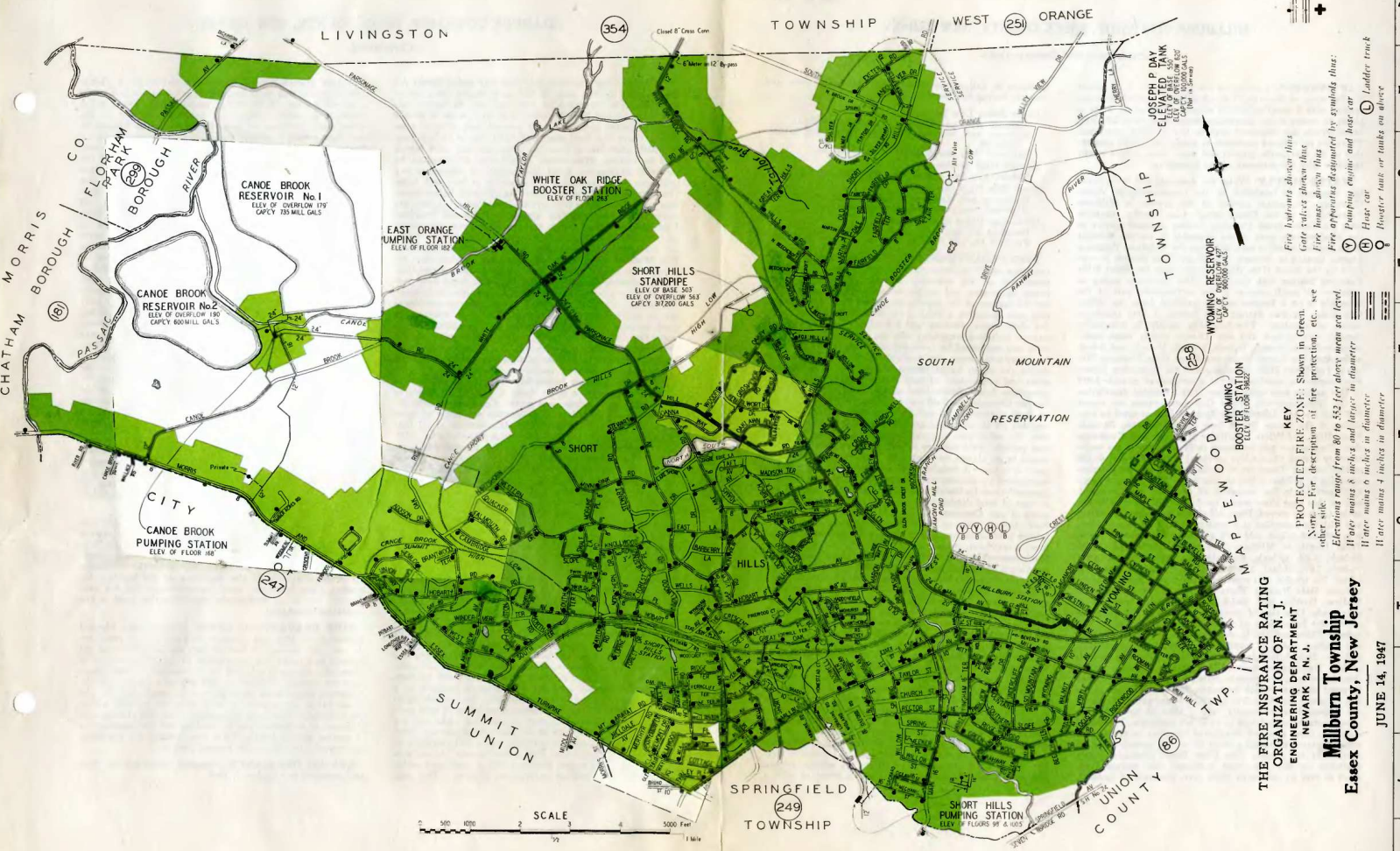


Superseding Map No. 248 of January 15, 1942. Please destroy old issue.



Fire hydrants shown thus
 Fire intake shown thus
 Fire intake shown thus
 Fire apparatus designated by symbols thus:
 Pumping engine and hose car
 Hose car
 Ladder truck
 Booster tank or tanks as above

KEY
 PROTECTED FIRE ZONE: Shown in Green
 Note: For description of fire protection, etc. see other side.
 Elevation range from 80 to 552 feet above mean sea level.
 If over minus 8 inches and higher in diameter
 If over minus 6 inches in diameter
 If over minus 4 inches in diameter

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

Millburn Township
Essex County, New Jersey

JUNE 14, 1947

SCALE
 0 500 1000 2 3 4 5000 Feet
 1 Mile

June 14, 1947.

