

SURVEY OF HIGHWAY CONSTRUCTION MATERIALS  
IN THE TOWN OF RANDOLPH, ORANGE 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

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### Acknowledgments

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 Charles G. Doll, Vermont State Geologist, University of Vermont, Burlington, Vermont.
4. The 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 Public 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, search for highway construction materials were conducted only as the immediate situation required. Thus, only limited areas were 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 material is passed on to the State in the form of higher construction costs. The

Materials Survey Project was established to minimize or eliminate this factor by enabling the State and its contractors to proceed with information on material 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 designed, keeping in mind their intended use. 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.

### Incllosures

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 quadrangles of the United States Geological Survey enlarged 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; i.e., Vermont Geological Survey Bulletins, Vermont State Geologist Reports, United States Geological Survey Bedrock Maps, 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, etc.) by which potential sources of gravel and sand may be recognized. This information was obtained primarily from a survey being conducted by Professor D.P. Stewart of Miami University, Oxford, Ohio, who, since 1956, has been mapping the glacial features of the State of Vermont during the summer months. Further 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, 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 character of the material tested 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, including an active card file compiled by the Highway Testing Laboratory. It was readily apparent that 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 in the cards varied widely in completeness. Transfer of information from the cards to the Data Sheets was made without elaboration or verification. The locations of the deposits listed in the

card files have also been plotted on the maps. However, caution should be exercised wherever this information appears incomplete. Some cards in the file were not used because the information on the location of the deposit was incomplete or unidentifiable. This project does not assume responsibility for the information taken from the card files.

Work Sheets containing more detailed information of each test including a detailed sketch of each Identification Number Area are on file in the office headquarters of this Project, together with the respective Laboratory Reports.

#### Location

The Town of Randolph is located in Orange County, in the geographic center of the state. It is bounded on the north by the Town of Brookfield, on the east by the Town of Tunbridge, on the south by the Town of Bethel, on the west by the Town of Braintree.

The town is in the Central Plateau Physiographic Sub-division, a region characterized by severely dissected uplands, with narrow and V-shaped stream valleys and somewhat flattened ridge tops which are remnants of the old plateau. Two dominant stream valleys extend from north to south through the town. The Second Branch of the White River flows southerly through the eastern portion of the town. Ayers Brook flows southerly through the western portion of the town, joining the Third Branch of the White River at Randolph Village. A wide plateau on which stands the Village of Randolph Center, is located in the center of the town. The elevations range from 700' in the lower valley of the Third Branch to 1800' above sea level on Osgood Hill in the northeast corner.

Drainage is southerly to the White River and thence to the Connecticut.

#### Procedure for Rock Survey

The routine employed by the Project in the survey of possible sources of rock for highway construction is divided into two main stages; the office investigation and field investigation. The first is conducted primarily during the winter months and comprises the mapping of rock types as indicated in various reference sources. Many different sources of information were utilized, as indicated in the Bibliography. These references differ considerably in dependability due to new developments and studies contributing to the obsolescence of a number of reports. In addition, the results of samples taken by other individuals are analyzed and the location in 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 second stage of the investigation is begun in the field by making a cursory preliminary survey over the entire area. The information obtained in this survey, together with the information assimilated in the first stage of the investigation is employed to determine the areas in which the testing and sampling will be concentrated. When a promising source is encountered as determined not only by rock type but also by volume, accessibility, and the existence of a good working face, chip samples are taken with a hammer and submitted to the Highway Testing Laboratory for testing by the Deval Method (AASHO T-3). It is

kept in mind that samples taken by the chip method are often in the weathered zone of the outcrop and consequently may show a less satisfactory test result than the fresh material deeper in the body of the rock structure. When deemed necessary, further samples are taken by drilling to a depth of approximately 3 feet and blasting across the strike or trend of the outcrop. When the material is uniform, and satisfactory tests result from the chip samples, no further drilling, blasting, or sampling is done and the material source is included as being satisfactory.

#### Discussion of Rock and Rock Sources

It will be observed that the information on the surface-geology bedrock map in regard to rock type is simplified. For a more detailed description of the respective rock formations, a summary is included in this report. It is apparent from this summary that each formation may not be composed of one distinct rock type, but may be a complex mixture of rock types blending into one another. For this reason, the data sheets may describe the rock tested as differing from the designation on the map.

The rock types of the town of Randolph are predominantly schists, micaceous quartzites, and impure siliceous limestones. The only rock which seemed to have a good potential as a source of crushed rock was the quartz-monzonite body known as "Beedle's Prospect." This rock is very similar to the "Bethel White Granite" in the neighboring town of Bethel, but lacks the characteristic biotite "chestnuts" and is finer grained. The abrasion results (see Rock Data Sheet) indicate this to be a very good rock for our highway requirements perhaps due in part to its fine grain. This "prospect" is a fairly small outcrop of igneous rock (230 feet by 140 feet) which lies on a side hill in overgrown pasture land about one-quarter mile south of the Beanville School. There is a very rough abandoned trail which leads from the

area of the Beanville School (presently housing the Randolph Special School) to the outcrop. In the outcrop two small quarry holes were observed one about 15 by 2 feet and the other about 25 by 30 feet. Both were in the order of 10 to 15 feet deep. These quarry holes are located near the north end of the outcrop where the rock appears much narrower than the 140 feet listed by E.H. Ern, Jr. in his "Bedrock Geology of the Randolph Quadrangle, Vermont"; Bulletin No. 21, Vermont Geological Survey, 1963. At the quarried location the actual distance between the contacts with the country rock on the east and west was 45 feet. Considerable caution should be observed in relying upon this outcrop as a source of crushed rock because the exact boundaries are covered by mantle. The quantity could not be determined without further exploration to uncover the contacts, and a diamond drilling program would seem prudent also.

The remaining rock types in the town of Randolph will be described from the southwest corner of the town to the northeast. In the extreme southwest corner of the town the rock type is the Brackett member of the Stowe formation. This rock is a laminated greenstone which might possibly be a source of material if it existed in sufficient quantity. No outcrops of this rock were observed in Randolph. Bounding the Brackett on the east is the Moretown which is the "pinstripe" rock composed of narrow bands of granulite separated by paper thin micaceous partings. Because of this schistosity the rock was considered unfit for crushed rock and was not sampled. The Cram Hill formation borders the Moretown on the east. Of the three principal rock types in the Cram Hill the only one with a potential for highway materials might be the massive phase of the greenstone. The Materials Inventory failed to find any outcropping of good rock in this formation. Separating the Cram Hill from the Northfield Slate are narrow lenses of the Shaw Mountain formation.

This rock in the town of Randolph is mostly sericite schist and of such small dimensions that it is not a probable source of construction materials. The Northfield formation extends entirely through the town of Randolph from north to south in a one-half mile width. This rock can not be considered a source for crushed rock for highway usage. The Waits River, western band, or the Barton River formation as it is called by Dr. Doll, contains interbedded rocks of which a blue-gray silicious limestone is the predominant one. This limestone would be a good potential source of rock for crushing if it occurred in wide enough bands as to be quarried without including the softer rocks on either side. This width was not observed in Randolph. Nearly one-half of the town is underlain by the Gile Mountain formation which extends from Randolph Center eastward. This formation is predominantly quartz mica schist and micaceous quartzite which will yield rock meeting the abrasion requirements for sub-base of crushed rock (8% wear). Considerable care must be exercised however in selecting a quarry site which could yield a uniform product. The boundaries of uniform acceptable rock would have to be delineated and the volume determined before quarrying operations could begin with confidence.

There were no obvious quarry sites in the formation observed within the town. In the extreme eastern corner of the town there is a small section of the eastern branch of the Waits River. The rock type here is very similar to the western branch but again no samples were taken.

In summary it would seem that the town of Randolph offers little hope for rock suitable for crushing other than Beedle's Prospect. The location of this site near the southwestern corner of the town may cause problems if material was needed in the central or eastern portions. Anyone considering a quarry site in the town is urged to contact the Engineering Geology Section, Materials Division, Vermont Department of Highways.

### Procedure for Sand and Gravel Survey

The method employed by the Project in the survey of possible sources of sand and gravel for highway construction is divided into two main stages; office investigation and field investigation. 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 recognizing and locating physiographic features indicating glacial deposits, and in studying drainage patterns. In addition, the location of existing pits, when known, are mapped. The locations in which samples were taken by other individuals are noted and mapped, when possible.

The second stage of the investigation is begun in the field by making a cursory preliminary survey over the entire area noting areas which show physiographic features giving evidence of glacial or fluvial deposits. These locations are later examined by digging test pits with a backhoe to a depth of approximately 11 feet and sampling the material. The samples are submitted to the Highway Testing Laboratory where they are tested for gradation and stone wear, the latter by the Deval Method (AASHTO T-4-35).

### Discussion of Sand and Gravel Deposits

The granular areas of the Town of Randolph are confined principally to the stream valleys, and consist of kames, kame terraces and outwash. A large amount of acceptable gravel is found in the valley of the Third Branch. The granular material in the Ayers Brook Valley is apparently overlain by lake sediments. The material in the Second Branch Valley contains much schist and other soft stones.

## Summary of Rock Formations In The Town of Randolph

Stowe Formation, Brackett Member -greenstones composed dominantly of quartz, albite, epidote, chlorite and carbonate. The greenstone beds, which comprize the Brackett Member of Stowe Formation, are present throughout the formation interstratified with the schists. These beds exceeding two hundred feet in thickness show a distinctive compositional banding with laminae between one-eighth and one-half inch in thickness. The individual bands are massive and lack well-defined schistosity.

Moretown Formation: The most distinctive and abundant rock type in the Moretown formation is a quartz-chloritic-albite sericite granulite referred to as the "pinstripe" by students of Vermont geology. Micaceous quartzites are also common. The granulite is characterized by thick granular laminae separated by paper-thin, darker colored micaceous partings and it is this feature which produces the effect described as "pinstripe." The granular laminae range from a fraction of an inch to one-half inch in thickness. This formation has also been called the Moretown Member of the Missisquoi Formation.

Cram Hill Formation - composed of three principal interbedded rock types: (1) splintery greenish-gray phyllite, (2) greenstone, and (3) feldspathic quartz-biotite-sericite schist. Phyllite dominates in the northern part of the quadrangle. The greenstones are both massive and schistose.

Shaw Mountain Formation: The bulk of the Shaw Mountain in the Randolph quadrangle consists of sericite schists which are dominantly tuffaceous.

Northfield Formation - consists of gray-slate, phyllite, and minor interbedded crystalline limestone. The slates become less fissite to the south and grade into phyllites along the strike.

Waits River Formation (Western band, called the Barton River formation by Dr. Doll) - "composed of the following interbedded rock types, in order of decreasing abundance: (1) thick and thin bands of blue-gray recrystallized impure limestone which is quite often siliceous" (2) fine-grained black phyllites, (3) minor quartzites and micaceous quartzites.

Gile Mountain Formation - predominantly quartz mica schists and micaceous quartzites with argillaceous phyllite and phyllitic schists along the contacts with the Waits River formation.

Waits River Formation (Eastern band) - dominantly siliceous impure crystalline limestones interbedded with quartz-biotite schists, quartz-calcite schists and quartzitic beds.

Quartz Monzonite (Beedle's Prospect) - fine grained quartz monzonite composed of quartz, oligoclase, orthoclase, microcline and muscovite.

## Glossary of Selected Geologic Terms

Biotite - The mineral commonly known as black mica.

Calcareous - Consisting of or containing calcium carbonate. As combined with rock names indicates a considerable proportion, say 50 percent, of calcium carbonate together with an equal or predominant amount of the material indicated by the rock name.

Crystalline - Of or pertaining to the nature of a crystal; having a regular molecular structure.

Dike - 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. May radiate in groups from a center, or occur singly and isolated from other igneous bodies.

Granite - A granular, crystalline rock of predominantly interlocking texture, composed essentially of alkalic feldspars and quartz. Accessory minerals (chiefly micas, hornblende, or more rarely pyroxene) are commonly present.

Greenstone - A field name for rocks that have been so metamorphosed or otherwise so altered that they have assumed a distinctive color owing to the presence of chlorite, epidote, or actinolite.

Igneous Rocks - Rocks formed by solidification of hot mobile rock material.

Kame - A conical hill of stratified drift, deposited at a glacial terminus by glacial streams flowing in or on the ice.

Kame Terrace - An accumulation of stratified drift laid down chiefly by streams between a glacier and an adjacent valley wall.

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.

Metamorphic Rocks - Rocks that owe their distinctive characters to the transformation of pre-existing rocks, either through intense heat or pressure or both.

Moraine - An accumulation of drift with an initial topographic expression of its own built within a glaciated region chiefly by the direct action of glacier ice.

Outwash - Stratified drift that is stream built beyond the glacier; laid down by meltwater streams issuing from the face of the glacier ice.

Phyllite - A fine grained foliated metamorphic rock intermediate between the mica schists and slates, into which it may grade. It is usually light in color, but various darker shades, even black, are found.

Quartzite - A firm, compact rock composed of grains of quartz so firmly united that fracture takes place across the grains instead of around them. A metamorphosed sandstone.

Quartz-monzonite - A rock of granitic texture, intermediate in composition between granite and quartz diorite, which contains quartz and about equal amounts of the alkali and soda-lime feldspars.

Schist - A crystalline rock with a secondary foliation or lamination based on parallelism of platy or needle-like grains. The name refers to the tendency to split along the foliation.

Schistosity - The property of a foliated rock by which it can be split into thin layers or flakes. The property of splitting may be due to alternating layers of differing mineral composition or to preferred orientation and parallelism of cleavage planes of the mineral.

Sericite - A mineral very similar to, if not identical with, muscovite mica. It occurs in small flakes and scales in metamorphic rocks such as sericite schists and sericite gneisses.

Surface-Geology Map - A map showing areas of outcrop of geologic formations, both consolidated rocks and the unconsolidated sediments. Its scale is large enough that pits and quarries can be accurately shown and indexed.

