SURVEY OF HIGHWAY CONSTRUCTION MATERIALS
IN THE TOWN OF CRAFTSBURY, ORLEANS COUNTY, VERMONT

prepared by

Engineering Geology Section, Materials Division
Vermont Department of Highways

in cooperation with

United States Department of Transportation
Federal Highway Administration

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Acknowledgements

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

1. Various departments and individuals of the Vermont State Department of Highways, notably the Planning and Mapping Division and the Highway Testing Laboratory.

2. Professor D. P. Stewart of Miami University, Oxford, Ohio.

3. Professor C. G. Doll, Vermont State Geologist, University of Vermont, Burlington, Vermont.

4. United States Department of Commerce, Bureau of Public Roads.

History

The Materials Survey Project was formed in 1957 by the Vermont State Department of Highways with the assistance of the United States Bureau of 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, searches for highway construction materials were conducted only as the immediate situation required. Thus only limited areas are surveyed, and no overall picture of material resources was available. Highway contractors or resident engineers are usually required to locate the materials for their respective projects and have samples tested by the Highway Testing Laboratory. The additional cost of exploration for construction materials is passed onto the State in the form of higher construction costs. The Materials Survey Project was established to minimize or elimate this factor by enabling the State and its contractors to proceed with information

on materials sources available beforehand. Prior knowledge of locations of suitable material is an important factor in planning future highways.

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

Inclosures

Included in this folder are two surface-geology maps, one defining the location of tests conducted on bedrock sources, the other defining the location of tests conducted on granular materials. These maps are derived from 15-minute or 7½-minute quadrangles of the United States Geological Survey enlarged or reduced to 1:31250 or 1" = 2604'. Delineated on the Bedrock Map are the various rock types of the area. This information was obtained from numerous sources: Vermont Geological Survey Bulletins, Vermont State Geologist Reports, United States Geological Survey Bedrock Maps, and the Centennial Geological Map of Vermont, as well as other references.

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

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

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

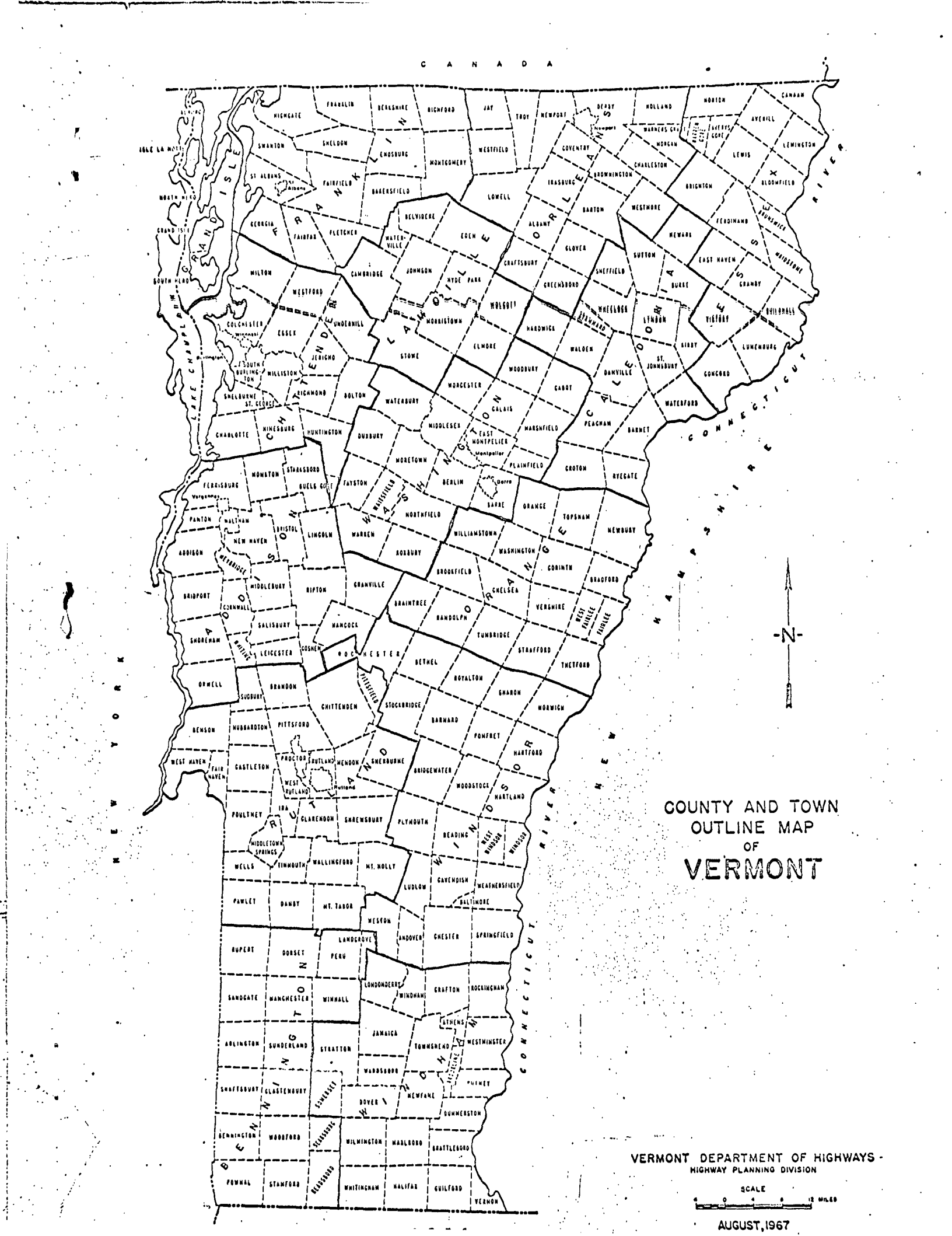
Work sheets contain more detailed information on each test and a detailed sketch of each identification Number Area. The work sheets and laboratory reports are on file in the office headquarters of this Project.

LOCATION

The town of Craftsbury is situated in the southwest corner of Orleans County, and is located in the Hardwick Quadrangle. It is bounded by the town of Eden on the northwest, Hyde Park on the west corner, Wolcott on the southwest, Greensboro on the east, Glover on the northeast corner, and Albany on the north. (See County and Town Map of Vermont on the following page.)

Craftsbury lies entirely within the Vermont Piedmont physiographic region. The town is rather hilly, with the most abrupt relief occuring in a north-south zone adjacent to the Black River Valley. West Hill, near the south part of town is the highest point at 1,802'. The lowest elevation is about 870' where the Black River flows north across the Albany Town Line, just east of Vermont Route No. 14.

Drainage in the west part of town is south via the Wild Branch and its unnamed tributaries. In the east part of town, Seaver, Whitney, Whetstone and Webber Brooks flow mostly westward to the Black River. Cass Brook flows north into the Black River. The Black River rises in Albany, flows south through the northeast and east part of Craftsbury, passes south through Craftsbury village then it flows west then north along Vermont Route No. 14 into Albany on its route north to Lake Memphremagog. Duck, Mud and Little Hosmer Ponds are entirely in the town; Great Hosmer and Eligo Ponds lie partly in the town; The Seaver Branch flows east and joins the Black River near the Albany Town Line.


CANADA
NEW YORK
NEW HAMPSHIRE
CONNECTICUT RIVER
LAKE CHAMPLAIN
GRAND ISLE
FRANKLIN
LAMOILLE
ORLEANS
ESSEX
CALEDONIA
WASHINGTON
ORANGE
WINDSOR
WINDHAM
BENNINGTON
RUTLAND
ADDISON
CHITTENDEN
N
COUNTY AND TOWN
OUTLINE MAP
OF
VERMONT
VERMONT DEPARTMENT OF HIGHWAYS
HIGHWAY PLANNING DIVISION
SCALE
AUGUST, 1967

SURVEY OF ROCK SOURCES

Procedure for Rock Survey

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

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

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

Discussion of Rock and Rock Sources

It should be noted that information on the Rock Materials Map is somewhat simplified. (For a more detailed description of the respective rock formations see the Summary included in this report).

Occasionally, rocks belonging to the same formation and exhibiting similar characteristics (i.e. color, texture, etc.) may produce different abrasion results due to different physical and chemical properties. Therefore, in no case should a satisfactory test result from an area, be construed to mean that the same formation, even in the same area, will not later produce unsatisfactory material. This is especially true of metamorphic rocks.

The western half of Craftsbury is underlain by the granulite, phyllite, and quartzite of the Morgantown Member of the Missisquoi Formation. The topography is quite rounded and gentle, except in rather inaccessible areas.

The eastern half of town is underlain by phyllite and limestone of the Barton River and Ayers Cliff members of the Waits River formation.

In the southern part of town, the contact between the older Moretown member rocks and the younger rocks to the east is marked by a series of alternate anticlines and synclines; one anticline plunges northeast, another northwest and two synclines plunge roughly south-southeast. This was determined from the Centennial Geologic Map of Vermont, and was not observed by this field survey.

Only one of the three areas of granitic rock outlined on the Rock Map was found in the field (see Map. Ident. No. 1). This area produced a sample of Undifferentiated granitic rock which passed the requirements for Crushed Stone for Sub-base. Access to the site is fairly good and not far from State Aid Highway No. 2. in East Craftsbury. However, when tested it did not have much areal extent and has very little relief. The sample was taken at random from an old prospect of scattered blocks because the outcrop itself was too rounded to obtain enough large fragments for testing.

Evidence led this survey to conclude that the rock tested was from a small granitic body because of the presence of small mineral crystals and traces of phyllite. Some of the rocks sampled showed small dark orbicules of biotite while other pieces had a vague flow-structure or foliation. The rock tested appears to grade into the Barton River member.

SURVEY OF SAND AND GRAVEL SOURCES

Procedure for Sand and Gravel Survey

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

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

The field investigation is begun by making a cursory preliminary survey of the entire town. All pits and other areas which show physiographic features that give evidence of glacial or fluvial deposition are noted. These locations are later investigated by obtaining samples of pit faces and other exposed materials. Test pits, dug with a backhoe to a depth of approximately 11 feet, are also sampled. The samples are submitted to the Materials Testing Laboratory where they are tested for gradation and stone abrasion, the latter by the Deval Method (AASHO T-4), and the Los Angeles Method (AASHO T-96).

