ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT

OF THE

CITY OF BOSTON

FOR THE YEAR ENDING DECEMBER 31, 1960.

HON. JOHN F. COLLINS, *Mayor*
JAMES W. HALEY, *Commissioner of Public Works*
JOHN J. MCCALL, *Engineering Division Engineer*
RUTHFORD J. KELLEY, *Highway Division Engineer*
JOHN F. FLAHERTY, *Sanitary Division Engineer*
EDWARD G. A. POWERS, *Sewer Division Engineer*
DANIEL M. SULLIVAN, *Water Division Engineer*

PUBLIC WORKS DEPARTMENT

1960 ANNUAL REPORT

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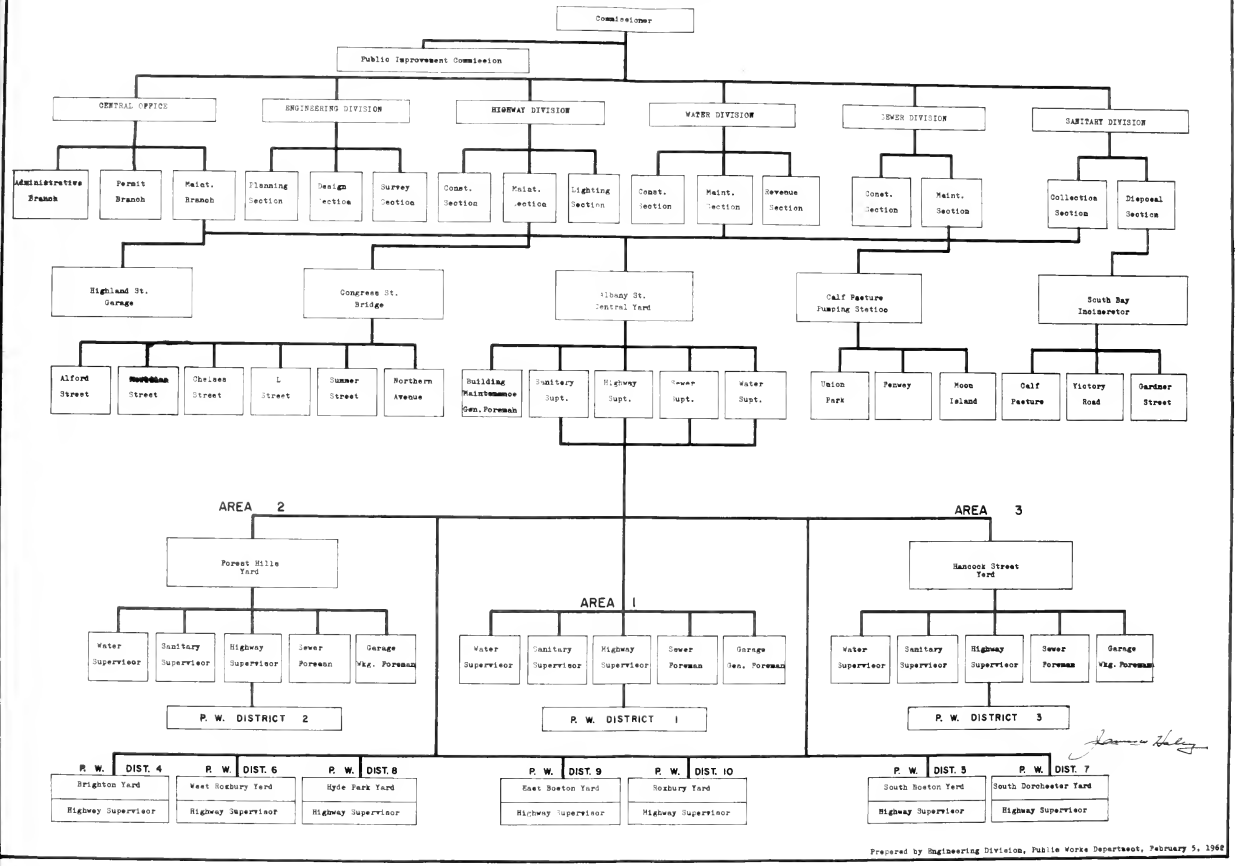

Prepared by Engineering Division, Public Works Department, February 5, 1968

ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT

FOR THE YEAR ENDING DECEMBER 31, 1960.

Boston, January 2, 1961.

Hon. John F. Collins,
Mayor of Boston.

Dear Mr. Mayor:

In compliance with the provisions of Section 24 of Chapter 3 of the Revised Ordinances of 1947, I respectfully submit herewith the annual report of the Public Works Department and the Public Improvement Commission for the year ending December 31, 1960.

Public works is one of the largest activities of the city. It is responsible for many public services, the most important being included in the department's major programs; namely, highway, water, sewer, and sanitation. The extent of these programs is indicated by their cost, which in recent years has varied from a minimum $18,696,829 in 1950 to a maximum $22,871,451 in 1958.

Reorganization

The most outstanding accomplishment of the year was a major reorganization of the department, the first since 1911. Upon assuming charge of the department in January, I began a careful assessment of its organization, personnel, plant, equipment, procedures, functions, efficiency, and costs. Like most other city de-

partments, Public Works fell far short of what it could be — and should be. It operated at high costs — yet with extremely low paid employees. Its plant and equipment were in particularly poor condition. Methods and procedures have failed to keep abreast of the times.

During the past year, the department has been completely reorganized around the following principles aimed at placing our public works program on a par with the best in the country: (1) centralization of administration; (2) simplification of organizational structure; (3) centralization of engineering design and planning; (4) regrouping of functions on a more logical basis; (5) improved efficiency; and (6) reduction in personnel.

Regrouping and consolidations were manifested. The many administrative and engineering functions of the Highway, Water, Sewer, and Sanitation Divisions were consolidated under new groupings. Each division was assigned all work related to its own prime function from those units discontinued.

On January 1, 1960, of the 1,800 employees of the department only ten were working under the direct supervision of the Commissioner. The remainder were working in virtually independent divisions with only general supervision emanating from the Commissioner's office. A new Central Office, complementing the original ten of the Commissioner's staff, were given the added functions of personnel, time and payroll records, supply procurements, contracts, inventory control, accounts and budget control. All permit activities were consolidated in a Central Permit Office. The Automotive Division was abolished, and a new Maintenance Branch activated to carry on motor and building maintenance.

The Survey Division was expanded into a new Engineering Division to which were transferred the engineering functions of the Highway, Water, Sanitary, and Sewer Divisions. The Bridge Division was abolished and its functions assigned to the Highway Division, which also was given responsibility for street cleaning, a former Sanitary Division task, together with catch-basin cleaning, previously performed by the Sewer Division.

In order to relieve Division Engineers of many routine duties, and provide more time for attention to major city and department projects, Construction and Maintenance Sections were established under the direct charge of responsible engineers, in the Highway, Water, Sanitary, and Sewer Divisions. Additional sections, namely a Street Lighting Section in the Highway Division and a Revenue Section in the Water Division, were likewise organized.

Reassignment of duties and responsibilities to the reorganized divisions permitted major consolidation of district yards. Six yards were completely closed down at Atkinson Street, Roxbury; Matthews Street, Dorchester; Rutherford Avenue, Charlestown; Walter Street, West Roxbury; Battery Street, Boston Proper; and Washington Street, Jamaica Plain. Sanitary, Sewer and Water Sections were closed at all but three yards, which were retained.

Under the reorganization major yards were established at 700 Albany Street, Boston Proper; 327 Forest Hills Street, Jamaica Plain; and 196 Hancock Street, Dorchester. At these yards Highway, Water, Sewer, and Sanitary Divisions maintain branches. Each yard also operates a garage for equipment maintenance.

Seven additional yards were retained for local highway maintenance at 315 Western Avenue, Brighton; 174 West Second Street, South Boston; 40 Moreland Street, West Roxbury; 58 Gibson Street, Dorchester; 58 Dana Street, Hyde Park; 320 East Eagle Street, East Boston; and 60 Ritchie Street, Roxbury.

For all public works maintenance activities, the city was divided into three areas and subdivided into ten districts. Highway maintenance is carried out with a yard at each district. All other activities are carried out on an area basis.

Area 1 Yard at Albany Street services Boston Proper, Roxbury, and East Boston; Area 2 Yard at Forest Hills services Jamaica Plain, West Roxbury, Hyde Park, and Brighton; Area 3 Yard at Hancock Street services North Dorchester, South Dorchester, and South Boston. At each area yard a highway district headquarters, numbered the same is located. Other highway district yards are located at East Boston (District 9); Roxbury (District 10); West Roxbury (District 6); Hyde Park (District 8); Brighton (District 4); South Dorchester (District 9); and South Boston (District 5).

PERSONNEL*

The departmental reorganization permitted a major reduction in the actual total work force. The total budget positions of 1,945 of all classifications January 2, 1960, were decreased to 1,690 as of December 31, 1960. This reflected the elimination of 255 total budget positions. From a total of 1,788 on the payrolls January 2, 1960, a reduction of 164 was effected during the year, leaving 1,624 on the payrolls as of December 21, 1960. Normal attrition due to retirements, deaths, resignations, transfers, and releases left unfilled positions for which no work was then available under the reorganization.

The largest shift in personnel was the transfer of 342 employees from the Sanitary Division to the Highway Division, occasioned by the enlarged duties of the latter unit.

A year-end objective appraisal determined that not only was there a substantial savings in tax dollars, but that the over-all efficiency of the department had been improved. Further reductions in personnel and economies can be anticipated in the future.

CENTRAL OFFICE

The Central Office is composed of three sections: an Administrative Branch in the charge of the Department Executive Secretary, a Maintenance Branch in the charge of the Director of Transportation, and a Permit Branch in the charge of a Supervisor of Permits.

The Administrative Branch function included the preparation and processing of correspondence, purchase supply requisitions, service orders, contracts, payrolls, personnel requisitions for transfers, promotions and terminations, the keeping of all required records and files, and provides all services required by the Public Improvement Commission.

The Maintenance Branch provided for the repair and maintenance of the departmental automotive equipment; the supervision and maintenance of all departmental buildings and property; the operation of four garages; the operation of a blacksmith shop, a sweeper

repair shop, and a building maintenance shop; and the around-the-clock operation of a two-way radio station and switchboard. The Motor Maintenance Section provided for the maintenance and repair of 400 vehicular units ranging from passenger cars to fifteen-ton dump trucks. Approximately 8,000 automotive service jobs are performed yearly, and the stock room holds an inventory of $50,000 worth of repair parts, tires, batteries, etc. A schedule of monthly lubrications is established and vehicles inspected at that time. The Highland Street Garage, a one-story building with a floor area of 8,200 square feet, is used for general repair work, stock room, lubrications, and dispensing of gasoline. The Albany Street Garage, a two-story building with a floor area of 22,000 square feet, is used for garaging vehicles and dispensing gasoline. The Hancock Street Garage, a one-story building with a floor area of 8,800 square feet, is used for garaging vehicles and dispensing gasoline. The Forest Hills Garage, a one-story building with a floor area of 8,400 square feet, is used for repair work, lubrication, and dispensing gasoline. During the winter season both the Albany Street Garage and the Hancock Street Garage are used for repair work.

During the year more than 100 motor equipment operators were trained in the operation of new large dump trucks and other heavy duty equipment, and approximately fifty men attended classes in the operation and repair of new street sweepers. Various manufacturers and local dealers assisted in the driver training program, and plans are being made to examine and test all drivers and issue permits to drivers of the various types of departmental equipment.

The Shop Section located at Albany Street provided, at the Blacksmith Shop, for the maintenance of street sweeper brooms and runners, snow plows, etc. and performing any required welding work; at the Sweeper Repair Shop for the maintenance of the mechanical street sweepers and, in the winter, for repairs on the snow fighting equipment; and at the Maintenance Shops, the services of carpenters, painters, tinsmiths, and other mechanics provide for the maintenance on department buildings and the repair of refuse disposal boxes, the erection of fences and platforms and similar work.

The Permit Branch issued all permits under the jurisdiction of the department and collected the fees required therefor. The processing of various permits, formerly performed by different divisions of the department, are now handled by the Permit Branch staff, who receive the applications, route them for processing, issue the permits, and collect the fees. During the year 14,939 permits were issued, and the cash receipts for all permits were $167,713.27.

ENGINEERING DIVISION

The newly organized Engineering Division, the former Survey Division, and officially renamed by City Ordinance on October 19, 1960, performed all the former duties of the Survey Division and, in addition, furnished the engineering services required by the other divisions of the department, along with those requested from the Public Works Department by the Public Improvement Commission and other city departments, boards, or commissions. The division was organized into four sections with sixty positions divided as follows: Administration, 9; Planning and Programming, 6; Survey, 24; and Design, 21.

The Administrative Section performed all duties of an administrative nature relating to the processing and maintenance of records pertaining to personnel, supplies, reproductions, correspondence, and engineering costs. The reproduction unit of this section furnished blueprints, ozalid prints, auto-positives, photostats, and photographs, as required by the various divisions of the department. Units of work of this section comprised 22,956 photostats, 970 blueprints, 24,115 ozalids, 461 auto-positives, 2,020 negatives, and 2,257 prints.

The Planning and Programming Section provided for the preparation, planning, and programming of the various engineering and construction programs of the department, involving highway, bridge, sewer, sanitation, water, and street lighting facilities. Work also included coordinating departmental programs with those of other agencies such as the Redevelopment Authority, the Public Utilities, Housing Authority, State Department of Public Works, and performing engineering services for the Public Improvement Commission.

Over 500 miles of the 758 miles of our city's streets were field inspected and classified as to the condition and need for repair. The remaining 258 miles have all had resurfacing done between 1947 and the present, and are generally in good condition with only need for minor maintenance.

As a result of this inspection and classification of a 4-year program for highway construction was developed as follows:

HIGHWAY RECONSTRUCTION PROGRAM
(Including Chapter 90 Projects)

Year Started	Mileage of Streets	Approximate Cost
1960	19	$1,700,000
1961	41	5,100,000*
1962	24	2,500,000**
1963	24	2,500,000**

* Includes approximately $1,400,000 of State 90 money, Chapter 1.
** Includes approximately $500,000 of State 90 money, Chapter 1.

The Survey Section is required to make surveys and plans in connection with (a) laying out, widening, design, and construction of highways, (b) taking easements for sewerage, (c) discontinuance of public highways, (d) land to be acquired by eminent domain, (e) sidewalk assessments, and (f) specific repairs. This section's work also included the staking out of line and grade for construction of public works; staking out and setting bounds; surveys and plans of areas involved in major developments; surveys and plans of city-owned land; and surveys and plans as may be required by other departments.

Work accomplished during the year by this section included thirty-four surveys and plans for the laying out of 3.4 miles of public highways; twenty-six surveys and plans for the widening and relocation of one mile of public highway; five surveys and plans for the discontinuance of 0.29 miles of public highway; one survey and plan for the discontinuance of a sewer easement; fifteen surveys and plans for taking 1.4 miles of easement for sewerage works; twenty-six profiles for 2.3 miles of sewer construction; seven sidewalk assessment plans; eight sewer easement plans; setting out twenty-seven stone bounds; fifteen surveys and plans for 1.1 miles of minimum pavements; for the Highway Division, thirty-six streets staked out for construction; for the Sewer

Division, forty-four catch basins staked out; for the Sanitary Division, four topographical surveys and plans; for the Water Division, line, grade, and staking out for water works; and surveys and calculations in connection with the proposed extension of the Government Center.

The Design Section functions during the year included the preparation of all plans, estimates, specifications, and contract forms relating to the design and construction of highway, sewer, and water facilities; the preparation of designs, plans, and specifications required for proposed structures and appurtenances to be constructed by the operating divisions; the design of grades in connection with the construction of highways and sewers; the checking of all plot plans submitted to the Building Department for approval with regard to grades and the availability of sewer and water facilities; checking proposed construction over existing sewers; making tracings of all plans prepared by the Survey Section; the preparation of various maps, plans, and charts, etc. required by the department; and making estimates and preliminary plans for the Public Improvement Commission.

During the year this section completed plans, estimates, and specifications for highway construction estimated to cost $330,012; for highway reconstruction estimated to cost $481,810; sewerage works estimated to cost $53,960; sewer and water works estimated to cost $102,191; water works estimated to cost $6,900; and the construction of fender piers at the Chelsea Street Bridge estimated to cost $180,000. Plans, estimates, and specifications were completed for work to be advertised in 1961 for highway reconstruction estimated to cost $152,099 and for sewerage works estimated to cost $104,101. This section also completed the design of twenty-nine street grades and thirty-one sewer grades, the making of 159 various tracings, examining and checking 240 plot plans, and making forty-six investigations and reports on street lighting conditions.

The development of the new Engineering Division into an efficiently working unit of the department will require continued modification and coordination of the engineering functions and duties formerly provided in six separate divisions. It is expected that during the coming year the Engineering Division will be organized

to its best capacity for executing its assigned duties and responsibilities. However, much depends on the possibility of obtaining and training qualified engineers in the lower grades who are interested in civil service careers in municipal engineering. This becomes increasingly important with the advent of extensive programs involving urban redevelopment and renewal, state highway systems, and the expansion of sewerage and water systems within the city.