Terrace - A plain, natural or artificial, from which the surface descends on one side and ascends on the other. Terraces are commonly long and narrow, and they border seas, lakes, or interior valleys. A terrace may be built by deposition of sediment from water, it may be cut by the breaking of waves on a shore or the sweeping of currents, or it may be formed by the dislocation of rocks in crustal movements. The descent from river terraces toward the river may be very abrupt, especially in arid regions, the ascent on the other side may be only that of an extensive alluvial slope.

Till - Unsorted drift, or the mixture of rock fragments and fine materials left by melting glaciers.

## Bibliography

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Partial Specifications for Highway Construction Materials as they apply to this report at date of publication. (For complete list of Specifications see "Standard Specifications for Highway and Bridge Construction" approved and adopted by Vermont Department of Highways).

Item 102A, Granular Borrow.

"The granular borrow shall be obtained from approved sources and shall consist of satisfactorily graded, free draining, 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 per cent (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 the A.A.S.H.O. Method 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 (9) inch square opening screen."

Item 201A, Sub-base of Gravel.

"The gravel shall consist of material free from silt, loam, or clay. It shall be obtained from approved sources and meet the following requirements:

"Not less than forty (40) per cent 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 Method A.A.S.H.O. T-4.

"The stone portion of the gravel shall be uniformly graded from coarse to fine and the maximum size particles shall not exceed six (6) inches in diameter.

"The sand portion, when tested by laboratory methods using Method A.A.S.H.O. T-27, shall meet the grading requirements set up in the following table:

Minimum Per Cent of stone	Per Cent Passing Square Openings No. 100	Per Cent Passing Square Openings No. 270
40%	0-15	0-3
50%	0-15	0-4
60%	0-15	0-5

"The sand shall show a color of not more than three and one-half ( $3\frac{1}{2}$ ) as determined by the colorimetric test described in the A.A.S.H.O. Method of test, Designation T-21."

Item 202 Mod., Sub-base of Sand.

"The sand shall consist of material free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and meet the following requirements:

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

Square Openings	Per Cent Passing
$1\frac{1}{2}$ "	95-100
$5/8$ "	85-100
No. 4	70-100
No. 100	0-18
No. 270	0-5

"The sand shall show a color of not more than three and one-half ( $3\frac{1}{2}$ ) as determined by the colorimetric test described in the A.A.S.H.O. Method of test, Designation T-21."

Item 204, Sub-base of Crushed Rock.

"The percent of wear shall not be more than eight (8) when tested by laboratory methods, using Method A.A.S.H.O. T-3."

RANDOLPH GRANULAR DATA SHEET NO. 1

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						% Passing							
						1 1/2"	5/8"	#4	#100	#270			
1	1	1963	2-7.5	0-2	No	-	-	30.5	17.0	6.0	2	34.0%	Gran. Bor. (Grav.) Owner: Clifton Menard. A flat area in the valley floor containing several pits. Test #1 230' south of pit. Gravel with silt bottom. Fails for Item 201-A, sub-base of gravel. Has 6% passing #270 mesh; Maximum allowed 5%. Has wear of 34%; maximum allowed 25%. Acceptable for Item 102-A. Granular Borrow.
	2	1963	0-8	-	Yes	100	100	99.6 *61.8	62.0 *14.9	15.0	1	-	Test #2 in floor of pit. Sand with sand and water in bottom. Fails for Item 202 Mod., sub-base of sand. Has 14.9% passing #270 mesh; maximum allowed 5%. Has 61.8% passing #100 mesh; maximum allowed 13%. Fails for Item 102-A, granular borrow. Has 15% passing #270 mesh; maximum allowed 10%.
	3	1963	3-10.5	0-1	No	-	-	54.8	13.0	6.0	2	40.4%	Gran. Bor. (Grav.) Test #3 300' south of Test #1. 0-1' overburden, 1'-3' silt, 3'-10.5' gravel with gravel and water in bottom. Fails for Item 201-A. Sub-base of gravel. Has 6% passing #270 mesh; maximum

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 2

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHTO T-21	Abrasion AASHTO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	4A	1963	1-4.5	0-1	No	-	-	30.2	7.0	2.5	2 1/2	38.0%	Gran. Bor. (Grav.)	allowed 5%. Has wear of 40.4%. Maximum allowed 25%. Acceptable for Item 102-A, Granular Borrow. Test #4 400' west of Test #3, 170' northwest of pit. 0-1' overburden, 1'-4.5' gravel, 4.5'-9' silty clay, silt, clay bottom. Test #4A fails for Item 201-A, sub-base of gravel. Has wear of 38%. Maximum allowed 25%. Acceptable for Item 102-A, Granular Borrow.
	4B	1963	4.5-9	-	No	100	100	100	96.0	43.0	1	-	-	Test #4B fails for Item 202 Mod., sub-base of sand. Has 43% passing #270 mesh; maximum allowed 5%. Has 96% passing #100 mesh; maximum allowed 18%. Fails for Item 102-A, granular borrow. Has 43% passing #270 mesh; maximum allowed 10%.
	5	1963	1-5	0-1	No	-	-	42.4	9.0	3.25	2	36.0%	Gran. Bor. (Grav.)	Test #5 400' south of Test #4. 0-1' overburden, 1'-5' gravel, 5'-10' silt, silt bottom. Fails for Item 201A, sub-base of gravel. Has 36% wear; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	6	1963	1-6	0-1	Yes	-	-	43.3	17.0	4.0	2 1/2	34.0%	Gran.	Test #6 in face of pit.

RANDOLPH GRANULAR DATA SHEET NO. 3

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1/2"	5/8"	#4	#100	#270				
													Bor. (Grav.)	Gravel with sand bottom. Fails for Item 201-A, sub-base of gravel. Has 17% passing #100 mesh; maximum allowed 15%. Has wear of 34%. Maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
2	1	1963	1-4	0-1	No	100	100	99.0 *91.1	92.0 *62.3	63.0	2	-	-	Owner: Mrs. Edith Goldsworth. A high knoll above granular terraces. 0-1' overburden, 1'-4' silt ledge bottom. Fails for Item 102-A granular borrow. Has 63% passing #270 mesh; maximum allowed 10%.
3	1A	1963	1-6	0-1	No	-	-	37.5	8.0	3.25	2 1/2	44.4%	Gran. Bor. (Grav.)	Owner: Peter Frankenberg. A series of terraces. Area restricted by town road. Pit face in south side of terrace. Test #1 250' west of fence adjacent to barn, 55' south of town road, 35' north of pit. Angular and subangular stones, many over 6". Apparently a local deposit of outwash from secondary stream running into lake from west. 0-1' overburden, 1'-6' gravel,

\* Percentage of Total sample

RANDOLPH GRANULAR DATA SHEET NO. 4

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	1B	1963	6-10	-	No	-	93.7	82.6	14.0	2.75	1 1/2	-	Sand	6'-10' sand, gravel bottom. Test #1A fails for Item 201-A, sub-base of gravel, Has 44.4% wear; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #1B acceptable for Item 202 Mod., sub-base of sand. Test #1C composite. Grading acceptable for Item 201-A, sub-base of gravel. Insufficient stones for wear test. Acceptable for Item 102-A, granular borrow. Test #2 235' west of Test #1, 45' north of pit. Interbedded layers of fine silt and gravel dipping north. Fine gravel with fine sand bottom. Fails for Item 201A. Sub-base of gravel. Has 3.5% passing #270 mesh; maximum allowed 3%. Has wear of 40.8%. Maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #3 300' west of Test #2, 250' northeast of corner of meadow, 275' southeast of corner of meadow. 0-1' overburden, 1'-4' gravel, 4'-10' silt, silt bottom. Gravel
	1C	1963	1-10	0-1	No	-	-	44.7	12.0	3.5	1 1/2	-	Gran. Bor. (Grav.)	
	2	1963	1-10	0-1	No	-	-	50.9	13.0	3.5	2	40.8%	Gran. Bor. (Grav.)	
	3	1963	4-10	0-1	No	100	100	100	38.0	17.25	1	-	-	

\* Percentage of Total Sample

RANDOLPH GRANULAR DATA SHEET NO. 5

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														contains flat stones. Silt apparently lake sediments. Fails for Item 102-A, granular borrow. Has 17.25% passing #270 mesh; maximum allowed 10%.
4	1	1963	1-10	0-1	No	100	100	100	67.0	48.0	1	-	-	Owner: Ernest Kraigenow. A medium-sized terrace with open meadow. Test #1 near south end of meadow. Fine sand with some bands of silt. Fails for Item 102-A, granular borrow. Has 4.8% passing #270 mesh; maximum allowed 10%.
	2	1963	1-10	0-1	No	100	100	97.4	23.0	3.25	1 1/2	-	Gran. Bor. (Grav.)	Test #2 300' north of Test #1. Sand with bands of coarse sand. Fails for Item 202 Mod., sub-base of sand. Has 22.4% passing #100 mesh; maximum allowed 18%. Acceptable for Item 102-A, granular borrow.
5	1	1963	3-10	0-1	No	100	100	38.8	11.0	3.75	1 1/2	-	Sand	Owner: Ted Anderson. A level plateau with open meadow. Test #1 on southernmost knoll. 0-1' over-burden, 1'-3' silt 3'-10' sand, sand bottom. Peb-bly sand with schist

\* Percentage of Total Sample

RANDOLPH GRANULAR DATA SHEET NO. 6

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VMD Spec.	Remarks
						1 1/2"	5/3"	#4	#100	#270				
	2	1963	7-10	0-1	No	100	100	89.3 *7.14	3.0 *1.34	1.5	1 1/2	-	Sand	particles. Interbedded with narrow bands of silt. Acceptable for Item 202 Mod., sub-base of sand. Test #2 in north end of meadow. 0-1' overburden, 1'-7' silt, 7'-10' sand, sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
5	1	1963	1-10	0-1	No	-	-	100	91.7	72.9	-	-	=	Owner: Albert Fielders. A small area of small knolls. Test #1 interbedded sand, silt, gravel; wet towards bottom. Sample processed by Soils Lab.: 100% total sample passing 3/4" mesh, 99.4% passing 3/3", 96.8% passing #4, 94.3% passing #10, 94.0% passing #40, 33.0% #100, 77.6% passing #200, 70.6% passing #270. Classified A-4 Soil Type. Silt, Fails for Item 102-A. Granular borrow. Has 72.9% passing #270 mesh; maximum allowed 10%.
7	1	1963	1-6	0-1	No	100	100	100	84.0	37.5	3	-	-	Owner: Mrs. Edward Mason. A very large area of level

\* Percentage of Total Sample

RANDOLPH GRANULAR DATA SHEET NO. 7

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														valley bottom incised by numerous deep drainage courses. Test #1 silt. Fails for Item 102-A, granular borrow. Has 37.5% passing #270, maximum allowed 10%.
2	1	1963	1-9	0-1	No	100	100	100	92.0	21.5	1	-	-	Owner: Boyce Nichols. A level valley bottom deeply incised by numerous drainage channels. Lake sediments. Test #1 fails for Item 102-A, granular borrow. Has 21.5% passing #270 mesh; maximum allowed 10%.
9	1	1963	1-11	0-1	No	100	100	100	99.0	54.0	1	-	-	Owner: Adam Dixon. A Very large level area in valley floor. Test #1 uniform silt. Fails for Item 102-A, granular borrow. Has 54% passing #270 mesh; maximum allowed 10%.
10	1	1963	1-11	0-1	No	100	100	100	92.0	19.0	1 1/2	-	-	Owner: Adam Dixon. In pasture adjacent to river. Silt. Fails for Item 102-A, granular borrow. Has 19% passing #270 mesh; maximum allowed 10%.

RANDOLPH GRANULAR DATA SHEET NO. 3

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHTO T-21	Abrasion AASHTO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
11	1	1963	2-50	0-2	Yes	100	100	99.3	84.0 *83.4	26.5 26.3	1 1/2	-	-	Owner: Rogers Bros. Const. Co. A large pit with high face (30'-50'). Bands of fine sand and silt. Material being used on Randolph-Randolph Center road for soil cement. Tests #1 and #2 in face. Test #1 fails for Item #102, granular borrow. Has 26.5% passing #270 mesh; maximum allowed 10%. Test #2 fails for Item 102-A, granular borrow. Has 4.5% passing #270 mesh; maximum allowed 10%.
	2	1963	2-50	0-2	Yes	100	100	100	95.0	45.0	1	-	-	
12	1	1963	1-3	0-1	Yes	-	-	22.4	8.0	2.25	3	21.5%	Gravel	Owner: Foster Terry. A series of small terraces in open pasture. Test #1 in first terrace. Bands of sand and gravel. Very dark color on some gravel. Acceptable for Item 201-A, sub-base of gravel. Test #2 made at request of owner. On same level as Test #1. 100' southeast of Test #1. Fine sand and silt with some stones over 6". Uniform. Fails for Item 102-A, granular borrow.
	2	1963	1-11	0-1	No	100	88.6	84.6 *57.5	68.0 13.6	22.0	1 1/2	-	-	

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 9

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1/2"	5/8"	#4	#100	#270				
	3	1963	1-11	0-1	No	100	91.1	88.4	81.0	34.25	1 1/2	-	-	Has 22% passing #270 mesh; maximum allowed 10%. Test #3, 160' north of Test #2, 80' northeast of Test #1. 0-1' overburden, 1'-1.5' silt, 1.5'-3' dirty gravel, 6'-11' fine sand and silt fine sand and silt bottom. Fails for Item 102-A, granular borrow. Has 34.25% passing #270 mesh; maximum allowed 10%.
	4	1963	1-3	0-1	No	-	-	42.2	10.0	3.75	1 1/2	27.4%	Gran. Bor. (Grav.)	Test #4 on terrace above Test #3. Bands of sand and fine gravel. Fails for Item 201-A, sub-base of gravel. Has wear of 27.4%, maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	5A	1963	1-7	0-1	No	100	100	100	87.0	17.50	1	-	-	Test #5 270' northeast of test #4, 100' west of fence, 130' south of fence. 0-1' overburden, 1'-7' silt, 7'-10' pebbly sand, pebbly sand bottom. Test 5A fails for Item 102-A, granular borrow. Has 17.5% passing #270 mesh; maximum allowed 10%.
	5B	1963	7-10	-	No	-	-	58.8	5.0	2.0	1	26.2%	Gran.	Test 5B fails for Item

