



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

City of
Summit
Union County, New Jersey

AUGUST 31, 1950

- KEY**
- PROTECTED FIRE ZONE:** Shown in Green
- NOTE:**—For description of fire protection, etc., see other side.
- Elevations range from 170 to 540 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:
- ① Pumping engine and hose car
- ② Ladder truck
- ③ Booster tank or tanks on above

247

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July 31, 1947.

CITY OF SUMMIT, UNION COUNTY, NEW JERSEY.

Population — 1940 Census — 16,165.

IN GENERAL: Located on the D., L. & W. R. R. about 14 miles west of Newark. It is a high-class residential community with about 20 small industries employing 1,400. Area is about 6.0 square miles. Elevations range from 170 to 540 feet. Streets are mostly improved and in good condition. Railroad crossings at grade, steep grades in some sections of the city, and traffic in business district could effect delays in 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 Summit is on high service supplied from the Baltusrol Pumping Station located south of Glenside Avenue while a small section in the southeast portion of the city, south of the railroad is on low service supplied from the Canoe Brook Pumping Station located in Millburn. The River Road Booster Station located in Summit discharges to the high service from the Canoe Brook Low Service and sustains pressure in the northwestern portion of the city. The city supply is principally through 10-inch and 12-inch mains from the Baltusrol Pumping Station and the low service supply is through a 12-inch main from the Canoe Brook Pumping Station. The Druid Hill Standpipe, north of Oak Ridge Avenue functions as an equalizer for the high service and provides 0.611 million gallons storage. For a detailed description of the Commonwealth Water Company system see report and map No. 245. **Distribution System:** In two services consisting of the Baltusrol High Service and the Canoe Brook Low Service. See map and description above. **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 Summit, but on December 31, 1945 there were 3,616 services in Summit. **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 3½-foot cover. Total length in Summit, 361,675 feet; 5.4% 12-inch, 5.6% 10-inch, 13.3% 8-inch, 55.4% 6-inch, and 20.3% 4-inch. No trouble was reported from frozen mains or electrolysis. **Gate Valves:** There are 674 in the city of Smith, Wood, Darling, and Ludlow 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 386 in the city of Wood, Darling, Smith, and Ludlow makes of standard type; 143 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; 148 have 6-inch branches, all of which are gated and 238 have 4-inch branches, of which 193 are gated. Hydrants are inspected semi-annually and at time of hydrant test those operated were found to be in fair condition. **Pressures:** Readings taken at 11 well distributed locations on the high service showed pressures ranging from 55 to 128 pounds with an average of 83 pounds. Two readings taken on the low service showed an average pres-

sure of 99½ pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on April 8, 1947 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

High Service—

Summit Ave. and Union Pl., 1,340—80—35.
Maple St. and Springfield Ave., 822—77—60.
Woodland Ave. and Woodcroft Rd., 490—91—36.
Prospect Hill Ave. and Wittredge Rd., 661—65—17.
Ridge and Fernwood Rds., 490—55—24.
Evergreen Rd. and Madison Ave., 627—128—28.
Oakley and Springfield Aves., 915—90—56.
Ashland and Colt Rds., 822—67—34.
Oak Ridge Ave. and Elm St., 628—58—22.
Ashwood and Allenwood Aves., 622—125—82.
Upper Overlook and Lower Overlook Rds., 570—75—37.

Low Service—

Morris Ave. and John St., 788—76—37.
Canoe Brook Pky. and Morris and Essex Tpke., 1,340—123—99.

FIRE DEPARTMENT: A part-paid organization of 4 companies under the supervision of the chairman of the fire committee of the city council. City owns house, apparatus, and equipment and appropriated \$49,452.00 for the support of the department in 1947. The paid organization consists of a chief, 1 lieutenant, and 9 firemen. Firemen are appointed to the department by the city council after a physical and mental examination. They work in 24-hour shifts, are allowed two weeks annual vacation, and subscribe to a pension fund which has been established by state law and is supported by assessments from salaries of members and by the city. Off-shift members are required to respond to all general alarms and only two are allowed out of city at one time. The volunteer organization consists of 4 assistant chiefs, 4 foremen, and 40 firemen, of whom an average of 10 are available during the day and 25 during the night. Officers appointed annually by city council on recommendation of companies. **Companies—Union Hose Company No. 1:** Membership 12. Located on Summit Avenue at Banks Street. Building is a 1-story and 2-story brick structure with a slag roof, concrete apparatus floor, steam heat, electric lights, telephone, and hose rack. **Equipment:** A 1937 Seagrave 750-g.p.m. triple combination pumping engine carrying a 100-gallon booster tank, 200 feet of booster hose, 1,650 feet of 2½-inch hose, 3 gas masks, 1 salvage cover, 2 short ladders, and good minor equipment. **Chemical Engine Company No. 1:** Membership 12. Located with Union Hose Company No. 1. **Equipment:** A 1927 Seagrave 750-g.p.m. triple combination pumping engine carrying a 200-gallon booster tank, 300 feet of booster hose, 1,000 feet of 2½-inch hose, 3 gas masks, 1 salvage cover, 1 foam generator, 2 short ladders, and good minor equipment. **Hose Company No. 2:** Membership 12. Located on Park Avenue at Ashwood Avenue. Building is a 2-story joisted brick structure with a slag roof, wood apparatus floor, steam heat, electric lights, telephone, and hose rack.

