

SURVEY OF HIGHWAY CONSTRUCTION MATERIALS
IN THE TOWN OF DORSET, BENNINGTON 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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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 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 materials is passed onto 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 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 being conducted by Professor D.P. Stewart of Miami University, Oxford, Ohio, who has been mapping the glacial features of the State 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 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 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 Dorset is located in the north part of Bennington County in the southwest corner of the State. Dorset is bounded on the north by the towns of Danby and Mount Tabor. Peru lies to the east; the towns of Winhall and Manchester border it on the south; and Rupert lies to the west. (See County and Town Outline Map of Vermont on the following page.)

Three physiographic regions are represented in Dorset. The Green Mountains Physiographic Region forms a picturesque front that rises above the east side of the Batten Kill valley on the east side of Dorset. The valleys of the Batten Kill and its West Branch comprise the Limestone Valley or Vermont Valley Physiographic Region. The Taconic Range occurs in the north, central, and western parts of town. In general, the terrain in Dorset is mountainous to rolling, and it has abrupt to gentle relief. Elevations on the western front of the Green Mountains vary from 2,000 feet to 2,700 feet, while elevations in the Taconic Range vary from 2,200 feet to 3,700 feet.

Drainage in Dorset is mainly southward via the Batten Kill and its West Branch and their numerous tributaries. Notable among these are Mad Tom and Little Mad Tom brooks that enter the Batten Kill just south of East Dorset.

Two drainage divides in the town of Dorset are associated with the origins of three major streams. The source of the Batten Kill is on Dorset Peak northwest of North Dorset Village. This stream enters its valley a short distance south of a marshy area that is the source of the north-flowing Otter Creek.

In the west part of Dorset the West Branch rises on the north side of Bear Mountain. This stream enters the somewhat narrow valley south of

Dorset Village, a short distance south of the point where a tributary of the northwest-flowing Mettawee River begins. Other tributaries of the Mettawee drain the south side of Dorset Mountain and the west slopes of Netop Mountain and Dorset Hill.

SURVEY OF ROCK SOURCES

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: 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 the 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

The rocks in the town of Dorset are mainly quartzites and carbonates of the Vermont Valley Sequence. The oldest rocks of this sequence, the quartzite and dolomite of the Dalton Formation, and the Cheshire quartzite, occur on the extreme east side of town above the Batten Kill valley. Carbonate rocks of the youngest formations represented in Dorset, the Shelburne and Bascom, occur in the central and west part of town.

The Taconic Sequence, represented by the Brezee and St. Catherine formations, occurs as the remnant of a faulted and displaced mass of rock, known as a klippe, that overlies the Bascom Formation. The Taconic Sequence occurs mainly in the north and north-central part of town on the flanks of Dorset Mountain and on the west edge of the town. The Mt. Holly Gneiss of the Green Mountains is mapped as occurring in a very small area at the southeast corner of Dorset.

Marbles of the Vermont Valley Sequence have been quarried in numerous locations in Dorset. Several quarries are of historic significance, and their preservation is being sought by a great number of Dorset residents. Two quarries owned by the Green Mountain Marble Company were investigated by the materials survey party as possible sources of Item 204, Sub-base of Crushed Rock. One, located in South Dorset Village had been in operation quite recently. This quarry was not sampled and described because a spokesman for the marble company stated that it would be worked again as soon as quarrymen became available.

The other quarry investigated (Map Identification No. 2) is the former Freedley Quarry located on the east side of Dorset Hill at the end of Town Highway No. 21. (See Plate II and Table II.) It is a large quarry with surface and underground workings. A huge grout pile was sampled for Item

204. The rock, consisting of marble and dolomite of the Shelburne Formation, is fairly hard, broke satisfactorily, and met abrasion requirements for the Item. This quarry is about 4.3 miles from U. S. Route 7. About one mile of the access, consisting of Town Highway No. 21 would have to be rebuilt.

Two other areas investigated as possible sources of Item 204 would be more satisfactory. Map Identification No. 1 is a wooded pasture on the west side of old U. S. Route 7 just north of East Dorset. The Dunham dolomite, a hard rock meeting abrasion requirements for Item 204, is exposed over an area large enough for a quarry operation.

Map Identification No. 3 is a steep, wooded hillside on the east side of the Batten Kill valley, east of the proposed location of the Arterial Project. Here the Cheshire quartzite is exposed, and blocks broken from the outcrops cover a large rock fall area at the foot of the slope. The quartzite is very hard, broke satisfactorily, and met abrasion requirements for Item 204.

In general, accessible exposures of sufficient extent for a quarry operation are very rare in Dorset. With the exception of Map Identification No. 3, and one or two other smaller area, the east side of the Batten Kill valley is covered with bouldery material derived from the west front of the Green Mountains. A small area just north of East Dorset Village does not appear to offer enough relief for a quarry operation and is quite close to dwellings. Rocks mapped as the Monkton Formation are exposed in a highway cut on the east side of U. S. Route 7 across from Emerald Lake. However, the exposures are too close to the highway to be considered as a source of Item 204.

On the west side of the Batten Kill valley near the Mount Tabor Town Line there are precipitous exposures of the Winooski Dolomite that could be worked only with great difficulty. From this exposure south to the Manchester Town Line the west side of the valley is characterized by poorly exposed quartzite and dolomite. An exception is Map Identification No. 1.

Elsewhere in Dorset rock exposures and existing quarries could not be sampled as sources of crushed rock because land owners refused to give permissions. It was explained by many owners that they wished to preserve the old quarries; and they felt that opening new quarries would devalue their properties.

SURVEY OF SAND AND GRAVEL SOURCES

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 are mapped when known. 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 area 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 then 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 (AASHO T-4-35).

Discussion of Sand and Gravel Deposits

The granular materials in the town of Dorset consist of outwash and ice-contact gravels. These deposits are concentrated within the town's two large valleys. Outwash occurs in the broad valley in the vicinity of Dorset Village, and kame terraces located northeast, north, and northwest of the village contain large quantities of gravel and small amounts of sand.

Numerous pits had been opened in the aforementioned terraces in years past; but many have been closed, or at least, discontinued. Permissions to sample three of the pits were refused by the property owners involved. Also, a number of fields and pastures located within the granular features were closed to sampling. The majority of these properties are located along Town Highway Numbers 5, 6, and 7 on the northeast and east sides of Dorset Village. In addition, permissions could not be obtained to sample outwash materials that underlie farmland, large estates and the Dorset Country Club, located between Vermont Route 30 and State Aid Highway No. 1.

The following granular areas, for which the materials survey party obtained permissions to sample, would not be available as sources of granular material unless a change in ownership and/or land utilization should occur: Map Identifications Numbers 26, 27, 28, 30, and 33. The following granular areas probably would be available as sources of Item 201, Sub-base of Gravel: Map Identifications Numbers 24, 31, 32, 34, 35, and 36.

Granular materials that occupy the valley of the Batten Kill on the east side of town, are less extensive and have been exploited to a greater degree than those on the west side; and most of them would be available for highway construction projects. These materials occur as deposits of

ice-contact origin. Map Identification Numbers 1, 7, 8, 9, 10, 16, 17, 18, 19, 21, and 23 contain gravels acceptable for Sub-base of Gravel, Item 201. Sub-base of Sand, Item 202 would be available in small quantities from Map Identification Numbers 1 and 22.

Further testing is recommended in the vicinities of Map Identification Numbers 6, 20, 21, and 22. Map Identification No. 12 is a pit which the present owner has closed. Its westward extension should be explored at a time when the ownership has changed and permission becomes available.

Map Identification Numbers 8, 9, 10, 11, 16, 17, 18, and 19 are located within or adjacent to the proposed right-of-way for the Arterial Project. Large quantities of gravel acceptable for Item 201 occur on these properties. Three of these, Map Identification Numbers 8, 9, and 10, are owned by the Vermont Highway District No. 1; and, under such ownership, they would not be available as sources of construction materials.

SUMMARY OF ROCK FORMATIONS IN THE TOWN OF DORSET

Vermont Valley Sequence

Bascom Formation: Interbedded dolomite, limestone or marble, calcareous sandstone, quartzite, and limestone breccia; irregular dolomitic layers, thin sandy laminae, and slaty or phyllitic partings characterize limestone and marble of lower, middle, and upper parts of the Bascom, respectively; south of West Rutland it includes some of Chipman formation.

Shelburne Formation: Chiefly a white marble or gray limestone characterized by raised reticulate lines of gray dolomite on the weathered surface; includes Columbian marble of the marble quarries, and the Intermediate dolomite, a massive, gray-weathered rock.

Clarendon Springs Dolomite: Fairly uniform, massive, smooth-weathered gray dolomite characterized by numerous geodes and knots of white quartz; quartz sandstone and irregular masses of chert are near the top.

Danby Formation: Comprised of interbedded quartzite and dolomite. White quartzite beds more than a foot thick, are separated by 10 to 12 feet of dolomite in eastern areas.

Winooski Dolomite: Buff-weathered, pink, buff, and gray dolomite; beds 4 inches to 1 foot thick separated by thin, protruding, red, pink, green, and black siliceous partings.

Monkton Quartzite: Distinctively red quartzite interbedded with lesser buff and white quartzite and relatively thick sections of dolomite like that of the Winooski; the quartzites thin to the east, and they become gray and phyllitic to the east and south.

Dunham Dolomite: Buff-weathered siliceous dolomite, pink and cream mottled or buff to gray on fresh surface; lower part is massive and upper part is sandy and resembles the Winooski dolomite.

Cheshire Quartzite: Very massive, white to faintly pink or buff vitreous quartzite near the top in west-central and southwestern Vermont; predominantly a less massive-appearing mottled gray, somewhat phyllitic quartzite; dolomitic sandstone and conglomerate near the base of the formation in west-central Vermont apparently grades southward into the Dalton formation.

Dalton Formation: Schistose quartzite containing pebbles of feldspar and blue quartz; impure dolomite containing pebbles of quartz and feldspar occurs locally; conglomerate near the

base. Occurs in southwestern Vermont.

Taconic Sequence

St. Catherine Formation: Purple, gray-green, and variegated slate and phyllite containing minor interbeds of white to green quartzite; locally albitic.

Breeze Formation: Dark gray to black phyllite with beds of blue-gray marble, dark gray dolomite, sandy dolomite, and dolomitic sandstone, in upper part; beds of massive quartzite as much as 20 feet thick occur locally and in places contain pebbles of blue quartz. Phyllites are locally highly albitic.

Green Mountains

Mount Holly Complex: Mainly fine- to medium-grained biotitic gneiss, locally muscovitic, and in western areas chloritic; massive and granitoid in some localities, fine-grained or schistose and compositionally layered in others; also abundant amphibolite and hornblende gneiss, and minor beds of mica schist, quartzite, and calc-silicate granulite; includes numerous small bodies of pegmatite and gneissoid granitic rock.

GLOSSARY OF SELECTED GEOLOGIC TERMS

Alluvial - Pertaining to material carried or deposited by running water.

Breccia - A rock consisting of consolidated angular rock fragments larger than sand grains. There may be fault, talus, and volcanic breccia.

Calcareous - Pertaining to or containing calcium carbonate.

Carbonate Rocks - Rocks composed of the molecule CO_3 combined with calcium, magnesium, etc. Includes limestones and dolomites.

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

Dolomite - A rock consisting predominantly of the mineral calcium magnesium carbonate (dolomite), containing carbon dioxide 47.7%, lime 30.4%, magnesia 21.9%.