\* Percentage of Total Sample

\*2.9 \*1.18

RANDOLPH GRANULAR DATA SHEETS NO. 10

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/3"	#4	#100	#270				
	6	1963	10-20	-	No	100	100	100	96.0	40.0	1	-	-	Bor. (Grav.) (Sand) 201-A, sub-base of gravel. Has wear of 26.2%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #6 in face of lower terrace. Silt with a verticle 6" band of fine gravel. Fails for Item 102-A, granular borrow. Has 40% passing #270 mesh; maximum allowed 10%.
13	1	1963	0-3	-	Yes	-	-	51.4	18.0	6.0	3 1/2	-	Gran. Bor. (Grav.)	Owner: Lewis Chambers. An extensive series of pits. Not properly stripped. Test #1 in bottom of small pit north of main pit. 10' face. Sandy gravel, dirty. Wet silt and clay in bottom. Fails for Item 201-A, sub-base of gravel. Has 6% passing #270 mesh; maximum allowed 5%. Insufficient stone for wear test. Acceptable for Item 102-A, granular borrow.
	2	1963	0-4	-	Yes	-	-	16.9	22.0	6.0	1 1/2	13.4%	Gran. Bor. (Grav.)	Test #2 in bottom of pit south of pit containing Test #1. Dirty gravel with more stones than in Test #1. Material dipping to

RANDOLPH GRANULAR DATA SHEET NO. 11

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						1 1/2"	5/8"	#4	#100 #270					
	3	1963	0-3	-	No	-	-	16.5	12.0	4.0	2	20.2%	Gravel	east. Water and silt in bottom. Nearly depleted. Fails for Item 201-A, sub-base of gravel. Has 22% passing #100 mesh; maximum allowed 15%. Has 6% passing #270; maximum 5%. Acceptable for Item 102-A, granular borrow. Test #3 in river bar. Gravel and water in bottom.
	4	1963	2-4	0-2	Yes	-	-	33.6	7.0	2.0	2 1/2	26.8%	Gran. Bor. (Grav.)	Acceptable for Item 201-A, sub-base of gravel. Test #4 in east face of pit containing test #2. Very dry gravel with gravel bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 26.8%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
14	1	1963	1-3	0-1	No	100	100	93.0	9.0	2.0	1	-	Sand	Owner: Henry Chase. A small terrace containing small pit. Test #1 215' west of Friend Street, 35' north of pit. Sand with a few large boulders. Ledge bottom. Acceptable for Item 202 Mod., sub-base of sand.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 12

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2	1963	0-6	-	Yes	100	100	98.8	71.0	13.0	1	-	-	Test #2 in bottom of pit; overgrown with brush and trees. Pines over 6" diam-10' face. Sand with sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 70.1% passing #100 mesh; maximum allowed 18%. Has 12.8% passing #270 mesh; maximum allowed 5%. Fails for Item 102-A, granular borrow. Has 13% passing #270 mesh; maximum allowed 10%.
15	1	1963	0-6	-	Yes	-	-	51.0	4.0	2.0	2	-	Gran. Bor. (Grav.)	Owner: Elgin Ladd. A small pit littered with large stones, topsoil, etc. Depleted. Test #1 in bottom of pit. Fine gravel with till bottom. Fails for Item 201-A, sub-base of gravel. Insufficient proper-sized stones in sample for wear test. Acceptable for Item 102-A, granular borrow.
	2	1963	1-8	0-1	No	100	90.3	73.5	1.0	0.5	2 1/2	-	Sand	Test #2 55' north of TV aerial, 65' east of property line fence. Pebbly sand with pebbly sand bottom. Acceptable for

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 13

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1/2"	5/8"	#4	#100	#270				
													Item 202 Mod., sub-base of sand.	
16	1	1963	1-10	0-1	No	100	100	78.4	2.0 *1.6	1.25 *0.98	2	-	Sand	Owner: Wallace Hill. Extension to north of Bettis pit. Pebbly sand with pebbly sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
17	1	1963	0-6	-	Yes	100	100	83.3	2.0 *1.7	0.5 *0.4	1 1/2	-	Sand	Owner: Grant Bettis. A large pit of pebbly sand. Test #1 in bottom of pit. Pebbly sand with ledge or boulder in bottom. Acceptable for Item 202 Mod., sub-base of sand.
	2	1963	0-9.5	-	Yes	100	100	100	21.0	3.0	1 1/2	-	Gran. Bor. (Sand)	Test #2 115' west of Test #1 in bottom of pit. Sand with sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 21% passing #100 mesh; maximum allowed 18%. Acceptable for Item 102-A, granular borrow.
	3	1963	2-17	0-2	Yes	100	98.4	90.6	6.0 *5.7	1.0 *0.91	2	-	Sand	Test #3 in east face of pit. 0-2' fine gravel. 2'-17' pebbly sand with pebbly sand bottom. Acceptable for Item 202 Mod., sub-base of sand.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 14

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
18	1A	1963	0-4	Stripped	No	.	-	46.8	3.0	1.0	2 1/2	-	Gran. Bor. (Grav.)	Owner: Lawrence Brigham. A large level terrace. Test #1 in stripped area at east side of meadow. 0-4' gravel with some flat stones, 4'-11' fine sand, fine sand bottom. Test #1A fails for Item 201-A, sub-base of gravel. Insufficient proper size stones in sample for wear test. Acceptable for Item 102-A, granular borrow.
	1B	1963	4-11	-	No	100	100	100	82.0	5.75	1 1/2	-	Gran. Bor. (Sand)	Test #1B fails for Item 202 Mod., sub-base of sand. Has 82% passing #100 mesh; maximum allowed 18%. Has 5.75% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
	2	1963	1-6	0-1	No	-	-	37.3	5.0	2.0	3 1/2+	29.4	Gran. Bor. (Grav.)	Test #2 200' southwest of Test #1. Fine gravel coarser than that in Test #1A. Silt bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 29.4%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	3	1963	1-10	0-1	No	100	38.9	80.6	18.0	3.0	4	-	-	Test #3 325' northwest of Test #2. 0-1' overburden,

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 15

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing			Color AASHO	Abrasion AASHO	Passes VHD Spec.	Remarks	
						1 1/2"	5/8" #4	#100 #270					
									T-21	T-4-35		1'-4' gravel, 4'-10' pebbly sand, pebbly sand bottom. Gravel contains many small flat stones. Fails for Item 102-A, granular borrow. Has color of 4; maximum allowed 3 1/2.	
19	1	1963	1-18	0-1	Yes	-	-	60.4	2.0	0.75	1	-	Gran. Bor. (Grav.) Owner: Paul Webster. A very small pit of sandy gravel. Fine gravel with fine gravel bottom. Fails for Item 201-A, sub-base of gravel. Has 60.4% passing #4 mesh; maximum allowed 60%. Insufficient proper sized stones in sample for wear test. Acceptable for Item 102-A, granular borrow.
20	1	1963	1-10	0-1	No	-	-	40.2	14.0	3.5	1 1/2	35.6%	Gran. Bor. (Grav.) Owner: Paul Webster. A small knoll behind house. Stones subangular, unstratified. Test #1 gravel with gravel bottom. 0-1' overburden, 1'-9' dirty gravel, fine gravel bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 35.6%; maximum allowed 25%. Acceptable for Item

RANDOLPH GRANULAR DATA SHEET NO. 16

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1/2", 5/8", #4	#100	#270						
												102-A, granular borrow.		
21	1A	1963	1-6	0-1	No	-	-	33.4	5.0	1.5	3 1/2	20.2%	Gravel	Owner: Paul Webster. A small terrace of gravel. Test #1 near southeast edge of terrace. 0-1' overburden, 1'-6' fine gravel with flat stones of schist, 6'-9' silt, silt bottom. Test #1A acceptable for Item 201-A, sub-base of gravel.
	1B	1963	6-9	-	No	100	100	97.7	96.0	48.0	1	-	-	Test #1B fails for Item 102-A, granular borrow. Has 47.0% passing #270 mesh; maximum allowed 10%.
	2	1963	1-10	0-1	No	-	-	57.1	25.0	7.25	3	-	Gran. Bor. (Grav.)	Test #2 275' southwest of Test #1 on small terrace below. Fine gravel with bands of silt. Fails for Item 201-A, sub-base of gravel. Has 25% passing #100 mesh; maximum allowed 15%. Has 7.25% passing #270 mesh; maximum allowed 5%. Insufficient proper size stones in sample for wear test. Acceptable for Item 102-A, granular borrow.
	3	1963	1-7	0-1	No	-	-	29.4	5.0	2.25	2 1/2	26.0%	Gran.	Test #3 200' northwest of

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 17

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing				Color AASHO	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100				
	4	1963	3-7.5	0-1	No	-	-	24.2	8.0	2.5	2	25.4%	Bor. (Grav.) Test #1, 110' south of Vt. Route 12-A, 215' east of property line fence. 0-1' overburden, 1'-7' gravel, 7'-10' silt, silt bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 26%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	5A	1963	1-7	0-1	No	100	100	100	76.0	24.0	2	-	Gran. Bor. (Grav.) Test #4 75' north of trees along river, 200' east of trees. Barely fails for Item 201-A, sub-base of gravel. Has 25.4% wear; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #5 300' north of Test #4, 290' east of trees. 0-1' overburden, 1'-7' silt, 7'-9' gravel, gravel and water in bottom. Test #5A fails for Item 202 Mod., sub-base of sand. Has 76% passing #100 mesh; maximum allowed 13%. Has 24% passing #270 mesh; maximum allowed 5%. Fails for Item 102-A, granular borrow. Has 24% passing

RANDOLPH GRANULAR DATA SHEET NO. 13

Ident. No.	Field Test NO.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	5B	1963	7-9	-	No	-	-	27.0	10.0	3.25	2 1/2	24.4%	Gravel	#270 mesh; maximum allowed 10%. Test #5B acceptable for Item 201-A, sub-base of gravel.
22	1	1963	1-8.5	0-1	No	-	-	34.3	7.0	2.0	1 1/2	21.0%	Gravel	Owner: Paul Webster. A small meadow south of river with several small knolls. Test #1 70' south of trees along river, 30' north of trees. Gravel with gravel and water in bottom. Acceptable for Item 201-A, sub-base of gravel.
	2A	1963	1-4	0-1	No	100	98.6	94.3	37.0	7.0	2 1/2	-	Gran. Bor. (Sand)	Test #2 330' west of Test #1, 290' north of railroad 0-1' overburden, 1'-4' silt, 4'-9' gravel, 9'-10' silt, silt bottom. Test #2A fails for Item 202 Mod., sub-base of sand. Has 34.9% passing #100 mesh; maximum allowed 18%. Has 6.6% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
	2B	1963	4-9	-	No	-	-	31.6	4.0	1.75	3	27.6	Gran. Bor. (Grav.)	Test #2B fails for Item 201-A, sub-base of gravel. Has wear of 27.6%; maximum

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 19

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1 1/2"	5/8" #4	#100, #270						
	3	1963	1-9	0-1	No	-	-	35.9	4.0	1.25	3	27.3%	Gran. Bor. (Grav.)	allowed 25%. Acceptable for Item 102-A, granular borrow. Test #3 450' west of Test #2, 345' south of trees along river, 235' from railroad. Fails for Item 201-A, sub-base of gravel. Has wear of 27.3%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	4	1963	1-5	0-1	No	-	-	14.1	4.0	1.75	2	27.3%	Gran. Bor. (Grav.)	Test #4 310' southwest of Test #2, 300' south of Test #3, 75' from railroad. Fails for Item 201-A, sub-base of gravel. Has wear of 27.3%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	5	1963	1-8	0-	No	-	-	30.5	7.0	2.0	1 1/2	37.8%	Gran. Bor. (Grav.)	Test #5 at east end of meadow, 115' south of trees, 100' north of trees. Fails for Item 201-A, sub-base of gravel. Has wear of 37.8%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	6	1963	2-9	0-1	No	-	-	23.6	9.0	3.0	1 1/2	23.3%	Gravel	Test #6 400' northeast of Test #1, 70' west of trees 30' south of river, 0-1'

RANDOLPH GRANULAR DATA SHEET NO. 20

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Exist- ing Pit	Sieve Analysis					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						% Passing								
						1 1/2"	5/32"	#4	#100	#270				
														overburden, 1'-2' silt, 2'-7' gravel, 7'-9' silt, coarse gravel bottom. Acceptable for Item 201-A, sub-base of gravel.
23	1A	1963	1-4	0-1	No	100	95.1	92.4	39.0	11.0	2	-	-	Owner: Frederick Smith. A level area in valley floor, limited by river and railroad. Test #1 55' west of property line, 65' north of railroad, 40' south of river. 0-1' overburden, 1'-4' silty sand, 4'-10' gravel, gravel bottom. Test #1A fails for Item 202 Mod., sub-base of sand. Has 36% passing #100 mesh; maximum allowed 13%. Has 10.1% passing #270 mesh; maximum allowed 5%. Fails for Item 102-A, granular borrow. Has 11% passing #270 mesh; maximum allowed 10%.
	1B	1963	4-10	-	No	-	-	33.0	11.0	3.5	1 1/2	22.8%	Gravel	Test #1B acceptable for Item 201-A, sub-base of gravel.
	2	1963	1-10	0-1	No	-	-	44.5	4.0	1.5	1 1/2	23.4%	Gravel	Test #2 300' west of Test #1, 50' north of railroad, 130' south of river, 400'

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 21

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Exist-ing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1 1/2" #4	5/8" #100	#270						
	3	1963	0-2.5	-	No	-	-	29.3	11.0	3.5	1 1/2	23.0%	Gravel	east of trees. Silt over gravel dipping steeply toward river. Acceptable for Item 201-A, sub-base of gravel. Test #3 in river bar. Gravel with gravel and water in bottom. Acceptable for Item 201-A, sub-base of gravel.
24	1	1963	3-9	0-1	No	-	-	42.1	6.0	1.25	2 1/2	25.2%	Gran. Bor. (Grav.)	Owner: Frederick Smith. A large meadow on valley floor. Test #1 on lower level near farm lane. 0-1' overburden, 1'-3' silt, 3'-8' gravel, 8'-9' silt, silt bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 25.2%; maximum allowed 25%. Acceptable for granular borrow.
	2	1963	1-7	0-1	No	-	-	24.1	3.0	0.75	3	21.4%	Gravel	Test #2 on same level as Test #1, 375' east of town line. Stones mostly schist. Very little matrix. Gravel with gravel bottom. Acceptable for Item 201-A, sub-base of gravel.
	3	1963	2-8	0-1	No	-	-	22.4	4.0	1.5	2	23.2%	Gravel	Test #3 415' northwest of

