SURVEY OF HIGHWAY CONSTRUCTION MATERIALS IN THE TOWN OF FAIRFIELD, FRANKLIN COUNTY, VERMONT

prepared by

Engineering Geology Section

Materials Division

Vermont Department of Highways

in cooperation with

United States Department of Commerce

Bureau of Public Roads

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Acknowledgments

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

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

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

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

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

History

The Materials Survey Project was formed in 1957 by the Vermont State Department of Highways with the assistance of the United States Bureau of Public Roads. Its prime objective was to compile an inventory of highway construction materials in the State of Vermont. Prior to the efforts of the personnel of the Survey as described in this and other re orts, searches for highway construction materials were conducted only as the immediate situation required. Thus, only limited areas were surveyed and no over-all 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 on to the State in the form of higher construction costs. The Materials Survey Project was established to minimize or eliminate this factor by enabling the State and its contractors to

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

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

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; i.e., Vermont Geological Survey Bulletins, Vermont State Geologist Reports, United States Geological Survey Bedrock Maps, Centennial Geological Map of Vermont, as well as other references.

The granular materials map depicts areas covered by various types of glacial deposits (outwash, moraines, kames, kame terraces, etc.) by which potential sources of gravel and sand may be recognized. This information was obtained primarily from a survey being conducted by Professor D. P.

Stewart of Miami University, Oxford, Ohio, who, since 1956, has been mapping the glacial features of the State of Vermont during the summer months. Further information was obtained from the Soil Survey (Reconnaissance) of Vermont, conducted by the Bureau of Chemistry and Soils of the United States Department of Agriculture, and from Vermont Geological Survey Bulletins, United States Geological Survey Quadrangles, aerial photographs, and other sources. On both maps the areas tested are represented by Identification Numbers. Several tests are usually conducted in each area represented by an Identification Number, the number of such tests being more or less arbitrarily determined either by the character of the material or by the topography.

Also included in this folder are Data Sheets for both the Bedrock and Granular Materials Survey which contain detailed information for each test conducted by the Project as well as information obtained from other sources, including an active card file compiled by the Highway Testing Laboratory. 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 containing more detailed information of each test including a detailed sketch of each Identification Number Area, are on file in the office headquarters of this Project, together with the respective Laboratory Reports.

Location

The Town of Fairfield is located in Franklin County in the northwest portion of the state, approximately 10 miles south of the Canadian border. The town is bounded on the east by Bakersfield and Enosburg, on the north by Sheldon, on the west by Swanton and St. Albans, and on the south by Fairfax and Fletcher. It is in the Champlain Valley and Green Mountains physiographic divisions. The Champlain Valley physiographic division, in the western part of the town, is an area of fairly smooth relief, broken by low hills and ridges in the eastern section. The Green Mountains, which occur in the eastern part of town have elevations ranging from 400' to 1400'. Drainage is into numerous creeks and rivers, which flow into Lake Champlain, Fairfield Pond, and Arrowhead Mountain Lake. There is also a swampy area in the west side of town.

Procedure for Rock Survey

The routine employed by the Project in the survey of possible sources of rock for highway construction is divided into two main stages; the office investigation and field investigation. The first is conducted primarily during the winter months and comprises the mapping of rock types as indicated in various reference sources. Many different sources of information were utilized, as indicated in the Bibliography. These references differ considerably in dependability due to new developments and studies contributing to the obsolescence of a number of reports. In addition, the results of

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

Discussion of Rock and Rock Sources

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

one another. For this reason, the data sheets may describe the rock tested as differing from the designation on the map. Occasionally, rocks belonging to the same formation and exhibiting similar outward characteristics (i.e. color, texture, etc.) may produce different abrasion results due to differing physical and chemical properties. Therefore, in no case should satisfactory test results of an area be construed as meaning that a particular area or formation will not later produce unsatisfactory material.

The rocks of Fairfield are chiefly metamorphic, comprised of dolomites, quartzites, limestones, shales, slates and schists. Outcrops of "greenstone", of volcanic origin, belonging to the Tibbet Hill Formation, occur in the southeast corner of the town, also.

The formations that are of concern in this report are the Cheshire Formation, Bridgeman Hill Formation and the White Brook member of the Underhill Formation. Rocks of these formations strike in a general north-south direction, and dip eastward.

The Cheshire Formation occurs in the north west corner of the town of Fairfield, (see Plate 1). Two tests were taken in this formation; in both cases the rock met abrasion requirements for Item 204. Typically, the Cheshire is a "massive gray argillaceous quartzite", but dolomitic and schistose rocks occur at the localities sampled.

The Bridgeman Hill Formation also occurs in the northwest corner of the town, as a thin stringer on the map (see Plate I). The rock is a "massive gray dolomite and limestone with numerous veins of calcite." Two samples were taken from this formation, one failed and one passed abrasion requiremets for Item 204.

The White Brook member of the Underhill Formation occurs throughout the town in small outcrops trending north-south. Five samples were taken of this rock, in different localities (see Plate II).

There are two other formations worth mentioning because of their large extent. One is the Fairfield Pond member of the Underhill formation, which occurs in stringers throughout the western side of town (see Plate II). The rock is a greenish quartzitic schist to phyllite, generally unsuitable for highway usage. The other is the Pinnacle formation, which occurs throughout the majority of the town. The rock is schistose graywacke, also generally unsuitable for highway usage. Due to their poor quality, these rocks were not sampled.

As is evident from Plate II, there are numerous areas in the town of Fairfield containing rock meeting abrasion requirements for highway usage. Generally speaking, the three formations mentioned appear to offer the greatest potential for a quarrying site or operation. More detailed information is available at the office of the Engineering Geology Section, Materials Division, Vermont Department of Highways.

Procedure for Sand and Gravel Survey

The method employed by the project in the survey of possible sources of sand and gravel for highway construction is divided into two main stages; office investigation and field investigation. The office investigation is conducted primarily during the winter months and comprises the mapping of potentially productive areas 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 known existing pits are mapped. Locations of samples taken by other individuals are noted and mapped whenever possible.

The second stage of the investigation is begun in the field by making a cursory preliminary survey of the entire area. Areas are noted which show physiographic features giving evidence of glacial or fluvial deposits. These locations are later examined by digging tests pits with a backhoe to a depth of approximately 11 feet and again 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 deposits in the town of Fairfield are glacial, marine and lacustrine in origin. They occur as kame terraces, beach gravels and lake sands.

At the close of the Pleistocene Period, the glacial ice sheet receded northward up the Champlain Lowland. The damming of the ice and the vast amounts of meltwater combined to form the ancient Lake Vermont. As the continental ice sheet retreated northward, the waters of Lake Vermont were emptied. Following this, sea water spread south from Canada, forming the shallow Champlain Sea. This invasion by marine waters occured due to a eustatic rise in sea level. It was during these times that our present-day sands and gravels were deposited in features such as kame terraces, beach gravels, lake sands, etc.

Most of the granular materials in Fairfield occur in two localities. One is in the vicinity of Fairfield Pond, the other is south of the village of East Fairfield. There are a number of tests in these areas with gravel acceptable for highway usage. (see Plate I).

There are also several limited sources of sand for highway purposes.

It is possible that further testing may disclose other sources of acceptable material in the town of Fairfield.

SUMMARY OF ROCK FORMATIONS IN THE TOWN OF FAIRFIELD

Bridgeman Hill Formation: Undifferentiated dolomite, slate, and conglomerate, on east limb of St. Albans synclinorium, about equivalent to Dunham, Parker, Rugg Brook, and Saxe Brook Formations.

Cheshire Formation: Very massive white to faintly pink or buff vitreous quartzite near 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.

