SURVEY OF HIGHWAY CONSTRUCTION MATERIALS

IN THE TOWN OF GLOVER, ORLEANS COUNTY, VERMONT

prepared by

Engineering Geology Section, Materials Division

Vermont Department of Highways

in cooperation with

United States Department of Commerce

Bureau of Public Roads

Montpelier, Vermont

January, 1967

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The work of this Project was greatly implemented by the cooperation and assistance of many groups and individuals. The following were particularly helpful in carrying out the Project's objectives.

- 1. Various departments and individuals of the Vermont State Department of Highways, notably the Planning and Mapping Division and the Highway Testing Laboratory.
- 2. Professor D. P. Stewart of Miami University, Oxford, Ohio.
- 3. Professor C. G. Doll, Vermont State Geologist, University of Vermont, Burlington, Vermont.
- 4. United States Department of Commerce, Bureau of Public Roads.

History

The Materials Survey Project was formed in 1957 by the Vermont State Department of Highways with the assistance of the United States Bureau of Fublic Roads. Its prime objective was to compile an inventory of highway construction materials in the State of Vermont. Prior to the efforts of the personnel of the Survey as described in this and other reports, searches for highway construction materials were conducted only as the immediate situation required. Thus only limited areas are surveyed, and no overall picture of material resources was available. Highway contractors or resident engineers are usually required to locate the materials for their respective projects and have samples tested by the Highway Testing Laboratory. The additional cost of exploration for construction materials is passed onto the State in the form of higher construction costs. The Materials Survey Project was established to minimize or elimate this factor by enabling the State and its contractors to proceed with information on materials sources available beforehand. Prior knowledge of locations of suitable material is an important factor in planning future highways.

The sources of construction materials are located by this Project through ground reconnaissance study of maps and aerial photographs, and geological and physiographic interpretation. Maps, data sheets, and work sheets for reporting the findings of the Project were designatd with their intended use in mind. These maps and data sheets were devised to furnish information of particular use to the contractor or construction man. For maximum benefit, the maps, data sheets, and this report should be studied simultaneously.

Inclusures

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Included in this folder are two surface-geology maps, one defining the location of tests conducted on bedrock sources, the other defining the location of tests conducted on granular materials. These maps are derived from 15-minute or $7\frac{1}{2}$ -minute quadrangles of the United States Geological Survey enlarged or reduced to 1:31250 or 1" = 2604'. Delineated on the Bedrock Map are the various rock types of the area. This information was obtained from numerous sources: Vermont Geological Survey Bulletins, Vermont State Geologist Reports, United States Geological Survey Bedrock Maps, and the Centennial Geological Map of Vermont, as well as other references.

The granular materials map depicts areas covered by various types of glacial deposits (outwash, moraines, kames, kame terraces, eskers, etc.) by which potential sources of gravel and sand may be recognized. This information was obtained primarily from a survey conducted by Professor D.P. Stewart of Miami University, Oxford, Ohio, who had been mapping the glacial features of Vermont during the summer months since 1956. Further

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information was obtained from the Soil Survey (Reconnaissance) of Vermont conducted by the Bureau of Chemistry and Soils of the United States Department of Agriculture, and from Vermont Geological Survey Bulletins, United States Geological Survey Quadrangles, aerial photographs, the Surficial Geologic Map of Vermont, and other sources. On both maps the areas tested are represented by Identification Numbers. Several tests are usually conducted in each area represented by an Identification Number, the number of such tests being more or less arbitrarily determined either by the the the character of the material or by the topography.

Also included in this folder are data sheets for both the Bedrock and Granular Materials Survey, which contain detailed information for each test conducted by the Project as well as information obtained from other sources, and including an active card file compiled by the Highway Testing Laboratory. The latter information was gathered over a period of years by many persons and consequently lacks the organized approach and detail required for effective use. The information on the cards varied widely in completeness. Transfer of information from the cards to the data sheets was made without elaboration or verification. When possible, the locations of the deposits listed in the card files have also been plotted on the maps; however, some cards in the file were not used because the information on the location of the deposit was incomplete or unidentifiable. Caution should be exercised wherever this information appears incomplete. This Project does not assume responsibility for the information taken from the card files.

Work sheets contain more detailed information on each test and a detailed sketch of each identification Number Area. The work sheets and laboratory reports are on file in the office headquarters of this Project.

LOCATION ;

The town of Glover is located in the south part of Orleans County in the northeast part of the state. It is bounded on the north by Barton, on the east by Sheffield, on the south by Greensboro, and on the southwest and west by Craftsbury and Albany. (See map following page)

Glover is in the Central Plateau Physiographic Region of Vermont, named by some the Vermont Piedmont, and is characterized by very rugged to moderately rolling topography. The hills in the south-central and southeast part of town are formed of granitic rock; those rising abruptly on either side of the Barton River valley characterize the rugged nature of this part of Glover. The land in the west, central, and north parts of town is moderately to steeply rolling and is upheld by limestones and schists. Elevations out of the Barton River valley vary from 1400 feet to a high of 2258 feet in the Black Hills.

The major feature in Glover is the valley of the Barton River, narrow and steep-walled where it flows through the granitic rocks and fairly broad to the north. Drainage is mainly into the Barton River from the hills to the east and west, and then northward. The west side of Glover drains through numerous small brooks, mainly to the west toward the Black River, and north, eventually reaching the Barton River in the town of Barton.



Procedure for Rock Survey

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The routine employed by the project in a survey of possible sources of rock for highway construction is divided into two main stages; office and field investigations.

The office investigation is conducted primarilty during the winter months and comprises the mapping and description of rock types as indicated in various reference sources. Many different sources of information are utilized, as indicated in the bibliography. These references differ considerably in dependability due to new developments and studies that have contributed to the obsolescense of a number of reports. In addition, the results of samples taken by other individuals are analyzed, and the location at which these samples were taken is mapped when possible. In other words, as complete a correlation as possible is made of all the information available concerning the geology of the area under consideration.

The field investigation is begun by making a cursory preliminary survey of the entire area. The information obtained in the preliminary survey, together with the information assimilated in the office investigation, is employed to determine the areas where testing and sampling will be concentrated. When a promising source has been determined by rock type, volume of material, accessibility, and adequate exposure and relief, chip samples are taken with a hammer across the strike or trend of the rock. The samples are submitted to the Material Testing Laboratory for abrasion testing both by the Deval Method (AASHO T-3) and the Los Angeles Method (AASHO T-96). It should be hept in mind that the samples taken by the chip method are often within the weathered zone of the outcrop and consequently may give a less satisfactory test result than fresh material deeper in the rock structure. When the material is uniform and acceptable abrasion testsresult from the chip samples, the material source is included in this report as being satisfactory.

Discussion of Rock and Rock Sources

The rocks of Glover are mainly metamorphic phyllites or schists, quartzites, and limestones of the Gile Mountain and Waits River formations, and granite which occurs as dikes intruding the metamorphic rock and as a large body in the south-central part of Glover.

Except where intruded by granitic dikes, the metamorphic rocks have not been resistant enough to form good exposures. Therefore much of the area of Glover, although investigated for possible sources of crushed rock, was not sampled. Areas sampled are described in Table II and are shown on the Rock Materials Map (Plate II).

Map Identification Numbers 1 and 2 were in areas mapped in the Vermont Geological Survey Bulletin No. 8 as having an abundance of granitic dike rocks. In Map Identification Nc. 1 a contact between the Gile Mountain phyllite and the granite was noted, as was a 30-to 6C-foot wide band of quartzite and phyllite included within the granite. Little relief and the small area exposed, as well as difficult access, are factors which would preclude this area as a source for Sub-base of Crushed Rock. In Map Identification No. 2, however, a high granite face with a large seeming inclusion of metasediments was sampled, and this area is recommended for further testing as a possible source. Much clearing is required; however, the area is located favorably to a main road. The steep valley wall above the area sampled could very possibly prove to be an acceptable source as well.

Map Identification No. 3 was sampled south of and above Shadow Lake at the end of a wooded knoll where a large granite face was exposed. Much clearing needs to be done here; however both the top and foot of the 20to 60-foot high face would be easily accessible after clearing. Access

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and remoteness from the Interstate projects are both factors against consideration of this area as a source of crushed rock.

The final area sampled was west of Area Number 3, still within the mapped granite body, and was a heavily wooded hillside beyond the end of a town road. Granite and metasediments were sampled. The relief and extent of the exposures are probably sufficient for a quarry operation. Clearing is required; construction of an access road would be necessary and the area is remote from the Interstate.

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SURVEY OF SAND AND GRAVEL SOURCES

Procedure for Sand and Gravel Survey

The method employed by the project in a survey of possible sources of sand and gravel for highway construction is divided into two main stages; office and field investigations.

The office investigation is conducted primarily during the winter months and comprises the mapping of possible potentially productive areas as indicated from various references. Of these references, the survey of glacial deposits mapped by Professor Stewart proves to be valuable, particularly when used in conjunction with other references such as soil-type maps, aerial photographs, and United States Geological Survey quadrangles. The last two are used in the recognition and location of physiographic features indicating glacial deposits and in the study of drainage patterns. In addition, the locations of existing pits are mapped when known. The locations in which samples were taken by other individuals are noted and mapped when possible.

The field investigation is begun by making a cursory preliminary survey of the entire town. All pits and other areas which show physiographic features that give evidence of glacial or fluvial deposition are noted. These locations are later investigated by obtaining samples of pit faces and other exposed materials. Tests pits, dug with a backhoe to a depth of approximately ll feet, are also sampled. The samples are submitted to the Materials Testing Laboratory where they are tested for gradation and stone abrasion, the latter by the Deval Method (AASHO T-4).

Discussion of Sand and Gravel Deposits

The granular materials of Glover consist of sands of glaciolacustrine origin and sands and gravels mapped by Dr. D. P. Stowart as kame moraine deposits. These deposits are confined to the Barton River valley.

Sands of glacial-lake origin were sampled in Map Identification Numbers 1, 2, 35, 36, and 38. Other sands acceptable for highway usage, mapped as kame moraine sands, but which may possibly be of lacustrine origin, were sampled in Map Identification Numbers 6, 22, 23 27, and 28.

Numerous pits which expose the kame moraine gravels have been opened in the Barton River valley and were sampled by the materials survey party. Those pits and areas which appear to offer the most potential quantity of highway gravels are Map Identification Numbers 11, 12, 15, 16, 18, 20, and 31. Also Map Identification No. 11 contains a coarse cobbly gravel, the best use of which would be for crushing. Small quantities of gravel are available at this writing in Map Identification Numbers 39, 40, and 41. Further testing, primarily for gravels, is recommended in Map Identification Numbers 7, 9, 12, 14, 32, and 38. In addition, two areas which were not sampled for various reasons and which are recommended for future testing, are (1) the meadow south of Map Identification No. 20, and (2) the rough wooded area immediately north of Map Identification No. 37.

SUMMARY OF ROCK FORMATIONS IN THE TOWN OF GLOVER

<u>Gile Mountain Formation</u> - Gray quartz-muscovite phyllite or schist, interbedded and intergradational with gray micaceous quartzite. Locally the phyllites and schists contain porphyroblasts of biotite, garnet, staurolite, kyanite, andalusite, or sillimanite. It is described in the Lyndonville Quadrangle as gray quartz-sericite-biotite schists and impure silty biotite quartzites.

Barton River Member (of the Waits River Formation) - Coarse-grained bluegray quartzose limestone consisting of recrystallized quartz and calcite grains weathering in places to a brown earthy crust. The limestones are interbedded with argillaceous schists and phyllites containing quartz, sericite, and biotite. The schists and phyllites commonly weather to a rusty brown. Diopsidic limestone and cordierite hornfels are at contacts with granitic dikes.

<u>Granitic Dikes</u> - Gray granitic rock varying from fine - to coarse-grained. Width and extent of individual dikes not determined.

Undifferentiated Granitic Rocks - Light to dark gray, medium- to coarsegrained granodiorite to quartz monzonite, referred to in this report as granite.

GLOSSARY OF SELECTED GEOLOGIC TERMS

Alluvial - Pertaining to material carried or laid down by running water.

<u>Aplite</u> - A fine-grained, light-colored igneous rock with sugary texture occurring as an intrusive, and most commonly associated with granites. However, many rock families contain members with aplitic textures.

Argillaceous - Containing or consisting of clay.

Calcareous - Pertaining to or containing calcium carbonate.

Delta - A predominantly alluvial deposit built out by a stream into the sea or other body of water. Usually it has the typical form of the Greek letter delta.

<u>Dike</u> - A sheet-like body of igneous rock that fills a fissure in older rocks which it entered while in a molten condition. Varies from less than an inch in width and a few yards in length to thousands of feet in width and many miles in length.

Esker - A long narrow winding ridge of mixed sand and gravel deposited by a stream of meltwater flowing in a tunnel or crevasse in stagnant glacial ice.

<u>Glaciolacustrine</u> - A term used to denote formation by or pertaining to deposition in quiescent waters of glacial lakes.

<u>Granodiorite</u> - A type of deep-seated, crystalline igneous rock composed of plagioclase feldspar, a smaller amount of orthoclase or other alkalic feldspar, quartz, and usually one or more of the dark minerals biotite, hornblende, or pyroxene.

<u>Hornfels</u> - A general term for very dense, hard, dark-colored sugarygrained rocks that have been recrystallized by the heat of an adjacent igneous intrusive.

Igneous Rocks - One of the three great rock classes; those rocks which have cooled and solidified from a hot mobile solution of minerals, water, and gasses either deep beneath or at the earth's surface.

<u>Intrusive</u> - Igneous rock which has cooled before reaching the earth's surface - contains small to large visible small grains; as opposed to <u>Extrusive</u> - solidifying at the surface and containing small unrecognizable grains.

<u>Kame</u> - A conical hill of stratified drift deposited in contact with glacial ice by streams flowing in or on the ice.

<u>Kame Moraine</u> - An accumulation of material deposited directly from the frontal portions of the glacial ice and partially sorted by water action. Deposits may take the form of coalescent knolls, hummocks, ridges, etc.

Limestone - A bedded sedimentary deposit consisting chiefly of calcium carbonate. The most important and widely distributed of the carbonate rocks. The percentage of calcium carbonate ranges from 40 percent to more than 98 percent. Common impurities are clay and sand.

<u>Meta</u> - A prefix used before rock names to indicate that the minerals have been altered chemically and physically.

<u>Metamorphic Rocks</u> - Rocks that owe their distinctive characteristics to the transformation of pre-existing rocks through intense heat or pressure or both.

<u>Phyllite</u> - A fine-grained, foliated metamorphic rock intermediate between the mica schists and slates into which it may grade. The foliation is made possible by the development of a large amount of potash mica, sericite, which also gives the rock a distinctive silvery appearance.

<u>Physiography</u> - Broadly, a study of the physical divisions of the globe lands, seas, and atmosphere.

Piedmont - An area lying at the foot of mountains.

<u>Quartzite</u> - A compact metamorphic rock composed of quartz grains so firmly cemented that fracture takes place across them and the cementing material with equal ease.

<u>Quartz Monzonite</u> - A deep-seated igneous rock with about equal amounts of orthoclase and plagioclase feldspars, quartz, and dark accessory materials. It is found in the series, granite, quartz monzonite, granodiorite, quartz diorite.

<u>Schist</u> - A metamorphic crystalline rock having a closely foliated structure and a tendency to split along approximately parallel planes.

<u>Slate</u> - A very fine-grained homogenous metamorphic rock which splits smoothly along parallel cleavage planes and yields roughly similar slabs.

BIBLIOGRAPHY

- A survey of the glacial geology of Vermont being conducted by D. P. Stewart, the partial results of which are published in Vermont Geological Survey Bulletin No. 19; 1961.
- Soil Survey (Reconnaissance) of Vermont, W. J. Latimer; 1930; Bureau of Chemistry and Soils, United States Department of Agriculture.
- Soil Exploration and Mapping; 1950; Highway Research Board, Bulletin 28.
- Survey of Highway Aggregate Materials in West Virginia; December, 1959; Engineering Station, West Virginia University, Morgantown, West Virginia.
- Materials Inventory, Bangor Quandrangle, South Half; September, 1959; University of Maine.
- Glacial Geology and the Pleistocene Epoch, R. F. Flint; 1947; John Wiley and Sons, Inc.
- A Handbook of Rocks, J. F. Kemp; June, 1946; D. Van Nostrand Company, Inc.
- Rock and Rock Minerals, L. V. Pirsson; June, 1949; John Wiley and Sons, Inc.
- Glossary of Selected Geologic Terms, W. L. Stokes and D. J. Varnes; 1955; Colorado Scientific Proceedings, Vol. 16.
- Microscopic Petrography, E. W. Heinrich; 1956; McGraw-Hill Book Company, Inc.

Centennial Geologic Map of Vermont, C. G. Doll; 1961.

The Geology of the Lyndonville Area, Vermont; J. G. Dennis; 1956; Vermont Geological Survey Bulletin No. 8.

The Geology of the Hardwick Area, Vermont; Ronald H. Konig and John G. Dennis; 1964; Vermont Geological Survey Bulletin No. 24.

Lyndonville Quadrangle, Vermont; Geological Survey, United States Department of the Interior.

PARTIAL SPECIFICATIONS FOR HIGHWAY CONSTRUCTION NETRIALS

Listed below are partial specifications for Eighway Construction Materials as they apply to this report at date of publication. For a complete list of specifications see Standard Specifications for Highway and <u>Bridge Construction</u>, approved and adopted by the Vermont Department of Highways in April, 1964.

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Item 105, Granular Borrow

"Article 105.02 - Materials. The granular borrow shall be obtained from approved sources and shall consist of satisfactorily graded, freedraining, hard durable stone and coarse sand practically free from loam, silt, clay, and organic matter.

"The sand portion (material passing the No. 4 screen) shall have not more than ten percent (10%) passing the No. 270 mesh sieve and shall show a color of not more than three and one-half $(3\frac{1}{2})$ as determined by the colorimetric test described in AASHO Hethod of Test, Designation T-21.

"When used in connection with fine grading or in fills where piling is to be driven, the granular material shall all pass the nine-inch (9") square-opening screen."

