

Superseding Map No. 211 of December 31, 1937. Please destroy old issue.



THE FIRE INSURANCE RATING
 ORGANIZATION OF N. J.
 ENGINEERING DEPARTMENT
 NEWARK 2, N. J.

Somerville Borough
Somerset County, New Jersey
 AUGUST 31, 1948

- KEY**
- PROTECTED FIRE ZONE: Shown in Green.
 - Note.—For description of fire protection, etc., see other side.
 - Elevations range from 30 to 100 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
 - ⊕ Automobile combination pumper and hose car
 - ⊙ Ladder truck
 - ⊙ Booster tank or tanks on above

August 31, 1948.

SOMERVILLE BOROUGH, SOMERSET COUNTY, NEW JERSEY.

Population — 1940 Census — 8,720.

IN GENERAL: Located on the Central Railroad of New Jersey about 12 miles west of Plainfield. It is a manufacturing and residential community with 20 plants employing about 1,150, and is the county seat of Somerset County. Area 2.2 square miles. Elevations range from 30 to 100 feet. Main roads improved, others macadam and gravel in fair to good condition. Railroad crossings at grade are said never to have interfered with the response of fire apparatus.

WATER SUPPLY: Water for domestic and fire protection purposes is furnished by the Somerville Water Company, a subsidiary of the Elizabethtown Water Company, which owns supply works and distribution system. There is a civil engineer who is in charge of system, a superintendent who maintains system and installs services, and two station engineers working at pumping station in two shifts. Laborers are hired as needed and major extensions are made under contract. Office at Somerville, shop and yard at pumping station in Raritan Borough. Superintendent responds to alarms of fire. A light truck is provided. Detailed records of valve and hydrant locations are on file. **Supply Works:** Built in 1881 and remodeled in 1937. Water is pumped from Raritan River and Raritan Water Power Canal into standpipe whence it flows by gravity through six 0.5-m.g.d. Jewel pressure filters into system. Filters can be by-passed. **Pumping Station:** Located in Raritan Borough on the Raritan River and Raritan Water Power Canal at foot of Wall Street as shown on map of Raritan Borough, No. 212. Station and filter houses are adjoining brick structures with slate and tin roofs, concrete floors, electric lights, telephone, and steam heat. **Equipment:** One 3.0-m.g.d. Gould horizontal duplex pump geared to a 280-h.p. water wheel. Two 2,400-g.p.m. Cameron pumps, each driven by a 150-h.p. Ingersoll-Rand diesel engine. There is a 5,000-gallon outside underground oil tank. Water power pump can only be operated at suitable stages of the river. **Distribution System:** In one service. See map. Consists of a 36-inch and 10-inch main and 16-inch, 12-inch, and 10-inch secondary feeders. **Standpipe:** Located near pumping station. It is steel, 155 x 25 feet, capacity 569,000 gallons. Elevation of base 40 feet. It serves as a settling basin and is blown off twice a year. **Consumption:** The average and maximum daily consumption in the entire territory served (3,406 services) during 1947 was 2.44 and 2.78 million gallons. There were 2,353 services in Somerville on December 31, 1947, of which about 90% were metered. **Pipe:** Cast iron, tar coated, bell and spigot joint, laid with about a 3½-foot cover. No trouble reported from frozen mains or electrolysis. Total length, 137,145 feet; 11.4% 4-inch, 55.3% 6-inch, 11.3% 8-inch, 14.2% 10-inch, 3.2% 12-inch, 2.5% 16-inch, and 2.1% 36-inch. **Gate Valves:** There are 330 of Eddy make. All except about 20% operate in same direction and are set with iron boxes at grade.

