

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

Gloucester City

Camden County, N. J.

JULY 10, 1923



KEY

PROTECTED FIRE ZONE: Shown in Green.
Note.—For description of fire protection, etc., see other side.
 Elevations range from 0 to 25 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
 Hose wagon
 Automobile apparatus
 Hand drawn apparatus
 Chemical tank or tanks on above

A
B
C
D
E
F
G
H
I
J

GLOUCESTER CITY, CAMDEN COUNTY, N. J.

Population about 14,000

IN GENERAL—Located on Delaware River and Atlantic City and W. J. and S. S. R. R.'s, adjoining Camden on the South. A commuters' and manufacturing town, especially shipbuilding; the more important plants employ a total of about 8,000 hands. Area $1\frac{1}{2}$ square miles. Elevations range from 0 to 25 feet above mean sea level. Streets are mainly improved and in fair to good condition. Good street car and auto bus service to Camden. Reported that railroad crossings at grade have not interfered with response of fire apparatus.

WATER SUPPLY—Original plant built in 1883, City owns and operates supply works and distribution system and supplies water to Brooklawn and Highland Park as well as to Gloucester. Water Department under control of Water Works Committee of Common Council; organization and supervision fair. Records fair. Repairs and extensions by local plumber. No employee of Water Department responds to alarms of fire. **Supply Works**—Supply derived from four old 8-inch wells, 175 to 180 feet deep with combined capacity of 2.5 to 3.0 million gallons per diem and two new 8-inch wells, 178 to 180 feet deep, with combined capacity of 2.5 million gallons per diem. At time of inspection water was pumped to reservoir and settling basin by direct suction from wells with low lift pumps and thence by high lift pumps to distribution systems of Gloucester, Brooklawn and Highland Park, with standpipe as an equalizer. A 3,000,000-gallon rapid sand filter in six sections and an aerator will be installed between settling basin and reservoir. **Pumping Station**—Located on Johnston St. opposite Gaunt St. Elevation of floor about 5. Building one-story concrete block and brick, concrete floor, unprotected steel truss roof with gypsum tile and asbestos shingles. Hot air heating and electric lighting. Housekeeping good. Station operated in three shifts, with two men on each shift. Equipment includes two 120 K.W. Generators, each driven by a five-cylinder Busch-Sulzer Diesel engine. One each 1, 1.5 and 2 million gallon low lift single stage Buffalo centrifugal pumps, each driven by one 20 h.p. G. E. induction motor. One each 1, 1.5 and 2 million gallon high lift single stage Buffalo centrifugal pump, each driven by one 40 h.p. G. E. induction motor. Current for driving units furnished by the above generators. One 10" x 8" Ingersoll Rand air compressor, driven by one 20 h.p. induction motor. Two 8" x 16" Vacuum pumps, each driven by one 5 h.p. induction motor. **Suction Reservoir**—Located at pumping station, elliptical in shape; excavation and embankment, lined with brick and cement. Capacity said to be 1.25 million gallons. **Standpipe**—Located as shown on map. Steel 30 x 125 feet high, capacity 662,700 gallons; base at about elevation 30. **Consumption**—Maximum, minimum and average daily consumption for 1922 was 2,120,000; 1,575,270, and 1,707,524 gallons, respectively. **Distribution System**—See map. In one service. **Pipe**—All cast iron, tar coated, bell and spigot joint. All laid with 2½- to 3-foot cover. No trouble from frozen mains or electrolysis. Total length 102,720; 61.2 per cent. 4-inch; 27.7 per cent. 6-inch; 8.14 per cent. 8-inch; .43 per cent. 12-inch; 2.54 per cent. 16-inch. **Gate Valves**—No records. Said to be ten or twelve different makes of gate valves, some of which open to right and some to left. Generally located along property lines. No inspection. Stated that annual inspections will be made and records kept. **Hydrants**—155 hydrants in service. Of the R. D. Wood, Ludlow, Gloucester Iron Works, Chapman and Corey makes, generally with two 2½-inch outlets. New hydrants have two 2½ and one 4½-inch outlets. Older hydrants have female butts; branches are 4-inch, some of which are gated. Some open to right and some to the left. Hydrants generally in fair condition. Inspected semi-annually. **Pressures**—Recording and direct reading pressure gauges installed at pumping station. Charts of recording gauge show that pressures range from 46 to 56 lbs. Readings taken at 9 hydrants well distributed show pressures range from 39.5 to 53.2, with an average of 46.9. **Fire Flow Tests**—Probable supply available for fire protection purposes was measured by means of Pitot tubes at the following locations, with the results as given: Location of test, discharge in gallons per minute, pressure before flow and pressure during flow are as given consecutively: Broadway and Hudson, 1264, 50.75, 42.5; Mercer near Burlington, 488, 53.21, 33.71; Ridge Ave. and Burlington St., 447, 49.75, 36.50; Water and Fifth Sts., 100, 47.75, 26.25; Charles and Sixth Sts., 100, 46.25, 4.00; Burdsall Ave. and Thompson St., 100, 41.50, 1; Lane Ave. and Powell St., 177, 39.5, 5.5; Market St., 75 feet east of Hickman St., 177, 41.5, 6.