Dunham Formation: 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.

Fairfield Pond Member of the Underhill Formation: Greenish quartzitic schist (quartz-sericite-albite-chlorite-biotite); sericite-quartz-chlorite phyllite, locally purple or red, common in lower part.

Pinnacle Formation: Schistose graywacke, gray to buff, commonly striped, quartz-albite-sericite-biotite rock predominates; quartz-cobble and boulder conglomerate is common, chiefly near base.

Rugg Brook Formation; Sandy gray dolomite, dolomite conglomerate and interbeds of gray-weathered sandstone, in St. Albans and Middlebury synclinoria.

Skeels Corners Slate and Mill River Conglomerate Members of the Sweetsburg Formation: Black slate, local dolomite, sandstone, dolomite conglomerate, limestone bioherms, limestone and calcareous shale. The Mill River is a basal limestone conglomerate.

Tibbit Hill Volcanic Member of Pinnacle Formation:
Albite-actinolite-chlorite-epidote-greenstone; locally pillowed and vesicular.

White Brook Member of the Underhill Formation:
Chiefly brown-weathered whitish, tan and gray sandy dolomite, locally only a hematitic zone; includes carbonaceous crystalline limestone in Cambridge syncline.

GLOSSARY OF SELECTED GEOLOGIC TERMS

Argillaceous - Containing or consisting of clay.

Dolomite - As used in this report it applies to rocks approximating the mineral dolomite in composition or consisting predominantly of the mineral dolomite. Mineralogically, dolomite is a mineral of definite chemical composition, $Ca\ Mg\ (CO_3)_2$; carbon dioxide 47.7 lime 30.4, and magnesia 21.9 percent.

Eustatic - Pertaining to world-wide changes of sea level that affect the entire ocean.

Fluvial - Pertaining to streams or stream action.

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

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

Lacustrine - Pertaining to lakes.

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

Marine Deposits -Sedimentary deposits laid down in the sea.

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

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

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

Phyllite - A fine-grained foliated metamorphic rock intermediate between the mica schists and slates, into which it may grade. The cleavage is made possible by the development of a large amount of potash mica, sericite, which also gives the rock a distinctive silvery appearance. Between the cleavage planes minerals other than mica usually predominate and garnet and pyrite may occur in visible crystals. Phyllite is usually light in color but various darker shades, even black are found. Practically all phyllites are derived

from fine-grained sedimentary rocks by mechanical deformation and recrystallization. The fracture is intermediate between the smooth, even cleavage of slate and the rather splintery fissility of schist; the rock is not as tough as slate.

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

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

Strike - The direction of a line formed by the intersection of a bedding plane, vein, fault, slaty cleavage schistosity orsimilar geologic structure, with a horizontal plane. It is at right angles to the dip.

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APPENDIX I

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 complete list of specifications see "Standard Specifications for Highway and Bridge Construction" approved and adopted by the Vermont Department of Highways 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 (3½) 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 (9) inch 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 (40) percent 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 AASHO 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 (3½) 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
1½"	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 (3½) 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, 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 AASHO 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 AASHO T-3, or more than forty (40), when tested by AASHO Method T-96."

Item 205, Sub-base of Crushed Gravel

"Article 205.02 Materials.

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

a product uniformly graded from coarse to fine.

"When tested by laboratory methods, using Method AASHO 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 (30) percent by weight of the stone content of the crushed gravel, that is, the material retained on the Number 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 (35), when tested by AASHO Method T-96.

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

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

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

TABLE I

FAIRFIELD GRANULAR DATA SHEET No. 1

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing					Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
						1½"	5/8"	#4	#100	#270				
1	1	1964	0-5	Stripped	Yes	--	--	42.9	9.0	1.0	2	----	Gran. Borrow (Grav)	Owner: Reginald Yates Two pits near cornfield just east of Fairfield Pond camp road, bounded on the north by town road. Pit to the south is small (75' by 95'). Test #1 taken in floor. Gravelly materials, with water at 5'. Meets grading requirements for Item 201, but insufficient proper size stone for abrasion test. Acceptable for Item 105.
	2	1964	3-10	0-1	Yes	--	--	35.8	24.0	12.0	1	28.8%	----	Test #2 taken by hand shovel from south face. 0-1' overburden, 1'-3' silt, 3'-10' gravelly material. Sampled 3'-10' portion. Rejected for Items 201 and 105; has excess passing No. 100 and No. 270 mesh sieves. Also fails on abrasion.
	3A	1964	4-8	0-1	Yes	100	100	98.8	53.0 52.3*	7.5 7.4*	1	----	Gran. Borrow (Sand)	Test #3 taken in south face of large pit to the north. 0-1' overburden, 1'-4' silt, 4'-8' fine sand, 8'-18' coarse sand. Took two samples. Upper portion (4'-8') is fine sand. Rejected for Item 202; has excess passing No. 100 and No. 270 mesh sieves. Acceptable for Item 105.
	3B	1964	8-18	---	Yes	100	99.4	90.9	3.0 2.7*	0.5 0.4*	1	----	Sand	Test #3B represents lower portion (8'-18'), coarse sand. Acceptable for Items 202 and 105.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 2

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	4	1964	0-10.5	Stripped	Yes	100	100	87.1	10.0 8.7*	2.5 2.2*	1	----	Sand	Test #4 taken in floor of upper level of pit (north end). Pit is about 50' wide and 60' north south here. Stripped, 0-6.5' coarse sand, 6.5'-10.5' fine sand. Sampled 0-10.5'. Acceptable for Items 202 and 105.
	5	1964	1-18	0-1	Yes	100	94.7	82.5	6.0 4.9*	1.25 1.0 *	1	----	Sand	Test #5 dug in northeast face of upper portion (north end) of pit. Material is sand with a few pebbles and stones. Acceptable for Items 202 and 105.
2	1	1964	0.5-15	0-0.5	Yes	--	--	38.7	8.0	1.0	1	----	Gran. Borrow (Grav)	Owner: M. R. Napoli A large pit north of Fairfield Pond across camp road from Ident No. 1. Pit is managed by Clarence Bocash. Test #1 taken in southwest face of pit. Gravelly material with flat, elongated, shaly stones in the majority. Meets grading requirements for Item 201; insufficient proper sized stones for abrasion test. Acceptable for Item 105.
	2	1964	0-10	Stripped	Yes	--	--	49.0	6.0	1.75	1	----	Gran. Borrow (Grav)	Test #2 taken in floor of pit, 10' north of south face. Material is similar to Test #1 , (flat, shaly stones, etc.). Gravelly material, meets grading requirements for Item 201, but insufficient proper sized stone for abrasion test. Acceptable for Item 105.

*Percent of Total Sample

PLATE I (cont'd.)

FAIRFIELD GRANULAR DATA SHEET No. 3

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	3	1964	0-15	Stripped	Yes	--	--	28.5	8.0	2.25	1	26.3%	Gran. Borrow (Grav)	Test #3 taken in northeast face of pit. Gravelly material with rounded stones. Rejected for Item 201 on abrasion. Acceptable for Item 105.
	4	1964	1-10	0-1	Yes	--	--	40.7	8.0	1.0	1½	----	Gran. Borrow (Grav)	Test #4 taken 125' south of pit in field where the extension of the pit lies. Gravelly material, meets grading requirements for Item 201. Insufficient proper sized stone for abrasion test. Acceptable for Item 105.
	5A	1964	0.5-6.5	0-0.5	Yes	100	100	100	53.0 53.0*	11.3 11.3*	1½	----	----	Test #5 dug on knoll between pit and pond, 385' south of Test #4. 0-0,5' overburden, 0.5'-6.5' fine sand, 6.5'-11' coarse clean sand. Took two samples. Test #5A represents top portion. Rejected for Items 202 and 105; has excess material passing No. 100 and No.270 mesh sieves.
	5B	1964	6.5-11	----	Yes	100	97.7	94.4	5.0 4.7*	1.25 1.2*	1	----	Sand	Test #5B represents lower portion, coarse sand. Material acceptable for Items 202 and 105.
	6	1964	0.5-11	0-0.5	Yes	--	--	27.9	11.0	4.75	1½	32.3%	Gran. Borrow (Grav)	Test #6 taken 400' west of Test #5 on twin knoll. Gravelly material (nice looking, but has fine, soft stones). Rejected on abrasion for Item 201. Acceptable for Item 105.

