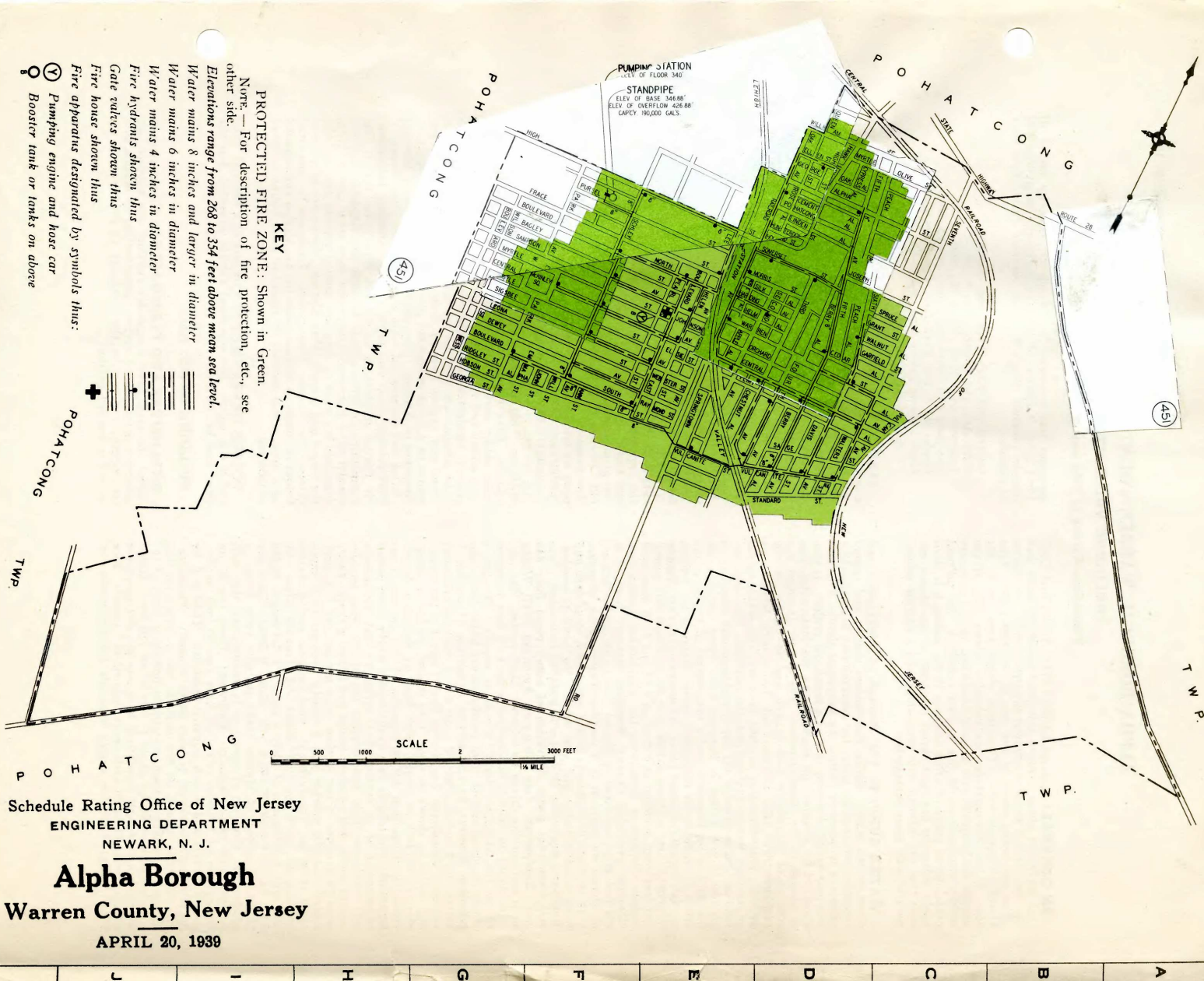

KEY

PROTECTED FIRE ZONE: Shown in Green.

NOTE.— For description of fire protection, etc., see other side.

Elevations range from 268 to 354 feet above mean sea level.

Water mains 8 inches and larger in diameter

Water mains 6 inches in diameter

Water mains 4 inches in diameter

Fire hydrants shown thus

Gate valves shown thus

Fire house shown thus

Fire apparatus designated by symbols thus:

Pumping engine and hose car

Booster tank or tanks on above

Schedule Rating Office of New Jersey
ENGINEERING DEPARTMENT
NEWARK, N. J.

Alpha Borough

Warren County, New Jersey

APRIL 20, 1939

ALPHA BOROUGH, WARREN COUNTY, NEW JERSEY.

INCLUDING VULCANITE.

Population—Census of 1930 was 2,374.

IN GENERAL: Located on the Lehigh Valley and Central Railroads about 2 miles southeast of Phillipsburg and Easton. It is a small residential community with one rayon plant employing about 83 and one idle cement plant. Area about 1.6 square miles. Elevations range from 268 to 354 feet. Main thoroughfares are concrete; about 25% of the streets are improved and in good condition, other streets are unimproved and are in fair to poor condition. No railroad crossings at grade or other features in the borough to seriously delay the fire department response or operations, except that the railroad with one bridge and a narrow underpass affords some segregation.