RANDOLPH GRANULAR DATA SHEET NO. 22

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	4	1963	1-10	0-1	No	-	-	29.8	6.0	3.0	1	23.4%	Gravel	Test #1 350' northeast of Test #2, 425' east of town line. 0-1' overburden, 1'-2' silt, 2'-8' gravel, 8'-9' sand, sand bottom. Acceptable for Item 201-A, sub-base of gravel. Test #4 330' north of Test #3, 500' east of town line, 400' west of trees, 75' south of Vt. Route 12A. Gravel with gravel bottom. Acceptable for Item 201-A, sub-base of gravel.
25	1	1963	4.5-10	0-0.5	No	100	95.9	78.4	2.0	0.5	1	-	Sand	Owner: Randolph Industrial Park. A large open meadow in valley floor dissected by many old stream channels. Test #1 near southern end of meadow, 300' north of trees, 190' west of trees, 150' east of trees. 0-0.5' overburden, 0.5'-4.5' fine sand, 4.5'-10' pebbly sand, pebbly sand bottom. Sand and gravel bands dipping eastward. Acceptable for Item 202 Mod., sub-base of sand.
	2A	1963	0.5-6	0-0.5	No	100	100	100	48.0	9.0	3	-	Gran. Bor.	Test #2 in level below Test #1, 150' east of

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 23

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
													Sand	Test #1, 150' east of Test #1, 60' west of trees, 225' north of end of meadow 0-0.5' overburden, 0.5'-6' fine sand, 6'-10' gravel, gravel with water in bottom. Test 2A fails for Item 202 Mod., sub-base of sand. Has 48% passing #100 mesh; maximum allowed 18%. Has 9% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
	2B	1963	6-10	-	No	-	-	53.2	6.0	2.0	3	24.4%	Gravel	Test 2B acceptable for Item 201-A, sub-base of gravel.
	3	1963	0.5-9	0-0.5	No	100	100	100	55.0	13.0	1	-	-	Test #3 500' north of Test #1, 240' south of trees. 0-0.5' overburden, 0.5'-6' fine sand, 6'-10' gravel, gravel and water in bottom. Fails for Item 202 Mod., sub-base of sand. Has 55% passing #100 mesh; maximum allowed 18%. Has 13% passing #270 mesh; maximum allowed 10%.
	4	1963	5-10	0-0.5	No	-	-	42.4	5.-	1.0	2	26.5%	Gran. Bor. (Grav.)	Test #4 300' east of Test #3, 140' south of trees, 200' north of trees, 170'

RANDOLPH GRANULAR DATA SHEET NO. 24

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														west of trees. 0-0.5' overburden, 0.5'-5' fine sand, silt, 5'-10' fine gravel, fine gravel bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 26.5%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
26	1	1963	3-10	0-1	No	-	-	56.2	3.0	1.0	1 1/2	-	Gran. Bor. (Grav.)	Owner: Green Mountain Stock Farm. A large meadow of knolls and terraces in valley floor behind Locke house. Test #1 on terrace below house. Test #1 150' west of bank. 0-1' overburden, 1'-3' fine sand, 3'-10' sandy gravel, sandy gravel bottom. Grading acceptable for Item 201-A, sub-base of gravel. Insufficient stones in sample for wear test. Acceptable for Item 102-A, granular borrow.
	2	1963	1-10	0-1	No	100	100	100	23.0	2.75	1	-	Gran. Bor. (Sand)	Test #2 200' west of Test #1 and on lower level. 0-1' overburden, 1'-10' fine sand, gravel bottom. Fails for Item 202 Mod., sub-base of sand. Has 23%

RANDOLPH GRANULAR DATA SHEET NO. 25

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1 1/2"	5/8" #4	#100 #270						
	3	1963	4-10	0-1	No	-	-	42.6	5.0	1.0	1	26.2%	Gran. Bor. (Grav.)	passing #100 mesh; maximum allowed 13%. Acceptable for Item 102-A, granular borrow. Test #3 150' west of Test #2, 100' east of trees along river. 0-1' overburden, 1'-4' fine sand, 4'-10' gravel, gravel bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 26.2%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
27	1	1963	1.5-10	0-1.5	No	-	-	85.1	3.0	0.5	2	-	Sand	Owner: Randolph Industrial Park. A series of terraces. Test #1 on upper terrace 75' east of factory building, 60' south of shed, 35' north of private lane to lower level. 0-1.5' overburden, 1.5'-7' pebbly sand, 7'-10' fine sand, fine sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
	2	1963	3-3	0-0.5	No	-	-	39.2	4.0	0.5	2	21.0%	Gravel	Test #2 southeast of Test #1 on next lower level, 125' south of private lane leading to lower

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 26

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/31"	#4	#100	#270				
3		1963	3-9	0-0.5	No	-	-	57.2	2.0	0.75	1	22.0%	Gravel	level, 40' west of edge of terrace. 0-0.5' over-burden, 0.5'-3' silt, 3'-8' gravel, 8'-10' fine sand and silt, fine sand and silt bottom. Some flat stones in gravel. Acceptable for Item 201-A, sub-base of gravel.
4A		1963	0.5-4.5	0-0.5	No	-	-	38.1	6.0	1.5	3 1/2	19.3%	Gravel	Test #3 200' southwest of pole #12, 35' east of railroad tracks. 0-0.5' over-burden, 0.5'-3' silt, 3'-9' bands of silt and fine sand running through fine gravel, 9'-10' fine sand, fine sand bottom. Acceptable for Item 201-A, sub-base of gravel.
4B		1963	4.5-10	-	No	100	100	100	85.0	25.0	1	-	-	Test #4 250' southeast of Test #3, 400' south of Test #2, 35' west of edge of terrace, 160' north of base of knoll, 220' east of railroad tracks. 0-0.5' overburden, 0.5'-4.5' gravel, 4.5'-10' fine sand, fine sand bottom. Test #4A acceptable for Item 201-A, sub-base of gravel. Test #4B fails for Item 202 Mod., sub-base of

RANDOLPH GRANULAR MAT. SHEET NO. 27

Ident. No.	Field Test No.	Year Field Tested	Dpth of Sample (FT)	Overburden (FT)	Exist-ing Pit	Sieve Analysis				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						% Passing								
						1 1/2"	5/8"	#4	#100	#270				
	5	1963	1-23	0-1	Yes	100	100	96.1	2.0	0.75	2	-	Sand	sand. Has 95% passing #100 mesh; maximum allowed 18%. Has 25% passing #270 mesh; maximum allowed 5%. Fails for Item 102-A, granular borrow, Has 25% passing #270 mesh; maximum allowed 10%. Test #5 in face of sand pit adjacent to railroad tracks. Acceptable for Item 202 Mod., sub-base of sand.
23	1	1963	3-10	0-0.5	No	-	-	47.8	5.0	1.75	2	-	Gran. Bor. (Grav.)	Owner: Randolph Industrial Park. A small open level meadow. Permission not granted for further testing. Test #1 150' east of railroad tracks, 175' south of private lane, 30' west of edge of terrace. Fine gravel with gravel bottom. Grading acceptable for Item 201-A, sub-base of gravel. Insufficient stones in sample for wear test. Acceptable for Item 102-A, granular borrow.
29	1	1963	1-7	0-1	No	-	-	45.1	4.0	1.5	1 1/2	24.6%	Gravel	Owner: Green Mountain Stock Farm. small knoll

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 28

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/31"	#4	#100	#270				
														of excellent gravel, Test #1 gravel with gravel bottom. Acceptable for Item 201-A, sub-base of gravel.
30	1A	1963	1-3	0-1	No	100	100	100	37.0	2.3	1 1/2	-	Gran. Bor. (Sand)	Owner: Green Mountain Stock Farm. A large area of knolls in valley floor. Test #1, 0-1' overburden, 1'-3' silt, 3'-10' fine gravel, fine gravel bottom. Test #1A fails for Item 202 Mod., sub-base of sand. Has 37% passing #100 mesh; maximum allowed 18%. Acceptable for Item 102-A, granular borrow.
	1B	1963	3-10	-	No	-	-	49.0	4.0	0.75	1	29.2%	Gran. Bor. (Grav.)	Test #1B fails for Item 201-A, sub-base of gravel. Has wear of 29.2%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	2A	1963	1-5.5	0-1	No	100	99.3	85.1	41.0	8.3	2 1/2	-	Gran. Bor. (Sand)	Test #2 190' south of Test #1 on small knoll, 0-1' overburden, 1'-5.5' fine sand, 5.5'-9.5' gravel, gravel bottom. Test #2A fails for Item 202 Mod., sub-base of sand. Has 34.9% passing #100 mesh; maximum
						* Percentage of Total Sample.								

RANDOLPH GRANULAR DATA SHEET NO. 29

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						1 1/2"	5/8"	#4	#100 #270					
	2B	1963	5.5-9.5	-	No	-	-	35.3	10.0	3.0	2	24.0%	Gravel	allowed 10%. Has 7.1% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow. Test #2B acceptable for Item 201-A, sub-base of gravel.
	3	1963	1-11	0-1	No	100	100	92.2	54.0	14.33	2	-	-	Test #3 300' west of Test #2 on lower level, 75' east of river. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 14.33% passing #270 mesh; maximum allowed 10%.
31	1	1963	3-10	0-3	No	100	100	100	98.0	53.75	1	-	-	Owner: Kenneth Norton. A medium-sized terrace. Test #1 near eastern edge of terrace, adjacent to junk cars. 0-3' dirty gravel, probably fill, 3'-10' silty sand, silty sand bottom. Fails for Item 102-A, granular borrow. Has 53.75% passing #270 mesh; maximum allowed 10%.
	2A	1963	1-5	0-1	No	-	-	16.5	18.0	6.25	3 1/2	40.0%	Gran. Bor. (Grav.)	Test #2 south of Test #1, 75' west of edge of terrace, 115' north of terrace edge 0-1' overburden, 1'-5'

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 30

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2B	1963	5-10	-	No	100	100	100	89.0	34.33	1	-	-	coarse gravel with many stones over 6", 5'-10' silt with silt bottom. Test #2A fails for Item 201-A, sub-base of gravel. Has 10% passing #100 mesh; maximum allowed 15%. Has 5.25% passing #270; maximum allowed 5%. Has wear of 40%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #2B fails for Item 102-A, granular borrow. Has 34.33% passing #270 mesh; maximum allowed 10%.
	3	1963	1-9	0-1	No	-	-	30.1	33.0	22.0	1	42.0	-	Test #3 310' west of Test #2, 30' north of edge of terrace, 155' east of Vt. Route 12. 0-1' overburden, 1'-9' coarse gravel with stones over 6", silt bottom. Fails for Item 102-A, granular borrow. Has 22% passing #270 mesh; maximum allowed 10%.
32	1	1963	1-3	0-1	No	-	-	26.1	15.0	5.0	1 1/2	29.8%	Gran. Bor. (Grav.)	Owner: Alexander Magalsky. An old pit now filled in. Dirty coarse gravel. Fails for Item 201-A, sub-base of gravel. Has wear of 29.8%; maximum allowed

RANDOLPH GRANULAR DATA SHEET NO. 31

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis			Color	Abrasion		Passes VHD Spec.	Remarks	
						% Passing	#100	#270		AASHO T-21	AASHO T-4-35			
						1 1/2"	5/8"	#4					25%. Acceptable for Item 102-A, granular borrow.	
33	1	1963	1-9	0-1	No	100	100	98.9	90.0	43.5	1	-	-	Owner: Hale E. Flint. A large level, meadow. Test #1 200' southeast of pole #20, 153-1C, 60' west of edge of terrace. Fine silty sand. Fails for Item 102-A, granular borrow. Has 43.5% passing #270 mesh; maximum allowed 10%.
	2	1963	1-10.5	0-1	No	100	100	98.5	32.0	7.0	1 1/2	-	Gran. Bor. (Sand)	Test #2 450' south of Test #1, 150' west of edge of terrace, 130' north of hedgerow. Fine silty sand. Fails for Item 202 Mod., sub-base of sand. Has 31.5% passing #100 mesh; maximum allowed 18%. Has 6.9% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
	3	1963	1-9.5	0-1	No	100	100	92.4	45.0	24.0	1	-	-	Test #3 in northwest corner of meadow, 225' south of village St. 80' east of Vt. Route 12. 0-1' overburden, 1'-2' silt, 2'-6' pebbly sand, 6'-9.5' wet silt, wet silt bottom. Fails for

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 32

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						1 1/2" #4	5/8" #100	#270					
												Item 102-A, granular borrow. Has 24% passing #270 mesh; maximum allowed 10%.	
34	1	1963	0-6	-	No	-	-	46.8	10.0	2.5	2	26.0%	Gran. Bor. (Grav.) Owner: Harold Taft. A large granular deposit along river. Test #1 adjacent to river in inner bend. Fails for Item 201-A, sub-base of gravel. Has wear of 26%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	2	1963	3-0	0-1	No	-	-	41.5	7.0	1.75	1	22.6%	Gravel Test #2 160' west of wire fence, 180' south of wire fence adjacent to river. 0-1' overburden, 1'-3' silt, 3'-8' gravel, gravel bottom. Acceptable for Item 201-A, sub-base of gravel.
	3	1963	2-7	0-0.5	No	-	-	36.2	14.0	5.0	1 1/2	23.0%	Gravel Test #3 450' west of Test #2, 125' south of river, 260' east of base of terrace. 0-0.5' overburden, 0.5'-2' silt, 2'-7' fine gravel, fine gravel and water in bottom. Acceptable for Item 201-A, sub-base of gravel.