*Percent of Total Sample

TABLE I (cont'd.)

FAIRFIELD GRANULAR DATA SHEET No. 4

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
3	1	1964	1-16	0-1	Yes	100	100	100	23.0 23.0	4.25 4.25*	1	----	Gran. Borrow (Sand)	Owner: Rev. Branon A small pit behind vacant house. Test #1 taken in south face of pit where extension lies. 0-1' overburden, 1'-3.5' fine sand, 3.5'-16' sand (varies from coarse to silty), 16' clay. Sampled 1'-16'. Rejected for Item 202, has excess passing No. 100 mesh sieve. Acceptable for Item 105.
	2	1964	0-5	Stripped	Yes	100	100	98.4	31.0 30.5*	6.0 5.9*	1	----	Gran. Borrow (Sand)	Test #2 taken in floor of pit, near spring. Sandy material with water and ledge at 5'. Rejected for Item 202; has excess passing No. 100 and No. 270 mesh sieves. Acceptable for Item 105. Apparently, this pit has material left that could be used for Granular Borrow (small amounts) but cannot be considered for a sand source.
4	1	1964	1-18	0-1	Yes	79.5	--	61.3	41.0 25.1*	21.3 13.4*	1	----	----	Owner: Clarence Bocash An old pit north of Fairfield Pond. Pit is almost depleted, small pockets of material remain, plastered against ledge. Test #1 taken in face of pit. Material is silt with stones, rejected for Item 105. Sample run by Soils Lab. See Sieve Analysis on next sheet.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 5

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														Sieve Size: Percent Passing: Total Sample / Sand Portion 1½" 79.5 1 " 79.5 3/4" 76.8 3/8" 69.3 No. 4 61.3 100 No. 10 49.7 81.0 No. 40 35.6 58.0 No. 100 25.1 41.0 No. 200 15.7 25.6 No. 270 13.4 21.8 AASHO Soil Type is A-1-b
	2	1964	0-8	Stripped	Yes	100	100	73.2	12.0 8.8*	3.0 2.2*	1½	----	Sand	Test #2 taken in floor of pit, 60' west of face. Material is silt with stones, with water at 8'. Acceptable for Items 202 and 105.
5	1	1964	1-4	0-1	No	100	100	100	95.5	93.0	1	----	----	Owner: Herbert Callan A flat-lying knoll southeast of barn, in field just east of road. Knoll has approximately 20' relief. Test #1 taken on knoll, 275' southeast of barn. Material is silt. Had to stop digging at 4', too hard-packed. Rejected for Item 105; has excess passing No. 270 mesh sieve. Sample tested by Soils Lab. See sieve analysis on next sheet.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 6

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														Sieve Size: / Percent Passing: Total Sample / Sand Portion No. 4 --- 100 No. 10 100 100 No. 40 97.5 97.5 No. 100 95.5 95.5 No. 200 94.0 94.0 No. 270 93.0 93.0 AASHO Soil Type: A-6
6	1	1964	1-6.5	0-1	Yes	100	100	61.3	34.0	10.0	1	----	Gran. Borrow	Owner: Phil Montgomery A small depleted pit east of brook in field east of barns. Field has swampy 'hummocky' soil. Test #1 taken in floor of pit. Material is silt and stones, with water and ledge at 6.5'. Acceptable for Item 105.
	2	1964	1-3	0-1	Yes	100	--	100	70.7	61.6	4	----	----	Test #2 taken on top of pit, 15' east of pit face, represents any extension possibilities. Material is silt, with stones and boulders. Quit digging at 3' - too hard packed. Rejected for Item 105; has excess passing No. 270 mesh sieve. Color is too high, also. Sample tested by Soils Lab. AASHO Soil type is A-6. See sieve analysis on next sheet.

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 7

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														Sieve Size: / Percent Passing: Total Sample / Sand Portion 1½" 100 3/4" 91.0 3/8" 89.5 No. 4 87.5 100 No. 10 84.5 96.3 No. 40 74.0 84.4 No. 100 62.0 70.7 No. 200 55.5 63.3 No. 270 54.0 61.6
7	1	1964	1-9.5	0-1	No	100	100	100	63.6	44.4	3½	----	----	Owner: Frederick Paradee Group of knolls north and west of house. Test #1 taken on knoll, 25' south of power pole. 0-1' overburden, 1'-6' sand, 6'-9.5' silt. Material rejected for Item 105; has excess passing No. 270 mesh sieve. Sample run by Soils Lab. Sieve Size: / Percent Passing: Total Sample / Sand Portion 3/8" 100 No. 4 99.0 100 No. 10 98.0 99.0 No. 40 86.7 87.6 No. 100 62.4 63.6 No. 200 48.4 48.9 No. 270 44.0 44.4 AASHO Soil Type is A-4.
	2	1964	1-6.5	0-1	No	100	100	100	95.5	93.0	1	----	----	Test #2 taken on large knoll west of Test #1. Rejected for Item 105; has excess passing

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 8

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														No. 270 mesh sieve. Sample run by Soils Lab. Percent Passing: Sieve Size: Total Sample / Sand Portion — No. 4: — / 100; No. 10: 100 / 100; No. 40: 98.0 / 98.0; No. 100: 95.5 / 95.5; No. 200: 93.5 / 93.5; No. 270: 93.0 / 93.0. AASHO Soil Type is A-6.
8	1	1964	1-9	0-1	No	100	100	97.3	38.0 37.0*	3.0 2.9*	1	----	Gran. Borrow (Sand)	Owner: John Hyson. A large area on both sides of railroad tracks, west of house, off Paradee Road. Test #1 taken behind barn. Sandy material; rejected for Item 202. Has excess material passing No. 100 mesh sieve. Acceptable for Item 105.
	2	1964	1-9	0-1	No	100	100	100	97.5	60.5	1½	----	----	Test #2 taken in corner of large overgrown field, across tracks from Test #1. Silty sand. Rejected for Item 105; Has excess passing No. 270 mesh sieve. Sample tested by Soils Lab. Percent Passing: Sieve Size: Total Sample / Sand Portion — No. 4: — / 100; No. 10: — / 100; No. 40: 100 / 100; No. 100: 97.5 / 97.5; No. 200: 71.0 / 71.0; No. 270: 60.5 / 60.5. AASHO Soil Type is A-4.

*Percent of Total Sample

TABLE I (cont'd.)