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.

Gneiss - Originally meaning a more or less banded metamorphic rock with the mineral composition of granite. The term now designates a foliated metamorphic rock with no specific composition implied, but having layers that are mineralogically unlike and consisting of particles visible to the eye. Usually gneiss displays an alternation of granular mineral and schistose minerals with the rock tending to split along the schistose bands.

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.

Limestone - A bedded sedimentary rock consisting chiefly of calcium carbonate. The most important and widely distributed of the carbonate rocks.

Marble - A soft, white rock being the metamorphic form of limestone in which the calcium carbonate (calcite) is recrystallized and the calcite crystals are overgrown and interlocked with additional calcite. Commercially it is a trade name applied to any carbonate rock of good color and texture and hard enough to take a polish.

Metamorphic Rocks - Rocks that owe their distinctive characteristics to the transformation of preexisting rocks through intense heat or pressure or both.

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.

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

Siliceous - Containing or pertaining to silica (silicon dioxide, SiO_2).

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

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 April, 1964.

Item 105, Granular Borrow

"Article 105.02 - Materials. 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 percent (10%) passing the No. 270 mesh sieve and shall show a color of not more than three and one-half ($3\frac{1}{2}$) as determined by the colorimetric test described in AASHO 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-inch (9") square-opening screen."

Item 201, Sub-base of Gravel

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

"Not less than forty percent (40%) stone shall be retained on No. 4 sieve.

"The percent of wear shall be not more than twenty-five (25) when tested by laboratory methods using Method T-4 or more than forty (40) when tested by AASHO Method T-96.

"The stone portion of the gravel shall be uniformly graded from coarse to fine, and the maximum-size particles shall not exceed two-thirds (2/3) of the layer being spread.

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

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

"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 AASHO Method of Test, Designation T-21."

Item 202, Sub-base of Sand

"Article 202.02 - Materials. The sand shall consist of material reasonably free from silt, loam, clay, or organic matter. It shall be obtained from approved sources and meet the following requirements:

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

Square Openings	Percent Passing
1 $\frac{1}{2}$ "	95-100
5/8"	80-100
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 AASHO Method of Test, Designation T-21."

Item 204, Sub-base of Crushed Rock

"Article 204.02 - Materials. The materials for sub-base, filler, and

sand cushion shall be obtained from approved sources and meet the following requirements:

A - Crushed Rock. "The crushed rock shall be uniformly graded, crusher-run material and shall be free from dirt. The ledge from which this material is obtained shall be stripped and cleaned before blasting. Conical stockpiling, or any other method of stockpiling which causes segregation of aggregates, will not be permitted.

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

Square Openings	Percent Passing
4"	95-100
1½"	25-50
No. 4	0-15

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

Item 205, Sub-base of Crushed Gravel

"Article 205.02 - Materials.

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

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

		Square Openings	Percent Passing
Sub-base of Crushed Gravel	Coarse-Graded Item 205-A	4"	100
		No. 4	25-50
	Fine-Graded Item 205-B	1½"	95-100
		No. 4	30-60

"At least thirty percent (30%) by weight of the stone content of the crushed gravel, that is, the material retained on the No. 4 screen, shall have a minimum of one (1) fractured face as determined by

actual count from the sample submitted to the laboratory.

"The percent of wear shall not be more than twenty (20) when tested by laboratory methods using Method AASHO T-4 or more than thirty-five when tested by AASHO Method T-96.

B - Sand. "The sand content of the crushed gravel, that is, the material passing the No. 4 screen, when tested by laboratory methods using Method AASHO T-27, shall meet the grading requirements set up in the following table:

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

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

TABLE I

DORSET GRANULAR DATA SHEET NO. 1

Map 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				
1	1	1964	4-20	0-4	Yes	100	99.5	97.4	4.8	1.75 1.7*	2	---	Sand	Owner: Mrs. Gertrude Connors. Area is a large pit on the west side of old U. S. Route 7 north of North Dorset. Test #1 was sampled by laboratory personnel in 1964 for the U. S. Route 7 job. A sample taken in the upper level was sand acceptable for Item 202.
	2	1964	0-10	---	Yes	85.5	77.2	65.0	3.0	1.0	1	---	Gran. Borrow (Grav.)	Test #2 was a gravelly sand sampled from the lower level and had too few stones for Item 201. When sampled in 1967, the lower level was water-filled and lower faces showed silty material and large boulders. Only the upper level to the north was active, and those faces were sampled. Sands with a limited east extension occur on the east side of the pit above a steep slope down to the old highway. Their north extension is wooded and the terrain is rough with no way to test the material.
	3A	1967	0-30	---	Yes	64.2	64.2	55.3	9	4.3	1	---	Gran. Borrow (Grav.)	Test #3 was sampled on the west face, 75' from the east side,

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 2

Map 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
						1½"	5/8"	#4	#100	#270				
	3B	1967	25-42	---	Yes	52.7	44.9	33.9	11	5.0	1	19.2%	Gravel	and 70' from the north end. Cobbly and pebbly gravels are concentrated from 10'-30' and 38'-42'; otherwise the face consists of sands and pebbly sands. Test #3A had a slight excess of silt for Item 201 and too few proper-size stones were included for the wear test. Test #3B, dug on lower face, met requirements for Item 201 and composite of face probably would be acceptable for that Item.
	4	1967	0-26	---	Yes	76.5	72.7	68.0	12.2	6.0 4.1*	2½	---	Gran. Borrow (Sand)	Test #4 was sampled on east sand face. Beds of coarse to fine sand with occasional silty seams and stony layers were sampled.
	5	1967	0-20	---	Yes	42.3	34.8	24.3	30	15.0	1	19.6%	---	Test #5 was sampled on north face of upper level on extreme west side of pit. Material is a very coarse cobbly gravel with a hard-packed silty clay matrix. The west part of the north end of the upper level extends northward into woods, and a stripped area between the woods and the pit measured 110' x 125' at the time sampled. Material beneath the stripped area seems to become more stony to the west, and as shown by Test #5, becomes less well sorted and very coarse. A possible

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 3

Map 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 extension of this area would be into a wooded knoll or ridge, the east side of which is open pasture. It was not possible to get a backhoe into wooded portion, and the owner would rather we did not test the open area. A summer camping ground lies to the south of the knoll. Entire area is probably a discontinuous and thin kame terrace.
2	1	1967	3-10	0-3	No	70.3	57.6	40.4	23	13.0	1	25.6%	---	<p>Owner: Mrs. Gertrude Connors.</p> <p>Area is a pasture hillside above a clearing just north of North Dorset school (Dewey's Discount Woolens). D. P. Stewart has mapped hillside a little way north and south toward Town Highway No. 15 as kame terrace. Permission was not obtained to sample pasture to south (behind and above old schoolhouse), and knolls to north are in a summer camping ground and could not be sampled.</p> <p>Test #1 was dug in upper southwest corner of clearing. Material is a "dirty"-looking, ill-sorted gravel with a clayey matrix, many large cobbles, and many tabular schist- or phyllite-derived stones.</p> <p>Test hole #2 was dug 140' northwest of and about 20'</p>
	2	1967	2-5	0-2	N O T	S A M P L E D								

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 4

Map 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	1	1967	0-6.5	N	O	T	S	A	M	P	L	E	D	<p>above elevation of Test #1. Boulders and loam go to silt from 2' to at least 5', and hole was not sampled.</p> <p>Owner: Vermont Department of Forest and Parks (formerly Bowen).</p> <p>This area is a pit and its vicinity located on the east side of U. S. Route 7 across from Emerald Lake. Much material was taken out in past, but subsequently pit has been smoothed somewhat and seeded. A few stony layers show on the west face and high on the north face. A small opening above and east of the pit is overgrown with trees and shows a few stones, but is inaccessible.</p> <p>Area north of the pit is wooded and does not appear promising as an extension.</p> <p>Test hole #1 was dug 140' south of south opening of pit alongside south access road. Silt, loam, and stones resembling back-filled material were encountered. The hole was dug to 6.5' and was not sampled.</p>
	2	1967	2-10	0-2	No		71.5	57.7	38.5	14	6.0	1	19.1%	<p>Gran. Borrow (Grav.)</p> <p>Test #2 was dug 110' west of pit and 110' back of top of highway slope. The vicinity of this test might be source of some gravels, that might be</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 5

Map 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
						1½"	5/8"	#4	#100	#270				
	3	1967	2-10.5	0-2	No	100	85.2	75.4	39.2	15.3 11.5*	1	---	---	<p>worked as an upper west extension of the old pit. Material is a "dirty"-looking gravel with maroon-colored cobbles, and is only vaguely stratified. A somewhat finer brown gravel with much silt or clay comes in at 7'. The indistinct bedding dips to the south.</p> <p>Test #3 was dug 15' from northwest pit face at junction of woods roads. Material is loamy in top 2', gravelly from 2'-4', and a silty sand from 4'-10.5'. Composite is a stony and silty sand. Pit is in a mapped kame terrace that occupies east edge of valley. Only remnants of the terrace are found in the thickly wooded area. Erdman's Eyrie, a motel property located on Town Highway No. 12, is on the terrace's south extension. But permission to sample could not be obtained.</p>
4	1	1967	2-75	0-2	No	100	100	81.6	15.5	7.0 5.7*	1	---	Gran. Borrow (Sand)	<p>Owner: Unknown.</p> <p>Feature is wooded ridge on the west side of the railroad tracks, west of U. S. Route 7, and south of Emerald Lake. Area is shown as a kame terrace becoming narrow to the south. Land to the north is owned by Vermont Department of Forests and Parks, and there are camp</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 6

Map 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
						1½"	5/8"	#4	#100	#270				
														<p>sites there. Access to the area would be through the campground or along tracks. A sample was taken down face of 75-foot high ridge in what appears to be a sloughed-in pit grown to trees.</p> <p>Material is a sand with a few pebbles and an occasional cobble. Some cobbles and boulders show at base.</p>
5	1	1967	0.5-18	0-0.5	Yes	60.8	47.6	35.9	16	7.0	1	18.0%	Gran. Borrow (Grav.)	<p>Owner: Harold Beebe.</p> <p>This is a pit near abandoned inclined marble railroad at Freedleyville, about 500' west of U. S. Route 7. Feature has very steep stony slopes with a narrow flat wooded area at top, and may be a narrow kame terrace.</p> <p>Three small faces have been opened at the foot of the bank. Fairly stony material with some angular to tabular stones is exposed. Sorting is poor. Many large stones are present on the floor. The floor is a few feet above the general level of the pasture land east of the pit.</p> <p>Test #1 was a hand sample of the most northerly opening. Material is a stony sand, silty in places, and hard-packed throughout, interlayered with gravelly portions having cobbles</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 7