MILLBURN TOWNSHIP, ESSEX COUNTY, NEW JERSEY.

Population — 1940 Census — 11,652.

IN GENERAL: Located on the D., L & W. R R. about 8 miles west of Newark. It is a high class residential community with 5 small industries employing about 60. Area is about 10 square miles. Elevations range from 80 to 552 feet. Most streets are improved and in fair to good condition. There are no railroad crossings at grade, but traffic congestion in the mercantile district and some steep grades might interfere with the response of fire apparatus.

WATER SUPPLY: Water for domestic and fire protection purposes is furnished by the Commonwealth Water Company. The major portion of this system in Millburn Township is on the Canoe Brook Low Service, supplied from the Canoe Brook Pumping Station. A small portion in the southwestern part of the township is on the Summit High Service which is supplied from the Baltusrol Pumping Station located in Summit The Short Hills Section is supplied by the Short Hills High Service from the Short Hills Pumping Station with the Short Hills standpipe acting as equalizer A small section in the northeastern part of the township is on a booster service supplied from the White Oak Ridge Booster Station with Joseph P. Day standpipe acting as equalizer. The township supply is principally through one 24-inch and one 12-inch supply main interconnected with 20-inch, 16-inch, 12-inch, 10-inch, and 8-inch mains from the Canoe Brook and Short Hills Pumping Stations. The Short Hills Standpipe and the Wyoming Reservoir function as equalizers for this service and provide 1.217 million gallons aggregate storage. For a detailed description of the Commonwealth Water Company system see report and map No. 245 **Distribution System:** In four services consisting of the Canoe Brook Low Service and the Summit, Short Hills, and White Oak Ridge High Services. **Consumption:** The average and maximum daily pumpage in the entire territory served (31,810 live services) was 12,782 and 20,122 million gallons. There are no available statistics for the consumption in Millburn, but on December 31, 1945 there were 3,312 services in the township, all of which were metered and on that date there was a total of 31,463 services in the entire territory served. **Pipe:** All pipe is cast iron, tar coated, and with the exception of a small amount of Universal joint, it is bell and spigot, laid with a minimum of 3½-foot cover. Total length in Millburn Township, 329,160 feet; 6.7% 24-inch, 0.2% 20-inch, 0.1% 18-inch, 6.8% 16-inch, 4.9% 12-inch, 7.2% 10-inch, 11.9% 8-inch, 53.9% 6-inch, and 8.3% 4-inch. No trouble was reported from frozen mains or electrolysis. **Gate Valves:** There are 543 in the township of Ludlow, Darling, and Smith makes set with boxes at or near grade. Direction of operation is uniform, but there are no regular inspections of valves at the present time. **Hydrants:** There are 369 in the township of Wood, Darling, and Ludlow makes of standard type; 246 have one 4½-inch and two 2½-inch outlets and the balance have two 2½-inch outlets. Hose outlets have 3½-inch outside diameter with 6 threads per inch, and steamer outlets have National Standard threads; 298 have 6-inch branches, 236 of which are gated and 71 have 4-inch branches, of which 56 are gated. Hydrants are inspected semi-annually and at time of hydrant tests those operated were found to be in fair condition. **Pressures:** Readings taken at 8 well distributed locations on all services showed pressures ranging from 66 to 138 pounds with an average of 105 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on April 9, 1947 by means of Pitot tube. Location of hydrant,

discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

- Canoe Brook Low Service—
 - Millburn Ave. and Cypress St., 1,300—138—128.
 - Millburn Ave. between Main and Spring Sts., 2,118—132—109.
 - Baltusrol Way and Ridge Ter., 923—98—86.
- Summit High Service—
 - Hobart Ave. and Hobart Gap Rd., 503—90—21.
- Short Hills High Service—
 - Delbarton and Kenilworth Drives, 1,080—66—36.
 - Highland Ave. and Forest Dr., 504—114—100.
- White Oak Ridge High Service—
 - Deerfield Rd. and Andover Dr., 622—132—20.
 - Fairfield Dr. and Sinclair Ter., 504—70—11.

