Pit	Wexford County
	236. Gladwin County Road Commission	Gladwin County
	237. Gezon & Battjes Gravel Co.	Kent County
	238. Gaylord, J. Pit	Near Antrim & Mancelona
	239. Genesee Gravel Co.	Davidson
	240. Grace Construction Co.	Girard
	241. Gleason Coal Co.	Port Huron
	242. Gordon Pit	Near Crosswell
	243. Grace Construction Co.	Kalamazoo
	244. Grand Rapids Gravel Co. Plant No. 4	Grand Rapids
	245. Grand Rapids Gravel Co. Plant No. 2	Lamar
	246. Grand Rapids Gravel Co. Plant No. 5	Hersey
	247. Grand Rapids Gravel Co. Plant No. 6	Local Pit near Kalkaska
	248. Grand River Gravel Co.	Ionia
	251. Great Lakes Steel Corp.	Kelly Island
	252. Great Lakes Steel Corp.	Zug Island
	253. Green Bay (Lake Deposit)	Green Bay, Wisc.
	254. Greenville Gravel Co.	Green Oak
	255. Greenville Gravel Co.	Kalamazoo
	256. Greenville Gravel Co.	Oxford
	257. Greenville Gravel Co.	Somerset Centre
	258. Grand Rapids Gravel Co. Plant No. 1	Grand Rapids
	262. Gurzick Pit	Daggett
	285. Hackett Pit	Jackson
	286. Harris & McBurney Co.	Napoleon
	287. Hall Gravel Pit	St. Johns
	288. Harris & McBurney Co.	Jonesville
	289. Hass Bros. Pit	Peck, N. & E.
	290. Harcourt Pit	Houghton Lake
	291. Hastings Sand & Gravel Co.	Hastings
	292. Hatherly & Peck Gravel Co.	Unknown
	293. Hersey Gravel Co.	Greenbush
	294. Hersey Gravel Co.	Hersey
	295. Hersey Gravel Co.	Milbrook
	296. Hersey Gravel Co.	Paris Pit
	297. Hewitt, A. J. Pit	Avoca
	298. Himes, John Pit	Berrien Springs
	299. Holmes, H.	Powers Pit, near Powers
	300. Holmes, H.	Wallace Pit, near Wallace
	301. Huron Gravel Co.	Project near Jackson
	302. Houghton County Pit	Toivola
	303. Hill Pit	St. Johns

304.	Hobeck, J. W.	The Heights
305.	Hughs, Charles (Bell Pit)	Saille, Benzie County
306.	Hobeck, J. W., C. Gruner Pit	Coldwater
307.	Houghton County Road Commission	Calumet
308.	Holmes, H.	Crystal Falls
309.	High Ridge Gravel Co.	Rockford
310.	Hobeck, J.W. (Ypsi. Sand & Gravel Co.)	Bellville
311.	Heichman & Van Every Gravel Co.	Northville
325.	Indiana Gravel Co.	Vanderveen Pit, Grand Rapids
326.	Inland Lime & Stone Co.	Kelly Island
327.	Inland Lime & Stone Co.	Pt. Inland
331.	Irvine, J. Pit	2 Mi. N. W. of Chelsea
332.	Iron County Road Commission	Crystal Falls
333.	Ireland & Lester	Benton Harbor
334.	Isabella County Pit	Isabella County
335.	Isle Royal Mine	Copper City
359.	Johnson, J. E.	Grand Rapids
361.	Jonesville Gravel Co.	Jonesville
382.	Kalamazoo County Pit	Kalamazoo County
386.	Kelly Island Lime & Transport Co.	Presque Isle
387.	Kelly Island Lime & Transport Co.	St. Clair River
388.	Kent Sand & Gravel Co.	Grand Rapids
389.	Killins Gravel Co.	Ann Arbor
390.	Kimmerle Pit	Cassopolis
391.	King Pit	Three Rivers
392.	Koenig Coal & Supply Co.	Sarnia Pit Sand
393.	Koenig Coal & Supply Co.	Oxford
395.	Kramers Pit	Eastmanville
417.	Lake Erie Sand	Lake Erie
418.	Lake Huron Sand	Lake Huron
419.	Local Pit	Iron River
420.	Lake Michigan Sand Furnished by State	- Lake Michigan
421.	Lake Superior Washed Sand	Unknown
422.	Lake Superior Gravel Co.	Ontonagon County
423.	Lansing Sand & Gravel Co.	Ingham County
424.	Leahy, T. J. Pit	Near Harbor Springs
425.	Lenawee Sand & Gravel Co.	Tecumseh
426.	Leonard Gravel Co.	Lansing
427.	Lilles Byron, Local Pit	Near West Branch
428.	Local Pit	3 1/2 Mi. S. W. of Charlevoix
429.	Loveless Gravel Pit	Algona Twp.
430.	Lowe, J., Pit	Kalamazoo
431.	Local Pit	Casnovia
432.	Local Pit	Mancelona
433.	Local Pit	Hastings
434.	Leelanau County Road Commission	Leelanau
435.	Local Pit	Lakeview
436.	Local Pit	Gaylord
437.	Lloyd Pit	Deckerville
438.	Local Pit	Leland Twp., Leelanau County
439.	Local Pit	Mentor Twp., Oscoda County
440.	Local Pit	Manton
441.	Lennon Gravel Co.	Lennon
442.	Local Pit	Village of Lyons