Map 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
						1½"	5/8"	#4	#100	#270				
	2	1967	0.5-15	0-0.5	Yes	71.1	61.3	54.9	29	9.0	1	15.9%	Gran. Borrow (Grav.)	up to 10". Bottom 3' had much sloughing on it and was more stony. Test #2 was sampled from middle face. Some boulders and many cobbles show on face and are lying on floor. Top 2' is hard-packed silty gravel with small sub-angular stones; from 2'-11' is a sand with two thin stony layers; from 11'-15' is clean cobbly gravel with partially cemented gravelly sand layers. Overall is a sandy gravel.
	3	1967	0-10.5	---	Yes	86.9	84.6	79.9	12.8	5.3 4.2*	1	---	Gran. Borrow (Sand)	Test #3 was dug in floor below Test #2. West end of test hole was gravel like the bottom of Test #2; east end of test hole was pebbly sand that bottomed in gravel at 12'. Contact between gravel and sand dips steeply to east. We couldn't get backhoe on top to take tests, but from tests taken on faces, area appears to be source of modified gravels. A screen found in pit indicates that material has been used in the past.
	4	1964	2-10	0-2	Yes	71.9	53.0	34.4	26	12.0	1	---	---	Test #4 was sampled by laboratory personnel in 1964 and had excess silt for gravel and Granular Borrow. If bank were worked, gravels would predom-

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 8

Map 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
						1½"	5/8"	#4	#100	#270				
														inate. A lift begun in the floor would encounter sand down to 12'. Generally, material in this area would be silty, hard-packed and cobbly.
6	1	1967	1.5-9	0-1.5	No	53.5	43.1	33.4	11	6.8	1	23.0%	Gran. Borrow (Grav.)	Owner: Harold Beebe. Feature is pasture "terrace" east across valley from owner's buildings. Pasture is hummocky and ridge-covered and slopes generally to the south and west. The pasture merges with a hillside where bedrock is exposed, and may be a kame terrace or some other ice-contact feature. Access is either by field road and woods road from the south, involving about 0.65 mile, or by an old log road leading straight in from U. S. Route 7 north of owner's buildings. This access is less than 0.40 mile long. Test #1 was dug at south end of feature at top of steep slope above cornfield. Top 2' is very cobbly and organic and then goes to a loose clean looking gravel with quite a few cobbles. No bedding is discernible. Sample had excess silt for Item 201. Material caves easily.

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 9

Map 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	1967	2-10.5	0-2	No	56.1	50.0	38.7	19	7.75	1	---	Gran. Borrow (Grav.)	Test hole #2 was dug about 400' north of and a little higher than Test #1. Hole is just south of prominent knoll and ridge. Material is quite stony, cobbly, loose, and "dirty"-looking. It looks cleaner below 4.5'. On the whole it is not as cobbly as Test #1, and appears to have some silt-clay binder. Bedding is indistinct. Insufficient proper-size stones were included for the wear test.
	3	1967	1.5-7.5	0-1.5	No	73.2	54.6	32.6	45	26.5	1	22.1%	---	Test #3 was dug 220' southwest of Test #2 on more-or-less flat area lying west of ridge on which Tests #1 and #2 had been dug. Test #3 is about same elevation as Test #1, and 12' below Test #2. Material is silt and pebbles with occasional pockets of stones, but overall has very little sorting. It goes to brown silt at 7.5'.
	4	1967	1-8	0-1	No	50.8	43.2	27.8	17	8.0	1	23.8%	Gran. Borrow (Grav.)	Test #4 was dug at east end of sinuous broad ridge northeast of and above Test #2. Other ridges and knolls continue to north. Top 1' of hole is loam and boulders going to a tan cobbly gravel. Stones are mostly carbonates, and are sub-rounded to sub-angular. Gravel appears a little finer below

*Percentage of Total Sample

TABLE I

DORSET 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					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1 1/2"	5/8"	#4	#100	#270				
													5', and overall is a little too silty for Item 201. The ridge averages 15'-18' high; is 40' wide at the base and about 15' wide on the rounded crest. The discontinuous ridges and knolls to the north are of similar dimensions. Probably these are ice-contact features. Pasture could be opened as a pit with better gravels occurring in the low ridge between Tests #1 and #2 and in the knolls and ridges in the north part. On the whole, material would be cobbly, bouldery, and silty or clayey. It should pack fairly well for town roads, but would have to be screened or crushed for that purpose. Access would be better straight in from U. S. Route 7. A stream and a few wet places would have to be crossed. More testing might be done on the west side of the pasture, west of and below Test #2 to determine if a pit could be started at a lower level.	
7	1	1967	2-16	0-2	Yes	100	100	81.5	11	4.0	1	---	Sand Owner: Stavens and Frost. A small bank of poor-looking material north of the barn and flat to east-sloping pasture to west and north was sampled. Area is on west side of U. S. Route 7 just north of East	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 11

Map 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
						1½"	5/8"	#4	#100	#270				
	2	1967	1.5-9.5	0-1.5	No	69.8	52.7	37.4	6	3.75	1	18.7%	Gravel	<p>Dorset and is in a kame terrace. Test #1 was dug in a bank 120' north of barn. This bank probably represents type of material underlying pasture to west and above the barn. Top 5' is cobbly and poorly-sorted; bottom 11' is coarse sand above fine sand with a cobbly pocket. Sample met requirements for Item 202, but on the whole, face looks only good enough for Granular Borrow.</p> <p>Test #2 was dug in pasture west of and about 16' above top of bank where Test #1 was taken. The gravel is fairly clean looking and quite stony with some cobbles. Material stands well in hole, and is vaguely bedded. Dip is to southeast and conforms to slope of ground. Pasture west of hole slopes gently up to west, and there is probably some extension of material in that direction.</p> <p>Test #3 was dug on east edge of pasture about 200' north-northeast across intervening swale from Test #2. This pasture is at about same elevation as one to south.</p> <p>Top 2' of material in hole is cobbly and loamy and then</p>
	3	1967	1.5-10	0-1.5	No	56.0	46.3	37.8	7	3.5	1	14.4%	Gravel	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 12

Map 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				
	4	1967	2-9.5	0-2	No	59.5	47.0	30.8	23.0	11.5	1	15.7%	---	<p>goes to a clean gravel with a few cobbles. Estimated extension of this type material is 160' to the north by 130' to the west. Pasture has a very low roll that trends northeast beginning about 75' to the northwest of the test. Terrain on the roll slopes gently up to west.</p> <p>Test #4 was dug 270' north of Test #3 on extension of the same low roll above highway slope. This test is across highway from a rest area. Gravel is gray-colored and stands well in hole. It has much apparent silt-clay coating and is coarse and cobbly with poor sorting and stratification. It does not seem as good as material in Tests #1 and #2. Both Tests #1 and #2 bottomed in gravel, and their vicinities look promising as gravel sources. Owners may not be interested in selling material, since they are in the well drilling business and may have a need for gravel in related operations.</p>
8	1	1967	0-7	---	Yes	78.3	65.9	50.7	6	3.0	1	11.4%	Gravel	<p>Owner: Vermont Highway District No. 1 (formerly the Brophy pit).</p> <p>This pit, with extensions to</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 13

Map 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				
														northeast, east, and southeast, is located close to the east bank of the Mad Tom River in East Dorset. The river bed, banks, and area adjacent to the river is strewn with cobble- to large boulder-size stones. Also, many large cobbles and boulders show on pit face and floor. Area is mapped as kame terrace. Test #1 was dug in pit floor 80' from northeast end and 55' from river bank. Beds of pebbly sand, gravelly sand, and a cobble layer dip to west. Beds vary in thickness. Hole bottoms at 7' in wet silt or silty sand. Very few +6" cobbles in hole. Test #2 was dug in pit floor 140' southwest of and about 3' below Test #1. It is about 50' from river bank. Material is very cobbly with unsampled +6" stones comprising over 50% of the gravel. Stones are mostly sub-angular to round with a few tabular, and fines look quite clean. The material seems fit for crushing. Test #3 was sampled on northeast face. Top 14' is a coarse, cobbly, somewhat sandy gravel with some large cobbles and
	2	1967	0.5-8	0-0.5	Yes	35.6	27.4	20.0	9.0	5.0	1	10.2%	Gravel	
	3	1967	1-21	0-1	Yes	33.1	27.5	23.2	9.0	4.0	1	17.8%	Gravel	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 14

Map Ident. No.	Field Test No.	Year Field Test	Depth of Sample (Ft)	Overburden (Ft)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1½"	5/8"	#4	#100	#270				
	4	1967	0-8.5	---	Yes	52.4	45.1	30.4	8.0	4.0	1	22.0%	Gravel	boulders. Bottom 7' is a thin gravel zone over sand with a few stones. Face bottoms in gravelly sand like Test #1. It looks as though face and its northeast and east extension would go for bank run. The extension is tree covered. Test #4 dug 30' in back of southeast face. Material is a coarse gravel with many cobbles and boulders, and is quite loose. Vague bedding is shown by cobble concentrations. Material goes to fine sand at 8.5' with contact dipping to west-northwest. Pit toward southeast could be worked as bank run; to northeast, parallel to river bank, it would be better to crush the material. A ford to the Mad Tom River is necessary to get to the pit.
	5	1960	1-15	0-1	Yes	75.0	60.4	39.2	9.0	3.75	2½	18.6%	Gravel	Two samples taken by laboratory personnel in 1960 from the pit faces also met requirements for Item 201.
	6	1960	1-10	0-1	Yes	81.6	61.4	38.8	6.0	3.5	1	16.4%	Gravel	
9	1	1967	1-10	0-1	No	54.0	40.8	27.6	16.0	7.3	1	16.4%	Gran. Borrow (Grav.)	Owner: Vermont Highway District No. 1 (formerly the Brophy Farm). This is rolling terrain about 450' southeast of the pit at Map Identification No. 8. It is reached by an old road going through the pit. Area is

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 15

Map 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				
														mapped as kame terrace. Test #1 was dug in northwest corner of a rolling meadow at edge of pine woods on a broad ridge 450' from pit. The top 4.5' is a cobbly, ill-sorted material underlain by a fairly clean gravel with a few boulders and many +6" cobbles. Sample had excess fines for Item 201.
	2	1967	2-10	0-2	No	53.1	44.1	36.4	11.0	4.0	1	11.6%	Gravel	Test #2 was dug on north side of meadow 160' east of and a few feet below elevation of Test #1. Log of hole: 0-2.5'-reddish loam and stones; 2.5'-5' gravelly sand; 5'-7'-coarse sand lens; 7'-10'-cobbly gravel. Meadow has gentle south slope, and it would seem likely that gravels might be found beneath most of it.
	3	1967	1=10.5	0-1	No	57.9	46.7	31.7	20.0	10.0	1	24.6%	Gran. Borrow (Grav.)	Test #3 was dug on knoll in southeast corner. Knoll covers an area of about 225' x 150'. Material is a sandy, indistinctly bedded gravel with some cobbles. Sample had excess fines for Item 201, and an estimated area 200' x 100' has similar material.
	4	1967	N	O	T	S	A	M	P	L	E	D		Test #4 was dug in pasture about 225' east of Test #2. Pasture slopes gently to southeast and looks like a glacial

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 16

Map 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
						1½"	5/8"	#4	#100	#270				
	5	1967	0-6.5											till surface. The test hole was dug to 4' in silt-clay and stones and was not sampled. Test #5 was dug 265' north-east of Test #4 and 110' from edge of woods. Brophy property (Highway District No. 1 Property) extends about another 210' north to the bank of the Mad Tom River. A knoll with a stony surface lies to the northwest of Test #5 and the river bank shows many stones. Material in test hole is silty and cobbly with angular stones. A silty gravel shows at 4.5'-6.5'. No sample taken. Possibly northwest corner should be the site of another test or two, and probably this part of pasture is ultimate extension of pit. (See Map Identification No. 8.)
	6	1967	2-9	0-2	No	69.7	52.8	36.5	9.0	4.8	1	21.5%	Gravel	Test #6 was dug in rough, stony pasture 120' southwest of Test #1. Test hole is 90' from southwest end of ridge that is same feature in which Test #1 was dug. Surface is very rocky. Material is fine with an occasional cobble from 2.5'-9' and doesn't stand well in hole. Hole shows a sand lens or pocket or two. Area would be a source of specification gravel