FAIRFIELD GRANULAR DATA SHEET No. 9

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	3	1964	1-9	0-1	No	100	100	99.2	50.0 49.6*	4.0 4.0*	1	----	Gran. Borrow (Sand)	Test #3 taken in northwest corner of overgrown field. 0-1' overburden, 1'-9' sand, 9'-11.5' damp silty sand. Sampled 1'-9'. Rejected for Item 202; has excess passing No. 100 mesh sieve. Acceptable for Item 105.
9	1	1964	1-9	0-1	No	100	100	100	94.0	16.0	1	----	----	Owner: Donald McEnany A long narrow pasture south of Hyson property. Pasture opens up to the west to a large open field with knolls. Test #1 taken in a narrow opening, 30' south of woods. Material is fine sand, with water at 9'. Rejected for Items 202 and 105; has excess passing No. 100 and No. 270 mesh sieves.
	2	1964	1-8	0-1	No	100	100	100	98.5	94.5	1½	----	----	Test #2 taken on large knoll west of Test #1. Apparently, these are silt knolls in the open field. Hard packed silt, wet in bottom. Rejected for Item 105; has excess passing No. 270 mesh sieve. Sample run by Soils Lab. Percent Passing:

Sieve Size:	Total Sample	Sand Portion
No. 4		100
No. 10	100	100
No. 40	99.5	99.5
No. 100	98.5	98.5
No. 200	96.0	96.0
No. 270	94.5	94.5

AASHO Soil Type is A-4.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 10

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Quarry	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
10	1	1964	1-9	0-1	No	100	100	100	97.5	77.5	1	----	----	Owner: Leo Potter A knoll with gentle rise in cow pasture. Test #1 taken on top, 100' south of electric fence. 0-1' overburden, 1'-3' sand, 3'-9' silty sand, 9'-9.5' clay. Sampled 1'-9'. Rejected for Item 105; has excess passing No. 270 mesh sieve. Sample tested by Soils Lab. Percent Passing: Total Sample / Sand Portion Sieve Size: No. 4 — 100 No. 10 — 100 / 100 No. 40 — 99.5 / 99.5 No. 100 — 97.5 / 97.5 No. 200 — 85.5 / 85.5 No. 270 — 77.5 / 77.5 AASHO Soil Type is A-4.
11	1	1964	1-6	0-1	No	100	100	100	94.4	90.8	1	----	----	Owner: B. S. Wanzer A large field across road from cemetery. Test #1 taken 160' east of road, near farm road. Hard packed silt. Sample run by Soils Lab. Percent Passing: Total Sample / Sand Portion Sieve Size: 3/4" — 100 3/8" — 98.5 No. 4 — 98.0 / 100 No. 10 — 97.0 / 98.9 No. 40 — 95.0 / 96.9 No. 100 — 92.5 / 94.4 No. 200 — 90.0 / 91.8 No. 270 — 89.0 / 90.8

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 11

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														AASHO Soil Type is A-6. Rejected for Item 105; has excess passing No. 270 mesh sieve.
	2	1964	0.5-7	0-0.5	Yes	100	99.0	91.0	35.0 31.9*	9.0 8.2*	3½	----	Gran. Borrow (Sand)	Test #2 taken across road, just west of cemetery, in old farm pit (sand bank). Represents face of pit. 0-0.5' overburden, 0.5'-1.5' stony sand, 1.5'-7' fine sand, 7' ledge or boulder. Rejected for Item 202; has excess passing No. 100 and No. 270 mesh sieves. Acceptable for Item 105.
12	1	1964	2-7.5	0-1	No	100	100	96.8	3.0 2.9*	0.75 0.7*	1	----	Sand	Owner: Allen Wanzer Large level fields by road. Test #1 taken across road from house, in field west of large cornfield, 55' south of road. This test represents a large, flat area. 0-1' overburden, 1'-2' silt, 2'-7.5' sand, water at 7.5'. Acceptable for Items 202 and 105.
	2	1964	1-9	0-1	No	100	100	100	73.4	49.0	4	----	----	Test #2 taken across road, 145' northeast of house. 0-1' overburden, 1'-7.5' silt, 7.5'-9' clay. Sample run by Soils Lab.

*Percent of Total Sample

Percent Passing:

Sieve Size:	Total Sample	Sand Portion
3/8"	100	
No. 4	98.0	100
No. 10	94.5	96.4
No. 40	85.0	86.7
No. 100	72.0	73.4
No. 200	54.0	55.1
No. 270	48.0	49.0

TABLE I (cont'd.)

FAIRFIELD GRANULAR DATA SHEET No. 12

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														Rejected for Item 105; has excess passing No. 270 mesh sieve and color is too high. AASHO Soil Type is A-4.
13	1	1964	1-4	0-1	No	100	100	69.4	48.0	21.0	2	----	----	Owner: Richard Ploof A knoll infield northeast of abandoned house. Ledge showing west of area. Test #1 taken on top of knoll. Material is silt with stones. Hit ledge at 4'. Rejected for Item 105; has excess passing No. 270 mesh sieve.
14	1	1964	1-6	0-1	No	100	100	74.3	24.0 17.8*	5.0 3.7*	1	----	Sand	Owner: Floyd Gonyea A large knoll across 'dead-end' road from house; has 20'-30' relief. Test #1 taken on top of knoll. Hard-packed silt with shaly stones; had to stop digging at 6'depth. Material is silt with stones. Acceptable for Items 202 and 105, but should not be seriously considered for a sand source.
15	1A	1964	0-5	Stripped	Yes	--	--	39.4	5.0	1.0	1	----	Gran. Borrow (Grav)	Owner: E. Frank Branon A group of pits south of road to Fairfield Station. Upper pit's dimensions are 275' by 125'. Test #1 taken in floor of upper pit. Stripped, 0-5' gravel (few stones), 5'-10' pebbly sand, 10' wet sand. Two samples taken. Test #1A represents upper 5'. Meets

*Percent of Total Sample

TABLE I (cont'd.)

FAIRFIELD GRANULAR DATA SHEET No. 13

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														grading requirements for Item 201; but has too few stones for percent of wear test. Acceptable for Item 105.
	1B	1964	5-10	---	Yes	100	100	77.6	14.0 10.9*	2.0 1.6*	1	----	Sand	Test #1B represents 5'-10' depth (pebbly sand). Acceptable for Items 202 and 105.
	2	1964	1-10	0-1	Yes	100	100	68.1	13.0 8.9*	2.0 1.4*	1	----	Gran. Borrow (Sand)	Test #2 taken in west face of pit. 0-1' overburden, 1'-10' pebbly sand. Rejected for Item 202; has excess passing No. 4 screen. Acceptable for Item 105.
	3	1964	1-9	0-1	Yes	--	--	56.8	3.0	1.5	1	----	Gran. Borrow (Grav)	Test #3 taken on ridge between pits. Material is sandy gravel, becoming finer with depth. Insufficient proper size stone for abrasion test, but meets grading requirements for Item 201. Acceptable for Item 105.
	4	1964	0.5-9	0-0.5	Yes	100	100	81.5	22.0 17.9*	4.5 3.7*	1	----	Sand	Test #4 taken in floor of lower pit, at entrace to entire pit area; pit is 100' wide here. 0-0.5' overburden, 0.5'-4± sand, 4'-6.5' pebbly sand, 6.5'-8' silty sand, water at 8'. Sampled 0.5'-8'. Acceptable for Items 202 and 105.
16	1	1964	0.5-9.5	0-0.5	Yes	100	100	100	92.6	77.3	1	----	----	Owner: Francis Branon A small pit east of dead-end road. Face of pit varies from 5' to 8' in height. Test #1 taken in floor of pit. Material is silty sand, going into clay (8'-9.5').