448.	Manning & Locklin Gravel Co.	Detroit
449.	Manson, C. Pit	St. Ignace
450.	McLouth Steamship Co.	Marine City
451.	McNeil Pit	Near Waterford
452.	McBride Pit Local	North of Sandusky
453.	McManus Pit	Petoskey
454.	Marsh Pit	1 1/2 Mi. from Roscommon
455.	Marsman & Tabor	Larke Pit near Sault Ste Marie
456.	Melrose Pit	Montmorency County, Briley Twp.
457.	Merithew Gravel Co.	Manchester
458.	Michigan Gravel Co.	Greenbush
459.	Michigan Limestone Chemical Co.	Rogers City
460.	Michigan Steamship Co.	Unknown
461.	Middle West Roads Co.	Pit 3 Mi. S. of Burnside
462.	Midland Contracting Co.	^B Bridgeport Twp., Saginaw County
463.	Midland Gravel Co.	Milbrook
464.	Miench, A.	Iron Mountain
465.	Milbrook Gravel Co.	Milbrook
467.	Mt. Pleasant Gravel Co.	Mt. Pleasant
469.	Miller & Walser	Chesaning
491.	Nelson, John Pit	Atlanta
492.	Nelson, Victor	4 Mi. W. of Hurley
493.	New Era Pit	2 1/2 Mi. W. of New Era
494.	New Era Road Building Co.	Pit N. W. of Plainfield
495.	Nebel Bros.	Bay at Gladstone
496.	Northern Indiana Sand & Gravel Co.	Wolcottville, Indiana
497.	Nye Hill Pit	Unknown
498.	Northern Materials Corp.	Unknown
499.	Noyer Pit	1 1/2 Mi. N. of Brown City
520.	Ontario Supply Co.	Ontario, Canada
521.	Ohio & Michigan Gravel Co.	Chilson Plant
522.	Ohio & Michigan Gravel Co.	Toledo, Ohio
523.	Olivine Co.	Marquette Plant
524.	O'Connor Pit	Local Pit near Crosswell
525.	Otisville Gravel Co.	Otisville
526.	Ottawa County Road Commission Pit	Local Pit
527.	Overholt, M. W.	Local Pit at Eastmanville
^X 528.	Owosso Gravel Co. Pit	Near Owosso, Sec. 34, R2 E, T 7 N
529.	Oxford Sand & Gravel Co.	Oxford
551.	Peterson, Gould & Turner	Unknown
552.	Peters, W. S.	Wakefield
553.	Peterson & McLean, Corfman Pit	North of Black River
554.	Peterson Sand & Gravel Co.	Harrisville - Greenbush
555.	Local Pit	SE 1/4 of SW 1/4, Sec. 5 T 39 N R 29 W
557.	Priceland, Frank	Bay Shores
558.	Pryor Bros.	Pewamo Local Pit
559.	Puritan Sand & Gravel Co.	Tecumseh
560.	Petoskey Portland Cement Co.	Petoskey
561.	Pleasant Lake Gravel Co.	Pleasant Lake
562.	Perry, Lee	Beaverton
563.	Pierce - McLouth	Unknown
564.	Perry, Wm.	Local, Harbor Springs
583.	Rainey Pit	Alanson
584.	Ray Sand & Gravel Co.	New Hudson
585.	Ray Sand & Gravel Co.	Oxford

586.	Remus Construction Co.	Local Pit near Farwell
587.	Riverside Fuel & Supply Co.	Ecorse
588.	Rockey, R. R. Pit	Marion
608.	Sawyer & Horbest	Kalamazoo
609.	Scharl, G. P. Gravel Co.	Cascade
610.	St. Clair Sand	St. Clair River
611.	Sand Lake	Local Pit, Kent County
612.	Sarnia Sand & Gravel Co.	Sarnia, Ontario, Canada
x 613.	Scharl, G. P. <i>Gravel Co.</i>	Grand Rapids
614.	Schwaderer, E. B.	Carmody Pit, N. W. of New Greenleaf
615.	Schreur & Schreur	Local Pit near Gaylord
616.	Sears Pit	Beulah
617.	Sheltraw Gravel Co.	Lansing
618.	Sheltraw Gravel Co.	Holt
619.	Shenk Gravel Co.	Durand
620.	Sloan, R. L. Pit	Near Antrim, Banks Twp.
621.	Sloans Pit	Charlevoix
622.	Soo Sand & Gravel Co.	Sault Ste. Marie
623.	Stacy Pit	Benzonia
624.	Shiawassee River	Unknown
626.	Standard Gravel Co.	Pit at E. End Proj. 38-20, C3 near Jackson
627.	Standard Gravel Co.	New Hudson
628.	State Concrete Materials Co.	Detroit
629.	Stewart, J. C., Co.	Local Pit near Flint
630.	Stewart, J. C., Co.	Local Pit near Owosso
631.	Sturgeon Bay Co.	Cleveland, Ohio
632.	Swanson, Guy Pit	Near Antrim
633.	Sylvan Lake	Local Pit near Sylvan Lake
634.	Saginaw Bay Sand	Saginaw Bay
635.	Sturgeon Bay Stone Co.	Green Island, Wisc.
653.	Tecumseh Sand & Gravel Co.	Tecumseh
659.	Thornton Bros. Construction Co.	Local Pit near Rudyard
660.	Thornton Bros. Construction Co.	Marshall Creek
661.	Thornton Bros. Construction Co.	Bosch Brewery - Hancock
662.	Toledo Stone & Glass Sand Co.	Toledo, Ohio
664.	Tylor, Jess Pit	Washtenaw County
665.	Thornton Bros. Construction Co.	Dishneau
666.	Thon, W. L.	Millers Pit
667.	Thomasme, H.	Grand Rapids
686.	United Fuel & Supply Co.	Oxford
687.	United Fuel & Supply Co.	Detroit
688.	United Fuel & Supply Co.	New Hudson
689.	United Fuel & Supply Co.	Oxford - Shelby
690.	United Fuel & Supply Co.	St. Clair River
691.	United Fuel & Supply Co.	Utica Pit - Oxford
692.	United Fuel & Supply Co.	Washington
717.	Valley City Gravel Co.	Grand Rapids
718.	Vanderveen Pit	Lowell
x 719.	Vanderveen & Gravel Pit	Plainfield Twp.
721.	Vinton Construction Co.	Union City
722.	Ventrelle Pit	Unknown
742.	Walker, Lyle	Square Lake
743.	Wards Pit	Perry
744.	Woodman, Hoyd	Lansing