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 17

Map 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				
10	1	1967	1-9.5	0-1	No	78.7	63.5	42.8	14.0	8.0	1	21.6%	Gran. Borrow (Grav.)	<p>in the vicinities of Tests #2 and #6.</p> <p>Owner: Vermont Highway District No. 1.</p> <p>Area is a rolling field and ridge south of Map Identification No. 9. Area is mapped by Dr. D. P. Stewart as a kame "terrace", and the field does have a west facing wooded escarpment. However, the north-east trending south side of the field rises to a wooded knoll in the southeast corner that is more characteristic of a kame moraine.</p> <p>Test #1 was dug on the north side of this knoll a few feet from woods. Material is a cobbly gravel in top 4' overlying a fine gravel. Sample had excess silt for Item 201. Hole bottoms in fine gravel.</p>
	2	1967	2-9.5	0-2	No	56.3	40.1	24.1	22.0	10.0	1	18.2%	Gran. Borrow (Grav.)	<p>Test #2 was dug about 180' west of and 6'-8' below elevation of Test #1. It is at corner made by east-west and north-south woods lines. Top 2' is loamy overburden (5' thick in a pocket at the northwest end of the hole) that overlies a badly sorted cobbly gravel from 2'-6'; from 6'-9.5' is gravelly sand. Hole bottoms in fine gravel. Material seems to have</p>

*Percentage of Total Sample

TABLE I

DORSET 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					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1½"	5/8"	#4	#100	#270				
	3	1967	N	O	T	S	A	M	P	L	E	D	much silt-clay on its constituents. Sample barely passed for Granular Borrow, Item 105. Tests #3 and #4 were dug on north side of field on a broad, gently rounded roll or ridge. Test #3 was dug 135' from west edge of property; Test #4 was dug 140' east of Test #3 on gentle east slope of roll. Both holes showed silt, clay, and stones, no sorting. No samples were taken. Holes were dug to 4'.	
	4	1967	N	O	T	S	A	M	P	L	E	D		
	5	1967	1-10	0-1	No	100	100	56.7	11.0	6.0 3.4*	1½	---	Gran. Borrow (Sand)	Test #5 was dug 225' southwest of Test #2; 40' north of small old pit, and 40' from west edge of field. Test is in extreme southwest corner of field. Material is a gravelly sand with too many small pebbles for Item 202, and is not well graded enough for Item 201.
	6	1967	2.5-10	0-2.5	No	58.0	42.0	30.4	14.0	5.0	1	13.4%	Gravel	Test #6 was dug 55' from northeast end of wooded ridge in meadow only a few feet above elevation of wet area and small brook to east. This test is 160' south of fence corner on old Brophy Farm and is a few feet below general elevation of field where Tests #2, #3, and #4 were taken. Log of test hole: 0-2.5'.

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 19

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1½"	5/8"	#4	#100	#270				
														<p>silty sand seam; 3'-10'-cobble gravel.</p> <p>Hole bottoms in silty sand. Stones are mainly angular to sub-angular. Cobbles up to 10" occur.</p>
11	1	1967	1.5-9	0-1.5	No	68.1	61.4	54.0	34.0	12.0	3½	---	---	<p>Owner: Edward Forrest.</p> <p>Area is rough pasture on either side of Little Mad Tom River east of U. S. Route 7. A large area on either side of the river is cobble-strewn; otherwise, most of pasture appears like thin glacial till. An area northeast of the river, and a small area near the south side of the pasture looks like thin kame terrace deposits.</p> <p>Test #1 was dug near south edge of pasture about 450' south of Little Mad Tom River, and 60' east of gate into field. Slope is gentle to west. A low terrace escarpment is located about 350' to west.</p> <p>Material in hole is a "dirty"-looking, vaguely bedded cobble gravel with angular to sub-angular stones. It is not well-graded and has excess silt for Item 105, Granular Borrow.</p>
	2	1967	1-8.5	0-1	No	42.9	36.4	29.9	22.0	7.5	3½	---	Gran. Borrow (Grav.)	<p>Test #2 was dug 200' north-east of Test #1 and about 150' south of cobble-strewn area. Top 5' is a sandy cobble gravel</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 20

Map 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
						1½"	5/8"	#4	#100	#270				
	3	1967	N	O	T	S	A	M	P	L	E	D		with angular stones; below 5' is bouldery and very silty. Overall, the hole has many blocks and angular stones, of which an estimated 50% exceeds 4". Material is poorly sorted and graded and too few proper-size stones were included for wear test. Test #3 was dug in cobble-strewn area beside river. There are many flood channels here. Material in hole is silty rubble as was in Test #2 and was not sampled.
	4	1967	1-9	0-1	No	40.5	33.8	26.6	29.0	7.5	1	---	Gran. Borrow (Grav.)	Test #4 was dug northeast of Test #3, about 200' from edge of cobble-strewn area. Test is north of stream on west-sloping low rise that extends out of rough pasture to east and is beside a stone wall. There are many angular stones and silty sand fines. Material is not well sorted and sample had excess fines for Item 201. Too few proper-size stones were included for the wear test. Extension of material is probably limited by thin, somewhat sorted ice-contact gravels and glacial till occurring to the east.
	5	1967	1-8.5	0-1	No	42.9	36.4	29.9	22.0	7.5	3½	---	Gran Borrow (Grav.)	Test #5 was dug west of Test #1 at south edge of pasture. Hole is near a low

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 21

Map 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
						1½"	5/8"	#4	#100	#270				
														<p>terrace escarpment which can be traced a short distance to southwest, but which gradually disappears to the northeast.</p> <p>Material is a vaguely stratified gravelly sand with cobble layers, and seems quite clean. Gravel is loose and kept caving, so sampling stopped at 9', but material continued below the depth tested.</p> <p>This pasture probably represents a thin and discontinuous kame terrace merging with till on the east. Any gravels would be found near Tests #4 and #5.</p>
12	1	1958	---	---	Yes	77.2	52.2	35.6	6	2.75	1½	16.2%	Gravel	<p>Owner: Gunther.</p> <p>Area is a pit above west side of U. S. Route 7 just north of State Aid Highway No. 3. Owner had smoothed pit over and would not give permission to sample. Bedrock is exposed north of pit. Extension would be to southwest onto terrace above the State Aid Highway. Material that came from this pit was sampled by Resident Engineer from roadway of U. S. Route 7. It met Item 201 requirements. This area should be looked into again, because owner is real estate dealer</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 22

Map 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
						1½"	5/8"	#4	#100	#270				
13	1	1967	1.5-12	0-1.5	No	60.4	45.1	27.5	13.0	7.0	1	14.6%	Gran. Borrow (Grav.)	<p>and may sell the property.</p> <p>Owner: Joe Rodriguez.</p> <p>Feature tested is kame terrace about 400' wide located above the north side of State Aid Highway No. 3. Feature ends in a small pit off southwest end of Rodriguez property, but extends northeast across private road into rough terrain and terminates in Gunther pit (Map Identification No. 12).</p> <p>Test #1 was dug near south edge of private road about 130' northwest of edge of terrace. Material is a sandy tan gravel with a few 6"-10" cobbles and is vaguely stratified. It stands well in test hole. No boulders were seen. From 6'-12' is a fine gravel and hole bottoms in same.</p>
	2	1967	1-10	0-1	No	59.4	46.4	33.8	16.0	8.0	1	17.6%	Gran. Borrow (Grav.)	<p>Test #2 was dug 220' south of Test #1 about 180' southwest of private road along edge of terrace. Material is a little coarser than Test #1 and doesn't stand well in hole. Stones are mainly sub-rounded. Below 8' gravel is less coarse.</p> <p>Both samples had excess silt for Item 201. Owner would not sell any material except for possibly a narrow strip along the edge of the terrace, because he bought the area to</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 23

Man 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		
						1½"	5/8"	#4	#100	#270						
														park his house trailer on. At the time of the field sur- vey, Harold Snow was negotia- ting to purchase some land on the hillside above the terrace, in which he feels there is granular material in small amounts. However, no tests were taken.		
14	---	1967	---	---	Yes	N	O	T	S	A	N	P	L	E	D	Owner: Dr. Guyette of Clevel- land Ohio. Permission to sample could not be obtained. Pit is small and is close to house which owner rents. Pit extension would be into Rodriguez pro- perty. It is located on the north side of State Aid High- way No. 3.
15	1	1967	0-14	---	Yes	82.8	68.4	42.8	12.0	6.0	1	18.2%	Gran. Borrow (Grav.)	Owner: Peter Fontana. This is an old pit in a broad ridge on the southeast side of State Aid Highway No. 3 southwest of a small pond. A kame terrace, occupying west side of valley, has been mapped by D. P. Stewart. The pit is about 400' long. The 100-foot south end has been inactive for a long time — there are trees growing there, and there is much sloughing. The north part of the pit is more recent and stripped areas still are fairly clear. The east property		

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 24

Map 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
						1½"	5/8"	#4	#100	#270				
	2	1967	0.5-14	0-0.5	Yes	64.6	48.9	26.9	12.0	7.0	1	16.0%	Gran. Borrow (Grav.)	<p>line follows a tree line and stone wall. There is some extension to north before ridge drops down toward elevation of pond. About 100' west of the pit the ridge drops off sharply to lower level of field. Toward south end of pit this low escarpment or roll becomes indistinct. Access into pit is through rough field for about 0.15 mile.</p> <p>Test #1 was a hand sample on west face about 110' from north end. Material is fine gravel and gravelly, somewhat silty sand. Stones are generally under 3".</p> <p>Test #2 was a hand sample of west face about 80' south of Test #1. Top 3' of face is somewhat silty. Overall, face is a gravel with cobbles interbedded with gravelly sands. Face bottoms in gravelly sand at Test #1 and gravel at Test #2.</p> <p>Both samples had excess silt for Item 201. Pit also has an east extension under another ownership. Mr. Fontana is not interested in selling material — he would rather close existing pit.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 25

Map 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
						1½"	5/8"	#4	#100	#270				
16	1	1967	1-10	0-1	No	66.8	50.5	35.9	13.0	7.5	1	14.4%	Gran. Borrow (Grav.)	<p>Owner: Edward Forrest.</p> <p>Area is a terrace in field or pasture south of the Little Mad Tom River. Access is east via pit road and north via field road leading from U. S. Route 7. Terrace is slightly undulating with a very gentle westerly slope, and has an irregular south-facing low escarpment. West extension is limited by a property line fence; north extension is represented by Test #5 of Map Identification No. 11. South extension is limited by the escarpment, and east extension probably limited by a thin kame terrace deposit merging with till.</p> <p>Test #1 was dug on field road 165' south of pasture and 135' from the west property line, in northwest corner of field. This test is near a dump. Material is a very stony gravel with many 4"-8" stones, and some silt-clay coating on all constituents.</p>
	2	1967	1.5-9.5	0-1.5	No	47.9	38.3	27.0	16.0	9.0	1	26.8%	Gran. Borrow (Grav.)	<p>Test #2 was dug 150' S40°E of Test #1 atop bowl-shaped depression. Material is a cobbly gravel from 2'-4.5'. From 4.5'-6.5' - gravel with smaller cobbles: 6.5'-8.5' is cobbly</p>