No regular valve inspection. **Hydrants:** There are 154 of Eddy make with two 2½-inch and one 4½-inch outlets with National Standard threads, 4-inch barrels, and 4-inch or 6-inch gated branches. Hydrants inspected twice a year. Those operated during inspection were found to be in good condition. **Pressures:** Readings taken at 10 hydrants widely distributed showed pressures ranging from 37 to 58 pounds with an average of 44 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on June 28, 1948 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

E. Main St. and Richards Ave., 830—37—21.
Richards Ave. and Putnam St., 590—28—10.
James St. and Kirby Ave., 580—39—26.
Spring St. and Gaston Ave., 610—50—24.
Ivanhoe Ave. and N. Bridge St., 650—38—18.
N. Bridge St. and E. Main St., 2,450—43—25.
Fourth St. and S. Bridge St., 750—58—27.
S. Bridge St. and Southside Ave., 1,270—55—29.
W. Main St. and Doughty Ave., 2,120—45—28.
Prospect St. and Middaugh Ave., 750—48—36.

FIRE DEPARTMENT: A volunteer organization under full control of borough which appropriated \$15,100 for the support of the department in 1948. There are 200 men including a chief, 3 assistant chiefs, 4 foremen, and 8 assistant foremen. Department is governed by board of engineers which consists of the chief and three assistant chiefs. Each company appoints one man to this board for two years and the borough appoints as chief a member of the board. Foremen and assistant foremen are elected by companies for a two-year term. About 40 members are available at all times. Borough owns all apparatus and equipment, No. 1 and West End houses, and rents the other two houses from their respective companies. **Companies — Engine Company No. 1:** Total membership 60. Located on Maple Street between West Main and West High Streets. Building is a two-story joisted brick structure with a tar and gravel roof, concrete floor, steam heat, electric lights, and telephone. **Equipment:** A 1942 Mack 750-g.p.m. triple combination pumping engine carrying a 200-gallon booster tank, 200 feet of booster hose, 450 feet of 1½-inch hose, 950 feet of 2½-inch hose, 1 Bresnan distributor, 1 mechanical foam nozzle, 3 short ladders, 3 gas masks, and fair minor equipment. **West End Company No. 3:** Total membership 45. Located on North Doughty Avenue between West Main and West High Streets. Building is a two-story joisted brick structure with a slate roof, concrete floor, gas heat, electric lights, and telephone. **Equipment:** A 1930 American La France 750-g.p.m. engine carrying a 120-gallon booster tank, 150 feet of booster hose, 1,000 feet of 2½-inch hose, 400 feet of 1½-inch hose, 2 short ladders, 4 gas masks, 1 mechanical foam nozzle, and fair minor equipment. **Lincoln Hose Company No. 4:** Total

SOMERVILLE BOROUGH, SOMERSET COUNTY, NEW JERSEY.

Continued.