745.	Waggoner, P. Pit	Onoway ^a
746.	Wakefield Local Pit	Wakefield
747.	Wallenger Pit	Near Coopersville, Allendale Twp.
748.	Walling & Holland	St. Johns
749.	Walsh Sand & Gravel Co.	Walsh, Wisc.
750.	Ward Co.	McNally Pit, Oxford - Ross Crossing
751.	Ward Sand & Gravel Co.	East Tawas - Big Cut
753.	Ward Sand & Gravel Co.	Oxford
x 754.	Western Indiana Gr. Co.	Indiana Tonia
755.	Whitehead, I. L. Co.	Local Pit, Rudyard Twp., U.P.
756.	Whitehead, I. L. Co.	Moran Pit, St. Ignace
757.	Whitehead, I. L. Co.	Roadside Pit 1 Mi. E. of Wilson
758.	Whitehead, I. L. Co.	Sault Ste. Marie
759.	Willemins Pit	Jonesville
760.	Wright Pit	Local Pit near Bad Axe
761.	Wysong Gravel Co.	Traverse City
762.	West Side Sand & Gravel Co.	Battle Creek
763.	Whitecraft Pit	N. & W. of Alma
764.	Whitehead, I. L. Co.	Local Pit, Ogemaw County
768.	Ypsilanti Sand & Gravel Co.	Ypsilanti
769.	2 Sources Supply	
770.	3 Sources Supply	
999.	No Record	

17. COARSE AGGREGATE CODE.

The manufacturer and source of each coarse aggregate material are represented by a code number appearing before each item.

1. Acme Sand & Gravel Co.	River Bottom at Clinton
2. Alba Local Pit	Near Alba
3. Acme Concrete Products Co.	Cement City
5. Alpena Local Pit	Local Pit near Alpena
6. Alpena Sand & Gravel Co.	Alpena - Big Cut
7. American Aggregates Corp.	Athens
8. American Aggregates Corp.	Kalamazoo
9. American Aggregates Corp.	Oxford
10. American Aggregates Corp.	Pit 3 Mi. S. of Burnside
11. American Aggregates Corp.	Green Oak
12. Anderson Sand & Gravel Co.	Vassar
13. American Sand & Gravel Co.	Sturgeon Bay
14. Anderson Pit	1/2 Mi. E. of Hesperia
25. Belmont Sand & Gravel Co.	Mecosta County
26. Banhagle Pit	Ionia
27. Bass River	Bass River near Grand River
29. Battle Creek Gravel Co.	Sheffner Pit
32. Benton Township Pit	Eaton County
34. Bichler Bros.	Escanaba - Groos
35. Belknap Cement Products Co.	Greenville
36. Bowen Pit	Traverse City
37. Bowen, Tom	Local Pit near West Branch
38. Boyne City Pit	Near Boyne City
39. Brady, E. P.	Pit 4 Mi. W. of Marion
40. Brand & Diele Co.	Elkhart, Indiana
41. Breen Gravel Co.	Hersey
42. Breen Gravel Co.	Grand Rapids
43. Brooks Const. Co.	Jonesville
44. Brown Gordon Co.	Lansing
45. Brown Ice Co.	Battle Creek, Pit in Calhoun County
46. Brown & Rosenbarger Co.	Battle Creek
47. Brown & Rosenbarger Co.	Beulah Pit
48. Brown & Rosenbarger Co.	Bertrand, Pit No. 11
49. Brown & Rosenbarger Co.	Coldwater
50. Brown & Rosenbarger Co.	The Heights
51. Brown & Rosenbarger Co.	Petoskey
52. Brown & Rosenbarger Co.	Riverside
53. Brown & Rosenbarger Co.	Sears Pit, Pit No. 4
54. Brown & Rosenbarger Co.	Union City
55. Brown & Rosenbarger Co.	Local Pit near Manton
56. Brown & Rosenbarger Co.	Muir
57. Brownell Improvement Co.	Chicago, Ill. - Thornton, Ill.
58. Brownell Stone Co.	Chicago, Illinois
59. Brownlee Park Gravel Co.	Battle Creek
60. Bunker, G. N. Co.	Kelly Siding, Kent County
61. Brown & Rosenbarger Co.	Irving, Roadside Pit

62.	Brown & Rosenbarger Co.	Six Lakes
63.	Brown & Rosenbarger Co.	Levering
64.	Brown, J. G. Pit	Emmet
84.	Carr, S. S.	Pit near Paris
85.	Caro Pit	Local Pit near Caro
86.	Cadillac City Pit	Cadillac
88.	Calumet & Hecla Mining Co.	Calumet
89.	Cameron Steamship Co.	St. Clair River
90.	Cadillac Sand & Gravel Co.	Fleming Creek, Detroit
91.	Campbell, E.A.	Local Pit near Hastings
92.	Case, Allen	Local Pit near Frankfort
93.	Cass City Sand & Gravel Co.	Cass City
94.	Cement City	Local Pit
95.	Centerville Gravel Co.	Centerville
96.	Champion Gravel Co.	Beechwood
98.	Champion Gravel Co.	Moon Lake Pit, Iron Mountain
99.	Champion Gravel Co.	Dishneau Pit, Champion
100.	Champion Gravel Co.	Loretto
101.	Chapman Sand & Gravel Co.	Lennon
102.	Champion Gravel Co.	White Marble Lime Co.
103.	Chicago Gravel Co.	Unknown
105.	Clark Co. Pit	Eaton County
106.	Clinton River Bottom	Clinton
107.	Comstock Hill Pit	St. Clair County near Port Huron
108.	Construction Aggregate Co.	Grand Haven
109.	Construction Aggregate Co.	Sturgeon Bay
110.	Construction Materials Corp.	Big Cut Pit
112.	Construction Materials Corp.	Grand Haven
113.	Consumers Co.	Ginger Hill, S of South Bend, Ind.
114.	Continental Quarry	Sylvania, Ohio
115.	Counihan, Barnum & Prosch	Local Pit, Iron River
116.	Crescent Gravel Co.	Beulah
117.	Crescent Gravel Co.	Magnus Pit, Clare
118.	Crescent Gravel Co.	Grand Rapids
119.	Crescent Gravel Co.	Reed City
120.	Crescent Gravel Co.	Hersey
121.	Consumers Co.	Grand Rapids
144.	Dolese & Shepard	McCook, Illinois
152.	Dolomite Co., Inc.	Sturgeon Bay, Wisc.
153.	Dolomite Corp.	Sarnia, Ontario, Canada
154.	Dwyer, H. M. Pit	Reed City
155.	Durand Sand & Gravel Co.	Durand
178.	Eaton County Road Commission Pit	Eaton County
179.	Emmet County Pit	2 Mi. E. Harbor Springs
180.	Edison, L. W., Coombs Pit	Cadillac
201.	Federal Sand & Gravel Co.	Emerson
202.	Federal Sand & Gravel Co.	Greenbush
203.	Fenton Village Pit	Fenton
204.	Foley & Beardsley Gravel Co.	Clarkston
205.	France Stone Co.	Monroe
206.	Friedrick, Wm. H.	Coldwater - Jonesville