Item 201, Sub-base of Gravel

"Article 201.02 - Materials. The gravel shall consist of material reasonably free from silt, loam, clay or organic matter. It shall be obtained from approved sources and meet the following requirements.

- "Not less than forty percent (40%) stone shall be retained on No. 4 sieve.
- "The percent of wear shall be not more than twenty-five (25) when tested by laboratory methods using Nethod T-4 or more than forty (40) when tested by AASHO Method T-96.

- "The stone portion of the gravel shall be uniformly graded from coarse to fine, and the maximum-size particles shall not exceed twothirds (2/3) of the layer being spread.
- "The sand portion, when tested by laboratory methods using Method AASHO T-27, shall meet the grading requirements set up in the following table:

Linimum Percent	Percent Passing	Percent Passing		
of Stone	Square Openings	Square Openings		
	No. 100	No. 270		
40	0-15	0-3		
50	0-15	0-4		
60	0-15	0-5		
70	0-15	C-6		

"The sand shall show a color of not more than three and one-half (3¹/₂) as determined by the colorimetric test described in the AASHO Method of Test, Designation T-21."

Item 202, Sub-base of Sand

"Article 202.02 - Materials. The sand shall consist of material

reasonably free from silt, loam, clay, or organic matter. It shall be ob-

tained from approved sources and meet the following requirements:

"The sand, when tested by laboratory methods using Method AASHO T-27, shall meet the grading requirements set up in the following table:

Square Openings	Percent Passing
12"	95-100
5/8"	80-100
No. 4	70-100
No. 100	0-18
<u>No. 270</u>	0-5

"The sand shall show a color of not more than three and one-half (3¹/₂) as determined by the colorimetric test described in the AASHO Method of Test, Designation T-21." Item 204, Sub-base of Crushed Rock

"Article 204.02 - Materials. The materials for sub-base, filler, and sand cushion shall be obtained from approved sources and meet the following requirements:

- A Crushed Rock. "The crushed rock shall be uniformly graded, crusher-run material and shall be free from dirt. The ledge from which this material is obtained shall be stripped and cleaned before blasting. Conical stockpiling, or any other method of stockpiling which causes segregation of aggregates, will not be permitted.
- "The crushed rock, when tested by laboratory methods using Hethod AASHO T-27, shall meet the grading requirements set up in the following table:

Square Openings	Percent Passing
4"	?5 - 100
15"	25-50
No. 4	0-15

"The percent of wear shall not be more than eight (8) when tested by laboratory methods using Method AASHO T-3 or more than forty (40) when tested by AASHO Method T-96."

Item 205, Sub-base of Crushed Gravel

"Article 205.02 - Materials.

A - Crushed Gravel. "The crushed gravel shall consist of material reasonably free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and produced by a crusher adjusted to deliver a product uniformly graded from coarse to fine.

"When tested by laboratory methods using Lethod AASHO T-27, it shall meet the grading requirements as set forth below:

و جوجود مو «بوجو مواقومی بور بومونواک موردی که موانواک موجودی ای موانو			
		Square	Percent
		Openings	Passing
	Coarse-Graded	411	100
Sub-base of	Item 205-A	No. 4	25-50
Crushed Gravel	Fine-Graded	12"	95-100
	Item 205-B	No. 4	30-60

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- "At least thirty percent (30%) by weight of the stone content of the crushed gravel, that is, the material retained on the No. 4 screen, shall have a minimum of one (1) fractured face as determined by actual count from the sample submitted to the laboratory.
- "The percent of wear shall not be more that twenty (20) when tested by laboratory methods using Method AASHO T-4 or more than thirty-five when tested by AASHO Method T-96.
- B Sand. "The sand content of the crushed gravel, that is the material passing the No. 4 screen, when tested by laboratory methods using Method AASHO T-27, shall meet the grading requirements set up in the following table:

Square	Openings	Percent Passing
No.	100	0-18
No.	270	0-8

"The sand shall show a color of not more than three and one-half (3½) as determined by the colorimetric test described in the AASHO Method of Test, Designation T-21."

Item 207, Sub-base of Dense Graded Crushed Rock

"Article 207.02 - materials. The crushed rock shall consist of granular fragments of hard, durable rock, of uniform quality throughout, reasonably free from thin or elongated pieces, soft or disintegrated rock, dirt or other objectionable matter."

"The rock shall meet the following requirements:

" The percent of wear shall be not more than eight (8) when tested by laboratory methods, using Method AASHO T-3, or more than forty (40), when tested by AASHO Method T-96."

"When tested by laboratory methods, using Method AASHO T-27, the material shall meet the requirements set up in the following table:

	Square Openings	Percent Passing
	311	100
	2"	80-100
Grading	12"	50-75
	No. 4	30-55
	No. 100	3-10
	No. 270	0-6

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"The dense graded rock shall be homogeneous and shall be produced and . manipulated in such a manner as to prevent segregation before material is spread on the prepared subgrade, or at other locations."

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GLOVER CRANULAR DATA SHEET NO. 1

Map I	Field	Year	Depth of	Over-	Exist-		Sieve	Ana	lysis		Color	Abrasion	Passes	
Ident	Test	Field	Sample	burden	ing		% F	assiı	ng	1	AASHO	AASHO	VHD	
No	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
1	1	1966	2-10.5	0-2	No	100	100	92.7	10.2	2.5	1		Sand	Owner: Bernard Butler. This
-				· ·	i I		1			2.3*				area is a terrace on the east
	•													side of Vt. Rte. 16 on the
				}										north edge of Glover Village.
														Dr. D.P. Stewart has mapped
									l					deposits occuring on either
							ł		Ì			[side of the Barton River Val-
														ley as lake sands. Test #1
]]]	}			was sampled on the west edge
							1		1	l		· ·	-	of the terrace 275 feet south
		1					-					4		of the Barton-Glover Town Line.
						1	ļ		{	1				The material is a fine sand
														with a few small pebbles
						ļ		ļ		}		1		acceptable for Item 202, Sub-
							1					ł		base of Sand. Extension of
				ļ	1	Į				ł				deposit would be to the east
											ł	l .		and northeast.
2	1	1966	1-10.5	0-1	No	100	100	99.7	65.6	8.0*	1		Gran.	Owner: Edmond Boutin. This
						-	· · ·	-		}.			Borrow	area is south across swale
			1				1						(Sand)	from area No. 1 and is in con-
											i .			tinuation of lake sand deposi-
		1	ļ		1	1		1				1		tion. This is an eroded ter-
							1	1				1		race and resulting terrain is
	1		1			}	1	1				1		flat to rolling. South end of
		1					i							field is lower in elevation
								ļ				1		and wet in places. One test
				·	1				1			1		was dug on northwest corner
								1						of terrace above slopes to
• •				· ·					1	1				north and west. Material is
•							Ì		}					a very fine silty sand with
	· .													only a few very small pebbles.
								!						Had excess silt for Item 202.
3	+	1966	N O	- <u> </u> т		S	_l	A	<u>.</u> М	<u>'</u> P	<u>.</u>	L E	<u>,</u> D	Owner: Raymond Perron. One
5	-	1 2700		-		Ŭ			**				-	test hole was due in pasture
												-		west of owner's buildings.
			1		*Perce	entage	∙of T	otal	Samp1	e				
	1	:	1						-		;			1

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TABLE I

GLOVER GRANULAR DATA SHEET NO. 2

Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing ·		% I	Passi	ng		AASHO	AASHO	AASHO	
No.	No.	Tested	(Ft)	(Ft)	Pit	$1\frac{1}{2}$ "	15/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
:			÷	•										Intent was to find edge of lake sand deposition shown on west side of valley. (See Plate I). Silt, boulders and a 1-thick poorly sorted gra velly layer encountered in 6' of digging. Probably repre- sents alluvium.
4	1	1966	2-14	0-2	No	100	100	100	64.0	11.0	1			Owner: Raymond Perron. Area is along Town Road No. 18 south of owner's buildings.
														Test #1 was dug in roadside bank. Material was fine to silty sand interbedded with silt-clay. Probably of lacus- trine origin. Sample had ex- cess passing the #100 and #270 mesh sieves for Items 202 and 105.
	2	1966	1.5-10.5	0-1.5	No	100	100	97.2	43.7	13.0 12.6*	2			Test #2 was sampled from small pasture southwest of and above Test #1 on west side of road. Material is a pebbly sand in the top 2', but goes to silty sand or sandy silt with silt layers. Bottoms in ledge fragments. Sample had excess fines for Sub-base of Sand and Granular Borrow.
5	1	1966	N O	T	*Percer	S	A of To	tal 1	M Sample	P	L	E	D	Owner: Mrs. L.M. Histed. Area was mapped within pebbly sand outlined by Dr. D. P. Stewart, at bend in Town Road No. 18. Test hole dug in pas- ture near edge of woods en- countered a glacial till for

	TAB	LE	1
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GLOVER GRANULAR DATA SHEET NO. 3

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Map Ident.	Field Test	Year Field	Depth of Sample	Over- burden	Exist- ing		Sieve % I	e Ana Passi	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
														the top 5 feet. It was not sampled.
6	1	1966	N O	T			S	A	М		Р	L E	D	Owner: Howard Conley. Area
								•						is west slope and fairly flat top of pasture on east side of Vt. Bte. 16 south of Fence
			•											Company Mill.
						:				•		•	i	Test #1 dug on top of slope in pasture about 200 feet from
									•					northwest corner. For 6 feet
			·.								•			material is boulders, cobbles,
					· .	•					• •		•	and silt with minor sand. An-
			-									,		Pasture is within kame moraine
												i		deposition, and material looks
														like poorly sorted gravel de-
					•-									rived from till. Hole was not
			1											sampled.
	··· -2 · ··-	1966	- 2-12	0-2 .	No	100	197.7	193.2	6.5	1.3	1		Sand	Test #2 dug 85' from north-
					ļ	ļ	1]		1.2*	· .	·}]		west corner of pasture. Gen-
		•						1		1		· ·		tle slope west of and below
		· .												in small scars. Material in
							{			1	1			test is fine nebbly sand, with
							1		·		ł		1	fewer pebbles and finer grain
						1					ł			size below 6'. Is horizon-
								1						tally stratified. Sample met
				. <u>.</u>	{			{	1		ł	· /		requirement for Sub-base of
											ł			Sand, Item 202.
	3	1966	2-12.5	0-2	No	100	99.0	197.0	16.5	2.5	I		Sand	Test #3 dug 140 feet south-
										2.4%				east of lest #2. Material is
														nobblos Stratification
			1								ł			appears crenulated in places
1											1			with very fine or silty sand.
	•				*Perce	ntage	of To	otal	Samp1e		k.			Looks like current bedding.

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GLOVER GRANULAR DATA SHEET NO. 4

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	·.	i	· · ·		•	•								
Мар	Field	Year	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1^{1}_{2} "	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
· ·							-							Sample meets requirements for Sub-base of Sand. More or less flat area on pasture would be source of Sub-base of Sand to a depth of 10 to 12 feet.
•	4	1966	2-24	0-2	No	66.6	54.0	43.4	13.0	5.5	1		Gran.	Test #4 dug on steep pasture
													Borrow	slope in what looks like old
												f • •	(Grav.)	pit. Sub-angular stones show
														at surface. Top 2' is over-
														burden going to 8' of gravelly sand. Below 10' is a sandy
												1		gravel with a few +6" cobbles
			•											and a few small boulders. Goes
		·												at 19' to a bed of fine tan
•	T /													sand overlying 5' or 6' of
		· ·									1			silty gravel with much matrix
		· ·												silt-clay and rottenstone.
	1				1	1					ł			Sample had excess silt for
		· · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·						•		· ·	t .1 / ~		Item 201, Sub-base of Gravel,
			-	•										and insufficient proper size
												l		stone for the percent of wear
		•								·				test was included. There
	. ·													may be small quantities of
														specification gravels beneath
					· ·		·				1	i i		this slope since the amount of
•						1					-	i		silt in excess of maximum re-
	+	1066	1.10	0.1	No	100	100	06 2	11 5	41 0		<u> </u>		Quitements was minor.
1		1900	1-10		1.0	100	1 100	1 20.2	11.7	30.4*		, i		rolling field and knolls south-
									-	J714			1	east of the junction of Vt.
				1									1	Rtes, 16 and 122. Test #1 was
	1								•			1		dug on knoll in northwest part
												:		of field. Material is brown
											i i			silt going to fine white sand
			1											at 9 feet. Excess silt rejec-
					*Perce	ntage	of T	otal	Sampl	e				ted this material for Items

TABLE I

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- GLOVER GRANULAR DATA SHEET NO. 5

Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%]	Passir	1 <u>g</u>		JAASHO	AASHO	VHD	
No.	No.	Tested	(FE)	(Ft)	Pit	15"	5/8"	#4	#100	#270	<u> T-21</u>	<u> T-4-35</u>	Spec.	Remarks
	2	1966	3.5-11.5	0-3.5	No	100	100	92.4	12.0	3.5 3.2*	1		Sand	202 and 105. Test #2 dug in swale 95 feet east of and 12 feet below ele-
· · .									•	- -				interbedded sands and pebbly or gravelly sands acceptable for Item 202.
	3	1966	1-10	0-1	No	91.1	73.5	59.6	28.0	15.0	1	• • • •	'	Test #3 dug on high land near
	- -									9.0*				terial is a silty gravel with excess silt and very fine sand for Items 201 and 105. Insuf- ficient proper size stone was
				· · · · · · · · · · · · · · · · · · ·										included for the wear test. Area is one of kame moraine deposition: poorly sorted grav- els, silts, and sands. Further testing will be necessary in this area. Possibly gravels
					-									meeting Vt. Highway Department specifications would be found in the vicinity of Test #3.
8		1966	0-5	Stripped	No	97.1	78.5	21.9	14.0	7.0	1	15.9%	Gran. Borrow (Grav.)	Owner: Norman Perron. This is a pit and adjacent area west of the Barton River and south of Town Road No. 37. Test #1 dug 350 feet east of the pit
										-				in stripped area next to woods. Digging stopped in loose ma- terial which kept caving. Gra- vel was fine and sandy with slightly excess silt for Item 201
	2	1966	3-11	0-3	Yes	77.6	69.0	50.0	8.0	3.8	1	14.2%	Gravel	Test #2 was dug a few feet east of the pit in the direc-
					*1	Percei	ntage	of To	tal S	ample				tion of a pit extension. The

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TABLE I

GLOVER GRANULAR DATA SHEET NO. 6

Map Ident.	Field Test	Year Field	Depth of Sample	Over- burden	Exist- ing		Siev %	e Ana Passi	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit ·	1/2"	<u> 5/8"</u>	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	3	1966	2-7.5	N	0	r		S	A .	М	P	L	E D	material is a gravel accep- table for Item 201. Test #3 dug about 100 feet northeast of Test #2. Top 7.5' is silt and sandy silt
		-				- - -				•				overlying a gravelly sand. Neither material was sampled. (Top 7.5' appeared too silty for Item 105, and excessive stripping required for the un-
	4	1966	1-2 5	0-1	Yes	100	100	195.7	45.9	115.0	1			Test #4 was sampled from north-
:	1									14.3*		•	• •	west face of pit. Material
- ·													,	is very fine sand with silt layers - a composite sandy silt - and contains excess silt for Item 105, Granular Borrow.
	5 _	. 1966	1-5	0-1	Yes	100	100	100	21.0	3.0*	1		Gran. Borrow (Sand)	Test #5 was dug in pit floor. Material is a very fine sand with excess passing the #100 mesh sieve for Item 202. This pit and adjacent area are in kame moraine deposits, charac- terized by abrupt changes in particle size both vertically and laterally. The pit could probably be extended to the north and northeast where, as shown by Test #3, coarser ma- terials would occur at greater depths
9	1	1966	1.5-10	0-1.5	No	100	100	100	87.0	25.0*	1			Owner: Unknown. Area is flat
														pasture with intervening swales east of Vt. Rte. 16 behind
	1				! *Per	centa	ge of	Tota	1 Sam	ple	1			

GLOVER GRANULAR DATA SHEET NO. 7

Мар	Field	Year	Depth of	Over-	Exist-	-	Siev	e Ana	lysis		Color	Abrasion	Passes	······································
Ident.	Test	Field	Sample	burden	ing	11.0	% . E (011	Passi	ng	11270	AASHO	AASHO	VHD	Pemerika
<u>NO.</u>	NO.					12"	<u> </u>				1-21	1-4-35	spec.	house. Test #1 dug on flat about 200' north of Paris property line. Material is a silt, unacceptable for Gran-
	2A	1966	1-5.5	0-1	No	100	100	100	90.3	72.0*	1.5			ular Borrow. Test #2 dug in swale 260' east- southeast of Test #1. Top 5.5' sampled as Test #2A. Ma- terial is a silt, unacceptable for Granular Borrow. Material
	2B	1966	5.5-11	0-5.5	No	84.7	77 . 6	62.3	13.0	5.0	1	•••	Gran. Borrow	gravelly sand sampled as Test #2B. Material had excess silt
	3	1966	1-10	0-1	No	62.9	54.2	42.2	18.0	8.0	1	33.8%	Gran. Borrow (Grav.)	Test #3 dug on terrace 200 feet north of Test #1. Ma- terial is a coarse gravel with
						•		u						fines for Item 201. Percent of wear is excessive for sub- base of gravel. Area mapped as kame moraine deposition. Gravels encountered indicate that below the silts these coarser materials may be abun- dant, and possibly would meet Vermont Highway Department specifications. This area would be extension of large Paris pit to the south. The owner of this area at the time sampled was E. A. Hebard.
10	1	1966	4-11	0-4	No	91.3	85.9	77.0	8.2	4.0 311*	2		Gran. Borrow (sand)	Owner: Robert Paris. Area is long, comparatively narrow field between large pit and
		1			*Percer	ntage	of To	tal S	Sample	2			· .	least side of Vt. Rte. 16. 7

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. GLOVER GRANULAR DATA SHEET NO. 8