RANDOLPH GRANULAR DATA SHEET NO. 33

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/3"	#4	#100	#270				
37	1A	1963	1-6	0-1	No	100	100	100	32.0	4.5	1 1/2	-	Gran. Bor. (Sand)	Owner: Green Mountain Stock Farm. A very large area of terraces and level meadows. Test #1 in small meadow. 0-1' overburden, 1'-6' sand, 6'-10' fine gravel, fine gravel bottom. Test #1A fails for Item 202 Mod., sub-base of sand. Has 32% passing #100 mesh; maximum allowed 18%. Acceptable for Item 102-A, granular borrow.
	1B	1963	6-10	-	No	-	-	41.8	23.0	5.25	1 1/2	27.2%	Gran. Bor. (Grav.)	Test #1B fails for Item 201-A, sub-base of gravel. Has 23% passing #100 mesh; maximum allowed 15%. Has 5.25% passing #270 mesh; maximum allowed 5%. Has wear of 27.2%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
38	1	1963	0-9	-	Yes	100	100	100	99.0	47.0	1	-	-	Owner: Green Mountain Stock Farm. A large extensive shallow pit in large open meadow. Test #1 in bottom of eastern section of pit. Fine sand with fine sand and water in bottom. Fails for Item

RANDOLPH GRANULAR DATA SHEET NO. 34

Field Ident. No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
					1 1/2"	5/8"	#4	#100	#270				
2	1963	0-3	-	Yes	100	99.2	82.5	7.0	3.0	1	-	Sand	102-A, granular borrow. Has 47% passing #270 mesh; maximum allowed 10%. Test #2 in bottom of pit at western end. Sand with sand and much water in bottom. Acceptable for Item 202 Mod., sub-base of sand.
3	1963	1-10	0-1	No	100	100	98.1	38.0	11.0	1	-	-	Test #3 at eastern end of meadow 70' west of wire fence. Sand with pebbly sand in bottom. Fails for Item 102-A, granular borrow. Has 11% passing #270 mesh; maximum allowed 10%.
4	1963	1-9.5	0-1	No	100	99.0	87.8	2.0	0.25	1 1/2	-	Sand	Test #4 400' north of Test #3, 145' west of wire fence, 130' south of wire fence. Pebbly sand with pebbly sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
5	1963	1-11	0-1	No	97.9	89.0	62.0	3.0	1.0	2	-	Gran. Bor. (Sand)	Test #5 150' west of Test #4, 105' south of wire fence. At a level 6' lower than tests #3 and #4. Pebbly sand with silt bottom. Fails for Item 202 Mod., sub-base of sand. Has 62% passing #4

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 35

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing				Color AASHO T-21	Abrasion: AASHO T-4-35	Passes VMD Spec.	Remarks
						1 1/2"	5/8"	#4	#100 #270				
6	1963	1-10	0-1	No	100	85.2	71.5	3.0	1.0	1	-	Sand	mesh; maximum allowed 70%. Acceptable for Item 102-A, granular borrow. Test #6 450' south of Test #5, 300' west of Test #3, 270' north of wire fence. Pebbly sand to fine gravel. Slight dip to east. Pebbly sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
7	1963	1-9	0-1	No	100	100	89.3	5.0	2.25	2 1/2	-	Sand	Test #7 400' west of Test #6. Pebbly sand with pebbly sand and water in bottom. Acceptable for Item 202 Mod., sub-base of sand.
8	1963	0.5-11	0-9.5	Yes	100	81.4	66.8	2.0	1.0	2	16.8%	Gran. Bor. (Grav.)	Test #8 in west face of pit. Pebbly sand with fine sand bottom. Fails for Item 201-A, sub-base of gravel. Has 66.8% passing #4 mesh; maximum allowed 60%. Fails for Item 202 Mod., sub-base of sand. Has 81.4% passing #100 mesh; minimum allowed 35%. Has 66.3% passing #4 mesh; minimum allowed 70%. Acceptable for Item 102-A, granular borrow.
9	1963	0-10	-	Yes	99.6	88.7	62.6	3.0	1.0	2 1/2	16.9%	Gran.	Test #9 in southeast face

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 36

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/31"	#4	#100	#270				
														Bor. (Grav.) of pit. Sandy gravel with sandy gravel bottom. Fails for Item 201-A, sub-base of gravel. Has 62.3% passing #4 mesh; maximum allowed 60%. Fails for Item 202 Mod., sub-base of sand. Has 62.6% passing #4 mesh; minimum allowed 70%. Acceptable for Item 102-A, granular borrow. Numerous tests were taken in this area at the request of the town manager.
37	1	1963	0-11	-	Yes	100	100	100	32.0	34.0	1	-	-	Owner: Green Mountain Stock Farm. A shallow pit on a large level terrace. Dimensions of pit north-south 225' east-west 215'. Test #1 in bottom of pit. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 34% passing #270 mesh; maximum allowed 10%.
	2	1963	0-11	-	Yes	98.4	34.9	67.0	2.0	0.75	3	-	Gran. Bor. (Sand) Test #2 in east face of pit. Pebbly sand with pebbly sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 34.9% passing 5/31" mesh; minimum	

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 37

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
3		1963	0.5-10	0-0.5	No	100	100	84.3	9.0	1.25	1	-	Sand	allowed 35%. Has 67% passing #4; minimum allowed 70%. Fails for Item 201-A, sub-base of gravel. Has 67% passing #4 mesh; maximum allowed 60%. No wear tests were applied to the stone portion. Acceptable for Item 102-A, granular borrow. Test #3 100' east of Test #2. 0-0.5' overburden, 0.5'-6' silt, fine sand, 6'-10' pebbly sand, pebbly sand and water in bottom. Acceptable for Item 202 Mod., sub-base of sand.
4		1963	0.5-5.0	0-0.5	No	100	100	100	35.0	2.5	5	-	-	Test #4 in face of high terrace southeast of pit. Very difficult to sample due to high face and low angle of repose. Sand with sand bottom. Fails for Item 102-A, granular borrow. Has color of 5; maximum allowed 3 1/2.
5A		1963	0.5-7	0-0.5	No	100	100	100	64.0	16.0	1	-	-	Test #5 north of telephone line on ridge adjacent to road leading to pit. 0-0.5' overburden, 0.5'-7' fine sand and silt, 7'-9.5' sandy gravel, 9.5'-11'

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 37A

Ident. NO.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis					Color AASHO	Abrasion MASHO	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	5B	1963	7-9.5	-	No	100	68.8	54.6	22.0	7.0	1	-	Gran. Bor. (Grav.)	silt, silt bottom. Test #5A fails for Item 102-A, granular borrow. Has 16% passing #270 mesh; maximum allowed 10%. Test #5B fails for Item 201-A, sub-base of gravel. Has 22% passing #100 mesh; maximum allowed 15%. Has 7% passing #270 mesh; maximum allowed 5%. Insufficient proper sized stone in sample for wear test. Acceptable for Item 102-A, granular borrow.
38	1	1963	3-3	0-1	No	-	-	43.8	4.0	1.5	1	26.2%	Gran. Bor. (Grav.)	Owner: Clyde Estabrook. A large flat terrace. Test #1 165' west of road, 150' northwest of pole #179, 25' east of base of upper terrace. 0-1' overburden, 1'-3' silt, 3'-8' gravel 8'-9' silt, silt bottom. Gravel dipping westward so that silt becomes deeper towards terrace and dies out towards road. Fails for Item 201-A, sub-base of gravel. Has wear of 26.2%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.

RANDOLPH GRANULAR DATA SHEET NO. 38

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						% Passing								
						1 1/2"	5/8"	#4	#100	#270				
39	1	1963	1-7	0-1	No	-	-	38.5	9.0	3.0	1	27.4%	Gran. Bor. (Grav.)	Owner: Clyde Estabrook. A large flat terrace. Permission was not granted to test in meadow. Test #1 taken in open ditch dug for water line. 125' east of road. Gravel with gravel bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 27.4%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
40	1	1963	0-10	Stripped	Yes	100	93.5	73.8	17.0	2.08	1 1/2	-	Sand	Owner: Randolph Fish and Game Club. A small pit on a large level terrace. Nearly depleted. Some extension to south. Area of pit was originally a small knoll. Large proportion of sand. Test #1 140' west of edge of terrace, 150' north of property line fence. Pebbly sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
	2	1963	0-7	Stripped	Yes	87.3	76.1	61.1	16.0	6.0	3	-	Gran. Bor. (Sand)	Test #2 on knoll south of pit. Pebbly sand with pebbly sand bottom. Fails

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 39

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														for Item 202 Mod., sub-base of sand. Has 87.3% passing 1 1/2" mesh; minimum allowed 95%. Has 76.1% passing 5/8" mesh; minimum allowed 85%. Has 61.1% passing #4 mesh; minimum allowed 70%. Acceptable for Item 102-A, granular borrow.
41	1	1963	1-9.5	0-1	No	100	100	77.4	49.0	10.5	1 1/2	-	-	Owner: Gilbert Billings. A large open meadow. Test #1 on knoll in center of meadow. Sandy silt with sandy silt in bottom. Fails for Item 102-A, granular borrow.
	2	1963	1-10	0-1	No	100	94.1	75.8	2.0	0.75	1	-	Sand	Test #2 600' east of Test #1, 40' north of wire fence, 240' west of wire fence, 195' south of property line fence. Pebbly sand with pebbly sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
	3A	1963	1-4	0-1	No	-	-	35.4	10.0	4.0	3 1/2	35.4%	Gran. Bor. (Grav.)	Test #3 300' northwest of Test #2, 125' south of property line. Coarse gravel over silt. Beds dip to east--gravel deeper

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 40

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	3B	1963	4-7.5	-	No	100	100	100	99.0	54.0	1	-	-	eastward. Test #3A fails for Item 201-A, sub-base of gravel. Has wear of 35.4%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #3B silt with silt bottom. Fails for Item 102-A, granular borrow. Has 54% passing #270 mesh; maximum allowed 10%.
42	1	1963	0-8	-	Yes	100	94.3	31.3	22.0	16.0	1	-	-	Owner: Lawrence Rand. A pit in an area of high terraces and rolling knolls. Very high face. Dimensions of pit 75' north-south, 50' east-west. This pit is deceiving--till follows contour of hill--quantity of sand apparently limited. Test #1 in floor of pit. Till. Fails for Item 102-A, granular borrow. Has 16% passing #270 mesh; maximum allowed 10%.
	2	1963	0-20	-	Yes	100	100	97.2	3.0	0.25	1 1/2	-	Sand	Test #2 in 20' face. Acceptable for Item 202 Mod., sub-base of sand.
43	1	1963	1-12	0-1	Yes	100	100	100	20.0	8.0	1	-	Gran. Bor.	Owner: Harry Eckson. A small pit. Sand with bands

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 41

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2	1963	2.5-10.5	0-2.5	Yes	100	100	100	99.2	98.2	-	-	-	(Sand) of silt. Dimensions 90' east and west, 50' north and south. Face 15'. Test #1 in east face. Fails for Item 202 Mod., sub-base of sand. Has 20% passing #100 mesh; maximum allowed 19%. Has 9% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow. Test #2 in bottom of pit. Fine sand and silt. Overburden represents sand fill. Sample processed by Soils Lab. 100% passing #10 mesh 99.6 " #40 " 99.2 " #100 " 93.6 " #200 " 98.2 " #270 " Fails for Item 102-A, granular borrow. Has 98.2% passing #270 mesh; maximum allowed 10%. Soil type A-4.
44	1A	1963	0.5-5	0-0.5	No	100	100	100	96.0	46.25	2 1/2	-	-	Owner: Lawrence Rand. A small terrace in pasture south of house. Test #1 on top of terrace 50' east of edge. 0-0.5' overburden, 0.5'-5' silt, 5'-10' fine

RANDOLPH GRANULAR DATA SHEET NO. 42

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	1B	1963	5-10	-	No	-	-	44.6	10.0	5.25	1 1/2	41.8%	Gran. Bor. (Grav.)	gravel, fine gravel bottom. Test #1A fails for Item 102-A, granular borrow. Has 45.25% passing #270 mesh; maximum allowed 10%. Test #1B fails for Item 201-A, sub-base of gravel. Has 5.25% passing #270 mesh; maximum allowed 4%. Has wear of 41.8%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	2	1963	1-8	0-1	No	100	96.3	88.3	17.0	3.0	1 1/2	-	Sand	Test #2 100' east of Test #1, 65' south of edge. Medium sand-yellow red color. Fine gravel in bottom. Acceptable for Item 202 Mod., sub-base of sand.
	3	1963	18-23	-	Yes	100	100	100	90.0	37.0	1	-	-	Test #3 in face below Test #1. Material slopes uphill. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 37% passing #270 mesh; maximum allowed 10%.
45	1	1963	3-11	0-1	Yes	99.2	71.7	47.5	7.0	1.5	1	30.2%	Gran. Bor. (Grav.)	Owner: Lawrence Rand. An extensive flat or floodplain in valley floor. Contains small pit adjacent

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 43

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2A	1963	1-7	0-1	No	100	100	100	39.0	8.0	2 1/2	-	Gran. Bor. (Sand)	to river. Test #1 10' west of pit. 0-1' overburden, 1'-3' silt, fine sand, 3'-11' gravel, gravel and water in bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 36.2%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #2 in meadow north of woods north of pit. 250' west of river, 120' north of woods, 120' east of wire fence. 0-1' overburden, 1'-7' silt, fine sand, 7'-10' gravel with gravel bottom. Test #2A fails for Item 202 Mod., sub-base of sand. Has 39% passing #100 mesh; maximum allowed 18%. Has 8% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
	2B	1963	7-10	-	No	-	-	50.2	7.0	2.25	2	47.1%	Gran. Bor. (Grav.)	Test #2B fails for Item 201-A, sub-base of gravel. Has wear of 47.1%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.