HIGHWAY DIVISION

The Highway Division is comprised of four sections: Administration, Construction, Maintenance, and Street Lighting, and supervises and performs all the services incidental to the construction of streets and sidewalks; highway maintenance work including pavement maintenance, snow removal, street cleaning, and catch-basin cleaning; the operation and maintenance of bridges; and the installation and maintenance of street lights.

The Administrative Section performed all duties of an administrative nature including the preparation and processing of correspondence, initiating supply requisitions and service orders, and the preparation of contract payments.

The Construction Section supervised the construction or reconstruction of eighty-one streets during the year at an expenditure of $2,004,400, and expended $22,862.06 for the construction or repair of bridges. Chapter 90 projects completed during the year were Baker Street from the V.F.W. Parkway to Spring Street, West Roxbury; and Beacon Street from Kenmore Square to Park Drive in the Back Bay. Work was started but not finished on Commonwealth Avenue from Warren Street to Chestnut Hill Avenue, Brighton.

The Maintenance Section performed sidewalk and roadway repairs on and cleaned and flushed the 755 miles of streets; cleaned 2,070 of the over 25,000 catch basins in the city; maintained and operated eight drawbridges; maintained eighty-three other bridges; and maintained, by repairing and replacing, existing street signs and the installation of new street signs where required.

The Street Lighting Section has the custody of 28,715 street lights and supervised the installation of new

lights and the replacement of existing lights totaling 126 units; also thirty-three obsolete gas lamps were replaced with fifty modern electric units of 2,500 lumens each. There are 193 gas lamps remaining in the city, located where facilities for installing electric units are not readily available. Maintenance of the police spotlights for traffic officers on night duty continued during the year.

The Highway Division supervised the work of snow plowing and snow removal with the assistance of personnel and equipment from the other divisions of the department at a total expenditure for the year of $892,900.

SANITARY DIVISION

The Sanitary Division is composed of three sections — Administration, Collection and Disposal, and providing for the collection and removal of all solid waste, either by contract operation or by the division labor force, and providing for the disposal of all collected wastes by the operation of an incinerator and open land dumps.

The Administrative Section provided all the services of an administrative nature including the preparation and processing of correspondence, initiating requisitions and supply orders, the preparation of the division budget, processing of applications for permits for the transportation of refuse, the preparation of contract payments and the keeping of all required records and files.

The Collection Section supervised the work of the contractors and division labor forces in the collection and removal of refuse throughout the city. Contracts were awarded in all seventeen of the refuse collection districts to eleven contractors, all being for a period of one year, from April 1, 1960, to March 31, 1961. These contracts were awarded as a result of negotiations from which it was agreed that the eleven contractors would absorb a five cents an hour increase in union employees' wages (this increase was paid into the newly established Union Pension Fund), and perform the contract work for the same price as the previous contract. The total collection contract costs for the year were $2,124,552.

In addition to the refuse collected and removed by the contractors, alley cleaning crews continued to clean various alleys in the South End and Lower Roxbury sections of garbage and refuse deposited in those alleys by residents or passers-by. The night market cleaning crew continued to operate through the year, cleaning up the garbage and refuse thrown in the gutters of the market district by pushcart peddlers, storekeepers, and other commercial establishments. The Dempster-Dumpster service was carried on through the year, servicing boxes in various locations of the South End and Roxbury, but with an additional service being provided to neighborhood clean-up groups, under the direction of the Mayor's Citizen Relations Committee, by providing Dempster boxes in various locations throughout the city over week ends for the depositing of clean-up material.

The Disposal Section provided for the disposal of the city's refuse at four land dumps and at the incinerator. This was the first full-year operation of the South Bay Incinerator, and the plant adequately serviced the ten districts for which it was originally designed, serving a total population of approximately 287,000 people. Starting April 1, refuse from the Dorchester North District was delivered to the incinerator, making the total population serviced 385,000, or approximately 54 per cent of the entire population of the city. On three occasions during the year refuse had to be diverted from this plant and dumped at the Calf Pasture Dump because of the inability of the plant to handle the material being delivered, on account of equipment breakdown or failure.

During the year considerable difficulty was experienced with the overhead trolley cranes. The Westinghouse Corporation spent considerable time and effort adjusting and servicing the controls on the cranes, and towards the end of the year this problem appeared to be solved. There were also failures of a mechanical nature, the two principal ones being cracked pillow boxes on the main shafts and cracks in the drums of the hoisting and lowering mechanism. Considerable difficulty was also encountered in keeping the three residue trucks in operation. On the whole the operation of this plant during the year was difficult, and appeared to have more than the normal amount of trouble that is to be expected in the breaking in of a new plant.

The steam main from the incinerator to the entrance at the Boston City Hospital boiler room was completed in January. The connection from this main to the main heater in the hospital was completed by the Hospital Department in December, and steam was first transmitted into the hospital plant from the incinerator on December 21. During this initial transmission, some difficulty was occasioned by a slug of water getting into the turbines at the hospital, and the transmission of steam was suspended until the cause and remedy for this condition could be determined.

At the Gardner Street Dump we experimented with some controlled burning in pits adjacent to the former water filtration tanks. It is not possible to burn all the material delivered to this dump, due to the inadequate size of the pits available for burning. No complaint was received of the burning operations.

The Hallet Street Dump is rapidly approaching exhaustion. Two severe fires occurred at this dump during the year, and it was decided to abandon the use of the city-owned land in this area as a dump on March 31, 1961.

The incinerator residue dump at the Calf Pasture has provided an excellent source of disposal for this material. The old rubbish dump, being used for disposal of unacceptable materials at the incinerator, has not worked out as well, due to the difficulty in obtaining better separation by the collection contractors' workmen.

The Saugus Dump was used through the year for the disposal of refuse from East Boston, and has proven to be very satisfactory for this purpose.

On March 16 the shops of the Sanitary Division on Albany Street, along with forty-six men assigned to work there, were transferred to the jurisdiction of the Central Office, Automotive Section, and on June 1 the street-cleaning function of the Sanitary Division, including 342 men and all the equipment used in that function, was transferred to the Highway Division.

SEWER DIVISION

The Sewer Division is organized in three sections: Administration, Construction, and Maintenance, and provided for the construction, replacement, maintenance, and repair of sanitary sewers, drains, catch basins, and

various appurtenances, and for the operation of pumping stations and disposal plants.

The Administrative Section provided for the preparation of correspondence, initiating requisitions and service orders, preparing contract payments and the maintenance of all files and records relating to the sewerage system.

The Construction Section supervised the construction of various sewerage and drainage projects, totaling 7,143 linear feet at an over-all expenditure of $278,491.47. A breakdown of the 1.18 miles of sewers and appurtenances constructed in 1960 is shown on Table 2 of the Appendix. This section proposes completion of the program of placing brook courses in conduits by constructing sections of Davenport Brook, Dorchester; Canterbury Branch of Stony Brook, West Roxbury; and Spring Street Brook in West Roxbury; a total of approximately 2,940 linear feet of conduit at an estimated cost of $444,000.

The Maintenance Section is responsible for the operation of the sewerage system, comprising 1,303.19 miles of common sewers and 30.93 miles of intercepters; pumping stations at the Calf Pasture, Union Park Street, Symphony Station, Summer Street, and Sullivan Square; and a disposal works at Moon Island. The Calf Pasture Pumping Station total pumpage for the year was 27,813 million gallons, with an average per day of 76,200,000 gallons at a cost of $7.24 per million gallon. The total expenditure for maintenance in 1960 was $680,632.46, making a total expenditure for the year for the Sewer Division of $959,123.93.

Sewage from Boston Proper, South Boston, parts of Roxbury, Dorchester, and West Roxbury outlets through the Calf Pasture—Moon Island Disposal Plant. Sewage from East Boston and Charlestown flows into the metropolitan system for discharge at Deer Island, and sewage from Brighton, Hyde Park, and parts of Roxbury, Dorchester, and West Roxbury flows into the metropolitan system and is discharged at Nut Island. A small portion of Dorchester and Milton in the metropolitan sewage area, lying at an elevation too low to drain into the metropolitan high level sewer, is discharged into the Boston main drainage system, for which disposal in 1960 the Metropolitan District Commission paid the city $28,656.76.

The Metropolitan District Commission sewerage assessment procedure was changed by the enactment of Chapter 612, Acts of 1959. Assessment for interest and sinking fund requirements, formerly based on taxable valuations of properties in the various cities and towns as established by the General Court, will be assessed as follows:

"The proportion to be paid by each city and town of the total annual amount shall be determined by the aggregate capacity of municipal sewers connected to the district sewers provided, however, that in no case shall the aggregate capacity of any municipal sewer used in the determination of such ratio be greater then the prorated capacity of the district sewer at the point of connection. At every point on the metropolitan sewerage system at which the capacity of the main sewer is less than the aggregate capacity of the sewers converging at that point, the available capacity of the main sewer shall be apportioned among the two or more lines converging at such points in proportion to the capacities of such converging lines." Chapter 612 also provided that the cost of construction of extensions shall be borne by the cities and town benefited.

A change in ordinance pertaining to sewer entrance permits was made when on April 21, 1960, the following ordinance was approved:

> "(260) Sewer Entrance Permit. The fee for a permit granted by the Commissioner of Public Works under section 10 of chapter 27 of these ordinances to enter a particular drain into a public sewer shall be $25.00."

WATER DIVISION

The Water Division is composed of four sections: Administration, Construction, Maintenance, and Revenue; and provides for the construction, replacement, maintenance, and repair of water mains, supply lines, meters, hydrants, and various appurtenances; meter reading; and assessing charges to consumers.

The Administrative Section handled the preparation and processing of correspondence, initiated requisitions and supply orders, prepared contract payments and maintained all of the required files and records relating to the water system and its operation.

The Construction Section furnished the engineering and inspection force supervising the laying and relaying of 2.5 miles of main pipe and on water works in conjunction with major projects such as the Central Artery, Southeast Expressway, Boston Common Garage, Callahan Vehicular Tunnel, and Urban Redevelopment, (Whitney Street and West End). Major projects requiring future construction are:

(*a*) Reinforce southern section of West Roxbury by utilizing abandoned Brookline water mains.

Cleaning and lining 24-inch water main from the Arborway to Spring Street.

(*b*) Reinforce Stony Brook Village with H.H.S.

(*c*) Reinforce Low Service, Roxbury and South Boston, by cleaning and lining 30-inch–24-inch mains from Roxbury Crossing to Andrew Square.

(*d*) Reinforce northeasterly section of city by extending 24-inch H.S. main from the Custom House.

(*e*) Replacement of 20-inch L.S. and 16-inch H.S. after demolition of Warren Bridge.

(*f*) Replacement of 6-inch water mains laid prior to 1890.

The Maintenance Section is responsible for the operation and maintenance of the water distributing system, comprising 1,035.5 miles of pipes including 18.64 miles of high pressure fire service, ranging in size from 2-inch to 48-inch in diameter and including gates, valves, hydrants, and other appurtenances.

This section provides for the repair of main pipes, service pipes, hydrants and gates, and furnishes emergency service on a 24-hour per day, seven day per week basis. The section forces are augmented by contractors' personnel for excavating and backfilling trenches. Contracts for this work awarded in 1960 totaled $267,180.

This section also operates a maintenance shop which comprises a machine shop, plumbing shop, and meter shop. This unit handles drilling services and the machining and assembly of all new corporation and tapping gates up to six inches. Also machined and repaired are defective hydrants and defective gates at the site, if possible. Assistance to the other divisions of the Public Works Department is rendered as required. New meters are installed, and old meters are changed, tested and repaired.

The Revenue Section performs all of the work involved in processing bills, customer relations, and complaints of plant maintenance. These operations include

applications for new services, reading 97,370 meters quarterly, and preparing 390,000 bills, as well as the bookkeeping entailed in these accounts, and the issuance of statements of outstanding water bills to the consumers at the end of the year as a courtesy to the customer.

WATER BREAK — BOSTON COMMON

On Thursday, April 21, 1960, at 5:15 A.M. a break occurred in the main 42-inch pipe under the Boston Common. The Foundation Company of New York, contractors for the Boston Common Garage, had piled excavated material to a height of approximately twenty-five feet above the normal grade of the baseball field. The pressure from this mound of excavated material caused the break. The Foundation Company worked around the clock and restored normal service on Saturday, April 23, at 3 A.M. The entire expense for making repairs was assumed by the company. The entire expense to the City for the pipe, sleeves, emergency crews, and dissipated water amounted to only $6,000.

SNOW REMOVAL

The worst single snowstorm in the history of the city started on March 3, reached blizzard proportions on March 4, and finally subsided on March 5, 1960. The total accumulation was 19.8 inches. This storm wiped out a record of 19.4 inches set only two years before, on February 16–17, 1958.

The department mobilized every possible piece of city equipment, hired approximately 270 contract plows, utilized all available department personnel on an around-the-clock basis, and finally restored the city to conditions approaching normal.

As is increasingly noticeable with each storm, the parked cars greatly impeded the work of properly plowing the streets. Because of this problem of snowed-in vehicles, some of our smaller residential streets remained unplowed until we were able to haul out the offending cars.

The earliest snowfall in twenty-six years of weather bureau records hit Boston on October 25, dropping four inches of snow. On December 12 another blizzard dropped eighteen inches of snow on outlying wards and fifteen inches on mid-city.

During 1960 the department's trucks spread 6,000 tons of salt and 18,000 tons of sand to keep the city streets in a safe condition. The total cost to the city in combating hazards of winter was $892,900.84.

FISCAL

Total expenditures in 1960 for public works amounted to $20,324,172.88, of which $3,386,461.28 represents water assessments, and $1,364,240.33 represents sewer assessments paid to the Metropolitan District Commission. The water assessments were $147,150.28 more, and the sewer assessments $379,482.29 more than those levied in 1959.

The most significant reduction in department fiscal expenditures was realized in the elimination of 164 employees from the public works payroll. With greater efficiency resulting, and an actual increase in services to the taxpayer, a saving of $768,000 was accomplished. This single item reflected a 50-cent cut in the tax rate. A more definitive picture on personnel reduction will be developed subsequently in this report.

The increase in water assessments, noted above, indicated that acute avoidable losses were taking place. Accordingly, a four-year survey was initiated by the Pitometer Associates, New York City, specialists in water research engineering. This firm quickly discovered losses which, once corrected, would result in considerable savings to the city.

Lost water—that is, water which is purchased from the Metropolitan District Commission but for which the city receives no monetary return—may be divided into two classes. The first represents necessary water that the city uses for all of its municipal services such as public buildings, fire, park, and other departmental activities. The second and most important is avoidable losses that accrue from leakage and waste, underground malfunctions of deteriorated piping, inadequate valves, abandoned services, and a variety of other causes.

The initial findings of the engineers more than justified the undertaking of this survey. Faulty meters which were incorrectly registering the total volume of water consumed by the city were uncovered. (This finding resulted in an abatement of $16,880 given to the city by the Metropolitan District Commission.) From this and other survey findings, $68,600 were saved in the

first year, and there is indication, when the survey is completed, it will have resulted in an annual saving of $100,000.

A minor, but significant, saving of $10,000 resulted from the removal of twenty-five water fountains throughout the city. It is noteworthy that only one citizen complaint was registered in protest to the curtailment of this service.

The fiscal picture of the department was further brightened when the year-end final evaluation of all activities were determined. More major highway reconstruction was completed, or under way, more sewer and water pipes were laid or repaired, more bridges and sidewalks were repaired, more new equipment was purchased, and as many general services rendered as in the previous fiscal year, under the previous administration, and all this accomplished with a budget of $2,000,000 less than the previous fiscal year.

This is the policy that this department, under this administration, is dedicated to pursue. Every saving, wherever it might be found, will be found. The taxpayer will get a dollar's worth for every dollar spent.

The end of 1960 found the reorganization plan running smoothly, with a minimum of inconvenience to our department personnel. While undue optimism can be a pitfall, we in Public Works respectfully submit that public works costs do not contribute to high property taxes.

Appended hereto is the report submitted by the Public Improvement Commission and statistical data relative to the activities of the various divisions in 1960.

Respectfully submitted,

JAMES W. HALEY,
Commissioner of Public Works.

Public Improvement Commission

The Public Improvement Commission was established May 1, 1954, by the provisions of Section 57, Chapter 2, of the 1954 Ordinances. This commission, consisting of the Commissioner of Public Works, the Commissioner of Real Property, and the Chairman of the Boston Traffic Commission, was assigned all of the powers and duties of the former Board of Street Commissioners, except:

(*a*) Those relating to the storage and sale of inflammables, filling stations, and parking lots which were transferred to the Committee on Licenses in the Public Safety Commission.

(*b*) Those relating to the planting and removal of trees in public ways, the use of public ways for any temporary obstruction in, under, or over the same, the use of public ways for the storage and sale of merchandise, and the designating of coasting streets, which were transferred to the Commissioner of Public Works.

(*c*) Those relating to the abatement of taxes which were transferred to Real Property Department.