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Man I	Field	Year	Depth of	Over-	Exist-	ļ	Sieve	Anal	ysis		Color	Abrasion	Passes	
Ìdent.	Test	Field	Sample	burden	ing	ļ	% P	assir	ng		AASHO	AASHO	VHD	
No	No	Tested	(Fr)	(Ft)	Pit	13"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
		125223		1										tests were dug at east edge of field at foot of hill in which pit was opened. Test #1 was dug 300' south of He- bard property and encountered 4' of sandy silt over 4' of gravel, underlain by fine light-colored sand. Composite
														of hole had excess coarser than $1\frac{1}{2}$ " for Sub-base of Sand.
	. 2	1966	2-11	0-2	No	100	100	98.5	52.2	13.5 13.3*	1			Test #2 was dug 180' north of town road, and at edge of stripped area southeast of
														Paris pit. Material is a sandy silt going to a coarse pebbly sand at 10.5'. Owner did not want field dug into so no test taken. Coarser
· · ·		· · · · · ·												materials found at depth in Test #2 might indicate an ex- tension of the Paris pit in this area, probably for sands or gravelly sands.
11		1966	12-38	0-12	Yes	55.3	40.0	32.4	8.0	3.8	1	20.4%	Grave1	Owner: Robert Paris. A huge pit east of Vt. Rte. 16 north of Town Road No. 41. Test #1 was sampled from east face in north part of pit. This part of pit is 310' long by 65' to 75' wide and floor is above south part of pit. Faces above north part of pit are 45' to 50' high. Top 10' to 15' was silty with a few peb- bles, and was not sampled. Gravels, coarse to fine, and

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Мар	Field	Year	Depth of	Over-	Exist-	[Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		<u>% ·]</u>	Passi	ng		AASHO	AASHO	VHD	Percentes
No.	No.	Tested	(Ft)	(Ft)	Pit	1/2"	5/8"	#4	#100	<u>#270</u>	1-21	1-4-35	spec.	Remarks
· .	2	1966	6.5-32	0-6.5	Yes	79.3	76.0	64.5	25.0	10.3	2	17.4%		<pre>#1. Lower part of face was concealed and not sampled. Test #2 taken on north face. Top 13' consists of silty sand silty gravel. Top 6.5' of sil ty sand not included. Materi-</pre>
								· · · · · · · · · · · · · · · · · · ·						al sampled is mainly gravel with some sand lenses and gra- velly sand. Sample had ex- cess fines and too few stone for Sub-base of Gravel. No
							-			· · ·				silts noted in beds below 13'; therefore the 6.5' sampled con tributed to the failure, and
-				-				and a first the second second						undoubtedly those silty beds would have to be stripped in order to get specification
	3	1966	0~39	Stripped	Yes	54.4	37.2	28.1	10.0	4.5	1	11.6%	Grave1	gravels on the north face. Test #3 was a hand sample of east face in middle of pit. Face is semi-circular; a 15'
					*Perce	entage	e of 1	'otal	Sampl	e				east face in middle of pit. Face is semi-circular; a 15' high face is the extent of th exposure of these gravels on the north side of the semi- circle, and these were sample as representing the lowermost gravels. Average stone size is 5"-7" with many +6"cobble: and many +12"boulders. A few rottenstone with some silt shows in 15' high exposure. Stones over 4" not sampled. Best use of face would be for crushing.

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GLOVER GRANULAR DATA SHEET NO. 10

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Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% 1	assi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	$1\frac{1}{2}$ "	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	4	1966	0-9	None ·	Yes	85.6	70.2	58.0	4.0	2.0	1	16.4%	Gravel	Test #4 dug in floor in north
		1												part of pit, 75' from north
					1			1						end. Material is a gravel
														with pockets of cross-bedded
										ř				sand. Sample met grading and
						1 *]						abrasion requirements for
												17 67		Item 201, Sub-base of Gravel.
	5	1966	2-10	0-2	Yes	35.5	43.2	31.8	8.0	4.0	1	17.6%	Gravel	Test #5 dug 220' southwest of
														Test #4 near present location
	; ;					· ·								or haul road in southwest cor-
		Ì							ļ					is computed coarcor than Test
														#4 and is not as well graded
								Í						Meets specifications for Item
								}						201. If gravels are 10' deep
	l													between Tests No. 4 and No. 5,
	{		1			[(·						more than 5,000 cu. yds. un-
	1													derlie the full width of the
							·····						-	north floor.
	6	1966	2-11	0-2	No	72.2	60.8	51.9	12.0	4.5	1	14.6%	Gran.	Test #6 dug 145' north-north-
						••							Borrow	east of north end of pit. In-
													(Grav.)	tervening area has been back-
														tilled with strippings and
	1													sand to Illi a natural depres-
												-		ston, and would have to be ie-
			· .					4						test is 901 south along Saw-
														ver property line from Hebard
								•				i		pasture. Material from 21-51
	,													is pebbly sand, cobbly sand
					ļ									from 51-71 and gravel from 71-
								•						91. A coarse light-colored
					l					•				pebbly sand found from 9'-11'.
					}									Sample had excess silt for
					*Porca-		~ <i>f</i>	1 4	· ·					Item 201.
					l'rercei	icage	or To	ocal S	pample	È	Ι.	!		

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GLOVER GRANULAR DATA SHEET NO. 11

Map	Field	Year	Depth of	Over-	Exist-	<u> </u>	Sieve	e Ana	lysis		Color	Abrasio	n Passes	
Ident.	Test	Field	Sample	burden	ing		%·1	Passi	ng		AASHO	AASHO	VHD	
No.	No	Tested	(Ft)	(Ft)	Pit	13"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	7	1966	1.5-11	0-1.5	No	100	100	86.0	6.9	3.8 3.3*	11/2 .		Sand	Test #7 dug north of strip- pings, north of pit, and is 375' west of the Guy Sawyer property line. Material is
	8	1966	2-10.5	0-2.	No	100	100	99.4	36.8	8.8	1		Grán.	a coarse pebbly sand going to a gravelly sand at ll', and is acceptable for Item 202. Test #8 dug 195' northwest of
	`			-						0./^			(Sand)	perty. Material is a fine
						,								brown sand with silt layers and a few thin coarse sand layers. Sample had excess
							-							fines for Item 202. Area northwest of pit would be source of granular borrow,
													×	while to the north and north- east sand and gravelly sands acceptable for Item 202 would
	9	1966	2-9	0-2	No	73.3	61.2	45.5	14.0	4.0	2	21.4%	Gravel	be found. Test #9 dug 175' west of en-
							-					-		trance road to pit, and 50' north of Town Road No. 41. Test like Test #10-2 (Below 10.5'), represents extension
														coarse gravel and cobbly or bouldery sand, going to a me- dium pebbly sand at 9'.
	10	1966	0-10	None	Yes	66 <u>.</u> 4	52.7	40.2	5.0	2.0	1	20.2%	Gravel	Test #10 dug on east side of pit on ramp area near middle part of pit. Area is about 15' above lowest point in floor and quantity of material
					*Perce	ntage	of To	otal S	Sample	2				would be about 5,000 cu. yds. Gravel is coarse with coarse

GLOVER GRANULAR DATA SHEET NO. 12

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Мар	Field	Year.	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	, a gang ang ang ang ang ang ang ang ang
Ident.	Test	Field	Sample	burden	ing		% I	<u>assi</u>	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T- 21	T-4-35	Spec.	Remarks
														sand fines, and has about 35% to 50% larger than 6".Sample did not include +6" stones, and met requirements for Item 201. Crushing of this materi- al along with that represented by Test #3 would be necessary
	11	1966	10-42	0-10	Yes	68.3	56.6	43.1	17.0	5,5	2	21.8%	Gran. Borrow (Grav.)	Test #11 was taken on west face of pit. After sample was taken, a haul road to the north floor of the pit was built across this face. Test #11 included silt, stones and sandy gravel beds from 10'
× .	12	1966	23-42	0-23	Yes	51.0	37.9	25.8	10.0	3.8	1	17.0%	Gravel	to 23' on the face as well as the gravel beds below 23'. Test #12 taken from 23' to 42', and did not include the
					*Perce	tage	of To	otal	Sample			·		42', and did not include the silty material. Test #11 had excess fines for Item 201, while Test #12 met require- ments for the Item. The pre- sent haul road is level with the north floor, and any ma- terial taken from below the road should be acceptable for Item 201. Material above the road should best be stripped off toward the west or used a Granular Borrow. Area to eas and north would be pit exten- sion. The east property line is presently atop the pit fac

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GLOVER GRANULAR DATA SHEET NO. 13

														· · · · · · · · · · · · · · · · · · ·
Man	Field	Year	Depth of	Over-	Exist~	1	Sieve	a Anal	Lysis		Color	Abrasion	Passes	3. 1. . \
Ident.	Test	Field	Sample	burden	ing		% 1	Passi	ng	-	AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
12	1	1966	2-11	0-2	No	85.8	72.9	57.9	21.0	6.3	1	- m, ct 12	Gran.	Owner: Guy Sawyer. Area is
~~					· ·								Borrow	hilltop to east and northeast
							Ì						(Grav.)	of large Paris Pit (Map Ident.
	1													#11), and Tests #1-3 represent
			· ·										}	extension of top material in
							-							Paris Pit. Test #1 dug on top
					1		-		l .					of hill, 75 feet east of pro-
						ł			ļ					perty-line fence. Material
												-		is somewhat silty gravel from
							1		1			· ·	-	beds of sand, gravelly sand,
						· ·								and gravel. A few +4" cobbles
									· ·					but mainly a fine gravel. In-
								1	1					sufficient proper size stones
								1			l			were included for wear test,
						1				ļ ·				and sample had excess fines
										ĺ				for Item 201.
	2	1066	2 5 12	0-2 5	No	80.7	69.2	59.9	14.0	6.0	2	18.4%	Gran.	Test #2 dug in swale 120 feet
	2	1900	2. 5-12			0011		1				-	Borrow_	northeast of and 12 feet below
			ļ				-	. ,-					(Grav.)	Test #1. Test is 165 feet eas
								1						of property-line fence. Top
							1	İ						5 feet of hole $(2.5^{1}-5^{1})$ is a
-					1		ł		· ·					cobbly gravel with one boulder
										Ì				overlying beds of gravelly
							1		1.					sand, and interbeds of pebbles
														and coarse sand. Fines appear
	1							•						"dirty". Sample was of a san-
										i				dy gravel with excess silt for
													ļ	Item 201.
	2	1066	2 10	3	No	100	100	96 3	11.6	3.8	31		Sand	Test #3 dug at southeast end
	3	1900	5-10	-J	MO	100	100	17085	11110	3.7%				of swale at top of slope near
										9•1				old test trenches. Top 3 feet
	1													is gravelly and was not same
	1													nled. Goes to a fine to me-
	1					•					1		1	dium quartzose sand acceptable
	1		i		1						1	1		for Itom 202 Owner would cor
	1		ŀ			Domo -	ntoo-	of T	otol	Samala				sont to opening top of hill
	1	1	1		i s	rerce	nçage	Of T	0181	Sampre	-1	ł	1	sent to opening cop of mill

GLOVER GRANULAR DATA SHEET NO. 14

Мар	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	4	1966	2-9	0-2	No	100	100	99.6	37.8	4.3*	2		Gran. Borrow (Sand)	but would not want the south- east lower area developed. Test #4 dug on the northeast side of a higher knoll to the northeast. May possibly be an extensive sand or granular borrow area. Material sampled was a very fine sand with ex- cess passing the #100 mesh side for Itom 202
12	1.	1066	0.8	Stringed	Voc	100	100	81 1	8 0	4.0	1	+	Sand	Owner: J. L. Dopp. Area is
13	IA	1900	0-0				100	01.1	0.9	3.2*				pit on north side of brook, south of Vt. Rte. 122 about 0.80 mile east of Vt. Rte. 16. Extension of pit would be north and northwest into orchard and field; however, <u>owner_did not want_to open_</u>
· · · · · · · · · · · · · · · · · · ·	1B	1966	8-22	Stripped	Yes	93.7	90.8	70.2	9.1	6.8 4.8*	1		Gran. Borrow	that area. Some gravels or gravelly sands noted on face of 6-foot lift in pit floor. Otherwise, pit is pretty well depleted. Test #1A was of top 8 feet of northeast face of pit. Beds of pebbly sand were sampled. Test #1B was of lower 14 feet of face, where beds of white
		-											(Sand)	sand interrupted by gravel lenses were exposed. Sample had barely excess material re- tained on the 1½" mesh sieve for Item 202. A composite sample of face would undoubt- edly meet the specifications.
				1	*	Perce	ntage	of T	otal S	Sample			ł	

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GLOVER GRANULAR DATA SHEET NO. 15

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Map	Field	Year	Depth of	Over-	Exist-		Siev	Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passir	ng		AASHO	AASHO '	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
14	1	1966	2.5-11.5	0-2.5	No	100	86.1	60.5	25.0	12.8	2			Owner: Ben Thompson. One of three pits in area defined by
														D. P. Stewart as kame moraine.
					· .					l				This pit is in field with rol-
							İ							of huildings and north of
				l .						Ī				small brook. Test #1 on south
														side of field drive atop wood-
								İ	1					ed bank above brook, 220 feet
									1					east of white Below 2.5 feet
-														of overburden and 1 100% of
				}			1			1				stones under 2" and with silt-
				1										clay laminae. A sand lens
						ļ								dips from 6' to 11' in the
									1		İ			hole. Looks like ice-contact
					· ·									deposition. Sample had too
							· · ·			j		1		had overes silt for Item 105
	24	1966	2_27	0-2	Yes	88.2	69.6	48.5	7.0	3.0	2		Gran.	Test on top of north
	2	1,00											Borrow	face -foot x 65-foot
·									· ·				(Grav.)	pit. Gravelly and pebbly sands
								1						and a gravel bed from 14'-20'
	[· ·		1				· ·	i	1	Í			exposed on upper face. Sample
	· ·						. .	· ·			1			ficient proper size stopes for
•	Į					i	1							a percent wear test.
	2B	1966	27-38	0-2	Yes	92.7	81.8	72.2	7.0	1.5	1		Gran.	Test #2B was of lower gravelly
										1.1*			Borrow	and pebbly sand beds. Grading
													(Sand)	of sample was nearer that of
									,					there were excess 14" stones
		1									İ			for Item 202. Some cross-
				{										bedding and silt-clay layers
										2				noted. Composite of face would
					1	rerce	ntage	OI TO	DEAL 3	Sampie	1		1	· · ·
Sieve Analysis Color Abrasion Passes Field Year Depth of Over-Exist-AASHO AASHO VHD burden ing % Passing Field Sample Test T-4-35 Spec. (Ft) Pit 13 1 5/81 #4 #100 #270 T-21 (Ft) Tested be a material with sufficient 0-2 99.4 30.8 1 Gran. 2-11.5 Ňo 100 100 7.0* 1966 Borrow (Sand) 81.7 10.6 100 6.8 Gran. 1966 Yes 1 2 - 100-2 100 5.6* Borrow

85.7 76.5 56.1 15.0 7.5

*Percentage of Total Sample

2

stones for Item 201. Stones for a wear test are required. Test #3 dug at south side of strippings south of pit. Material is a silty and very fine sand down to 6.51; then goes to a medium quartzose sand. Test #3 is 140 feet north of top of steep bank above brook. Test probably represents material in this area with possible lateral gradation to gravel or gravelly sand encountered in Test #2. If sloughed sands in pit were cleaned out, the trend of these gravels might be found. Test #4 dug 20 feet north of top of pit face and represents (Sand) material in top 10 feet of north extension. Material is coarse dark-gray gravelly and pebbly sand interbedded with medium sand. Some cross-bedding and silt laminae noted. Sample had excess silt for Item 202. Test #5 dug on steep bank be-

Remarks

Gran. low Test #1. Top 11.5 fect Borrow sampled as Test #1; middle 11 (Grav.) feet of bank sampled by hand and backhoe. A "dirty" coarse gravel overlies a silt-clay. Sample had excess silt for Item 201, and too few proper

TABLE I

Мар

No.

Ident.

No.

