



KEY
PROTECTED FIREMAN Shown in Green,
 Blue and Black
NOTE—Fire protection report on file in Engineering
 Department of F. I. R. O. of N. J.
 Classification range from 165 to 1627 above mean sea level.

Water mains 8 inches and larger in diameter	=====
Water mains 6 inches and longer	=====
Water mains 4 inches in diameter	=====
Water mains 4 inches in diameter	=====
Water hydrants shown thus	=====
Water valves shown thus	=====
Fire houses shown thus	=====
Fire apparatus designated by symbols thus:	
1. Pumping engine and hose car	=====
2. Tender	=====
3. Hose reel	=====
4. Hand-drawn apparatus	=====
5. Booster tank or tanks on wheels	=====

THE FIRE INSURANCE RATING
ORGANIZATION OF N. J.
ENGINEERING DEPARTMENT

Parsippany-Troy Hills Township
Morris County, New Jersey

FEBRUARY 20 1952

September 15, 1947.

PARSIPPANY-TROY HILLS TOWNSHIP, MORRIS COUNTY, NEW JERSEY.

Including Mount Tabor and Greystone Park (Fire District No. 1), Rainbow Lakes (Fire District No. 2), Lake Parsippany (Fire District No. 3), Lake Hiawatha (Fire District No. 4), Rockaway Neck (Fire District No. 5) and Parsippany and Troy Hills (Fire District No. 6).

Population — 1940 Census — 10,976, including approximately 6,300 inmates and employees at Greystone Park.
Estimated Summer Population — 10,000, exclusive of Greystone Park.

IN GENERAL: Located on the west bank of the Rockaway River on either side of Bloomfield Avenue (State Highway Route No. 6) about 9 miles west of Montclair. It is a residential and agricultural area with nearest railroad stations on the D., L. & W. Railroad at Denville and Mountain Lakes. Local and interstate bus service affords transportation to Newark and other nearby communities. Mount Tabor in the northwesterly section is owned by the Methodist Camp Meeting Association and consists of about 275 congested frame dwellings subject to serious conflagration. Rainbow Lakes, Lake Parsippany, and Lake Hiawatha comprise three real estate developments on small artificial lakes located respectively in the northwesterly, central, and easterly sections. The former is a completed development and the latter two are developing rapidly with permanent and summer residences of ordinary frame construction. The remainder of the township consists of small substantial residential developments, a few high value residences, the County Institution at Greystone Park, a pretentious country club, and scattered farms and dairies. Area 25.3 square miles. Elevations range from 165 to 1,027 feet. Main thoroughfares are concrete or macadam in good condition; other roads are gravel in fair to poor condition. Traffic congestion on State Highway Route No. 6 constitutes possible delays to the response of fire apparatus. No grade crossings in the township.

WATER SUPPLY: The major portions of the township are supplied with water for domestic and fire protection purposes by a municipal system started in 1930 and extended to the time of inspection. The Mount Tabor Section, with the exception of seven hydrants on the municipal supply main to Rainbow Lakes, is supplied from a distribution system owned by the Camp Meeting Association which purchases water at wholesale from the municipality and provides the high service storage facilities for this district and Rainbow Lakes. A small area on the property of the Jersey City Water Department is supplied through 12-inch, 8-inch and 6-inch mains, carrying 14 fire hydrants, from the aqueduct at the gate house below the reservoir dam. **Municipal System:** The system was installed under the supervision of a competent consulting engineer. Office in township hall in Parsippany Center. The water department is under the supervision of the township committee and the system is in charge of a Superintendent of Public Works assisted by a foreman and fourteen regular employees with laborers as needed. The township clerk serves as Administrative Clerk of the water department and one clerk and meter reader are employed. Employees are qualified and protected by Civil Service requirements. The superintendent or the foreman responds to alarms of fire prepared to render emergency assistance. One light truck is provided and nine others are available from the street department. A pipe yard is provided at pumping station at Well No. 1. Records are incomplete as to details of valve locations and inspections, but include service records, a distribution map, and pumping statistics. **Supply Works:** The supply for the entire system including Mount Tabor is obtained from two deep wells; No. 1 is 16 inches in diameter, 142 feet deep with a tested capacity of 650 g.p.m. and No. 3 is 16 inches in diameter, 80 feet deep with a tested capacity of 600 g.p.m. No. 1 is equipped with a low lift deep well turbine which discharges to an 8,000-gallon concrete receiving reservoir and operates in conjunction with two high lift pumps; No. 3 Well is equipped with a high lift deep well turbine; all high lift pumps discharge to the distribution system with a low ser-