FIRE DEPARTMENT: A part-paid organization of one company under the supervision of the chairman of the fire committee of the township committee. Township owns house, apparatus, and equipment and appropriated \$50,983 for the support of the department during 1947. There are 11 paid men including a chief, 2 captains of whom one is the fire alarm superintendent, and 8 firemen. There are 40 volunteers including 4 captains who are appointed annually by chief and confirmed by township committee. An average of 18 volunteer firemen are available during the day and 30 during the night. Appointments of paid men to the department and promotions of paid men are made by township committee from eligible lists submitted by the State Civil Service Commission. Paid men are divided into two platoons on duty alternately 10 and 14 hours every third day with one day off in seven and are allowed 14 days annual vacation No substitutes are provided during sickness or vacation periods. Paid men on the off shift are required to respond to all alarms and only two men are allowed out of town at a time. A pension fund established by state law is maintained by assessments on salaries of paid members and appropriations by the city. Members may retire on half pay in case of total disability or after 20 years of service if 50 years of age. **Company:** Located in township hall on Millburn Avenue west of Main Street. Building is a 2-story joisted brick structure with a slate roof, concrete apparatus floor, steam heat, electric lights, telephone, and hose tower **Equipment—Hose No. 1:** A 1940 Mack hose and booster car carrying a 150-gallon booster tank, 250 feet of booster hose, 1,000 feet of 1½-inch hose, 1,350 feet of 2½-inch hose, a 4-way deck nozzle, a cutting torch, a portable foam generator, a distributor nozzle, 2 short ladders, and good minor equipment. **Engine No. 1:** A 1923 American La France 1,000-g.p.m. triple combination pumping engine carrying a 35-gallon booster tank with CO₂ for expellant, 250 feet of booster hose, 1,800 feet of 2½-inch hose, 2 short ladders, and good minor equipment. **Engine No. 2:** A 1926 American La France 1,000-g.p.m. triple combination pumping engine carrying a 35-gallon booster tank with CO₂ for expellant, 250 feet of booster hose, 1,500 feet of 2½-inch hose, a distributor nozzle, 2 short ladders, and good minor equipment. **Truck No. 1:** A 1929 American La France city service ladder truck carrying a 35-gallon booster tank with CO₂ for expellant, 300 feet of booster hose, 16 ladders ranging from 12 to 55 feet and totaling 392 feet, a deluge set, a cellar pipe, 4 all-service gas masks, 2 self-contained oxygen masks, 1 portable electric generator, 3 portable flood lights, 14 salvage covers, and good minor equipment. The chief is provided with a

MILLBURN TOWNSHIP, ESSEX COUNTY, NEW JERSEY.

Continued.

1941 Dodge coupe equipped with one-way radio. **Hose:** All 2½-inch and 1½-inch hose is C.R.L. equipped with screw couplings. The 2½-inch hose couplings are 3½ inches outside diameter and have 6 threads per inch. Hose is shifted monthly, tested annually at 250 pounds, and dried in hose tower. There is a total supply of 7,100 feet of 2½-inch hose of which 4,600 feet is over five years old and 2,950 feet is held in reserve. **Operations:** Department is governed by township ordinances. Chief has control of apparatus and paid men at all times and of volunteers at fires and drills. Chief may suspend members pending a hearing before township committee and Civil Service Commission. Motors are started daily. Paid men drive apparatus. **Drills and Training:** Paid men are drilled weekly throughout the year and volunteers weekly from May to September by paid officers. Drills are conducted on hose tower in rear of fire headquarters. **Fire Methods:** Booster streams used on incipient fires reinforced by engine lines with shut-off nozzles. Hose lines are laid directly from hydrant to fire from gated hose outlets. It is the general practice to hook up engine to hydrant. Gas masks, salvage equipment, and heavy stream appliances are provided. **Response to Alarms:** The hose, engine, and truck respond to all alarms unless person calling clearly states that fire is grass, brush, automobile, or other similar fire; then hose company responds. The fire alarm superintendent responds to fire headquarters on receipt of alarms and would man reserve engine on a subsequent or additional alarm. **Building Inspection:** The department makes a complete inspection three times a year of all factories, apartments, gas stations, and stores. Complete records are kept of these inspections and sketches are made of most risks. **Records and Reports:** Complete records of all fires including a journal, log, and hose record are kept by chief. An annual report is submitted by chief to township committee. **Fire Alarm System:** The fire alarm system is part of the fire department and is under the supervision of a captain who is the fire alarm superintendent. Captain with one paid man maintains and operates system. A well-equipped truck is provided. Headquarters equipment is located in fire alarm headquarters in rear of fire headquarters. Building is a 1-story brick structure with a slate roof, concrete floor, steam heat from fire headquarters, wired glass windows in metal sash, electric lights and 2 CO₂ extinguishers. Equipment is of Horni automatic emergency ground return type and consists of an ebony asbestos operating board mounted in a metal cabinet with provisions for 8 box circuits, 1 alarm circuit, and 1 local alarm circuit, with the necessary trouble bells, high and low voltage relays, pilot lights and switches for testing and operation, and a protector board with provisions for 12 circuits. Wire between apparatus is well installed in rigid conduit. Circuits are protected on protector board by ½-ampere enclosed fuses, 5-ampere fuses, and inert gas lightning arresters, and at the junction of aerial conductors with underground cable, by inert gas lightning arresters mounted in metal cabinets at curb. Current for operation of system is supplied by 8 high and low rate rectifiers serviced from the 110-volt lighting circuit with 8 banks of storage batteries of 22 cells each floating. Batteries are mounted on standard racks and are located in a cut-off section of fire alarm headquarters. They are protected by 3-ampere cartridge fuses and rectifiers by ½-ampere cartridge fuses. Emergency power is available from a Kohler gas engine driving a 1½-k.w. generator which operates automatically on interruption of power. This with

