SB 483

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1916

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DEVELOPMENT OF EAST POTOMAC PARK

LETTER FROM THE SECRETARY OF WAR AD INTERIM

TRANSMITTING

A REPORT OF THE OFFICER IN CHARGE OF
PUBLIC BUILDINGS AND GROUNDS, PRE-
SENTING A COMPREHENSIVE PLAN FOR
THE DEVELOPMENT OF EAST POTOMAC
PARK AS A PUBLIC RECREA-
TION GROUND

U. S. Office of public buildings & grounds.

APRIL 20, 1916.—Referred to the Committee on Appropriations
and ordered to be printed, with illustrations

WASHINGTON
GOVERNMENT PRINTING OFFICE
1916

SB483

W3P3

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DEPARTMENT OF
EAST POTOMAC PARK

LETTER FROM
THE SECRETARY OF THE DEPARTMENT

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LETTER OF TRANSMITTAL.

WAR DEPARTMENT,
Washington, February 18, 1916.

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit a letter of the Chief of Engineers, United States Army, dated February 18, 1916, inclosing a report by the officer in charge of public buildings and grounds, dated February 11, 1916, presenting a comprehensive plan for the development of East Potomac Park as a public recreation ground.

I recommend that the letter and the report, together with the illustrations, be printed.

Very respectfully,

H. L. SCOTT,
Secretary of War ad interim.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, February 18, 1916.

From: The Chief of Engineers.

To: The Secretary of War.

Subject: Improvement of East Potomac Park.

1. I have the honor to transmit a report of the officer in charge of public buildings and grounds, dated February 11, 1916, presenting a comprehensive plan for the development of East Potomac Park as a public recreation ground, together with an estimate of the cost of executing that plan.

2. This plan has been prepared in the office of public buildings and grounds, which is well equipped for the preparation of such a project. It has been the subject of much thought and has been developed with great care. It has progressed under the supervision of the national Commission of Fine Arts, and has the approval of that body as a preliminary study.

3. While I am not prepared to pass at this time upon all of the details of the proposed development, I am in favor of the plan as a whole. The estimates of costs appear proper, and the plan is considered as a preliminary study only, and will be subject to further study when the consideration of its details is undertaken.

4. The buildings of the Washington district engineer depot, in the northeast corner of the park, adjacent to the railroad embankment, are shown on plan of the proposed development, but they will not be removed unless their removal is specially considered and authorized.

5. It is recommended that the report herewith be transmitted to Congress with a recommendation that it be printed, with the illustrations.

DAN C. KINGMAN,
Chief of Engineers, United States Army.

DEVELOPMENT OF EAST POTOMAC PARK.

OFFICE OF PUBLIC BUILDINGS AND GROUNDS,
Washington, February 11, 1916.

From: The officer in charge.

To: The Chief of Engineers, United States Army.

Subject: Improvement of East Potomac Park.

1. In accordance with the general instructions for the preparation of plans for the improvement of areas under charge of this office, and to meet the suggestions made from time to time to the officer in charge of public buildings and grounds by members of the Committee on Appropriations of the House of Representatives during hearings before that committee, I am forwarding herewith a comprehensive plan, for the development of East Potomac Park as a public recreation ground, together with a report on the cost. It is suggested that this report be forwarded to Congress at an early date with the request that it be printed with the illustrations, which are considered an essential part.

2. After careful consideration of the problem of improving East Potomac Park so as to provide outdoor recreation facilities in the National Capital, the following project is proposed:

THE DISTRICT OF COLUMBIA AS THE SEAT OF THE NATIONAL GOVERNMENT.

3. The District of Columbia is devoted almost exclusively to the purposes of the Government. Its population is made up of Government officials or those dependent upon such officials for their support. Washington is neither a manufacturing nor a commercial city; nor can private enterprise ever expect to compete with the Governmental agencies, under the conditions that prevail. The resident population not engaged in any occupation is so small as to be insignificant.

4. The people of Washington, whether actually in Government employ or not, pay (either directly through ownership or indirectly through rent) the average taxation imposed by municipalities throughout the country.

5. Congress in providing for the needs of the District of Columbia is only supplying to citizens of the United States living conditions to which they are entitled according to the present standards of civilization. Properly, also, Congress is expressing in visible ways the dignity of the Government and the power and importance of the Nation. It is a popular but untrue fiction that there is in the District of Columbia a large class of permanent residents for whom the Government is furnishing unusual favors or privileges.

6. It can not be insisted upon too strongly that the one paramount interest in the District of Columbia is the Government interest; and that whatever Congress does here it does for the representatives of

the people of the United States. The very fact that the citizens of the District are not permitted to exercise the right of suffrage sustains the contention that the District exists primarily for the United States. The further fact that they are called upon to pay the usual rate of taxation indicates that they are enjoying no unusual privileges.