Discussion of Sand and Gravel Deposits

The granular deposits in Craftsbury occur either as sands and gravels of ice-contact origin deposited as kame terraces, kame moraines, and kames; or as material deposited in quiescent waters of post glacial lakes. Some material may have been deposited as post glacial fluvial gravel. According to D.P. Stewart, the material probably came from the northwest and was deposited during the Burlington Glacial Stade (the last of three stades during Pleistocene Glaciation of Vermont.)

Acceptable Gravel for Sub-base is extremely limited in Craftsbury; the greatest occurences are at Map Identification Numbers 14, 12, 4 and 9, in decreasing amounts. However, even Number 14 has very little material. Map Identification Numbers 9 and 12 have material ranging from coarse gravel to bouldery gravel. Other scant sources of gravel are at Map Identification Numbers 3 and 5, and pits at 2, 19 and 24.

The two largest sources of material suitable for Sand Borrow and Cushion in Craftsbury are at Map Identification Numbers 6 and 8, neither of which is a pit. All other areas are extremely limited. There are pits at Map Identification Numbers 2,15,16,19,23,27,28,29,31 and 35. Non-pit areas are at Map Identification Numbers 7, 18 and 30.

Sand is more plentiful than Gravel in Craftsbury but there are no large sources. Map Identification Number 6 is probably the greatest single source of sand in town and has 100,000 cubic yards (estimated).

SUMMARY OF ROCK FORMATIONS IN THE TOWN OF CRAFTSBURY

Eastern Vermont Sequence (Formations are listed oldest to youngest).

Moretown Member (of the Missisquoi Formation): Quartzite and quartz-plagioclase granulite, in layers 1/8 to several inches thick, separated by "pinstripe" partings that contain muscovite, chlorite, epidote, biotite, and locally garnet; also greenish quartz-sericite-chlorite phyllite and schist, and minor carbonaceous phyllite.

Shaw Mountain Formation: Chiefly tan to brown weathered quartzose limestone and calcareous quartzite characterized by specks of limonite after ankerite; locally underlain by quartz conglomerate and overlain by blue fossiliferous crystalline limestone; greenstone and quartz-sericite schist.

Northfield Formation: Dark gray to black quartz-sericite slate or phyllite with fairly widely-spaced interbeds a few inches thick of siltstone and silty crystalline limestone like that of the Waits River Formation; calcareous slate north of Lamoille River.

Ayers Cliff Member (of the Waits River Formation): Siliceous crystalline limestone containing thin beds of slate and phyllite north of the Lamoille River.

Barton River Member (of the Waits River Formation): Interbedded Siliceous crystalline limestone and sericite-quartz-chlorite phyllite in northern Vermont; diopsidic limestone and cordierite hornfels at contacts with granitic dikes and sills.

New Hampshire Plutonic Series

Undifferentiated Granitic Rocks: Light to dark gray, medium- to coarse-grained granodiorite to quartz monzonite.

GLOSSARY OF SELECTED GEOLOGIC TERMS

Calcareous - Pertaining to or containing calcium carbonate.

Diabase - A basic igneous rock of the Basalt-Gabbro series in which the essential minerals are plagioclase and augite. The plagioclase occurs in long, narrow lath-shaped crystals oriented in all directions and the augite fills the interstices.

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

Fissile - The property of some rocks to be easily split, either along the bedding planes or along cleavage planes induced by fracture or flowage. The term is not applied to minerals.

Fluvial - Of or pertaining to rivers or river action. Produced by river action.

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

Granulite - A quartz feldpsar rock of high metamorphic grade, poor in mica, and characterized structurally by a single, easily visible, regular plane of schistosity.

Ice Contact - Refers to sediments which have accumulated in contact with stagnant or wasting glacial ice. They assume the varied topographic forms expressed by eskers, kames and kame terraces.

Kame - A conical hill of generally poorly stratified drift deposited in contact with glacial ice by streams flowing in or on the ice.

Kame Terrace - Stratified sands and gravels deposited by streams between a glacier and an adjacent valley wall.

Kame Moraine - An accumulation of material deposited directly from the frontal portion of the glacial ice and partially sorted by water action. The deposits may take the form of coalescent knolls, hummocks and ridges.

Medial Moraine: A moraine formed where two valley glaciers join; a lateral moraine from each smaller glacier contributes debris to the medial moraine which lies in and upon the middle of the glacier below the place of junction.

Orbicular - A type of igneous rock having relatively large, somewhat rounded masses of biotite mica.

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

Physiographic - Pertaining to the physical divisions of the earth.

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.

Slate - A very fine-grained homogeneous metamorphic rock which splits smoothly along parallel cleavage planes and yields roughly similar slabs.

Till - An unsorted, unstratified, and unconsolidated heterogeneous mixture of clay, silt, sand, gravel, and boulders deposited directly by glacial ice.

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PARTIAL SPECIFICATIONS FOR HIGHWAY CONSTRUCTION MATERIALS

Listed below are partial specifications for Highway Construction Materials as they apply to this report at date of publication. For a complete list of specifications see Standard Specifications for Highway and Bridge Construction, approved and adopted by the Vermont Department of Highways in July, 1971.

DIVISION 700 - MATERIALS

Section 703.03, Soils and Borrow Materials

703.03 Sand Borrow and Cushion

Sand Borrow shall consist of material reasonably free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and shall meet the requirements of the following table:

Table 703.03A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves Total Sample	Sand Portion
2"	100	
1½"	90-100	
½"	70-100	
No. 4	60-100	100
No. 100		0-30
No. 200		0-12

703.05 Granular Borrow

Granular Borrow shall be obtained from approved sources, consisting of satisfactorily graded, free draining, hard, durable stone and coarse sand reasonably free from loam, silt, clay, and organic material.

The Granular Borrow shall meet the requirements of the following table:

Table 703.05A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves Total Sample	Sand Portion
No. 4	20-100	100
No. 200		0-15

The maximum size stone particles of the Granular Borrow shall not exceed 2/3 of the thickness of the layer being spread.

Section 704, Aggregate

704.05 Gravel for Sub-base

Gravel for Sub-base shall consist of material reasonably free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and shall meet the following requirements.

(a) Grading
The gravel shall meet the requirements of the following table:

Table 704.05A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
No. 4	(20-60)	100
No. 100		0-18
No. 200		0- 8

The stone portion of the gravel shall be uniformly graded from coarse to fine, and the maximum size stone particles shall not exceed 2/3 the thickness of the layer being placed.

(b) Percent of Wear
The percent of wear of the gravel shall be not more than 25 when tested in accordance with AASHO T 4, or more than 40 when tested in accordance with AASHO T 96.

704.06 Crushed Stone for Sub-base

Crushed Stone for Sub-base shall consist of clean, hard, crushed stone, uniformly graded, reasonably free from dirt, deleterious material, pieces which are structurally weak and shall meet the following requirements:

(a) Source
This material shall be obtained from approved sources and the area from which this material is obtained shall be stripped and cleaned before blasting.

(b) Grading
This material shall meet the requirements of the following table:

Table 704.06A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
	Total Sample
4½"	100
4"	90-100
1½"	25- 50
No. 4	0- 15

(c) Percent of Wear
The percent of wear of the parent rock shall be not more than 8 when tested in accordance with AASHO T 3, or the crushed stone a percent of wear of not more than 40 when tested in accordance with AASHO T 96.

(d) Thin and Elongated Pieces
Not more than 30 percent, by weight, of thin and elongated peices will be permitted.
Thin and elongated pieces will be determined on the material coarser than the No. 4 sieve.

(e) Filler

The filler shall be obtained from approved sources and shall meet the requirements as set up for Sand Cushion, Subsection 703.03.

(f) Leveling Material

The leveling material shall be obtained from approved sources and may be either crushed gravel or stone screening produced by the crushing process. The material shall consist of hard durable particles, reasonably free from silt, loam, clay or organic matter.

This material shall meet the requirements of the following table:

Table 704.06B - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves Total Sample
1"	100
3/4"	90-100
1/2"	50- 90
No. 4	30- 70
No. 100	0- 20
No. 200	0- 10

704.07 Crushed Gravel for Sub-base

Crushed Gravel for Sub-base shall consist of material reasonably free from silt, loam, clay or organic matter. It shall be obtained from approved sources and shall meet the following requirements:

(a) Grading

The crushed gravel shall be uniformly graded from coarse to fine and shall meet the requirements of the following table:

Table 704.07A - Gradation Requirements

Grading	Sieve Designation	Percentage by Weight Passing Square Mesh Sieves Total Sample	Sand Portion
	4"	100	
Coarse	No. 4	25- 50	100
	No. 100		0- 20
	No. 200		0- 12
	2"	100	
	1½"	90-100	
Fine	No. 4	30- 60	100
	No. 100		0- 20
	No. 200		0- 12

(b) Percent of Wear

The percent of wear of the parent gravel shall be not more than 20 when tested in accordance with AASHO T 4, or the crushed gravel a percent of wear of not more than 35 when tested in accordance with AASHO T 96.

(c) Fractured Faces

At least 30 percent, by weight, of the stone content shall have at least one fractured face.

Fractured faces will be determined on the material coarser than the No. 4 sieve.

704.09 Dense Graded Crushed Stone for Sub-base

Dense Graded Crushed Stone for Sub-base shall consist of clean, hard, crushed stone, uniformly graded, reasonably free from dirt, deleterious material and pieces which are structurally weak, and shall meet the following requirements:

(a) Source

This material shall be obtained from approved sources and the area from which this material is obtained shall be stripped and cleaned before blasting.

(b) Grading

This material shall meet the requirements of the following table:

Table 704.09A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves Total Sample
3½"	100
3"	90-100
2"	75-100
1"	50- 80
½"	30- 60
No. 4	15- 40
No. 200	0- 10

(c) Percent of Wear

The percent of wear of the parent rock shall be not more than 8 when tested in accordance with AASHO T 3, or the crushed stone a percent of wear of not more than 40 when tested in accordance with AASHO T 96.