WATER SUPPLY: The Borough of Alpha owns and operates the supply works, distribution system and appurtenances and supplies water for domestic and fire protection purposes to territory within the municipal limits. The system was installed during 1938 as a municipal project. It was designed by a consulting engineer and the installation was in charge of the superintendent. The system is under the control of the mayor and council and in charge of the superintendent who performs all duties with laborers as needed. Superintendent has had little previous water works experience, but is qualified for the position. The superintendent is a member of the fire department and responds to alarms of fire. Office in borough hall. Some supplies are on hand in the basement and a department of public works truck is available for emergency work. Records are limited to distribution maps and plans and construction data. **Supply Works:** Water is obtained from one 10- to 8-inch driven well 363 feet deep, yielding in excess of 0.30 m.g.d. A deep well turbine discharges directly to the distribution system and standpipe providing storage. **Pumping Station:** Located at the standpipe northwest of Pursel Street and Schley Avenue as shown on map. It is a small one-story brick structure with concrete floor, metal covered wood roof, wood sash and door, electric lights and coal stove. No hand protection. Exposures negligible. Wiring well installed in conduit. Care and cleanliness good. Elevation of pump room floor 340 feet. **Equipment:** One 170-g.p.m. American Well Works deep well turbine driven by a 20-h.p. U. S. motor. The unit is equipped to operate automatically on a 27-foot variation below full standpipe level. Power is supplied through a single overhead service from nearby transmission line. **Distribution System:** In one service consisting of an 8-inch artery and 6-inch loop with 3 short 6-inch dead end branches; see map. **Standpipe:** Located on Pursel Street at the pumping station as shown on map. Unit is steel, 20 feet in diameter by 80 feet in height, with base at elevation 346.88, elevation of overflow 426.88, capacity 190,000 gallons. **Consumption:** No reliable data available due to the short period of operation of the system. It is estimated that the average and maximum daily consumption during the next twelve-month period will be about 20,000 and 30,000 gallons. There were 78 services in use at time of inspection and it is estimated that the number will gradually increase to a maximum of 320 services during the next five-year period. Active services are 100% metered. **Pipe:** All Transite Class 150, laid with a minimum of 4½-foot cover. Total length 26,650 feet; 64.3% 6-inch, 35.7% 8-inch. **Gate Valves:** There are 23 on the system of Mueller make set with valve boxes at grade. The direction of operation is uniform and they will be inspected twice annually. **Hydrants:** There are 32 on the system of Ludlow make; all have two 2½-inch outlets, 4-inch barrels and 4-inch ungated branches. They will be operated and inspected at least twice annually. **Pressures:** No recording gauge on the system, but a direct reading gauge in pumping station showed 28 pounds at time of inspection with standpipe about 15 feet below full level. Readings taken at 6 well distributed hydrants showed pressures ranging from 31 to 56 with an average of 45.2 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on March 27, 1939, by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow and pressure during flow were as follows:

Central and Fifth Aves., 900—51—23.
Fifth Ave. and Cedar Alley, *—43—*.
Railroad Ave., S. of Alpha St., 600—48—*.
Lee Ave. and Frace St., 1,280—56—23.
Boulevard S. and Park Ave., 655—42—23.
High St. and Schley Ave., *—31—*.

* No reading taken.

FIRE DEPARTMENT: Volunteer organization of one company under the control of the borough which owns quarters, apparatus and equipment and appropriated $150 for the support of the department during 1939. Total active membership 37, of whom a minimum of 12 are available at all times. Officers including a chief, assistant chief and 2 foremen are elected annually by the company and confirmed by the mayor and council. **Company:** Located in borough hall on East Boulevard at Sampson Avenue as shown on map. Building is a 2-story concrete block structure with slate roof, concrete apparatus floor, electric lights, steam heat, hose rack and siren on roof. **Equipment:** One 1930 Ahrens-Fox 500-g.p.m. triple combination pumping engine carrying one 100-gallon booster tank, 200 feet of booster hose, 850 feet of 2½-inch hose, 150 feet of 1½-inch hose, 2 short ladders and some minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. Total supply of 2½-inch hose is 850 feet, all of which is carried on the apparatus. Hose is repacked in part at monthly drills and tested at least twice annually with shut-off nozzles at 200 pounds pressure. About 500 feet is more than five years old. Drying rack is provided in fire station. **Operations:** The company is governed by municipal ordinance and company by-laws under the supervision of the fire committee of the borough council. Motors are started daily and there are 5 appointed drivers and operators with 3 alternates in addition to the chief officers. **Drills and Training:** Company drills are held monthly under the direction of the chief officers. They consist of hose laying, pump operation and some ladder work. Members have participated in the county drill school and the chief is a graduate of a 30-week course recently conducted. **Fire Methods:** Booster lines and 1½-inch hose streams are used on incipient fires supported by hydrant and engine streams with shut-off nozzles. No gas masks or salvage equipment provided at time of inspection. **Response to Alarms:** The company responds to all borough alarms and secures aid from the volunteer departments at Phillipsburg, about two miles distant. **Building Inspection:** No routine inspections by the fire department except that complaints are investigated. **Records and Reports:** Records consist of a complete attendance tabulation and a fairly complete log book of fires and annual reports are made to the mayor and council. **Fire Alarms:** Alarms are telephoned through the Easton, Pennsylvania Exchange to members' homes or places of business near the fire station and sounded on a siren at that location by means of push button on front of building.

POLICE DEPARTMENT: Consists of a borough chief and 5 fire police. No municipal vehicle provided, but the chief uses his own car.

BUILDING LAWS: None.

EXPLOSIVES AND FLAMMABLES: No regulations except the state laws adequately regulate the storage and shipment of explosives and the construction of motion picture booths and restrict the discharge of fireworks to responsible bonded parties.