*Percentage of Total Sample

TABLE I

DORSET 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					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1½"	5/8"	#4	#100	#270				
	3	1967	1-9	0-1	No	60.8	45.2	27.7	20.0	10.3	1	22.0%	---	gravel. The contacts dip to east. On the whole, it is stratified, poorly sorted, and kept caving. Hole has a gravel bottom. Test #3 was dug 130' south of Test #2 at edge of terrace above an intermittent stream flowing from east. Material is very stony with some +6" cobbles and one or two boulders. Gravel is quite loose. Tests #1, #2, and #3 all had excess fine for Item 201, and Test #3 failed for Item 105.
	4	1967	N O T			S	A	M	P	L	E	D		Test #4 was dug 200' east of Test #3 near upper side of pasture. Only unsorted silty material including cobbles and boulders was encountered, and it was therefore not sampled.
	5	1967	0-4.5	N O T		S	A	M	P	L	E	D		Test #5 was dug near north edge of pasture northeast of Test #1. Top 4.5' is organic-looking silty sand going to silt and stones. It was not sampled.
	6	1967	1-10	0-1	No	64.3	49.6	39.8	10.0	4.5	3	25.0%	Gravel	Test #6 was dug at north edge of pasture about 150' east of Test #5. This test is 90' south of Test #1, Map Identification No. 11. Material does not look well-sorted. There is vague bedding shown by concentrations of stones. There were many angular to

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 27

Map 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
						1½"	5/8"	#4	#100	#270				
														sub-angular stones. This sample met Item 201 requirements, but looked far worse than other gravel holes sampled. It is possible that re-sampling of this area would produce different results.
17	1	1967	1-9	0-1	No	64.5	54.2	38.1	9.0	4.5	1	21.2%	Gravel	<p>Owner: Edward Forrest.</p> <p>Area is knolly and hummocky terrain, and probably a kame moraine, a small part of which is on Forrest property. The rest of it lies on property to the west. The knolls lie southwest of Map Identification No. 16 on the west side of a field road.</p> <p>Test #1 was dug on an elongate knoll at the north end of the area. The test is 110' east of property line fence. Surface has many sub-angular cobbles. Material in hole is very stony with quite a few large cobbles, and looks quite clean. There is sand with cobbles from 6' to depth.</p>
	2	1967	1.5-8.5	0-1.5	No	56.0	40.4	21.4	12.0	5.8	1	27.2%	Gran. Borrow (Grav.)	<p>Test #2 was dug on a higher ridge or knoll 165' south of and a few feet above elevation of Test #1. Material is a very stony gravel, a little more silty than Test #1. Gravel is fine to 4' and then coarse and cobbly. Hole bottoms in cobbly gravel. This sample failed to</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 28

Map 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
						1½"	5/8"	#4	#100	#270				
														meet abrasion requirements for Item 201. An estimated 15,000 cu. yds. of gravel occurs in that part of feature on Forrest property. A modification would be required in order to meet Highway Department Specifications. Material would have to be crushed or screened for use on gravel roads, since there are many cobbles.
18	1	1967	1-9.5	0-1	No	50.6	29.4	21.1	18.0	9.5	1	17.4%	Gran. Borrow (Grav.)	Owner: Edward Forrest. Feature tested is a rolling terrace with rounded escarpment which merges with wooded east valley slope. Terrace is located about 0.15 mile east of U. S. Route 7 and access is by pit road and field road. Test #1 was dug 90' from south end of the terrace in its southwest corner near road. Surface of terrace is very rough with many stones showing. Material in hole is very cobbly with many 4"-8" stones, and a few small boulders. Rough stratification is shown by concentrations of stones. Hole bottomed in the same material.
	2	1967	1.5-10	0-1.5	No	69.8	51.9	40.1	8.0	4.8	1	12.2%	Gran. Borrow (grav.)	Test #2 was dug 150' east of Test #1 and 160' from end

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 29

Map 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
						1½"	5/8"	#4	#100	#270				
	3	1967	1.5-10	0-1.5	No	59.5	52.8	41.4	7.0	3.3	1	14.2%	Gravel	of terrace. Material is a horizontally bedded gravel with fewer cobbles than Test #1. Sample had a slight excess of silt for Item 201. Test #3 was dug 150' north of Test #2, and was 125' from west escarpment of terrace. Material looks the same as Test #2, but met requirements for Item 201.
	4	1967	1-9	0-1	No	72.9	57.8	43.9	7.0	3.5	1	20.0%	Gravel	Test #4 was dug on northwest part of terrace a short distance east of Map Identification No. 17. This test is representative of an area about 225' x 125' that is separated from terrace to southeast by a low saddle. Many sub-angular cobbles show on the hummocky surface. Material is a loose gravel with a few +6" cobbles going to a sand with cobbles continuing below depth. Terrace drops off to north in vicinity of this test.
	5	1967	1-10	0-1	No	63.4	50.6	38.1	11.0	6.0	1	18.0%	Gran. Borrow (Grav.)	Test #5 was dug 275' southeast of Test #4 and 220' north of Test #3. Material is gravel with silt-clay coating on stones that goes to sand with stones at 6'. The hole bottoms in pebbly sand at 10'. Composite of hole is a sandy gravel; composite of a 12-foot

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 30

Map 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					
	6	1967	1.5-8.5	0-1.5	No	59.7	43.8	27.8	11.0	5.8	1	22.8%	Gravel	<p>hole might have too few stones for Item 201. The sample taken had excess silt for Item 201.</p> <p>Test #6 was dug at estimated limit of gravel about 175' east of Test #5 and 100' from foot of valley slope. Material is very stony and looks like that of Test #5. There are a few +6" cobbles. The hole kept caving.</p>	
	7	1967	2.5-7	0-2.5	N O T S A M P L E D										<p>Test hole #7 was dug at base of northwest side of terrace only 3'-4' above level of west areas in lower level of fields. Hole is 20'-22' below top of terrace. Top 2.5' is loamy overburden overlying a fine gravel with water at 7'. The material was not sampled.</p> <p>There is a lot of gravel in this terrace, some of which would have to be modified for Highway Department use. In places there are enough +4" and +6" cobbles for crushing. The terrace contains an estimated 100,000 cu. yds of material which could be modified for Highway Department use. This terrace is part of Buffum Farm, which also includes Map Identification numbers 16, 17, and 19.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 31

Map 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
						1½"	5/8"	#4	#100	#270				
						19	1	1958	2-20	0-2				
2A	1967	1.5-15	0-1.5	Yes	42.9	34.6	26.0	6.0	3.0	1	13.8%	Gravel	Test #2 was sampled on south face; #2A from 0-15' is a clean cobbly gravel overlying gravelly sand; from 15'-32' a silty sand layer overlies a hard packed sandy gravel.	
2B	1967	15-32	0-1.5	Yes	56.2	49.2	38.4	18.0	8.0	1	17.2%	Gran. Borrow (Grav.)	Sample #2B had excess fines for Item 201. An estimated 25% of stones exceed 6", and probably the material on this face could be crushed.	
3A	1967	0.5-14	0-0.5	Yes	53.2	38.0	26.1	7.0	3.0	1	---	Gran. Borrow (Grav.)	Test #3A was sampled from the upper north face of pit.	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 32

Map 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				
	3B	1967	14-28	0-0.5	Yes	57.3	33.1	14.9	16.0	7.5	1	---	Gran. Borrow (Grav.)	Beds of cobbly gravel with stones up to 8", gravel layers, and beds of pebbly sand were sampled. This sample met gradational requirements for Item 201. From 10' to floor is a hard-packed very stony gravel with much silt matrix and practically no sand. Test #3B was sampled from 14'-28' in this material and had excess fines for Item 201. Too few proper size stones were included in both samples for the abrasion test. However, other abrasion test results showed very good wears.
	4	1967	0-9	---	Yes	87.9	62.6	39.6	15.0	5.0	1	16.6%	Gravel	Test #4 was dug in floor in middle of pit. A thin layer of stony sand goes to a fine gravel that continues below depth of sample. Water enters at 9'.
	5	1967	1.5-7	0-1.5	S E E R E M A R K S						19.6%	Gran. Borrow (Grav.)	Test #5 was dug 75' north of top of north face. Material below about 2' of boulders, cobbles and soil is loose gravel with a few small cobbles. Upper layers are coarse; lower beds consist of very fine gravel. The sieve analysis of this sample was miscalculated. There is still quite a bit of gravel left in the pit. The faces are coarse and could be	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 33

Map 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
						1½"	5/8"	#4	#100	#270				
														crushed; gravels in the floor are finer and become wet at 9'.
20	1	1967	1-6.5	0-1	No	76.5	57.1	40.8	10.0	5.5	1	19.1%	Gran. Borrow (Grav.)	<p>Owner: Frank Read Jr.</p> <p>Feature is a small terrace used as a pasture and is located behind owner's barn on the west side of U. S. Route 7 north of the cemetery. A small pit was once opened in the north end of the terrace. A small narrow field is on the west side of the terrace, and a bouldery pasture lies west of the terrace. The pasture to the north is somewhat terraced with a rough bouldery surface. Probably area is a kame terrace extending north toward the Fontana pit (Map Identification No. 15), and south toward the Steere pit.</p> <p>Test #1 was dug near south end of terrace. Material is a cobbly gravel with many unsampled +3" stones including two boulders. It was sampled from beds of roughly stratified very fine gravel, sub-angular cobbles and silty, unsorted gravel. Hole bottoms in a stony silty sand at 6.5'.</p>
	2	1967	1-9	0-1	No	46.6	36.9	26.5	13.0	6.5	1	23.0%	Gran. Borrow (Grav.)	<p>Test #2 was dug about 425' north of Test #1, and 70' south of old pit area. Test hole shows a well sorted gravel</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 34

Map 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
						1½"	5/8"	#4	#100	#270				
	3	1967	7-20	---	Yes	88.8	82.5	74.5	8.0	2.3 1.7*	1	---	Gran. Borrow (Sand)	<p>that doesn't stand well in hole. There are more cobbles below 5'. Sample had a slight excess of silt for Item 201.</p> <p>Test #3 was dug in lower face of pit and continued in floor. Top 7' is like Test #2. From 7'-20' is a pebbly sand bottoming in medium sand. Test #3 had excess +1½" stones for Item 202. A composite of face probably would have had stones enough for Item 201.</p> <p>A woodchuck hole in pasture slope west of pit showed pebbly sand. Terrace could be used for a source of Item 201 if modified, and pasture to northwest should be investigated. Access is either through barnyard or through pasture behind barn.</p>
21	1	1967	0.5-10	0-0.5	No	62.2	34.0	23.8	7.0	3.0	1	21.4%	Gravel	<p>Owner: O'Neal Estate (Mildred O'Neal).</p> <p>This area is a terrace on the east side of U. S. Route 7 just south of the cemetery and about 0.20 mile north of the Manchester Town Line. The terrace is below the elevation of the one in which the cemetery is located, and the north end of which was sampled in Map Identification No. 20. It is mapped as kame moraine by Dr. D. P. Stewart. The east edge</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 35