(d) Thin and Elongated Pieces

Not more than 30 percent, by weight, of thin or elongated pieces will be permitted.

Thin and elongated pieces will be determined on the material coarser than the No. 4 sieve.

704.10 Gravel Backfill for Slope Stabilization

Gravel Backfill for Slope Stabilization shall be obtained from approved sources, consisting of satisfactorily graded, free draining, hard, durable stone and coarse sand reasonably free from loam, silt, clay, and organic material.

The gravel backfill shall meet the requirements of the following table:

Table 704.10A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
No. 4	20-50	100
No. 100		0- 20
No. 200		0- 10

The stone portion of the gravel backfill shall be uniformly graded from coarse to fine, and the maximum size stone particles shall not exceed 2/3 the thickness of the layer being placed.

704.11 Granular Backfill for Structures

Granular Backfill for Structures shall be obtained from approved sources, consisting of satisfactorily graded, free draining granular material reasonably free from loam, silt, clay, and organic material.

The granular backfill shall meet the requirements of the following table:

Table 704.11A - Gradation Requirements

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Total Sample	Sand Portion
3"	100	
2½"	90-100	
No. 4	50-100	100
No. 100		0- 18
No. 200		0- 8

CRAFTSBURY GRANULAR DATA SHEET NO.1

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
1	1	1971	3.5-8	0-3.5	No	66	57	43	33	26	14	30.5%	Gran. Borrow (Grav.)	Owner: Irvin Martin. Area is field west and above the west end of Town Highway No. 8, and the pit at Map Identification No. 2. Material was mostly a dirty gravel with a high silt content, and did not meet requirements of Gravel for Sub-base. Access is via a narrow road with two wooden bridges, and via a steep road beyond the pit at Map Ident. No. 2. Test #1 was dug in center of field 40' south of fence line. Log of Test #1: 0-3.5', ov.; 3.5-5', gravel; 5-6', silt; 6-8', gravel; bottoms on boulders; water flows in at 5'.
	2A	1971	2-5	0-2	No	71	66	55	44	10	9	18.7%	Gran. Borrow (Grav.)	Test #2A was dug on hillside, 110' N.65°W. and 13' above Test #1. Log of Test #2A: 0-2', ov.; 2-5', pebbly gravel. Beds dip to the east slightly.
	2B	1971	5-9.5	----	No	100	84	82	77	37	23	----	-----	Log of Test #2B: 0-2', ov.; 5-9.5', sand.
	3	1971	2-9	0-2	No	64	64	59	51	50	34	----	----	Test #3 was dug on hillside, 60' S40°W. of shack. Sample was a dirty gravel over a pebbly sand over silt. Log of Test #3: 0-2', ov.; 2.5', gravel; 5-9', pebbly sand. There was insufficient proper size stone for percentage of wear test.

CRAFTSBURY GRANULAR DATA SHEET NO. 2

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
2	1	1966	0.5-8	0-0.5	Yes	61.4	55.2	45.5	30.4	10	2.2	18.5%	Gravel	Owner: Irvin Martin. Area is a two-level pit which was sampled in 1966. This pit is below and just east of Map Ident. No. 1 and has been extended to within a few feet of the Albany Town Line. The pit appeared close to depletion and has water on much of the floor which is a good indication of either silt-clay or bedrock close to floor level. Some material could be obtained , but only afer selective screening. Test #1 was a hand shovel sample of 15' face at bottom of south slope of high hill. Gravels are exposed above face up slope and on top of hill. Gravels near bottom are less silty. On bottom face 8' of bedded gravels and sands contain most of the stones. There are many 4"-6" cobbles, and a few +6" boulders.
	2	1966	0-18	-----	Yes	74.6	73	58.1	35.7	15	4.5	22.4%	Gravel	Test #2 was a composite of the face. Top 8' is a bedded gravel. Bottom 10' looks unstratified with a silty sand matrix and a few rounded stones from boulder to pebble size.

CRAFTSBURY GRANULAR DATA SHEET NO. 3

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	3	1966	0-10.5	----	Yes	100	96.9	91.5	69.7	9	1	-----	Sand	Test #3 was dug at east end of pit on level 15' above floor. Material is a gravelly sand or coarse pebbly sand.
	4	1966	0-8	----	Yes	68.3	64.8	63	49.6	49	33	-----	-----	Test #4 was dug 90' north of and 11' above Test #3. This is on a level with top of pit face. Top 3' or 4' is vaguely stratified and is a gravelly sand with small stones. This goes to unstratified with a silt matrix and angular to sub-rounded cobbles and boulders
	5	1966	0-6	-----	Yes	80.5	75.7	66.7	45.9	30	12	----	Gran. Borrow (Grav.)	Test #5 was dug in haul road 18' above top of lower face, and 40'-50' north of face. Top 4' is a hard-packed, heterogeneous deposit of silt, sand and sub-rounded stones. This is underlain by 2' of clean gravel in a bed which pinches out at north end of hole. The hole bottoms in silt-clay with ledge or large boulder.
	6	1966	0-9	-----	Yes	78	74.6	56.4	41.5	33	12.7	------	-----	Test #6 was dug in top of pit that has a large floor area but whose extensions are used up. A composite of hole is sandy gravel with silt-clay and sand layers, pebbly sand and cobbly gravel in the bottom. Log of Test #6: 0-3', pebbly or gravelly sand; 3-7.5', silt-clay and sand; 7.5-9', sandy gravel with cobbles.

CRAFTSBURY GRANULAR DATA SHEET NO. 4

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	7	1966	-----	----	-----		N O T S A M P L E D						-----	Test #7 dug in north floor at top of pit about 10' below and 130' northwest of Test #6. Material is silty and sandy with a few sub-rounded stones and one thin pebbly sand layer. Ledge at 6'. Material not sampled. Too few stones and too much fine material.
3	1	1971	1-6	0-1	No	73	64	47	35	18	8	15.3%	Gravel	Owner: Irvin Martin. Area is a rolling, grassy hillside on northwest side of Town Highway No.9. Test #1 was dug 100' N60°W. of 20-inch pine near Town Highway No.9. Beds are about horizontal and are vaguely stratified. Gravel is very limited. Log of Test #1: 0-1', ov.; 1-6', dirty pebbly fine gravel. Water seeps in at 3'. Bottoms at 6' in water and fine gravel. (Note: Material may have met specifications for Gravel for Sub-base only because much of the fines were washed out by the water in the hole.)
	2	1971	2-6	0-2	No	100	90	90	90	68	54	-----	----	Test #2 was dug on a wooded hillside, 725' N60°W. of 20-inch pine. Log of Test #2: 0-2', ov.; 2-6', silt-clay.
4	1	1971	1-5	0-1	No	83	72	56	41	17	6	23.4%	Gravel	Owner: Irvin Martin. Area is a rolling field which

CRAFTSBURY GRANULAR DATA SHEET NO. 5

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing 2"	1½"	½"	#4	#100	#200	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														slopes down to southeast from Town Highway No. 9. Field is across road from 20-inch pine. Test #1 was dug in northeast corner of field. Log of Test #1: 0-1', ov.; 1-5', dirty fine gravel; Bottoms at 5' in silt to clay. Field probably is very small, local deposit of gravel. Note: all areas above have access via three wooden bridges and a narrow gravel road.
5	1	1966	1-5	0-1	No	81.3	63.5	49.7	30.9	5	2.4	18.3%	Gravel	Owner: Bert Martin. Area was bank alongside Vermont Route No. 14 which was sampled in 1966. Area is now planted to corn, and permission to sample in 1971 was denied. Test #1 was dug on top of slope of exposed gravel behind and south of house. Material in hole is gravel to 5' with water on a layer of clay. Hole was dug to 8.5' in clay, going to silty sand. Gravel has stones up to 4".
	2	1966	-----	-----	N O T	S A M P L E D						-----	-----	Test #2 was dug 50' south of Test #1. Dug for 6' in a silt-clay. A few stones and minor sand encountered. Not sampled.
6	1	1971	1-11	0-1	No	100	100	98	79	25	6	-----	Sand	Owner: Stephen Meyer. Area is a large pasture southwest of Town

CRAFTSBURY GRANULAR DATA SHEET NO. 6

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														a large pasture southwest of Town Highway No. 10. It is mapped as a kame, but the field survey concluded that it is a beach or lake sand. Test # 1 was dug near Town Road at north corner of field. Log of Test #1: 0-1, ov.; 1-7', layers of pebbles and sand; 7-11', sand with some pebbles.
	2	1971	1-10	0-1	Nc	100	100	100	100	12	5	------	Sand	Test #2 was dug near high-line at northwest edge of field, 350' S50°W of Test #1. Log of Test #2: 0-1',ov.; 1-2', brown sandy silt; 2-10', moist gray silty sand.
	3	1971	2-10	0-2	No	100	100	98	90	18	2	------	Sand	Test #3 was dug near southeast end of high-line near Town Road, and 290' S60°E. of Test #2. Log of Test #3: 0-2', ov.; 2-10', pebbly gray sand; bottoms in same.
	4	1971	1-4.5	0-1	No	100	100	98	97	3	1	------	Sand	Test #4 was dug in sag in field, 270' southwest of Test #3. Log of Test #4: 0-1', ov.; 1-4.5' sand; 4.5-8', silt-clay.
	5	1971	1-10	0-1	No	100	100	99	94	12	3	------	Sand	Test #5 was dug on grassy terrace, 75' north of clump of trees, 415' S10°W of Test #4. Log of Test #5: 0-1', ov.; 1 10', sand with some pebbles.