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1966

GLOVER GRANULAR DATA SHEET NO. 16

1.5 %

12.5-23.5 0-2.5

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GLOVER GRANULAR DATA SHEET NO. 17

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Map Ident.	Field Test	Year Field	Depth of Sample	Over- burden	Exist- ing		Sieve % P	Ana Passi	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	6	1966	N	0	T		S	A	М	P	L	E	D	<pre>size stones were included for the wear test. Test hole #6 dug 80 feet east of Test #5 on lower edge of field. Seven feet of silt or silt clay were encountered and</pre>
~					· · · · ·	•		' .					•	not sampled. Pit vicinity would be source of sands and gravels, but more testing of the pit vicinity and further
··· ·	· · ·	-				- - -	- · ·		·			· · ·	· ·	opening of the pit would be necessary to determine their extent. The kame moraine area extends north to the J. L. Dopp Pit (Map Ident. #13) and
15	14	1966	1.40	<u> </u>	1 Voc	07 6	20 /	179 0	121	150	+ + + + + + + + + + + + + + + + + + + +		Sand	Town Highway #41.
	18	1900	1-40	0-1	Ves	80 7	70-0	62.0	16.0	3.8*			Gran	large pit and area to south in pasture, south of buildings across brook. Access is 0.40 mile along a haul road leading from Town Highway #41 near the barn. Test #1A was a hand sam- ple of upper southwest face near south end of large pit. Material comes from lenses of cross-bedded sands and gravelly sand stringers. Sample met requirements for Item 202. Test #1B from (01-601 was
		1900	40-00	0-1	Ies	100.1	110.0		10.0	().0			Borrow (Grav.)	a gravelly sand with too few stones for Item 201. Insuf-
	i	ł			*	Percei	ntage	of T	otal S	Samp10	e	1	1	

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GLOVER GRANULAR DATA SHEET NO. 18

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Map	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample .	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	$1\frac{1}{2}$ "	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
			,											were included for the wear test. Composite of face would probably meet specifi- cations for Item 202, but there is a possibility of ex-
	2A .	1966	1-45	0-1	Yes	92.3	78.0	56.8	8.0	1.8	1	17.0%	Gravel	cess being retained on the l½" sieve. Test #2A was a hand sample of upper 45 feet of face 65feet
	24	1066	1-40	0-1	Yes	87 8	78 7		11 0	5 8	2	20.0%	Gran	northwest of Test #1. Materi- al is a fine gravel meeting requirements for Item 201. Test #3A was sempled 45 feet
	1	1900	1-40	0-1	Tes	07.0		-	11.0	J•0		20.0%	Borrow (Grav.)	north of Test #2A. Material is gravel with barely too few stones for Item 201. Also has excess silt for the gra-
	4	1966	0.5-11.5	0-0.5	No.	100	100	93.4	9.0	2.8 2.6*	1		Sand	vel item. Test #4 dug 225 feet north- west of pit and represents material in pit extension. Material is a pebby sand ac-
· · ·	5A	1966	1-7.5	0-1	No	100	89.0	79.6	11.9	4.8 3.8*	11/2		Sand	Test #5 dug 175 feet south- east of Test #4 and 50 feet west of pit. Top 75 feet is pebbly sand sampled in Test #5A and meets requirements
	5B	1966	7.5-12	0-1	No	89.3	85.9	77.5	12.4	4.0 3.1*	11/2		Gran. Borrow (Sand)	Test #5B was sampled from 7.5 ¹ . 12 ¹ and consisted of sands and fine gravels or gravelly sands. Sample had excess retained on only the 11 ² " mesh sieve for Item 202. Composite of Tests
	1	1			*	Perce	ntage	of Te	otal S	Sample	1	ł		#5A and #5B would meet grading

GLOVER GRANULAR DATA SHEET NO. 19

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Мар	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing	-120	% .	Passi	$\frac{1}{100}$	11270	AASHU	AASHO	VHD .	Pomarika
<u>NO.</u>	<u>ко.</u> 6	1966	0-10	Stripped	No	100	100	91.1	31.9	20.5	1-21			requirements for Item 202. Test #6 dug in stripped area 50 feet west of center face.
	7	1966	1-11	0-1	No	86.1	75.7	54.6	13.0	6.0	3	13.6%	Gran. Borrow (Grav.)	<pre>Material is silt with/a few pebbles unacceptable for Items 202 and 105. Test #7 dug on hilltop 50 feet southwest of southwest face of pit. Log of hole is as follows: 0-1' overburden; 1'-</pre>
	8	1966	1-10	0-1	No	90.1	77.0	59.7	14.0	5.3	2	17.0%	Gran. Borrow (Grav.)	5' "dirty" gravel; 5'-7' sand 7'-11' "dirty" gravel. Sample had excess silt for Item 201. Test #8 is on hilltop 260 feet south ofTest #7 and 60 feet east of woods. Material is a gravel with "dirty"-looking sand. The "dirt" is silt whic
	9	1966	1-10	0-1	No	100	100	79.1	32.4	14.3 11.3*	2			<pre>failed the sample for Item 201. Test #9 is located 20 feet eas of east face of small pit to south of large one. Test re- presents extension of small</pre>
· · ·	10	1966	1-10	0-1	No	97.7	93.1	73.7	8.1	3.0	1		 Sand	pit. Material is a pebbly and sandy silt with excess fines for Items 202 and 105. Test #10 is on east edge of old field road 130 feet south-
•				¢				٠ • • • •				···,		east of Test #8. Material is gravelly and pebbly sand with a 2-foot thick fine sand at 4'-6'. This area would have acceptable sands in the north- west extension represented by

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GLOVER GRANULAR DATA SHEET NO. 20

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Man	Field	Year	Depth of	Over-	Exist-	[Sieve	Ana	lysis	· \]	Color	Abrasion	Passes	
Ident	Test	Field	Sample	burden	ing		% H	?assi:	ng -		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1월배	5/8"	#4	<i>#</i> 100[#270	T-21	T-4-35	Spec.	Remarks
								•						Specification gravels appear to be located in an extension to the southwest represented by Test #2A and possibly Tests #1A and #3A. The area repre-
														#10, south-southeast of the pit, needs more testing to de- termine if acceptable gravels can be defined and if any sands can be found near Test #10.
16	1A	1966	2-7	0-2	Yes	75.3	67.2	58.4	11.0	5.0	1	17.4%	Gran. Borrow (Grav.)	Owner: Ben Thompson. This is a small pit and extension into pasture to south, south of and above Town Highway #41.
													· · · · · · · · · · · · · · · · · · ·	tion. Principal gravel lenses are discussion belows and lie main ly within 6 feet of the sur-
· · · · ·				2	· · ·									face. Test #1A was sampled from top 7 feet of southwest face of pit. Material is san- dy gravel and gravelly sand
							· ·							having excess silt for Item 201. Material from 7'-16' on
	18	1966	7-16	0-2	Yes	84.1	78.5	65.7	36.0	17.0	1			lower face comes from beds of gravel, silt, silty and pebbly sand, and was sampled in Test #1B. The sample had excess silt for Items 201 and 105 and had too few stones for Item 201.
	2A	1966	1-8	0-1	Yes	72.2	48.3	35.3	10.0	4.5	1	16.6%	Gravel	Test #2A taken from 1'-8' on
					+	*Perce	ntage	of T	otal 3	Samp1	e			west end of south face of pit.

GLOVER GRANULAR DATA SHEET NO. 21

Мар	Field	Year	Depth of	Over-	Exist-	1	Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing	12.00	<u> </u>	Passi	ng	11270	AASHC	AASHO	AASHO	Pomorika
NO.	NO.	iested	(rt)		<u>i F1C</u>	12"	5/6"	! #4	1/1/100	: #270	1-21	11-4-35	spec.	Material is a very stony gra-
	2 B	1966	N	0	T		S	A	M	Р	L	E	D	vel meeting specifications for Item 201. Test #2B was of a cobbly clay from 8'-16' below Test #2A.
•	3	1966	N	0	T	· ·	S	A	- M	P	L	Е	D	The material was not sampled. Test hole #3 dug in floor at west end of pit. From 0-3! was a gravel going to boulder
												-		clay. Material was not sam-
	4	1966	1-7	0-1	Yes	N	0	T	S	A	M P	L	E D	Test #4 was observed on south face between tests #1 and #2.
	-	1000			-	-	F0 F	lie e			4 0	100 18		bling that of Test #1A and #2A and was not sampled.
	5	1966	1-4.5	0-1	NO	66.1	58.5	45.5	18.0	8.5	2	23.4%	Gran. Borrow	Test #5 dug 100 feet west of pit in possible extension.
													(Grav.)	Top 4.5 feet is gravel with excess silt for Item 201. Hole bottoms in clay.
	6	1966	1-8	0-1	No	100	98.5	95.0	25.0	10.8 10.3*	2			Test #6 sampled on top of knoll 160 feet south of and about 30 feet above south
									-					face of pit. Material was a pebbly and sandy silt from beds of silt, sand, and peb- bly sand. Sample had excess fines for Items 202 and 105.
	78	1966	1-7	0-1	No	100	100	94.5	53.0	22.8 21.5*	2			Test #7A was of top 7 feet of hole dug in swale 110 feet east of and about 12 feet be- low Test #6. Naterial was
					*	Percen	tage	of T	otal 3	Sample	-			too fine for Item 105.

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GLOVER GRANULAR DATA SHEET NO. 22

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Man	Field	Year	Depth of	Over-	Exist-		Sieve	Ana	lysis		Color	Abrasion	Passes	
Ident	Test	Field	Sample	burden	ing		% 1	Passi	ng	·	AASHO	AASHO	VHD	_
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	7B ;	1966	7-13	0-7	No	71.7	62.4	43.4	8.0	3.5	1	18.2%	Gravel	Sample #7B came from 71-131
I														and consisted of beds of fine
														gravel acceptable for Item
		-									-			201. Pit is pretty well deple-
				-										ted with an extension to the
									·					south and east. Gravels in
										1			•	the south extension are thin
	·* .									•				on the west end of the pit
			-											and appear to occur under
	-							1		5				great depths of silts and
	•		1				· ·	ļ						sands to the southeast (as
					[1							· ·	shown by test holes $\#6$ and $\#7$
		10//	0.11	0.2	No	100	100	56 6	44 0	18 3	1-1			Owner: Guy Sawyer. This is
17	· 1	1900	2-11	0-2	NO	100	100	10.0	44.0	10.5	-	· · · · · ·		a small northwest-sloping
					1		•			[· .		:		field east of owner's house
														on the south side of Town
				Ì		1		ļ		Ì				Highway #41. Test #1 was a
						1		1	1					composite sample of Testhole
					!									#1 dug at west end of field.
								: .	1	1				Halo showed ice-contact fea-
	· .		· ·		į		1	1				1		turos such as ice-cavity fil-
								:		i				lings and abrunt grain-6176
			1 · · ·					İ		!				chappens Above (51 material
		· ·			ł		·		i	1			-	changes. Above 4.5 material
• •		ł			1.			!	1			1	•	hauldong gilt and cand Ben
								i		1			1	boulders, silt, and sand. De-
				ļ	1	1				i		1		10W 4.5' material was a line
	1		· .		1									peddiy sand.
	2	1966	4.5-11	0-4.5	No	100	196.0	92.8	16.7	15.3	13		Sand	lest #2 was of sand beds, and
•					•					4.9*	•			material was acceptable for
			•.										_	Item 202.
•	3	1966	N	0	Т		S	Α	M	Р	L	E	D	Test hole #3 was dug at upper
	1		1											least end of field 40 feet fro
						•								road. Material is unsorted
														stones, silt-clay, and ledge
														fragments, and was not sample
	1				*	Porco	ntago	of T	0+01 ·	Samala			•	

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Map Ident.	Field Test	Year Field	Depth of Sample	Over- burden	Exist- ing		Siev %	e Ana Passi	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	$1\frac{1}{2}$ "	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
18	1	1966	3-13	0-3	No	71.4	58.9	46.2	9.0	2.8	1	17.4%	Gravel	Owner: Guy Sawyer. Area is
										1	1 ·	1		steep wooded bank and more or
								l	ł					less flat pasture on hilltop
	ł						!		1			1		on the south side of Town High-
							· .				1	· ·		way #41 across road from own-
-								{	1		1	1		er's house and the old school-
								1	i					house. Test #1 was dug in
										1				small exposure beside the road
														at the foot of the bank about
· .			:						1	ł		1 . 1		100 feet east of the bridge
				· . · ·										at the school. Material is a
: •					I .	1	: :	1				· ·		gravel acceptable for item
														201. Log 1s as follows:
							i				•			U-3' overburden; 3'-5' Cross-
							1							51 81 gravel, 81 9 51 coarse
		Í	1				ł	1	-					proce bodded cand: 9 51-131
		ł	•			•		1	; ;			~		cross-bedded said, 3.3.=13
·							· ·						- ··· ·	boulders Steep bank could
		}												be cleared and nit opened here.
) ; t	· ·	.·						but material above test is un-
							· ·	1		i				known.
	2	1966	2-12	0-2	No	90.3	81.2	67.0	9.0	3.5	1	19.2%	Gran.	Test #2 was dug at top of steep
		1,000		0-2			0	1			- ·		Borrow	bank at edge of thinly wooded
•					ĺ			Ì	1				(Grav.)	pasture. Hole is 50 to 75 feet
						ĺ		· ·		4				east of Test #1. Material is
•							1	.	Ì	:				a gravelly sand from vaguely
			· ·			-	ł		1	<u>ا</u>			•	stratified sand and stones. A
			1					1	İ	: 1				boulder noted, but most stones
					. ·			•	I	i				are under 4".
	3	1966	2-12	0-2	No	86.0	72.0	58.8	14.0	6.0	11/2	25.2%	Gran.	Test #3 dug 250 feet west of
					ł								Borrow	Test #2 and is atop steep bank
					İ.,							1	(Grav.)	about 30 feet from property-
	1					•	•							line fence. This test is
					1	•				. ·	!			about 5 to 8 feet below ele-
	ļ				*	Perce	ntage	of T	otal	Sample	4	1	. 1	vation of Test #2. Material

GLOVER GRANULAR DATA SHEET NO. 24

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Man	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% 1	Passir	ng		AASHO	AASHO	VHD	· .
No	No	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	4	1966	2-12	0-2	No	73.2	73.2	71.3	7.8	1.8 1.3*	1		Gran. Borrow (Sand)	is gravel with much sand. Most stones are under 3".This goes to a gravelly sand at 8' and to a sand with a few soft-looking stones in the bottom. Vague horizontal bed- ding noted. Barely excessive wear and excess silt failed this sample for Item 201. Test #4 dug on south side of fairly flat top of pasture about 300 feet southeast of and 10 to 12 feet above Test #3. Material is a medium to coarse sand with excess $\pm 1\frac{1}{2}$ " stones for Item 202. Horizon- tal bedding shown by vari- colored sands and pebble ori-
	5	1966	2-11	0-2.	No .	1 00	100	93.4	13.1	4.5 4.2*	2		Sand	entation. Test #5 dug about 175 feet east of Test #4 on southeast side of pasture. Material is
					. *			•						a fine to medium sand with a few pebbles. A 3" pebble lay- er hit at 6'. Sample met re- quirements for Item 202. Area is a probable source of sand from the top of the pasture, and of gravels from the north edge of the pasture, very pos- sibly for the entire height of the wooded bank
19	1	1966	N	0	T		l	A ·	M	P		E	D	Owner: Rober Paris. This
•	-		••	-	-		-	•		-	_	- 	_	area is south slope of promin- ent knoll and north and north-
		1	-	· ·	*]	Percen	atage	of To	otal S	Sample				east edges of field on west

TABLE I

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GLOVER GRANULAR DATA SHEET NO. 25

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Мар	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident	Test	Field	Sample	burden	ing		%]	Passi	ng		AASHO	AASHO	VHD	
No	No	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
														side of Vt. Rte. 16. Test #1 dug on south side of knoll 16 to 18 feet above general ele- vation of field. Material is silt to clay and was not sam-
	2	1966	2- 5 5	n-2	No .	83.1	76.8	65.1	54.0	17.0	2			pled. Test #2 dug 220 feet north of road to pit and near east end of field. Material in top 5.5 feet is silty and gravelly
						•								sand unacceptable for Items 201 and 105. Goes to a very fine or silty sand. Area is within kame moraine as out- lined by Dr. Stewart. Apparent
			-					•				· · · · ·		ly, however, only silts and clays and silty sands were available for deposition in the north and northeast part
		1066	0.22	Stainad	Voo	100	07 5	00 7	100	20	+	<u> </u>	Sand	Ounor: Robert Paris Area is
20	1	1900		Stripped	162	100			10.9	3.5*			Sanu	large pit in west end of mea- dow and that part of the mea- dow south of the pit road. A small pit has been opened in the south side of the meadow about 700 feet southeast of the large pit. Tests were
					*	Perce	ntage	of. T	otal	Sample				concentrated in the area be- tween the two pits. Kame moraine deposits were mapped in this meadow, and the large pit shows large boulders and silt size particles. Test #1 dug on southwest face of pit near south end. Material is

GLOVER GRANULAR DATA SHEET NO. 26

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						····						·····		
Map	Field	Year	Depth of	Over-	Exist-		Siev	e Anal	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing	-	%	Passir	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	emarks Remarks
							-	-					-	interbedded and cross -bedded sands and coarse pebbly sands with gravelly sand stringers. Test taken at about western limit of specification sands. Silty sands with few or no pebbles form an island in the pit. Extension of the pebbly and gravelly sands would be south through a stripped area
		i							ł					and southeast.
	2	1966	3-15	Stripped	Yes	77.2	65.8	53.3	9.0	4.0	1	••••	Gran. Borrow (Grav.)	Test #2 taken on southeast face of pit. Three feet of sand overlies a gravel with mainly 1" to 2" pebbles and a few 4" to 6" cobbles. At 9' goes to interbeds of fine gra-
	······································				•••••••••••••••••••••••••••••••••••••••		• • • • • •	•				· · ····		vel and coarse sand. Sample
		·.								- -		· -		Item 201, and too few proper- size stones were included for
	3A -	1966	1-4.5	0-1	Yes	81.3	70.0	54.2	14.0	5.0	312	24.4%	Gran.	Testhole #3 was dug 30 feet
							-						Borrow (Grav.)	from the pit face about 100 feet north-northeast of where Test #2 was taken. Sample #3A came from sandy gravel with 1 or 2 boulders and many ±4"
												·	_	cobbles. Fines look "dirty". Has excess silt for Item 201.
	3 B	1966	4.5-11	0-1	Yes	1 00	100	94.7	20.8	3.8 3.6*	2		Gran. Borrow (Sand)	Test #3B was sampled from me- dium to fine sands with pebble beginning at 4.5' and contin- uing to depth. Sample had
•						*Perc	centa	ge of	Tota	1 Samp	1e			barely excess passing the #100 mesh sieve for Item 202.