Map 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
						1½"	5/8"	#4	#100	#270				
	2	1967	1-10	0-1	No	60.2	32.6	24.7	13.0	6.0	1	18.4%	Gravel	<p>of the terrace overlooks meadows and trends a little west of north so that it narrows to nothing across the highway from the cemetery.</p> <p>Test #1 was dug 120' from the highway, southwest of the south cemetery corner. A very coarse, stony gravel with a few +6" stones was encountered. It is hard-packed with much silt-clay binder. From 0.5'-4' is a fine gravel; from 4'-10' is very coarse and cobbly. The test hole bottoms in the same material.</p> <p>Test #2 was sampled behind buildings about 320' from highway and 90' from edge of terrace. This test is about 425' south of Test #1. Terrace to south becomes wider toward the east.</p> <p>Material is very stony with bedding shown by laminar abundance of stones separated by more sandy layers. Has silt-clay binder. This property is roughly triangular in shape and it is estimated that about 40,000 - 50,000 cu. yds. of material are in area north of buildings — about 80,000 cu. yds. overall. Whole terrace was planted to corn, so further testing could not be done.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 36

Map 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
						1½"	5/8"	#4	#100	#270				
														Mildred O'Neal may not wish to have a gravel pit opened on this property since it would be near her house. Permission to sample the property to the south was not obtained; it is more rolling, is wooded in part, and has small water-filled basins, possibly kettles.
22	1	1967	1.5-10	0-1.5	No	68.6	53.1	36.0	27.0	13.0	1	21.6%	---	Owner: O'Neal Estate (Mildred O'Neal). Area is a pasture ridge extending north of the Steere pit (Map Identification No. 23) on the west side of U. S. Route 7. To the north the ridge broadens and merges with an east sloping pasture beyond which the cemetery is located. This area is located across the highway from Mildred O'Neal's house. Test #1 dug on ridge 90' - from Steere property. Material is a cobbly gravel with a few boulders and a silt lens. Overall - a sandy gravel. -- Hole was hard to dig. A pocket of organic, unsorted material was encountered in west end of hole.
	2	1967	1.5-11	0-1.5	No	100	100	82.8	17.4	6.0 5.0*	1	---	Sand	Test #2 was dug in basin west of ridge about 180' northwest of Test #1. This basin is at about same elevation as

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 37

Map 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	1967	2-7	0-2	No	SEE	REMARKS					1	21.6%	Gran. Borrow (Grav.)	<p>west face of Steere pit. Material is a sand with an occasional small pebble and hole goes to a gravelly sand at the bottom.</p> <p>Sieve analysis of Test #3 was miscalculated by the laboratory. This hole was dug 395' northeast of Test #1 and about 320' south of the cemetery. The pasture slope here is gently east. Material is a sandy cobbly gravel that doesn't stand well in hole. There are very abrupt changes in particle size and degree of sorting. A fairly flat corn field lies below and to east of pasture, and shows a stony surface. This ridge seems to be characterized by silty and cobbly gravels that are not well stratified. Access directly from U. S. Route 7 would be possible.</p>
23	1	1958	---	---	Yes	84.1	64.4	36.5	14.0	4.5	1	11.5%	Gravel	<p>Owner: Arthur Steere. (Gravel rights now owned by Wm. E. Dailey).</p> <p>This is a large pit on the west side of U. S. Route 7 just north of the Manchester Town Line. Extension of pit is west and southwest; a south extension is limited by a house. O'Neal Estate owns to north.</p>	
	2	1964	0-30	---	Yes	74.7	55.1	30.4	10.0	4.0	1	15.0%	Gravel		
	3	1964	2-30	0-2	Yes	78.3	52.3	34.7	9.0	4.0	1	14.6%	Gravel		

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 38

Map 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
						1½"	5/8"	#4	#100	#270				
	4	1967	0-21	---	Yes	45.7	32.9	19.5	28.0	18.0	1	13.0%	---	<p>Callahan of Testing Laboratory personnel took samples of the center of the west face in 1958 and 1964, and of the north face in 1964. All samples met Item 201 requirements. The pit was sampled again in 1967, and the pit had been enlarged a great deal. Silt beds and silty or sandy gravels now show on the west face; the south face and the north and northwest faces have much sloughed material. The lower middle and north floors are filled with +4" cobbles that apparently had been screend out.</p> <p>Test #4 was a hand sample taken of the south face of the lower level. This face is 155' from the south end of the pit. Beds of fine gravel, silty sand, silty cobbly gravel, and hard-packed sandy gravel are exposed from top to bottom of the 33-foot high face. The lower 11' is hard-packed gravel and was not included in sample.</p>
	5	1967	2.5-27	0-2.5	Yes	68.4	57.1	44.0	28.0	17.0	1	18.0%	---	<p>Test #5 was a hand sample taken on upper west face 200' south of O'Neal property.</p> <p>Log of test: 0-2.5'-overburden; 2.5'-16'- gravel and</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 39

Map 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
						1½"	5/8"	#4	#100	#270				
	6A	1967	2-21	0-2	Yes	64.5	50.3	32.0	13.0	7.0	1	17.6%	Gran. Borrow (Grav.)	one pebbly sand layer; 16'-26'-silty sand; 26'-?-sandy gravel. the lower part of 44-foot high face has excess sloughing to take a hand sample and backhoe could not get up to bottom of face. Sample overall was a sandy gravel with excess fines for Items 201 and 105. Test #6A was a hand sample of upper north face, and represents extension into O'Neal property. Thin beds of pebbly sand overlie gravel from 2'-21'.
	6B	1967	21-33	---	Yes	46.5	38.1	26.6	29.0	11.0	1	19.0%	---	Test #6B was a sample from middle part of north face. Material is a sandy gravel and a seam of silty sand. Lower 22' of face has too much sloughing to dig through. Length of lower pit floor (between Tests #4 and #6) is about 500'
	7	1967	1-17	0-1	Yes	79.1	74.8	65.5	3.9	2.0 1.3*	1	---	Gran. Borrow (Sand)	Test #7 was a hand sample taken on west face of pit about 100' from southwest corner. Stratified fine gravel, gravelly sand, and pebbly sand were encountered. The beds dip to the west. Sample had excess +1½" stones for Item 202.
	8	1967	0-10.0	---	Yes	70.4	68.1	62.4	8.0	3.0	1	---	Gran. Borrow (Grav.)	Test #8 was dug in floor below Test #7. Southwest upper level of pit represented by Tests #4, #8, and #9B measures

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 40

Map 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
						1½"	5/8"	#4	#100	#270				
	9A	1967	5-19	0-2	Yes	82.6	75.1	66.4	3.3	1.5 1.0*	1	---	Gran. Borrow (Sand)	<p>230' along the west face, about 155' on its east edge, and averages about 125' wide.</p> <p>Material in Test #8 is a gravelly sand with sand in bottom of hole. Sample had too few stones for Item 201, but material in this floor apparently is coarse toward its northeast corner.</p> <p>Test #9A was a hand sample of upper face at east edge of upper southwest level of pit. Top of this test is only a little below elevation of top of Test #7, and both tests probably represent extension of pit to south and southwest.</p> <p>Material from 2'-19' is stratified gravelly sand and medium sand. The stratification dips west. The test was taken about 33' from south end of pit. This sample had excess large pebbles for Item 202.</p>
	9B	1967	19-36	---	Yes	58.3	43.9	24.2	9.0	4.0	1	21.4%	Gravel	<p>Test #9B was a backhoe and hand sample from the lower face. Material is a very stony gravel separated from upper less stony beds by a 2-foot thick layer of silty sand. Face bottoms in gravel. A composite of the face would have had enough stones for Item 201.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 41

Map 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
						1½"	5/8"	#4	#100	#270				
	10	1967	0-8.5	---	Yes	50.4	39.8	27.8	5.0	2.0	1	17.4%	Gravel	<p>Test #10 was dug in floor below Test #9B. Area of this floor is about 170' x 120'. Material is very clean and stony with many +2" pebbles and a few +6" cobbles.</p> <p>The only chance for gravels in this pit seems to be in the south end — on the east side of the upper floor, represented by Test #9 and in the lower, represented by Test #10.</p> <p>Gravelly sands that would require screening to meet Item 202 specifications, would probably be found in an extension to the southwest.</p>
24	1	1967	1.5-13	0-1.5	Yes	82.3	67.7	51.1	11.0	3.0	1	18.2%	Gravel	<p>Owner: Mrs. Catherine Kelleher.</p> <p>Area is a pit and wooded ridge east of State Aid Highway No. 1 about 0.40 mile north of Town Highway No. 26. The wooded ridge is in the middle of a broad marshy area. The West Branch River has been diverted to the east around the area, and there are ponds at the south and north end. The pit, about 75' x 75', is 250' from the north end of the ridge, 30'-40' from its east edge, and about 225' from its south end. This ridge is at east edge of a kame terrace mapped by Dr. D. P. Stewart, and</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 42

Map 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	1967	2-14	0-2	Yes	52.4	42.3	27.3	11.0	6.0	1	22.4%	Gravel	<p>is about 400' east of State Aid Highway No.1.</p> <p>Test #1 was dug on east face near northeast corner. Top 8.5' is a sandy gravel with a few cobbles overlying an interbedded sand and gravelly sand. Hole bottoms in silt to clay.</p> <p>Test #2 was dug in west end of south face and continued for 2' into floor. Material is a sandy, very stony gravel with pebble lenses and 1 or 2 lenses of stony sand. There are quite a few cobbles and small boulders. Gravel is compact and seems partially cemented. Bottom of hole is cobbly and wet. Both pit samples met requirements for Item 201. The faces have much sloughing and the north extension is thickly wooded. Little material is left to east. South of the pit are small clearings and woods roads.</p>
	3	1967	2-10.5	0-2	No	50.8	42.0	29.4	17.0	9.0	1	27.8%	Gran. Borrow (Grav.)	<p>Test #3 was dug 20' south of middle south face in clearing. Material is a sandy cobbly gravel that is not well sorted. Stones are sub-angular. There are a few small boulders. Material is very stony in bottom. Surface of area south of Test #3 shows many stones,</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 43

Map 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
						1½"	5/8"	#4	#100	#270				
														indicative of a granular sub-surface. However, the woods roads were too narrow to maneuver the backhoe for testing. The south end of the wooded ridge stands 5'-8' above the general elevation of the lowland.
25	1	1967	1-6	0-1	No	100	86.8	66.5	34.6	25.0 16.6*	---	---	---	<p>Owner: Mrs. Austin Rumney.</p> <p>Area is a pasture ridge on east side of Vermont Route 30 just south of Dorset Village. East side of this highway is mapped as a kame terrace between Dorset and South Dorset. This area was the only property in the kame terrace for which permission to sample could be obtained. One test hole was dug atop ridge due east of owner's store. Only unsorted angular stones and silty clay were encountered.</p> <p>A small cornfield below and west of ridge looked stony on surface, but permission to sample there could not be obtained.</p> <p>A somewhat higher ridge or terrace to east is very bouldery and cobbly on the surface, and a ditch dug for a water line also showed many stones. The silty or clayey character of the material indicates a glacial till.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 44