CRAFTSBURY GRANULAR DATA SHEET NO. 7

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	6	1971	1-4	0-1	No	100	100	100	93	6	1	-----	Sand	Test #6 was dug near the edge of grassy terrace, 300' S65°W. of Test #5. Log of Test #6: 0-1', ov.; 1-4', sand with some pebbles; bottoms in silt-clay.
7	1	1971	0.5-11	0-0.5	No	100	100	97	83	11	5	-----	Sand	Owner: Stephen Meyer. Area is hayfield east of Town Highway No. 10. Test #1 was dug east of the cellar hole at the edge of the pasture near road. The beds dip slightly to the east. Log of Test #1: 0-0.5', ov.; 0.5-1.5', sand; 1.5-2.5', pebbly sand; 2.5-4', sand; 4-5', pebbles; 5-6', sand; 6-7', pebbly sand; 7-8', sand; 8-11', sand and pebbly sand.
	2	1971	0.5-11	0-0.5	No	100	100	100	97	80	57	----	-----	Test #2 was dug near fence at southeast edge of field, 350' S30°E. of Test #1. Log of Test #2: 0-0.5', ov.; 0.5-2', brown sand; 2-8', sand; 8-11', sand; silt and fine sand seams; bottoms in fine sand or silt.
	3	1971	0.5-8	0-0.5	No	100	100	100	100	90	42	------	----	Test #3 was dug near trees at east end of field, 180' N50°E. of Test #2. Log of Test #3: 0-0.5', ov.; 0.5-2.5', sand; 2.5-3.5', silt-clay; 3.5-5', fine sand or silt.

CRAFTSBURY GRANULAR DATA SHEET NO. 8

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	4	1971	1-11	0-1	No	100	100	100	100	90	42	------	-----	Test #4 was dug near trees at north end of field, 270' N10°W of Test #1. Log of Test #4: 0-1', ov.; 1-11', silty fine sand.
8	1	1971	1-10	0-1	No	100	100	100	99	4	1	-------	Sand	Owner: Roger Martin: Area is long pasture with low ridge. Owner did not want many tests in field. Field is south of east end of Town Highway No. 18. Test #1 was dug atop gentle ridge 270' south of barn. Log of Test #1: 0-1', ov.; 1-2.5', sandy silt; 2.5-4.5', medium to coarse sand; 4.5-10', fine sand.
	2	1971	1-5	0-1	No	100	100	100	100	94	60	-------	----	Test #2 was dug near south end of pasture ridge, 60' north of fence. Log of Test #2: 0-1', ov.; 1-5', layers of silty sand and sand, and some silt-clay; bottoms on silt-clay.
	3	1971	1-6	0-1	No	100	100	98	94	22	9		Sand	Test #3 was dug in lower part of pasture, 200' S80°E. of Test #2. Log of Test #3: 0-1', ov.; 1-3', sand; 3-6', silty sand; bottoms in silt-clay at 6'.
9	1	1966	1-8	0-1	No	79.4	67.8	54.3	36,8	14	5.5	23.6%	Gravel	Owner: Floyd Hunt. Area is a stony pasture which has had material drawn from it. The area is west of Vermont Route No. 14.

CRAFTSBURY GRANULAR DATA SHEET NO. 9

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														Test #1 was dug by hand shovel on face of exposure. Material is heterogeneous; it consists of silt- to boulder-size particles; most stones are soft and are sub-angular. The pasture to the north is rough and boulder-strewn. Possible extension would be to the north and northeast.
	2	1966	0.5-6	0-0.5	No.	88.8	78.7	61.4	41.8	17	6.8	22.2%	Gran. Borrow (Grav.)	Test #2 was dug on edge of terrace north of old pit area. Water encountered at 5.5' showed an increase of silt and clay. Hole represents an extension of material in Test #1.
	3	1966	1-7.5	0-1	No	55.4	53	34.6	21.8	18	8.3	20.4%	Gran. Borrow (Grav.)	Test #3 was dug on north extension of terrace-like feature which may be a lateral or medial moraine. There was no apparent stratification and the angular nature of cobbles and boulders would be evidence of morainal deposition. Water at 5.5'.
10	1	1966	1-10	0-1	No	100	100	88.3	68.3	15	3	----	Gran. Borrow (Sand)	Owner: Mildred Wells. Area is a smoothed-over pit near the junction of State Aid Highway No. 1 and Vermont Route No. 14. Test #1 was dug on top of east slope of feature northeast of old pit area. Material is interbedded sand, gravelly sand and pebbles. Test #2 was dug on top of face of old pit, 175' southwest of Test #1. Material is the same as Test

CRAFTSBURY GRANULAR DATA SHEET NO. 10

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														#1 with most of the stones occuring in a layer at the top.
11	1	1971	2-6	0-2	No	87	75	52	38	12	7	26.8%	Gran. Borrow (Grav.)	Owner: Herman Waterhouse. Area is the eastern (low) part of a long field southeast of the junction of Town Highway No. 21 and Town Highway No. 22. The field is quite flat and is not much above a nearby brook. This area is mapped as a pebbly sand, but field investigation proved it to be a fluvial gravel. Test #1 was dug in southeast corner of field, 50' N30°W. of fence corner. Log of Test #1: 0-2', ov.; 2-4', sand and fine gravel; 4-6', fine gravel; much water flows in at 4'.
	2	1971	1.5-7	0-1.5	No	67	57	35	22	27	19	24.7%	----	Test #2 was dug atop small rise near upper part of field, 380' N15°W. of Test #1. Log of Test #2: 0-1.5, ov.; 1.5-4.5', brown to reddish-brown fine gravel; 4.5-7', gray gravel, which is somewhat coarser than the top 4.5'; 7-9', silty fine blue sand Water flows in at 6'.
	3	1971	1-9	0-1	No	70	60	39	27	24	19	25.8%	----	Test #3 was dug atop small rise at north end of field near house, 600' north of Test #2. Log of Test #3: 0-1', ov; 1-2', pebbly fine gravel; 2-6', brown and gray gravel; 6-7', brown gravel; 7-9', gray gravel; water flows in at 8'. About 10% of the stones were in the 4-6" range.

CRAFTSBURY GRANULAR DATA SHEET NO. 11

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														Overall this area would have to be worked keeping the fact of a high water table in mind.
12	1	1971	2-8	0-2	No	62	52	35	25	15	11	16.2%	Gran. Borrow (Grav.)	Owner: Kenneth Stoddard. Area is a small plowed field south across Town Highway No. 22 from Stoddard's house. Test #1 was dug near the southeast corner of plowed field. Log of Test #1: 0-2', ov.; 2-5', coarse bouldery gravel; 5-7', cobbly gravel; 7-8', coarse gravel; water seep at 8'. The gravel was coarse and well-nested which made the digging difficult. Many stones were in the 4-8" range.
	2	1971	2-6.5	0-2	No	60	49	38	28	14	8	23.6%	Gravel	Test #2 was dug near fence, 450' N20°W. of Test #1. There is coarse bouldery gravel over cobbly well-nested gravel. The gravel is essentially horizontally bedded. Log of Test #2: 0-2', ov.; 2-6.5', coarse cobbly gravel; Water encountered at 5.5'. Test bottoms at 6.5' in water and coarse cobbly gravel.
13	1	1971	0.5-8	0-0.5	No	100	100	100	98	87	67	-----	----	Owner: Wilfred Paquette. Area is a hilly pasture with a knoll trending about north-northeast, north of Town Highway No. 42. Test #1 was dug in pasture 160' N20°W. of electric fence opening. Log of Test #1: 0-0.5', ov.; 0.5-8', fine sand; bottoms at 8' on ledge or boulders.
	2	1971	0.5-8	0-0.5	No	100	100	100	100	60	38	-----	----	Test #2 was dug on slope 160' N30°E. of and 12' above Test #1. A thin (2 foot) gravel cap overlies fine sand.

CRAFTSBURY GRANULAR DATA SHEET NO. 12

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														Test #3 was dug atop knoll near fence at north end of field. Log of Test #3: 0-0.5', ov.; 0.5-2', sand 2-3', silt-clay; 3-8', sand; 8-10', silt-clay; bottoms in silt-clay.
14	1	1971	1-11	0-1	No	75	68	48	32	13	5	22.5%	Gravel	Owner: Wilfred Paquette. Area is hayfield south of Town Highway No. 42 and east of hen house. Test #1 was dug in field, 120' S15°E. of northeast corner of hen house. Log of Test #1: 0-1', ov.; 1-4', gravel; 4-11', fine gravel; bottoms on fine gravel.
15	1	1966	1-9	0-1	Yes	100	95.3	94.4	81.6	6	1.5	-------	Sand	Owner: Rodney Smith (former Kenneth Atherton property). Area is a pit and its terraced extension west of the Wild Branch, and west of State Aid Highway No. 3. Test #1 was a hand shovel sample on spur at east end of face. Material is a coarse-to pebbly or gravelly sand, with a few 2-3" stones.
	2	1966	1-12	0-1	Yes	100	100	100	92.5	9	1.5	------	Sand	Test #2 was a hand shovel sample from face west of haul road. Small pebbles and cobbles seen on face are from one layer at top. Material is a coarse to fine sand, getting finer with depth.

CRAFTSBURY GRANULAR DATA SHEET NO. 13

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	3	1971	0.5-5.5	0-0.5	Yes	61	55	46	36	28	20	12.2%	-----	Test #3 was dug in floor, 70' N60°E. of brook. Log of Test #3: 0-0.5', ov.; 0.5-1.5', pebbly sand 1.5-5', gravel; 5-9', sand with pebbles and silt; water flows in at 5'.
	4A	1971	1-3	0-1	No	81	70	43	28	6	2	21%	Gravel	Test #4A was dug near west edge of pasture, 600' N50°W. of field road which is just atop rise of pit. Log of Test #4A: 0-1', ov.; 1-3', reddish brown gravel.
	4B	1971	3-8	0-1	No	100	95	91	78	21	6	----	Sand	Log of Test #4B: 3-8', wet sand; bottoms in silt-clay and water.
	5	1971	1-6	0-1	No	77	70	52	37	9	3	24.2%	Gravel	Test #5 was dug near north end of pasture, 220' N40°E. of Test #4. Log of Test #5: 0-1', ov.; 1-3', brown fine gravel; 3-6', gray fine gravel; 6-8', gravelly sand and water, (not included in sample).
	6A	1971	1-5	0-1	No	70	61	42	32	18	9	28.5%	Gran. Borrow (Grav.)	Test #6A was dug near south end of field, 480' S30°E. of Test #5. Log of Test #6A: 0-1', pebbly ov.; 1-5', gravel.
	6B	1971	5-8	0-1	No	100	100	98	91	11	2	----	Sand	Log of Test #6B: 5-8', wet gray sand.