a 2-stage Ingersoll-Rand compressor driven by a 7½-h.p. electric motor and three large storage tanks are located in a cut-off section of fire alarm headquarters. There are 3 registers at watch desk in fire headquarters, one on the alarm circuit and two for ground side of circuits, tappers on each box circuit, a master transmitter, an 18-inch gong on apparatus floor, an air horn, gongs in homes of five firemen, a gong and register in home of chief, and a gong at the Short Hills Pumping Station. There are 44 fire alarm boxes of Gamewell and Horni makes of which 24 are of the grounded succession type and 19 are of the succession type. Two boxes are private and inaccessible to the public. All outer cases are grounded to half-inch iron conduits. Five boxes are mounted on pedestals, remainder are mounted on utility company poles at or near street intersections with red and white indicating bands; 24 of the fire alarm boxes also have blue indicating lights. Boxes examined during inspection were found to be in good operating condition. Boxes are tested monthly and complete records are kept of tests. Total length of circuits is 38 miles of which one mile is underground. Underground wire is No. 14, rubber covered copper wire in lead sheath, installed in ducts carrying telephone cable only. Aerial wire is No. 10 hard drawn copper, triple braided, weatherproof, and No. 10 Peerless on joint occupancy poles well below other utility wires. There are 3 telephone trunks to fire headquarters, two of which are reserved exclusively for fire calls. Twenty-four hour watch is maintained. Circuits are tested daily for amperage, voltage, and ground. Batteries are tested monthly and air horn is operated four times a day. Excellent records are kept of all tests. Alarms of fire may be telephoned directly to fire headquarters and are sounded on air horn by means of transmitter.

POLICE DEPARTMENT: Consists of a chief, 6 sergeants, and 12 patrolmen working in 8-hour shifts. Department is provided with 5 radio cars equipped with three-way radios, and one ambulance. Police respond to all alarms of fire and report unauthorized building construction to building inspector.

BUILDING LAWS: Code adopted August 8, 1927 and amended to February 19, 1940 provides for the appointment of a building inspector and requires that plans and specifications be submitted and permit obtained for building operations. Code establishes fire limits, but leaves the restriction of roofing materials to the discretion of the building inspector. Code has some good features regarding fire prevention, but is not sufficiently comprehensive from a fire protection standpoint.

FIRE PREVENTION LAWS: An ordinance adopted December 27, 1927 and amended to June 7, 1937 regulates the use and storage of fuel oil and the installation of oil burners and tanks. An amendment to the 1939 revision of township ordinances adopted on November 17, 1941 regulates the storage, distribution, and sale of explosive liquids. A further amendment provides that a permit shall be obtained before any bonfire or other open fire be built within the township. State laws adequately cover the storage and shipment of explosives and flammables and the construction of motion picture booths. They also restrict the discharge of fireworks to responsible bonded parties.

ZONING ORDINANCE: Adopted November 25, 1936 and amended to October 7, 1940.