207.	Fuller & Becker	Oxford
208.	France Stone Co. (Slag)	Toledo, Ohio
209.	France Stone Co.	Silica, Ohio
229.	Gladwin County Road Commission	Gladwin County
230.	Gezon & Battjes Gravel Co.	Kent County
231.	Grace Construction Co.	Girard
232.	Gleason Coal Co.	Port Huron
233.	Grace Construction Co.	Kalamazoo
234.	Grand Rapids Gravel Co., Plant No. 1	Grand Rapids
235.	Grand Rapids Gravel Co., Plant No. 2	Lamar
236.	Grand Rapids Gravel Co., Plant No. 5	Hersey
237.	Grand Rapids Gravel Co., Plant No. 6	Local Pit near Kalkaska
239.	Grand Rapids Gravel Co., Plant No. 4	Grand Rapids
241.	Grand River Gravel Co.	Ionia
243.	Great Lakes Steel Corp.	Kelly Island
244.	Great Lakes Steel Corp.	Zug Island
245.	Greenville Gravel Co.	Kalamazoo
246.	Greenville Gravel Co.	Somerset Center
247.	Greenville Gravel Co.	Oxford
249.	Greenville Gravel Co.	Green Oak
250.	Green Bay (Lake Deposit)	Green Bay, Wisconsin
251.	Gurzick Pit	Daggett
252.	Genesee Gravel Co.	Davidson
276.	Hall Gravel Pit	St. Johns
277.	Harris & McBurney Co.	Jonesville
278.	Hass Bros. Pit	Peck, N. & E.
279.	Harcourt Pit	Houghton Lake
280.	Hastings Sand & Gravel Co.	Hastings
281.	Hersey Gravel Co.	Greenbush
282.	Hersey Gravel Co.	Hersey
283.	Hersey Gravel Co.	Milbrook
284.	Hersey Gravel Co.	Paris Pit
285.	Hewitt, A.J. Pit	Avoca
286.	Himes, John, Pit	Berrien Springs
287.	Holmes, H.	Powers Pit near Powers
288.	Holmes, H.	Wallace Pit near Wallace
289.	Hobeck, J. W.	The Heights
290.	Houghton County Road Commission	Tamarack, Calumet
291.	Hill Pit	St. Johns
292.	Hughes, Charles (Bell Pit)	Sailey, Benzie County
293.	High Ridge Gravel Co.	Rockford, Benzie County
315.	Indiana Gravel Co.	Vanderveen Pit, Grand Rapids
316.	Inland Lime & Stone Co.	Pt. Inland
318.	Iron County Road Commission	Crystal Falls
320.	Isabella County Pit	Isabella County
321.	Isle Royal Mine	Houghton County
346.	Johnson Ensing Gravel Co.	Battle Creek
347.	Johnson, J. E.	Grand Rapids
348.	Johnson, J. E.	Local Pit near Cheboygan
349.	Jonesville Gravel Co.	Jonesville

371. Kalamazoo County Pit	Kalamazoo County
373. Kelly Island Lime & Transport Co.	Presque Isle
374. Kent Sand & Gravel Co.	Grand Rapids
375. Killins Gravel Co.	Ann Arbor
377. Kimmerle Pit	Cassopolis
378. Koenig Coal & Supply Co.	Oxford
380. Kramers Pit	Eastmanville
381. Keweenaw County Road Commission	Ahmeek
403. Lark Pit	Near Sault Ste. Marie
404. Lake Huron Gravel	Lake Huron
405. Lake Michigan Gravel (Furnished by State)	Lake Michigan
406. Lake Superior Gravel Co.	Ontonagon County
407. Lansing Sand & Gravel Co.	Ingham County
408. Leahy, T. J. Pit	Near Harbor Springs
409. Lehigh Stone	Chicago, Illinois
410. Lenawee Sand & Gravel Co.	Tecumseh
411. Leonard Gravel Co.	Lansing, M.
412. Local Pit	3 1/2 Mi. S.W. of Charlevoix
413. Loveless Gravel Pit	Algona Twp.
414. Lowe, J. Pit	Kalamazoo
415. Local Pit	Casnovia
416. Local Pit	Iron River
417. Local Pit	Hastings
418. Leelanau County Road Commission	Leelanau
419. Local Pit	Lakeview
420. Local Pit	Gaylord
421. Local Pit	Leland Twp., Leelanau County
422. Local Pit	Mentor Twp., Oscoda County
423. Local Pit	Village of Lyons
424. Lennon Gravel Co.	Lennon
425. Local Pit	Manton
436. Manson, C. Pit	St. Ignace
437. McNeil Pit	Near Waterford
438. McLouth Steamship Co.	Marine City
439. McManus Pit	Petoskey
440. Marsh Pit	1 1/2 Mi. from Roscommon
441. Marsman & Tabor	Larke Pit near Sault Ste. Marie
442. Melrose Pit	Montmorency County, Briley Twp.
443. Merithew Gravel Co.	Manchester
444. Michigan Gravel Co.	Greenbush
445. Michigan Limestone Chemical Co.	Rogers City
446. Middle West Roads Co.	Pit 3 Mi. S. of Burnside
447. Midland Contracting Co.	Pit (Bridgeport Twp., Saginaw County)
448. Midland Gravel Co.	Millbrook
449. Millbrook Gravel Co.	Millbrook
451. Mt. Pleasant Gravel Co.	Mt. Pleasant
453. Miller & Walser	Chesaning
474. Nelson, John Pit	Atlanta
475. Nelson, Victor	Hurley, 4 Mi. W.
476. New Era Road Building Co.	Pit N. & W. of Plainfield
477. Nebel Bros.	Bay at Gladstone
478. Northern Indiana Sand & Gravel Co.	Wolcottville, Indiana