vice reservoir acting as an equalizer and providing storage. High service booster pumps at this reservoir discharge to a high service system with a standpipe on the Mount Tabor system acting as an equalizer and providing high service storage for both systems. **Pumping Stations—Well Station No. 1:** Located in Parsippany south of Bloomfield Avenue as shown on map. Building is a small area 1-story brick structure with asbestos shingled roof, concrete floor, electric lights, and coal stove. Electrical installation is standard. No exposure. No hand protection. Elevation of pump room floor 306.83. **Equipment:** One 650-g.p.m. Layne low lift deep well turbine driven by a 10-h.p. G. E. electric motor. Two 300-g.p.m. Fairbanks-Morse centrifugal pumps each driven by a 30-h.p. Fairbanks-Morse motor. Electric power is supplied by the utility company through an overhead service from Bloomfield Avenue to a transformer outside the station. **Well Station No. 3:** Located north of Vail Road east of Bloomfield Avenue as shown on map. Building is a small area 1-story cement block and brick structure with composition covered wood roof, concrete floor, electric lights, and oil stove. No exposure. No hand protection. Elevation of pump room floor 299.8. **Equipment:** One 650-g.p.m. Layne high lift deep well turbine driven by a 60-h.p. G. E. electric motor. Electrical installation is standard. **High Service Booster Station:** Located on Park Road at reservoir as shown on map. Building is a 1-story cement block structure with composition roof, concrete pump pit, electric lights and oil stove. No exposures except woods. No hand protection. Wiring installation is standard and power supply is through a single overhead service. Elevation of pump pit floor about 490. **Equipment:** One 200-g.p.m. and one 300-g.p.m. American Well Works centrifugal pump driven respectively by 20-h.p. and 30-h.p. U. S. electric motors. The pumps take suction from the reservoir supply line and operate automatically on a 14-foot water level variation in the Mount Tabor standpipe. **Elevated Storage—Low Service Reservoir:** Located near Park Road as shown on map with base at elevation 496. Reservoir is of the covered circular type constructed of reinforced concrete. It is 62 feet in diameter by 23.5 feet in height with a capacity of 500,000 gallons. Elevation of overflow 518.16 feet. **Mount Tabor High Service Standpipe:** Located in Mount Tabor district as shown on map with base at elevation 660. Standpipe is steel, 20 feet in diameter by 70 feet in height with a capacity of 164,000 gallons. Elevation of overflow 730 feet. **Distribution System:** In two services, supplied as described above. The distribution system consists of 8-inch, 10-inch and 12-inch arteries supplying 6-inch gridiron and 4-inch and 6-inch dead end branches. The Mount Tabor distribution system is supplied as a unit through a 10-inch meter and by-pass located at the standpipe. A normally closed 6-inch metered connection to the Denville system at Fox Hill Road provides an emergency supply under reduced pressures of about 0.75 m.g.d. to portions of the high service system; see map. **Consumption:** The average daily consumption during the twelve-month period ending December 31, 1946 in the entire territory served was 0.277 m.g.d., of which about 11.7% was sold to the Mount Tabor Association. The maximum daily consumption during 1946 is estimated at 0.50 m.g.d. On June 30, 1941 there were 1,890 services on the municipal system, all of which were metered. The Mount Tabor system supplies about 275 services, none of which is metered. **Pipe:** Tar coated, bell and spigot joint, about 50% with bitumastic lining, laid with about 4½-foot cover. No trouble