7. Congress, therefore, may properly provide for the District of Columbia all those park and recreation features which civilization has come to demand, with the firm assurance that it is providing for its own household instead of conferring a favor on any special body of citizens.

MODERN RECREATION FACILITIES FOR THE PUBLIC USE.

8. Suitable public recreation facilities are now widely recognized as an essential factor in laying the foundations for good citizenship and for the healthful, moral, and physical development of the people. In recent years it has become more and more the duty of municipalities to provide wholesome outdoor recreation for the public in such form as may be readily available for those who can not otherwise have such opportunities. Efforts are being made in many cities, not only to make labor conditions better, but to guide the people after working hours to those recreations which, by experience and popular demand, are found to contribute most to the making of a happy, healthy, and contented community.

9. The dwellings and yards of the vast majority of city dwellers are too cramped for effective healthful recreation, and the ever-increasing tendency to live in tenements or apartments prevents their occupants from indulging in gardening and those other incidental minor outdoor recreations usually available to the inhabitants of houses. The street pavements of the city are the nearest and most convenient spaces that offer any relief to the young, but streets can not, of course, be approved as permanent or satisfactory playgrounds. The so-called commercial amusements, such as theaters, bowling, billiards, pool, dancing halls, and the like, furnish nothing toward the universal natural craving for outdoor recreation. The instinct for play is as fundamental and strong in the human being as it is in the lower forms of life and is limited to no race or class. Whatever form of mental or physical relaxation it may take, it is essential to man's well being.

10. The use of the small neighborhood playground, yet in its infancy, has in the larger cities already become a habit with numbers of our young people in their energetic daily life. One result is that juvenile delinquencies are being lessened, which means, in many cases, merely a wise transfer of expenditure for maintenance of penal institutions and incidental police control to the maintenance and equipment of recreation centers. Some great industrial corporations have found it sound business policy to provide and maintain facilities for indoor and outdoor recreation of their employees. The activities in this direction indulged in by the large universities, colleges, and other schools in behalf of their students are too well known to need more than passing comment, for the public has taken great delight in witnessing their great athletic contests.

PUBLIC PARKS AS SERVICE CENTERS.

11. The open stretches of large public parks are fast becoming service centers with facilities for recreation for the whole community rather than breathing spaces for the fortunate few who reside in their immediate neighborhood, or for those who have private means of conveyance. No city, however well provided with modern physical necessities and conveniences, is now attractive to live in if the comfortable enjoyment by the people of outdoor pastimes and diversions is neglected or denied. In fact, the more these recreations are provided for, the more rapid the expansion of the city and the greater its growth as a successful modern social and economic center. They become civic assets of the first importance. The new charters of some large municipal corporations such as Cleveland, Seattle, Detroit, and St. Louis, have created special departments of public welfare, with supervisory jurisdiction over open-air recreations. In brief, better recreation facilities have become an important feature in progressive municipalities.

PROVISION FOR RECREATION FACILITIES IN CITY PLANNING.

12. The great recognition which city planning has received since the World's Columbian Exposition in 1892 is given not merely because it solves the major utilitarian problems of transportation and other economic features, but because it also recognizes the needs of human welfare and provides accessible recreation centers for the masses, as prime factors in the modern city's industrial and social efficiency. Chicago, Detroit, Boston, Kansas City, Harrisburg, Rochester, Des Moines, Denver, Nashville, St. Louis, and other cities too numerous to mention, are already in the vanguard of this movement and have ambitious plans for broadening their corporate functions in this direction. Public parks, properly equipped for service, are the most practical and economical means of providing all persons with healthful outdoor exercise. From all sections of the country reports are received of increase in appropriations for new or extended parks, and for their better improvement, equipment, and maintenance. Some cities that have lagged behind in this phase of municipal endeavor are now starting in with energy, while the larger cities, like New York, Philadelphia, Boston, and Chicago have spent millions of dollars for this public purpose alone.

13. A trip through South Park or West Park in Chicago, to Revere Beach in Boston, or Belle Isle Park in Detroit, will show the wide range of these municipal endeavors, and the appreciative use made of the facilities provided. For the young there are wading pools and sand boxes, apparatus for swinging and climbing, and an abundance of space for running and playing the children's games, while shelters near at hand for the watchful parents provide convenient and charming spots for their enjoyment. For those of maturer years opportunity is afforded for indulging themselves in the more strenuous exercise of playing the many popular American games in the large open areas equipped for golf, cricket, baseball, and tennis. Drives and walks through shady portions of the parks, along the shores of streams and lagoons, through cool valleys and other picturesquely treated sections, give diversion to those riding or on foot who may wish to withdraw from the exuberant enthusiasm of youthful play.