Functions of the Board of Street Commissioners transferred to this commission include the authority to lay out, widen, relocate, alter, discontinue, or rename public highways, and to order the making of specific repairs therein; to order the construction of sanitary sewers and storm drains; to take land by eminent domain for municipal purposes (except housing and off-street parking); to permit the opening of private ways for public travel; to levy assessments for street, sidewalk, and sewer betterments; and to issue permits for the location of wire-carrying poles, conduits, pipes, and similar uses of the public ways.

LAYOUTS WITH CONSTRUCTION

The following streets were ordered laid out and constructed as public ways during the year 1960:

Balina Place, Dorchester, from Norfolk street approximately 184 feet northwesterly. Length, 184 feet; estimated cost, $5,504; estimated benefit, $2,752.

Birchland Avenue, West Roxbury (formerly Ashland avenue), from Cass street to Johnson street. Length, 675 feet; estimated cost, $19,296; estimated benefit, $9,647.98.

Birchland Terrace, West Roxbury, from Birchland avenue approximately 175 feet northwesterly. Length, 175 feet; estimated cost, $6,706; estimated benefit, $3,352.99.

Corman Road, Dorchester, from Cummins Highway to Hallowell street. Length, 736 feet; estimated cost, $24,084; estimated benefit, $12,042.01.

Greenbrook Road, Hyde Park, from Chestnut street to Austin street. Length, 706 feet; estimated cost, $15,877; estimated benefit, $7,938.50.

Hackensack Terrace, West Roxbury, from Hackensack road approximately 320 feet southerly. Length, 320 feet; estimated cost, $11,754; estimated benefit, $5,877.

Hoyt Street, Dorchester, from Dorchester avenue approximately 330 feet easterly. Length, 330 feet; estimated cost, $8,846; estimated benefit, $4,422.99.

Itasca Street, Dorchester, extended between Almont street and Monterey avenue. Length, 718 feet; estimated cost, $23,602; estimated benefit, $11,794.18.

Kittredge Court, West Roxbury (formerly Metropolitan terrace), from Kittredge street approximately 222 feet southeasterly. Length, 222 feet; estimated cost, $6,182; estimated benefit, $3,090.99.

Linley Terrace, South Boston (formerly Lincoln park), from East Third street approximately 185 feet southerly. Length, 185 feet; estimated cost, $3,666; estimated benefit, $1,832.98.

Rambler Road, West Roxbury, extended from a point approximately 480 feet west of Centre street approximately 110 feet westerly. Length, 110 feet; estimated cost, $3,432; estimated benefit, $1,715.99.

Swan Street, West Roxbury, between La Grange street and Pheasant street. Length, 333 feet; estimated cost, $11,109; estimated benefit, $5,554.48.

Tobin Road, West Roxbury, extended from Kerna road approximately 294 feet northwesterly. Length, 294 feet; estimated cost, $8,521; estimated benefit, $4,260.51.

DISCONTINUANCES

Conant street, Roxbury, from Huntington avenue to St. Alphonsus street.

Enterprise street, Dorchester, on the northeasterly side from a point approximately 375 feet northeast of Boston street approximately 185 feet northeasterly.

Gillette park, South Boston, between Dorchester avenue and A street.

Granite street, South Boston, from Gillette park approximately 170 feet northeasterly.

Granite street, South Boston, from Baldwin street approximately 27 feet southwesterly.

Shetland street, Roxbury, on the southeasterly side at Shirley street.

Shirley street, Roxbury, on the southeasterly side at Shetland street.

Smith street, Roxbury, from Worthington street to St. Alphonsus street.

Whitney street, Roxbury, from Tremont street to Conant street.

SIDEWALKS

In connection with the recently enacted Chapter 245 of the Acts of 1958, the Public Improvement Commission ordered the installation of artificial stone sidewalks on the following streets:

Bogandale road, West Roxbury, from Centre street approximately 785 feet southeasterly (monolithic sidewalks).

Carruth street, Dorchester, at various locations between Ashmont street and Gallivan boulevard.

Fletcher street, West Roxbury, between Centre street and South street, consisting of increasing the present four-foot artificial stone sidewalks to six feet.

Grove street, West Roxbury, adjacent to 203–209.

Richmond street, Dorchester, on the southerly side between Wachusett street and Belnel road.

Savin Hill avenue, Dorchester, between Southview street and Evandale terrace.

West Howell street, Dorchester, on the southwesterly side, from Boston street approximately 348 feet northwesterly.

Woodhaven street, Dorchester, between Blue Hill avenue and Cummins highway.

PRIVATE WAYS

During the year 1960 permission was given to prepare for public travel the following private ways:

Belle avenue, West Roxbury, from Northdale road 400 feet northerly.

Danny road, Hyde Park, from Reynold road 250 feet southeasterly.

Jo-Anne terrace, Dorchester, from Adams street 290 feet westerly.

Mattapan street, Dorchester, from 35 feet northwest of Colorado street 70 feet northwesterly.

Soldiers Field place, Brighton, from Soldiers Field Road Extension 820 feet southerly and easterly.

Violet street, Dorchester, from French street to Delhi street.

During the same period permission was given to open for public travel the following private ways:

Banfield avenue, Dorchester, from Wooddale avenue 400 feet northeasterly.

Centre Lane, West Roxbury (formerly Baker street), from Centre street 265 feet southeasterly.

Danny Road, Hyde Park, from Reynold road 250 feet southeasterly.

Itasca street, Dorchester, between Monterey avenue and Messinger street.

Leseur road, Hyde Park, from Fairmount avenue 175 feet southwesterly.

Lodgehill road, Hyde Park, from Goff street to Beech street.

Maplewood street, West Roxbury, between Petrel street and Eagle street.

Maplewood street, West Roxbury, from St. Theresa avenue to Petrel street.

Martinwood road, West Roxbury, from South street to Asticou road.

Miami terrace, West Roxbury, from Miami avenue 190 feet northwesterly.

Moreland street, West Roxbury, between Laurie avenue and Belle avenue.

Prospect Park, Hyde Park, from Warren avenue 325 feet northeasterly.

Trilling Way, South Boston, between Northern avenue and Ramp street.

ASSESSMENTS

During the year 1960 the Highway Division of the Public Works Department sent notice of completion of twenty-nine streets at a total cost of $453,949.15. On this work the Public Improvement Commission levied assessments in the amount of $177,915.92.

During the same period the Sewer Division of the Public Works Department reported the completion of construction of sanitary sewerage in ten streets at a cost of $48,064.40, on which the Public Improvement Commission levied assessments in the amount of $23,019.40.

With the abolishment of sewer entrance fees by the Supreme Court in 1959, the Public Improvement Commission was empowered to assess parcels of land within a seasonable time after connections were made to sewers from estates that had never paid an assessment for the original improvement. The following is a list of streets in which connections were made:

STREET	District	Assessment
Atherton avenue	Hyde Park	$176 00
Gould street	West Roxbury	336 00
Grove street	West Roxbury	82 00
Hallowell street	Dorchester	60 00
Hemlock road	West Roxbury	100 00
Lawn street	West Roxbury	370 00
Metropolitan avenue	Hyde Park	123 00
Meyer street	West Roxbury	112 50
Morton street	Dorchester	110 00
Northdale road	West Roxbury	1,394 00
Prairie street	Dorchester	60 00
Private land (Adams street)	Dorchester	183 00
Salman street	West Roxbury	161 60
Van Brunt street	Hyde Park	180 00
West Howell street	Dorchester	730 00
Total		$4,177 50

The completion of new sidewalks in one street at a cost of $2,340.50, authorized by the Boston City Council, was reported by the Highway Division. On this the Public Improvement Commission levied an assessment of $1,170.25. During the year 1960 the Highway Division of the Public Works Department sent notice of completion of sidewalks in four streets at a total cost of $48,883.22. On this the Public Improvement Commission levied assessments of $19,278.44.

SEWER PROGRAM

During the year 1960 the construction of 1.59 miles of sanitary sewer, 1.06 miles of storm sewer, 31 catch basins, and 2 drop inlets, was ordered at a total estimated cost of $101,340.75.

Estimated benefit to private property for the construction of the 1.59 miles of sanitary sewer amounted to $28,211.78.

The following sewer easements were ordered abandoned:

Connolly street, Harrison terrace, Boston Proper and Roxbury, from Fellows street approximately 290 feet northwesterly.

Private land, Brighton, from Washington street at Fairbanks street approximately 170 feet southerly and easterly.

Sewerage works were ordered as follows:

SEWERAGE WORKS ORDERED

STREET	Sanitary Sewer (Linear Feet)	Surface Drain (Linear Feet)	Catch Basins	Drop Inlets	Cost	Estimated Benefit
Brighton						
*Soldiers Field place	826	875	5	.....	$25,320 00	$8,062 92
Dorchester						
Balina place	190	.....	2	.....	3,260 00	1,500 00
Itasca street	.....	440	4	.....	7,300 00	None
*Jo-Anne terrace	275	280	.....	.....	5,444 45	$2,079 60
Mattapan street	.....	73	.....	.....	460 00	None
*Sefton street	.....	365	2	.....	4,640 00	None
*Violet street and Delhi street	600	868	4	.....	20,211 00	$6,553 44
East Boston						
Bennington street	.....	.....	1	1	175 00	None
Hyde Park						
*Danny road	.....	50	2	.....	950 00	None
*Goff street	336	338	.....	.....	6,009 30	None
Lawton street	.....	465	4	1	7,900 00	None
Readville street	.....	.....	1	.....	500 00	None
West Roxbury						
*Belle avenue	878	1,052	4	.....	15,741 00	$9,465 82
*Caledonian avenue	120	132	.....	.....	1,600 00	550 00
Macullar road	.....	.....	2	.....	830 00	None
Pierpont road	90	.....	.....	.....	1,000 00	None
Totals	3,315	4,938	31	2	$101,340 75	$28,211 78

* Easements taken

STREET NAME CHANGES

The names of the following public streets were changed:

Enterprise street, Dorchester District, from Field's court approximately 90 feet southeasterly. New name: Willow court.

Helen F. Burgess Footway, Dorchester District, from Burt street to Bailey street. New name: Carmela lane.

Main street, Charlestown District, between Gardner street and Cambridge street (southerly roadway). New name: Maffa way.

Marist road, Dorchester District, from Morton street to Maryknoll street. New name: Caryll street.

Swan's court, Dorchester District, from Olney street approximately 220 feet southeasterly. New name: MacNeil way.

Troy street, Boston Proper District, between Albany street and Washington street. New name: Traveler street.

Westville road, Hyde Park District, from Sierra road approximately 220 feet northeasterly. New name: Sierra road.

LAND DAMAGES

On new street construction eighty-five claims were filed for damage to property resulting from land takings or changes in grades. On these claims this commission awarded damages in the amount of $21,445.22.

During the period of this report 205 petitions from public utilities were approved for the placing and maintaining of poles for the support of wires.

Also, fifty-nine petitions were approved for miscellaneous installations or uses of the public highways of the City of Boston, as follows:

STREET	Petitioner	Nature of Petition
Adams street, Dorchester	Boston Gas Company	Underground gas main
Ansonia road, West Roxbury	Boston Gas Company	Underground gas main
Baldwin street, Charlestown	Boston Gas Company	Underground gas main
Batterymarch street, Boston Proper	Terminal Realty Company	Permanent marquee
Boston street, South Boston	Boston Gas Company	Underground gas main
Caton street, Hyde Park	Worcester Gas Light Company	Riser
Central avenue, etc., Hyde Park	Worcester Gas Light Company	Underground gas main
Charles street, Boston Proper	Fishelson The Florist	Colonial lamp post
Charlesview street, Brighton	Boston Gas Company	Underground gas main
Collins street, Hyde Park	Worcester Gas Light Company	Underground gas main
Corey street, West Roxbury	Boston Gas Company	Underground gas main
D street, South Boston	Boston Gas Company	Underground gas main
Decatur street, East Boston	Boston Gas Company	Underground gas main
Dent street, West Roxbury	Boston Gas Company	Underground gas main
Dorchester avenue, South Boston	Boston Gas Company	Underground gas main
E street, South Boston	Boston Gas Company	Underground gas main
East First street, South Boston	Boston Gas Company	Underground gas main
Edgemere road, West Roxbury	Boston Gas Company	Underground gas main

Emerson street, South Boston	Boston Gas Company	Underground gas main
Foundry street, South Boston	Boston Gas Company	Underground gas main
Glenwood avenue, Hyde Park	Worcester Gas Light Company	Underground gas main
Gordon street, Brighton	Berman Realty Trust	Heating main
Greenbaum street, South Boston	Boston Gas Company	Underground gas main
Highland street, Hyde Park	Worcester Gas Light Company	Underground gas main
Hopedale street, Brighton	Boston Gas Company	Underground gas main
Huntington avenue, Hyde Park	Worcester Gas Light Company	Underground gas main
Hyde Park avenue, Hyde Park (at West street)	Worcester Gas Light Company	Underground gas main
Hyde Park avenue, Hyde Park (from 797–846)	Worcester Gas Light Company	Underground gas main
Itasca street, Dorchester	Boston Gas Company	Underground gas main
London street, East Boston	Boston Gas Company	Underground gas main
Macullar road, West Roxbury	Boston Gas Company	Underground gas main
Main street, Charlestown (at Baldwin street)	Boston Gas Company	Underground gas main
Main street, Charlestown (at South Eden street)	Boston Gas Company	Underground gas main
Main street Sullivan street	Boston Gas Company	Underground gas main
Maplewood street, West Roxbury	Boston Gas Company	Underground gas main
Merrimac street, Boston Proper	Rose B. Kabitsky	Sidewalk door
Meshaka street, West Roxbury	Boston Gas Company	Underground gas main
Mt. Pleasant street, Hyde Park	Worcester Gas Light Company	Underground gas main
Northdale road, etc., West Roxbury	Boston Gas Company	Underground gas main
Pond street, Hyde Park	Worcester Gas Light Company	Underground gas main
Readville street, Hyde Park (at Cross street)	Worcester Gas Light Company	Underground gas main
Readville street, Hyde Park (at Danny road)	Worcester Gas Light Company	Underground gas main
Reynold road, Hyde Park	Worcester Gas Light Company	Underground gas main
Richmond street, Boston Proper	Boston Gas Company	Underground gas main
Seattle street, Brighton	Boston Gas Company	Underground gas main
State street, Boston Proper	Terminal Realty Company	Permanent marquee
Stimson street, West Roxbury	Boston Gas Company	Underground gas main
Summer street, Hyde Park	Worcester Gas Light Company	Underground gas main
Vallaro road, Hyde Park	Worcester Gas Light Company	Underground gas main
Vershire street, West Roxbury	Boston Gas Company	Underground gas main
Walk Hill street, West Roxbury	Boston Gas Company	Underground gas main
Washington street, Brighton	Charles Petitti	Marquee
Water street, Dorchester	Boston Gas Company	Gas main and regulator
West street, Hyde Park	Worcester Gas Light Company	Underground gas main
West Second street, South Boston	Boston Gas Company	Underground gas main
Wexford street, Brighton	Boston Edison Company	Poles
Williams avenue, Hyde Park	Worcester Gas Light Company	Underground gas main
Wolcott court, Hyde Park	Worcester Gas Light Company	Underground gas main
Worley street, West Roxbury	Boston Gas Company	Underground gas main

STREET ASSESSMENTS

STREET	District	Cost	Assessment
Aldwin road	West Roxbury	$6,280 59	$3,374 99
Altacrest road	West Roxbury	10,119 00	3,960 00
Banfield avenue	Dorchester	2,571 00	1,828 10
Belle avenue	West Roxbury	10,094 00	1,394 00
Bradlee street	Hyde Park	8,225 89	4,962 01
Child street	Hyde Park	13,446 21	5,140 00
Colorado street	Dorchester	13,747 22	6,276 12
Copeland park	Roxbury	2,608 75	1,093 50
Faunce road, et al	Dorchester	66,434 88	32,641 39
Freeport Way	Dorchester	10,803 54	5,583 96
Gilmore terrace	West Roxbury	7,140 00	3,585 60
Gould street	West Roxbury	3,576 00	336 00
Lodgehill road	Hyde Park	14,170 01	4,726 96
Magee street	Hyde Park	19,332 32	10,867 07
Meyer court	West Roxbury	4,288 08	2,144 04
Meyer street (Catherine street 290 feet southeasterly)	West Roxbury	7,739 24	3,479 83
Meyer street (290 feet southeast of Catherine to Organ Park street)	West Roxbury	10,016 53	5,008 22
Metropolitan avenue	Hyde Park	12,006 81	7,597 76
Milton street	Dorchester	8,613 67	4,306 83
Newhill place	South Boston	2,713 72	1,166 48
Quarley road	West Roxbury	1,705 00	510 00
Ruffing street	Hyde Park	17,919 34	8,937 45
Salman street	West Roxbury	43,228 78	21,184 98
Sherrin street	Hyde Park	28,493 09	14,098 50
Sierra road	Hyde Park	7,138 00	3,324 00
South Bay avenue	Roxbury	71,117 12	6,561 00
Tracton avenue	Hyde Park	3,970 00	2,031 50
Vogel street	West Roxbury	3,209 40	2,206 49
Westminster street	Hyde Park	43,157 00	9,587 14
Totals		$453,865 19	$177,913 92

WIDENINGS AND RELOCATIONS

Brighton street, Charlestown, at the northeasterly corner of Cambridge street.