membership 45. Located on Warren Street south of Main Street. Building is a three-story joisted brick structure with a slate roof, concrete floor, steam heat, electric lights, and telephone. **Equipment:** A 1935 American La France 600-g.p.m. engine carrying a 150-gallon booster tank, 150 feet of booster hose, 500 feet of 1½-inch hose, 800 feet of 2½-inch hose, 2 short ladders, a deluge set, 2 gas masks, a mechanical foam nozzle, and fair minor equipment. **Central Hook and Ladder Company No. 1:** Total membership 45. Located on Division Street between Main Street and South Street. Building is a three-story brick structure with slag roof, wood floor, steam heat, electric lights, and telephone. Driver resides on third floor. **Equipment:** A 1924 Seagrave city service ladder truck carrying ladders ranging from 16 to 50 feet, totaling 208 feet, a 60-gallon booster tank with CO₂ for expellant, 150 feet of booster hose, a life net, 8 salvage covers, 4 gas masks, one 1,250-watt electric generator, 2 flood lights, and fair minor equipment. **Hose:** All 2½-inch hose is C.R.L. with National Standard screw couplings. There is 3,500 feet in reserve. Hose is tested at 250 pounds pressure, shifted about every three months and dried on outside rack at Engine Company No. 1 house. **Operations:** Department governed by municipal ordinances and company by-laws. Chief has control of apparatus at all times and of men at fires and drills. Chief may suspend members. About 25 men are appointed drivers. Motors run weekly. **Drills and Training:** There are 2 general drills and 12 drills per company a year. Drills consist of pump operation, hose laying, and ladder raising under supervision of chief and assistant chiefs. **Fire Methods:** Booster streams are used on incipient fires reinforced by engine and hydrant streams with shut-off nozzles. Heavy stream appliances are provided. Covers are carried for salvage. **Response to Alarms:** Entire department responds to all box alarms. For telephone alarms chief is notified and one company is dispatched with men who are called on telephone by chief. On arriving at scene of fire, if more aid is required the nearest box is pulled. One engine responds to out-of-town alarms. Outside aid may be secured from Raritan, Bound Brook, and Manville. **Building Inspection:** For purposes of inspection borough is divided into four sections with each chief inspecting a section once a year. **Records and Reports:** A record is kept of each fire and monthly and annual reports are made to borough council. **Fire Alarm System.** Fire alarm system is part of fire department and is maintained by a fire alarm superintendent. Headquarters is located on first floor of Engine Company No. 1 house, a two-story joisted brick structure severely exposed by an adjacent frame building. Apparatus is of the Gamewell make consisting of a four-circuit slate operating board with the usual devices for testing and operating. Circuits are protected on protector board by ½-ampere fuses; a 6-ampere fuse on the battery racks and rectifiers, and a 5-ampere fuse and vacuum lightning arresters on poles between

overhead and underground construction. Current for operating the system is supplied by four Mohawk rectifiers serviced from 220-volt lighting circuit with four banks of storage batteries of 11 cells each, floating. Batteries are mounted on glass rails on porcelain knobs on iron rack in room with operating board. Each fire station has a punch register and gong. There are also 10 tappers located in homes of superintendent, chiefs, and drivers. There are 52 Gamewell three-fold boxes of which 7 are located on pedestals and the remainder on utility company poles with red and white indicating bands at or near street intersections. There are no indicating lights. Boxes inspected during survey were found to be in good condition. All outer cases are grounded to driven copper rods with No. 10 hard drawn copper wire or iron pipe. There is a single circuit divided into four loops carrying all boxes and alarm instruments. There is about 27 circuit miles of wire, of which 3 is underground. Overhead wire is No. 10 medium drawn triple braid weatherproof, located below power wires on utility company poles. Underground wire is No. 14 copper wire in cables of 10 conductors. Wiring in fire stations is in BX cable. Circuits are tested daily by time signal and boxes monthly by operating for one round. Alarms are telephoned to police desk where there is always someone on duty. A breakwheel transmitter and a visual indicator are installed at police desk.

POLICE DEPARTMENT: Consists of 16 men including a chief, captain, lieutenant, sergeant, and 12 patrolmen all under control of the Chairman of Council Police Committee. Men work in 8-hour shifts with one man at police desk at all times. Patrolmen respond to alarms of fire. Two 2-way radio cars and 1 motorcycle are provided.

BUILDING LAWS: Code adopted December 27, 1929 provides for the appointment of a building inspector, requires plans and specifications to be submitted and permits secured for building operations. Fire limits, which include all the mercantile district, are established and within these limits combustible roof coverings are prohibited. Code includes many essential regulations, but is not so comprehensive with regard to height and area requirements as the building code recommended by the National Board of Fire Underwriters.

FIRE PREVENTION LAWS: The building code has good regulations in regard to oil burner installations. Two codes adopted October 16, 1913 and May 17, 1920 have poor regulations in regard to garages, motion picture machines and booths, and explosives. State laws adequately cover the storage and shipment of explosives, the transportation of flammables, and the construction of motion picture booths. They also restrict the discharge of fireworks to responsible bonded parties.

ZONING ORDINANCE: Adopted June 13, 1930.