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 14

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														Sample run by Soils Lab. Percent Passing: Sieve Size: Total Sample / Sand Portion — No. 4: 100; No. 10: 100 / 100; No. 40: 97.6 / 97.6; No. 100: 92.6 / 92.6; No. 200: 82.6 / 82.6; No. 270: 77.3 / 77.3. AASHO Soil Type is A-4. Rejected for Item 105; excess passing No. 270 mesh sieve.
	2	1964	1-8	0-1	Yes	100	100	98.1	62.0 60.8*	15.0 14.7*	2½	----	----	Test #2 taken by hand shovel in face of pit (south end). Material is silty sand. Rejected for Items 202 and 105; has excess passing No. 100 and No. 270 mesh sieves.
17	1	1964	1-10	0-1	No	100	100	100	80.0	10.0	1	----	Gran. Borrow (Sand)	Owner: Allen Soule A large knoll alongside town road, near Black Creek. Test #1 taken 90' east of electric fence and 25' north of end of knoll. Material is sandy. Rejected for Item 202; has excess passing No. 100 and No. 270 mesh sieves. Acceptable for Item 105.
	2	1964	1-10-	0-1	No	100	100	99.2	45.0 44.6*	8.8 8.7*	1	----	Gran. Borrow (Sand)	Test #2 taken in north end of knoll, 445' north of Test #1. Material is still sandy. Rejected for Item 202; has excess passing No. 100 and No. 270 mesh sieves. Acceptable for Item 105.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 15

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	3	1964	1-8	0-1	No	100	100	100	95.0	80.7	1	----	----	Test #3 taken in meadowland below and 150' east of knoll. Material in meadow is apparently silt, with clay bottom. Rejected for Item 105; has excess passing No. 270 mesh sieve. Sample tested by Soils Lab. Percent Passing: Sieve Size: Total Sample / Sand Portion — No. 4: 100; No. 10: 100 / 100; No. 40: 97.0 / 97.0; No. 100: 95.0 / 95.0; No. 200: 86.7 / 86.7; No. 270: 80.7 / 80.7. AASHO Soil Type is A-4.
18	1	1964	1-7	0-1	No	100	100	100	81.0	31.0	1	----	----	Owner: David Read A small silt bank, southeast of house and barn. Dimensions are 120' by 145'. Test #1 taken in floor of area. Poor material. 0-1' overburden, 1'-4' silt, 4'-7' clay. Rejected for Item 105; has excess passing No. 270 mesh sieve.
19	1	1964	1-7.5	0-1	No	100	100	94.9	26.0 24.7*	2.5 2.4*	3	----	Gran. Borrow (Sand)	Owner: Donald Saxby A large knoll north of Vt. Rte. #36. Test #1 taken in south end of knoll. Material is dirty sand, quite fine, with a clay bottom. Rejected for Item 202; has excess passing No. 100 mesh sieve. Aqceptable for Item 105.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 16

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	2	1964	1-9	0-1	No	100	100	97.7	38.0 37.1*	5.5 5.4*	1	----	Gran. Borrow (Sand)	Test #2 taken 265' north of Test #1. 0-1' overburden, 1'-9' sand, 9'-10' silt. Material is sandy, becoming more silty at 9'. Rejected for Item 202; has excess material passing No. 100 and No. 270 mesh sieves. Acceptable for Item 105.
20	1	1964	1-9	0-1	No	100	100	98.2	10.0 9.8*	1.0 1.0*	1	----	Sand	Owner: John Maynard A medium-sized meadow south of barn and east of town road. Test #1 taken 50' north of property fence, 130' east of town road. Material is silty sand, going into sand (6'-8'), then clay below 8'. Acceptable for Items 202 and 105; but considering depth to clay, should not be seriously considered as a sand source.
21	1	1964	1-9	0-1	No	100	100	97.1	13.0 12.6*	4.0 3.9*	1½	----	Sand	Owner: Burton Hale Twin knolls south of house. Test #1 taken in east end of knoll, 40' west of edge. Silty material, but acceptable for Items 202 and 105. Area quite limited by property fence on south end of knoll and gully on north end.
22	1	1964	0-8.5	Stripped	Yes	--	--	21.3	4.0	1.25	1	14.3%	Gravel	Owner: Francis Howrigan A medium-sized pit south of town road. Dimensions are 200' by 245'. Testhole #1 taken in

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 17

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														floor of pit. Dirty gravel, some stones quite large. Water at 8.5'. Acceptable for Items 201 and 105.
	2	1964	1-20	0-1	Yes	--	--	50.4	8.0	2.0	1½	22.6%	Gravel	Test #2 taken in south face of pit. Face varies in height here from 20' to 30', Bands of sand and gravel (alternate layers). Acceptable for Items 201 and 105. Apparently there is some good material left in this pit, with extension possibilities to the south.
23	1	1964	1.5-9.5	Stripped	Yes	100	100	97.7	18.0 17.6*	2.0 2.0*	1½	----	Sand	Owners: Francis Howrigan and Peter Morey A huge pit just north of town road. Pit is jointly owned by two individuals, with the property line roughly cutting the pit in half. From the entrace off town road, Howrigan's side is on the left and Morey's on the right. Test #1 taken on Morey's side of pit, in floor. Material is pebbly sand; acceptable for Items 202 and 105.
	2	1964	20-30	0-1.5	Yes	--	--	49.0	9.0	2.0	1	23.2%	Gravel	Test #2 taken in north face; represents bottom 10'. Gravelly material. Acceptable for Items 201 and 105.
	3	1964	0-11	Stripped	Yes	100	91.8	66.7	3.0 2.0*	1.0 0.7*	1	----	Gran. Borrow (Sand)	Test #3 taken in floor of pit on Howrigan's side. Pebbly sand. Rejected for Item 202; has excess passing No. 4 screen. Acceptable for Item 105.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD 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 1½"	5/8"	#4	#100	#270	Color/Abrasion AASHO T-21	AASHO T-4-35	Passes VHD Spec.	Remarks
	4	1964	5-20	0-1	Yes	97.2	94.4	75.0	5.0 3.8*	1.0 0.8*	1	----	Sand	Test #4 taken in face of pit (west end). Material is pebbly sand. Acceptable for Items 202 and 105.
	5	1964	0-11.5	Stripped	Yes	100	100	81.4	4.0 3.3*	1.0 0.8*	1	----	Sand	Test #5 taken in floor of pit, east end (Howrigan's side). Material is pebbly sand, not enough stones for gravel. Acceptable for Items 202 and 105. Apparently, there is still a great deal of material (mostly sand, some gravel) left, although much material has been removed from the pit proper.
24	1	1964	0-11	Stripped	Yes	--	--	43.8	2.0	1.0	1	14.6%	Gravel	Owner: Francis Howrigan A medium-sized pit, across road from Morey-Howrigan pit. Dimensions are 145' by 175'. Test #1 taken in floor of pit (east end). Material is gravel, becoming finer in bottom. Acceptable for Items 201 and 105.
	2	1964	1.5-25	0-1.5	Yes	--	--	28.3	7.0	3.0	3½	13.4%	Gravel	Test #2 taken in south face of pit by hand shovel. Face is about 25' high (varies from 20' to 30'). Nice looking gravel with plenty of rounded stones. Acceptable for Items 201 and 105. Pit has extension possibilities to the south. Area is accessible from town road.
25	1	1964	0-5	Stripped	Yes	--	--	74.5	41.0	6.0	1	----	Gran. Borrow	Owner: David Read A small depleted pit along 'dead end' road. Test #1 taken

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD 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 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														in floor of pit. Poor material; silt goes into ledge at 5'. Acceptable for Item 105.
	2A	1964	1-5	0-1	Yes	--	--	50.4	4.0	1.0	1½	26.4%	Gran. Borrow (Grav)	Test #2 taken in face of pit. Represents any extension possibilities to the east. Face is 10' high here. Took two samples. Test #2A represents upper portion. Rejected for Item 201; on abrasion. Acceptable for Item 105.
	2B	1964	5-10	---	Yes	100	100	98.6	47.0 46.3*	13.0 12.8*	1½	----	----	Test #2B represents lower portion of face. Material is sand. Rejected for Items 202 and 105; has excess material passing No. 100 and No. 270 mesh sieves.
26	1	1964	0-10	Stripped	Yes	--	--	42.0	3.0	1.0	1	19.4%	Gravel	Owner: Francis Howrigan A medium-sized pit at junction of town roads. Dimensions are 100' by 325'. Test #1 taken in southeast end of pit, in floor. Gravelly material. Acceptable for Items 201 and 105.
	2	1964	1-20	0-1	Yes	--	--	46.2	3.0	1.3	1	22.8%	Gravel	Test #2 taken in south face of pit. Material is gravel, but finer than in Test #1 (fewer stones and of smaller size). Acceptable for Items 201 and 105.
27	1	1964	1-10	0-1	Yes	--	--	31.3	2.0	1.3	1	13.2%	Gravel	Owner: Lionel Couture A small pit with a high face, along town road, and east of Howrigan pit (Map Ident. No.26). Test #1 taken in floor of pit.

