Superseding Map No. 38 of February 27, 1937. Please destroy old issue.

KEY

PROTECTED FIRE ZONE: Shown in Green.
NOTE.—For description of fire protection, etc., see other side.

Elevations range from 59 to 200 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:
(Y) *Pumping engine and hose car*
(L) *Ladder truck*
(A) *Ambulance, Squad or Auxiliary car*
Booster tank or tanks on above

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

City of Plainfield
Union County, New Jersey

NOVEMBER 29, 1947

November 29, 1947.

CITY OF PLAINFIELD, UNION COUNTY, NEW JERSEY.

Population — 1940 Census — 37,469.

IN GENERAL: Located on the C. R. R. of N. J. about 24 miles from Jersey City. It is a substantial residential community with an extensive business district and about 45 plants employing about 4,400 persons. Area about 6.25 square miles. Elevations range from 59 to 200 feet above sea level. Streets are mainly improved and in good condition.

WATER SUPPLY: Supply for domestic and fire protection purposes is furnished by the Plainfield-Union Water Company which supplies Plainfield and 17 other municipalities in Union and Somerset Counties. For a description of this system see map and report No. 124. Supply is obtained primarily through a 16-inch main from the Netherwood Pumping Station in the eastern portion of the city, and from the Clinton Avenue and Green Brook Well Fields in South Plainfield and Green Brook Township respectively, with emergency supply available from the Park Avenue Pumping Station of the Middlesex Water Company in South Plainfield. **Consumption:** The average and maximum daily consumption during 1946 for the entire territory served (37,208 services) was 10.34 and 12.2 m.g.d. On December 31, 1946 there were 9,209 services in Plainfield, all of which are metered. **Distribution System:** In one service; see map. **Pipe:** All cast iron, tar coated with bell and spigot joint, laid with a 3½-foot cover. No trouble experienced from frozen mains or electrolysis. Total length of pipe, 451,200 feet; 4.1% 4-inch, 76.1% 6-inch, 3.7% 8-inch, 0.7% 10-inch, 8.3% 12-inch, 6.7% 16-inch, and 0.4% 24-inch. **Gate Valves:** There are 624 of various makes with valve box set at grade. There is no systematic inspection of valves. They are operated only when shut-offs are necessary. **Hydrants:** There are 579 of Ludlow, Smith, Corey, and Catuta makes; 399 have four 2½-inch outlets, and balance have one 4½-inch and two 2½-inch outlets; 404 have 4-inch and balance have 6-inch gated branches. Small outlets are 3-inch outside diameter with 8 threads per inch. Large outlets are National Standard. Hydrants are inspected annually, after use, and frequently in cold weather. Those operated were in good condition. **Pressures:** Readings taken at 50 hydrants by the National Board of Fire Underwriters in January, 1935 showed pressures ranging from 26 to 93 pounds with an average of 73 pounds. Pressures at the recording gauge in the Plainfield business district at elevation 110 average 70 pounds during the day and 75 to 78 pounds at night. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured on February 1, 1935 by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

Front St. and Watchung Ave., 3,680—72—61.
Second St. and Madison Ave., 3,690—74—54.
Sixth St. and Watchung Ave., 3,530—72—56.
Fourth and Liberty Sts., 3,520—74—53.
Front St. and Clinton Ave., 2,840—80—56.
North Ave. and Berckman St., 3,690—64—58.
Second St. and Netherwood Ave., 3,160—63—51.
Berkley Ave. and Denmark Rd., 2,120—51—15.
Hillside and Prospect Aves., 2,330—61—47.
Randolph Rd. and Lenox Ave., 2,460—78—46.
Fourth St. and Grant Ave., 3,520—78—53.
Third and Halsey Sts., 1,350—84—64.

FIRE DEPARTMENT: A full-paid organization of 8 companies with 60 members including a chief, 2 deputy chiefs, 4 captains, 3 lieutenants, 2 chief drivers, 46 privates, and 2 fire alarm operators. Members are appointed after competitive examination and serve a 6 months' probationary period. Suitable height, weight, and age limits are specified. Men work on two-platoon basis alternating every fourth day. Not more than 5 off-shift members are permitted to leave the city at one time. Off-shift members are required to respond to second alarms and good means of notification are provided. City owns all apparatus and equipment and appropriated $170,638.65 for fire department, $15,459.87 for the fire alarm system and $63,255.00 for hydrant rental for 1947. Good retirement and pension provisions are in effect. **Headquarters:** Located at W. Fourth Street and Central Avenue in a three-story fire resistive brick building with concrete floors, vapor-steam heat, and electric lights. **Equipment—Engine Company No. 1:** A 1947 Mack 1,000-g.p.m. triple combination pumping engine carrying a 100-gallon booster tank, 200 feet of booster hose, 1,700 feet of 2½-inch hose, 2 short ladders, 2 gas masks, and good minor equipment. **Engine Company No. 5:** A 1930 Mack 1,000-g.p.m. triple combination pumping engine carrying a 110-gallon booster tank, 250 feet of booster hose, 1,100 feet of 2½-inch hose, 2 short ladders, 2 mechanical foam pipes, and good minor equipment. **Engine Company No. 2—Reserve:** A 1920 American La France 1,000-g.p.m. triple combination pumping engine carrying one 100-gallon booster tank, 250 feet of booster hose, 1,000 feet of 2½-inch hose, 3 short ladders, two 3-way deluge sets, and fair minor equipment. **Ladder Company No. 1:** A 1922 American La France 75-foot aerial ladder truck carrying ladders from 12 feet to 75 feet and totaling 312 feet, ladder pipe, 2 cellar pipes, 1 deluge set, 10 salvage covers, and good minor equipment. **Ladder Company No. 3:** A 1931 Mack city sevice ladder truck carrying ladders from 10 feet to 45 feet, totaling 234 feet, 1 deluge gun, 2 cellar pipes, 10 salvage covers, and good minor equipment. **Emergency Squad No. 1:** A 1933 G.M.C. 1½-ton truck carrying one 1,250-watt generator, two 500-watt lights, 1 cutting torch, 2 inhalators, 2 oxygen masks, and good minor equipment. **Engine Company No. 3:** Located on Fourth Street opposite Darrow Avenue in a two-story joisted brick building with steam heat, electric lights, and hose tower. **Equipment:** A 1924 American La France 1,000-g.p.m. triple combination pumping engine carrying a 100-gallon booster tank, 200 feet of booster hose, 1,400 feet of 2½-inch hose, 2 short ladders, mechanical foam pipe, 2 gas masks, and good minor equipment. **Engine**