Centre street, West Roxbury, from Grove street to the Dedham Boundary Line.

High street, Charlestown, at the northeast corner of School street and the southeast corner of Pearl street.

Longwood avenue, Roxbury, on the southwesterly side, from St. Alphonsus street to Huntington avenue.

Park street, Dorchester, between Ashland street and Freeport street.

St. Alphonsus street, Roxbury, on the northwesterly side, from Tremont street to Longwood avenue, and southeasterly side, from a point approximately 110 feet southwest of McGreevey way approximately 380 feet northeasterly to Huntington avenue.

SPECIFIC REPAIRS

Cambridge street, Charlestown, from Crescent street approximately 835 feet easterly, consisting of the reduction in width of the existing sidewalks.

Commonwealth avenue, Brighton, consisting of the reduction in width of the northwesterly sidewalk between Wallingford road and Chiswick road and the corresponding widening of the streetcar reservation adjacent thereto; the reconstruction of the proposed traffic divisional island at Wallingford road; the construction of an opening in the proposed divisional island at Kinross road; the construction of an opening in the streetcar reservation and the proposed divisional island at Strathmore road; and the elimination of the proposed cross-over in the existing streetcar reservation at Sutherland road.

Commonwealth avenue, Brighton, at Wallingford road, consisting of the construction of a cross-over in the street car reservation.

Longwood avenue, Roxbury, at the northwesterly corner of Binney street, consisting of increasing the curb radius.

Massachusetts avenue, Roxbury, at the intersection of Southampton street, consisting of the extension of the existing traffic islands.

St. Alphonsus street, Roxbury, at Longwood avenue and Huntington avenue, consisting of the installation of traffic islands.

EMINENT DOMAIN LAND TAKING

During the period of this report the following land taking was made for municipal purposes:

School Buildings Department. — The taking of approximately 23,568 square feet of land bounded by Wyman street, Bolster street, and Mozart street, Roxbury District, under an order of this commission and Mayor dated April 13, 1960, and recorded in the Suffolk Registry of Deeds on April 29, 1960.

STREET PROGRAM

During the period covered by this report, forty-two highway improvements were ordered by the Public Improvement Commission, including the laying out of thirteen new highways, the construction of eight new sidewalks, the widening and relocation of six public ways, the making of specific repairs in six existing streets, and the discontinuance of nine streets.

SEWER ASSESSMENTS

STREET	District	Cost	Assessment
Banfield avenue	Dorchester	$2,571 00	$1,828 10
Belle avenue	West Roxbury	10,094 00	1,394 00
Child street	Hyde Park	6,860 00	3,000 00
Maplewood street	West Roxbury	5,400 00	3,510 00
Meyer court	West Roxbury	497 00	373 75
Meyer street (from Catherine street 290 feet southeasterly)	West Roxbury	900 00	112 50
Meyer street (from Organ Park street 300 feet southwesterly)	West Roxbury	1,026 00	763 56
Vogel street	West Roxbury	3,209 40	2,206 49
Willow court	Dorchester	5,697 00	975 00
Windham road	Hyde Park and West Roxbury	11,810 00	8,856 00
Totals		$48,064 40	$23,019 40

SIDEWALK ASSESSMENTS

STREET	District	Cost	Assessment
Bogandale road	West Roxbury	$6,241 31	$3,252 94
Drury road	Hyde Park	2,340 50	1,170 25
Fletcher street	West Roxbury	1,678 83	839 48
Savin Hill avenue	Dorchester	12,195 41	6,098 66
Woodhaven street	Dorchester	28,767 67	9,087 36
Totals		$48,883 22	$20,448 69

APPENDIX A

GENERAL ORDERS NO. 2

APPENDIX B

CENTRAL OFFICE

Department Personnel
- Table 1 — Grade and Number of Employees
- Table 2 — Number Actually Employed
- Table 3 — Appointments, Transfers, Deaths, etc.

Loan Orders — Outstanding Debt
- Table 1 — Public Ways
- Table 2 — Sewerage Works
- Table 3 — Bridges

Automotive Equipment
- Table 1 — List as of December 31, 1960
- Table 2 — Added or Ordered in 1960

Permits
- Table 1 — Permits Issued and Cash Receipts

DEPARTMENT PERSONAL

TABLE I

GRADE AND NUMBER OF EMPLOYEES

(As of Decmeber 31, 1960)

TITLE	Central Office	Highway	Sanitary	Sewer	Water	Engineering	Total
Commissioner	1	....	....	....	....	....	1
Division engineers	....	1	1	1	1	1	5
Chief highway engineer	....	1	....	....	....	....	1
Director of transportation	1	....	....	....	....	....	1
Associate civil engineer	....	....	....	....	1	3	4
Assistant division engineer	....	1	....	....	....	....	1
Superintendents and assistants	1	3	2	1	1	....	8
Supervisors and assistants	1	12	3	....	5	....	21
Principal senior and assistant civil engineers	1	13	2	14	1	17	48
Junior civil engineers	....	6	....	....	....	13	19
Senior engineering aids	....	6	....	2	1	9	18
Junior engineering aids	....	2	....	1	....	1	4
Senior public relations representative	....	....	1	....	....	....	1
Driver training inspector	1	....	....	....	....	....	1
Automotive, principal, and senior electrical engineers	....	1	....	....	....	....	1
Assistant electrical engineers	....	....	....	....	....	1	1
Chief pumping station engineers	....	....	....	....	1	....	1
Pumping station engineers and stationary engineers	....	....	4	4	....	....	8
General foremen	2	....	....	....	....	....	2
District foremen	....	....	....	5	2	....	7
Maintenance foremen	....	3	....	....	1	....	4
Other foremen	14	5	7	1	2	....	29
Chief inspectors	....	1	....	1	....	....	2
Inspectors	1	73	49	14	15	....	152
Electricians and electrical operators	....	1	1	2	....	....	4
Executive secretary and assistants	2	....	....	....	....	....	2
Carried forward	25	129	70	46	31	45	346

TABLE I. GRADE AND NUMBER OF EMPLOYEES—Continued

Brought forward	25	129	70	46	31	45	346
Senior personnel officers	1	....	....	....	....	....	1
Head administrative clerks	1	1	....	1	....	....	3
Head clerks	3	1	1	....	3	1	9
Head account clerk	1	....	....	....	....	....	1
Principal clerks and secretaries	1	....	1	....	....	....	2
Principal clerks, stenographers, account clerks, etc.	12	5	2	3	10	1	33
Technical clerk	....	....	....	....	1	....	1
Senior clerks, typists, stenographers, etc	9	2	2	2	27	1	43
Clerk-stenographers, clerks, typists	1	....	....	....	15	....	16
Telephone operators	3	....	....	....	1	....	4
Senior cashier and cashiers	1	....	2	....	1	....	4
Principal storekeepers	2	....	....	....	1	....	3
Senior storekeeper and storekeepers	2	....	....	....	....	....	2
Chief water meter reader	....	....	....	....	1	....	1
Supervisor and special water meter readers	....	....	....	....	2	....	2
Water meter readers and clerks	....	....	....	....	30	....	30
Supervisor, mobile guard	1	....	....	....	....	....	1
Sergeants, mobile guard	3	....	....	....	....	....	3
Mobile guards	7	....	....	....	....	....	7
Incinerator traffic regulator	....	....	1	....	....	....	1
Drawtenders and assistants	....	88	....	....	....	....	88
Chief and senior investigators	2	....	....	....	....	....	2
Estimators and investigators	7	....	....	....	....	....	7
Dispatcher	1	....	....	....	....	....	1
Plumbers	....	....	....	....	15	....	15
Head photostat operator	....	....	....	....	....	1	1
Photostat operators	....	....	....	....	....	2	2
Photographer	....	....	....	....	....	1	1
Sewer gatemen	....	....	....	4	....	....	4
Yardmasters and yardmen	....	2	....	2	6	....	10
Carried forward	83	228	79	58	144	52	644

TABLE I. GRADE AND NUMBER OF EMPLOYEES—Concluded

Brought forward	83	228	79	58	144	52	644
Working foremen	4	3	4	9	18	....	38
Firemen and oilers	....	....	7	9	....	....	16
Machinists and helpers	....	1	....	....	18	....	19
Repairmen and maintenancemen	28	2	5	7	74	....	116
Crane operators	....	....	9	....	1	....	10
Maintenance mechanics and helpers, etc	4	1	....	....	3	....	8
Carpenters and helpers	5	10	....	....	....	....	15
Welders	4	....	....	....	....	....	4
Painters	4	4	....	....	....	....	8
Pavers	....	30	....	....	....	....	30
Blacksmiths and helpers	14	1	....	....	....	....	15
Bricklayers	1	....	....	2	1	....	4
Sewer cleaners	....	....	....	8	....	....	8
Catch-basin machine operators	....	2	....	6	....	....	8
Heavy motor equipment operators	5	60	24	1	17	....	107
Motor equipment operators	4	95	23	16	26	....	167
Incinerator operators	....	....	15	....	....	....	15
Garage attendants	12	....	....	....	....	....	12
Laborers	5	266	73	12	23	....	379
Constables	1	....	....	....	....	....	1
Totals	174	703	239	128	325	52	1,624

TABLE 2
NUMBER OF EMPLOYEES ACTUALLY EMPLOYED JANUARY 1, 1960, AND JANUARY 1, 1961

	Engineering	Central Office	Bridge	Water	Highway	Sanitary	Sewer	Automotive	Total
January 1, 1960	35	10	140	361	320	658	161	103	1,788
January 1, 1961	52	174	—	324	706	239	129	—	1,624

Total Eligible Force

January 1, 1960	34	11	136	393	353	711	171	111	1,920
January 1, 1961	58	179	—	331	723	762	137	—	2,190

TABLE 3

APPOINTMENTS, TRANSFERS, RESIGNATIONS, RETIREMENTS, DEATHS, ETC., OF EMPLOYEES

Died	Resigned	Transferred to Other Departments	Transferred to Other Services	Discharged	Resigned	January 1, 1960	Services 1960–1961	January 1, 1961	Transferred from Other Services	Transferred from Other Departments	Reinstated	Appointed
1	7	4	5	....	3	10	Central Office...	174	184	.....	....	1
2	....	.....	101	....	....	103	Automotive.....	.....	....	.....	....	....
....	....	.....	140	....	..	140	Bridge.....	.....	....	.....	....	....
10	39	5	32	7	8	320	Highway.....	706	486	.....	1	....
4	10	5	393	10	13	658	Sanitary.....	239	1	6	3	6
2	11	2	13	1	3	161	Sewer.....	129	....	.....	....	....
1	....	.....	6	....	2	35	Engineering.....	52	26	.....	....	....
3	16	.....	10	5	3	361	Water.....	324	....	.....	....	....
23	83	16	700	23	32	1,788	Totals.....	1,624	697	6	4	7

LOAN ORDERS — OUTSTANDING DEBT

It was necessary to request a loan order for the construction of public ways in the amount of $2,000,000, and the sewerage works construction was funded for $975,000. This brings the bonded debt for public ways construction to a total of $8,500,000 and for sewerage works to $6,772,000. The bonded debt for bridge construction and repair was unchanged, totaling $4,422,000 for completed programs. Issues for public ways unretired date back to 1951, for sewerage works to 1934, and for bridges to 1941.

OUTSTANDING BONDED DEBT

TABLE 1

PUBLIC WAYS — CONSTRUCTION

	Issued	Series Due	Amount
Inside Debt Limit			
2s	1951	10/1/61	$100,000
Outside Debt Limit			
2½s	1952	4/1/62	200,000
2¼	1953	10/1/63	600,000
1½s	1954	10/1/64	800,000
2¼s	1955	4/1/65	1,000,000
3s	1956	11/1/62–66	600,000
3s	1957	5/1/67	700,000
5s	1957	10/1/67	350,000
5s	1958	10/1/68	800,000
4s	1959	10/1/69	1,350,000
3½s	1960	11/1/70	2,000,000
Total			$8,500,000

TABLE 2

SEWERAGE WORKS

	Issued	Series Due	Amount
Inside Debt Limit			
3¼s	1934	11/1/64	$100,000
3s	1937	9/1/67	28,000
2¾s	1937	12/1/67	35,000
2¾s	1938	6/1/68	128,000
1¾s	1939	8/1/69	36,000
1¾s	1940	7/15/70	25,000
2s	1941	12/15/71	67,000
2s	1942	12/1/72	120,000
1½s	1943	12/1/73	130,000
1¼s	1944	8/1/74	88,000
1¼s	1945	12/1/75	195,000
1¼s	1946	7/1/76	320,000
1¾s	1947	5/1/77	545,000
2s	1948	12/1/78	90,000
2¼s	1949	12/1/79	520,000
1½s	1949	11/12/79	285,000
1¾s	1950	6/1/80	350,000
1¾s	1951	11/1/71	275,000
Total			$3,337,000
Outside Debt Limit	Issued	Series Due	Amount
2½s	1952	10/1/72	$300,000
2¼s	1953	10/1/73	650,000
2s	1955	3/1/75	375,000
2½s	1955	10/1/75	375,000
3½s	1957	5/1/77	425,000
3½s	1957	10/1/77	425,000
2¾s	1960	11/1/79	475,000
2¾s	1960	11/1/80	500,000
Total			$3,525,000
Inside Debt Limit			3,247,000
Outside Debt Limit			3,525,000
Total			$6,772,000

TABLE 3

BRIDGES — RECONSTRUCTION AND REPAIR

	Issued	Series Due	Amount
Inside Debt Limit			
1¾s	1950	6/1/70	$205,000
Construction			
2s	1941	12/15/61	10,000
1¾s	1942	12/1/62	24,000
1½s	1943	11/1/63	21,000
1¼s	1945	12/1/65	42,000
Outside Debt Limit			
2s	1952	4/1/72	300,000
2½s	1952	10/1/72	190,000
2¾s	1953	4/1/73	405,000
2¼s	1954	4/1/74	970,000
2s	1955	4/1/75	375,000
2½s	1955	10/1/75	375,000
3s	1956	11/1/62-75	600,000
3s	1956	11/1/61	40,000
3½s	1957	5/1/77	170,000
3½s	1957	10/1/77	425,000
3¾s	1959	11/1/79	475,000
Total			$4,422,000

AUTOMOTIVE EQUIPMENT

TABLE 1

LIST AS OF DECEMBER 31, 1960

The automotive equipment of the Public Works Department consists of the following:

56 Passenger cars
13 Carryalls
28 ½-ton pickup trucks
119 1½- to 15-ton dump trucks
28 1-ton utility trucks
5 2-ton derrick and lumber trucks
3 2-ton catch-basin cleaning trucks
5 1½-ton 7-man cab emergency trucks
3 2- to 10-ton wrecker trucks
2 3-ton gate closing trucks
3 1½- to 3-ton platform trucks
9 1½-ton trucks with compressors
9 Miscellaneous trucks
2 Gutter vacuum cleaners
25 Large street sweepers
5 Street flushers
27 Snow fighters
3 Snow loaders
22 Front bucket loaders
3 Crawler tractors
3 Compressor trailers
8 Gasoline road rollers
1 Road grader

TABLE 2

New equipment added to the fleet in 1960 or ordered for delivery in 1961 consisted of the following:

10 Ford F850 trucks with 4-yard dump bodies
10 Jet sanders
4 Wayne street sweepers
2 Heavy duty snow-fighting trucks
14 Ford F850 Ford chassis and cabs
14 Large dump bodies
31 Snowplows

PERMITS

TABLE 1

CASH RECEIPTS

Signs	$82,760 20
Permits	43,330 92
Driveway applications	20 00
Sidewalk licenses	21,836 25
Notifications to abuttors	90 00
Sewer inspection fees	8,800 00
Total	$156,837 37
Bad check — collected	92 50
	$156,929 87
Corporation permits	5,996 40
Rents for city land	14,787 00
Total — all permits	$177,713 27

STREET OPENING ACCOUNT

Total deposits received	$80,897 12
Total number of deposits	513

STREET OPENING ACCOUNT — SPECIAL

	Amount Committed	Payments Received
Boston Gas Company	$126,321 50	$30,503 00
Boston Edison Company	82,202 05	13,721 00
Worcester Gas Company	35,032 00	7,270 00
New England Telephone & Telegraph Company	29,908 00	9,137 00
Quincy Market Company	1,329 00	1,329 00

PERMITS ISSUED

Signs	7,764
Permits (cash)	3,634
Special permits	201
Driveway applications	10
Sidewalk licenses	296
Sewer inspections	277
Utility permits	1,858
City permits — no fee	899
Total permits	14,939