Map 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
						1½"	5/8"	#4	#100	#270				
26	1	1967	4-10.5	0-4	No	83.1	60.8	38.9	16.0	8.0	1½	24.4%	Gran. Borrow (Grav.)	<p>Owner: Willis Abbot.</p> <p>Area is rolling meadow with rounded ridges located west of Vermont Route 30 just south of Dorset Village at edge of kame terrace with outwash occurring to the west. Reed pit (Map Identification No. 27) is located about 50' north of tree line marking edge of property. One test was taken from a hole dug 300' west of highway and 40' south of trees. Top 4' is a "dirty" fine gravel; from 4'-10.5' gravel is a little cleaner with more stones of larger size.</p> <p>A rounded ridge just west of the test has a woodchuck hole in which gravels show. Owner was not interested in selling material, and he did not want meadow dug up with numerous test holes.</p>
27	1	1967	1-12	0-1	Yes	56.0	45.1	26.2	10	5.0	1	23.4%	Gravel	<p>Owner: Sherman Reed.</p> <p>Area is a 230- by 190-foot pit begun in southwest corner of 8-acre meadow on west side of Vermont Route 30 at south edge of Dorset Village. Meadow is characterized by rolling, hummocky terrain, mapped by Dr. D. P. Stewart as an outwash area. However, the terrain looks more like kame</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 45

Map 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				
	2	1967	1-13	0-1	Yes	57.4	46.7	37.9	7.0	3.0	1	25.2%	Gran. Borrow (Grav.)	<p>moraine. Possibly differen- tail erosion produced the topo- graphy.</p> <p>Test #1 was dug on east face which is an exposed sec- tion of a ridge extending south- west from owner's buildings about 250' away. Material is very stony with some silt and a few +6" cobbles.</p> <p>Test #2 was dug on 13-foot face in southwest corner of pit.</p> <p>Log of test: 0-1'-overbur- den; 1'-6'- sandy gravel; 6'- 8'- clean gravel; 8'-11'-peb- bly sand; 11'-13'-medium sand. This material looks too poorly sorted for outwash. Sample had slightly excessive wear for Item 201. Silty gravel shows on south face. Silt and stones over a gravelly sand occurs on the west face north of the test. Probably no extension to south and southwest of pit.</p>
	3	1967	1-18	0-1	Yes	57.4	49.1	35.3	15.0	8.0	1	14.4%	Gran. Borrow (Grav.)	<p>Test #3 was dug in 18-21- foot high north face. Beds of sandy gravel, gravelly sand, pebbly sand, and layers of very fine sand were encountered. The face bottoms in fine gra- vel.</p> <p>Another lower face in the north pit floor, also shows</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 46

Map 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
						1½"	5/8"	#4	#100	#270				
														a fine gravel. The owner was not interested in selling any more gravel at the time of sampling, and planned to close the pit.
28	1	1967	1-9.5	0-1	No	75.0	56.0	30.9	10.0	6.0	1	20.0%	Gran. Borrow (Grav.)	<p>Owner: W. Lawrence King. Dr. D. P. Stewart has mapped terrain in which area occurs as a kame terrace. The feature is a pasture located on the north side of and high above Town Highway No. 7 out toward Dorset Hollow.</p> <p>The owner stated that he was not, and would never be, interested in selling material. Only one test hole was dug, the top 4' of which was not well sorted. The material appeared cleaner below that. Overall, it was quite stony with a number of large cobbles. The sample had a slight excess of silt (6% vs 5%) for Item 201. Many stones show on the flat to rolling surface of the pasture; and if this area ever becomes available as a materials source, it would warrant further testing.</p> <p>Access to the top of the terrace is via a pasture road through a swampy area and up the steep slope.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 47

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (Ft)	Existing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1½"	5/8"	#4	#100	#270				
29	---	1967	---	---	Yes	--	--	--	--	--	--	---	---	<p>Owner: Mr. & Mrs. F. S. Dunn.</p> <p>Area is a small pit and hillside on the north side of Town Highway No. 7 near Dorset Hollow. This property adjoins the pasture sampled in Map Identification No. 28. The pit, however, is quite a distance to the east.</p> <p>The owners are not interested in selling material and would not allow testing. The pit shows much sloughing and appears quite stony.</p> <p>Area is mapped as kame terrace by Dr. D. P. Stewart.</p>
30	1A	1967	1-9	0-1	Yes	81.1	63.1	40.6	10.0	5.0	1½	21.8%	Gran. Borrow (Grav.)	<p>Owner: Burton Bartlett.</p> <p>Area is a granular terrace on northeast side of valley at the north edge of Dorset Village. A few pits have been opened along its edge.</p> <p>Burton Barlett owns a small one which has been discontinued. It is located between a small brook and Town Highway No. 5. Pit would have a tremendous extension to the east in meadow, but owner would allow no backhoe sampling there. There is also an extension to the north limited by the Mc-Wayne property. Part of the pit area has been graded off; a 125-foot long north face and</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 48

Map 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
						1½"	5/8"	#4	#100	#270				
	1B	1967	9-24	---	Yes	90.8	73.6	50.8	9.0	4.0	1	---	Gran. Borrow (Grav.)	a 125-foot east face remain. Test #1 was a hand sample of the north face; Test #1A was of fine gravel; Test #1B was of beds of sand and gravel. Both samples had slightly excess silt for Item 201.
31	1	1967	1.5-26	0-1.5	Yes	64.8	59.5	49.5	14.0	6.0	1	22.8%	Gran. Borrow (Grav.)	Owner: Paul McWayne. Area is small pit with limited extension located east of Vermont Route 30 south of Town Highway No. 5. Pit is about 135' x 80' and has a southward extension of 190' to the Bartlett property, and a westward extension of about 100' to the edge of the terrace. The Town trucks were loading from the pit when it was sampled. Extensions are grass covered. Test #1 was a hand sample of west face at north end. Interbedded pebbly sands and sandy gravels with a silt-clay seam were sampled. Gravel beds are somewhat "dirty" and poorly sorted, sands on face show cross-bedding, and lenses and steep dips of beds occur indicating an ice-contact origin. South end of west face shows more sand.
	2	1967	4-20	0-4	Yes	47.6	39.0	25.5	6.0	4.0	1	23.6%	Gravel	Test #2 was dug at east end

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 49

Map 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
						1½"	5/8"	#4	#100	#270				
	3	1967	1.5-10	0-1.5	No	100	100	83.8	10.9	4.0 3.4*	1	---	Sand	<p>of south face. About 4' of strippings that had been pushed over the face were not included in sample.</p> <p>Material on face includes coarse to fine gravels, generally poorly sorted, and interbeds of gravelly sand. The face bottoms in gravel. However, since the floor is only a little bit above swale to east there is probably little or no granular material in floor.</p> <p>Test #3 was dug 35' south of east end of south face. Gravels seen on face were not encountered — they may hold to east edge of feature or pinch out before they get to test hole. The material in hole is interbedded fine and pebbly sands. Hole bottoms in a silty and stony material. West face of pit could be screened for sand. The south extension may be a source of sands, although it is more likely that the material keeps changing since the faces show pockets and lenses of gravel. Quite a few tabular stones noted.</p>
32	1A	1967	1.5-9.5	0-1.5	Yes	SEE	REMARKS				1	22.4%	---	<p>Owner: Paul McWayne.</p> <p>This is small pit on north side of Town Highway No. 5</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 50

Map 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
						1½"	5/8"	#4	#100	#270				
	1B	1967	8-18	--	Yes	63.6	47.1	22.9	5.0	3.5	1	17.6%	Gravel	<p>about 0.10 mile east of Vermont Route 30. Pit has been opened at edge of pasture which is in kame terrace.</p> <p>Test #1A was dug in top of north face. Laboratory analysis was miscalculated. Fine sandy gravels with some tabular stones were sampled.</p> <p>Test #1B was dug on lower face. Material is a very stony gravel — looks clean — with only a few +4" stones. Face bottoms in a cobbly gravel.</p>
2	1967	N O T	S A M P L E											<p>Test #2 was dug in floor. Only 2' of cobbles overlies clay and hole was not sampled.</p>
3	1967	1-10.5	0-1	No		64.1	54.2	33.2	13.0	7.5	1½	23.2%	Gran. Borrow (Grav.)	<p>Test #3 was dug 75' north of pit in hummocky pasture. Top of test hole is very stony with sub-angular small cobbles. Overall, it is fairly clean and not well packed. Schist stones are abundant. The test was taken about midway across 145-foot wide lower level of pasture. To the east there is another rolling or hummocky level about 6'-8' above the lower level.</p>
4	1967	1-8	0-1	No		50.9	42.1	28.8	11.0	6.5	1	16.6%	Gran. Borrow (Grav.)	<p>Test #4 was dug at the edge of the upper level, 110' east of Test #3, and 120' northeast of the pit. The surface around Test #4 shows many angular large</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 51

Map 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
						1½"	5/8"	#4	#100	#270				
														rocks. Material in hole is cobbly and mainly poorly sorted. It goes to silty clay with large angular stones at 8'. Gravels here might be modified for Item 201, and have enough silty clay to be crushed for use on gravel roads.
33	1A	1967	2-33	0-2	Yes	61.6	54.8	42.8	4.0	2.0	1	23.6%	Gravel	Owner: Ray Foote. This is a high pit on the southwest side of State Aid Highway No. 1 about 0.5 mile southeast of East Rupert Village. Pit is an exposure of a kame terrace standing above the southwest side of the valley, and has about 300' of frontage along the road. The owner has a broad flat meadow between the top of the pit and his mansion on Town Highway No. 11 to the west. He doesn't want gravel removed in quantities that would cause trees and meadow to slough off. If any material were to be obtained here, it would have to be along edge of road both north and south of pit. The 80' high west face was sampled with three tests taken about two-thirds of the way to the north end. There is some sloughing on lower face and at north and south ends on the very short
	1B	1967	33-58	--	Yes	73.9	63.6	47.7	2.0	1.0	1	16.8%	Gravel	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 52

Map 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				
	1C	1967	58-76	--	Yes	44.5	30.1	22.7	17.0	8.0	1	16.0%	Gran. Borrow (Grav.)	<p>faces there. The generally fine gravels are cemented in places. They are interbedded with pebbly sands and gravelly sands and dip about 30° back to the west-southwest.</p> <p>Test #1C bottomed in a stony silt-clay 4' above floor and was the only test which failed.</p> <p>Pit is located 0.2 mile north of junction of State Aid Highway No. 1 and Town Highway No. 11.</p>
34	1A	1967	2-32	0-2	Yes	82.6	76.3	57.5	18.0	8.0	1	28.2%	Gran. Borrow (Grav.)	<p>Owner: Mrs. Herman Ruegger.</p> <p>Area is a 130-foot by 75-foot pit with 40-foot to 60-foot faces. It is located on the west side of State Aid Highway No. 1 north of the Foote pit. There is much sloughing and many small trees on the pit faces.</p> <p>Test #1A was a hand sample of upper face in northwest corner of pit. Silty gravel with schist cobbles and tabular blocks in the top 4' goes to interbeds of "dirty" sand and very fine gravel with many tabular stones.</p> <p>Interval below 32' is covered by too much sloughed material to dig through.</p>
	1B	1967	54-64	--	Yes	100	100	84.9	12.7	4.0	1	---	Sand	<p>Test #1B was a backhoe sample of bottom 10' of face.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 53