CITY OF PLAINFIELD, UNION COUNTY, NEW JERSEY.

Continued.

Company No. 4: Located on South Avenue near Woodland Avenue in a two-story joisted brick building with steam heat, electric lights, and hose tower. **Equipment:** A 1938 Mack 750-g.p.m. triple combination pumping engine carrying a 100-gallon booster tank, 250 feet of booster hose, 1,500 feet of 2½-inch hose, 2 short ladders, and 2 gas masks. **Hose:** All 2½-inch hose is C.R.L. with screw couplings 3-inch outside diameter with 8 threads per inch. There is a total of 11,050 feet in service and reserve. It is tested when new at 400 pounds and annually at 250 pounds. It is dried in the two stations that have hose towers. **Operations:** Department governed by rules and regulations adopted in 1928 with subsequent amendments. Charges are made by or through the chief to the fire committee and Civil Service. Chief has power to suspend or transfer members pending action by the committee and Civil Service. **Drills and Training:** Drills are held weekly in some companies and engines are tested monthly. No tower or regular school is provided. **Fire Methods:** Chemical lines usually supported by a 2½-inch hydrant line are used on most fires. Engines are not usually connected to hydrant, dependence being placed on hydrant streams. **Response to Alarms:** Chief or deputy chief responds to all alarms. Two engine companies and one ladder company respond to all box and telephone alarms, except for grass, chimney, and automobile fires, when one engine and one ladder company respond. Provision is made for second and third alarms. The rescue company responds to boxes in and near the principal mercantile district. **Building Inspection:** Business district is inspected semi-annually by firemen and deputy chief follows up any violation. Card records are kept of inspections. **Records and Reports:** Each station keeps the usual journal and captains make report on each fire attended. Chief makes a complete annual report to the Mayor and Council. **Fire Alarm System:** The fire alarm system is a part of the fire department and is maintained by Captain James F. Pearsall, a member of the fire department. Headquarters equipment located on the third floor of fire headquarters, a fire resistive building. System is of automatic type and Gamewell make installed in 1928. Apparatus consists of a protector board and operating board for 12 circuits and a 10 circuit automatic repeater. A punch register with time stamp is located at the telephone switchboard on the balcony adjacent to the chief's office. Circuit protection on the protector board consists of ½-ampere and 3-ampere fuses and inert gas arresters on the circuit panels by ½-ampere fuses, and at the rectifiers by 1-ampere fuses. Current for operating the system is supplied through oxide film rectifiers with battery floating. Batteries are well mounted in a room adjoining the operating room; 3-ampere fuses are provided on battery racks. Headquarters station has two punch registers, 5 gongs, and automatic light switch connected to local house circuit on the repeater. Other stations have a punch register, gong, and light switch connected to a box circuit. Gongs or tappers connected to same box circuit are provided at the residences of the chief, fire alarm superintendent, Elks Club, and newspaper office. A siren is provided at headquarters. There are 105 boxes, of which 8 are inaccessible to the public and 3 are auxiliarized. All are of Gamewell make; 84 are of succession type; the remaining 13 are non-interfering. Indicating lights are provided over boxes. Boxes are tested two or three times a year by means of silent-test switch. There are six all metallic normally closed circuits to which all boxes and alarm instruments are connected. No circuit is overloaded and 4 box circuits do not enter any fire station. Total length of circuits is approximately 123 miles of which 10 miles is underground in cable. Aerial wire is No. 10 hard drawn copper with weatherproof insulation installed on joint poles below power wires. Underground wire is No. 14 copper rubber covered in lead sheathed cable. About one-half of the boxes are grounded. Telephone switchboard at fire headquarters has extensions to all fire stations and police headquarters. Four trunk lines connect to the public exchange, only one of which is listed in the directory. Fire alarm circuits are tested once daily for current, voltage, and grounds and test taps are transmitted over the system three times daily. Records and maps are incomplete.

POLICE DEPARTMENT: Chief, 2 captains, 10 sergeants, and 47 patrolmen in the department. There are 12 signal boxes, 4 radio patrol cars. An automobile and patrol wagon are provided. Patrol wagon responds to serious fires. Police report unauthorized building construction to the building inspector.

BULDING LAWS: Code adopted December, 1934 and amended January, 1941 follows very closely that recommended by the National Board of Fire Underwriters. Extensive fire limits are established. Wood shingle roofs are prohibited in the fire limits only.

FIRE PREVENTION LAWS: Ordinance adopted November 17, 1924 embodies the requirements of the National Board of Fire Underwriters for oil burning equipment. An ordinance of 1912 provides good requirements for motion picture projection booths and fireworks law of 1930 regulates the manufacture, storage and sale of fireworks and restricts their use to definite periods of the year. A permit is required for the storage of flammable liquids. 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.