WASHINGTON'S NEED—A LARGE PUBLIC RECREATION AND SERVICE PARK.

14. The Park Commission of 1901, in its excellent and carefully studied report, states:

While from the 1st of October till about the middle of May the climatic conditions of Washington are most salubrious, during the remaining four and a half months the city is subject to extended periods of intense heat, during which the public business is conducted at an undue expenditure of physical force. Every second year Congress is in session usually until about the middle of July, and not infrequently it happens that by reason of prolonged or special sessions during the hottest portion of the summer the city is filled with the persons whose business makes necessary a more or less prolonged stay in Washington. Singularly enough, up to the present time the abundant facilities which nature affords for healthful and pleasant recreation during heated terms have been neglected, and in this respect Washington is far behind other cities whose climatic conditions demand much less and whose opportunities also are less favorable.

This condition, so frankly observed then, still exists. In the summer the heat, rendered doubly oppressive by the heavy humidity of the Washington climate, is very trying. Under such physical conditions access to the water is probably more appreciated and refreshing than any other form of diversion. Bathing, swimming, and boating are the aquatic recreations indulged in by the more active, while the cool water views are restful and diverting to those who are unable to participate in these lively exercises. Salt-water bathing is not within easy reach of Washingtonians, and the distances to be traveled to reach the nearest points on the shores of Chesapeake Bay or the lower Potomac are deterrents to most of the heads of families in indulging in these opportunities. The upper Potomac, to the lower falls, is dotted during summer days with small water craft. Rock Creek Park and the Zoological Park offer hours of recreation and repose, but the many beauties of these parks are still inaccessible to the great majority of visitors. The capacity of the small municipal bathing pool has not been sufficient to accommodate the more than 100,000 persons who desired to use it during the past season. It has been found necessary at times to divide the bathers into three shifts, and on occasions to turn away hundreds without permitting them to bathe at all. This pool is nothing more than a temporary makeshift until better means can be provided. The constant demands for the use of the public baseball diamonds and tennis courts on the public grounds can not be met, notwithstanding a yearly increase in these facilities. The 11 small playgrounds under the municipal authorities are not sufficient in number to cover even the sectional needs of the city.

15. For the great mass of the people who are obliged to stay in the city practically throughout the year nothing of the sort is easily accessible. Prevented during the hot months from seeking relief at a distance, they would eagerly welcome the opportunities of enjoyment and rest at some conveniently situated, easily accessible service park as other cities have, a park where the family as a whole or individuals could find wholesome mental and physical recreation.

16. Although Washington is not a manufacturing city in the accepted meaning of that term, the Government maintains here great manufacturing establishments, notably the Naval Gun Shops, the

Government Printing Office, the Bureau of Engraving and Printing, and the mail-bag repair shops. The employees in these Government factories need recreation facilities; and their children, who are growing up to take their places, need them still more. This need is the more pressing because, with the growth of the city, the vacant spaces which were available as playgrounds for the former generations are now occupied with buildings.

WASHINGTON'S OPPORTUNITY FOR RECREATION IN EAST POTOMAC PARK.

17. A rare opportunity is now presented for transforming the large flat area east of the railway embankment below the Tidal Basin, commonly called East Potomac Park, into a public recreation field of this type. It is now a part of the park system of the District of Columbia, under the jurisdiction and control of the Chief of Engineers, United States Army, who exercises his supervision through the Engineer officer in charge of public buildings and grounds. This area forms a continuation of Potomac Park, being separated from the latter by the railway embankment. The driveways in Potomac Park have been extended to the lower end of East Potomac Park, and new planting has been arranged to make these roads more attractive. At the same time, the fact that this park is adjacent to South Washington, the one section of the city most in need of recreation places, makes it desirable to utilize the opportunities presented by a large area especially adapted to playgrounds and boating facilities. Fortunately, the area is sufficient, and the means of access are available for the accommodation of certain sports enjoyed by the people of the entire District.

HISTORY OF THE PARK.

18. It is fitting at this point to give a brief history of the transformation of this particular area from an unhealthful, disease-breeding mud flat to its present promising condition, a magnificent attainment which resulted from no haphazard scheme. While its entire development was carried on merely as an incident to the sanitary and harbor requirements of the National Capital, nevertheless it has been in harmony with the plans for the intelligent development of the area to meet the great prospective needs of the city. Even in the very inception of the project it was foretold that a splendid park addition to the city would be the result. This purpose has been fostered by Congress from the beginning.