CRAFTSBURY GRANULAR DATA SHEET NO. 14

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
16	1	1966	1-6	0-1	No	96.7	96.7	70.1	48.6	10	2.8	16.3%	Gravel	Owner: Rodney Smith (former Kenneth Atherton Property). Area is pit and pasture south of buildings on west side of State Aid Highway No. 3 Test #1 was a hand sample from test pit and pile at the north end of pasture. Material is a hard-packed, gravelly sand. The surface of the ground is cobble- and boulder-strewn. The bank of a small brook north of test shows cobbles and pebbles. Extension of the deposit would be north behind buildings in terrace-like pasture, and south in a large field.
	2	1966	1-10	0-1	No	84.6	81.2	71.2	56.6	9	2.8	27.9%	Gran. Borrow (Grav)	Test #2 was dug in pasture, 60' south of Test #1. Material is cobble-and boulder-gravel going to a somewhat less coarse gravel below 4', and into a coarse and stony sand at 6'. Composite of hole is a gravelly sand, with a soft stoned gravel confined to the top 5 or 6'.
	3	1966	2-7	0-2	No	100	97.9	91.5	87.5	10	2	-----	Sand	Test #3 was dug in the pasture west of and behind buildings. Material is coarse to fine sand, with pebbles, cobbles and one or two boulders.
	4	1971	0.5-2.5	0-0.5	Yes	100	100	93	88	45	24	---	----	Test #4 was dug in pit floor, 80' north of fence which is atop face.

CRAFTSBURY GRANULAR DATA SHEET NO. 15

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	5	1971	1-5	0-1	No	100	92	81	72	8	3	-----	Sand	Log of Test #4: 0-0.5', ov.; 0.5-2.5', sand; bottoms at 2.5' in silt-clay. Test #5 was dug midway between high-line poles in a small pasture north of brook. Log of Test #5: 0-1', ov.; 1-2', fine gravel; 2-5', pebbly sand with a few cobbles; bottoms in silt-clay at 5'.
	6	1971	1.5-10	0-1.5	No	100	100	89	81	16	7	----	Sand	Test #6 was dug on a small terrace south of fence near the west edge of pasture terrace and 250' N.45°W. of Test #5. Log of Test #6: 0-1.5', ov.; 1.5-5.5', sand; 5-7', pebbly sand; 7-9', sand; 9-10', fine sand.
17	1	1971	1-9	0-1	No	100	96	91	84	31	19	-----	------	Owner: Roland Greene. Area is a sloping pasture south across small gully from Branch School (now a private residence). This is south of the junction of Town Highway No. 43 and State Aid Highway No. 3. Test #1 was dug near low part of field in northwest corner. Log of Test #1: 0-1', ov.; 1-3', sand; 3-5.5', pebbly sand; 5.5', large boulder; back-hoe was moved slightly to enable digging to continue; 5.5-9', fine sand; 9' large

CRAFTSBURY GRANULAR DATA SHEET NO. 16

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	2	1971	1-7	0-1	No	100	100	97	93	61	45		----	boulder or ledge. Test #2 was dug just north of small rise at east end of pasture. Log of Test #2: 0-1', ov.; 1-7', silty sand with a few angular pebbles; bottoms at 7' on angular rocks and boulders.
	3	1971	1-4	0-1	No	71	65	59	53	44	29	16.5%	-----	Test #3 was dug near tree-line at north end of field, 200' N20°W. of Test #2. Log of Test #3: 0-1', ov.; 1-4', pebbly fine gravel; bottoms at 4' on silt-clay and boulders. This area was mapped as a pebbly sand terrace, but the field survey interpreted the feature to be a probable ablation till which has had a little water sorting.
18	1	1966	1-12	0-1	No	84.9	73.2	61.6	49.2	11	4.1	28.2%	Gran. Borrow (Grav.)	Owner: Wendell Earle. (Former owner was Kenneth Atherton who sold to Denton who sold to Earle; area would need right-of-way through Denton's land). Area is a large high pasture south of pits east of State Aid Highway No. 3. Test #1 was dug near northwest corner of pasture near test gully or erosion gully in which stones show. Material in test-hole is coarse to fine sand with some stones

CRAFTSBURY GRANULAR DATA SHEET NO. 17

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														going to gravel at about 8'. A composite sample was taken, but coarser material may lie below depth of test. A few 10" boulders noted scattered in test-hole. Stones are rounded to sub-rounded.
	2	1966	1.5-10.5	0-1.5	No	100	100	90.7	82.9	16	3.5	------	Sand	Test #2 was dug 220' south southwest of Test #1, and near west edge of pasture. Material is a sand with stones, most of which are 2", but some are up to 6". All are sub-rounded to rounded. Test #2 is 10' below Test #1.
19	1	1966	1-12	0-1	Yes	89.3	83.9	78.8	70.1	11	2.8	---------	Gran. Borrow (Gravel) (Sand)	Owner: Rodney Smith (formerly Kenneth Atherton Property). Area is pit complex east of State Aid Highway #3 beyond field, and north of Town Highway No. 43. Test #1 was a hand shovel sample of east face of small pit, east of and above large pit. Extension of pit would be east into knolls. Materials are a gravelly sand with generally small sub-rounded stones, and a very few cobbles and boulders.
	2	1966	1-10	0-1	Yes	89	87.3	69.6	49.4	11	3.8	14%	Gravel	Test #2 was a hand-shovel sample of 10-foot east face of large pit, 225' west of and below small pit. Many sub-angular to sub-rounded cobbles and boulders on pit faces and around floor. Many stones are somewhat flat. The material is a silty gravel

CRAFTSBURY GRANULAR DATA SHEET NO. 18

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														and more stony than that in the small pit. Extension would be east toward small pit, and possibly west and northwest beneath field.
	3	1966	0-4	---	Yes	100	99.1	92.4	86	14	4.1	-----	Sand	Test #3 was dug in floor of small easterly pit. Top 4' is a sand with small cobbles and pebbles (not enough for a gravel); bottoms in silt-clay.
	4	1966	0.5-7	0-0.5	Yes	77.1	68.5	49.8	11	3	5.3	25.6%	Gran. Borrow (Grav.)	Test #4 was dug in area between two pits, 80' east of face of large pit, and represents its southward extension. Material is a gravel with much sand and a few 10"+ boulders noted. There were many 4"+ sub-rounded cobbles. Test hole bottomed in clay layer and water.
	5	1966	1.5-6	0-1.5	Yes	78.3	73.1	61.3	44.6	13	4.8	20%	Gravel	Test #5 was dug on north side of potential extension of large pit, 45' east of face, and near edge of woods. Material is generally a fine gravel with very few stones over 6"; most are in the 1½ to 3" range.
	6	1971	1-8	0-1	Yes	100	82	81	78	64	44	----	-----	Test #6 was dug in floor of lower pit, 65' south of north face. Material seems to be a damp sandy till with some random pebbles.

CRAFTSBURY GRANULAR DATA SHEET NO. 19

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	7	1971	1 6.5	0-1	No	65	63	54	45	13	7	20.5%	Gravel	Log of Test #7: 0-1, ov.; 1-5', sand and pebbly sand; 5-6.5', fine gravel; water seeps at 6', Silt-clay at 6.5'.
	8	1971	1-10	0-1	No	100	98	90	83	18	8	-----	Sand	Test #8 was dug in edge of field near State Aid Highway No. 3, 400' N65°W. of, and 35' below Test #7. Log of Test #8: 0-1', ov.; 1-4', fine gravel; 4-10', pebbly sand with an occasional boulder or cobble.
	9	1971	1-8	0-1	No	64	58	46	37	13	6	24.3%	Gravel	Test #9 was dug in southwest corner of field, 260' S30°W. of Test #8. Log of Test #9: 0-1', ov.; 1-8', fine gravel with some rounded cobbles; bottoms at 8' in pebbly sand.
20	1	1971	1-10	0-1	No	66	66	61	58	51	37	-----	-----	Owner: James Moffatt. Area is the northern-most of two hill-top fields east of State Aid High-way No. 3. Test #1 was dug in southwest corner of field. Log of Test #1: 0-1', ov.; 1-10', hard-packed sandy till with random pebbles; a few boulders near bottom of hole.

CRAFTSBURY GRANULAR DATA SHEET NO. 20

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing 2"	1½"	½"	#4	#100	#200	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	2	1971	1-10	0-1	No	100	100	98	96	51	33		------	Test #2 was dug on a small rise near northeast corner of field. Log of Test #2: 0-1', ov.; 1-10', hard-packed, silty-sandy till with a few random pebbles, cobbles and boulders. Hard packing was probably caused by the fines in the till matrix. This area is mapped as being a pebbly sand, however, it is a sandy till.
21	1	1971	1-10	0-1	No	100	81	81	78	43	29		-----	Owner: James Moffatt. Area is southernmost of two hilltop fields east above State Aid Highway No. 3, and North of Town Highway No. 43. Test #1 was dug in center of field, 125' south of the treeline. Log of Test #1: 0-1', ov.; 1-10', a sandy till with some disintegrated, angular rock fragments and some hard-packed fine material.
	2	1971	1-10	0-1	No	100	100	82	81	49	35		----	Test #2 was dug near the treeline at the south end of field 280' S15°W. of Test #1. Log of Test #2: 0-1', ov.; 1-10', sandy till with some rock fragments.