TABLE I

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GLOVER GRANULAR DATA SHEET NO. 27

Мар	Field	Year	Depth of	Over-	Exist-		Sieve	Anal	lysis	<u> </u>	Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		, % I	assir	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1/2"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	4	1966	2.5-9	0-2.5	No	100	100	97.5	21.5	4.3	$1\frac{1}{2}$		Gran.	Test #4 dug in field 155 feet
			1	1					ł	4.2*			Borrow	east-southeast of pit and 110
		1											(Sand)	feet from the haul road. Top
						1	1			}- ·				2.5 feet is soil and a thin
							;			1			-	cobble layer overlying a fine
				4.						ļ				to medium sand with very fine
						1	1	·					•	sand laminae, and a few peb-
		•				1	•							bles. Goes to a gravel or
		· · .					ļ			 .				gravelly sand at 91. Sample
			· · ·				1		· ·	ļ.			-	had excess passing the #100
							:		ļ					mesh sieve for Item 202.
	5	1966	1.5-5	0-1.5	No	76.0	62.4	46.6	13.0	4.5	2	21.8%	Gran.	Test #5 dug in field 260 feet
													Borrow	northwest of the samll pit and
	1		-	1		1	· · ·		-	t 1			(Grav.)	120 feet north of the south
		. .							ļ	ł				side of the field. Top 5 feet
•					-		1 1	Ì	1			-		is a gravel with mostly -3"
				i				Ì						stones and barely excess silt
														tor Item 201. Goes to a sand
							1	ļ				•		resembling that of lest #4 in
-							-	•						the bottom, which was not sam-
					•							6 6 6 9		pied.
	6	1966	2-6	0-2	No	, 76.4	62.5	44.1	14.0	4.8	2	20.0%	Gran.	Test #6 dug about 140 feet
		ι. Ι				! i	1 -		l			-	Borrow	north of small pit and loo leet
				1	1	1	1	1	1 .				(Grav.)	east of lest #5. From 2'-0' 1s
•							1				1			a fine graver with mostry 1
		}			1 1		· ·		1	ĺ			۰.	to 2" scones. Very rew ex-
					i .	j				· ·	1			ceed 4", Again goes to a salid
							1	1						haraly avenue silt for Item
		1			i I	•			1		÷			201
									111 0				Cron	Tootholo $\#7$ was due 210 feet
	7A	1966	1.5-5	0-1.5	NO	11.1	01.1	47.5	:11.0	3.3	ני		Borrow	cost of Test #6 and 150 feet
					1 ·							*	(Crow)	porthoast of southeast end of
	-	1	1								4		(Grav.)	email nit. Ton 5 feet is a
		1		Į									·	oravel with more 2"_6" stones
		5	1	[Domo		. C m		1	i 1			then Test #6 This and 1
	1	<u>.</u>	i		, *	rerce	ncage	OIT	ocal 1	pample	1	1	ľ	; than lest #0. Inis was sampled

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GLOVER GRANULAR DATA SHEET NO. 28

Map	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	<u>1½"</u>	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	7B	1966	5-10.5	0-1.5	No	100	96.2	94.3	33.9	8.0 7.5*	1		Gran. Borrow (Sand)	as Test #7A and had insuffi- cient proper size stones for the wear test. Grading re- quirements were met. Test #7B came from beds of fine sand with silt laminae and a few coarse sand grains. Sam-
														ple had excess passing the #100 and #270 mesh sieves for Sub-base of Sand, Item 202.
	8	1966	2-9	0-2	Yes	85.2	75.0	56.0	18.0	8.0	32	29.6%	Gran.	Test #8 was a hand sample of
	1	; :				•							Borrow	12-foot high north face of
• •								-				· ·	(Grav.)	small pit. Top 9 feet is a fine gravel with only a few +4" cobbles and contains ex-
					-									cess fines and has excess wear for Item 201. Goes to a fine
						···a ····· ·		***						active at the time sampled, and its eastward and southeast-
														ward extension appears to be running into sands. Tests #5 through #8 indicate that this
	Ţ												í	sandy gravels occur in the vi- cinity of the small pit. The small pit was inactive at the time sampled.
21	1	1966	2.5-12.5	0-2.5	No	100	100	100	45.0	14.0*	1			Owner: Robert Paris. Area
														is sandy pasture hill on the east side of Vt. Rte. 16 south of Town Road #41. Test #1 was dug on flat area on south side of base of hill near the A. Bona property line and 135 feet
			l l		*1	ercer	ntage	of T	otal S	Sample				east of the highway. Log is as follows: 0-2.5' overburden;

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GLOVER GRANULAR DATA SHEET NO. 29

Мар	Field	Year	Depth of	Over-	Exist-		Siev	e Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing Dit	111	5/911	Passir #4	ig #100	#270	T_21	T_4_35	Spec.	Remarks
No.	NO.	lested	(FE)	(FL)		12	578		1100					2.5'-9.5' silty sand and very fine sand or silt; 9.5'-12.5' fine to medium sand. Sample was a sandy silt unacceptable
	2	1966	2-12.5	0-2	No	100	100	99.4	42.0	14.0 13.9*	1			for Item 105. Test #2 dug on south edge of flat pasture north of and above Test #1. Material is a very fine and silty sand with a
· .	· · ·					i .	· • • •							few coarse layers and a few silt laminae. Composite ma- terial is a silty sand unac-
	3	1966	2.5-9.5	0-2.5	No	100	100	99.5	65.0	26.3 26.2*	2			ceptable for Item 105. Test #3 dug on east side of pasture 160 feet from Test #2 and 50 feet from the A. Bona property line. Material is a
	4	1966	2-11.5	0-2	No	89.0	82.1	76.6	13.0	4.0 3.1*	1		Gran. Borrow	silt to sandy silt going to a silt clay at 9.5'. Sample had excess silt for Item 105. Test #4 dug at north edge of flat pasture 235 feet north of
													(Sand)	Test #3 and about 110 feet from the west slope of the pas- ture. To the north a steep bank slopes down to a stream which flows west along Town Highway #41. This part of the pasture appears to be a
						Perce	entage	e of T	otal	Sample				continuation of Map Ident. #18 (Guy Sawyer property) to the north. Material in testhole is coarse sand with pebbles and only a few small cobble size stones. Goes to a coarse sand at 6 ⁺ and to a pebbly

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Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1½"	5/8"	#4	#100	<i>#</i> 270	T-21	T-4-35	Spec.	Remarks
									1				•	sand at 11.5 ¹ . Sample had excess retained on the $1\frac{1}{2}$ " mesh sieve for Item 202. In this area any further test- ing should be done along the
· ·								0						north side of the pasture between Test #4 and Test #18- 3. It appears that the silts and silty sands are the rule
- - - -													· .	on the south part of the pasture, and this southward grading to finer size may be due to the greater distance from the tributary valley
		-												through which materials for Map Identification #18 and Map Identification #21-4 were transported.
22	1	1966	1.5-5.5	0-1.5	No	100	100	99.7	35.9	10.0*	31/2		Gran. Borrow (Sand)	Owner: Angelo Bona. This area is an open west- facing slope on the east
						· · ·				• •				side of Vt. Rte. 16 and north of Town Highway #42. Test #1 was dug near the foot of the pasture slope in an area
							• • •	•						of exposed sand 80' east of and 17' above the highway. The material sampled was a silty sand with a few peb- bles going to a clay at 5.5'. The sample had excess silt
•		1	1 1 1 1		*	Perce	ntage	of T	otal	Sample				

Map	Field	Year	Depth of	Over-	Exist-		Siev %	e Anal Passir	lysis	·····	Color	Abrasion AASHO	Passes. VHD	· ·
No.	No.	Tested	(Ft)	(Ft)	Pit	15"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
							•							and very fine sand for Item 202.
	2	1966	0-8	Stripped	No	100	100	100	5.0	1.3*	1		Sand	Test #2 was dug 65' north- east of and about 12' above Test #1. The testhole was dug in an erosion gully in the expected sand area. The
														material sampled was a very coarse sand bottoming in fine sand at 8' and is ac- ceptable for Item 202. This area is the west slope of the large pasture which was sampled as Map Identifica-
-									~ ~			· · · · · · · · · · · · · · · · · · ·		tion #23 and as shown by Test #23-2 and Test #23-3 probably would have coarser sands on the top. This area very likely is a source of sub-base of sand between the top of the slope above Test #2 and Test #2 and Test #3 of Map Identification #23.
23	1	1966	2-9	0-2	Yes	100	100	83.0	46.0	22.3 18.5*	2			Owner: Angelo Bona. This area is a steeply to gently rolling pasture on the north side of and above Town
					*	Perce	ntage	of T	otal j	Sample				

GLOVER GRANULAR DATA SHEET NO. 32

Map	Field	Year	Depth of	Over-	Exist-		Sieve	Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% 1	assir	ıg		AASHO	AASHO	VHD ·	
No.	No.	Tested	(Ft)	· (Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
											1			Highway #42 & east of Vt. Rte.
	•													16. The terrain rises to the
					•									north of the town highway, is
												-		gently rolling for 500 to 700
	!					ļ								teet, and then drops into a
	ļ		-			.						· ·	1	gully or ravine on the north
										:				side of which is Map Ident.
	i I	· ·				1								#18. The pasture drops off
•				1										steeply into a drainageway to
					· ·						į			the east, and tests were con-
														fined to the south slope of
										1	4			the pasture between the edge
	· ·		-			1			1	· ·				of the woods to the west
										1	·			and the steep slope to the
	[· ·	i t		:			ĺ					east. Test #1 was dug at 100t
										1				of pasture slope near the west
	1										1		1	end. A shallow pit or test
		1			· .									trench had been opened here.
													-	Material in test is silt to
		· ·	1			İ.,	{	1						silty sand with stones in the
			, ·	-										top 5 feet and going to silt
						{ ;		1						below that. Sample had excess
				1		1		1		· ·		ł		silt for item 103.
	2	1966	0-11	Stripped	Yes	100	100	96.7	8.7	3.0	2		Sand	lest #2 dug at top of stope.
-						· ·]	i . !		2.9*				above pit and lest #1. lest
						1	1			1	· · ·			15 20 feet east of edge of
						· · ·						1		woods. Material in top 0.5
· :						1 - · · ·			1		1		1	reet is a dark coarse peoply
	1				į .		1	•						sand with peoples in thin lay-
			1	1										ers overlying a right brown
				ł				1	İ				i	Time same to depend bampie
					·		1	1		1				was acceptable for filem 202.
	3	1966	2-12.5	0-2	No	188.1	.186.8	183.0	114.9	4.5	2		Gran.	iest #5 dug at edge of swale
					· ·					3.7	*		Borrow	above 210 feet northeast of
				1					-				(Sand)	and about 10 reet below ele-
	!		1		*	Perce	entage	of T	otal	Sample	e l	I.	1	Vation of lest #2. Material

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TABLE I

GLOVER GRANULAR DATA SHEET NO. 33

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Man	Field	Year	Depth of	Over-	Exist-		Sieve	Ana	ysis	1	Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% P	assi	ng		AASHO	AASHO	VHD	
No.	No	Tested	(Ft)	(Ft)	Pit	15"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
NO.	NO.	lesceu												is a brown-gray pebbly sand with fine sand layers in pla- ces. One or two +3" cobbles noted. A coarse sand with many small to large pebbles hit at 11'. Beds dip to east. Sample had excess stones re- tained on the 1½" screen for Item 202.
 	4	1966	2-12	0-2	No	100	100	100	15.0	2.5*	1		Sand	Test #4 dug on slope of pas- ture about 200 feet east of and 20 feet above Test #3. Naterial is a tan-gray fine or very fine sand going to a medium sand at 6 ¹ . These two sands are separated by an ir- regular band of silt, and silt laminae were noted in the top
······································	5	1966	1.5-10	0-1.5	No	91.8	83.1	78.0	18.7	6.8 5.3*	3 ¹ / ₂		Gran. Borrow (Sand)	6 feet. Sand becomes coarse and quartzose at 9' and has a few very small pebbles. Ma- terial sampled was acceptable for Item 202. Test #5 dug 340 feet east of Test #4 near old test trench at top of steep bank. Materi- al is a silty and stony sand with excess +1½" stones and fines for Item 202. Two or three +6" cobbles noted with the gravelly sands from 6' - 10'. Area is a source of sand between Tests #4 and #5 and between Test #2 and #3 extend- ing northwest and north.

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TABLE I

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GLOVER GRANULAR DATA SHEET NO. 34

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Мар	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	•
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1/2"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
24	1A	1966	1-9	0-1	Yes	100	100	100	55.0	19.0*	3			Owner: Mrs. Phyllis Spring.
														Test #1A was from top 9 feet
				·									1	of test hole dug 20 feet west
	1													of north, end of old pit 115
		, ·			· ·					,				feet from Vt. Rte. 16. Materi-
														al is a sandy silt unacceptable
		· ·								•				for Item 105.
	1B	1966	9-13	0-9	N	0	Т	S.	Α	M P	L	E D	.	Test #1B was not sampled, but
														material was a "dirty"-looking
• •	Í.			1					• •					cobbly gravel. Water was hit
				ł										at 11 ¹ .
	2	1966	1-16	0-1	Yes	95.3	186.4	69.3	1 9.7	4.3	33	131.2%	Gran.	Test #2 dug on northeast face
,	i									3.0*			Borrow	of small pit just off the high-
			į		1				ľ				(Sand)	way at the south end of the
						1						} .		pit area. Material is a com-
		1			-				·					posite gravelly sand from bets
			1											of stony and silty sand. file
	•			[1	~				1		sand, and nebbly and cobbly
									• • • • • • • • • • • • • • • • • • • •	•• • •••- ••				lavers. Sample had barely too
				1										many stopes for Item 202 and
				1	1.		1					· ·		far too few stones which also
·	1					:								have an excessive wear for
				1		į								Item 201. This test represents
			•	1		1	1							only possible extension of Ta-
					· · ·						ł			torial
	2	1044		Floor	Voc	87 2	82 5	67 1	10.0	40	2		Gran.	Test #3 due in floor of nit.
	5	1900	0-4		les	07.2	02.5	07.1	10.0	2 7*	-		Borrow	Material is a gravelly sand
	· ·		{		I .		1		1	2.1			(Grav	with a few $+311$ cobbles - but
	1 1.					1							(Olave	with too fow stones (retained
	1				} .	:	·		1]			1	on the #4 size) for Item 201
		·									ł			Water bit at 11 Too for sto
					į	}					1		1	water filt at 1., 100 few plot
	1 1													per size scones were included
	1.						1		10.0		2	11 191		IOT THE WEAT LEST.
·* · ·	4	1966	0-5	None	NO	i 81.1	100.2	1 55.6	119.0	1 3 .3	2	44.4%	Gran.	1est #4 dug on west side of
• .				· ·		- The second sec			1 -	1			Borrow	From 0.21 is and a size to a
	1	1	f	ł	*	rerce	ncage	OIT	otal S	sampie	1	1.	(Grav.	riom U-2' is sand going to a

Man	Field	Year	Depth of	Over-	Exist-		Sieve	Anal	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% E	Passi	ng		AASHO	AASHO	VHD	
No	No	Tested	(Ft)	(Ft)	Pit	13"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
								1						sandy gravel from 2'-5'. Hole
														bottoms in silt-clay. Sam-
				ĺ			,							ple had excess fines for Item
:								·						201.
·	5	1966	0.5-10.5	0-0.5	Yes	92.1	74.3	51.9	7.0	3.3	1	18.3%	Gran.	Test #5 dug on terrace-
							1	1		İ			Borrow	like area, just below Vt. Rte.
				1	1		ļ			!			(Grav.)	16 100 feet north of Test #2.
:		1			;		i !.		ļ		1 . 1 ·			Sample represents material
					•	i	:		1			-		in a narrow 200 foot-long ex-
• •		Ì		- ·	:							1	24 	tension of lest #2 and is a
					ļ ⁻		į.					ŧ		stratified fine gravel with
			Ì	:		• .	1							only a rew +2" scores and gra-
			1	ļ			l							verry sand. The scone concent
						-	;	•	1					bed barely excess silt for
			1	:			1	1	1	1				I tom 201 This pit area is
			1	-	-	Ì	1	· ·						netty woll depleted Extens
				:			1	1					1	cion limited by the highway.
	<u></u>	10//		0.2	N	01 5	00 /	64 0	22 0	11 2	+	27 69		Owner: Mrs. Phyllis Spring.
25	1	1966	3-7.5	0-3	NO	51.0	00.4	04.0	23.0	11.5	1	21.0%		Area is rolling topography
				1	1				1			• • •		of hill and field on the east
			-						!					side of Vt. Rte. 16 across
						• •	ļ	1	•					from Map Ident. #24. Test
	1. A					1	:			i				#1 dug on east side of knoll,
						:						1		south of and above edge of
	1. 1			1		1	: !	2 1	e. 1	1				field. Top 3' is soil, silt,
•			· .		1	i				l	1		ļ	and stones overlying a stony
	·						• •		: i		1	-		and sandy silt. Stones are
•	i		1	1		•	1	1	į		Ì	1.		mainly under 2", and material
				:	1	•	!	1			1			is too silty for Items 201
				1		•	1	1						and 105.
	2	1966	2.5-13	0-2.5	No	100	100	100	37.0	5.0*	1		Gran.	Test #2 dug on south slope of
	-				1	•		•	•		1		Borrow	pasture 220 feet southeast of
			:								1		(Sand)	Test #1 south of poplar grove.
					ţ						1		4	Test is about 6 feet below
			1 1 1	• •i	1 *P	ercen	tage	of To	tal S	ample	l	ļ		elevation of Test #1. Material

TABLE Ì

Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		<u>%</u>]	Passir	ıg		AASHO	AASHO	VHD .	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
														is a very fine sand with a 1.5 foot-thick lens of coarse sand at 3'. Sample had excess pas- sing the #100 mesh sieve for Item 202.
	3	1966	1.5-12	0-1.5	No	100	100	100	72.0	15.0*	1			Test #3 dug 150 feet northwest of southeast corner of field and is about 15 feet below elevation of Test #1. Material is a sandy silt from beds of verv fine sand with silty lay-
	4	1966	2-13	0-2	No	100	100	99.5	22.9	4.0*	1		Gran. Borrow	ers and is unacceptable for Item 105. Test #4 dug on small terrace at northeast edge of field
· · · · · · · · · · · ·		· ·				·.							(Sand)	370 feet east of Vt. Rte. 16. Material is allomogenous very fine sand_with_minor silt. Has
	5	1966	2-13	0-2	No	100	100	92.4	55.4	9.0 8.3*	2		Gran. Borrow (Sanc)	sieve for Item 202. Test #5 dug at west end of small terrace 45 feet from north edge of field and 140 feet east of Vt. Rte. 16. From 2!-12! material is homogenous
	6	1966	2-11	0-2	No	100	100	100	83.0	36.0*	1			<pre>silty sand, and from 124-131 a clean gravel bed was encoun- tered. Sample had excess fines for Item 202. Test #6 sampled in northwest corner of field. A gravel lens</pre>
 -						Perce	entage	of T	otal	Sample				occurs just below the surface and dips steeply east. Other- wise material is a silt un- acceptable for Item 105.

Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% 1	Passir	ng		AASHO	ÀASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	7	1966	2-11.5	0-2	No	88.4	82.6	71.6	14.3	5.5	31/2		Gran.	Test #7 dug above edge of Vt.
										3.9*			Borrow	Rte. 16 in southwest corner
		:									· ·		(Sand)	of field. It is 75 feet south
, .		1									ł			of and across road from rest
										ł		1		area. Material below 2' is
	• •	1												interbedded coarse sands and
											1			pebbly or gravelly sands. Be-
								İ İ		· ·		1		low 6' is generally a coarse
• .		1												pebbly sand, with -2" peb-
			1	· .						Ì				bles. Sample had excess $+1\frac{1}{2}$ "
•	-			I										stones for Item 202. Area is
			1	· ·		i		1					•	within mapped kame moraine.
			1									· · ·		This area is probably a source
			1											of granular borrow near Tests
			1											#4 and #5 and possibly a sand
			}					1	[near Test #7. An extension of
		· ·		!										gravels found in Map Ident.
		i	· .			Í						1		#24 may-possibly-occur at depth
				· · · · ··	· · · · · · · · ·		*** *** *		• • • • .:		1			on the east side of Rte. 16
			· `	1		1								near Test #7:
26	1	1966	1-12.5	0-1	No	100	100	93.0	7.4	2.0	1		Sand	Owner: Mrs. Phyllis Spring.
	1 A. A.	l					• -			1.9*				Area is a long narrow field
		· .		İ					•			1		on the east-southeast side of
											· .			Vt. Rte. 16 south of Map Ident.
	· .													#25. Field is in kame moraine
			· .						. •		· -			deposition. Test #1 was dug
				• ,							!			on high, nearly flat area 105
- '						· · ·	-				į	· ·		feet from the southwest side
•											ł			of the field, and 160 feet
						·								from the highway. Material is
		1												a medium to coarse pebbly sand,
:			1		ļ						1			cross-bedded, and with a very
														thin pebbly gravel. At 41
		[I			sand is fine with silt or sil-
														ty sand laminae. Sand is stra-
		1			*	Perce	ntage	of Te	otal S	Sample				tified throughout. A stony
-	i	1	•	•	-					F	•		-	· · · · · · · · · · · · · · · · · · ·

GLOVER GRANULAR DATA SHEET NO. 38

Man	Field	Year	Depth of	Over-	Exist-	1	Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No	No	Tested	(Ft)	(Ft)	Pit	131	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
<u>NO.</u>	2	1966	1.5-11	0-1.5	No	86.4	85.4	82.1	12.3	2.8 2.3*	1		Gran. Borrow	sand layer hit at 13'. Test #2 dug 75 feet northeast of Test #1 and about 12 feet
· · · · · · · · · · · · · · · · · · ·			8										(Sand)	below its elevation at edge of woods. Top 1.5 feet is soil and cobbles underlain by peb- bly sand with a silty sand lay- er 1 foot thick. Goes back to a pebbly sand with some sub-angular cobbles at 10'. Sample had excess l_2^{1} " stones for Sub-base of Sand, Item
•	3	1966	2.5-11.5	042.5	No	100	100	100	39.0	6.0*	1		Gran. Borrow (Sand)	202. Test #3 dug near northeast corner of field about 460 feet east-northeast of Test #2. Top 2.5 feet is soil and silty gra-
		· · · · · · · · · · · · · · · · · · ·	· · · · ·											vel underlain by a very fine light-brown sand. A pebbly sand lens and a silt lens hit in hole, attesting to probable ice-contact origin. Sample had excess passing the #100
•														and #270 mesh sieves for Item 202. Probably a sand area nea Vt. Rte. 16 with the possibili ty of gravels below the sands as seen in Testhole #2.
27	1	1966	1.5-11.5	0-1.5	No	100	100	97.0	33.9	11.5	1			Owner: Lawrence White. Area is sandy pine woods behind grove of pines southeast of the ball field across Vt. Rte. 16 from the Vermont Highway Department sheds. Test #1 dug beside woods road. Material

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												· •		
	ፕል	BLF T		· .	, i	LOVE	R GRAI	NULAR	DATA	SHEET	NO. 3	9		
				j I	i i					0				
Map	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing	111	% ·	Passi	ng	4270	AASHO	AASHO	VHD	Pemanka
<u>NO.</u>	NO.	lested	(rL)		<u>-</u>	12	5/0"	1/4	#100	11-270	1-21	1-4-55	spec.	laminae and a few very small
														pebbles. Sample had excess
							į							fines for Items 202 and 105.
	2	1966	1.5-11	0-1.5	No	100	100	96.3	15.4	2.8	1		Sand	Test #2 dug near northeast
						-	1	i		2.7*				end of pine grove above a
														arosion gully above a small
								}				,		brook. Material is a fine to
												· ·		coarse pebbly sand with a few
		• • •												cobbles (not sampled) and is
														acceptable for Item 202.
-														Owner would consent to a pit
													ļ	grove out of sight. Possible
		-											1	access would be along brook
_														to vicinity of erosion gully.
28	1	1966	8-15	0-0.5	Yes	100	100	99.5	14.9	2.3*	1		Sand	Owner: Vt. Highway Department
	······································					******								Area is two old pits, one
				-	{	1 · .								and a small meadow between
				· ·	· .		ł					-		Vt. Rte. 16 and Barton River
														south of the state sheds. Test
т. •					1		}							#1 sampled from southeast face
														of pit about 90 feet from high
							ļ	}						Way. This pit is used as a
														a fine to very fine sand. in
						ł								places coarse, and with a very
					ł									few small pebbles. Sample
			÷							_				met requirements for Item 202.
	2	1966	2.5-11	0-2.5	Yes	100	100	93.9	7.5	1.8	1	~ ~ ~ ~	Sand	Test #2 dug on top of pit face
										1./*				a rew reet from Test #1. Ma-
								`						tified fine to coarse sand
		1							•	••••				with pebbles and a few silt
		ļ		i	*]	Perce	ntage	ofT	otal S	ample				laminae. Sand is fine with
								21	· ·					

GLOVER GRANULAR DATA SHEET NO. 40

Map Ident	Field Test	Year Field	Depth of Sample	Over- burden	Exist-		Sieve % I	e Ana Passi	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1211	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	3	1966	2-12	0-2	No	100	100	94.4	20.8	4.5	1		Grạn.	with fewer pebbles below 4.5'. No cross-bedding seen but few small slumps noted. Sample was acceptable for Item 202. Test #3 dug 80 feet northeast
										4.1*			Borrow (Sand)	of pit in meadow. Test re- presents extension of pit. Northward the meadow drops off
							·						-	to a small brook flowing into
	· ·											-		is a fine to very fine sand with silty sand layers, over-
					-									lying a coarce pebbly sand from 9'-12'. Sample had ex- cess passing the #100 mesh sieve for Item 202. Meadow is about 230 feet x 150 feet and would probably be a sand source.
	4	1966	1-11	0-1	No	100	100	99.3	19.9	4.3*	1		Gran.	Test #4 dug on low ridge south
						•••	•						Borrow (Sand)	of east end of old shallow de- pleted pit in meadow northwest of first pit. Material is a fine to very fine tan sand over
							·		· .					a medium sand at 8.5'. Water flows in at 11'. Bedding is horizontal. Sample had excess passing the #100 mesh sieve
							·	-						for Item 202. Low rounded ridge sweeps westward on the south side of the pit toward Town Highway #44 and would be a source of granular borrow only in small amounts. Local- ly it is believed the sands in
					*	Perce	ntage	of T	lotal	Sample				this area were deposited when the pond, later known as

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GLOVER GRANULAR DATA SHEET NO.41

Map	Field	Year	Depth of	Over-	Exist-		Siev	e Anal	lysis		Color	Abrasion	Passes	
Ident.	Test No	Tested	Sample (Ft)	(Ft)	ing Pit	11/1	6 1 5/811		$\frac{18}{14100}$	#270	T_{-21}	T-4-35	Spec.	Remarks
<u>NO.</u>									100					"Runaway Pond", let loose and washed everything before it down toward Glover Village.
29	1	1966	1.5-11	0-1.5	No	100	100	82.6	77.0	25.0 20.7*	1			Owner: Burton Conley. Area is steep-sided knolls on pas- ture sidehill on the south side of State Aid Highway #2. Area is located near mapped margin of ice-contact (kame moraine) deposition. Test #1 due on side of knoll show
														dug on side of knoll above State Aid Highway #2. Material is a silty sand with a few large angular to sub-angular pebbles and small cobbles. A small gravel lens noted at 4 ¹ . No bedding; stones are random. Sample had excess silt for
	2	1966	0.5-12.5	0-0.5	No	100	94.5	84.5	25.0	11.0 9.3*	1			Test #2 dug in old test trench on top of high knoll 20 feet above and 90 feet up slope from Test #1. Stones of ig-
• • •				*										Material is a stony and silty sand with sub-angular stones all under 3". Goes to silt laminae and coarse sand at 12.5" Sample had excess silt for Item 105. Sorting has been de- ficient in this area to pro-
30	1	1966	1.5-11.5	0-1.5	No *	l l l l l l l l l l l l l l l l l l l	199.0	99.0 of To	28.7	4.5* Sample	1		Gran. Borrow (Sand)	Owner: Calco Inc. This area is along the east side of old Vt. Rte. 16 on the west side of a wooded hill, the east side

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GLOVER GRANULAR DATA SHEET NO. 42

Man	Field	Voar	Depth of	Over-	Exist-		Sieve	Anal	ysis		Color	Abrasion	Passes	
nap Tdont	Tost	Field	Sample	burden	ing		% 1	assir	ng		AASHO	AASHO	AASHO	
No.	No	Tected	(Ft)	(Ft)	Pit	13"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
NO.	NO.	TUSECU	(of which has been opened (pit, Map Ident. #31). Access is
					•				·					waters of a beaver pond along the old road. Test #1 was dug
														in steep skidway about 240 feet north of the beaver pond.
								• •					-	Material is a medium to very fine buff to gray-tan sand
•													-	with a few pebbles and a few paper-thin silt laminae. Is
														horizontally stratified. Sam- ple had excess passing the #100 mesh sieve for Item 202.
	2	1966	0-10.5	Stripped	Yes	100	100	100	15.0	3.0*	1		Sand	Test #2 dug about 200 feet north along road from skidway
			. <u>.</u>		5 		-, -							in shallow pit area of exposed sands. Material is a fine to
														Water flows in at 10. Clear- ing of trees required on steep
				· .										be done in woods between Map Ident. #31 and top of bank
														where access for backhoe was not possible at the time. A small volume of sand is pos-
														sible along the road between the two tests.
31	1	1966	3-33	Stripped	Yes	100	100	98.8	7.9	1.5*			Sand	Uwner: Galco Inc. Area 1s a pit and vicinity to north, with a westward extension. An
														area above the pit, measuring 230 feet x 45 to 75 feet has
					*	Perce	entage	of T	otal	Sample	2			been stripped. Test #1 was taken on southwest corner of

TABLE I

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GLOVER GRANULAR DATA SHEET NO.43

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Map	Field	Year	Depth of	Over-	Exist-		Sieve	Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% I	assir	lg	1070	IAASHO	AASHO	VHD	D
<u>No.</u>	NO.	Tested	(FE)	(FE)	Pit	12"	5/8"	- 1 F4	4F 100	47270	1-21	1-4-35	spec.	pit face in fine to coarse sands with a few pebbles. Ex- tent of this material is not
	2	1066	320	0-3	Ver	68 1	60.0	13 0	12 0		1	20.0%	Gravel	known, since pit face to north is covered by cobbles and other sloughed material.
		, J	5=20	U-J	163	00.1			12.0			20.0%		beds about 100 feet north of Test #1 on the pit face in the northwest corner. Materi-
									1					al looked poorly sorted with silt and some decomposed rock and is probably of ice-contact origin. Sample met require- ments for Sub-base of Gravel
	3A	1966	1-10	0-1	Yes	100	87.1	82.0	3.2	1.0 0.8*	1		Sand	Item 201. Test #34 sampled from the upper south face about 45 feet from
										•		-		Test #2. Material is a sand with some gravel stringers
	3 B	1966	10-20	0-1	Yes	100	100	97.7	6.8	3.5 3.4*	1		Sand	Test #3B was sampled from the bottom 10 feet of the south face. Six feet of pebbly sand
										×				overlies 4 feet of fine sand. Composite of south face would be an acceptable sand and, to- gether with material of Test #1, would represent a goodly volume of sand.
	4	1966	2-10	0-2	No	69.5	62.4	53.4	9.0	3.0	1		Gran. Borrow (Grav.)	Test #4 dug 40 feet west of pit face in stripped area. Ma- terial is gravel going to sand
			i j		*I	Percer	ntage	of To	otal S	Sample	1 1	i i	:	at 91. Sample met grading

GLOVER GRANULAR DATA SHEET NO.44

Map	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	· · · · · · · · · · · · · · · · · · ·
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng	1070	AASHU	AASHU T (25	VHD Spoo	Remarks
No.	No.	Tested	(Ft)	<u>(Ft)</u>	Pit	15"	<u>5/8"</u>	#4	#100	#270	1-21	1-4-35	spec.	requirements for Item 201, but
	5	1966	1.5-11	0-1.5	No	77.1	73.7	59.9	,9.0	3.5	1		Gran. Borrow (Grav.)	sufficient proper size stones for the wear test were not in- cluded. Test #5 dug above level of stripped area at south edge. Bank drops off steeply from this test toward the south.
			· · ·			• • • • • • • • • • • • • • • • • • •			· ·				-	Log of hole is as follows: 0-1.5' overburden; 1.5'-2.5' fine sand; 2.5'-5' "dirty" gra-
			!	•										Composite material met grading requirements for Item 201. However, too few proper size stones were included for the wear test.
	6	1966	2-12	0-2	No	69.1	64-3	-56.6	5.0	3.0	2		Gran.	Test #6 dug in approach road
								• • •	•	• • •			Borrow (Grav.)	from Vt. Rte. 16 to top of pit. Test hole is 340 feet north of Test #4, and about 340 feet from Rte. 16. Material is in- terbedded sand, gravelly sand, and fine gravel, meeting gra-
		1	• •											ding requirements for Item
	······													201. Too few proper size stone were included for the wear test Pit area is probably a gravel source with about 5,000 cubic yards in the stripped area and specification sands below the gravels. Extension would be
. .				6 1 1	*	Perce	entage	e of T	`otal	Sample				westward on wooded hilltop. Further testing needed near Test #6 and westward.

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GLOVER GRANULAR DATA SHEET NO.45

Ident.TestField No.Sample (Ft)burden (Ft)ing Pit7. Passing 12 mAASHO #4#100 #270 T-21T-4-35 T-4-35Spec.Remarks.32119662-110-2No10010099.525.94.0*3Gran. Borrow (Sand)Owner: Calco Inc. Area is wooded and of rough topogra- phy east of and above Vt. Rte. 16 northeast across highway from Map Ident. #31.* Test #1 dug at junction of two woods roads 150 feet from highway. Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202.219662-110-2No10010096.714.52.01Sand219662-110-2No10010096.714.52.01SandFest #2 dug 85 feet north of and 15 feet above Test #1. Waterial is fine sand with a few silt laminae becoming coarse in the bottom. Also	Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	
No.Tested(Ft)(Ft)Pit1½" 5/8" #4#100 #270T-21T-4-35Spec.Remarks32119662-110-2No10010099.525.94.0*3Gran. Borrow (Sand)Cwner: Calco Inc. Area is wooded and of rough topogra- phy east of and above Vt. Rte. 16 northeast across highway from Map Ident. #31.* Test #1 dug at junction of two woods roads 150 feet from highway. Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202.219662-110-2No10010096.714.52.01SandFest #2 dug 85 feet north of and 15 feet above Test #1. Material is fine sand with a few silt laminae becoming coarse in the bottom. Also	Ident.	Test	Field	Sample	burden	ing		% 1	Passin	ng		AASHO	AASHO	VHD	
32 1 1966 2-11 0-2 No 100 100 99.5 25.9 4.0* 3 Gran. Borrow (Sand) Gwner: Calco Inc. Area is wooded and of rough topogra- phy east of and above Vto Rte. 16 northeast across highway from Map Ident. #31.* Test #1 dug at junction of two woods roads 150 feet from highway. Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. 2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand Fest #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also	No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 1.9* 1 Sand For the second process of th	32	1	1966	2-11	0-2	No	100	100	99.5	25.9	4.0*	3		Gran.	Owner: Calco Inc. Area is
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 1.9* 1 Sand [Sand] phy east of and above Vt. Rte. Sand] phy east of and above Vt. Rte. 16 northeast across highway from Map Ident. #31. Test #1 dug at junction of two woods roads 150 feet from highway. Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also										i I		1		Borrow	wooded and of rough topogra-
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand Test #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few single between the sand with a few single between the sand with a few single between the sand with a few single between the sand with a few single between the sand with a few single between the sand with a few single between the sand with a few single between the better the better. Also												1		(Sand)	phy east of and above Vt. Rte.
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand From Map Ident. #31. Test #1 dug at junction of two woods roads 150 feet from highway. Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also						1 1									16 northeast across highway
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand Junction of two woods roads 150 feet from highway. Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Waterial is fine sand with a few silt laminae becoming coarse in the bottom. Also												· ·			from Map Ident. #31. Test #1
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 1.9* Sand From the bottom of the second se												· ·			dug at junction of two woods
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand Material is a fine sand with a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. [Test #2 dug 85 feet north of and 15 feet above Test #1. Material is fine sand with a few silt laminae becoming coarse in the bottom. Also			•							{		1			roads 150 feet from highway.
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand a few small pebbles and silt laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Material is fine sand with a few silt laminae becoming coarse in the bottom. Also		· ·										· ·			Material is a fine sand with
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand laminae. Becomes very fine to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Material is fine sand with a few silt laminae becoming coarse in the bottom. Also												ł			a few small pebbles and silt
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand to silty toward bottom. Has excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Material is fine sand with a few silt laminae becoming coarse in the bottom. Also								÷				· ·			laminae. Becomes very fine
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand excess passing the #100 mesh sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also							-) ·]		}	j –		to silty toward bottom. Has
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand Sieve for Item 202. Test #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also	·										-	[excess passing the #100 mesh
2 1966 2-11 0-2 No 100 100 96.7 14.5 2.0 1 Sand Test #2 dug 85 feet north of and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also												ł			sieve for Item 202.
1.9* and 15 feet above Test #1. Naterial is fine sand with a few silt laminae becoming coarse in the bottom. Also		2	1966	2-11	0-2	No	100	100	96.7	14.5	2.0	1		Sand	Test #2 dug 85 feet north of
Material is fine sand with a few silt laminae becoming coarse in the bottom. Also		-	1,00		• -						1.9*	[and 15 feet above Test #1.
few silt laminae becoming coarse in the bottom. Also															Material is fine sand with a
coarse in the bottom. Also													· ·		few silt laminae becoming
]			coarse in the bottom. Also
has a few small pebbles.									····						has a few small pebbles.
3A 1966 0.5-6 0-0.5 No 96.0 92.0 88.0 44.0 16.0 2 Test hole #3 dug on second		3A	1966	0.5-6	0-0.5	No	96.0	92.0	88.0	44.0	16.0	2			Test hole #3 dug on second
14.0* woods road 140 feet east of											14.0*	{		1	woods road 140 feet east of
and 22 feet above Test #1.			••												and 22 feet above Test #1.
Top 6 feet of hole sampled as				•								{			Top 6 feet of hole sampled as
Test #3A consisted of a stony											}				Test #3A consisted of a stony
and sandy silt going to a cob-										·]	· .		and sandy silt going to a cob-
bly gravel.													1		bly gravel.
3B 1966 6-11 0-6 No 73.5 64.8 57.0 9.0 3.0 12 Gran, Sample #3B was taken from beds	1	3 B	1966	6-11	0-6	No	73.5	64.8	57.0	9.0	3.0	13]	Gran,	Sample #3B was taken from beds
Borrow of fine stratified sand with							·· ·							Borrow	of fine stratified sand with
(Grav.) sub-angular to sub-rounded				· · ·										(Grav.)	sub-angular to sub-rounded
cobbles and a few pebbles. Dip						ł		•		,			1		cobbles and a few pebbles. Dip
of material is shallow toward															of material is shallow toward
north. Sample met grading re-					•								ł		north. Sample met grading re-
quirements for Item 201, but]									quirements for Item 201, but
too few proper size stones]							· · ·	1	too few proper size stones
were included for the wear			••••••												were included for the wear
*Percentage of Total Sample test. Area is one of ice-	l	•	۰.		-	*	Percei	ntage	of To	otal S	Sample	1	r 1	I	test. Area is one of ice-