APPENDIX C

ENGINEERING DIVISION

TABLE I

REPRODUCTIONS

	Photostats	Blueprints	Ozalds	Auto Positives	Card Stock
Administrative Services	1,130	.....	1,160	.....	.....
Assessing	998	.....	1,998	28	.....
Building	1,068	.....	1,781	.....	.....
City Clerk	456	.....	643	.....	.....
City Clerk	456	.....	643		
City Council	1,484	.....	530		
Civil Defense	144	.....	90	.....	.....
Collecting	182	.....	.....	12	.....
Election	152	.....	164	.....	.....
Finance Commission	76	.....	.....	.....	.....
Fire	332	.....	335	.....	.....
Law	586	.....	88	.....	.....
Mayor's	1,692	.....	487	.....	.....
Park	64	.....	163	.....	.....
Penal	168	.....	246	.....	.....
Planning Board	1,346	.....	1,828	.....	.....
Public Buildings	94	.....	45	.....	.....
Public Works:					
Engineering Division	3,654	597	7,644	372	113
Central Office	946	373	1,823	.....	.....
Highway Division	420	.....	774	49	.....
Permit Division	396	.....	117	.....	.....
Sanitary Division	168	.....	393	.....	.....
Sewer Division	901	.....	466	.....	.....
Street Lighting	136	.....	157	.....	.....
Water Division	762	.....	954	.....	.....
Real Property	1,372	.....	1,489	.....	.....
Registry	930	.....	.....	.....	.....
School Buildings	264	.....	121	.....	.....
School Committee	68	.....	.....	.....	.....
Traffic Commission	632	.....	619	.....	.....
Treasury	162	.....	.....	.....	.....
Veteran's Services	1,538	.....	.....	.....	.....
White Fund	448	.....	.....	.....	.....
Totals	23,228	970	24,758	461	113

The photographic service furnished by the Reproduction Unit includes photographing all locations of new highway layouts and other proposed improvements; lands taken for municipal purposes; progress of public works projects; snowstorm and other emergency conditions. Following is a summary of such work for the year 1960:

DEPARTMENT	Negatives	4x5 Prints ON	8x10 Prints
Public Works:			
Engineering Division	1,200	1,200	32
Central Office	215	.....	420
Maintenance Branch	25	.....	25
Highway Division	340	250	90
Sewer Division	210	180	30
Water Division	30	30	.....
Totals	2,020	1,660	597

TABLE 2

PAVEMENT CLASSIFICATION

CLASSIFICATION	District 1 Chas. & C. P.	District 2 J. P.	District 3 N. Dor.	District 4 Bri.	District 5 S. B.	District 6 W. R.	District 7 S. Dor.	District 8 H. P.	District 9 E. B.	District 10 Rox.
Very poor	9.92 mi.	8.08 mi.	4.77 mi.	5.86 mi.	6.03 mi.	2.19 mi.	7.13 mi.	6.03 mi.	3.16 mi.	6.11 mi.
Poor	8.19 mi.	3.92 mi.	5.33 mi.	4.20 mi.	1.85 mi.	3.40 mi.	5.40 mi.	3.40 mi.	2.84 mi.	10.08 mi.
Fair-poor	9.91 mi.	5.96 mi.	4.18 mi.	5.34 mi.	5.95 mi.	2.51 mi.	6.11 mi.	4.16 mi.	3.12 mi.	8.94 mi.
Fair	3.23 mi.	2.79 mi.	1.01 mi.	1.23 mi.	1.00 mi.	2.87 mi.	4.18 mi.	1.59 mi.	1.10 mi.	0.98 mi.
Total	31.25 mi.	20.75 mi.	15.29 mi.	16.63 mi.	14.83 mi.	10.97 mi.	22.82 mi.	15.18 mi.	10.22 mi.	26.11 mi.

CLASSIFICATION	Total Length in Miles	Reconstruction Approximate Cost
Very poor	59.28	$5,250,000
Poor	48.61	4,220,000
Fair-poor	56.18	4,950,000
Fair	19.98	1,750,000
Grand total	184.05	$16,170,000

TABLE 3

SURVEY SECTION WORK

Following is a report of the major works accomplished by the Survey Section in the year 1960:

Thirty-four surveys and plans were made for the laying out of 3.4 miles of public highways as follows:

District	*Length in Feet*
BRIGHTON	
Langley road	400
Hopedale street	2
DORCHESTER	
Baker court	550
Corman street	820
Elm Lawn	480
Itasca street	1,500
Manor street	800
Matignon street	200
Menton street	310
Merola park	400
Park street	860
HYDE PARK	
Ashville road	400
Beech street	1,100
Buckingham street	500
Greenbrook road	590
Harvard avenue	100
Lodgehill road	500
Maida terrace	200
Providence street	400
Ransom road	400
ROXBURY	
Copenger street	185
SOUTH BOSTON	
Lincoln park	125
Webb park	125

District	*Length in Feet*
WEST ROXBURY	
Birchland terrace	200
Brookstone street	100
Chester place	250
Cornauba street	630
Centre street	2,300
Hackensack terrace	300
Metropolitan terrace	220
Stimson street	1,000
Swan street	360

Twenty-six surveys and plans were made for the widening and relocation of one mile of public highways as follows:

BOSTON PROPER	
Allen street, Blossom street	700
Staniford street	1,000
BRIGHTON	
Wirt street	250
DORCHESTER	
Ceylon street at Quincy street	85
ROXBURY	
Longwood avenue	130
St. Alphonsus street	1,300
Binney street	20
WEST ROXBURY	
Ashland avenue	620
Canterbury street	550
Bardwell street at South street	38
Bardwell street at Ballard street	31
Florence street at Poplar street	34
Florence street at Murray Hill road	20
Florence street at Rowe street	—
Florence street at Hawthorne street	38
Florence street at Bexley road	33
Florence street at Sycamore street	37
Robin street at La Grange street	23
Sycamore street at Prospect street	41
Sycamore street at Brookdale street	41
Sycamore street at Ridge street	33
HYDE PARK	
Harvard street at Winthrop street	120
West street at Hyde Park avenue, at Central avenue, at Elm street	120

Five surveys and plans were made for the discontinuance of 0.29 miles of public highways as follows:

District	*Length in Feet*
DORCHESTER	
Enterprise street	185
Shirley street	82
SOUTH BOSTON	
Gillette park	831
Granite street	190
WEST ROXBURY	
Germania street	227

One survey and plan was made for the discontinuance of the following sewer easement:

BRIGHTON	
Washington street	100

Fifteen surveys and plans were made for the taking of 1.4 miles of easements for sewerage purposes as follows:

BRIGHTON	
Soldiers Field place	840
HYDE PARK	
Beechmont terrace	976
Chesterfield street	730
Crane street	240
Danny road	25
Sefton street	400
WEST ROXBURY	
Belle avenue	800
Caledonian avenue	140
Coleman street	127
Eagle street	780
Goff street	375
Heron street	1,260
Northdale Road Extension	600
Rockwood terrace	540
Stella road	220

Twenty-six profiles for highway construction were made as follows (2.3 miles):

District	*Length in Feet*
BOSTON PROPER	
Eastern avenue	340
BRIGHTON	
Hopedale street	150
DORCHESTER	
Corman road	450
Annapolis street	300
Evandale terrace	300
Menton road	200
Park street	860
HYDE PARK	
Buckingham street	400
Greenbrook road	590
Lawton street	600
Maida terrace	200
Providence street	300
WEST ROXBURY	
Ashland avenue	1,000
Brook Farm road	300
Brookway road	100
Centre street	3,000
Florence street	360
Florian street	300
Highfield road	650
Hackensack road	150
Ivory street	334
Joyce Kilmer road	225
Pleasantdale road	100
Swan street	360
Tobin road	400
Walk Hill street at Harvard street	200

Twenty-three profiles for sewer construction were made as follows (2.3 miles):

District	*Length in Feet*
BRIGHTON	
Soldiers Field road	2,500

District	*Length in Feet*
CHARLESTOWN	
Bartlett street	180
High street	240
Pearl street	390
School street	440
Summer street	180
DORCHESTER	
Balina place	500
Violet street	600
Delhi street	230
French street	360
HYDE PARK	
Danny road	—
Norway park	800
Raldne road	1,000
Pleasantdale street	300
Silvia court	315
Stonehill road	120
WEST ROXBURY	
Ashland avenue	100
Beechmont terrace	680
Belle avenue	1,250
Burroughs street	1,320
Macullar street	—
Northdale road	450
Northdale terrace	135

Seven sidewalk assessment plans were made as follows (1.9 miles):

DORCHESTER	
Carruth street	1,800
Richmond street	1,000
Savin Hill avenue	1,590
Woodhaven street	1,700
HYDE PARK	
Drury road	200
WEST ROXBURY	
Bogandale road	800
Centre street	3,000

Eight sewerage assessment plans were made as follows (0.8 mile):

District	*Length in Feet*
BRIGHTON	
Soldiers Field road	900
DORCHESTER	
Balina place	150
Violet street	200
HYDE PARK	
Chesterfield street	700
Sefton street	400
WEST ROXBURY	
Belle avenue	800
Northdale Road Extension	600
Rockwood terrace	540

Stone Bounds. In accordance with a policy established in 1950, stone bounds were set and drilled on the following locations:

District	*Number*
HYDE PARK	
Asheville road	4
Lodgehill road	3
Magee street	3
Ruffing street	2
Rainier road	4
Sherrin street	4
Sierra road	2
WEST ROXBURY	
Altacrest road	1
Gilmore terrace	2
Pleasantdale road	2
	27

Fifteen surveys and plans were made for minimum pavements as follows (1.1 miles):

District	*Length in Feet*
DORCHESTER	
Banfield avenue	450
Delhi street	325
Itasca street	275
HYDE PARK	
Danny road	250
Leseur road	150
Lodgehill road	450
Prospect park	300
Windham road	1,500
WEST ROXBURY	
Baker Street Extension	275
Birchland terrace	200
Maplewood street	550
Martinwood road	360
Miami terrace	200
Salman street	410
Vogel street	350

For the Public Works Department, Highway Division, thirty-six streets were staked out for construction.

For the Public Works Department, Sewer Division, forty-four catch basins were staked out.

Surveys and plans were made for specific repairs and widenings on Commonwealth avenue, Brighton, from Chestnut Hill avenue to Warren street, and Walter street, Hyde Park, at Davison street and at Pierce street.

Fourteen requests for information relative to line and grade were received from private engineers and other agencies, and data furnished.

For the Public Works Department, Sanitary Division, the following information was furnished:

Albany Street Yard, topographical survey and plan.

Hallet Street Dump, Dorchester, topographical survey and plan.

Condor Street City Yard, East Boston, topographical survey and plan.

Gardner Street Dump, West Roxbury, topographical survey and plan.

For the Public Works Department, Water Division, line, grade, and staking out was furnished for Meyer court and Meyer street, West Roxbury, and survey and plan for water easement in Centre street, West Roxbury.

Survey, plotting, and calculations were made in connection with proposed extension of the Government Center.

Plans of city-owned property were made for the Real Property Department as follows:

CHARLESTOWN

Rutherford avenue (city yard)

DORCHESTER

Boston Sanatorium
Mathew street (city yard)

ROXBURY

Atkinson street (city yard)
Washington street at Egleston square (fire station)

SOUTH BOSTON

Broadway and Dorchester avenue

WEST ROXBURY

Centre street and Walter street (city yard)

For the Building Department survey and plans were made for Wall street, Charlestown and East Lenox street, Roxbury (Green Shoe Company).

For the School Department survey and plan was made of West Springfield street, City (Dwight School).

For the Law Department surveys and plans were furnished for Stuart street, City, and Sydney and Carson streets, Dorchester.

For the Library Department survey, plan, and cross-sections were made of Parmenter street, City.

TABLE 4

Following is a report of the activities of the Design Section for the year 1960:

Completed plans, estimates, and specifications for the following work which was advertised for bids in 1960:

Contract	District	Length (Feet)	Estimated Cost	Date of Bid Opening
Construction of:				
Bryant road	6	270	$9,921	6/23/60
Fairlane road	6	245	11,710	6/23/60
Glenellen road	6	1,054	29,890	6/23/60
Salman street	6	1,161	39,850	6/23/60
Stimson street	6	986	31,640	6/23/60
Total			$123,011	
Construction of:				
Caryll street	7	853	$19,140	8/04/60
Clapp street	3	170	3,390	8/04/60
Enterprise street	3	1,064	34,055	8/04/60
Graham court	3	65	405	8/04/60
Hallet-Davis street	7	239	6,215	8/04/60
Lorna road	7	755	19,360	8/04/60
Massachusetts avenue	3	220	2,187	8/04/60
Patterson street	7	223	6,987	8/04/60
St. Clare road	7	201	5,094	8/04/60
Total			$96,833	
Construction of:				
Corman road	7	778	$20,579	10/31/60
Greenbrook road	8	765	16,924	10/31/60
Grove street	6	180	2,019	10/31/60
Hackensack road	6	138	1,000	10/31/60
Hackensack terrace	6	316	11,087	10/31/60
Highfield road	6	630	7,771	10/31/60
Itasca street	7	760	23,834	10/31/60
Pleasantdale road	6	40	791	10/31/60
Pleasantdale road	6	105	4,253	10/31/60
Swan street	6	348	12,460	10/31/60
Tobin road	6	295	9,450	10/31/60
Total			$110,168	

CONTRACT	District	Length (Feet)	Estimated Cost	Date of Bid Opening
Reconstruction of:				
Carruth street	7	1,791	$19,210	6/30/60
Clermont street	7	314	4,365	6/30/60
Deering road	7	1,409	16,564	6/30/60
Elmer road	7	1,973	22,615	6/30/60
Hiawatha road	7	962	13,300	6/30/60
Newhall street	7	566	8,614	6/30/60
Pierce avenue	7	1,439	16,550	6/30/60
Richmond street	7	1,616	15,770	6/30/60
Walnut street	7	407	8,260	6/30/60
Total			$125,248	
Reconstruction of:				
Alhambra road	6	500	$5,374	7/28/60
Bradfield avenue	6	1,124	12,500	7/28/60
Chilton road	6	687	6,070	7/28/60
Edgebrook road	6	440	3,864	7/28/60
Greaton road	6	2,277	27,285	7/28/60
Ivory street	6	532	6,508	7/28/60
Willow street	6	3,125	15,785	7/28/60
Total			$77,386	
Reconstruction of:				
Cutter road	6	253	$7,036	7/14/60
Dow road	6	750	19,310	7/14/60
Florian street	2	695	20,672	7/14/60
Kingsland road	6	611	17,510	7/14/60
Myopia road	8	830	22,311	7/14/60
Oakcrest road	8	864	22,824	7/14/60
Rambler road	2	110	3,064	7/14/60
Summer street	8	782	19,806	7/14/60
Wilna court	6	194	6,031	7/14/60
Total			$138,564	

CONTRACT	District	Length (Feet)	Estimated Cost	Date of Bid Opening
Reconstruction of:				
Concord street	1	400	$5,195	9/01/60
Cottage street	9	1,565	23,415	9/01/60
Cross street	1	426	3,805	9/01/60
Frankfort street	9	1,190	17,557	9/01/60
Pleasant street	1	734	7,125	9/01/60
St. Martin street	1	455	4,135	9/01/60
Soley street	1	657	4,775	9/01/60
Swift street	9	210	4,583	9/01/60
Swift terrace	9	250	7,172	9/01/60
Total			$77,762	
Reconstruction of:				
Augustus avenue	6	412	$5,555	9/08/60
Averton street	6	1,028	10,205	9/08/60
Brier road	6	504	6,770	9/08/60
Emmonsdale street	6	516	3,070	9/08/60
Fletcher street	6	1,750	19,275	9/08/60
Gertrude road	6	406	4,070	9/08/60
Robin street	6	490	5,425	9/08/60
Stratford street	6	1,154	8,480	9/08/60
Total			$62,850	
Sewerage Works in:				
Salman street	6	563	$10,400	6/15/60
Beech street	8	2 catch basins	1,500	6/15/60
Danny road	8	2 catch basins	1,500	6/15/60
Lodgehill road	8	2 catch basins	1,500	6/15/60
Macullar road	6	2 catch basins	1,500	6/15/60
Total			$16,400	
Itasca street	7	440	$7,460	8/11/60
Braeburn road	8	545	$8,440	8/17/60
Lawton street	8	465	7,900	8/17/60
Total			$23,800	

CONTRACT	District		Length (Feet)	Estimated Cost	Date of Bid Opening
Sewerage Works in:					
Northdale road	6		340	$6,100	12/14/60
Oakmere street	6		80	2,100	12/14/60
Total				$8,200	
Balina place	7		187	$3,260	12/21/60
Caledonian avenue	6		120	$2,300	9/28/60
Sewerage & Water Works in:					
Soldiers Field place	4		826	$25,300	6/08/60
		Water	1,038	7,400	
Total				$38,260	
Belle avenue	6	Sewer	878	$15,471	12/14/60
		Water	600	6,000	
Total				$21,471	
Violet street	7	Sewer	600	$18,500	12/21/60
		Water	660	6,500	
Delhi street	7	Sewer	280	3,500	12/21/60
		Water	10	100	
Total				$28,600	
Jo-Anne terrace	7	Sewer	275	$5,450	8/11/60
		Water	275	2,800	
Total				$8,250	
Gladstone street	9	Sewer	80	$1,570	9/28/60
		Water	80	800	
Goff street	8	Sewer	276	6,000	9/28/60
		Water	276	2,800	
Total				$11,170	
Water Works in:					
Kingsland road	6		158	$1,200	6/22/60
Macullar road	6		261	1,900	6/22/60
Salman street	6		521	3,800	6/22/60
Total				$6,900	

Completed plans, estimates and specifications for the following work which is to be advertised in 1961:

Reconstruction of:				
Bardwell street	2	623	$6,935	2/02/61
Cedarwood road	2	1,080	13,099	2/02/61
Florence street	2&6	1,715	24,595	2/02/61
Goodway road	2	603	9,510	2/02/61
Hillcroft road	2	671	8,685	2/02/61
Johnswood road	2	1,534	23,834	2/02/61
Rowe street	2&6	1,934	37,241	2/02/61
Sycamore street	2	1,373	20,930	2/02/61
Wyvern street	2	440	7,270	2/02/61
Total			$152,099	

Completed plans and estimates made in 1960 to be advertised in 1961:

Sewerage Works in:				
Beechmont terrace	8	667	$15,066	
Raldne road	8	904	22,603	
Rockwood terrace	6	492	15,961	
Sherrin street	8	700	13,346	
Silvia court	8	317	9,360	
Soldiers Field road	4	1,176	27,815	
Total			$104,151	

Completed the following:

Design of 29 street grades.
Design of 31 sewer grades.
20 tracings relating to laying-out plans.
10 tracings relating to widenings and relocations.
12 tracings relating to sewer easements.
1 tracing relating to taking for school purposes.
1 tracing relating to water easement.
4 tracings relating to sidewalk assessments.
1 tracing relating to sewer assessments.
2 tracings relating to sewer discontinuances.
3 tracings relating to street discontinuances.
6 tracings relating to city-owned land.
1 tracing relating to specific repairs.
25 tracings relating to sewerage works.
29 tracings relating to water works.
41 tracings on vellum of highway reconstruction plans.
3 tracings on vellum of Chelsea Street Bridge fender plans.
46 investigations and reports on street lighting conditions.
240 plot plans were examined and checked for approval of grades and availability of sewer and water facilities.