19. The oldest map of the Potomac River in this vicinity of which there is any record was made by Andrew Ellicot in 1792. This map apparently gives us the earliest authentic information of the topography of the river bed in the vicinity of Washington. The shoals are not indicated, however, only the channels being shown.

20. The next authentic survey of record appears to have been made in 1834 by Lieut. Col. Kearney, of the Corps of Topographical Engineers. Kearney's map shows that at extreme low water there were two shoals near the Long Bridge, the smaller one a short distance below the bridge and about 1,000 feet from the Washington shore; the larger one close to the Virginia channel, crossed by the Long

Bridge, and exposing an area of about 100 acres at extreme low tide. A number of surveys were made from Kearney's time up to about 1880, but nothing definite was accomplished toward the reclamation of the shore areas until 1882.

21. Beginning of work on the main reclamation project in the latter year was undoubtedly accelerated by the disastrous Potomac River flood of 1881, which caused considerable property damage on the river front of the city. A far more imperative reason, however was the condition of the river front of the city which, by that time, had become so bad from a sanitary point of view as to render the adjacent portions of the city almost uninhabitable. For nearly a century flats and marshes had been in gradual process of formation, extending from Observatory Hill to a point about opposite the Arsenal below the Long Bridge. They were caused by deposits of sediment from the river and by the accretion of solid matter from the sewers. The sewer at the foot of Seventeenth Street discharged its contents directly on the nearest flats, then called Kidwell's Meadows. Covered with a dense rank growth of marsh sedges and other aquatic weeds, they were submerged for about one half the time and bare for the other half. In the latter condition they were exposed each day to the direct rays of the sun, and during the summer time produced great discomfort in the adjacent inhabited portions of the city because of the stench arising from the decomposing material. The District Commissioners of that period urged in strongest terms that some decisive action be taken to abate what had become well-nigh an intolerable nuisance. In a report made November 26, 1881, on the improvement of the sanitary condition of the Executive Mansion we find the following:

Aside from the sanitary state of the Executive Mansion itself, and of its immediate drainage work, the problem is complicated by external conditions of which the very serious character has long been recognized. These external causes of insalubrity, affecting not only this building but more or less all that part of Washington which has the same exposure, are due to two or three well-marked defects.

The most glaring and perhaps the most important is the condition of the Kidwell Flats, not far from 1,000 acres of silty deposit of the Potomac which is nearly or quite exposed at low tide, which bears in part a rich aquatic vegetation, and which is a lodging ground for the sewage and other matters with which the waters of the Potomac are fouled.

22. No argument is needed to prove that conditions at that time were offensive and detrimental to public health, and, looking at it from the advanced hygienic standards of the present day, it seems inconceivable that such conditions should have been tolerated for such a long time in the immediate vicinity of the White House.

BEGINNING OF ACTUAL RECLAMATION.

23. It is obvious, therefore, that the sanitary conditions discussed above had an important influence on the project of necessary harbor improvements, and that when reclamation of the flats was undertaken it would be as an economical accessory of the elimination of shoals and the deepening of the channels in the Potomac. The reclamation of the flats by the pumping of the dredged material on them was thus the natural step.

24. In 1882 the Potomac Flats improvement project was definitely undertaken by Congress, and, under liberal annual appropriation throughout succeeding years, the reclamation of the entire area from Observatory Hill to the point opposite the arsenal, comprising in all about 739 acres, was accomplished. The work was divided into three sections, section 1 embracing what is now West Potomac Park, 135 acres; section 2, the present Tidal Basin and its immediate surrounding areas, 277 acres; and section 3, the portion southeast of the railroad embankment, 327 acres—the subject of this report.

CLEARING THE GOVERNMENT'S TITLE TO THE LAND.

25. Inseparably connected with the project of reclamation was the necessity for clearing the areas of all claims of title adverse to the United States. The original act for these improvements made it the duty of the Attorney General to examine all claims of title to the premises to be improved, and to see that the rights of the Government in all respects would be secured and protected, authorizing him also to enter suit in his discretion against all claimants of title under patents which might by mistake or otherwise have been improperly or illegally issued for any part of the marshes or flats within the limits of the proposed improvements. The further injunction was given that no part of the moneys appropriated should be expended upon any place in respect to which the title of the United States was in doubt, or in respect to which any claim adverse to the United States has been made. Extensive and prolonged litigation ensued, but in the final decree the United States Supreme Court sustained all the contentions of the United States as to title, and removed all legal obstacles to the prosecution of the improvements.

THE COST OF THE RECLAMATION OF THIS AREA.