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GLOVER GRANULAR DATA SHEET NO.46

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Мар	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	lysis		Color AASHO	Abrasion AASHO	Passes VHD	c
Ident.	Test	Testod	Sample (Ft)	(Ft)	Pit	121	5/8"	#4	1 <u>8</u> #100	#270	T-21	T-4-35	Spec.	Remarks
<u>No.</u>	<u>No.</u>	lested				12	570		1100	,				contact deposition, and steep highway bank to northwest shows cobbles and gravelly sands. Much more testing sould be done in this area. Clearing required. Extensions of the tests would be either to north or south along top of highway banks.
33	1	1966	0-9	Stripped	Yes	87.7	82.9	76.5	3.1	1.0 0.8*	11/2		Gran. Borrow (Sand)	Owner: C. V. Akley. Area is small pit and extension at end of Town Highway #59 northeast of Town Highway #57. Knolls and fields to north and north- northeast have been set out to pines. Test #1 dug on top of 60-foot long pit face 50 feet from and 3 feet below top
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			 									of knoll. Material is a coarse brown pebbly sand with a gra- vel lens near top. One sub- angular small boulder noted. A gravelly sand layer comes in at 7.5', and contains a few large sub-angular pebbles. Ma- terial has excess $+l_2^{\perp}$ " stones for Item 202.
	2	1966	2-7	0-2	No *	Perce	79.0	67.6	8.0	3.3 2.2* Sample	31/2		Gran. Borrow (Sand)	Test #2 dug on lower north side of knoll in old test trench. Material below 2' is a light brown sand with a peb- ble layer and some cobbles. Is wet at 6'. Tested for gra- vel but had too few stones for Item 201. Had excess stones for Item 202, but area in

TABLE I

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Map Ident.	Field Test	Year Field	Depth of Sample	Over- burden	Exist- ing		Sieve % F	Ana Assi	lysis ng	3	Color AASHO	Abra AASH	sion 10	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1/2"	5/8"	#4	1#100) #270	T-21	<u> T-4-</u>	35	Spec.	Remarks
		-												,	source.
34	1	1966	N	0	Т		S	Ā	М	Р	L	Е	1	D	Owner: Unknown. Leased by
i			↓ ~ ↓					÷.,					Ì		Wilfred Proulx. Area is field
			l								· .				on southwest side of Town High-
			1	•				••		•					Way #57, southeast of and above
			i											•	of kama moraina denosition as
					·										imanned by Dr. D. P. Stewart.
			1	•									· · ·	· ·	Test #1 dug at lower end of
										•					field about 50 feet above le-
					•	·							1		vel of town road at the fence
		· .								-					line and about 150 feet west
			! i				·.	*			<u></u>				of the town road. Bedrock hit
			1							-	i .				at a shallow depth overlain
					-									1	by till, which was not sampled.
· .	2	1966	2-11	0-2	No	71.2	64.9	52.8	17.0	8.0	32		•	Gran.	Test #2 dug 90 feet west of
				· ··· · ···										Borrow	and about 22 feet above the
														(Grav.).	town road. Material is a san-
			-								· · ·				dy gravel with sub-angular to
		· .													sub-rounded stones. A lew ex-
											1				Appears to be more story below
					1							1			71. Too few proper size stopes
į	· · ·								.						were included for the wear
										ļ					test, and the sample had ex-
															cess fines for Item 201.
	3	1966	2-12	0-2	No	82.2	69.7	59.2	13.0	4.0	2		•	Gran.	Test #3 dug on 12 foot high
	•.					•			•		1			Borrow	roadside bank. Material is
														(Grav.)	interlayered silty sand, peb-
															bles, and fine gravel with a
	· •									•					few cobbles. Most stones are
·												1		1	sub-rounded; some are tabular.
	i				Ì							1			Sample had barely excess silt
. 1	1			· ,	 -=		• - :		1	C 1					for item 201, and too iew pro-
		• •	: !	i	, ×)	rercen	tage	01 T	OLAI	Sample	21	ł		i	per size scones were included

TA	ABLE I		G	LOVER G	RANULA	AR DAT	A SHI	EET NO). 48		•	•	
Field Test	Year Field	Depth of Sample	Over- burden	Exist- ing		Sieve % E	Anal	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
<u>No.</u>	Tested	(Ft)	(Ft)	Pit	<u>1'2"</u>	5/8"	<u>`#4</u>	#100	<u>#270</u>	<u>T-21</u>	<u>T-4-35</u>	Spec.	Remarks for the wear test. Probable extension of material toward northwest along road (into adjoining property owned by Calco Inc.), and possibly small quantities of specifi- cation gravel.
1	1966	1.5-10	0-1.5	No	100	98.1	91.0	7.3	1.8 1.6*	2		Sand	Owner: Calco Inc. This is a pasture area lying above the east side of Vt. Rte. 16 south of its junction with Town High- way #57. It is terrace-like with two levels, and is loca- ted within Dr. D. P. Stewart's kame moraine deposition. Test #1 dug just south of old foun- dations on northwest end of lower flat area about 80 feet
			-						•		1000 C		from highway. From 1.5'-4.5'

7.0

4.7*

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0-4

No

Map Ident. No.

35

1966

4-8

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ld founnd of 80 feet 51-4.51 material is a stratified tan sand; from 4.51-7.01 very coarse pebbly sand; 7.0'-10.5' medium sand; 10.5'-? silty sand. Gran. Test #2 dug 160 feet southeast Borrow of and about 6 feet above Test (Sand) #1. Top 4 feet is silt and stones over a 4 foot gravelly sand layer. Water flows in at 71. Some silt and boulders at 8.51. This test is near foot of wooded slope which probably marks east edge of sand deposition. Stratification dips to north as shown by layered pebbles.

*Percentage of Total Sample

87.0 77.9 67.1 11.4

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TABLE I

Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%]	Passir	ıg		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	$1\frac{1}{2}$ "	5/8"	#4	#100	<u>#270</u>	T-21	T-4-35	Spec.	Remarks
	3	1966	2-11	0-2	No	97.2	94.8	89.1	5.3	2.5 2.2*	1		Sand	Test #2 and 230 feet west of Test #2 and 230 feet south of Test #1. Naterial is a fine to coarse pebbly sand. Pebbly sands also shown on highway hark 120 feet from Test #3.
														Tests #1 and #3 represent pro- bably 8,000 to 10,000 cubic yards of sand from the lower "terrace".
	4	1966	1.5-11	0-1.5	No	100	98.9	90.6	2.7	1.0 0.9*	1		Sand	Test #4 dug about 25 feet above Test #3 on flat upper "terrace". Material is a coarse pebbly horizontally stratified sand, quite quart- zose and with a few +3" cobbles.
• • • • •	5	1966	2-10.5	0-2	No 	100	98.8	93.2	10.3	4.0 3.7*	1		Sand	Test #5 was dug 120 feet east of Test #4. Material is a fine pebbly sand. Both tests met requirements for Sub-base of Sand. This flat area is
· .														and Mason Stone property line is about 250 feet south from Test #4. Area represented is 250 feet long by about 200 feet wide, and possibly 15,000 to 18,000 cubic yards of sand could be obtained.
	6	1966	2-5	0-2	No	100 Pares	100	93.5	11.2	3.0 2.9*	2		Sand	Test #6 dug in pasture on hill northeast of old foundations. Material is moist pebbly sand for 5 feet, and overlies a silt-clay layer which holds up flowing vaces. Extension of this material is to north

Мар	Field	Year	Depth of	Over-	Exist-	•	Sieve	Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing	1211	% I	assir	1g /#100	1270	AASHU	AASHU T_4_35	Spec	Remarks
NO.	NO.	lested	(FC)	<u>(rt)</u>	110	12	578*	- 17 4	#100	11210	1-21	1-4-55	opec.	and northeast, but is probably quite shallow.
36	1	1966	3-9.5	0-3	No	100	98.9	91.3	10.0	4.3 3.9*	1		Sand	Owner: Mason Stone. Area is small sidling pasture on the east side of Vt. Rte. 16 north of Tildy's Pond. Test #1 was of medium to coarse pebbly sand sampled from upper side of pasture 120 feet from high- way.
	2	1966 i	1.5-11	0-1.5	No	100	98.8	90.1	12.6	4.3 3.9*	1		Sand	Test #2 dug near edge of woods beside woods road east of and above old foundations. Ma- terial is a medium to coarse pebbly sand. Both samples were acceptable for Sub-base of Sand, but represent only a small quantity of material.
37	1	1966	1-8.5	0-1	No	100	100	99.5	79.6	26.8	15			Owner: Mason Stone. Area is rolling pasture to northwest of Tildy's Pond. Test #1 dug above a small brook on a knoll west of the north end of the pond. Material is silt with one thin sand layer above a stony layer at 8.5'. Materi al is too silty for granular borrow.
· · · ·	2	1966	1.5-9.5	0-1.5	No *	76.3 Perce	66.4	of T	15.0	Sample	2		Gran. Borrow (Grav.)	Test #2 dug on north side of pasture 200 feet west of fence between field and pasture. Ma- terial is gravel with sub-roun ded stones, some over 6", and with coarse sand containing phyllite fragments. Sample had excess silt for Item 201

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GLOVER GRANULAR DATA SHEET NO.51

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Map	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		%	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
								(0.0	15 0					and contained too few proper size stones for a wear test.
ļ	3	1966	2-9.5	0-2	NO	94.3	80.9	62.9	15.0	6.5	2		Gran.	Test #3 dug in northwest cor-
										• •	1	1	Borrow	ner of pasture about 230 feet
							I						(Grav.)	west of lest #2. Material is
		t I												a gravelly and slightly silty .
											1		-	sand with mainly -4" sub-roun-
			-		i.								i	ded stones. Sample had too
														few stones and excess silt for
1				-					: i		;	}	1	the gravel item. More testing
			· ·											need be done in vicinity of
									Ì	1				Test #2. Any extension would
									1		ł			be northward. Property to
-													ſ	north is thickly wooded, very
					1				1	1		1	ļ	rough, and inaccessible to
				-					! ;					backhoe, but appears a likely
ĺ					İ.					ļ				spot to test for gravel. This
			· · · · · · · · · · · · · · · · · · ·		 		·			i				area is owned by Calco Inc.
38	1	1966	1.5-10.5	0-1.5	No	100	87.0	81.4	12.2	6.8	31/2		Gran.	Owner: Mason Stone. Area is
			-	1						5.5*			Borrow	piney pasture on west side of -
					ł						}		(Sand)	Tildy's Pond. Test #1 dug 90
i													2	feet west of road near camps.
. 1														Material from 1.5'-6' is coarse
· ;			· · · ·				•					•		sand, separated from a lower
				2.5										layer of sand by a silt layer.
:	•											1		Sample had excess silt for
:	•				1 :	-			· .		ļ	1 -		Item 202.
i	2	1966	1.5-10.5	0-1.5			•		•					Test #2 dug in small clearing
. י					•	. ·			•					on flat area in pines about 220
:														feet northwest of and 30 feet
:											1		i	above elevation of Test #1.
					:									Material is a coarse quartz-
					• •					. •.		<u>}</u>]	ose sand, fairly clean, and
• •					•						1	1	1	with a few pebbles. Material
• . •					•			•	•					looked acceptable for Item 202;
;				ł	*	Percer	ntage	of To	otal a	Sample	1		1	however, laboratory misplaced
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GLOVER GRANULAR DATA SHEET NO. 52

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Map	Field	Year .	Depth of	Over-	Exist-		Sieve	e Ana	lysis		Color	Abrasion	Passes	· · · · · · · · · · · · · · · · · · ·
Ident.	Test	Field	Sample	burden	ing	-	% 1	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
									i					results of sieve analysis.
	3	1966	1.5-10.5	0-1.5	No	97.1	96.1	92.6	18.5	3.3	.1		Gran.	Test #3 dug in fork of roads
									1	3.1*	ł		Borrow	north of camp area. Material
		1							i		İ		(Sand)	under 1.5 feet of overburden
														is a 1 foot gravel layer going
:								1	1		1			to a tan fairly quartzose sand
						i						1		with a few pebbles. A silty
				· .					•		1			sand layer noted at about 41-
									ł					61. Composite material has
				:	·				l			7. 7		barely excess silt for Item
									ł	1			ł	202.
	4	1966	1.5-10.5	0-1.5	No	85.9	77.3	63.5	17.0	4.5	1		Gran.	Test #4 dug northwest of Test
							i i	1			ļ	, .	Borrow	#3 on low east-west ridge just
							· ·		1			Í	(Grav.)	north of woods road. Sand,
							· ·							gravelly sand, and three cob-
		1												ble beds encountered. Most
								1		· ·				of stones are sub-rounded to
														sub-angular and are in the
		}	1	1			5							2"-5" range. Sample had too
						i			i					few stones (retained on the
			1							1				#4 mesh sieve), and excess
			1		}			1			1		1	fines for Item 201.
	5	1966	2-9	0-2	No	63.7	54.2	41.3	14.0	4.5	3		Gran.	Test #5 dug 70 feet west of
												l I	Borrow	and 15 feet above Test #4.
			1		1							1	(Grav.)	Material is a coarse gravel
				· ·	1									with most of stones in 3" to
					ļ									5" range. Some +6" cobbles
		1				· ·	•		-					noted. Insufficient proper
					1					•				size stones were included for
		1												the wear test, and sample had
												1		excess silt for Item 201.
					İ						ł			Tests #4 and #5 probably re-
					1							1	1	present ice-contact deposition,
											1	1		and further testing should be
			• .			•						I .		done in their vicinity. Tests
*	l .	1	1.	• •	*	Perce	ntage	of T	otal	Sample	T Si	1		#1-#3 probably are of lacus-

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	TA	BLE I		-	G	LOVER	GRAN	ULAR I	DATA S	SHEET	NO. 53			
Map Ident	Field Test	Year Field Tested	Depth of Sample (Ft)	Over- burden (Ft)	Exist- ing Pit	11/11	Siev %	e Anal Passir	ysis ng #100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spece	Remarks
														trine origin; however, camps in this area may preclude opening a pit. Entire area is wooded, and gravels are a good possibility farther west on the hillside.
39	1A	1966	1-12.5	0-1	Yes	63.4	59.2	49.4	7.0	3.0	1	16.8%	Gravel	Owner: Mason Stone. Area is huge field of two levels with a pit near the south end, lo- cated southwest of and above Tildy's Pond and north of Runaway Pond area. The field
														is located in kame moraine deposition, but terrainelre- sembles a kame terrace. Test #1A taken from top and middle of face in southeast corner of 75-foot-long pit.
• • •														Sample taken from coarse sand and pebble sand layers with isolated 3"-6" cobbles as well as a few layers of predominantly large pebbles. Extension of these gravels seems to be north toward Test #4 and south toward Test #3, both of which are gravelly sands and both of which are near the top of
	18	1966	12.5-26.5	0-1	Yes *	100 perce	100 ntage	98.7 of To	4.9	1.0* Sample	1		Sand	a gentle to steep west slope above the lower level of the field. Test #1B sampled from lower face and pit floor below Test #1A. Material is fine sand dipping shallowly west. A few small pebbles noted. Hole

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GLOVER GRANULAR DATA SHEET NO. 54

Map	Field	Year	Depth of	Over-	Exist-		Sieve	e Anal	ysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% 1	Passir	າຊື່		AASHO	AASHO	VHD ·	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	2	1966	1.5-10	0-1.5	No	90.8	84.0	70.8	4.2	2.3 1.6*	2		Gran. Borrow	continues below bottom in same sand. Test #2 dug 45 feet west of pit at floor elevation. Top
												-	(Sand)	5' is a fine gravel and gra- velly sand like Test #1A,
	.*													goes to a coarse pebbly sand and to a sand at 10.5'. Sam- ple had excess $+1\frac{1}{2}$ " stones
							1							for Item 202. Top gravel layer probably was continuous with that on the upper pit face and represents a west-
	3	1966	1.5-10	0-1.5	No	81.4	78.5	72.2	4.3	2.8 2.0*	1		Gran. Borrow (Sand)	ward thinning of that materi- al. Test #3 dug at south end of field at top of west-facing slope about 210 feet south of
				· · · · · · · · · · · · · · · · · · ·										pit. Material is a coarse samd with pebble layers and isolated pebbles. Bedding is horizontal. Sample had excess +13" stones for Item 202.
	4	1966	1.5-10	0-1.5	No	100	85.8	68.4	4.1	2.5 1.7*			Gran. Borrow (Sand)	Test #4 dug 70 feet north of pit at top of steep west slope. Material is a sand with many pebbles going to fine sand at 101.
•	5	1966	1-6.5	0-1	No	88.9	73.1	50.7	18.0	8.0	2½	17.6%	Gran. Borrow (Grav.)	Test #5 dug at west edge of field about 195 feet from south end and about 220 feet west of the pit. Naterial is a fine gravel with mostly $-1\frac{1}{2}$ " stones, a sub-angular boulder, amd a few 3"-6" cobbles. Fines
		•	:	i ;	*	Perce	ntage	of To	otal S	Sample			2	look a little "dirty", and