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concrete floor, electric lights, gas heater, and siren on roof. Total active membership 28 including a chief, assistant chief, foreman, assistant foreman, and 6 appointed drivers. A minimum of 10 members are available at all times. **Equipment:** One 1936 Ford-Seagrave 500-g.p.m. triple combination pumping engine carrying one 100-gallon booster tank, 150 feet of booster hose, 1,350 feet of 2½-inch hose, 500 feet of 1½-inch hose, 2 short ladders, and fair minor equipment. No reserve hose. **Lake Parsippany Volunteer Fire Company—District No. 3:** Located on Centerton Drive near Delanco Drive. Building is 1-story concrete block and frame with composition covered wood roof, concrete floor, electric lights, telephone, coal stove, and siren on roof. Total active membership 35 including a chief, 1 captain, 1 lieutenant, and 6 appointed drivers. A minimum of 15 members are available at all times. **Equipment:** One 1937 Diamond T Pirsch 500-g.p.m. triple combination pumping engine carrying one 300-gallon booster tank, 200 feet of booster hose, 650 feet of 2½-inch hose, 1,000 feet of 1½-inch hose, 2 short ladders, and fair minor equipment. No reserve hose. **Lake Hiawatha Volunteer Fire Association—District No. 4:** Located on Lake Shore Drive near North Beverwyck Road. Building is 1-story cinder block with composition covered wood roof, concrete floor, electric lights, oil-fired steam heat, and siren on tower. Total active membership 35 including a chief, assistant chief, 1 captain, 3 lieutenants, and 7 appointed drivers. A minimum of 20 members are available at all times. **Equipment:** One 1939 Sealand-International 500-g.p.m. triple combination pumping engine carrying one 250-gallon booster tank, 150 feet of booster hose, 1,000 feet of 2½-inch hose, 300 feet of 1½-inch hose, one 12-foot roof ladder, one 28-foot extension ladder, and fair minor equipment. One 1942 U. S. Army Chevrolet Caysler 500-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 150 feet of booster hose, 300 feet of 1½-inch hose, 300 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. **Parsippany-Troy Hills Volunteer Fire Company—District No. 5:** Located on Bloomfield Avenue west of Elm Avenue. Building is 1-story concrete block with composition covered wood roof, concrete floor, electric lights, telephone, oil heater and pipeless furnace, and siren on roof. Total active membership 25 including a chief, assistant chief, 1 foreman, 1 assistant foreman, and 6 appointed drivers. A minimum of 10 members are available at all times. **Equipment:** One 1923 Mack 500-g.p.m. triple combination pumping engine carrying two 60-gallon chemical tanks, 200 feet of booster hose, 500 feet of 2½-inch hose, 300 feet of 1½-inch hose, 2 short ladders, and fair minor equipment. A service test on this apparatus shows the maximum delivery to be 410 g.p.m. at 120 pounds. One 1942 U. S. Army Chevrolet - Oren 500-g.p.m. triple combination pumping engine carrying one 150-gallon booster tank, 150 feet of booster hose, 100 feet of 1½-inch hose, 750 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. **Parsippany-Troy Hills Volunteer Fire Association—District No. 6:** Located on Littleton Road south of Bloomfield Avenue. Building is 1½-story cinder block and frame with composition covered wood roof, concrete floor, electric lights, telephone, oil-fired hot water heater, and siren on tower at rear. Total active membership 24 including a chief, assistant chief, 1 foreman, and 1 assistant foreman. There are 20 appointed drivers. A minimum of 8 members are available at all times. **Equipment:** One 1942 Ward LaFrance 500-g.p.m. triple combination pumping engine carrying a 275-gallon booster tank, 400 feet of booster hose, 1,200 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. One 1942 U. S. Army Chevrolet-Darley 300-g.p.m. triple combination pumping engine carrying a 300-gallon booster tank, 600 feet of booster hose, 650 feet of 1½-inch hose, 700 feet of 2½-inch hose, 2 short ladders, and fair minor equip-