26. The work of reclamation lasted 31 years. The average cost per acre of placing the dredged material was about \$4,450, which for the entire area may be figured at \$1,459,600. The work was done under the supervision of the engineer office having the river improvement in charge. The area to be reclaimed served merely as a convenient place of deposit for the dredged material, an incident to the major operations of channel improvement. The cost to the United States of this park may be said, therefore, to have been nothing as far as the reclamation itself was concerned, for this additional ground represents an acquisition obtained without the direct outlay of a dollar. By these operations land has been created valued at more than \$7,000,000 in East Potomac Park alone.

THE PLAN OF IMPROVEMENT.

27. Upon the transfer of this area to the Chief of Engineers, United States Army, in 1914, as a part of the park system of the District of Columbia, there was made available a virgin tract of park land of 327.53 acres well above the highest river floods, protected by a strong serviceable sea wall, the soil of which is composed of the richest

alluvium, promising excellent planting possibilities for landscape adornment. The surface has been left in such condition by the dredging operations that the entire area is adaptable with little expense for development into a huge recreation field. Slight undulations of surface are even now sufficiently pronounced to drain well the major portion, but of course here and there various minor draining facilities will be required to dispose of occasional surface water which would otherwise collect or drain across roads and walks. Some small portions will have to be regraded to accommodate special recreation features, as, for instance, wading and bathing pools, tennis courts, baseball diamonds, etc.; but the work anticipated in this direction may be considered quite light in comparison with the extent of the project. In parts of the island volunteer trees have already grown to considerable heights; many of these trees can well be preserved and incorporated into the final development.

28. The plan presented herewith, while subject to further study when the execution of its details is undertaken, has been developed with great care. It has been prepared by an experienced landscape designer well versed in the handling and treatment of similar large projects elsewhere and has progressed under the supervision of the National Commission of Fine Arts, whose members have taken great interest in the successful outcome of the project. It has the approval of that body as a preliminary study.

29. Although the project embodies facilities for every anticipated modern recreation it does not present an extraordinarily ambitious scheme. Based on the experiences of other large cities it merely follows the installation of similar facilities already in successful operation in those cities.

ROADWAY.

30. The existing 30-foot circuit road running along the borders of the park will be available throughout, a few slight changes in its location being expected only at the site for the prospective boat harbor on the Washington Channel side and where the road passes beneath the railroad tracks in entering the park.

THE STADIUM AND VICINITY.

31. At the northeast corner of the grounds near the main entrance the plan provides for the erection of a U-shaped stadium, located in such a manner as to command a full view of the entire field, the river beyond, and in the distance the rolling hills of Virginia and Maryland. The stadium itself would be of sloping earthen banks, and will be inconspicuous from the White House and the Monument Grounds. Its central portion is to be equipped with fixed concrete seats, and would have an actual seating capacity of 6,000, while on the turf slopes of the two wings of the U-shaped structure, temporary wooden seats can be so placed as to accommodate a maximum seating capacity of 14,000. On special occasions when large crowds gather, temporary wooden seats can be placed at the open end of the stadium so as to expand this seating capacity to about 40,000. Passageways through the center of the stadium embankment would

approach the field from the railroad terminal at the rear of the stadium, and be arranged so as to give convenient space for locker rooms, toilet rooms, and like conveniences for players and spectators. Within the stadium angle lie the running track, one-third mile long, and a 220-yard straightaway dash, while its shape permits the games of baseball and football to be played before large audiences. At each end of the wings are permanently located football practice fields; these are in turn again adaptable to other sports when football is not in season.

THE PARADE GROUND.

32. The large parade ground of 60 acres which the stadium faces will conveniently accommodate 13 baseball diamonds. These are so disposed that all but two of them can be equipped with permanent backstops, while these two which are located in the center of the field can be supplied with easily removable backstops set in sockets so as not to interfere with other games when the space is needed. The great advantage of this arrangement is that the whole field can be cleared of players and their paraphernalia so as to be available on short notice for parades, tournaments, pageants, community festivals, holiday celebrations, in fact all the larger civic attractions and games so popular in recent years.

THE WADING POOL AND CHILDREN'S PLAYGROUND AND THE LARGE SWIMMING POOLS.

33. To the east of this large field and parade ground, set in a grove of overhanging trees, is located a children's wading pool of about three-fourths acre in extent. Such a feature has become very popular in other cities and should be installed as early as possible.

34. In an extension of this large grove would be located the various playground apparatus for the use of others of the younger element—swings, slides, sand courts, handball courts, adequate space for tossing ball, and for races and wrestling.