CRAFTSBURY GRANULAR DATA SHEET NO. 21

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
22	1	1971	1-7	0-1	No	70	65	54	39	16	13	27.8%	Gran. Borrow (Grav.)	Owner: Joe Houston. Area is a small knoll west of brook, north of the junction of Town Highway No. 39 and Vermont Route No. 14. Test #1 was dug atop a low knoll southwest of the ford across a small brook. Log of Test #1: 0-1', ov.; 1-3', gravel; 3-7', fine pebbly gravel; test bottoms on silt-clay at 7'.
	2	1971	2-4	0-2	No	100	100	100	100	89	84		-----	Test #2 was dug atop a higher knoll, 100' S70°W. of, and 30' above Test #1. Log of Test #2: 0-2', ov.; 2-4', silt-clay.
	3	1971	1-7	0-1	No	73	63	43	30	16	9	22.6%	Gran. Borrow (Grav.)	Test #3 was dug at edge of pasture on the east bank of brook. This was the only place that we could sample on the pasture. There were no stone walls or stone piles noted, so the gravel may be just along the edge of the brook. Log of Test #3: 0-1', ov.; 1-7', cobbly gravel. No permission was given to sample elsewhere east of the brook.
23	1	1966	1-9.5	0-1	No	100	95.6	94.3	87.8	8	6		Sand	Owner: Mrs. Hollis Lathe. Area is ridge and knolls and pit northwest of State Aid Highway No. 4. Area was sampled in 1966,

CRAFTSBURY GRANULAR DATA SHEET NO. 22

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing 2"	1½"	½"	#4	#100	#200	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	2	1966	0-15	----	Yes	79.2	77.1	71.4	62.5	8	2		Gran. Borrow (Grav.)	Owner did not want any testing because she was trying to get area filled in and smoothed over, as of 1971. Test #1 was dug on ridge south-southwest of knoll, and behind owner's buildings. Knoll is along trend of a winding ridge (roughly north-south). Material is a coarse to fine sand with a few pebbles. Test #2 was a hand shovel sample of 15-foot high face in south end of pit. Interrupted bedding, lenses of pebbles and cobbles, and a few silt layers indicate ice contact deposition. North part of pit appears to be mostly sand.
24	1	1966	Random	-----	Yes	73.7	69.7	56.5	45.2	7	4	20%	Gravel	Owner: Mrs. Hollis Lathe. Area is small pit near Levi Cole property line, southwest of Town Highway No. 28. Test #1 was a random hand shovel sample of exposed gravel on the stripped south side of a small kame. Material is a gravel with only a few +6" boulders. There are many small stones, much sand, and some soft, tabular stones.
	2	1971	0-5	----	Yes	81	74	60	46	12	8	45.1%	Gran. Borrow (Grav.)	Test #2 in floor, 125' S25°W. of property line fence near old slaughter house. Material dips to the south slightly. Log of Test #2: 0-3', cobbly fine gravel; 3-5', coarse gravel; water flows in at 3'. Soft stones

CRAFTSBURY GRANULAR DATA SHEET NO. 23

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	3A	1971	2-10	0-2	Yes	79	74	55	42	20	12	29.1%	Gran. Borrow (Grav.)	Test #3A was a hand shovel sample on the upper part of a spur on the west side of the pit. Log of Test #3A: 0-2', ov.; 2-10', cobbly gravel with soft stones.
	3B	1971	10-16	----	Yes	100	98	92	81	36	26	-----	-----	Test #3B was a hand shovel sample on the lower part of a spur on west side of pit. Log of Test #3B: 0-2', ov.; 10-13', gray sand with some angular pebbles; 13-16', cobbly hard-packed fine sand; the stones were angular and coated with gray silty material.
	4	1971	22-28	0-2	Yes	66	56	43	30	10	8	23.4%	Gravel	Test #4 was a hand sample of the lower part of the nearly verticle south pit face. As of 7/21/71 the town was drawing material from the pit. Log of Test #4: 0-2', ov.; 2-22', not able to sample; 22-28', gravel and gravelly sand, with gray silt-clay coating; 28-35', sloughed material.
25	1	1966	1-10	0-1	Yes	68.5	57.2	42.7	27.7	11	5.5	30.6%	Gran. Borrow (Grav.)	Owner: Levi Cole. Area is pit which is now occupied by the town dump west of Town Highway 28. The slight extension of the pit is not worth exploiting.

CRAFTSBURY GRANULAR DATA SHEET NO. 24

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														Test #1 was a hand shovel sample of face of low kame in west-southwest end of pit. The Lathe/Cole property line runs through the face in northwest to southeast direction. Material on face is a coarse gravel with many cobbles, and some boulders up to 12 inches in diameter. There is much sand, silt and disintegrated rock fragments. Most of the stones seem soft.
	2	1966	0-13	----	Yes	75.7	69.8	58.8	43.1	7	4	26.4%	Gran. Borrow (Grav.)	Test #2 was a hand shovel sample of southeast face on west-southwest lobe of pit. Material is a gravel with only a few cobbles over 4", some silt, and much sand. Shows ice contact stratification. What stones are present seem quite soft.
	3	1966	0-15	----	Yes	76.6	68.2	56.9	40.9	6	3.5	27.4%	Gran. Borrow (Grav.)	Test #3 was a hand shovel sample on 15-foot southeast face in central pit area. Fifteen feet back from top of face the knoll drops sharply to wet area. Material is a coarse gravel interbedded with fine sand and pebbly sand layers. Many boulders larger than 6" were noted.
	4	1966	0.5-15	0-0.5	Yes	71	63.3	49.4	35.8	6	5.5	28.6%	Gran. Borrow (Grav.)	Test #4 was a hand shovel sample taken on southwest face in north part of pit. Face varies from 12-20' high. Material consists of interbedded sands, pebbly sands and cobbles with many 6-10" boulders, and a few boulders larger

CRAFTSBURY GRANULAR DATA SHEET NO. 25

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	5	1966	1-20	0-1	Yes	75.4	66.9	55.4	41.5	12	6.8	32.8%	Gran. Borrow (Grav.)	than twelve inches. The stones appeared soft. The floor in the north part is about 6-8' above the floor in the south and central parts of the pit. Test #5 was a hand shovel sample of long northeast face in north part of pit. The top 12-14' is a zone of gravelly sand, below which is fine sand with a few stones. The north end of this face shows interbedded silty sands, sands, cobbles and a few boulders. On the northwest side of the knoll (the edge of the dump) the gravels grade into pebbly sands.
26	1	1971	0.5-4	0-0.5	No	100	100	100	62	21	15	-----	Gran. Borrow	Owner: Raymond Riel. Area is ridge with small diggings just west of State Aid Highway No. 4, and south of Riel's house. Test #1 was dug down face of tiny diggings. Log of Test #1: 0-0.5', ov.; 0.5-4', sand, fine gravel with pebbles and small rock fragments. Test bottoms on bedrock at 4'.
27	1	1971	1-11	0-1	Yes	100	100	100	98	31	13	-----	Gran. Borrow (Sand)	Owner: Raymond Riel. Area is pits and field east of Town Highway No. 28. Test #1 was a hand shovel sample of southeast face of northwest pit. Log of Test #1: 0-1', ov.; 1-11', interbedded fine and coarse sands with one silt-clay seam.

CRAFTSBURY GRANULAR DATA SHEET NO. 26

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	2	1971	1-7	0-1	Yes	89	88	77	52	21	14	38.9%	Gran. Borrow (Grav.)	Test #2 was a hand shovel sample dug on the north face of south pit. Log of Test #2: 0-1', ov.; 1-7', soft, very fine gravel; test bottoms at 7' in fine sand.
	3	1971	1-8	0-1	Yes	100	100	100	97	28	11	-------	Sand	Test #3 was a hand shovel sample of southeast face of south pit. Log of Test #3: 0-1', ov.; 1-2.5', pebbly sand; 2.5-3.5', fine sand; 3.5-8', medium sand; test bottoms at 8' on silty sand.
	4	1971	1-8	0-1	Yes	100	98	95	94	17	7	-------	Sand	Test #4 was dug in floor, 70' N60°W. of Test #1. Beds dip slightly to the west. Log of Test #4: 0-1', a silt-clay overburden; 1-3', sand; 3-4', pebbly sand; 4-7', sand; 7-8', sand; water flows in at 7', test bottoms at 8' on boulders.
	5	1971	0.5-4	0-0.5	Yes	100	80	68	54	43	30	-----	----	Test #5 was dug in floor of southeast pit, and appeared to be a poorly sorted moraine or till. Log of Test #5: 0-0.5', ov.; 0.5-4', rock fragments and some sand; test bottoms on bedrock or boulder at 4'.
	6	1971	1-10	0-1	No	100	100	96	90	10	6	--------	Sand	Test #6 was dug on pasture knoll, 125' N85°E. of southeast pit, and 8' above top of face. Log of Test #6: 0-1', ov.; 1-3', coarse sand with pebbles; 3-6', sand 6-7', pebbly sand; 7-10', fine sand; test bottoms at 10' on bedrock or boulders.

CRAFTSBURY GRANULAR DATA SHEET NO. 27

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	7	1971	1-3	0-1	No	100	100	98	98	74	42		-----	Test #7 was dug on hillside near north end of field, 550'N20°E of, and 37' above Test #6. Log of Test #7: 0-1', ov.; 1-3', sand and silt-clay; 3', bedrock.
	8	1971	1-5	0-1	No	100	100	94	92	78	55		-----	Test #8 was dug on pasture slope, 270'N25 E. of, and 15' above Test #6. Log of Test #8: 0-1', ov.; 1-5', sand with rotted rock fragments; 5', bedrock.
28	1	1971	1-18	0-1	Yes	100	100	100	98	17	6		Sand	Owner: Maurice Kerwin. Area is pit and knoll and pasture, east of, and above State Aid Highway No. 4. Test #1 was a hand shovel sample near center of 38-foot high north face of narrow pit. Log of Test #1: 0-1', ov.; 1-18', beds of fine sand and pebbly sand; 18-38', sloughed material.
	2	1971	2-18.5	0-2	Yes	100	100	100	98	26	11		Sand	Test #2 was a hand shovel sample near west end of north face. At test #2 the face is 23' high. Log of Test #2: 0-2', ov.; 2-18.5', interbedded pebbly sands, silty sand and sand.
	3	1971	0.5-9	0-0.5	No	100	100	100	99	31	12		Gran. Borrow (Sand)	Test #3 was dug on pasture above pit, 130'S10°E. of strippings pile. Log of Test #3: 0-0.5', ov.; 0.5-3', sand; 3-4', silt-clay; 4-5', coarse sand; 5-9', sand; bottoms at 9' on boulders.