RANDOLPH GRANULAR DATA SHEET NO. 44

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis					Color AASHO	Abrasion AASHO	Passes VHD Spec.	Remarks
						% Passing								
						1 1/2"	5/32"	#4	#100	#270				
46	1	1963	0.5-10	0-0.5	No	100	100	100	28.0	3.0	3	-	Gran. Bor. (Sand)	Owner: Harry Eckson. A large granular area, very level with little vegetation. Test #1 90' south of private lane, 180' east of woods. Fine to medium sand, with fine to medium sand in bottom. Fails for Item 202 Mod., sub-base of sand. Has 23% passing #100 mesh; maximum allowed 18%. Acceptable for Item 102-A, granular borrow. Test #2 in floor of pit, 20' west of east end of pit, 65' north of south end of pit. Dimensions of pit 160' north and south, 70' east and west. Maximum face 10'. Poorly stripped. Test #2 silt with silt bottom. Fails for Item 102-A, granular borrow. Has 40% passing #270 mesh; maximum allowed 10%. Test #3 in southeast face, overburden represents improper stripping. Pebbly sand with silt bottom. Acceptable for Item 202 Mod., sub-base of sand.
	2	1963	3-10	-	Yes	100	100	100	93.0	40.0	1 1/2	-	-	
	3	1963	1-11	0-1	Yes	100	89.3	72.7	9.0 *6.5	1.5 *1.09	2	-	Sand	

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 45

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	4	1963	1-11	0-1	No	100	100	96.2	40.0	17.0	2	-	-	Test #4 50' east of pit in stripped area. 0-1' over-burden, 1'-4' silt, 4'-6' sandy gravel, 6'-11' silt, silt bottom. Fails for Item 102-A, granular borrow. Has 17% passing #270 mesh; maximum allowed 10%.
	5	1963	1-10	0-1	No	100	100	100	36.0	35.5	1	-	-	Test #5 180' south of Test #4. Silt with silt and water in bottom. Fails for Item 102-A, granular borrow. Has 35.5% passing #270 mesh; maximum allowed 10%.
	6	1963	0.5-10	0-0.5	No	100	100	100	11.0	1.5	1	-	Sand	Test #6 250' north of private lane, 90' east of woods, 510' west of town road, 100' south of woods, 200' southwest of corner of woods. Medium sand with medium sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
	7	1963	1-11	0-1	No	100	100	100	36.0	2.0	1	-	Gran. Bor. (Sand)	Test #7 in southeast corner of meadow, 225' north of wire fence, 100' west of town road. Fine sand with fine sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 36% passing #100 mesh; maximum

RANDOLPH GRANULAR DATA SHEET NO. 46

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						% Passing 1 1/2" 5/8" #4	#100	#270	% Passing					
	8	1963	1-10	0-1	No	100	100	100	9.0	1.0	1	-	Sand	allowed 18%. Acceptable for Item 102-A, granular borrow. Test #8 450' west of Test #7, 70' south of trees, 30' east of trees. Medium sand with medium sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
	9	1963	1-10	0-1	No	100	100	100	6.0	1.0	1	-	Sand	Test #9 north of private lane 150' west of town road, 360' northeast of Test #6, 200' east of corner of woods. Sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
47	1	1963	0.5-9	0-0.5	No	100	100	98.2	49.0	6.5	3	-	Gran. Bor. (Sand)	Owner: Earl Farrington. A level meadow. Test #1 in northwest corner. Fine sand with fine sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 48.1% passing #100 mesh; maximum allowed 13%. Has 6.30% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 47

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
48	1	1963	1-10	0-1	No	100	100	99.2	90.0	42.0	1	-	-	Owner: Clifton Lyon. An area of steeply rolling hills. Test #1 30' west of power line, 80' north of town road. 0-1' overburden, 1'-3' silt, 3'-4.5' pebbly sand, 4.5'-10' silt, silt bottom. Fails for Item 102-A, granular borrow. Has 42% passing #270 mesh; maximum allowed 10%.
49	1	1963	1-7	0-1	Yes	-	-	52.3	18.0	8.5	1 1/2	41.0%	Gran. Bor. (Grav.)	Owner: Barton Camp. A series of knolls on terrace. Test #1 under power line and 15' east of small pit. Dimensions of pit 155' east and west, 145' north and south. Very shallow. Flat soft stones. Apparently sandy till. Test #1 0-1' overburden, 1'-7' till, 7'-9.5' silt, silt bottom. Fails for Item 201-A, sub-base of gravel. Has 18% passing #100 mesh; maximum allowed 15%. Has 8.5% passing #270 mesh; maximum allowed 5%. Has wear of 41%; maximum allowed 25%. Acceptable

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 48

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Exist- ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2	1963	1-10.5	0-1	No	100	100	100	90.0	52.0	1	-	-	<p>For Item 102-A, granular borrow.                      Test #2 on knoll northeast of pit. Taken at request of property owner. 0-1' overburden, 1'-3' sandy till, 3'-10.5' silt, silt bottom. Fails for Item 102-A, granular borrow. Has 52% passing #270 mesh; maximum allowed 10%.                      Test #3 on small terrace adjacent to river and north of house. 0-0.5' overburden, 0.5'-5.5' pebbly sand, 5.5'-10.5' silt, silt bottom. Test #3A acceptable for Item 202 Mod., sub-base of sand.                      Test #3B composite. Fails for Item 102-A, granular borrow. Has 13.5% passing #270 mesh; maximum allowed 10%.                      Test #4 in southeast face of pit adjacent to Test #1. Dirty pebbly sand with pebbly sand in bottom. Fails for Item 202 Mod., sub-base of sand. Has 90.3% passing 1 1/2" mesh;</p>
	3A	1963	0.5-5.5	0-0.5	No	96.4	83.1	73.9	10.0 *7.4	3.75 *2.8	2	-	Sand	
	3B	1963	0.5-10.5	0-0.5	No	100	94.9	84.0	41.0	13.5	1 1/2	-	-	
	4	1963	2-7	0-2	Yes	90.3	82.4	69.9	28.0 *19.6	7.0 *4.89	1 1/2	-	Gran. Bor. (Sand)	

\* Percentage of Total Sample.

RAIDOLPH GRANULAR DATA SHEET NO. 49

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1 1/2"	5/8"	#4 #100 #270						
	5	1963	1-11	0-1	Yes	-	-	46.0	25.0	8.3	1	52.4%	Gran. Bor. (Grav.)	minimum allowed 95%. Has 82.4% passing 5/8" mesh; minimum allowed 35%. Has 19.6% passing #100 mesh; maximum allowed 13%. Acceptable for Item 102-A, granular borrow. Test #5 in face of small pit adjacent to town road. Could not sample 11'-13' due to slipping of face. Dirty gravel with many stones over 6". Fails for Item 201-A, sub-base of gravel. Has 25% passing #100 mesh; maximum allowed 15%. Has 3.3% passing #270 mesh; maximum allowed 5%. Has wear of 52.4%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
50	1	1963	0.5-9	0-0.5	Yes	-	-	21.3	12.0	4.5	1 1/2	40.6%	Gran. Bor. (Grav.)	Owner: Mrs. Lyman Gilman. A series of knolls containing several small pits. Test #1 in floor of small pit. Dimensions of pit 100' north and south 65' east and west. Coarse gravel with some stones over 6". Fails for Item

RANDOLPH GRANULAR DATA SHEET NO. 50

Ident. No.	Field Test No.	Year Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1/2"	5/8"	#4	#100, #270						
2		1963	2-7	0-2	Yes	-	-	38.1	9.0	3.75	1 1/2	47.0%	Gran. Bor. (Grav.)	201-A, sub-base of gravel. Has wear of 40.6%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #2 in face of small pit south of pit containing Test #1. Represents small amount of material. Coarse gravel with some stones over 6". Fails for Item 201-A, sub-base of gravel. Has wear of 47%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.	
3		1963	0.5-10.5	0-0.5	No	100	100	100	99.0	40.0	1	-	-		Test #3 on east end of knoll south of Test #2. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 40% passing #270 mesh; maximum allowed 10%.
4		1963	2.5-11	0-1	No	100	100	96.1	83.0	63.75	1	-	-		Test #4 south of knoll containing test #3, 110' west of edge of terrace. Sandy silt with sandy silt bottom. Fails for Item 102-A, granular borrow. Has 63.75% passing #270 mesh; maximum allowed 10%. A small pit is located 200' south of

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 51

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														Test #4 which was not sampled. Schisty fine sand with small flat stones.
51	1	1963	1-9.5	0-1	Yes	100	100	99.6	7.0	2.0	2	-	Sand	Owner: Mrs. Lyman Gilman. A small pit on knoll behind house. Permission was not granted to test this area. Consequently testing was done with hand shovel. Test #1 in north face of pit. 9.5'-11.5' not sampled. Sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
									*6.97	*1.99				
52	1	1963	1-10.5	0-1	No	100	100	100	93.0	35.0	2	-	-	Owner: Wallace Adams. An area of knolls containing several pits. Test #1 on top of knoll overlooking Vt. Route 14. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 35% passing #270 mesh; maximum allowed 10%.
	2	1963	1-8	0-1	No	100	100	91.6	5.0	2.0	1 1/2	-	Sand	Test #2 north of pit near edge of knoll. Sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
									*4.58	*1.33				

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 52

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	3A	1963	3.5-13	0-1	Yes	100	100	96.3	4.0	1.25	1 1/2	-	Sand	Test #3 in west face of pit. 0-1' overburden, 3.5'-13' sand, 13'-19' sand, 19'-23' silt, silt bottom. Test #3A sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
	3B	1963	13-19	-	Yes	100	100	100	5.0	1.5	1 1/2	-	Sand	Test #3B acceptable for Item 202 Mod., sub-base of sand.
	4	1963	2.5-10.5	-	Yes	100	100	100	98.8 *98.2	98.5 *97.8	-	-	-	Test #4 in floor of pit. Silt with silt bottom. Sample processed by Soils Lab. 100% total sample passing 3/8" mesh 99.4 " " " #4 " 99.2 " " " #10 " 98.6 " " " #40 " 98.2 " " " #100 " 98.0 " " " #200 " 97.8 " " " #270 "
	5	1963	2-9	0-2	No	100	100	100	94.0	37.0	1	-	-	Soil Type A-4. Fails for Item 102-A, granular borrow. Has 98.5% passing #270 mesh; maximum allowed 10%. Test #5 in southeast corner of meadow, east of pit containing tests #3 and #4, adjacent to lower pit. Silt with sandy gravel bottom. Fails for Item 102-A, granular borrow. Has 37% passing #270 mesh; maximum allowed 10%.

\* Percentage of Total Sample..

RANDOLPH GRANULAR DATA SHEET NO. 53

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						% Passing 1 1/2"	% Passing 5/8"	% Passing #4	% Passing #100				
	6	1963	15-31	-	Yes	-	-	38.3	5.0	2.0	2	39.6%	Gran. Bor. (Grav.) Test #6 in west face of lower pit. 0-15' sand, silt, 15'-31' coarse gravel 31'-46' not sampled due to slump. Some stones in gravel over 6". Fails for Item 201-A, sub-base of gravel. Has wear of 39.6%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
53	1	1963	5-11	0-0.5	No	-	-	96.7	20.0	4.75	1	-	Gran. Bor. (Sand) Owner: Edson Gifford. An area of steep knolls on valley floor. Knolls apparently contain silt. Test #1 at foot of knoll and east of wire fence. 0-0.5' overburden, 0.5'-5' silt, 5'-7' pebbly sand, 7'-11' fine sand, fine sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 19.3% passing #100 mesh; maximum allowed 18%. Acceptable for Item 102-A, granular borrow.
54	1	1963	1.5-5	0-1.5	No	99.3	81.7	70.6	14.0	4.25	1	-	Sand Owner: Edson Gifford. A level meadow south of barn. Test #1 only hole permitted in this good meadow. 3/10'

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 54

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														south of fence adjacent to barn, 70' west of fence. 165' east of Vt. Route 14. 0-1.5' overburden, 1.5'-5' fine dark brown gravel, 5'-9.5' sandy silt, 9.5'-10.5' sandy gravel, coarse gravel bottom. Acceptable for Item 202 Mod., sub-base of sand.
55	1	1963	1-10	0-1	No	100	100	79.7	24.0	6.5	2	-	Gran. Bor. (Sand)	Owner: Edson Gifford. An area of high knolls. Test #1 in trench silo. Sand with stones. Fails for Item 202 Mod., sub-base of sand. Has 19.1% passing #100 mesh; maximum allowed 18%. Has 5.18% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
56	1	1963	1-9.5	0-1	No	100	100	99.5	84.0	61.25	1	-	-	Owner: Leon Greenwood. A small knoll on valley floor. Test #1 on top of knoll. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 61.25% passing #270 mesh; maximum allowed 10%.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 55

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
57	1	1963	1-10	0-1	No	100	100	94.9	8.0 *7.59	3.0 *2.85	1	-	Sand	Owner: Leon Greenwood. A level meadow on a large terrace. Test #1 206' north of wire fence adjacent to barn. 40' east of wire fence, adjacent to Vt. Route 14. Sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
58	1A	1963	1-5	0-1	No	100	99.5	95.4	8.0 *7.63	2.75 *2.62	2	-	Sand	Owner: Leon Greenwood. A large terrace. Test #1 in pasture. 0-1' overburden, 1'-5' pebbly sand, 5'-10' silt, silt bottom. Test #1A acceptable for Item 202 Mod., sub-base of sand.
	1B	1963	1-10	0-1	No	100	100	97.0	67.0 *65.0	31.0 *30.1	2	-	-	Test #1B composite. Fails for Item 102-A, granular borrow. Has 31% passing #270 mesh; maximum allowed 10%.
59	1	1963	1-8.5	0-1	No	100	100	100	39.0	65.0	1	-	-	Owner: Wendell Brigham. An area of large terraces. Test #1 in small knoll on valley floor. Silt with silt bottom. Fails for Item 102-A, granular borrow. Has 65% passing #270 mesh; maximum allowed 10%.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 56

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
60	1	1963	0.5-10	0-0.5	No	100	100	99.0	7.0	2.0	2	-	Sand	Owner: Wendell Brigham. A large granular terrace. Test #1 300' north of wire fence, 30' west of edge of terrace. Medium sand with medium sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
								*6.93	*1.98					
61	1	1963	0.5-10	0-0.5	No	100	100	98.8	7.0	3.0	3 1/2	-	Sand	Owner: Wendell Brigham. A small terrace between two larger terraces. Sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
								*6.8	*2.96					
62	1	1963	1-10	0-1	No	100	100	99.4	5.0	2.0	1	-	Sand	Owner: Wendell Brigham. A large terrace. Test #1 sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
								*4.97	*1.99					
63	1	1963	1.5-5	0-1.5	No	100	100	92.0	9.0	2.0	2	-	Sand	Owner: Wendell Brigham. A small knoll at north end of meadow. Test #1 0-1.5' overburden, 1.5'-5' sand, 5'-10' silt, ledge bottom. Acceptable for Item 202 Mod., sub-base of sand.
								*7.36	*1.84					
64	1	1963	1-10	0-1	Yes	-	-	35.4	6.0	3.0	1	35.4%	Gran. Bor.	Owner: Leon Greenwood. An old small pit partially
								* Percentage of Total Sample.						