CITY OF SUMMIT, UNION COUNTY, NEW JERSEY.

Continued.

Equipment: A 1927 Seagrave 750-g.p.m. triple combination pumping engine carrying a 90-gallon booster tank, 300 feet of booster hose, 1,300 feet of 2½-inch hose, 3 gas masks, 1 salvage cover, 2 short ladders, and good minor equipment. **Hook and Ladder Company No. 1:** Membership 12. Located on Summit Avenue near Union Place. Building is a 1-story and 2½-story joisted brick structure with a slate roof, concrete apparatus floor, steam heat, electric lights, and telephone. **Equipment:** A 1935 Mack 75-foot aerial truck carrying ladders ranging from 10 to 75 feet and totaling 276 feet, an 85-gallon booster tank, 150 feet of booster hose, a ladder pipe, a cellar pipe, a deluge set, 17 salvage covers, 3 gas masks, and good minor equipment. In reserve is a 1930 Cadillac 500-g.p.m. pumping engine, 250 feet of 2½-inch hose, 250 feet of 1½-inch hose, 2 short ladders, and some minor equipment. Chief is provided with a 1947 Ford coupe. **Hose:** All 2½-inch and 1½-inch hose is C.R.L. equipped with screw couplings. The 2½-inch hose couplings are 3½-inch outside diameter and have 6 threads per inch. Hose is tested three times a year at 250 pounds pressure, shifted every other month, and dried on hose rack. There is a total supply of 8,000 feet of 2½-inch hose, of which 3,850 feet is held in reserve and 5,500 feet is over five years old. **Operations:** Department is governed by city ordinances. Chief has control of apparatus and paid men at all times and of volunteers at fires and drills. He can suspend members pending a hearing before city council. Motors are started weekly. Paid men drive apparatus. **Drills and Training:** Drills held ten times a year under supervision of chief consist of hose laying, ladder raising, pump operation, and use of equipment. **Fire Methods:** Booster streams are used on incipient fires reinforced by hydrant lines with shut-off nozzles. Engines are seldom connected to hydrant. Gas masks, salvage equipment, and heavy stream appliances are provided. **Response to Alarms:** Entire department responds to all box and general alarms. One company responds to grass, automobile, or similar fires. Outside aid may be secured from Millburn, Chatham, Springfield and New Providence Borough. **Building Inspection:** Monthly inspections are made of all stores and factories. Schools and yards are inspected annually. Complete records are kept of all inspections. **Records and Reports:** Complete records are kept of all fires in a regular fire department log. The chief submits a monthly report to the chairman of the fire committee. **Fire Alarm System:** System is under the supervision of the fire chief. Repairs and extensions are made by linemen hired from Jersey Central Power and Light Company. Equipment is located in rear of Union Hose Company No. 1 in a non-standard room and consists of a 5-circuit operating board. Circuit enters headquarters from outside pole in a common conduit direct to operating board. Wire between apparatus is in conduit. Circuit protection consists of 7-ampere fuses and carbon block arresters at operating board and at the entrance of circuit to fire houses and home of chief. Current for operation of system is supplied by one Gamewell Oxide film rectifier serviced from the 110-volt light-

ing circuit with one bank of storage batteries of 25 cells floating. Batteries are mounted on a wood shelf and are located in room with operating board. There is a punch register in each fire house; 6-inch gongs and tappers in Hook and Ladder and Hose Company No. 2 houses; tappers in homes of chief and one driver; and air horns at Hose Company No. 2, Union Hose Company No. 1, and at McGregor Manufacturing Company. There are 29 Gamewell fire alarm boxes, of which 3 are of the succession type, 15 of the non-interfering type, and 11 of the interfering type. One box in principal mercantile district is mounted on a pedestal while the remainder are mounted on utility company poles with silver and red indicating bands at or near street intersections. All but 6 boxes are grounded to driven copper weld rods. Boxes examined during inspection were found to be in good operating condition. There is a single circuit divided into three outside loops carrying fire alarm boxes and alarm instruments and two inside loops carrying alarm equipment in Union Hose Company No. 1. There is about 16 miles of No. 10 hard drawn copper wire, triple braided, weatherproof, on joint occupancy poles well below other utility wires. Test taps are sent over system daily. No tests for amperage, voltage, or grounds. Boxes are tested monthly. Alarms of fire may be telephoned to fire headquarters over one of three trunks from public exchange and are sounded by means of a break wheel transmitter. One trunk is reserved exclusively for fire calls.

POLICE DEPARTMENT: Consists of a chief, a captain, 3 lieutenants, 3 sergeants, 1 detective, and 20 patrolmen working in 8-hour shifts. There are 6 police signaling boxes over which patrolmen report hourly. Three cars equipped with three-way radio are provided. Patrolmen respond to all alarms of fire and report unauthorized construction to the building inspector.

BUILDING LAWS: Code adopted October 6, 1925 and subsequently amended provides for the appointment of a building inspector and requires that plans be submitted and permits issued before building operations may begin. Code generally follows that recommended by the National Board of Fire Underwriters, but has no regulations in regard to area, protection of exposed windows, protection of vertical openings, or protection of openings in fire walls. Fire limits are established and flammable roof coverings are allowed except in the fire limits.

FIRE PREVENTION LAWS: An ordinance adopted November 19, 1935 requires that the fire department inspect stores, factories, and schools. It also restricts the storage of combustibles or explosive materials. 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: Revised May 7, 1929.