35. To the east and west of the wading pool there would be arranged capacious swimming pools, each pool having an area of about $1\frac{3}{4}$ acres in extent. They are to be constructed with sand beaches having a gradual increase from wading depth to a point opposite where a depth of about 20 feet of water will be available for diving. These pools will be supplied with filtered water, kept constantly purified by approved methods of treatment. The need for the wading and swimming facilities is probably more insistent at the present time than for any other form of outdoor recreation. The small municipal bathing beach in the Monument Grounds can accommodate only a small portion of those who wish to swim and soon will have to be removed. The use of the Tidal Basin is somewhat restricted, investigation having shown that the use of any local bathing place supplied by raw Potomac River water is to be avoided on account of its pollution. In all such bathing pools, whether municipally or privately owned, the greatest care has to be taken not only to supply the purest of water, but also to keep them clean

from contamination by constant effective treatment to prevent the development and spread of anything detrimental to the health of the community. Extended investigations into bathing facilities, both in this country and abroad, have shown the great danger of contamination by the spread of many diseases as a result of bathing in unclean water. In every case where an invitation is extended to the public to use bathing facilities a serious public duty is therefore involved to see that every precaution is taken to make the water fit from a hygienic point of view. The bacteriological condition of the water should closely approximate that of drinking water, as this is the standard that is being urged for all swimming pools.

36. Every effort would be made by proper equipment to have these pools unexcelled hygienically. It would be false economy to plan for them anything but the best and most modern approved equipment. By furnishing a safe and sanitary center for bathers in the city their installation will diminish the promiscuous and surreptitious bathing going on in the rivers and branches surrounding Washington, and without doubt will contribute materially to a decrease of diseases.

37. A pumping station containing apparatus for refiltration and for the chemical treatment of the water to be used will necessarily be installed in connection with the pools.

38. The two bathhouses, shown on the shores of the pools, are to contain the usual modern equipment for storage, locker room, shower baths, toilet and retiring rooms, and working quarters for the attendants.

BOATHOUSES AND HARBOR ON WASHINGTON CHANNEL SIDE.

39. A short distance south of the group of pools the plan shows an artificial indentation on the Washington Channel side of the island, which is intended for small boats. The water area in this indentation will be sufficiently large to give a safe and convenient landing and shelter for boats of moderate size. Provision for hire of boats, where patrons can rent rowboats, small sailboats, launches, or canoes for short periods, can be made near the railroad channel, and perhaps can be leased to concessionaires. The other boathouses are to afford space for the storage of the privately-owned small-sized water craft, such as canoes, shells, rowboats, and perhaps small motor boats, as well as for locker and rest rooms. The larger water craft above a certain prescribed size would necessarily be obliged to anchor in the channel, as they do at present, and take on passengers either from a float direct or by tender. At the southeast corner of this harbor there is to be an inclined way on which disabled boats may be hauled up for inspection or repair.

THE CROSS-PARK CANAL.

40. The beginning of the connecting waterway leading from the Washington Channel side to the Potomac River leads out from this basin. Upon its pleasant irregular turfed banks one can draw his canoe or boat to rest in passing. This feature, so attractive in some

large parks in other cities, gives a safe and agreeable playground for the oarsman and a convenient cut-off for those wishing to go up the river and having neither the time nor the desire to make the journey through the deeper water around the lower point of the park.

41. It is believed that this waterway will be one of the most popular points of attraction in the whole park.

THE MAIN FIELD HOUSE.

42. Opposite the center of the boat harbor and situated upon an inland elevation is to be located the main large field house. From this commanding situation its verandas will afford views of great beauty. To the rear and across the channel is the busy water front with its boulevard and modern keys, and farther back the white dome of the Capitol and the masses of the large Government buildings. In the front one looks out on the broad expanse of the Potomac, with the beautiful hills and fields of Virginia surmounting the opposite shores. The accommodations for players and spectators will include refectory provisions that are a necessary part of the modern facilities for the convenience of the public. The house will also be available for band concerts and dances and for meetings of all kinds.

SOME OF THE MAJOR RECREATIONS.

43. Grouped about the field house and within immediate view are the major recreations—31 tennis courts to the south singly and in pairs and some inclosed in shrubbery so the players may be more private if they so desire. Between them and the building are 4 basket-ball courts. To the north, immediately in the foreground, are 10 croquet and 3 roque courts. Directly in front of the central porch is the cricket ground, of about 4 acres in extent, and the main public golf course. The latter is so arranged that, in addition to an 18-hole course, one of 9 holes for amateurs is available. By taking advantage of the existing trees and those to be planted, portions of these courses are to weave in and about the groups of planting and groves of trees, presenting an appearance similar to the natural countryside so desirable in every golf course.

44. Nested in the area about one-third mile south of the field house and halfway the length of the island is a small lagoon. This lagoon will add greatly to the picturesqueness of the course and the general attractiveness and interest of the whole park. It offers the possibility of making it one of the most charming and beautiful spots in the scheme. It will also afford a safe and convenient skating pond in the wintertime.