ment. **Hose:** The 2½-inch hose in all companies is C.R.L. with National Standard screw couplings and is distributed as indicated above. It is repacked occasionally at drills and tests and ages are as follows: District No. 1—Tested twice annually at 175 to 200 pounds with open nozzles; 100% over 5 years old. District No. 2—Tested thrice annually at 200 pounds with open nozzles; 50% over 5 years old. District No. 3—Tested in part at normal pump operating pressures at drills; 50% over 5 years old. District No. 4—Tested in part at 200 pounds hydrant pressure; 50% over 5 years old. District No. 5—Tested in part at normal pump operating pressures at drills; 35% is over 5 years old. District No. 6—Tested in part at normal pump operating pressures at drills; 75% over 5 years old. No adequate drying facilities except hose rack at District No. 4. **Operations:** Departments are under the supervision of the respective Fire District Commissioners, but no regulations delegating authority to any group have been adopted. The chiefs have charge of their respective equipment and of men at fires and drills. No regular schedules for starting of motors. **Drills and Training:** Drills consisting of engine operation and hose laying are held at least 12 times each year in all companies. **Fire Methods:** Chemical extinguishers, booster streams, or small lines are used on incipient fires supported by engine or hydrant streams with shut-off or open nozzles. Salvage equipment is provided and gas masks are limited to one or two to each of 10 pieces, and the police department. No heavy stream appliances are provided. **Response to Alarms:** Companies respond to first alarms within their respective districts and on call to the entire township. Aid may be secured from surrounding volunteer departments in Denville, Mountain Lakes, Boonton, Pine Brook, Morris Plains, and Hanover Township. **Building Inspection:** No regular inspections by fire department. **Records and Reports:** Records consist chiefly of location of and attendance at fires and drills. Annual reports are made to the fire commissioners. **Fire Alarms:** Telephoned to designated homes or places of business of members in each district and sounded on devices provided in each district. The Mount Tabor section of District No. 1 is equipped with a Federal fire alarm system carrying 6 boxes, a punch register and siren relay in the fire station. Current is supplied by the local power circuit and instruments are operated by an oxide film rectifier with batteries floating. Circuit is electrically supervised by the battery current and trouble gong is installed. Boxes are of sector-pull interfering type mounted on convenient utility company poles. Sirens are installed at all stations except at District No. 1 where same is located at reservoir. Telephone alarms are transmitted through four different central offices and considerable confusion is probable.

POLICE DEPARTMENT: Consists of a uniformed chief, sergeant, 3 patrolmen, and 75 special officers. Two patrol cars are provided.

BUILDING LAWS: Code adopted July 8, 1940 provides for the appointment of a building inspector under civil service and embodies some general restrictions. In general the regulations are inadequate from a fire protection standpoint and neither fire limits nor combustible roof restrictions are established. Building regulations at Mount Tabor prohibit combustible roofs and require permits issued by the Board of Trustees.

FIRE PREVENTION LAWS: No municipal regulations. 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.

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reported from frozen mains or electrolysis, but there is evidence of occasional breaks in pipe lining. Total length exclusive of the Mount Tabor system, 254,875 feet; 2.17% 12-inch, 13.95% 10-inch, 18.97% 8-inch, 59.41% 6-inch, and 5.50% 4-inch. **Gate Valves:** There are 403 of A. P. Smith and Darling makes, set with iron boxes at grade. All operate in same direction. No regular inspections. **Hydrants:** There are 303 of Mathews make of standard type; all have one 4½-inch and two 2½-inch outlets and 6-inch gated branches. Hose and steamer outlet threads are National Standard. All operate in same direction and are inspected twice annually. Numerous low hydrants at Lake Hiawatha have plugged drains to prevent freezing during periods of high water. **Pressures:** No recording pressure gauge on system, but a direct reading gauge in Well Station No. 1 at about elevation 308 shows low service pump to operate against a head of about 95 pounds when tank is full. Readings taken at 5 hydrants on the high service showed pressures ranging from 56 to 90 pounds with an average of 76 pounds. Readings taken at 11 hydrants on the low service showed pressures ranging from 58 to 145 pounds with an average of 94.6 pounds. General average is 88.7 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured by means of Pitot tube on September 27, 1932 and corrected to July 7, 1941. Location of hydrant, discharge in gallons per minute, pressure before flow, and pressure during flow were as follows:

High Service

November 16, 1936—

Morris Ave. W. of McClintock Pl., 800—56—49.
Hillside La. 1,000 ft. S. of Fox Hill Rd., 900—90—16.
Fern La. and Fox Hill Rd., 980—82—6.
Fox Hill and Oakdale Rds., 665—72—16.
Rainbow Tr. and Fox La., 660—80—5.

Low Service

September 27, 1932—

Bloomfield Ave. bet. Parsippany Blvd. and Littleton Rd., 3,330—90—30.
Hill Rd., 500 ft. N. of Fox Hill Rd., 820—68—3.
Fanny Rd. 600 ft. N. of Intervale Rd., 610—58—15.
Littleton Rd. 800 ft. N. of Halsey Rd., 590—70—20.
Knoll Rd. 500 ft. W. of Greenbank Rd., 560—80—13.
N. Beverwyck Rd. 500 ft. S. of Knoll Rd., 510—119—5.
Vail Rd. 400 ft. W. of N. Beverwyck Rd., 730—115—8.
Reynolds Ave. 900 ft. W. of S. Beverwyck Rd., 470—109—4.