FIRE DEPARTMENT—Volunteer organization under control of Council Committee on fire apparatus. All members appointed by Council. Total membership 21, 10 of whom are available at all times, including two full paid drivers, all organized in one company. Department supported by city, which owns house, apparatus and equipment. Fire house located as shown on map. Two-story, joisted brick with steam heating and gas and electric lighting; no dormitories provided. 50-foot brick hose tower. **Apparatus**—One American LaFrance triple combination pump, chemical and hose wagon, rated at 750 gallons per minute, carrying one 50-gallon chemical tank, 250 feet of chemical hose, 1,500 feet 2½-inch hose, two short ladders and fair minor equipment. One American LaFrance Brockway automobile ladder truck carrying one 40-foot extension and eight other ladders, totaling 192 feet, one 40-gallon chemical tank, 250 feet of chemical hose, 450 feet of 2½-inch hose and fair minor equipment. **Hose**—All 2½-inch hose is C.R.L. with Jones snap couplings. In addition to that on the apparatus there is a supply of 500 feet in the hose tower. After use at fires hose is hung in tower. In warm weather said to be shifted every two or three weeks. No reliable hose tests. **Operations**—Department governed by Council Committee and fire department ordinance. Chief has control of apparatus and full paid men at all times and volunteer members at fires. He has power to suspend, but must prefer charges to Council. Full paid men act as drivers and operate in two shifts of twelve hours each. In addition, volunteer members are trained as drivers. Motors turned over twice daily. **Drills and Training**—Held once a week. Consist of stretching hose, making and breaking couplings, handling streams and ladder work. **Response to Alarms**—Both pieces of apparatus respond to all alarms of fire. Outside aid may be summoned from Camden and Woodbury. **Fire Methods**—For small fires supported chemical streams are used and for larger fires hydrant streams with shut-off nozzles are used. Automobile pumping engine is used when pressure is low. **Reports and Records**—Chief keeps record of all alarms of fire and makes annual report to Council. Records indicate fairly high percentage of attendance at fire. **Fire Alarm System**—System part of fire department under supervision of Council Committee and in charge of electrician employed in local plant, who is said to devote about one hour a day to maintenance of the system. System installed in 1892; consists of one circuit of part Nos. 8, 10, 12 and 14 copper wire with weatherproof or rubber covered insulation, mounted on poles with high and low tension wires, to which are attached eighteen boxes, one tower bell, three 8-inch gongs and one 3-figure indicator. Energy supplied by forty-four gravity cells located in City Hall. Boxes are of the Gamewell non-interfering type, mounted on telephone poles, five of which have keys under glass guard. Some of the boxes are in poor condition. Public telephone at fire house, with extension bells to the second floor. Telephone alarms received at police station sounded by key in fire alarm box in police station. Overhead circuits reported in better condition.

POLICE DEPARTMENT—Consists of chief, night and day sergeant and nine uniformed officers. Sixteen police telephone call boxes distributed throughout town; maintained by telephone company. No patrol wagon, but have ambulance. Police respond to alarms of fire.

BUILDING LAWS—None.

EXPLOSIVES AND INFLAMMABLES—No regulations.