45. Eight miles of artificial walks with shelters and seats commanding the best views will lead to the main attractions of the park and to the many natural vistas and landscapes.

46. For the lover of horses a soft road winds amongst the trees, and runs for a considerable distance beside a straightaway driving course of a half-mile length. Three miles of bridle paths skirt the shores.

TREATMENT OF THE POINT OF THE ISLAND.

47. At the southern end of the park a small channel is proposed so that those who may wish to take a short journey to the point by way of the water will have some shelter. On the small island so created, but connected to the main portion of the park with an appropriate bridge, will be a small shelter house equipped with toilet conveniences and refectory to accommodate the many visitors who even now make enthusiastic use of the motor roadway around the park. On this point an opportunity is also afforded for placing a suitable artistic memorial in such a way as to add a proper and natural feature to the landscape.

ACCESSIBILITY.

48. The question of making the park accessible has been given particular consideration. Compared with similar attractions in other cities, this park is already reached with comparative ease by reason of its close proximity to the more densely populated portions of the city. Street railway lines with terminals are planned so that in times of large gatherings 40,000 people can be handled without undue crowding, and ample space has been reserved for the storing and switching of the street cars. The railway traffic yard at the stadium is proposed to be served by the same tracks that extend to the boat harbor but which would not be used except on the occasion of the congregation of large crowds. These transportation features are, of course, subject to change in detail depending on the practicability of construction.

49. Private ferries are contemplated directly connecting the nearest points of the transportation lines serving the water front, probably at L, Water, and Seventh Streets, with that portion of the park having boating facilities on the artificial channel.

50. Ample provision for the parking of automobiles has been made not only at the lower end of the island but at the main field house and the boathouses, these points being the most important places where such parking facilities are necessary. The space reserved for parking near the railroad stadium will accommodate more than 300 automobiles, and is so arranged in conjunction with the railroad terminals that automobiles can come in at one end and out at the other without crossing the railroad tracks. At the point near the boat harbor, where the railroad terminus and ferry come together, appropriate accommodations are planned for large numbers of "jitney" and motor busses; it is believed that great numbers of such service vehicles will be available as soon as visitors commence to make use of the park and its facilities, and that these would likely take care of the demand for transportation for a few years until the work on the major improvements has advanced sufficiently for providing for better facilities.

ESTIMATE OF COST OF IMPROVEMENTS PROPOSED.

51. It is estimated that the total cost of improving the park complete with all its features installed will closely approximate one and one-half million dollars. It is planned to distribute this total cost over a progressive period of construction of about 10 years, which

would require annual appropriations of about \$100,000. The following is a rough estimate of the improvements proposed, based on the preliminary plan and according to data obtained regarding the cost of similar features elsewhere. Not until detailed working drawings are prepared for the various individual features could a more definite statement of cost be made.

Approximate preliminary estimate of cost.

5,500 feet of oil-macadam roads for all kinds of traffic.....	\$33,349
7,920 feet of soft dirt roads for driving only.....	10,000
3,000 feet of dirt straightaway for horses.....	11,000
5,000 feet of curbs.....	4,000
32,000 feet of macadam walks.....	30,000
8,200 feet of dirt saddle paths.....	4,000
Stadium:	
125,000 cubic yards earthwork.....	\$75,000
63,000 square feet roadway.....	7,000
3 tunnels.....	5,600
2 toilets.....	5,000
Concrete seats.....	18,000
	<hr/>
2,120 feet cinder mixture running track, including 220-yard dash.....	110,600
13 ball fields, including 52 bases and 13 back stops (not including general grading).....	5,830
2 football fields (not including general grading).....	2,000
2 swimming pools, $1\frac{1}{4}$ acres each:	1,000
Grading.....	\$50,000
Sand.....	20,000
Fence.....	7,500
Concrete sides and bottom.....	40,000
	<hr/>
1 wading pool, one-half acre:	117,500
Grading.....	968
Sand.....	1,209
Concrete coping.....	1,000
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Golf courses (in addition to general grading).....	3,177
Golf lake, grading and shaping.....	2,400
31 tennis courts, of clay.....	7,200
Wire inclosures for tennis courts, including gates.....	7,250
25 wooden shelters at tennis.....	7,275
4 basket-ball courts, clay surface.....	8,750
10 croquet courts, clay surface.....	1,000
16 wooden shelters at croquet and roque courts.....	1,000
3 roque courts, clay surface, plank cushions.....	4,800
Sea walls at boat harbor and bridges.....	1,000
Cross canal and boat harbor excavation.....	26,000
Harbor piers and breakwater of wood and piles and plank.....	81,000
Pump house of tile and stucco.....	5,500
Machinery (pumps, filters, boiler, etc., for purifying and renewing water in pools).....	8,000
2 bathhouses of tile and stucco.....	50,000
Fittings and equipment, such as plumbing, lockers, etc.....	98,000
2 ferry houses of tile and stucco.....	30,000
Railway terminals of tile and stucco.....	25,000
2 large boathouses of tile and stucco.....	10,000
Boat landings, floats, and bridge.....	30,000
2 small boathouses of tile and stucco.....	2,500
1 field house of tile and stucco, complete, with all plumbing, lockers, etc..	20,000
1 carriage shelter of tile and stucco.....	200,000
1 pergola of stove brick and wood.....	10,000
1 footbridge of cement, with stone face.....	4,000
2 driveway bridges of cement, with stone face.....	9,000
	<hr/>
	60,000