RANDOLPH GRANULAR DATA SHEET NO. 57

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing			Color AASHO	Abrasion AASHO	Passes VHD Spec.	Remarks	
						1 1/2" #4	5/8" #100	#270					
									T-21	T-4-35	(Grav.)	overgrown with poplar trees. Material is coarse boney gravel with some carbonate cementing. Open spaces between the large particles. Many of the stones were rotten. Possible extension of material to south. Test #1 in floor. Gravel with gravel bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 35.4%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.	
65	1	1963	0-8	-	Yes	-	-	47.5	17.0	7.0	1	67.4%	Gran. Bor. (Grav.) Owner: Ray Schwartzmann. A medium-sized pit in a large knoll. Lower level 110' by 110'. Upper level to south--very sandy. Test #1 in floor of lower level coarse gravel with gravel and water in bottom. Fails for Item 201-A, sub-base of gravel. Has 17% passing #100 mesh; maximum allowed 15%. Has 7% passing #270 mesh; maximum allowed 4%. Wear 67.4% maximum allowed 25%. Acceptable for Item 102-A, granular borrow.

RANDOLPH GRANULAR DATA SHEET NO. 58

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2	1963	0-18	-	Yes	-	-	31.2	7.0	3.5	1 1/2	29.6%	Gran. Bor. (Grav.)	Test #2 in east face of lower level. Coarse gravel with many soft stones. Coarse gravel in bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 29.6%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
66	1	1963	0-20	-	Yes	-	-	40.1	3.0	2.0	1	34.0%	Gran. Bor. (Grav.)	Owner: Lowell Lachapelle. A medium sized pit of gravel and sand, in numerous levels. Test #1 in north face. Gravel with calcium carbonate cementation, Fails for Item 201-A, sub-base of gravel. Has wear of 34%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	2	1963	4-12	-	Yes	-	-	52.4	13.0	5.0	1	40.4%	Gran. Bor. (Grav.)	Test #2 in west face of upper level. Overburden hard to measure as pit was partially stripped at one time. 0-4' dark brown sand, 4'-8' sand with some soft-looking stones, 8'-12' gravel some stones look soft and rotted, gravel bottom. Fails for Item

RANDOLPH GRANULAR DATA SHEET NO. 59

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Exist-ing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						1 1/2"	5/8"	#4 #100 #270					
3A	1963	1-9	0-1	Yes	-	-	21.4	15.0	8.0	1	29.8%	Gran. Bor. (Grav.)	201-A, sub-base of gravel. Has wear of 40.4%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #3 in floor of middle level. Gravel in west end dipping sharply westwards. Sand in east end. 0-1' fill, Test #3A fails for Item 201-A, sub-base of gravel. Has 8% passing #270 mesh; maximum allowed 5%. Has wear of 29.8%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
3B	1963	1-9	0-1	Yes	100	100	96.4	3.0	2.0	1	-	Sand	Test #3B sand with sand bottom. Acceptable for Item 202 Mod., sub-base of sand.
4	1963	3-12	0-3	Yes	-	-	32.0	4.0	2.0	1	39.4%	Gran. Bor. (Grav.)	Test #4 in north face. 0-3' overburden, 3'-12' gravel with soft stones, sand bottom. Fails for Item 201-A, sub-base of gravel. Has 39.4% wear; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 60

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
67	1	1963	1-11	0-1	No	100	100	96.4	16.0	7.25	1 1/2	-	Gran. Bor. (Sand)	<p>Owner: Lowell Lachapelle. A very large area of knolls and terraces. Granular material is apparently overlain with lake sediments towards west--material is pinching out in test #2. Test #1 north of pit 50' west of edge of terrace, 0-1' overburden, 1'-3' sandy, silt, 3'-7' sandy gravel, 7'-11' medium sand, medium sand bottom. Fails for Item 202 Mod., sub-base of sand. Has 6.99% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow. Test #2 300' west of Test #1. 0-1' overburden, 1'-6' interbedded silt and sand, 6'-10' silt, silt bottom. Fails for Item 102-A, granular borrow. Has 22.7% passing #270 mesh; maximum allowed 10%.</p>
	2	1963	1-10	0-1	No	100	100	98.7	80.0	22.7	1	-	-	
68	1	1963	1-11	0-1	No	100	100	100	96.0	66.5	1 1/2	-	-	<p>Owner: Lowell Lachapelle. A knoll overlooking meadows containing Ident. #67. Test #1 sandy silt with sandy</p>

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 61

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-2!	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#10	#20				
														silt bottom. Fails for Item 102-A, granular borrow. Has 66.5% passing #270 mesh; maximum allowed 10%.
69	1	1963	1-10	0-1	No	100	100	99.5	92.0	46.5	1 1/2	-	-	Owner: Emory Gifford. A small terrace above valley floor. A narrow ridge extending north from terrace containing pit. Sandy silt with sandy silt bottom. Fails for Item 102-A, granular borrow. Has 46.5% passing #270 mesh; maximum allowed 10%.
														*91.5*46.3
70	1	1963	1-11	0-1	No	-	-	46.8	16.0	6.75	1	57.0%	Gran. Bor. (Grav.)	Owner: Lowell Lachapelle. A series of knolls on both sides of river. Test #1 on knoll in pasture southeast of barn. Unsorted angular stones, some over 6", very soft. Fails for Item 201-A, sub-base of gravel. Has 16% passing #100 mesh; maximum allowed 15%. Has 6.75% passing #270 mesh; maximum allowed 4%. Has wear of 57%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 62

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2	1963	0.5-4	0-0.5	No	-	-	46.6	9.0	4.25	1 1/2	29.6%	Gran. Bor. (Grav.)	Test #2 in valley floor adjacent to river. Gravel with some stones over 6". Gravel and water in bottom. Fails for Item 201-A, sub-base of gravel. Has wear of 29.6%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	3	1963	0-5	-	No	-	-	51.1	5.0	2.25	1 1/2	28.0%	Gran. Bor. (Grav.)	Test #3 across river from Test #2. Subangular stones in gravel. Sand in lower portion of hole contains many schist particles. Fails for Item 201-A, sub-base of gravel. Has wear of 28%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
71	1	1963	1.5-11	0-1.5	No	100	89.6	78.9	21.0 *16.6	8.25 *6.51	1 1/2	-	Gran. Bor. (Sand)	Owner: Lowell Lachepelle. A large terrace on east wall of valley. Test #1 0-1.5' overburden, 1.5'-5.5' dirty sandy gravel, 5.5'-11' fine sandy silt, fine sandy silt bottom. Fails for Item 202 Mod., sub-base of gravel. Has 6.51% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-f,

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 63

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks	
						1 1/2"	5/8"	#4	#100: #270					
													granular borrow.	
72	1	1963	1-6	0-1	No	-	-	55.3	22.0	9.5	2	60.6%	Gran. Bor. (Grav.)	Owner: Eli Camp. A large level meadow. Test #1 in center of meadow. Coarse dirty gravel or sandy till. Many large stones, some well rounded. Little or no stratification. Hole continued to 8' after sampling. Possible ledge at 8'. Fails for Item 201-A, sub-base of gravel. Has 22% passing #100 mesh; maximum allowed 15%. Has 9.5% passing #270 mesh; maximum allowed 3%. Has wear of 60.6%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.
	2	1963	1-7	0-1	No	-	-	35.4	19.0	8.0	2 1/2	45.0%	Gran. Bor. (Grav.)	Test #2 in northwest corner of meadow 50' south of Ferris Road, 0-1' overburden, 1'-7' gravel, 7'-9' sand, sand bottom. Fails for Item 201-A, sub-base of gravel. Has 19% passing #100 mesh; maximum allowed 15%. Has 8% passing #270 mesh; maximum allowed 5%. Has wear of 45%;

RANDOLPH GRANULAR DATA SHEET NO. 64

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	3	1963	1-5	0-1	No	-	-	31.9	19.0	7.5	5	40.2%	-	maximum allowed 25%. Acceptable for Item 102-A, granular borrow. Test #3 in northeast corner of meadow, 100' south of Ferris Road, 185' west of trees. 0-1' overburden, 1'-5' dirty poorly sorted gravel with many soft stones. A band of silty sand at 4'. 5'-6' silty sand. Fails for Item 102-A, granular borrow. Has color of 5; maximum allowed 3 1/2.
73	1	1963	1-9	0-1	No	-	-	40.6	14.0	5.5	2	32.6%	Gran. Bor. (Grav.)	Owner: Richmond Camp. In meadow west of Vt. Route 14 and southwest of chicken house. Test #1 on top of knoll under power line 10'-15' from northwest corner of old pit on Vt. Route 14. Material dark brown with soft-looking stones. Carbonate cementation. 0-1' overburden, 1'-9' gravel, gravel bottom. Fails for Item 201-A, sub-base of gravel. Has 5.5% passing #270 mesh; maximum allowed 4%. Has wear of 32.6%; maximum

RANDOLPH GRANULAR DATA SHEET NO. 65

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Over-burden (FT)	Exist-ing Pit	Sieve Analysis % Passing				Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100 #270				
	2	1963	1-9.5	0-1	No	100	100	99.4	31.0 10.0	1	-	Gran. Bor. (Sand)	allowed 25%. Acceptable for Item 102-A, granular borrow. Test #2 at west edge of meadow 50' from dry brook bed. Material a medium to fine sand with some pebbles and silt bands. Silt approximately 10% of volume. Fails for Item 202 Mod., sub-base of sand. Has 30.8% passing #100 mesh; maximum allowed 18%. Has 9.94% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
74	1	1963	0.5-4	0-0.5	No	-	-	31.9	7.0 3.0	3	22.8%	Gravel	Owner: Richmond Camp. An area of old river channels and terraces on valley floor. Test #1 adjacent to river. Water at 3'. Gravel with gravel and water in bottom. Acceptable for Item 201-A, sub-base of gravel.
75	1	1963	1-3.5	0-1	No	100	100	76.2	28.0 11.0	5	-	-	Owner: Richmond Camp. A terrace above valley floor. Test #1 sandy till--some stones over 6". Silt,

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 66

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis					Color AASHO	Abrasion AASHO	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
														Angular stones, unsorted. Fails for Item 102-A, granular borrow. Has 11% passing #270 mesh; maximum allowed 10%. Has color of 5%; maximum allowed 3 1/2.
11	1	1963	2-9.5	0-2	No	100	100	96.5	33.0	6.5	2	-	Gran. Bor. (Sand)	Owner: Richmond Camp. Meadow south of chicken houses and north of Ident. #73. Test #1 taken about 150' from back of pit, 120' west of wire fence, 110' east of wire fence. Fine to medium sand, overburden, silty. Fails for Item 202 Mod., sub-base of sand. Has 31.8% passing #100 mesh; maximum allowed 13%. Has 6.27% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.
	2	1963	1-5	0-1	No	100	100	100	99.0	68.5	2 1/2	-	-	Test #2 silt. Fails for Item 102-A, granular borrow. Has 68.5% passing #270 mesh; maximum allowed 10%.
11	1	1963	0.5-9.5	0-0.5	No	91.0	82.5	70.3	24.0	10.0	1 1/2	-	Gran. Bor. (Sand)	Owner: Richmond Camp. Pasture north of chicken house and back of large

\* Percentage of Total Sample.

RANDOLPH GRANULAR DATA SHEET NO. 67

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing			Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks		
						1 1/2"	5/8" #4	#100 #270						
												pit. Test #1 silty sand with stones op top. Bottom was cleaner sand with stones. Becoming gravel in bottom of hole. Fails for Item 202 Mod., sub-base of sand. Has 91% passing 1 1/2" mesh; minimum allowed 95%. Has 32.5% passing 5/8" mesh; minimum allowed 35%. Has 7.03% passing #270 mesh; maximum allowed 5%. Acceptable for Item 102-A, granular borrow.		
73	1	1963	1-9.5	0-1	No	-	-	63.4	25.0	10.0	5	63.4%	-	Owner: Richmond Camp. A small meadow on large terrace. Test #1 in south-east corner, 15' west of edge of terrace, 100' east of Vt. Route 14, 155' south of buried water pipe. Material coarse poorly sorted, dirty, dark brown to gray gravel. Mostly flat sub-angular soft-looking stones. More silt and fine sand 1'-2', gravel cleaner and rounder with depth. Fails for Item 102-A, granular borrow. Has color of 5. maximum

RANDOLPH GRANULAR DATA SHEET NO. 60

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
79	1A	1963	4-14.5	0-1	Yes	-	-	13.4	14.0	6.0	1	25.6%	Gran. Bor. (Grav.)	Owner: Jasper Pinney. Small pit in south end of small ridge. State picnic area in northwest end, of ridge. Test #1 in face. 0-1' overburden, 1'-4' coarse gravel--well rotted stones with silty matrix. Not sampled due to poor quality. 4'-20' gravel, 20'-24.5' sand, sand bottom. Dimensions of pit 200' north-south, 150' east-west. Test #1A by hand-shovel. Fails for Item 201-A, sub-base of gravel. Has 6% passing #270 mesh; maximum allowed 5%. Has wear of 25.6%; maximum allowed 25%. Acceptable for Item 102A, granular borrow.
	1B	1963	17.5-20	-	Yes	-	-	18.5	13.0	5.0	1	22.2%	Gravel	Test #1B by backhoe. Could not reach bottom of Test #1A at 14.5'. Acceptable for Item 201-A, sub-base of gravel.
	1C	1963	20-24.5	-	Yes	100	100	100	2.0	0.75	1	-	Sand	Test #1C acceptable for Item 202 Mod., sub-base of sand.