CRAFTSBURY GRANULAR DATA SHEET NO. 28

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	4	1971	1-7	0-1	No	100	100	100	100	95	73		-----	Test #4 was dug at east edge of high pasture, 400' S10°E. of, and 35', above Test #3. Log of Test #4: 0-1', ov.; 1-3', sand with rock fragments; 3-7', sand, silt-clay and rock fragments.
29	1A	1971	1-14.5	0-1	Yes	100	100	98	91	16	10		Sand	Owner: Charles Furlong. Area is a knoll with a pit, east of State Aid Highway No. 4. Pit is just behind Furlong's house. Test #1A was a hand shovel sample on east side of pit. Log of Test #1A: 0-1', ov.; 1-7.5', sand with silt seams; 7.5-8.5', pebbly sand; 8.5-14.5', sand and pebbly sand.
	1B	1971	14.5-30	0-1	Yes	100	100	100	93	32	16		----	Test #1B was a hand shovel sample taken below Test #1A and down to the level of the floor. Log of Test #1B: 0-1', ov.; 14.5-16', pebbly sand; 16-20', sand; 20-21', pebbly sand; 21-24', sand; 24-25', silty sand with some silt-clay; 25-29', coarse sand; 29-30', pebbly sand.
	2	1971	0.5-3	0-0.5	Yes	100	100	100	100	75	46		----	Test #2 was dug in pit floor. Log of Test #2: 0-0.5', ov.; 0.5-2.5', silty sand; 2.5-3', fine sand; 3-6', silt-clay.
	3	1971	1-11	0-1	No	100	100	98	91	13	7		Sand	Test #3 was dug atop knoll, 45' N80°E. of Test #1A. Beds are about horizontal. Log of Test #3: 0-1', ov.; 1-11', alternating layers of sand

CRAFTSBURY GRANULAR DATA SHEET NO. 29

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														and pebbly sand.
	4	1971	1-6	0-1	No	100	100	100	96	23	11		Sand	Test #4 was dug on lower level of knoll, 160' N85°E. of Test #3. Log of Test #4: 0-1', ov.; 1-3', pebbly sand; 3-6', sand; bottoms on silt-clay.
30	1	1971	1-9	0-1	No	100	100	98	82	10	6		Sand	Owner: Lyndall Bailey. Area is a rolling field west of Town Highway No. 17, just south of Bailey's buildings, about 0.30 mile north of Town Highway No. 33. Test #1 was dug at south edge of ridge in field. Beds dip to S30°E. about 20°. Log of Test #1: 0-1', ov.; 1-5', layers of sand and pebbly sand; 5-9', beds of pebbly fine gravel and sand; bottoms at 9' on boulders.
	2	1971	1-10	0-1	No	72	69	47	29	16	10	28%	Gran. Borrow (Grav.)	Test #2 was dug on knoll in field, 450' N30°E. of Test #1. Log of Test #2: 0-1', ov.' 1-4', coarse cobbly gravel; 4-6.5', pebbly gravel; 6.5-10', cobbly gravel. Angular, phyllitic and tabular stones are common.
31	1	1971	1-10	0-1	Yes	100	100	91	69	9	3		Sand	Owner: Lyndall Bailey. Area is small shallow pit and its southward extension, 0.15 mile east of Town Highway No. 17. Test #1 was a hand shovel sample of the northeast face of north

CRAFTSBURY GRANULAR DATA SHEET NO. 30

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														end of pit. Log of Test #1: 0-1', ov.; 1-10', poorly sorted, dirty sand and fine gravel with angular, slaty stones and some boulders. Test bottoms at 10' on marshy soil. Wet spots occur downhill to the west.
	2	1971	2-10	0-2	Yes	100	87	81	69	27	19		------	Test #2 was a hand shovel sample of the north face of the south end of pit. Log of Test #2: 0-2', ov.; 2-5', dirty, poorly sorted gravel; 5-8', dirty pebbly sand; 8-10', sand and stones. Test bottoms in sloughed material. Overall, there is a dirty gravel layer over dirty sand and pebbly sand and some boulders. Stones are angular.
	3	1971	0.5-7	0-0.5	Yes	N	O	T	S	A	M	P L E	D	Test #3 was dug in floor near north end of pit. Log of Test #3: 0-0.5', ov.; 0.5-7', coarse, dirty, bouldery gravel. Not very good looking material; it has angular phyllitic stones and large boulders. There were no stones in the one-half to three inch range. As an estimated 50% of the stone content was in the 8"-14" range, no sample was taken.
	4	1971	0.5-5	0-0.5	Yes	100	100	97	94	9	6		Sand	Test #4 was dug in floor of upper diggings at east end of pit. Log of Test #4: 0-0.5', ov.; 0.5-5', sand; water at 5', sides kept caving.

CRAFTSBURY GRANULAR DATA SHEET NO. 31

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
32	1	1971	4.5-11	0-4.5	No	58	54	43	34	17	12	30.1%	Gran. Borrow (Grav.)	Owner: Fred Janci. Area is a large field, which is probably part of a kame terrace, south of State Aid Highway No. 2, and southwest of Town Highway No. 40. Owner did not want much digging. The material would be drawn out from the base of the feature, southwest of, and about 120' below the field. Field narrows to the north and granular material probably runs out. Test #1 was dug at edge of slope in south end of field. Log of Test #1: 0-1', ov.; 1-4.5', sand; 4.5-8', cobbly gravel; 8-9', layer of silt or fine sand; 9-11', pebbly fine gravel.
	2	1971	1-6	0-1	No	100	100	95	87	51	31		------	Test #2 was dug in northwest corner of field, near outcrops and fence opening, 400' N5°W. of Test #1. Log of Test #2: 0-1', ov.; 1-6', sand; test bottoms on phyllitic bedrock at 6'.
33	1	1971	1-11	0-1	No	100	100	100	100	88	41		------	Owner: Robert Williams. Area is a brush-covered knoll just east of State Aid Highway No. 1. The access is 270' north of Williams' house. The owner was planting pines and said he was going to plant the knoll which was tested. Test #1 was dug on the side of the knoll, 50' north of the logging road, 200' east of, and 45' above

CRAFTSBURY GRANULAR DATA SHEET NO. 32

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
														the state road. Log of Test #1: 0-1', ov.; 1-11', sand. Test #2 was dug on top of knoll. 75' N30°E. of, and 23' above Test #1. Log of Test #2: 0-2', stony ov.; 2-8', sand; 8-10', silty sand and silt layers.
	2	1971	2-10	0-2	No	100	100	100	100	87	47		-----	
34	1	1971	2-7	0-2	Yes	100	89	78	68	25	17		----	Owner: Edna J. Blaise. Area is a small pit and field southwest of State Aid Highway No. 1. Test #1 was a hand shovel sample of low south face of small pit. Log of Test#1: 0-2', ov.; 2-4', sand; 4-5', gravel; 5-7', sand; test bottoms on stones.
	2	1971	0.5-2.5	0-0.5	Yes	100	100	100	99	99	94		----	Test #2 was dug in pit floor. Log of Test #2: 0-0.5', ov.; 0.5-2.5', silt-clay.
	3	1971	1-3	0-1	No	100	99	89	76	25	20		----	Test #3 was dug in field, 130' S10°W. of Test #1. There was pebbly sand over silty fine sand and silt-clay.
35	1A	1971	1-14	0-1	Yes	100	100	96	89	24	9		Sand	Owner: Lucien Day. Area is a pit south of old logging road east of State Aid Highway No. 1.

CRAFTSBURY GRANULAR DATA SHEET NO. 33

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Exist-ing Pit	Sieve Analysis % Passing						Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						2"	1½"	½"	#4	#100	#200			
	1B	1971	14-30	0-1	Yes	100	100	96	87	22	11		Sand	Test #1A was a hand shovel sample of top of southeast face of pit. Log of Test #1A: 0-1', ov.; 1-14', sand with some pebbles and silt seams. Test #1B was a hand shovel sample below Test #1A. Log of Test #1B: 0-1', ov.; 14-30', sand and silty sand seams.
	2	1971	0.5-10	0-0.5	Yes	100	100	100	98	59	7		Gran. Borrow (Sand)	Test #2 was dug in pit floor. Log of Test #2: 0-0.5', ov.; 0.5-10', sand.

TABLE I
Supplement

CRAFTSBURY PROPERTY OWNERS - GRANULAR	Map Identification No.
Bailey, Lyndall	30,31
Blaise, Mrs. Edna Johnson	34
Cole, Levi	25
Day, Lucien	35
Earle, Wendall	18
Furlong, Charles	29
Greene, Roland	17
Houston, Joseph	22
Hunt, Floyd	9
Janci, Fred	32
Kerwin, Maurice	28
Lathe, Mrs. Hollis	23,24
Martin, Bert	5
Martin, Irvin	1,2,3,4
Martin, Roger	8
Meyer, Stephen	6,7
Moffatt, James	20,21
Paquette, Wilfred	13,14
Riel, Raymond	26,27
Smith, Rodney	15,16,19
Stoddard, Kenneth	12
Waterhouse, Herman	11
Wells, Mildred	10
Williams, Robert	33

CRAFTSBURY ROCK DATA SHEET NO. 1

Map Ident. No.	Field Test No.	Year Field Tested	Rock Type	Existing Quarry	Method of Sampling	Abrasion AASHO T 3	Results
1	1	1971	Grano-diorite	Prospect	Chip	2.7%	Owner: Edward A. Dutton. Area is a small prospect with a low, rounded, working face (10' high). The outcrop is about 120' long and trends N.10°E.-S10°W. Small crystals and some non-granitic rock is evidence that this source, at least near the surface, is from a small igneous body. Some fragments had rather small dark orbicules of biotite mica. Other pieces showed a vague flow-structure, or foliation. The rock source would be difficult to exploit due to its small size (extent) and low relief. The rock looks like it soon grades into non-igneous rock. The site is 0.20 mile west of State Aid Highway No. 2 at a point 0.60 mile north of the junction of State Aid Highway No. 2 with Town Highway No. 40. Access is through Dutton's fields and brushy wooded areas. Samples were taken from random blocks only, due to the round nature of the outcrop. For a description of the rock, see P. 10, Summary of Rock Formations: New Hampshire Plutonic Series; Undifferentiated Granitic Rock. The present owner would be willing to sell material. The result of the AASHO T-96 Abrasion Test was 34.3%.