479. Nye Hill Pit	Unknown
502. O'Conner Pit	Local near Crosswell
503. Ohio & Michigan Gravel Co.	Chilson Plant
504. Ohio & Michigan Gravel Co.	Toledo, Ohio
505. Olivine Co.	Marquette Plant
507. Ottawa County Road Commission Pit	Local Pit
508. Overholt, M. W.	Local Pit at Eastmanville
509. Owosso Pit	Near Owosso, Sec. 34, R 2 E, T 7 N
510. Otisville Gravel Co.	Otisville
511. Oxford Sand & Gravel Co.	Oxford
531. Peterson, Gould & Turner	Unknown
532. Peters, W. S.	Wakefield
534. Peterson & McLean, Corfman Pit	N. of Black River
535. Peterson Sand & Gravel Co.	Harrisville - Greenbush
536. Petoskey Portland Cement Co.	Petoskey
541. Pleasant Lake Gravel Co.	Pleasant Lake
542. Priceland, Frank	Bay Shores
543. Pryor Bros.	Pewamo Local Pit
544. Puritan Sand & Gravel Co.	Tecumseh
570. Rainey Pit	Alanson
571. Ray Sand & Gravel Co.	New Hudson
572. Ray Sand & Gravel Co.	Oxford
573. Remus Construction Co.	Local Pit near Farwell
574. Riverside Fuel & Supply Co.	Ecorse
575. Rock View Pit	5 Mi. from Pickford
597. Sawyer & Horbest	Kalamazoo
598. St. Clair River Gravel	St. Clair River
599. Sand Lake	Local Pit, Kent County
600. Scharl, G. P. Gravel Co.	Cascade
602. Scharl, G. P. Gravel Co.	Grand Rapids
603. Schreur & Schreur	Local Pit near Gaylord
604. Sears Pit	Beulah
605. Sheltraw Gravel Co.	Mason
606. Sheltraw Gravel Co.	Holt
607. Shenk Gravel Co.	Durand
608. Sloan, R. L., Pit	Local near Antrim, Banks Twp.
609. Sloans Pit	Charlevoix
610. Soo Sand & Gravel Co.	Sault Ste. Marie
611. Spear & Son	Local Crushed Rock near Wakefield
612. Stacy Pit	Benzonia
613. Shiawassee River	Unknown
614. Standard Gravel Co.	New Hudson, Oakland County
615. Standard Gravel Co.	Pit at E. End Proj. 38-20, C3 near Jackson
616. Sibley Stone Co.	Detroit
618. Stewart, J. C. Co.	Local Pit near Owosso
619. Sturgeon Bay Stone Co.	Sturgeon Bay, Wisc.
620. Swanson, Guy	Near Antrim

621.	Sylvan Lake	Local Pit near Sylvan Lake
622.	Sturgeon Bay Stone Co.	Cleveland
623.	Sullivan, G. E.	Detroit
645.	Tecumseh Sand & Gravel Co.	Tecumseh
646.	Thornton Bros. Construction Co.	Local Pit near Rudyard
647.	Thornton Bros. Construction Co.	Marshall Creek
648.	Thunder Bay Quarries	Alpena
649.	Thornton Bros. Construction Co.	Dishneau
650.	Thon, W. L.	Miller Pit
670.	United Fuel & Supply Co.	Oxford
671.	United Fuel & Supply Co.	Detroit - Shelby Pit
672.	United Fuel & Supply Co.	St. Clair River
673.	United Fuel & Supply Co.	Utica Pit - Oxford
697.	Valley City Gravel Co.	Grand Rapids
698.	Vanderveen Gravel Pit	Plainfield Twp.
699.	Vanderveen Pit	Lowell
701.	Vinton Construction Co.	Union City
722.	Wards Pit	Perry
723.	Ward Sand & Gravel Co.	East Tawas (Big Cut)
724.	Waggoner, P., Pit	Onaway
726.	Wallace Stone Co.	Bay Port
727.	Wallenger Pit	Near Coopersville, Allendale Twp.
728.	Walling, E. C.	St. Johns
729.	Walling & Holland	St. Johns
730.	Walsh Sand & Gravel Co.	Walsh, Wisc.
731.	Ward Co.	McNally Pit, Oxford, Ross Crossing
732.	Ward Sand & Gravel Co.	Oxford
733.	Wagner Quarries Co.	Sandusky, Ohio
734.	Western Indiana Gravel Co.	Indiana Tonia
735.	Whitehead, I. L. Co.	Local Pit, Rudyard Twp.
736.	Whitehead, I. L. Co.	Moran Pit - St. Ignace
737.	Whitehead, I. L. Co.	Roadside Pit, 1 Mi. E. of Wilson
738.	Whitehead, I. L. Co.	Sault Ste. Marie
739.	Willemins Pit	Jonesville
740.	Wilson Gravel Co.	Pit near Wilson
741.	Wright Pit	Local Pit near Bad Axe
742.	Wysong Gravel Co.	Local Pit near Traverse City
743.	Wysong & Jeffries Pit	Traverse City
744.	Whitehead Co.	Local Pit, Ogemaw Co.
745.	West Side Sand & Gravel Co.	Battle Creek
746.	Wakefield Crushed Stone Co.	Wakefield
747.	Whitcraft Pit	N. W. of Alma
749.	2 Sources Supply	
750.	3 Sources Supply	
999.	No Record	