APPENDIX D

HIGHWAY DIVISION

TABLE 1

WORK DONE BY CONTRACT IN 1960

ITEM	Quantity	
Earth and services excavation	42,067	cubic yards
Rock and well excavation	1,033	cubic yards
Bank gravel	32,510	tons
Crushed stone for edgestone	1,708	tons
Existing base removed	6,126	square yards
Existing pavement removed	18,686	square yards
New straight edgestone	20,444	lineal feet
New circular edgestone	7,909	lineal feet
New two-foot radius corners	872	
Existing edgestone reset or relocated	49,373	lineal feet
Edgestone hauled to yard or disposed of	6,451	lineal feet
Crushed stone for macadam base	11,923	tons
OA asphalt	110,456	gallons
Portland cement concrete base	1,928	cubic yards
Bituminous concrete base, roadway	24,066	tons
Portland cement concrete for backing sidewalk	35	cubic yards
Bituminous concrete top, roadway	18,287	tons
Bituminous concrete base, sidewalk	618	tons
Bituminous concrete top, sidewalk	779	tons
Sheet asphalt top	548	tons
Artificial stone sidewalks	690,009	square feet
Artificial stone driveways	106,523	square feet
Loam spaces	1,096	square yards
Loam back of sidewalks	1,008	cubic yards
Covers reset	2,112	
Catch basins and manholes rebuilt	84	
Catch basins and drop inlets built	57	
Street sign posts set or reset	219	
Stone bounds	92	
TOTAL AREAS		
Bituminous concrete pavement	266,245	square yards
Sheet asphalt pavement	6,900	square yards

TABLE SHOWING LENGTH AND AREA OF PAVING ON ACCEPTED STREETS, CORRECTED TO JANUARY 1, 1961

	Length in Miles										Area in Square Yards									
	Sheet Asphalt	†Asphalt Concrete	‡Granite Block	Wood Block	Plank on Bridges	Brick	§Concrete	‖Macadam	Gravel	Not Graded	Totals	Sheet Asphalt	†Asphalt Concrete	‡Granite Block	Wood Block	Plank on Bridges	Brick	§Concrete	‖Macadam	Gravel	Not Graded	Totals
Year 1959 Report	214.33	397.59	21.17	0.10	0 34	0.19	17.16	97.97	8.33	0.76	757.94	4,306,689	7,879,339	462,996	1,881	9,068	5,408	362,409	1,564,909	138,367	29,227	14,760,293
Per Cent	28.28	52.46	2.79	0 01	0.04	0.03	2.26	12.93	1.10	0.10	100.00	29.18	53.38	3.13	0.01	0 06	0.04	2 46	10.60	0.94	0.20	100.00
January 1, 1961																						
City Proper	46.43	34.17	6.21	0 01	0.09	0.16	2.86	2.19	0.39	.....	92.51	1,053,178	780,704	128,127	40	3,258	3,025	91,413	33,252	7,023	.....	2,100,020
Charlestown	4.30	8.11	4.62	0 06	0.02	.....	0 74	4.75	0.03	0.01	22.64	84,708	215,468	101,114	1,503	1,098	.....	13,487	65,895	407	41	483,721
East Boston	2.85	25.91	2.33	.....	0.02	.....	1.39	6.53	0.10	0.04	39 17	60,931	581,492	48,427	.....	317	.....	47,177	146,549	1,982	812	887,687
South Boston	10.42	23.11	4.81	.....	0.03	.....	0.32	5.00	0.12	0.50	44.31	217,587	494,675	128,830	.....	892	1,055	18,780	79,224	1,349	15,754	958,146
Roxbury	37.58	41.86	2.29	.....	.....	0.02	3.93	9.37	0.18	0 08	95.31	767,802	814,005	25,715	.....	.....	1,183	60,517	132,732	2,166	1,825	1,805,945
West Roxbury	31.19	107.96	0.03	.....	0 04	.....	1.23	19.11	1.30	0.00	160.86	551,828	1,976,225	997	.....	983	.....	17,534	315,130	23,056	4,000	2,889,753
Dorchester	52 16	94.70	0.48	0.03	0.04	0.01	5.12	27.13	1.43	0.03	181.13	989,185	1,814,533	8,946	338	985	145	82,171	417,297	23,854	3,337	3,340,791
Brighton	19.64	37.11	0.29	.....	0.08	.....	0.78	8.03	0.23	.....	66.16	422,902	748,360	15,526	.....	1,231	.....	19,204	128,121	3,417	50	1,338,811
Hyde Park	7.83	34.91	0.00	.....	0.02	.....	0.24	10.26	3.07	0.12	56.45	134,015	654,498	32	.....	304	.....	3,898	164,568	50,168	3,408	1,010,891
Total	212.40	407.84	21.06	0.10	0.34	0.19	16.61	92.37	6.85	0.78	758.54	4,282,136	8,079,960	457,714	1,881	9,068	5,408	354,181	1,482,768	113,422	29,227	14,815,765
Per Cent	28.00	53.77	2.78	0 01	0.04	0.03	2.19	12.18	0.90	0.10	100 00	28.90	54 54	3.09	0.01	0.06	0.04	2.39	10.01	0.76	0.20	100.00

Total Public Streets 758.54 Miles

Note.—In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline included in City Proper.

‡ Of this amount 0.02 miles or 185 square yards is cobble; and 10.85 miles or 299,468 square yards is granite block paving on concrete base.

§ Of this amount 0.06 miles or 435 square yards is Blome granitoid concrete block.

‖ Of this amount 81.45 miles or 1,321,423 square yards is bituminous macadam.

† Of this amount 53.01 miles or 999,797 square yards is bitulithic; and 2.02 miles or 32,808 square yards is Topeka; and 0.06 miles or 920 square yards is Filbertine; and 0.03 miles or 595 square yards is Carey-Elastite Asphalt Plank; and 0.06 miles or 518 square yards is Johns-Manville Asphalt Plank; and 0.09 miles or 2,224 square yards is Asphalt Block.

6.48 miles or 35,955 square yards public alleys included in this table; 1.89 miles or 61,141 square yards public streets in charge of Park Department included in this table; 15.90 miles or 551,363 square yards public streets in charge of Commonwealth of Massachusetts included in this table. In addition to this table there are 2.45 miles or 11,845 square yards of accepted footways.

TABLE 2

STREET CONSTRUCTION WORK

The following is a summarized record of the highway improvement work done by the department in 1960.

Number of streets constructed or reconstructed	81
This total included twenty-four new streets laid out and constructed as public ways under the provisions of Chapter 393, Acts of 1906.	
Streets improved	13.16 miles
This included one-third of a mile reconstructed as a Chapter 90 project.	

STREET CONSTRUCTION WORK
(EXCLUSIVE OF CHAPTER 90 PROJECTS)

The following is a summarized financial statement of the expenditures made in 1960 for highway improvements:

HIGHWAY

Public Ways, Construction of (Loan Account)	$1,831,004 77
Public Ways, Construction of (Revenue Accounts)	171,784 87
Reconstruction of Streets	1,447 39
Reconstruction of Sidewalks	15 45
Reconstruction of Sidewalks	147 80
	$2,004,400 28

BRIDGE

Bridges, Construction of (Loan Account) .	$21,650 69
Bridges, Repair of (Structures and Improvements)	1,211 37
	$22,862 06

CHAPTER 90

PROJECTS UNDER CONSTRUCTION IN 1960

	Bid Price
Commonwealth avenue, Brighton . . . (Warren street to Chestnut Hill avenue)	$414,135 50
Beacon street (Kenmore square to Brookline Line)	56,397 00
Baker street, West Roxbury . . . . (VFW Parkway to Spring street)	48,967 42

There were eighty-one streets constructed or reconstructed during the year. Some of the more important thoroughfares on which reconstruction work was completed in 1960 are as follows:

Atkinson street, from South Bay avenue to approximately 400 feet southerly

South Bay avenue, from Atkinson street to Moore street

Robinwood avenue, from Centre street to Rockview street

Drury road, from Sunnyside avenue to dead end

Warren avenue, from Truman Highway to Summit street

Central avenue, from Webster street to River street

Oakland street, from Washington street to Faneuil street

Savin Hill avenue, from Hubbardston road easterly to Old Colony terrace

Woodhaven street, from Blue Hill avenue to Cummins Highway

Bogandale road, from Centre street to approximately 793 feet easterly and southerly

Iona street, from Belgrade avenue to Beech street

Landseer street, from Centre street to La Grange street

Potomac street, from Vermont street to Jennett avenue

Redlands road, from Centre street to Alameda road

Theodore Parker road, from Weld street to Halford road

Beacon street, at Cleveland Circle

Charlotte street, from Blue Hill avenue to Bradshaw street

Harlem street, from Glenway street to Greenwood street

Carruth street, from Ashmont street to Gallivan Boulevard

Elmer road, from Carruth street to Adams street

Pierce avenue, from Adams street to Plain street

Richmond street, from Dorchester avenue to Adams street

Greaton road, from Esther road to Weld street

Willow street, from Centre street to Farrington road

Baker street (Chapter 90), from Cutter road to Spring street

Fletcher street, from South street to Montclair avenue

Concord street, from Monument square to Bunker Hill street

Frankfort street, from Maverick street to Porter street

Pleasant street, from Main street to High street

TABLE 3

HIGHWAY MAINTENANCE WORK

Brick sidewalks relaid	535	square yards
Artificial stone sidewalks, new	1,974	square feet
Artificial stone sidewalks, relaid	192,393	square feet
Bituminous concrete sidewalks, relaid	2,068	square yards
Artificial stone sidewalks and bituminous concrete roadways temporarily patched	26,162	square yards
Bituminous concrete and asphalt roadways permanently patched	21,975	square yards
Edgestone reset	1,748	lineal feet
Catch basins cleaned	2,070	

TABLE 4

CATCH BASINS IN SYSTEM

	Catch Basins for Twelve Months Ending December 31, 1960			Totals for Whole City in Charge of Division	
District	Number Built or Rebuilt	Number Abandoned or Removed	Net Increase	Previous Report to January 1, 1960	Grand Total to January 1, 1961
City Proper	0	0	0	3,801	3,801
Roxbury	0	0	0	3,560	3,560
South Boston	0	0	0	1,521	1,521
East Boston	4	0	4	1,227	1,231
Charlestown	0	0	0	871	871
Brighton	19	10	9	2,145	2,154
West Roxbury	37	0	37	4,659	4,696
Dorchester	12	0	12	5,745	5,757
Hyde Park	29	0	29	1,486	1,515
Totals	101	10	91	25,015	25,106

TABLE 5

STREET LIGHTING

Street lighting, which has always been a function of the Highway Division, has the custody of approximately 28,715 street lights, varying from 2/200 lumens to the 20,000-volt mercury lights.

MERCURY VAPOR LIGHTING PROJECTS

In 1960 orders were issued on the following listed streets, main throughfares, and business areas for relighting with modern mercury vapor lighting:

	Units	Lumens Each
Bennington street, East Boston	10 single	20,000
Bennington street, East Boston	3 twin	20,000
Brighton avenue, Brighton	1 single	20,000
Commonwealth avenue, Brighton	1 single	20,000
Walley street, East Boston	1 single	20,000

INCANDESCENT LIGHTING PROJECTS

In 1960 orders were issued for the installation of new and the replacement of old lighting units as follows:

	Units	Lumens Each
Clapp street, Dorchester	1 single	6,000
Cottage street, East Boston	12 single	6,000
Norfolk street, Dorchester	4 single	6,000
Porter street, East Boston	2 single	6,000
North Bennet street, Boston	1 single	4,000
Enterprise street, Dorchester	1 single	4,000
Fleet street, Boston	4 single	4,000
South street, West Roxbury	3 single	4,000
Sarsfield street, Roxbury	1 single	4,000
Winchester street, Boston	1 single	4,000
Bradlee street, Hyde Park	8 single	2,500
Cedarwood street, Dorchester	6 single	2,500
Dodge road, Hyde Park	1 single	2,500
Enterprise street, Dorchester	5 single	2,500
Elton street, Dorchester	3 single	2,500
Eldridge road, West Roxbury	7 single	2,500
Farwell avenue, Hyde Park	3 single	2,500
Florian Way, West Roxbury	2 single	2,500
Gartland street, West Roxbury	3 single	2,500
Hillcroft road, West Roxbury	4 single	2,500
Oakman street, Brighton	1 single	2,500
Orlando street, Brighton	1 single	2,500

	Units	Lumens Each
Pheasant street, West Roxbury	3 single	2,500
Rice street, Dorchester	1 single	2,500
Romsey street, Dorchester	4 single	2,500
Rockdale street, Dorchester	11 single	2,500
Sagamore street, Dorchester	9 single	2,500
Walnut street, Dorchester	3 single	2,500
Waldridge street, Brighton	3 single	2,500
Wessex street, Dorchester	2 single	2,500

TABLE 6

STREET SIGNS

The following work was done in placing new street signs and replacing and repairing existing street signs:

Erected 109 6-inch street signposts
Erected 5 new hero signs for dedication
Replaced 11 broken hero signs with new hero signs
Regilded 245 metal hero signs
Replaced 65 wooden hero signs with new metal hero signs
Installed 473 baked enamel signs
Installed 91 hand painted signs
Removed 278 old hand painted signs, damaged baked enameled signs, and obliterated signs
Repaired 94 bent or broken 4-inch street signposts
Straightened 27 welded 4-inch posts
Repaired 391 broken street sign frames and collars, in blacksmith shop
Repaired and adjusted 301 street frames, collars, and brackets on 4-inch posts and light poles on locations
Removed 1,304 pieces of rope, wire, old tires, political signs from 4-inch posts, frames, and light poles
Installed 395 street sign frames on 4-inch street signposts, light poles, and wooden poles
Installed 215 street collars on 4-inch posts and light poles
Installed 72 pairs of adapters on wooden poles
Installed 119 4-inch acorns on 4-inch street signposts
Installed 91 "Private Way" signs on 4-inch posts, light poles, and wooden poles
Removed 41 "Private Way" signs because public ways were made
Painted 1,344 4-inch posts and hero signposts for May 30
Painted 965 street sign frames
Painted 639 4-inch acorns
Painted 786 street sign collars on 4-inch posts and light poles
Washed and cleaned 517 street sign name plates
Painted 117 blanks for temporary name plates
Removed 76 broken or badly bent 4-inch posts from location and repaired sidewalks

TABLE 7

DETAILS OF EXPENDITURES ON TIDEWATER BRIDGES FOR THE YEAR 1960

BRIDGE	Draw-tenders' Salaries	Mechanics' Wages	Material	Repair Bills	Supplies, Utilities, Etc.	Total
Charlestown	$22,701 28	$4,084 59	$27 00	$278 50	$1,343 95	$28,435 32
Chelsea Street	62,550 52	1,858 24	10 45	58 00	762 21	65,239 42
Congress Street	45,936 78	3,528 60	97 87	91 05	641 07	50,295 37
Malden	68,054 73	2,447 41	112 68	65 00	739 25	71,419 07
Andrew P. McArdle	63,658 28	3,351 77	272 91	364 23	1,151 18	68,798 37
Northern Avenue	63,929 23	6,874 15	1,239 48	518 95	2,014 93	74,576 74
Summer Street (Fort Point Channel)	50,597 55	6,554 45	699 60	—	601 38	58,452 98
Summer Street (L Street) (Reserved Channel)	49,674 38	5,061 09	359 75	215 62	448 39	55,759 32
Totals	$427,102 75	$33,760 30	$2,819 74	$1,591 35	$7,699 36	$472,976 50