GLOVER GRANULAR DATA SHEET NO. 55

Map	Field	Year	Depth of	Over-	Exist-		Sieve	Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% I	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks ·
	6	1966	1-9	0-1	-No	100	100	99.4	46.7	9.0 8.9*	2		Gran. Borrow (Sand)	test results showed excess material passing the #100 and #270 mesh sieves for Item 201. Goes to a silty sand at 6.5'. Test #6 dug at west edge of field about 500 feet north of Test #5. A tan to gray-brown
<i>"</i>	7	1966	0.5-4.5	0-0.5	No	100	100	100	57.0	10.0*	1		Gran.	two encountered, and material becomes moist and more silty at 9'. Sample had excess fines for Item 202. Test #7 taken near northwest
	1	1,00	0.541.5					1					Borrow	corner of field above bowl-
			1			1	1			/ 			(Sand)	like depression to east and
			1	-									1	at top of steep slope down to
						:					1			west to foot of high ledge.
						i .			1		i			Material, like that of Test
						1			Ī					#6 is silty and becomes more
		. 1000		0.0.5	No	00 0	79 2	61 8	10 0	5.0	3	19.07	Gran.	Test #8 dug at north end of
÷	В	1900	0.5-9.5	0-0.5	NO	90.0	10.2	101.0	10.0			17.0 %	Borrow	higher level of field. Top
													(Grav.)	6 feet is fine gravel with
											1			mostly 1"-3" stones. A very
														few 3"-6" cobbles noted. Goes
				1										then to a gray gravelly sand.
												i ·		Sample had barely too few
	1	а. т.		· ·										stones plus excess silt for
	ł		:											Item 201. More testing need-
				1										ed in vicinity of Test #8 and
	·) !		l l	1										around pit between Tests #3
	:			4 1										and #4 with the possibility
	1			I										of gravels. Vicinity of Test
	•													#6 and #7 appears to be of
· ·	i			1	1							i		silty sands - a granular bor-
					*	Perce	ntage	of T	otal	Sample			1	row. Access is either via a

GLOVER GRANULAR DATA SHEET NO. 56

Map	Field	Year	Depth of	f Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	T
Ident.	Test	Field	Sample	burden	ing		% 1	Passi	ng	-	AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	121	15/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
		! <u> </u>		1		[1		T			steep road leading up from Vt.
				1						1				Rte. 16 at owner's farm or via
		: :	1	1				1			l l			road through pit area at end
		l	1	1		}		1			ļ			of old Runaway Pond.
40	1	1966	0-20	Stripped	Yes	72.3	52.8	41.7	13.0	4.8	1	19.6%	Gran.	Owner: Mason Stone. Area is
		i		1			}	Í				ŀ	Borrow	330-foot long pit with stripped
		1	1	1]]	1	1		(Grav.)	area to north and northeast
			İ			•			ł		1 7			and is located at north end
			i .								1			of Runaway Pond west of Vt.
			1						1		1	1		Rte. 16. Test #1 was a compo-
		:				1								site sample of pit face taken
		ļ	-	1				1	1		Ì		,	100 feet from south end. About
				1							1			10 feet of gravels overlie 10
	-		1	1	·					1			1	feet of coarse to fine sands
								1						and silty sand layers. Sample
					-									barely failed for Item 201
				1					1					because of excess silt.
			0_9	Strinned	Yes	58.2	45.2	34.0	13.0	5.0	1	20.0%	Gravel	Test $#2$ from the top 9 feet
	2	1,000	0-1	Feripped					10.0		-	2000.0	, eraver.	of gravel beds met requirements
		t i i i i i i i i i i i i i i i i i i i												for that item.
• .	3	1966	12-20	Strinned	Yes	100	95.0	91.7	18.3	6.0	1		Gran.	Test #3 sampled from beds of
	,	1,000	12-20	peripped	105	100	,,,,,		10.5	5.5*	-		Borrow	coarse sand silty sand, and
					ł				1	5.5	}		(Sand)	lenses of fine sand from 121
									1				(band)	to 201 on the face at a point
:		1 •		1						l .		1		about 20 feet north of Tests
			ł	i i				1						#1 and #2 Material had
		• •	· .]		-	1	j		baroly avonce fines for Item
			1]			1			202 and this cample shows that
			ł					ļ						the bettom bade of the face
								1			1			due to their excessive silt.
	•		1								ļ			wore the factor that failed
		1						ł						Tost #1 for the gravel item.
	1.	1066	0 10 5	Floor	Vee	100	100	100	50 0	10 5*	1		:	Toot #4 due in floor below
	4	1900	0-10.3	r 100r	ies	100	100	100	120.0	10.3%	1			Test #4 dug in 11001 below
			1	!				•						lest #3. Material is mainly
			:	j .	ا دەم (D				•	1			a silty sand with one thin
		'.		!	*	rerce	ntage	of Te	otal S	sample	1		:	coarse sand layer. Sample

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GLOVER GRANULAR DATA SHEET NO. 57

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Мар	Field	Year	Depth of	Over-	Exist-	i	Sieve	e Ana	lysis		Color	Abrasion	Passes	
Ident.	Test	Field	Sample	burden	ing		% 1	Passi	ng		AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	12"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
	5	1966	8-16	Stripped	Yes	100	100	100	64.0	22.8*	1			had excess fines for Items 202 and 105. Test #5 dug on lower face and for 3 feet in floor of north
														end of pit. Top 8' is gravel like Test #2. Material sampled is very fine to silty sand and silt (soil classification is
								and the second second second second second second second second second second second second second second secon						silt). Tests #3-#5 indicate that the material below the gravels is at best a granular borrow and probably not a source of large quantities of this material
	6	1966	0-8.5	Stripped	No	60.5	46.9	36.8	9.0	5.0	1	12.6%	Grave1	Test #6 dug on east side of haul road and 90 feet north of pit in stripped area and is about at north and west limit
						-								of material extension. Ma- terial is a stony gravel with many +2" stones. Beds dip to west.
	. 7	1966	1.5-9	0-1.5	No .	100	100	100	74.0	29.0*	1			Test #7 dug on upper side of stripped area 100 feet east of north end of pit. Material under 1.5 feet of gravel is silt and sandy silt.
· · ·	8	1966	0-4.5	Stripped	No	78.4	61.5	49.6	6.0	5.0	11/2	19.6%	Gran. Borrow (Grav.)	Test #8 dug 40 feet east of pit face and 120 feet south of and 15 feet below Test #7. Material is a coarse gravel going to sand at 4.5'. Sample had excess silt for Item 201. Pit extension to porth and to
		х.		•	*	Percen	ntage	of To	otal :	Sample	1			east would have perhaps 3500 to 4000 cubic yards of gravel

GLOVER GRANULAR DATA SHEET NO. 58

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Мар	Field	Year	Depth of	Over-	Exist-		Siev	e Ana	lysis		Color	Abrasion	Passes	
Ident.	¹ Test	Field	Sample	burden	ing		%	Passi	ng	14070	AASHO	AASHO	VHD	
No.	No.	Tested	(Ft)	(Ft).	Pit	1/2"	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
							-							underlain by silty sands. Any further extension to east would require much clearing and stripping with silty sands a likelihood, since access
· ·														road in from Vt. Rte. 16 shows
41	1	1966	0-11	Stripped	No	63.9	49.9	32.0	10.0	3.5	1	9.4%	Gravel	Owner: Vt. Highway Department. Area is above steep road bank on east side of Vt. Rte. 16
•							÷		-		· · ·			just north of rest area. Access is via steep washed-out road, and material quantity is limi- ted by bedrock to east at side
														of old valley and to north and south by terrain dropping off. Test #1 dug near south
·					· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		•						side of cleared area at top of access road in bank of ex- posed gravels, many of which appear to have been bulldozed
		- -									, ,			down from the slope above. Sample was of a coarse clean gravel down to 12' where it
	2	÷1966	0-9	Stripped	No	64.3	53.0	42.8	5.0	3.3	1	10.2%	Gravel	Test #2 was sampled 100 feet
					; · .	-								coarse sand with layers of pebbles and cobbles. Average
										· · ·				bottoms in silt-clay. Sample met requirements for Item 201.
	3	1966	N	0	T		S	A	М	P	L	E	D	Test #3 sampled near top of highway cut 50 to 60 feet from
				v	* *	Percei	ntage	of To	otal S	Samp1e	•	•.		Scattered stones show on surface

GLOVER GRANULAR DATA SHEET NO. 59

Map	Field	Year	Depth of Sample	Over- burden	Exist-		Sieve % P	Ana assi	lysis ng		Color AASHO	Abrasion AASHO	Passes VHD	
No.	No.	Tested	(Ft)	(Ft)	Pit	1211	5/8"	#4	#100	#270	T-21	T-4-35	Spec.	Remarks
<u>NO -</u>		1105000				1		-				• • •		but underlying material is silt-clay. Mason stone prop- erty line crosses feature from east to west about 375 feet north of Test #1. Exten- sion probably limited to 90 foot x 125 foot extension, and a depth to 10 feet is a possi- bility.
		•	•										•	
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TABLE I

TABLE	1
Supplemen	١t

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	TABLE I
	Supplement
GLOVER PROPERTY OWNERS - GRANULAR	Map Ident. No.
Akley, C. V.	33
Bona, Angelo	22, 23
Boutin, Edmond	2
Butler, Bernard	11
Calco. Inc.	30, 31, 32, 35
Conley, Burton	29
Conley, Howard	6
Deep I I	13
Histed, L. M. (Mrs.)	5
Paris, Robert	10, 11, 19, 20, 21
Perron, Norman	8
Perron, Raymond	3, 4
Perron, Rene	7
Sawyer, Guy	12, 17, 18
Spring, Phyllis (Mrs.)	24, 25, 26
Stone, Mason	36, 37, 38, 39, 40
Thompson, Ben	14, 15, 16
•	
Unknown	9, 34
Vermont Highway Department	28, 41
	27
white, Lawrence	
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GLOVER ROCK DATA SHEET NO. 1

Мар	Field	Year	Rock	Exist-	Method	Abrasion	
Ident.	Test	Field	Туре	ing	of	AASHO	
No.	No.	Tested		Quarry	Sampling	T-3	Remarks
1	1	1966	Granitic Dike Rock & Metasedi-	No	Chip	1.8%	Owner: Henry Wagner. Area is near top on west edge of a hardwood knoll about 0.5 mile southeast of the Carrier Farm on Town Road #23. Access is across a field and up a woods road through a rocky pasture in which phyllites are
			ments				exposed. Granitic rock exposures begin on the west slope about 15 to 20 feet below the top and countinue for 100 to 125 feet across the strike. Quartzites and phyllites are exposed beneath a 6-foot scarp on the west slope and
							again on the flat wooded area in a band ranging from 30 feet to 60 feet wide. Test #1 was sampled on a due east- west line near the southern end of the exposure. About
		1000		Na	<u>Chr</u>	2.0%	100 feet of rock traversed. Sample met abrasion require- ments for Sub-base of Crushed Rock, Item 204.
	2	1966	Granitic Dike Rock & Metasedi-	NO	Chip	2.8%	of rock sampled. Meets requirements for Sub-base of Crushed Rock. Rock type is granitic, medium-grained to porphyritic, and aplitic. Flow banding seen in places.
-			ments			· · · · · · · · · · · · · · · · · · ·	The granitic rock is hard and uniform; the quartzites and phyllites are hard but break somewhat tabularly. Large quantities of the metasediments would be undesireable, but the included band within the granitic exposure would not be detrimental. Difficulty of access and small area and relief of exposure would preclude this area as a source of crushed rock for Item 204.
2	1	1966	Granitic	No	Chip	4.4%;	Owner: Mason Stone. This area is the vertical face of a high steep valley wall of granite or granitic dike rock east across Vt. Rte. 16 from Tildy's Pond. Exposure is about 150 feet from road, and a gentle to steep thickly wooded slope would have to be cleared to locate an opera- tion. A face of granite 100 feet long and over 50 feet high was sampled near the base and near the top. Exposure is oriented north-northwest to south-southeast. Lime- stones and phyllites, exposed on the northwest end of the granite face, may be a large inclusion within the granite, which may be part of an extensive mass of granite (such
]		!	l .	ł	as a stock) which is comparable to the granite body which

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GLOVER ROCK DATA SHEET NO. 2

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Map	Field	Year	Rock	Exist-	Method	Abrasion	
Ident.	Test	Field	Туре	ing	of	AASHO	
No.	No.	Tested		Quarry	Sampling	<u>T-3</u>	Remarks
	2	1966	Granitic	No	Chip	6.2%	is mapped west of the Black Hills and south of Shadow Lake. Test #1 taken from a 60-foot-long portion of the exposure near its south end on the bottom of the face. Rock is granitic, and unweathered rock was next to impossible to obtain. Sample met abrasion requirements for Sub-base of Crushed Rock. Test #2 was sampled at top of face just south of sediments. This material also met abrasion requirements for Item 204. In general, rock is an equigranular, medium-grained gra- nite. Further investigation needed in this area to deter- mine if body is extensive enough to warrant clearing and building of an access road.
3	1	1966	Granite	No	Chip	7.8%	Owner: Burton Conley. Area is densely wooded knoll about 200 yards north 70° west of pasture, which is 0.80 mile from State Aid Highway #2, and beyond end of Town Road #56. Town Road #56 is steep up to summer residence and then is unimproved and used only as field drive from there to pasture.
	2	1966	Granite	No	Chip	4.8%	Two samples of fine-to medium-grained granite were taken on a face 150 feet long by 20 to 60 feet high located on the north end of the knoll. Test #1 was taken on 20-foot face at southeast end of exposure. Test #2 was taken on 60- foot face 150 feet northwest of Test #1. The area at the foot of the face and at the top of the knoll is heavily wooded but, once cleared, both would be readily accessible since the terrain is not too difficult. Both samples met abrasion requirements for Item 204. A more detailed re- connaissance with further testing would be necessary to determine if this area could be developed economically as a source of crushed rock. A thrown-up Town Road, #55 leads southward and up from the east end of Shadow Lake and may prove to be better access into the area from the west side of the exposure.
4	1	1966	Granite & Metasedi- ments	No	Chip	3.8%	Cwner: Hugo Meyer. Area is thickly wooded hillside about 0.3 mile southwest of end of Town Road #54. Access is

GLOVER ROCK DATA SHEET NO. 3

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Ident. I		F: 14	Tuno	ino	of	AASHO		
		Teeted	Type	Ouarry	Sampling	T-3	Remarks	
<u>NO.</u> <u>N</u>	2	1966	Granite No & Metasedi- ments	Chip	4.0%	100 yards across a wet area and along a woods trail to a talus slope and granite escarpment where the tests were taken. Test #1 was a sample of granite, quartzite, lime- stone, and phyllite taken for about 125 feet across the strike, beginning about 30 feet upslope from the woods trail. Granite boulders and scattered granite exposures occur west of the top of the slope, and granites are ex- posed again in a 15-foot-high by 35-foot-wide escarpment west of and above the flat area. Test #2 was sampled 75 feet north of Test #1, beginning at the edge of the trail and continuing for 75 feet to near the top of the slope. The sample included granite, phyllite, and a quartzose limestone. Both samples met abrasion requirements for Sub-base of Crushed Rock. Area appears to be one of contact with country rock by a grani intrusive of unknown extent. Numerous contact zones, in- clusions, and recrystallization in the country rock were noted. Some of the granites are porphyritic; the phyllit and quartzites appear highly altered. Since area is hea- vily wooded, of rugged topography, and granites are of unknown extent, it is recommended that this not be con- sidered a source of Item 204.		
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TABLE II Supplement

GLOVER PRO	PERTY OWNERS -	ROCK	1		Map Ident	. No.
Conley, B	urton		• •	•		3
Meyer, Hu	go	Ň	•			4
Stone, Ma	son		1			2
Wagner, H	enry .			· · ·		ĺ

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LEGEND

Fisher

Pond

Beach HXI

Chaniels Pondy 153

1797

0	GRAVEL, ACCEPTABLE FOR ITEM 201 (sub-base of gravel)
	GRAVEL, DEPLETED OR NOT ACCEPTABLE FOR ITEM 201
\bigtriangleup	SAND, ACCEPTABLE FOR ITEM 202 (sub-base of sand)
	SAND, DEPLETED OR NOT ACCEPTABLE FOR ITEM 202
	GRANULAR BORROW, ITEM 105
	MATERIAL NOT ACCEPTABLE FOR ITEM 105
\times	EXISTING PIT
SG	SAND & GRAVEL DEPOSIT
S	SAND DEPOSIT
3	IDENTIFICATION NUMBER (refer to data sheets)



(BARTON RIVER - WAITS RIVER)

GRANITE

Pand

Mundels Plinds 453

LEGEND

0	ROCK, ACCEPTABLE FOR ITEM 204 (sub-base of crushed rock) ROCK, NOT ACCEPTABLE FOR ITEM 204 EXISTING QUARRY
3	GRANITE TO DIORITE (light to intermediate igneous rocks) AMPHIBOLITE, GABBRO, DIABASE, METADIABASE, GREENSTONE, TRAP DIKES (basic or dark igneous rocks) PERIDOTITE, PYROXENITE, SERPENTINITE (ultra-basic igneous rocks) GNEISS QUARTZITE DOLOMITE MARBLE, LIMESTONE SCHISTS, SLATES, PHYLLITES, SHALES, CONGLOMERATES IDENTIFICATION NUMBER (refer to data sheets)