18. CONTRACTOR CODE

The contractor is represented by the code number appearing before each item.

1. Alma, City of	Alma
2. Ann Arbor Construction Co.	Ann Arbor
3. Atkinson, R. C.	Niles
4. Adrian, City of	Adrian
5. Ann Arbor, City of	Ann Arbor
6. Alpine Excavating Co.	St. Ignace
25. Baker, John & Son	Kalamazoo
26. Bailey, Roy	Corunna
27. Baker, Amos	Lansing
28. Bacco Construction Co.	Iron Mountain
29. Baker, J. H. & Son Construction Co.	Port Huron
30. Baker, A. G.	Monroe
31. Baker, The R. D., Co.	Royal Oak
32. Banhagle Construction Co.	Ionia
33. Barck, George	Grand Haven
34. Barden & West	St. Johns
35. Barnes & O'Neil	Allegan
36. Bartling & Dull	Pontiac
37. Battjes, D. D.	Grand Rapids
38. Bay City Stone Co.	Bay City
39. Benzie & Son	Norway
40. Bishop & Weir, Inc.	Detroit
41. Bay City, City of	Bay City
42. Bontraeger Construction Co.	South Bend, Elkhart, Indiana
43. Bridgeport Core Sand Co.	Saginaw
44. Bridges, C. G.	Escanaba
45. Brooks, C. D.	Omer
46. Brooks Construction Co.	Fort Wayne
47. Brown & Woodby	Beaverton
48. Brumm, L. W.	Marquette
49. Burley, George A.	Flint
50. Bridgeport Core Sand & Thos. McNally	Saginaw
51. Bristol, G. F.	Highland Park
52. Battle Creek, City of	Battle Creek
53. Bolt & Morey Co.	Muskegon
72. Campbell, E. A.	Kalamazoo - Vicksburg
73. Campbell, Hugh & Son	Bay City
74. Campbell, J. A.	Bay City
76. Carlson & Lunden	Menominee
77. Carpenter, O. P.	Muskegon Heights
78. Carpenter, Floyd	Adrian
79. Central Construction Co.	Mt. Pleasant
81. Chalmers, G. L.	Grand Rapids
82. Chalmers Paving Co.	Grand Rapids
84. Charlevoix Abstract & Eng. Co.	Charlevoix
85. Charlevoix County Road Commission	Charlevoix
86. Chicago Heights Coal Co.	Chicago Heights, Illinois
87. Christman, H. G., Co.	Lansing
88. Cline & Boelens	Spring Lake

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89.	Closser Bros.	Detroit
90.	Cochran, M. W.	Bloomfield Hills
91.	Comb, A. M.	Kalamazoo
92.	Cook, Clark & Lang	Grand Haven
93.	Cook, George R., Co.	Detroit
94.	Cosens, Edward	Levering
95.	Counihan, Barnum & Prosch	Iron River
96.	Crane, Hiram A.	Midland
97.	Crescent Concrete Construction Co.	Detroit
98.	Cunningham Construction Co.	Saginaw, Indianapolis, Ind.
99.	Currie, Thomas E., Co.	Detroit
100.	Couse & Saunders	Detroit
101.	Cheney-Wright Co.	Williamston
102.	Carlson, Andrew	Menominee
103.	Cleveland-Trinidad	Cleveland, Ohio
123.	Denton Construction Co.	Detroit
124.	Dawson Brothers	Ypsilanti
125.	Deckerville Construction Co.	Deckerville
126.	Delta Contracting Co.	Escanaba
127.	Dovey & Kloosterman	Batavia
128.	Dovey Paving Co.	Batavia
129.	Detroit Asphalt Paving Co.	Detroit
130.	Donaldson & Hull	Dryden
131.	Dearborn Paving Co.	Dearborn
132.	Davidson, L. A.	Lansing
133.	Davies, H. L.	Escanaba
134.	DuBoise Construction Co.	Flint
135.	Davenport, George	Lake City
136.	Dyer Brothers	Sterling
137.	Doer & Oliver Co.	Jackson
153.	Edelman, John R., Co.	Muskegon Heights
154.	Ederer, J. W. & Co.	Saginaw
155.	Edison, L. W.	Grand Rapids
156.	Eitel & Ayres	South Haven
181.	Ford Construction Co.	Michigan City, Indiana
182.	Fox Valley Construction Co.	Appleton, Wisc.
183.	*Frame, Charles H. & Son	Harbor Beach
184.	Friedrich, W. H. & Co.	Coldwater
185.	Frisinger Construction Co.	Ann Arbor
186.	Fry, Kain, Inc., & Robert Hudson	Lansing - Owosso
187.	Frank & Stiehl	East Lansing
188.	Flint, City of	Flint
210.	Genesee County Road Commission	Flint
211.	Galarno Construction Co.	Bay City
212.	Garney-Weyenberg Contracting Co.	Appleton, Wisc.
213.	Genesee Gravel Co.	Genesee County
214.	Geneva Construction Co.	North Bradley
215.	Gessamin, W. F.	Monroe
216.	Goldberg Brothers	Mackinaw City
217.	Goldberg Construction Co.	Mackinaw City
218.	Gosner & Co.	Detroit
219.	Gould & Cross	Grand Rapids
220.	Grace Construction Co.	Fort Wayne, Indiana
221.	Groves, S. J. & Sons	Minneapolis, Minn.
222.	Green, A. E.	South Haven