November 8, 1937—

Bloomfield Ave. and Troy Rd., 1,600—82—26.

July 7, 1941—

N. Beverwyck Rd. and Lake Drive, 710—105—35.
Bloomfield Ave. 700 ft. W. of New Rd., 1,310—145—30.

Mount Tabor System: Owned and operated by the Camp Meeting Association and supplied as described under Municipal System. It is in charge of a local superintendent who has held the position for many years and is a member of the fire department. A local plumber makes taps and repairs. **Reserve Supply Works and Pumping Equipment:** The original supply works and pumping equipment are held in reserve, having been superseded by the supply from the municipal system. No definite arrangements have been made for the utilization of this supply in an emergency, and the pumping equipment is not subject to regular operation. The

supply was normally obtained from two surface wells and one spring and pumped through a 4-inch line to the fire service standpipe and a domestic system reservoir. Pumping equipment consists of one 250-g.p.m. steam pump operated by a 50-h.p. boiler and one 73-g.p.m. triplex pump driven by a 5-h.p. G. E. motor. **Distribution System:** Practically two independent systems, one for fire service and one for domestic service supplied from the municipal system which discharges to the Mount Tabor system at the standpipe whence the fire system is supplied by gravity and a valve controlled supply is delivered to a lower domestic service reservoir and discharged to the domestic system. The fire service distribution system consists of a 6-inch loop and two short 4-inch dead end branches supplemented by the municipal transmission main which is independent except for connection at standpipe; see map. **Pipe:** All cast iron, tar coated, Universal joint, laid with a 4½-foot cover. No trouble from frozen mains or electrolysis. Total length, 5,600 feet; 37.5% 4-inch and 62.5% 6-inch. **Gate Valves:** There are 11 gate valves on system of Darling make, set with iron boxes, mostly 6 inches below grade. All open to left. No regular inspection of valves. **Hydrants:** There are 17 hydrants on the system of Darling make of standard type; all have two 2½-inch outlets and 6-inch ungated branches. Hose outlet threads are National Standard. Hydrants inspected twice annually and were in good condition at time of inspection. **Pressures:** No recording gauge on system, but direct reading gauge at station at about elevation 530 shows 90 pounds when standpipe is full. Readings taken at 5 hydrants showed pressures ranging from 31 to 80 pounds with an average of 59 pounds. **Fire Flow Tests:** Probable supply available for fire protection purposes was measured by means of Pitot tube. Location of hydrant, discharge in gallons per minute, pressure before flow and pressure during flow were as follows:

Bloomfield Ave. and Strowbridge Ave., 550—55—44.
Baker Ave. and Force Place, 710—80—73.

FIRE DEPARTMENT: A volunteer organization of six independent companies under partial control of fire commissioners in each of six respective fire districts. Companies generally own quarters, apparatus, and equipment, except that new equipment is purchased by the district. Each fire district made a 1947 appropriation of \$1,219 to \$2,500 for the support of its fire company. Officers are elected annually by the companies without confirmation by the fire commissioners. **Companies—Mount Tabor Volunteer Fire Department—District No. 1:** Located on Simpson Avenue near Trinity Avenue. Building is 2-story frame with 30-foot tower, composition shingle roof, concrete floor, electric lights, hot water heat, and tower bell on roof. Total active membership 35 including a chief, assistant chief, captain, lieutenant, and six appointed drivers. A minimum of 8 members are available at all times. **Equipment:** One 1937 G.M.C. Buffalo 500-g.p.m. triple combination pumping engine carrying one 200-gallon booster tank, 150 feet of booster hose, 1,200 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. One 1942 U. S. Army Chevrolet-Darley 300-g.p.m. triple combination pumping engine carrying one 300-gallon booster tank, 600 feet of booster hose, 500 feet of 1½-inch hose, 250 feet of 2½-inch hose, 2 short ladders, and fair minor equipment. In reserve there are two hand drawn hose reels each carrying 300 feet of 2½-inch hose. One is housed in a small stone and frame tool house near the fire station and the other together with four ladders from 15 to 25 feet is housed in a small frame building on North Place. **Rainbow Lakes Volunteer Fire Company—District No. 2:** Located on Rainbow Trail at Lake Entrance. Building is 1-story concrete block with composition shingle roof,