*Percent of Total Sample

TABLE I (cont'd.)

FAIRFIELD GRANULAR DATA SHEET No. 20

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	2	1964	1-8	0-1	Yes	100	98.7	94.7	8.0 7.6*	2.0 1.9*	2½	----	Sand	Material is good looking gravel with rounded stones in ample quantity. Acceptable for Items 201 and 105. Test #2 taken in steep ridge between Couture-Howrigan pits. Material is sand, with gravel bottom. Acceptable for Items 202 and 105.
	3	1964	1.5-30	0-1.5	Yes	--	--	29.5	8.0	3.0	1	18.2%	Gravel	Test #3 taken in face of pit by hand shovel. Good looking gravel for 30' face. Acceptable for Items 201 and 105. This entire area apparently has a great potential. Readily accessible. Acceptable sand and gravel is available, but somewhat limited in quantity. The main extension beyond the pit is the ridge toward Howrigan's pit.
28	1	1964	0-10.5	Stripped	Yes	100	100	81.4	6.0 4.9*	1.3 1.1*	1	----	Sand	Owner: M. Morris A small pit south of East Fairfield along Fairfax Road. Test #1 taken in floor of pit. Material is pebbly sand. Acceptable for Items 202 and 105.
	2	1964	1-18	0-1	Yes	100	100	86.6	13.0 11.3*	1.8 1.6*	1	----	Sand	Test #2 taken in face of pit. Material is similar to Test #1-pebbly sand. Acceptable for Items 202 and 105. Apparently there is some good sandy material left in pit. Somewhat limited in extension possibilities.

*Percent of Total Sample

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 21

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
29	1	1964	---	---	Yes	N O T S A M P L E D					---	----	----	Owner: M. Morris A very small depleted pit along Fairfax Road. Test #1 taken in face of pit. Could not dig; hit ledge or large boulders immediately.
	2	1964	---	---	Yes	N O T S A M P L E D					---	----	----	Test #2 taken in floor of pit. Pebbly sand for 2', then ledge. Not sampled.
30	1	1964	0-5	Stripped	Yes	--	--	64.4	30.0	13.0	1	----	----	Owner: Albany Gregoire A small farm pit south of barn and along farm road. Two faces; one 6' high and one 10' high. Test #1 taken in floor. Material is silt and stones, with ledge at 5'. Rejected for Item 105; has excess passing No. 270 mesh sieve.
	2	1964	1-16	0-1	Yes	--	--	53.2	23.0	10.0	1	26.6%	Gran. Borrow (Grav)	Test #2 taken in faces of pit (combined=16' height). Material is dirty gravel (clean in some bands). Also some sandy layers. Rejected for Item 201; has excess passing No. 100 and No. 270 mesh sieves and abrasion is high. Acceptable for Item 105.
31	1	1964	0-8	Stripped	Yes	--	--	26.5	11.0	5.0	1	18.5%	Gravel	Owner: Albany Gregoire An old pit and knolls south of town road. Shallow pit - face varies from 6' to 10' in height; dimensions are 100' by 105. Test #1 taken in floor of pit. Large boulders in "dirty

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 22

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														gravel". Very difficult digging; stones are packed on top of each other. Acceptable for Items 201 and 105.
	2	1964	0-7	Stripped	Yes	--	--	61.9	4.0	1.5	1	25.3%	Gran. Borrow (Grav)	Test #2 taken by hand shovel in north face of pit. Fairly nice-looking gravel. Barely rejected for Item 201; has only 38.1% stone and abrasion is slightly high. Acceptable for Item 105.
	3	1964	1-6	0-1	No	--	--	56.3	45.0	33.0	2	----	----	Test #3 taken in field above pit and on knoll, 515' northeast of pit. Apparently out of the gravel here: 0-1' overburden, 1'-3' silty gravel, 3'-6' silt to clay. Rejected for Item 105; has excess passing No. 270 mesh sieve.
32	1	1964	1-3	0-1	No	--	--	61.3	25.0	9.0	3½	----	Gran. Borrow	Owner: Dennis Kane A large field with ledge showing; behind house and barn. Test #1 taken 100' west of barn. Material is silt and stones, with ledge at 3'. Acceptable for Item 105.
33	1	1964	1-8	0-1	Yes	--	--	67.6	31.0	6.0	2	----	Gran. Borrow	Owner: Harold Howrigan A series of small pits with 5' to 10' faces. Overgrown with brush. Test #1 taken 85' east of fence, in floor of old pit area. Material is silt and stones, with water at 8'. Acceptable for Item 105.

TABLE I (cont'd.) FAIRFIELD GRANULAR DATA SHEET No. 23

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-Burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	2	1964	0.5-10	0-0.5	No	--	--	93.6	49.0	15.0	2	----	----	Test #2 taken in face of knoll, 90' east of Test #1. Material is sandy silt & stones, rejected for Item 105. Has excess passing No. 270 mesh sieve.
34	1	1964	1-11	0-1	No	100	100	94.4	14.0 13.2*	4.0 3.8*	1½	----	Sand	Owner: George Fairchild A large field adjoining Howrigan pit area (Identification No. 33). Ledge showing. Test #1 taken in northeast corner of the fenced-in portion of field. 0-1' overburden, 1'-11' stoney sand (quite coarse grained, but contains some silt). Acceptable for Items 202 & 105.
	2	1964	--	--	No	--	Not Sampled			--	--	----	----	Test #2 taken 170' north of fence. Hit ledge at once - not sampled.
	3	1964	1-9	0-1	No	100	100	73.0	5.0 3.6*	1.0 0.7*	1½	----	Sand	Test #3 taken 115' northeast of Test #2, 365' south of edge of bank. Material is stoney sand, acceptable for Items 202 & 105. Apparently there is some granular material here among the ledge outcrops.

* Percentage of Total Sample

TABLE I (cont'd) FAIRFIELD GRANULAR DATA SHEET NO. 24

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-Burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
35	1	1964	1-5	0-1	No	96.9	--	79.1	61.2 48.6*	48.9 38.8*	2	----	----	Owner: Roland Corey A large terrace along town road. Test #1 taken in southeast corner, 45' north of bank. Material is silt, hard-packed. Quit digging at 5', too hard. Rejected for Item 105. Sample run by Soils Lab.
36	1	1964	0-10	Stripped	Yes	100	100	61.5	25.0 15.4*	11.0 6.8*	2	----	----	Owner: George Fairchild. A large pit, (actually two separate pits), South of town road, Test #1 taken in floor of pit, near entrance to area. Material is sand, (a little on the "dirty" side). Rejected for Items 202 & 105.