223.	Green & McQuestion	LeRoy
224.	Gross Construction Co.	LaPorte, Indiana
225.	Green Bay Paving Co.	Green Bay, Wisc.
226.	Goodwin, Carl E.	Allegan
227.	Goldberg, Louis I.	Petoskey
228.	Globe Construction Co.	Kalamazoo
229.	Grand Haven, City of	Grand Haven
249.	Ham & Westing	Grand Rapids
250.	Handeyside, C. A.	Detroit
251.	Hersey Gravel Co.	Hersey
252.	Hilding Construction Co.	Grand Rapids
253.	Hilding & Rabe	Grand Rapids
254.	Hodgkiss, A. W., Co.	Petoskey
255.	Holmes, Crane & Bartling	Alma
256.	Holmes, H.	Crystal Falls
257.	Holtlander, Adam	Lansing, R.F.D. #4
258.	Hoxie, H. A., Co.	Grand Rapids
259.	Hudson & Coons	Lansing
260.	Hudson, Robert	Owosso
261.	Huron Paving Co., Charles H. Frame	Sandusky
262.	Hobeck, J. W.	Holland
263.	Hill & Louks	Whittemore
264.	Hamer Bros., Inc.	Detroit
265.	Holland, Martin A.	Lansing
266.	Hill & Belknap	East Tawas
267.	Harrah, C. G.	Niles
268.	Harwick & Brown Bros.	Petersburg
269.	Hutchinson, W.B.	Mt. Clemens
270.	Hoxie & Knowlson Co.	Grand Rapids
286.	Ironwood, City of	Ironwood
287.	Intra-State Construction Co.	Chicago
288.	Ingham County Road Commission	Mason
308.	Jackson, John K.	Ironwood
309.	Jansma, Fred & Son	Grand Rapids
310.	Jackson County Road Commission	Jackson
311.	Jackson, City of	Jackson
312.	Jackson Construction Co.	St. Clair
313.	Jeffrey, Alex	Saginaw
314.	Jenks & Dewart	Port Huron
315.	Johnson, J. E.	Saginaw
316.	Johnson, W. S. Construction Co.	Hicksville, Ohio
317.	Jutton, Kelly Co.	Bryan, Ohio
343.	Kalamazoo Construction Co.	Kalamazoo
344.	Kauffman, J. E.	Dowagiac
345.	Kimmerle, G. H.	Cassopolis
346.	Knapp, W. H.	Monroe
347.	Knight, F. J., Co.	Detroit
348.	Kalamazoo Paving Co.	Kalamazoo
349.	Kebbe, Ray	Warren
371.	Leonard Construction Co.	Saginaw
372.	Lamb, L. W.	Holland
373.	Lang, W. J. Construction Co.	Chicago, S. Dearborn Street
374.	Lewis & Frisinger	Ann Arbor

375.	Lewis & Goldberg	Scottville - Grawn
376.	Lenderick & Baker	Kalamazoo
377.	Longyear & Winters	Marquette
378.	Loomis, C. M.	Grand Rapids
379.	Loselle Construction Co.	Wyandotte
380.	Lowe, L. H.	Kalamazoo
381.	Lewis, Frisinger & Schwaderer	Ann Arbor
382.	Lansing, City of	Lansing
404.	McAvey, J. G.	Royal Oak
405.	McArdle, T. H.	Lake City
406.	McDermott & Sons	Grand Rapids
407.	McDonnell, John	Duluth, Minn.
408.	McFarrin, J. W.	Rapid City
409.	McKay, James A. & Sons, Inc.	Detroit
410.	McKechnie-Pierce	Toledo, Ohio
411.	McKenzie, The Co.	Dearborn
412.	McKeon & Galarno	Detroit
413.	McNally & McLean	Saginaw
414.	McNally, Thomas	Saginaw
415.	McQuestion & McArdle	LeRoy
416.	McVaugh-Haynes Co.	Detroit
417.	McDermoth & Cooper	Grand Rapids
437.	Mason County Road Commission	Ludington
438.	Mayer & Ryan	Chicago, Illinois
439.	Meagher, W. J.	Bay City
440.	Macomb County Road Commission	Mt. Clemens
441.	Mallow, William	Utica
442.	Marsman & Green	Grand Rapids
443.	Marsman & Taber	Grand Rapids
444.	Mecosta County Road Commission	Big Rapids
445.	Mercier, J. A.	Detroit
446.	Meredith & McVaugh	Detroit
447.	Middle West Roads Co.	Flint
448.	Midland Contracting Co.	Midland
449.	Miller, Rudolph	Bay City
450.	Milne, Charles G.	Saginaw
451.	Moellering Construction Co.	Fort Wayne, Indiana
452.	Moore-Elmer Construction Co.	Sandusky - Elmer
453.	Moran, L. A. & P. E.	Howell
454.	Murray & Fremont	Bad Axe
455.	Murray, James J.	Bad Axe
456.	Muskegon County Road Commission	Muskegon
457.	Menominee County Road Commission	Menominee
458.	Maintenance Division	MSHD
459.	Meash, John E.	Pickford
477.	Nelson, John	Alpena
478.	Nebel Brothers	Gladstone
479.	Nelson, Victor	Unknown
480.	Neale, William	Kalamazoo
481.	Neale, William & Son	Galesburg
482.	Neilson, L. H.	Muskegon
483.	Nelson, H. C.	Muskegon
484.	New Era Road Building Co.	Grand Rapids = New Era