RANDOLPH GRANULAR DATA SHEET NO. 69

Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (FT)	Overburden (FT)	Existing Pit	Sieve Analysis					Color AASHO T-21	Abrasion: AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
	2	1963	0.5-9.5	0-0.5	Yes	100	100	100	4.0	3.0	1	-	Sand	Test #2 in floor. Uniform sand, sand bottom. Cementation at 2'-3' layer. Many black particles of schist. Sand acceptable for Item 202 Mod., sub-base of sand.
30	1	1963	1.5-9.5	0-1.5	Yes	-	-	17.3	17.0	7.5	1	26.0%	Gran. Bor. (Grav.)	Owner: State of Vermont An old pit, now a picnic area. Test #1 on ridge above pit. Coarse gravel, some stones over 3". Fails for Item 201-A, sub-base of gravel. Has 17% passing #100 mesh; maximum allowed 15%. Has 7.5% passing #270 mesh; maximum allowed 5%. Has wear of 26%; maximum allowed 25%. Acceptable for Item 102-A, granular borrow.

RANDOLPH ROCK DATA SHEET NO. 1

Ident. No.	Field Test No.	Year Field Tested	Rock Type	Exist- ing Quarry	Method of Sampling	Abrasion AASHO T-3	Distance Between Samples (FT)	Remarks
1	1	1963	Quartz Monzonite	Yes	Chip	2.6	-	Owner: L.M. Webster. Two small quarry holes in a small outcrop of quartz-monzonite. Outcrop is on side hill about one-quarter mile south of Beanville School, west of Vt. Route 12. Rock is nearly white in color and fine grained. Should be a good source of material if quantity is determined to be sufficient. Samples were chipped from fresh rock at random in the quarry holes. (See also "Discussion of Rock and Rock Sources")
	2	1963	Quartz Monzonite	Yes	Chip	3.3	-	

RANDOLPH GRANULAR PROPERTY OWNERS

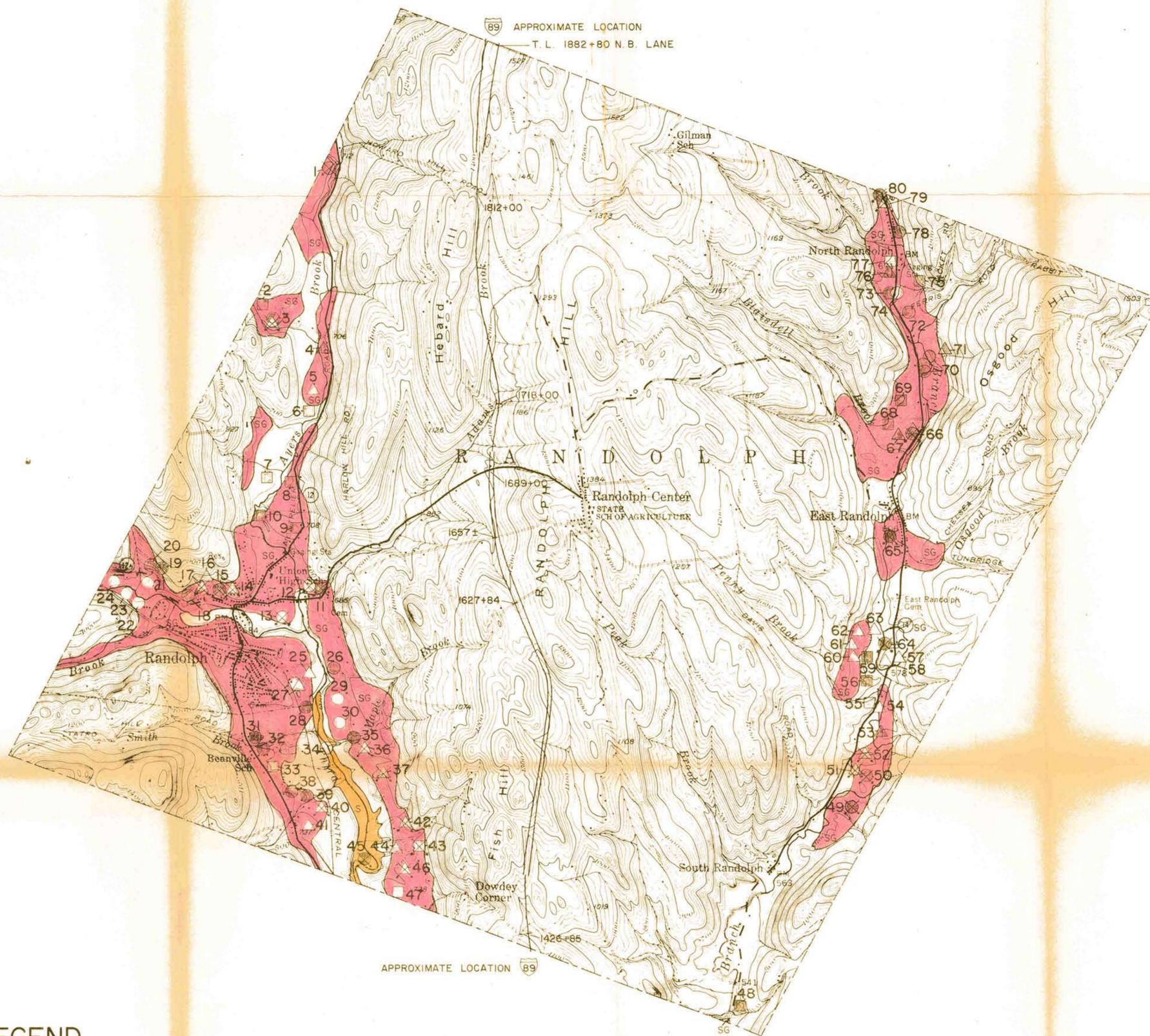
<u>PROPERTY OWNERS</u>	<u>IDENT. NO.</u>
Adams, Wallace	52
Anderson, Ted	5
Barton Camp	49
Bettis, Grant	17
Billings, Gilbert	41
Brigham, Lawrence	18
Brigham, Wendell	59,60,61,62,63
Chambers, Lewis	13
Chase, Henry	14
Dixon, Adam	9, 10
Eckson, Harry	43, 46
Eli Camp	72
Estabrook, Clyde	38, 39
Farrington, Earl	47
Fielders, Albert	6
Flint, Hale E.	33
Frankenberg, Peter	3
Gifford, Edson	53, 54, 55
Gifford, Emory	69
Gilman, Mrs. Lyman	50, 51
Goldsworth, Mrs. Edith	2
Green Mountain Stock Farm	26,29,30,35,36,37
Greenwood, Leon	56,57,58,64
Hill, Wallace	16
Kraigenow, Ernest	4
Lachapelle, Lowell	66,67,68,70,71
Ladd, Elgin	15
Lyon, Clifton	48
Magalsky, Alexander	32
Mason, Mrs. Edward	7
Menard, Clifton	1
Nichols, Boyce	8
Norton, Kenneth	31
Pinney, Jasper	79
Rand, Lawrence	42, 44, 45
Randolph Fish and Game Club	40

RANDOLPH (CONT.)

<u>PROPERTY OWNERS</u>	<u>IDENT. NO.</u>
Randolph Industrial Park	25, 27, 28
Richmond Camp	73,74,75,76,77,78
Rogers Construction Company	11
Schwartzmann	65
Smith, Frederick	23, 24
Taft, Harold	34
Terry, Foster	12
Vermont State	80
Webster, Paul	19,20,21,22

RANDOLPH ROCK PROPERTY OWNERS

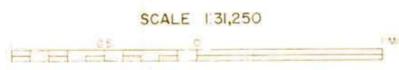
<u>PROPERTY OWNERS</u>	<u>IDENT. NO.</u>
Webster, L.W.	1



LEGEND

- GRAVEL, ACCEPTABLE FOR ITEM 201-A (sub-base of gravel)
- ⊙ GRAVEL, DEPLETED OR NOT ACCEPTABLE FOR ITEM 201-A
- △ SAND, ACCEPTABLE FOR ITEM 202 (sub-base of sand) Mod.
- ▲ SAND, DEPLETED OR NOT ACCEPTABLE FOR ITEM 202 Mod.
- GRANULAR BORROW, ITEM 102-A
- ⊞ MATERIAL NOT ACCEPTABLE FOR ITEM 102-A
- ⊗ EXISTING PIT
- SG SAND & GRAVEL DEPOSIT
- S SAND DEPOSIT
- 3 IDENTIFICATION NUMBER (refer to data sheets)

RANDOLPH



CONTOUR INTERVAL 20 FEET

1964

GRANULAR MATERIALS MAP

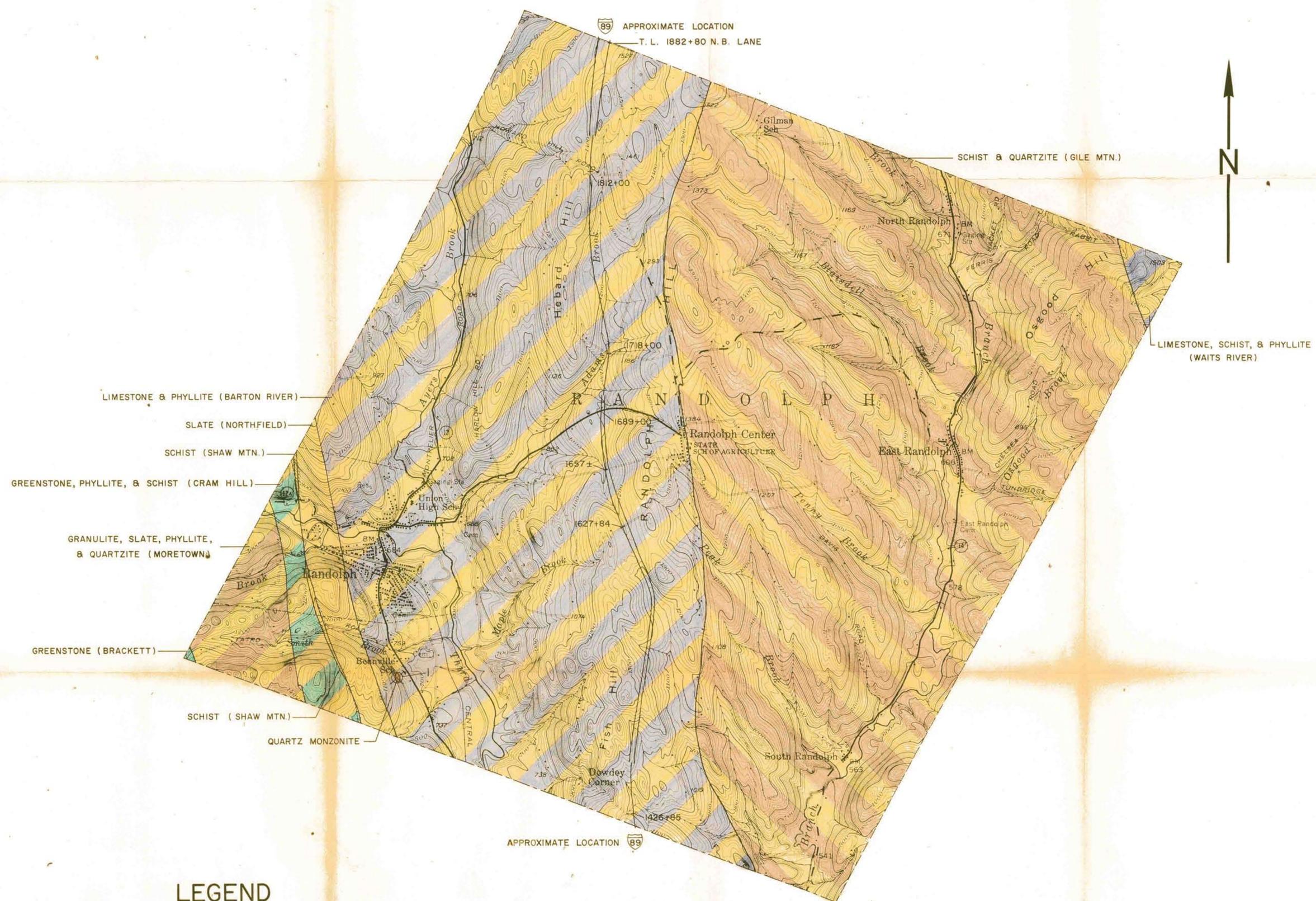
BY  
VERMONT DEPARTMENT OF HIGHWAYS  
IN COOPERATION WITH  
U.S. BUREAU OF PUBLIC ROADS

NOTE: BASED ON U.S.G.S. TOPOGRAPHIC MAPS

REVISIONS

DATE					
BY					

APPROXIMATE LOCATION  
T. L. 1882+80 N. B. LANE



LIMESTONE & PHYLLITE (BARTON RIVER)

SLATE (NORTHFIELD)

SCHIST (SHAW MTN.)

GREENSTONE, PHYLLITE, & SCHIST (CRAM HILL)

GRANULITE, SLATE, PHYLLITE,  
& QUARTZITE (MORETOWN)

GREENSTONE (BRACKETT)

SCHIST (SHAW MTN.)

QUARTZ MONZONITE

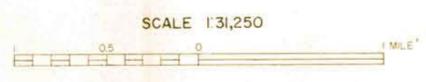
SCHIST & QUARTZITE (GILE MTN.)

LIMESTONE, SCHIST, & PHYLLITE  
(WAITS RIVER)

### LEGEND

- ROCK, ACCEPTABLE FOR ITEM 204 (sub-base of crushed rock)
  - ROCK, NOT ACCEPTABLE FOR ITEM 204
  - EXISTING QUARRY
  - 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
- 3 IDENTIFICATION NUMBER (refer to data sheets)

## RANDOLPH



SCALE 1:31,250  
CONTOUR INTERVAL 20 FEET

1964

## ROCK MATERIALS MAP

BY  
VERMONT DEPARTMENT OF HIGHWAYS  
IN COOPERATION WITH  
U.S. BUREAU OF PUBLIC ROADS

NOTE: BASED ON U.S.G.S. TOPOGRAPHIC MAPS

REVISIONS

DATE				
BY				

ROCK