Sieve Size	% Passing T.S.	S.P.
1½"	96.9	
1"	93.1	
3/4"	90.1	
3/8"	84.8	
No. 4	79.1	100
No. 10	71.5	90.1
No. 40	57.9	73.0
No. 100	48.6	61.2
No. 200	41.4	52.2
No. 270	38.8	48.9

AASHO Soil Type is A-4
Has excess passing No. 270 mesh sieve.

* Percentage of Total Sample

TABLE 1 (Cont'd)

FAIRFIELD GRANULAR DATA SHEET NO. 25

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Exist-ing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
	2	1964	0-9	Stripped	Yes	--	--	60.9	20.0	3.0	1	----	Gran. Borrow (Grav.)	Has excess passing No. 4 and No. 270 mesh sieve. Test #2 taken in floor of "2nd" pit west of Test #1. Material is sandy gravel, on the "dirty" side. Hit ledge at 9'. Insufficient proper-size stone for abrasion test. Rejected for Item 201. Has only 39.1% stone excess passing No. 100 mesh sieve. Acceptable for Item 105.
	3	1964	5-30	0-1	Yes	--	--	68.5	19.0	2.0	1	----	Gran. Borrow (Grav.)	Test #3 taken in east face of pit by handshovel. Alternate layers about 1.5' thick, of sand, silt and gravel. Insufficient proper size stone for abrasion test. Rejected for Item 201; has excess passing No. 100 mesh sieve. Stone content is not met. Acceptable for Item 105.
[illegible]	1	1964	0.5-10	0-0.5	No	--	--	59.3	10.0	1.0	1	----	Gran. Borrow (Grav.)	Owner: Carlton Soule A logging knoll off town road beyond brook. Test #1 taken 155' east of fence. Material is stony sand, insufficient

TABLE I (cont'd) FAIRFIELD GRANULAR DATA SHEET NO. 26

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-Burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														stones for abrasion test. Meets grading requirements for Item 201. Acceptable for Item 105.
	2	1964	1-4	0-1	No	100	100	100	55.0	25.0	1	----	----	Test #2 taken on smaller knoll east of Test #1 north of brook. Rejected for Item 105. Has excess passing No. 270 mesh sieve.
38	1	1964	1-5	0-1	No	100	100	100	87.9 87.9*	80.3 80.3*	1½	----	----	Owner: Carlton Soule A slight rise in cow pasture, across town road from farmhouse. Test #1 taken 90' north of fence, 175' east of barway. Material is silt, with ledge or boulders at 5 ft. Rejected for Item 105. Has excess passing No. 270 mesh sieve. Sample run by Soils Lab.

Sieve Size	% Passing T.S.	S.P.
No. 4		100.0
No. 10	100.0	100.0
No. 40	95.3	95.3
No. 100	87.9	87.9
No. 200	81.6	81.6
No. 270	80.3	80.3

AASHO Soil Type is A-4

39	1	1964	1-7	0-1	Yes	100	100	56.4	25.0	7.0	2	----	Gran Borrow	Owner: Arthur Bessette Area of old, shallow pits, on side of hill, west of

*Percentage of Total Sample

TABLE 1 (Cont'd)

FAIRFIELD GRANULAR DATA SHEET NO. 27

Map Ident. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	3/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
														town road. Limited extension. Test #1 dug on top of pits, between faces. Material is "dirty" silt and stones, with ledge at 7'. Acceptable for Item 105.
40	1	1964	1-3	0-1	No	100	100	63.5	25.0	7.0	3	----	Gran. Borrow	Owner: Wesley LaRochelle A large field north of house. Test #1 taken in southeast corner of field, 55' west of fence. Material is silt and stones with ledge at 3'. Acceptable for Item 105.
41	1	1964	1-8.5	0-1	No	100	100	90.3	53.0 47.9*	14.0 12.6*	1½	----	----	Owner: Bernard Bessette A large open meadow south of town road and farm buildings. Test #1 taken in southeast corner of field. Sandy material, with boulders and stones, silt to clay in bottom. Rejected for Items 202 and 105. Has excess material passing No. 100 and 270 mesh sieves.
	2	1964	1-6	0-1	No	100	100	64.7	60.0	19.0	2½	----	----	Test #2 taken in "back pasture" north of road. Silt and stones with ledge or boulders at 6'. Rejected for Item 105. Has excess passing No. 270 mesh sieve.

*Percentage of Total Sample

TABLE I (cont'd)

FAIRFIELD GRANULAR DATA SHEET No. 28

Map Ident.. No.	Field Test No.	Year Field Tested	Depth of Sample (Ft.)	Over-Burden (Ft.)	Existing Pit	Sieve Analysis % Passing 1½"	5/8"	#4	#100	#270	Color AASHO T-21	Abrasion AASHO T-4-35	Passes VHD Spec.	Remarks
42	1	1964	1-5	0-1	No	100	100	71.2	11.0 7.8*	4.0 2.8*	2½	----	Sand	Owner: Eugene Messier A large open field east of town road, North of house. Ledge showing uphill (east) from field. Test #1 taken 85' east of small pond, 80 west of fence. Material is silt, and stones with ledge or boulders at 5'. Acceptable for Items 202 and 105. Area apparently quite limited by ledge near surface.

*Percentage of Total Sample

FAIRFIELD PROPERTY OWNERS - GRANULAR

TABLE I
Supplement
Map Ident. No.

Bessette, Arthur	39
Bessette, Bernard	41
Bocash, Clarence	4
Branon, E. Frank	15
Branon, Father	3
Branon, Francis	16
Callan, Herbert	5
Corey, Roland	35
Couture, Lionel (ANTHONY HAVRELUK)	27
Fairchild, George	34, 36
Gonyea, Floyd	14
Gregoire, Albany	30, 31
Hale, Burton	21
Howrigan, Francis	22, 23,24,26
Howrigan, Harold	33
Hyson, John	8
Kane, Dennis	32
LaRochelle, Wesley	40
Maynard, John	20
McEneny, Donald	9
Messier, Eugene	42
Montgomery, Phil	6
Morey, Peter and Howrigan, Francis	23
Morris, M.	28, 29
Napoli, M. R. (Clarence Bocash, Sr. overseer)	2
Paradee, Frederick	7
Ploof, Richard	13
Potter, Leo	10
Read, David	18, 25
Saxby, Donald	19
Soule, Allen	17
Soule, Carlton	37, 38
Wanzer, Allen	12
Wanzer, B. S.	11
Yates, Reginald	1

TABLE II

FAIRFIELD ROCK DATA SHEET NO. 1

Ident. No.	Field Test No.	Year Field Tested	Rock Type	Existing Quarry	Method of Sampling	Abrasion AASHO T-3	Remarks
1	1	1964	Quartzite	No	Chip	4.4%	Owner: Merrill Lahue. A very large rounded outcrop with excellent relief. Accessible from town road to the east. Partially wooded. Massive dense grey siliceous dolomite with faint red mottling. Occasionally breaks platy. Numerous quartz stringers. Meets abrasion requirements for Item 204.
2	1	1964	Dolomite	No	Chip	9.8%	Owner: Noe Bedore. A long, narrow outcrop east of town road; accessible. Heavily overgrown with brush. About 20' relief. Material is very dense and massive grey dolomite and limestone, with numerous veins of calcite. Rejected on abrasion for Item 204.
	2	1964	Dolomite	No	Chip	4.3%	Test No. 2 also taken from same outcrop. Exact location unknown. Meets abrasion requirements for Item 204.
3	1	1964	Quartzite	No	Chip	6.2%	Owner: Reginald Yates. A large outcrop with gradual slope to good relief. Material is schistose quartzite with many quartzite stringers. Difficult to sample--crumbles with few edges. Meets abrasion requirements for Item 204.
4	1	1964	Quartzite	No	Chip	3.0%	Owner: Herbert Callan. A large outcrop showing excellent relief. According to town record material was mined as iron ore in 1801. Underground shafts still exist. Material is dense quartzite, has a tendency to break platy. Meets abrasion requirements for Item 204.
5	1	1964	Limestone-Dolomite	No	Chip	5.6%	Owner: Leon Grant. A very large outcrop about 500' in width, with schist on both sides with good relief, 60' face. Appears to be easily accessible. Material is pink and grey dolomite and limestone, with many quartz stringers. Weathers buff. Solution cavities throughout. Meets abrasion requirements for Item 204.