485. Nickel, P. J.	Ironwood
487. Northern Construction Co.	Elkhart, Indiana
488. Nolan, E. C. & Son	Detroit
512. Oakland County Road Commission	Pontiac
513. O'Connor, P. W.	Grand Rapids
514. Olson, K. B.	Birmingham
515. Ottawa County Road Commission	Grand Haven
516. Oosting & Hofsteen	Holland
517. Oak Construction Co.	Royal Oak
518. Otis Cement Construction Co.	Detroit
519. O'Connor, J. C. & Son	Fort Wayne, Indiana
538. Persinger Excavating Co.	Lincoln Park
539. Palma Construction Co.	Detroit
540. Perry, Lee	Beaverton
541. Peters, W. S.	Wakefield
542. Pierson, Wilmer	Saginaw
543. Porath, J. & Son	Detroit
544. Porath, Ferdinand	Detroit
545. Patterson, J. W.	Reed City
546. Pope-Foss Co.	Mt. Clemens
547. Port Huron, City of	Port Huron
548. Pierson & Allswede	Hersey
549. Pickett & Goodwin	Allegan
550. Porath, Edward H.	Detroit
567. Raymond Contracting Co.	Escanaba
568. Rehms, A. J.	Bay City
569. Rieth Riley Construction Co.	Goshen, Indiana
570. Remus Construction Co.	Remus
571. Rockford Construction Co.	Rockford, Ohio
572. Roehm, Paul P.	Calumet
573. Rogers Construction Co.	Scottville - Beulah - Detroit
574. Rogers & Monroe	Muskegon
575. Rowe Construction Co.	Sebewaing
576. Ryan, W. H.	Jackson
600. Sablain, R.	Lansing
601. Sager Brothers	Saginaw
602. Scharl Construction Co.	Grand Rapids - Saginaw
603. Schreur & Schreur	Gaylord
604. Schulz & Liken	Sebewaing
605. Schwaderer, E. B.	Cass City
606. Schweinsburg Construction Co.	Bay City
607. Schweinsburg, Carl	Bay City
608. Scott, Cochran & Scott	Lansing
609. Scott, R. R.	Saginaw
610. Sloan, R. F., Jr.	Battle Creek
611. Smith Construction Co.	Detroit
612. State Construction	Lansing
613. State Road Builders, Inc.	Grand Rapids
614. Stewart, J. C.	Flint
615. Storen, W. J., Co.	Detroit
616. Saginaw County Road Commission	Saginaw
617. Solomon, S. D.	Lansing
618. Schwaderer, Frisinger & Porath	Detroit

619.	Scharl, G. P.	Grand Rapids
620.	Smith Paving Co.	Dearborn
621.	Schaefer, H. O.	Green Bay, Wisc.
622.	St. Clair County Road Commission	Port Huron
623.	Smith-Sparks Construction Co.	Houghton
638.	Tatti, Walter G.	Detroit
639.	Taylor Brothers Co., Inc.	Birmingham
640.	Thon, W. L. Co.	Wyandotte
641.	Thornton Brothers Construction Co.	Hancock
643.	Townsend & Shuttleworth	Lansing
644.	Twichell & Barrows	Orland, Indiana
668.	Uler & Blackburn	Ontonagon
691.	Vanderhorst, Henry	Kalamazoo
692.	Vanderveen Brothers Construction Co.	Grand Rapids
693.	Vanderveen, Harold & Donald	Grand Rapids
694.	Vinton Construction Co.	Coldwater
695.	Vizena & Gatiss	Munising
696.	Vanderveen P., & Sons	Grand Rapids
697.	Vanderveen, E. J.	Grand Rapids
717.	Webber Construction Co. H.C.	Bay City
718.	Waterbury & O'Shaughnessy	Coldwater
719.	Walbridge-Aldinger Co.	Detroit
720.	Ward, Andrew & Sons	Oakland, Illinois
721.	Warren Bros. Roads Co.	Flint
722.	Wayne County Road Commission	Detroit
723.	Webber Construction Co.	Ionia
724.	Weir Construction Co.	Detroit
725.	Wells Construction Co.	Buffington, Indiana
726.	West Michigan Construction Co.	Zeeland
727.	Wexford County Road Commission	Cadillac
728.	White Construction Co.	Detroit - Chicago
729.	Whiting Construction Co.	Grand Rapids
730.	Whitlow & Hobeck	South Haven
731.	Whitlow & Nelson	Muskegon
732.	Whiting, Cook & Clark	Grand Rapids
733.	Wilke & Perry Construction Co.	Oskosh, Wisc.
734.	Williston Construction Co.	South Bend, Indiana
735.	Willite Road Construction Co.	Detroit
736.	Willits & Schweinsberg	Bay City
737.	Willits Brothers	Benton Harbor
738.	Wise, Bryan	Watervliet
739.	Wolvering Asphalt Paving Co.	Grand Rapids
740.	Wolverine Construction Co.	Kalamazoo
741.	Woodley, Granger Construction Co.	Benton Harbor
742.	West Shore Construction Co.	Zeeland
743.	Whitehead, I. L.	Sault Ste. Marie
744.	White Cloud, Village of	White Cloud
745.	Wells, L. W.	Saginaw
746.	Willits, Walter	Bay City
747.	Whitely & Schwaderer	Cass City
748.	Waterway Construction Co.	Detroit
749.	Whitely, A. W. Co.	Marlette
750.	Yerington, John G.	Benton Harbor

751.	Wisconsin Bridge & Iron Co.	Detroit
752.	Wilton, W. S.	North Street
753.	Whitlow, O. M.	Muskegon
800.	Joint Contract	Lewis & Frisinger - Ann Arbor
		E. B. Schwaderer - Cass City
801.	Joint Contract	Wilmer Pierson - Hersey
		C. M. Loomis - Grand Rapids
802.	Independent Contractors	The Cleveland Trinidad Paving Co.
		Detroit
		J. H. Baker & Sons Construction Co.
		Port Huron
999.	No Record.	