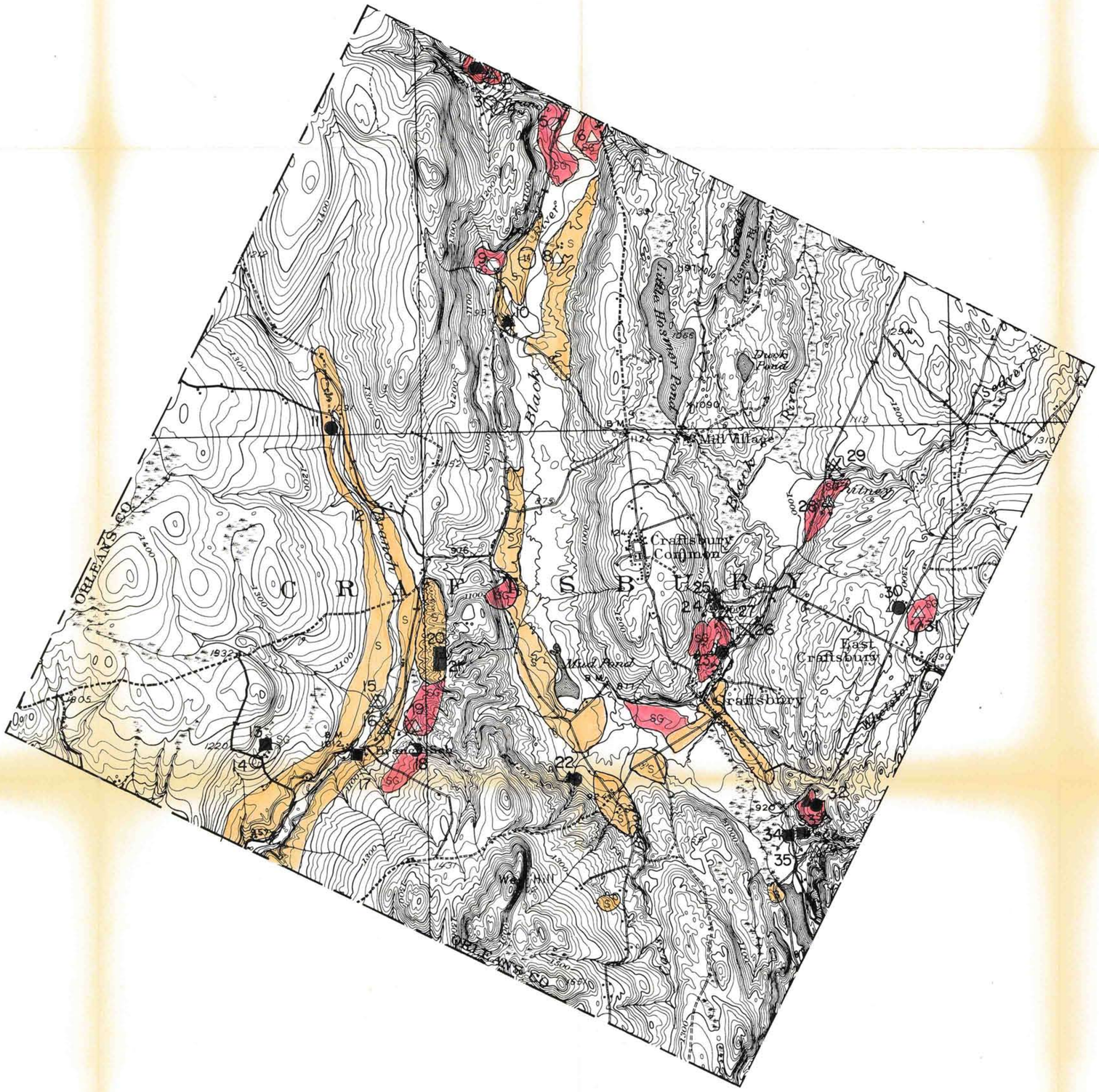
Table II
Supplement

CRAFTSBURY PROPERTY OWNERS - ROCK

Map Identification No.

Dutton, Edward A.

1



LEGEND

- ○ GRAVEL, ACCEPTABLE FOR SEC. 704.05 (gravel for sub-base)
- ● GRAVEL, DEPLETED OR NOT ACCEPTABLE FOR SEC. 704.05
- △ SAND, ACCEPTABLE FOR SEC. 703.03 (sand borrow and cushion)
- ▲ SAND, DEPLETED OR NOT ACCEPTABLE FOR SEC. 703.03
- □ GRANULAR BORROW, SEC. 703.05
- ■ MATERIAL NOT ACCEPTABLE FOR SEC. 703.05
- ⚔ EXISTING PIT
- SG SAND & GRAVEL DEPOSIT
- S SAND DEPOSIT
- 3 IDENTIFICATION NUMBER (refer to data sheets)

CRAFTSBURY

SCALE 1:31,250

0.5 0 1 MILE

CONTOUR INTERVAL 20 FEET

1971

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

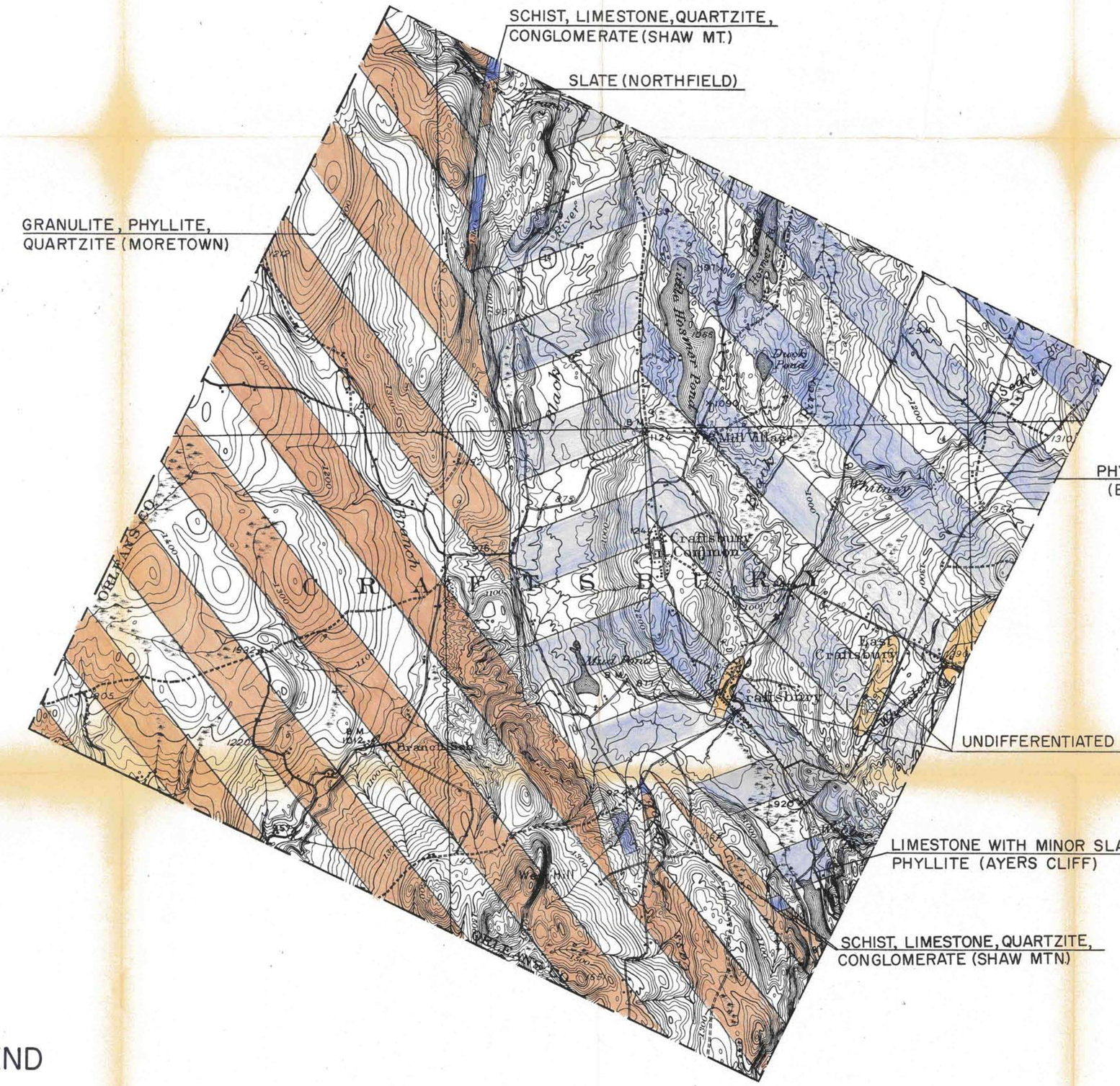
PLATE I

GRANULAR

ORLEANS COUNTY VT. HWY. DISTRICT NO. 9

REVISIONS

DATE						
BY						



LEGEND

- ROCK, ACCEPTABLE FOR SEC. 704.06 (crushed stone for sub-base)
- ROCK, NOT ACCEPTABLE FOR SEC. 704.06
- 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)

CRAFTSBURY

SCALE 1:31,250

0.5 0 1 MILE

CONTOUR INTERVAL 20 FEET

1972

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

PLATE II

ROCK

ORLEANS COUNTY VT. HWY. DISTRICT NO. 9

REVISIONS

DATE						
BY						