TABLE II

FAIRFIELD ROCK DATA SHEET NO. 2

Ident No.	Field Test No	Year Field Tested	Rock Type	Existing Quarry	Method of Sampling	Abrasion AASHO T-3	Remarks
6	1	1964	Schist	No	Chip	3.0%	Owner: Allen Soule. A long ridge, the center of which contains buff-weathering, pink-grey dolomite of the White Brook formation. Many solution cavities, quartz stringers. See Ident. No. 7. About 20' relief. On both sides of the White Brook is the Fairfield Pond formation--a quartz-chlorite schist, with iron stain. Sampled this rock. Met abrasion requirements for Item 204.
7	1	1964	Dolomite	No	Chip	3.6%	Owner: Allen Soule. A long narrow outcrop on west side of ridge. Area is about 0.5 mile south of Ident. No. 6. Relief about 30'. Material is buff-weathering pink and grey dolomite, with quartz stringers. Solution cavities, zones of schist intermingled. Meets abrasion requirements for Item 204.
8	1	1964	Dolomite	No	Chip	3.2%	Owner: Furman Menard. A large area of scattered outcrops Good relief on north side, leading down to open pasture. Material is pink-grey dolomite with occasional bands of chlorite schist. Buff weathering, with solution cavities and quartz stringers. Meets abrasion requirements for Item 204.
9	1	1964	Limestone	No	Chip	4.5%	Owner: Mrs. Beulah Ayer. A long narrow outcrop with 150' width and 30' relief. east of house and town road. Material is creamy white to grey limestone, weathering buff Crumbles easily, many solution cavities. Meets abrasion requirements for Item 204.
10	1	1964	Dolomite	No	Chip	4.8%	Owner: Arthur Bessette. A long narrow outcrop at west end of high ridge. Material is pink-grey dolomite, buff weathering, with solution cavities and quartz stringers About 50' in width, with 20' relief Meets abrasion requirements for Item 204.

FAIRFIELD PROPERTY OWNERS - ROCK

TABLE II
Supplement
Map.Ident. No.

Ayer, Beulah (Mrs.)	9
Bedore, Noe	2
Bessette, Arthur	10
Callan, Herbert	4
Grant, Leon	5
Lahue, Merrill	1
Menard, Furman	8
Soule, Allen	6
Soule, Allen	7
Yates, Reginald	3

LEGEND

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

FAIRFIELD

SCALE 1:31,250

CONTOUR INTERVAL 20 FEET

1965

GRANULAR MATERIALS MAP

BY

VERMONT DEPARTMENT OF HIGHWAYS

IN COOPERATION WITH

U.S. BUREAU OF PUBLIC ROADS

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

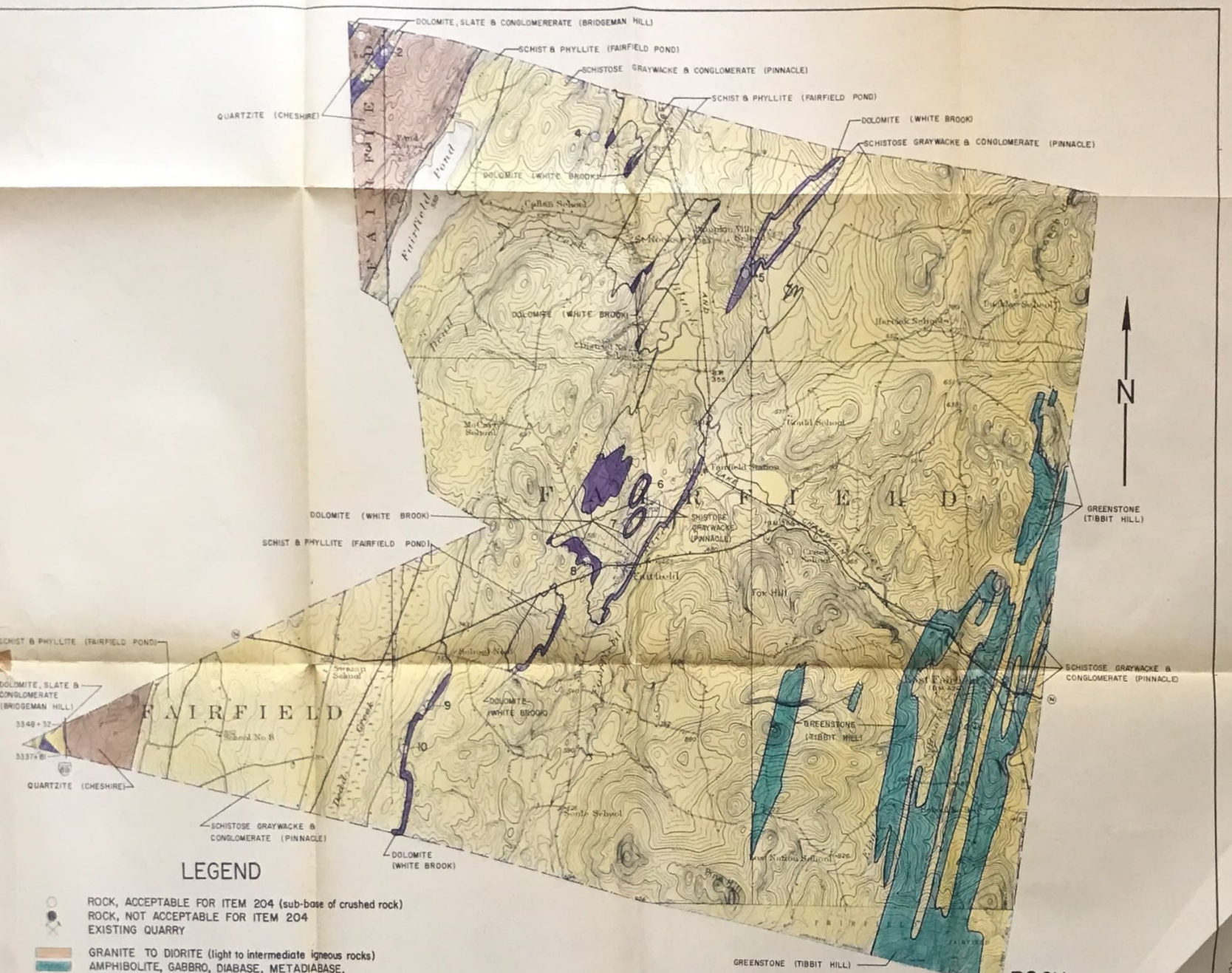
FRANKLIN COUNTY VT. HWY. DISTRICT NO. 8

REVISIONS

DATE							
BY							

PLATE I

GRANULAR



LEGEND

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

FAIRFIELD

SCALE 1:31,250

CONTOUR INTERVAL 20 FEET

1965

ROCK MATERIALS MAP

BY

VERMONT DEPARTMENT OF HIGHWAYS

IN COOPERATION WITH

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

FRANKLIN COUNTY VT. HWY. DISTRICT NO. 8

REVISIONS

DATE							
BY							

PLATE 2 ROCK