TABLE 8

WATERBORNE TRAFFIC THROUGH DRAWBRIDGES, 1960

BRIDGE	Steamers	Tugs	Barges	Pleasure Craft	All Others	Total Vessels	Total Cargoes	Total Openings
Charlestown	0	0	0	0	2	2	2	4
Chelsea Street	448	4,062	1,409	0	115	6,034	945	2,613
Congress Street	47	433	104	18	72	674	90	326
Malden	11	574	484	345	11	1,425	263	949
McArdle	670	6,384	1,313	1	770	9,138	1,075	3,952
Northern Avenue	46	1,170	171	21	106	2,114	248	1,140
Summer Street (Fort Point Channel)	45	429	147	0	4	625	90	287
Summer Street (Reserved Channel)	0	192	105	456	3	756	54	636
Totals	1,267	13,244	3,733	841	1,083	20,768	2,767	9,907

APPENDIX E

SANITARY DIVISION

TABLE I

PAYMENTS TO REFUSE COLLECTION CONTRACTORS

	District	Contractor	Monthly Contract Price	Total Payments
1A	Charlestown	Jeffries Disposal Corporation	$5,500	$66,000
1B	North and West Ends	Ward General Contracting Company	12,200	146,400
1C	Back Bay	Dooley Brothers, Inc	4,200	50,400
1D	Stuart	James A. Freeney, Inc	2,940	35,280
1E	South End	United Contracting Company, Inc., of Boston	6,550	78,600
2	Jamaica Plain	J. J. Moore Company, Inc	11,369	136,428
3	Dorchester (North)	Dooley Brothers, Inc	24,630	295,560
4	Brighton	F. J. Cavaliere & Co., Inc	14,499	173,988
5	South Boston	J. F. Ryan, Inc	11,990	143,880
6	West Roxbury	Marinucci Brothers & Co., Inc	11,990	143,880
7	Dorchester (South)	Dooley Brothers, Inc	27,430	329,160
8	Hyde Park	Dooley Brothers, Inc	6,690	80,280
9	East Boston	Jeffries Disposal Corporation	9,800	117,600
10A	Elm Hill	W. J. Banfield Corporation	4,998	59,976
10B	Dudley	Carriere Construction Company	7,500	90,000
10C	Mission Hill	United Contracting Company, Inc., of Boston	7,300	87,600
10D	Roxbury	James A. Freaney, Inc	7,460	89,520
	Total			$2,124,552
	PAYMENTS FOR RENTAL OF DUMPS			
Saugus		Dewey E. Daggett	$2,000	$24,000
	Total Payments to Contractors for Refuse Collection and Hire of Dump			$2,148,552

TABLE 2

EXPENDITURES

EXPENDITURES IN 1960		
Payments to refuse collection contractors		$2,124,552 00
Payments for rental of Saugus Dump		24,000 00
Total collection contract and dump rental payments		$2,148,552 00
Payroll totals were as follows		
Administrative and General Services	$58,892 80	
Collection supervision	266,773 90	
Street cleaning (January to June)	879,020 44	
Shops and storehouse (January to June)	61,436 55	
Special cleaning (Dempster-Dumpster, market and alleys)	247,321 10	
		151,344 79
Disposal:		
Incinerator	$353,838 29	
Dumps	50,392 10	
		404,230 39
Total payroll		$1,917,675 18
Overtime payrolls were as follows:		
Collection, supervision, and special cleaning	$11,502 38	
Street cleaning (January to June)	14,329 64	
Disposal—incinerator and dumps	33,208 32	
Total overtime payrolls		$59,040 14
Total Sanitary Division payroll		$1,976,715 52
Incinerator operation and maintenance costs (other than labor)		$60,770 04
Payments on other contracts		9,668 86
Supplies and materials (other than incinerator)		20,190 80
Miscellaneous		6,188 46
Grand total of expenditures		$4,222,085 68

TABLE 3

SOUTH BAY INCINERATOR PERFORMANCE

EXPENDITURES

Personal services	$339,483 60	
Contractual services for maintenance of incinerator, including utilities	22,491 04	
Supplies and materials for operation of incinerator excluding fuel oil	15,772 83	
Fuel oil	5,452 26	
Insurance costs	1,537 08	
Equipment	630 90	
Maintenance costs and depreciation:		
Charges for three residue trucks, one jeep, and one bulldozer	25,046 25	
Total operational cost	$410,413 96	
Loan amortization	429,650 00	
Total chargeable expenditures for 1960		$840,063 96

PERFORMANCE

The South Bay Incinerator served an area with a population of approximately 380,000 during 1960.

Source and amount of refuse received at incinerator:

Contractors	111,514 tons	
Sanitary Division, dumpsters	3,391 tons	
Sanitary Division, alley service	1,726 tons	
Sanitary Division, market detail	10,311 tons	
City Hospital	955 tons	
Private dumpers	539 tons	
Total tonnage from all sources	128,436 tons	
Revenue received from private dumpers		$3,005 00

OPERATIONAL DATA

$\frac{\$410,413\ 96}{128,436} = \$3.20$ per ton cost for incineration.

$\frac{\$410,413\ 96}{380,000} = \$1.08$ per capita cost for incineration excluding loan amortization.

$\frac{\$840,063\ 96}{380,000} = \$2.21$ per capita cost for incineration including loan amortization.

$\frac{\$410,413\ 96}{642,180} = \$\ .64$ per cubic yard cost for incineration excluding loan amortization.

$\frac{\$840,063\ 96}{642,180} = \$1.31$ per cubic yard cost for incineration including loan amortization.

$\frac{128,436 \times 2,000}{380,000} = 676$ pounds of refuse per capita.

TABLE 4

SOUTH BAY INCINERATOR TONNAGE BURNED

	Contractor	Private	Alley	Dumpster	Market	Hospital
January	7,997.19	13.44	153.81	263.49	1,103.80	51.76
February	8,148.76	58.32	164.84	281.33	1,034.40	121.23
March	9,110.23	25.73	193.17	286.86	931.30	120.84
April	9,174.03	92.48	112.94	296.60	1,166.45	154.94
May	9,683.70	29.34	137.84	305.37	1,026.60	109.27
June	9,921.11	49.29	163.26	267.39	1,072.80	105.66
July	7,963.21	34.58	123.96	270.13	945.50	109.27
August	9,741.74	56.72	163.59	331.76	643.74	109.20
September	9,976.64	43.44	114.51	296.12	628.19	72.59
October	9,970.20	49.38	120.70	304.62	586.59	.....
November	9,454.16	44.52	123.23	243.00	567.90	.....
December	10,372.75	41.64	154.49	244.53	603.90	.....
Totals	111,513.72	538.88	1,726.34	3,391.20	10,311.17	954.76

Gross over-all tonnage received 128,436.07.

TABLE 5

FISCAL ACCOUNT OF THE SOUTH BAY INCINERATOR FOR 1960

	Dumping Fees	Dump Ticket Sales	Total Revenue	Deposits with City Collector
January	$48 75	$25 00	$73 75	—
February	312 65	50 00	362 65	$73 75
March	135 90	—	135 90	362 65
April	161 75	300 00	461 75	597 65
May	150 75	—	150 75	—
June	240 00	—	240 00	150 75
July	195 00	25 00	220 00	240 00
August	365 25	—	365 25	220 00
September	221 25	—	221 25	365 25
October	231 05	—	231 05	427 80
November	287 50	—	287 50	175 75
December	230 50	25 00	255 50	391 75
Total	$2,580 35	$425 00	$3,005 35	$3,005 35

TABLE I

SEWERAGE WORKS CONTRACTS, 1960

LOCATION	Started	Finished	Contractor	Length in Feet	Character	Amount Expended in 1960
WEST ROXBURY						
Glenellen road, between Fairlane road and Stimson street, and minor sewerage works in Salman street and Bryant road.	Dec. 9, 1959	May 9, 1960	Latin Construction Co., Inc.	485.00 287.00	10″ and 12″ pipe surface drain.... 10″ catch-basin drain 1 manhole 21 catch basins	$12,379 33
Meyer street and outlet in private land and minor sewerage works in Aldwin road.	Sept. 28, 1959	Oct. 23, 1959	N. Bevilacqua & Son.....		Final payment only.....	503 17
Meyer street, from Organ Park street to a point 350 feet northwesterly; Meyer court, from Meyer street to a point 120 feet northwesterly.	Nov. 23, 1959	Dec. 5, 1959	Roslindale Contracting Co.		Final payment only.....	4,997 25
Maplewood street, between Curlew street and Searle road.	July 6, 1959	Sept. 15, 1959	Latin Construction Co., Inc.		Final payment only.....	427 71
Vogel street, between Crosstown avenue and Stimson street, and minor sewerage works in Canterbury street.	June 29, 1959	July 22, 1959	N. Bevilacqua & Son.....		Final payment only.....	159 32
Salman street, West Roxbury (Crosstown avenue to Stimson street), and minor sewerage works in Beach street, Lodgehill road, Danny road, all in Hyde Park, and Macullar road, West Roxbury.	July 5, 1960	Aug. 17, 1960	Civitarese & DiTullio Construction Co., Inc.	562.78 561.35 225.00	10″ pipe sewer..... 10″ pipe surface drain 10″ catch-basin drain 6 manholes 12 catch basins	9,450 83
Grandview street, and outlet in private land to Winton street, and minor sewerage works in June street.	Dec. 11, 1957	April 29, 1958	G. & F. Construction Co...		Final payment only.....	403 44
Sewerage and water works in Belle avenue, (part) and sewerage works in Northdale road (part) and Oakmere street.	Not started		Anthony Musto.....	No const.	Advertising only.....	18 50
Sewerage works in Caledonian avenue (part) and sewerage and water works in Gladstone street (part) and Goff street (part), West Roxbury, Hyde Park, and East Boston.	Nov. 11, 1960	Dec. 6, 1960	N. Bevilacqua & Son, ...	483.00 286.00 231.00	10″ pipe sewer..... 12″ pipe surface drain 10″ pipe surface drain 7 manholes	1,132 70

TABLE I

SEWERAGE WORKS CONTRACTS, 1960 — Continued.

Location	Started	Finished	Contractor	Length in Feet	Character	Amount Expended in 1960
BRIGHTON						
Soldiers Field place	July 19, 1960	Sept. 1, 1960	Charles & Louis Construction Co., Inc.	849.00 179.00 245.00 219.00 241.00 120.00	12″ and 10″ pipe sewer 36″ pipe surface drain 30″ pipe surface drain 27″ pipe surface drain 24″ pipe surface drain 10″ catch-basin drain 12 manholes 5 catch basins	$27,002 78
DORCHESTER						
Banfield avenue	Sept. 11, 1959	Sept. 25, 1959	Roslindale Contracting Co.		Final payment only	376 34
Minor sewerage works in Manchester street, Dania terrace, Dania street, Jamestown terrace, Constitution road, Viking terrace and Faunce road.	April 8, 1959	May 15, 1959	P. R. B. Construction Co., Inc.		Final payment only	190 79
Enterprise street, Clapp street at Enterprise street, and Massachusetts avenue at Clapp street.	Aug. 11, 1959	Oct. 13, 1959	Latin Construction Co		Final payment only	974 29
Sewerage works in Itasca street (part), sewerage and water works in Jo-Anne terrace.	Sept. 6, 1960	Oct. 4, 1960	Charles & Louis Construction Co., Inc.	437.00 277.00 275.00	12″ pipe surface drain 10″ pipe surface drain 10″ pipe sewer 7 manholes 7 catch basins	10,890 42
HYDE PARK						
Bradlee street, between Safford and Tacoma street, Tacoma street, from Bradlee street to 100 feet northeasterly.	Dec. 2, 1958	April 13, 1959	Roslindale Contracting Co.		Final payment only	215 38
Bradlee street, between Collins street and Tacoma street, and minor sewerage works in Metropolitan avenue.	Oct. 20, 1959	Dec. 8, 1959	Latin Construction Co		Semifinal payment only	533 52
Windham road, between Sherrin street and Dale street.	Nov. 3, 1959	Dec. 21, 1959	Charles & Louis Construction Co., Inc.		Final payment only	4,941 27

SEWERAGE WORKS CONTRACTS, 1960 — Concluded.

Location	Started	Finished	Contractor	Length in Feet	Character	Amount Expended in 1960
HYDE PARK, Continued						
Meadow road	Sept. 2, 1959	Sept. 18, 1959	C. Russo, Inc.		Final payment only	$276 90
Child street, from Linwood street 400 linear feet southwesterly, and Child street, between Chestnut street and Gordon avenue, and outlet in private land.	June 11, 1959	Aug. 21, 1959	Mystic Construction Co.		Final payment only	386 05
Tacoma street, between Bradlee street and Chapel road.	Sept. 29, 1959	Oct. 21, 1959	R. A. Buccella & Sons		Final payment only	179 79
Manion road, from existing manhole to Westminster street, and Minor sewerage works in Westminster street, Metropolitan avenue, and Morris road.	July 23, 1959	Sept. 5, 1959	N. Bevilacqua & Son		Final payment only	296 33
Greenbrook road, between Chestnut street and Austin street.	Sept. 8, 1959	Oct. 17, 1959	Mario Corsi Co.		Final payment only	127 81
Braeburn road (part) and Lawton street	Oct. 31, 1960	Dec. 27, 1960	Anthony Musto	1,014.00	12″ pipe surface drain 8 manholes 8 catch basins 1 drop inlet	4,940 20
ROXBURY						
Sewerage works in Alley 933, Roxbury, and minor sewerage works in West Roxbury.	Jan. 8, 1960	May 3, 1960	Mystic Construction Co.	435.00 63.00	10″ catch-basin drain 10″ pipe surface drain 12 catch basins 2 manholes 5 drop inlets	15,979 47
Bickford street, between Heath street and Centre street.	Aug. 11, 1959	Nov. 23, 1959	Susi & DeSantis Co., Inc.		Final payment only	1,347 96
CITY PROPER						
Hereford street, between Back street and Beacon street.	July 10, 1959	Nov. 13, 1959	Salan & Pecci Construction Co., Inc.		Final payment only	11,749 82
Construction of twin 30″ inverted siphon across Prudential Site.	Aug. 14, 1959	Not finished	Paccila Brothers Corporation.		Approaching completion	166,939 12
Engineering services Construction of inverted siphon across Prudential Life Insurance Company's premises.	Nov. 26, 1958	Not finished	Camp, Dresser and McKee		Engineering services	1,670 98
Totals				1,512.00		$203,894 43

APPENDIX F

SEWER DIVISION

TABLE 2

SEWER CONSTRUCTION, 1960

DISTRICTS.	Total Lengths Built During Twelve Months Ending December 31, 1960.	Lengths Removed or Abandoned During Twelve Months Ending December 31, 1960.	Additional Lengths for the Twelve Months Ending December 31, 1960.	
	Linear Feet	*Linear Feet*	*Linear Feet*	*Miles*
City Proper	.....	.....	.....	.....
Roxbury	63	970	—917	—0.17
South Boston	.....	.....	.....	.....
East Boston	178	.....	178	0.03
Charlestown	.....	.....	.....	.....
Brighton	1,733	.....	1,733	0.32
West Roxbury	2,346	.....	2,346	0.44
Dorchester	989	.....	989	0.19
Hyde Park	1,834	.....	1,834	0.35
Totals	7,143	970	6,226	1.18

SUMMARY OF SYSTEM

	Miles.	
Common sewers and surface drains built previous to January 1, 1960	1,302.01	
Common sewers and surface drains built between January 1 and December 31, 1960	1.18	
Common sewers and surface drains built ending December 31, 1960		1,303.19
City of Boston intercepting sewers connecting with metropolitan sewers to December 31, 1960	6.81*	
City of Boston main drainage intercepting sewers to December 31, 1960	24.12*	
		30.93
Grand total of common and intercepting sewers to December 31, 1960		1,334.12
Total mileage of streets containing sewerage works to January 1, 1961	720.61	

* No change during 1960.

APPENDIX G

WATER DIVISION

TABLE 1

APPROPRIATIONS, EXPENDITURES AND REVENUE

Budget appropriation		$2,804,000 00
Amount expended		5,983,171 82
Amount collected from all sources		6,136,198 46
Amount expended from all sources		6,115,136 26
Surplus		$21,062 20
Balances from 1959:		
Receipts	$54,043 89	
Appropriation	71,318 28	
		$125,362 17
Receipts:		
Water Rates and Services	$6,072,041 96	
Tax Titles, Water	64,156 50	
		6,136,198 46
		$6,261,560 63
Expenditures:		
Pensions and Annuities	$238,937 80	
Water Service	2,076,807 09	
Refund	2,286 65	
MDC Water Assessment	3,386,461 28	
Collecting, Water	164,246 00	
Automotive, Water	114,433 00	
		$5,983,171 82
		$278,388 81
Transfer of 1959 Surplus		54,043 89
		$224,344 92
Carried Forward to 1961 Water Division		203,282 72
Surplus 12/31/60		$21,062 20

The metropolitan assessment for 1960 amounted to $3,386,461.28 at the rate of $80 per million gallons, an increase of $147,150.24 over the assessment of 1959, based on the $80 per million gallon rate.