Map 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	1967	2-42	0-2	Yes	70.1	55.6	37.0	10.0	5.0	1	19.6%	Gravel	<p>Material is a pebbly sand bottoming in same.</p> <p>Test #2 was dug on face in southwest corner of pit.</p> <p>Log of face: 0-2'-overburden; 2'-9'-very fine gravel; 9'-16'-fine sand; 16'-22'-fine gravel; 22'-33'-cobbly sandy gravel; 33'-42'-fine sandy gravel with lenses of coarse gravel. Face bottoms in fine gravel.</p> <p>The Town had purchased some gravel from owner, and it is not known at this time if any material would be available for State projects. Apparently the owner does not object to expansion of this pit. The north and south extensions are wooded, but the property lines to the south (Foote) and to the north (Harwood) were not found. Quite a bit of rubbish clean-up and tree clearing would be required in this pit. A small pit owned by Harwood north of this pit is about depleted and owner would not give permission to sample.</p>
35	1A	1967	2-15	0-2	Yes	65.3	54.8	37.9	4.0	2.0	1	26.4%	Gran. Borrow (Grav.)	<p>Owner: Mrs. Arther Colbourn. (Formerly the M.L. Clark pit)</p> <p>Area is located on the northeast side of Vermont Route 30 east of East Rupert. The pit is about 450' long (northwest-</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 54

Map 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	1967	18-33	--	Yes	68.4	53.4	35.9	3.0	2.0	1	16.4%	Gravel	<p>southeast) and is less than 100' wide. It has not been used in a long time. The access road leading for about 300' northwest from Vermont Route 30 is washed out near the pit. Trees are growing in floor and on faces. An eastward extension of 50'-100' is limited by Tiffit Estate for which permission to sample could not be obtained. Extension to north, northwest, and west was thickly wooded and inaccessible to backhoe. However, area looks granular with pine trees and a stony surface and was indicated as a granular terrace by Dr. D. P. Stewart.</p> <p>Test #1A was a hand sample of upper west face taken 130' from northwest end. There were some tabular stones and soft-looking stones, many in the 4"-8" range. Sample had excessive wear for Item 201.</p> <p>Test #1B was a backhoe sample of lower face 20' to the south of Test #1A. Material is vaguely stratified clean gravel with some cobbles and small boulders. At bottom of face is a cobble and boulder bed. Tests #1A and #1B represent westward extension.</p>

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 55

Map 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
						1½"	5/8"	#4	#100	#270				
	2	1967	0-10	--	Yes	100	91.6	72.4	7.2	4.0 2.9*	1	---	Sand	Test #2 was dug in floor of pit 150' from northwest end. Beds of very fine gravel and pebbly sand dip shallowly to west or west-southwest. Below 6' is a pebbly sand that continues below depth of test.
	3A	1967	2-22	0-2	Yes	79.0	64.3	48.5	4.0	3.0	1	19.0%	Gravel	Test #3 was dug on northeast face 75' from northwest end of pit. This has about 100' of extension that is limited by Tiff property. A hand sample was taken of a reddish sandy gravel from 2'-8' and of beds of pebbly sand and fine gravel from 8'-22'. The upper beds sampled as Test #3A met Item 201 requirements.
	3B	1967	22-40	--	Yes	71.0	59.0	43.6	8.0	3.0	1½	27.8%	Gran. Borrow (Grav.)	Test #3B was sampled from the lower face. Fine gravel and pebbly sand were exposed by hand shovel and backhoe. Sample had excessive wear for Item 201. The pit's northwest face shows much sloughing and many boulders and couldn't be approached close enough with the backhoe to expose in-place material. There are probably large quantities of gravel remaining in pit's extensions. Its availability, however, is not known.

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 56

Map 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		
						1½"	5/8"	#4	#100	#270						
36	1	1967	---	---	Yes	N	O	T	S	A	M	P	L	E	D	Owner: Chester Baldwin. Area is a pit and elongate knoll located 0.20 mile west of Town Highway No. 8 a short distance south of the Danby Town Line. Access is along a pasture road through owner's barnyard and involves the ford of a small brook that passes close to the east edge of the knoll. There is a small pit of two levels at the south end of the 175-foot x 140-foot knoll.
	2	1967	---	---	Yes	N	O	T	S	A	M	P	L	E	D	Two test holes dug in the first and second floors encountered very thin granular layers over silt or clay and were not sampled.
	3	1967	0-12.5	---	Yes	66.0	45.6	28.3	8.0	3.8	1½	---	Gran. Borrow (Grav.)		Test #3 was a sample of the upper face a little northwest of Test #2. Beds of clean gravel and gravelly sand were sampled. Material goes to silt at 11'. Insufficient proper-size stones were included for the wear test.	
	4	1967	0.5-8.5	0-0.5	No	72.1	64.4	41.7	3.0	2.0	1	15.6%	Gravel		Test #4 was dug on top of knoll 35' north of Test #3. Material is a clean gravel over silty sand at 8.5'.	
	5	1967	1-9.5	0-1	No	69.5	47.6	27.4	19.0	6.8	1½	24.2%	Gran. Borrow (Grav.)		Test #5 was dug 75' north-northeast of Test #4. It is at a point where the knoll slopes down to north and is atop its very steep east side.	

*Percentage of Total Sample

TABLE I

DORSET GRANULAR DATA SHEET NO. 57

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft)	Over-burden (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				
														<p>Beds of fine gravel and cobble layers were encountered. Overall, the material looks a little "dirty" and is not well sorted. A sand lens was noted, and a bed of fine gravel varying from 2'-5' in thickness was seen. This knoll is probably of ice-contact origin, and material is probably confined to the knoll. Mainly the gravel seems a little soft and there are many tabular stones. Bulldozer scars show about half-way down east side of knoll where stones and silty-looking fines are exposed.</p> <p>Possibly gravels occur on the east side of the knoll from the bank of the brook to the top of the feature.</p> <p>The bulldozer scars were inaccessible to the backhoe and there was excess sloughed material to shovel through.</p>

*Percentage of Total Sample

TABLE I
Supplement

DORSET PROPERTY OWNERS - GRANULAR	Map Ident. No.
Abbot, Willis	26
Baldwin, Chester	36
Bartlett, Burton	30
Beebe, Harold	5, 6
Colbourn, Arthur (Mrs.)	35
Connors, Gertrude (Mrs.)	1, 2
Dunn, F. S. (Mr. & Mrs.)	29
Fontana, Peter	15
Foote, Ray	33
Forrest, David	19
Forrest, Edward	11, 16, 17, 18, 19
Gunther	12
Guyette, Dr.	14
Kelleher, Catherine (Mrs.)	24
King, W. Lawrence	28
McWayne, Paul	31, 32
O'Neal Estate (Mildred O'Neal)	21, 22
Read, Frank, Jr.	20
Reed, Sherman	27
Rodriguez, Joe	13
Ruegger, Herman (Mrs.)	34
Rumney, Austin (Mrs.)	25
Stavens and Frost	7
Steere, Arthur	23
Unknown	4
Vermont Department of Forest and Parks	3
Vermont Highway District No. 1	8, 9, 10

TABLE II

DORSET 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	Remarks
1	1	1967	Dolomite	No	Chip	4.2%	<p>Owner: Stavens and Frost.</p> <p>This area is a wooded hillside on the west side of old U. S. Route 7 a short distance north of East Dorset. Access is via the old highway leading north from a point on the new highway near the entrance of the Marbleledge Motel.</p> <p>Test #1 was begun on the hillside 140' west of old U. S. Route 7 at a point 0.20 mile north of the new highway. A stone wall marks the beginning of the test. The test traverse was across the strike at N45°W for 160'. Rock is a gray-, brown-, or buff-weathered gray to mottled cream dolomite which is mainly quartzitic. The rock is mapped as the Dunham Dolomite and its contact with the Monkton Quartzite is mapped just to the west of the sample traverse. The upper end of the traverse showed thin quartzite layers, greenish gray in color..</p> <p>The sample met abrasion requirements for Item 204, Sub-base of Crushed Rock and appeared to break satisfactorily.</p>
	2	1967	Dolomite	No	Chip	2.4%	<p>Test #2 was begun in a roadside outcrop 140' north of due east extension of south end of Test #1. (Extension follows stone wall out to road.) The test traverse was continued for about 125' at N10°W (about 70° from the strike). Outcrops are sparse. Beds of slabby, gray-weathered dolomite give way across the strike to buff- or brown-weathered dolomite with sandy and shaly partings. The rock on fresh surfaces is gray to pink or cream mottled. On the whole, the rock is fairly hard and breaks mainly blocky. Probably the pasture north of the stone wall, represented by Tests #1 and #2, has enough relief and area for a quarry operation.</p>
	3	1967	Dolomite	No	Chip	3.5%	<p>Test #3 was sampled on the steep pasture slope 225' west of a point 340' south of the stone wall. On the 225-foot gentle slope east of the test site there were no outcrops, but an exposure stood at the edge of the road, so the rock cannot be far below the surface. The brown-to gray weathered gray exposures consist of siliceous dolomite;</p>

TABLE II

DORSET ROCK DATA SHEET NO. 2

Map Ident. No.	Field Test No.	Year Field Tested	Rock Type	Existing Quarry	Method of Sampling	Abrasion AASHTO T-3	Remarks
							<p>it is massive in places and thinly bedded in others. It breaks angular to blocky and is quite hard, and meets requirements for Item 204.</p> <p>There is 35'-40' of relief from foot of exposure up to the fairly flat wooded top, and there is enough area and relief here for a quarry operation. This property as a whole would require clearing and stripping for a large quarry. It is not known if this source would be available, since Stavens and Frost expressed interest in learning whether their rock met Highway Department abrasion requirements. They may have a use for a crushed rock material in their well-drilling operations.</p>
2	1	1967	Marble & Dolomite	Yes	Chip	4.4%	<p>Owner: Green Mountain Marble Company. (Freedley Quarry)</p> <p>The quarry is located at the end of abandoned Town Highway No. 21 about 1.10 mile from Town Highway No. 15 and is at head end of inclined marble railway which comes out on railroad at Freedleyville.</p> <p>This quarry has gone underground and has been worked outside as well where high faces stand above a huge grout pile. Faces and grout pile have access around north end to top. East foot of grout pile has a grove of trees on a small flat-topped rise standing 10'-12' above the haul road.</p> <p>The rock is fairly soft, gray-streaked white marble and buff-weathered siliceous dolomite, and a sample taken from grout pile broke satisfactorily and met abrasion requirements for Item 204. There is a lot of rock here, but much of it is in huge blocks in the grout pile and would have to be drilled. There would be about 1.1 miles of road to reconstruct if this source were to be used.</p>
3	1	1967	Cheshire	No	Chip	1.8%	<p>Owner: Edward Forrest.</p> <p>Area is wooded hillside on east side of valley southeast of East Dorset. It is located east of the proposed location of the Arterial Project and is reached by a field and woods road leading about .55 mile from U. S. Route 7. The slope is quite steep, thickly wooded, and the top stands</p>

TABLE II

DORSET ROCK DATA SHEET NO. 3

Map Ident. No.	Field Test No.	Year Field Tested	Rock Type	Existing Quarry	Method of Sampling	Abrasion AASHO T-3	Remarks
							<p>about 80' above level of fairly flat area along woods road. The upper slope shows many exposures of gray-weathered vitreous quartzite mapped as the Cheshire.</p> <p>One sample was taken down the steep slope. Area covered by exposures is about 225' north-south and 100' east-west; a rock fall area at the foot of the slope measures 200'x 100'.</p> <p>The test was located about 1,000' south of a sugarhouse. The rock is very hard and breaks angular to blocky. It appears massive, and the area looks like a good quarry location.</p>

TABLE II
Supplement

DORSET PROPERTY OWNERS - ROCK

Map Ident. No.

Forrest, Edward

3

Green Mountain Marble Company

2

Stavens and Frost

1