Total amount billed for 1960	$6,304,992 74
Total amount collected for 1960 bills, use as of December 31, 1960	4,557,387 94
Total amount abated for 1960 bills, as of December 31, 1960	7,308 90
Total amount collected in 1960 on bills rendered prior to 1960	409,385 80

TABLE 2

METER WORK DONE DURING THE YEAR 1960

MAKE	Applied	Discontinued	METER CHANGES		Tested in Shop	Repaired in Service	Repaired in Shop	Reset	Junked
			Out	In					
Hersey	527	1,268	4,986	6,621	547	1,000	547	1,502	118
Watch Dog	28	60	1,009	71	141	151	141	4	79
King	1	3	28	2	1	.....	1	.....	30
Worthington	.....	4	67	.....	.....	1	.....	.....	77
American	.....	.....	.....	.....	.....	.....	.....	.....	.....
Federal	.....	.....	1	.....	.....	.....	.....	.....	1
Sparling	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nash	.....	.....	1	.....	.....	.....	.....	.....	.....
Arctic	1	.....	5	4	7	4	7	2	.....
Trident	.....	.....	1	.....	.....	2	.....	.....	.....
Lambert	.....	.....	.....	.....	.....	.....	.....	.....	.....
Empire	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crown	.....	1	4	.....	.....	.....	.....	.....	1
Keystone	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pitt	.....	.....	.....	.....	.....	.....	.....	.....	.....
Connection pieces	.....	.....	1,327	913	.....	.....	.....	.....	.....
Total	557	1,336	7,429	7,611	696	1,158	696	1,508	306

TABLE 3

METERS IN SERVICE, DECEMBER 31, 1960

DIAMETER IN INCHES

MAKE	⅝	¾	1	1½	2	3	4	6	8	10	12	Total
Hersey	73,915	5,435	2,474	1,536	1,041	366	431	127	34	10	....	85,369
Watch Dog	5,785	185	268	748	361	223	71	....	....	....	....	7,641
King	265	7	3	8	3	....	....	....	....	....	....	286
Worthington	793	6	.....	6	3	....	....	....	....	....	....	808
American	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
Federal	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
Crown	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	3
Nash	5	1	.....	.....	1	....	....	....	....	....	....	7
Lambert	2	.....	.....	.....	.....	1	1	....	....	....	....	4
Arctic	.....	1	.....	15	15	13	....	....	....	....	....	44
Trident	1	.....	.....	.....	.....	18	7	....	....	....	....	26
Keystone	2	.....	.....	.....	.....	1	....	....	....	....	....	3
Empire	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Neptune	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sparling	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	80,829	5,635	2,745	2,313	1,425	623	511	127	34	10	....	94,252

TABLE 3—Continued

METERS IN SERVICE, DECEMBER 31, 1960

DIAMETER IN INCHES

MAKE	⅝	¾	1	1½	2	3	4	6	8	10	12	Total
Connection pieces	2,258	203	105	40	41	15	3	7	5	....	....	2,678
City of Boston, connection pieces	49	4	27	82	165	69	26	7	5	1	10	441
Total	2,307	207	132	122	206	84	29	14	10	1	10	3,119

TABLE 4
METERS IN SHOP, DECEMBER 31, 1960

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hersey Disc	782				10	8	2	1				803
Hersey Compound Train						8	4					12
Hersey Detector							7	8	8			23
Watch Dog					3	3						6
Total	782				13	19	13	9	8			844

TABLE 5
METERS REPAIRED IN SHOP IN 1960

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hersey	205	19	29	120	137	32	5					547
Watch Dog				55	76	9	1					141
King				1								1
Arctic				4	3							7
Total	205	19	29	180	216	41	6					696

TABLE 6
METERS REPAIRED AND REBUILT AT FACTORY IN 1960

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hersey	482											482
Total	482											482

TABLE 7
METERS PURCHASED NEW IN 1960

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hersey	5	30	30	50	15	15	5	2				152
Total	5	30	30	50	15	5	5	2				152

TABLE 8

METERS RESET IN 1960

MAKE	DIAMETER IN INCHES											
	5/8	3/4	1	1½	2	3	4	6	8	10	12	Total
Hersey	1,381	68	23	14	14	2	....	....	....	....	....	1,502
Watch Dog	.....	.....	.....	.....	3	1	....	....	....	....	....	4
Arctic	.....	.....	.....	.....	2	....	....	....	....	....	....	2
Total	1,381	68	23	14	19	3	....	....	....	....	....	1,508
Occupancy	.....	.....	.....	.....	.....	....	....	....	....	....	....	181
Connection Piece (Out)	.....	.....	.....	.....	.....	....	....	....	....	....	....	1,327

TABLE 9

METERS CHANGED IN 1960 — METERS TAKEN OUT

MAKE	DIAMETER IN INCHES											Total
	5/8	3/4	1	1½	2	3	4	6	8	10	12	
Hersey	4,213	298	189	117	123	26	13	4	3	....	....	4,986
Watch Dog	804	19	41	68	60	17	....	....	....	....	....	1,009
King	26	.....	.....	2	.....	....	....	....	....	....	....	28
Worthington	66	.....	.....	.....	.....	....	1	....	....	....	.....	67
American	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Federal	1	.....	.....	.....	.....	....	....	....	....	....	....	1
Keystone	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Arctic	.....	.....	.....	3	1	1	....	....	....	....	....	5
Trident	.....	.....	.....	.....	.....	1	....	....	....	....	....	1
Lambert	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Empire	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Nash	1	.....	.....	.....	.....	....	....	....	....	....	....	1
Crown	1	.....	.....	1	1	....	1	....	....	....	....	4
Sparling	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Total	5,112	317	230	191	185	46	15	4	3	....	....	6,102

TABLE 10

METERS CHANGED IN 1960 — METERS PUT IN

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hershey	5,682	346	229	163	145	35	18	3	....	....	....	6,621
Watch Dog	.....	1	.....	51	16	2	....	....	....	....	....	70
King	.....	.....	.....	2	.....	....	....	....	....	....	....	2
Arctic	.....	.....	.....	3	1	....	....	....	....	....	....	4
Total	5,682	347	229	219	162	37	18	3	....	....	....	6,697

TABLE 11

METERS REPAIRED IN SERVICE IN 1960

MAKE	Defaced, Broken Clocks	Spindle Leaks	Coupling Leaks	New Train	Broken Gears	Examination	Repair Train	Total
Hersey	237	234	39	4	.....	486	.....	1,000
Watch Dog	57	46	7	.....	1	40	.....	151
Worthington	.....	.....	.....	.....	.....	1	.....	1
Arctic	2	1	.....	.....	.....	1	.....	4
Trident	1	.....	.....	.....	.....	1	.....	2
Total	297	281	46	4	1	529	.....	1,158

TABLE 12

METERS APPLIED IN 1960

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hersey	397	14	15	52	29	7	12	1	....	....	....	527
Watch Dog	.....	.....	.....	14	9	5	....	....	....	....	....	28
Arctic	.....	.....	.....	1	.....	....	....	....	....	....	....	1
King	.....	.....	.....	1	.....	....	....	....	....	....	....	1
Total	397	14	15	63	38	12	12	1	....	....	....	557

Meters applied on old service	6
Meters applied on new service	551
Total	557

TABLE 13
METERS DISCONTINUED IN 1960

MAKE	DIAMETER IN INCHES											Total
	⅝	¾	1	1½	2	3	4	6	8	10	12	
Hersey	1,069	102	38	23	20	4	7	2	3	....	....	1,268
Watch Dog	44	1	5	4	5	....	1	....	....	....	....	60
King	1	.....	1	1	.....	....	....	....	....	....	....	3
Worthington	4	.....	.....	.....	.....	....	....	....	....	....	....	4
American	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Arctic	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Federal	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Crown	.....	.....	.....	.....	1	....	....	....	....	....	....	1
Trident	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Nash	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Sparling	.....	.....	.....	.....	.....	....	....	....	....	....	....	.....
Total	1,118	103	44	28	26	4	8	2	3	....	....	1,336

Permanent 357 Connection Pieces 913 Vacancy 66

TABLE 14
REASON FOR METER CHANGE IN YEAR 1960

MAKE	Do Not Register	Coupling Leak	Spindle Leak	Department Test	Special Test	Noisy Meter	Set Backwards	Clock Broken	No Force	Frozen	Total
Hersey	2,906	48	522	112	38	74	39	112	203	27	4,081
Watch Dog	630	12	107	10	2	4	14	29	16	1	825
Worthington	57	1	12	.....	.....	.....	.....	.....	2	.....	72
King	18	.....	4	.....	.....	.....	.....	.....	.....	.....	22
American	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Federal	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Empire	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keystone	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arctic	2	.....	.....	.....	.....	.....	.....	1	.....	.....	3
Trident	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lambert	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nash	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Crown	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Total	3,618	61	645	122	40	78	53	142	221	28	5,008

TABLE 15
METERS JUNKED IN 1960

MAKE	DIAMETER IN INCHES											
	⅝	¾	1	1½	2	3	4	6	8	10	12	Total
Hersey	99	9	9				1					118
Watch Dog	73	4			2							79
King	28	1	1									30
Worthington	77											77
American												
Federal	1											1
Lambert												
Trident												
Crown					1							1
Nash												
Arctic												
Total	278	14	10		3		1					306

NOTE: Meters lost in service during the year 1960, 250.

TABLE NO. 16

Showing Length of Water Pipes and Connections Owned and Operated by Public Works Department, Water Division, Water Services, and Number of Valves in Same, December 31, 1960

	Diameter of Pipe in Inches.															
	48	42	40	36	30	24	20	16	12	10	8	6	4	3	2	Total
Length owned and operated December 31, 1959	55,595	16,191	9,599	30,238	75,205	89,675	108,223	380,499	1,865,363	446,984	1,391,459	911,392	62,504	11,904	6,311	5,461,142
Gate valves in same	26	4	5	31	50	78	72	791	5,304	1,570	5,046	3,036	550	18	18	16,599
Air valves in same	60	5	10	35	113	85	53	105	65	1	5	.....	.....	1	.....	538
Blowoffs in same	11	5	6	11	33	37	52	77	166	40	203	141	.....	9	.....	791
Lengths laid and relaid during 1960	1,194	.....	.....	.....	.....	.....	.....	863	437	.....	7,540	475	295	.....	.....	10,804
Gate valves in same	.....	.....	.....	2	.....	.....	.....	.....	3	.....	14	1	1	.....	.....	21
Air valves in same	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Blowoffs in same	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lengths abandoned in 1960	504	.....	790	.....	.....	.....	30	946	98	.....	621	1,569	175	.....	.....	4,733
Gates abandoned in 1960	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2	4	1	.....	.....	9
Air valves abandoned in 1960	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Blowoffs abandoned in 1960	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lengths owned and operated December 31, 1960, including high pressure fire service	56,285	16,191	8,809	30,238	75,205	89,675	108,193	380,416	1,865,702	446,984	1,398,378	910,298	62,624	11,904	6,311	5,467,213
Gate valves in same	26	4	5	31	50	78	72	791	5,307	1,570	5,058	3,033	550	18	18	16,611
Air valves in same	60	5	10	35	113	85	53	105	65	1	5	.....	.....	1	.....	538
Blowoffs in same	11	5	6	11	33	37	52	77	166	40	203	141	.....	9	.....	791
High pressure fire service	.....	.....	.....	.....	.....	.....	20,140	46,511	31,756	.....	.....	.....	.....	.....	.....	98,407

1,035.5 miles in distribution system, including high pressure fire service.
18.64 miles in high pressure fire service.

TABLE 17

TOTAL NUMBER OF HYDRANTS IN SYSTEM, DECEMBER 31, 1960

HYDRANTS	Lowry	Boston Lowry	Boston Post	Ordinary Post	Batchelder and Pinneran Post	Ludlow Post	Chapman Post	Darling Post	Matthews Post	Boston Hydrant	Mueller Post	A. P. Smith Post	Total
Public, December 31, 1959	426	240	2,042	1,938	6,812	2	—	13	—	67	22	108	11,670
Private, December 31, 1959	33	5	29	126	17	13	56	—	4	111	—	—	394
Added during 1960	—	—	—	—	5	—	—	—	—	—	53	7	65
Abandoned during 1960	3	—	15	25	26	—	—	—	—	—	—	—	69
Total Public, December 31, 1960	423	240	2,027	1,913	6,791	2	—	13	—	67	62	115	11,653
Total Private, December 31, 1960	33	5	29	126	17	13	56	—	4	111	—	—	394

Total hydrants in service, December 31, 1959	12,536
Total hydrants added during 1960	65
Total hydrants abandoned during 1960	69
Total hydrants in service, December 31, 1960	12,060
High pressure fire hydrants in service 1960	469
Total hydrants (all kinds) in service, December 31, 1960	12,529

TABLE 18

COST OF REPLACEMENT OF MAIN PIPE, 1960

Area	District	STREET	Size (Inches)	Length (Feet)	Contract Amount	Pipe Stock	Total Cost	CONTRACTOR
1	1	Warren Bridge	8 W 20	30	.....	$300.00	$300.00	By City of Boston
1	9	Meridian street	12 W 12	98	.....	.....	.....	Perini Company
1	10	Huntington avenue	8 W 8	46	.....	.....	.....	McClean-Grove Company
2	2	Park Lane	6 W 8	588	$1528.80	2,336.80	3,865.60	Great Northern Construction Company
2	4	Dustin road	6 W 8	97	252.20	437.75	689.95	Great Northern Construction Company
2	6	Joyce Kilmer park	16 W 16	692.5	.....	.....	.....	Ventura Company
2	8	Danny road	6 W 8	192	499.20	643.20	1,937.55	Great Northern Construction Company
2	8	Readville street	6 W 12	339	881.40	2,832.98	3,714.38	Great Northern Construction Company
3	7	Blue Hill avenue	16 W 16	170	.....	.....	.....	Massachusetts Public Works Department
		Totals	.....	2,252.5	$3,161.60	$6,550.73	$10,507.48	

TABLE 19

COST OF EXTENSION OF MAIN PIPE, 1960

Area	District	Street	Size (Inches)	Length (Feet)	Contract Amount	Pipe Stock	Total Cost	Contractor
1	1	Boston Common	48	1,194	.....	.....	.....	Foundation Co.—Sub., La Centra Co.
1	1	Ferry street	8	280	.....	.....	.....	Perini Company
1	1	Ferry street	8	149	.....	.....	.....	Perini Company
1	9	Gladstone street	8	81	$233.28	$271.35	$504.63	N. Bevilacqua & Son
2	2	Meyer street	8	501	1,212.42	2,126.80	3,339.22	Great Northern Construction Company
2	4	Soldiers Field place	8	1,038	2,786.79	4,632.50	7,419.29	Charles & Louis Construction Company
2	6	Kingsland road	8	158	599.53	529.30	1,128.83	Mystic Construction Company
2	6	Macullar road	8	261	983.59	893.00	1,876.59	Mystic Construction Company
2	6	Salman street	8	521	1,604.03	2,138.35	3,742.38	Mystic Construction Company
2	8	Danny road	8	473	325.47	830.80	1,156.27	Great Northern Construction Company
2	8	Goff street	8	373	800.22	1,521.55	2,321.77	N. Bevilacqua & Son
2	8	Windham road	8	1,617	3,913.14	7,241.35	11,154.49	Great Northern Construction Company
3	5	E street	8	180	.....	.....	.....	J. Freaney Co., Inc.
3	5	D street	8	180	.....	.....	.....	J. Freaney Co., Inc.
3	7	Jo-Anne terrace	4	295	825.05	473.65	1,298.70	Charles & Louis Construction Company
3	7	Prospect park	8	291	775.00	1,149.30	1,924.30	A. Piatelli Company
3	7	Hallet street	6	475	1,666.00	1,295.00	2,961.00	J. Appel
3	7	Delhi street	8	308.5	709.55	1,070.80	1,780.35	Roslindale Contracting Company
3	7	Slocum road	8	176	440.00	609.60	1,049.60	J. Capone
		Totals	.....	8,551.5	$16,874.07	$24,783.35	$41,657.42	

TABLE 20

WATER BUSINESS OFFICE

Main pipe positions received	4
Domestic service applications	576
Wire pipe applications	64
Special meter tests	40
Hydrant permits issued	13
Repair deposits received	101
Miscellaneous	24
Shutting off and turning on water:	
Shut-offs for repairs	5,288
Turned on after repairs	4,695
Shut-off for vacancy	522
Turned on for occupancy	121
Shut-off for nonpayment	22
Shut-off for waste	49
Turned on after waste	7
New service pipes turned on	650
	12,176