300 acres grading and seeding.....	\$100,000
Trees and shrubs.....	10,000
Sewage disposal by septic tank system.....	77,500
Rain-water drains.....	20,000
	<hr/>
Engineering, supervision, contingencies, etc.....	1,241,631
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Total.....	1,489,957
If a sea-wall rail is used add (3 rail wrought steel pipe).....	55,440
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Total.....	1,545,397

52. Washington in 1860 had a population of 75,080; in 1870, 131,700; in 1880, 177,624; in 1890, 230,392; in 1900, 278,718; and in 1910, 331,069; an increase of an average of more than 51,000 per decade during the past 50 years. It will not be many years before the city has reached the 500,000 mark, and a look into the future based upon the growth of the past 100 years will show the Capital City of the Nation exceeding the 1,000,000 mark. It is evident that some start along large lines should be made without delay in meeting the demands for recreation of a constantly increasing community. The completion of the project outlined above will go far toward meeting the situation, and will place the city in favorable comparison with other large municipalities, both in this country and abroad.

WM. W. HARTS,
Colonel, United States Army.

WAR DEPARTMENT
CORPS OF ENGINEERS

PRELIMINARY PLAN

PUBLIC RECREATION GROUNDS

EAST POTOMAC PARK

WASHINGTON, D. C.

MADE UNDER THE DIRECTION OF
COL. W. W. HARTS, U. S. A.
OFFICER IN CHARGE OF PUBLIC BUILDINGS AND GROUNDS.

SCALE

0 200 400 600 800 1000 1200 1400 1600 FT.

PREPARED BY
JAMES G. LAMSON
CONSULTING LANDSCAPE ARCHITECT
MARCH 1914

There is a bridge at Commercial
Street, about 1/2 mile long, on the
Potomac River, below the R. & A.
R. R. bridge.

The proposed picnic grounds west
of the Washington Monument are
being adapted to the plan of the
Park Commission of 1901 and are subject
to future detail study.

Description.

Stadium - Extension of the only car line into the grounds, with
looks at the stadium and the boat station near the Field House.
Stadium look would be used on large occasions only.
Arrives at Boat Station and at Stadium communicate with
South Washington.

Boat Station - The center station has concrete seats for 6,000 people,
the two wings temporary wooden seats for 8,000 more.
On large occasions concrete seats can be placed around the
other end of the stadium to further increase the seating capacity.
The back of the stadium are covered with trees
which furnish shade to the seats when the sun is low.
A one-third mile running track with a 220 yard dash is
fully enclosed by the stadium.

Bathing Pools - Ten wood beach bathing pools of 1/2 acre each with Locks
between the bathing pools and main of the river.

Boat Field - 100 boats in the Field House and main of the river.
The boats in the Field House are used for a large number of children.
The boats in the Field House are used for a large number of children.
The boats in the Field House are used for a large number of children.

Picnic Grounds - 40 acres in extent and enclosed by the stadium.

Boat Station - For the sole accommodation of canoes and other small craft,
most of which would be kept in the 4 Boat Houses upon it's
banks, the one on the left would be a landing Boat House.
A channel connects with the Potomac River, it keeps the
Boat Station fresh and separates the quiet from the noisy stream.

Field House - Opposite the Boat Station and overlooking the Golf Course
it is bounded with fields, lawns and gardens. It has kitchen
facilities and has ample benches.

**Canoe and
Boat** - 10 Canoe and 8 Boat House, located between the Field House
and the Boat Channel, the boats are located between the
courts.

Boat Field - 4 courts between the Field House and the Tennis Courts.

Tennis Courts - 31 courts located at the southern side of the Field House
and Boat Station, they are provided with seats for spectators
and are enclosed by wire cages.

**Canoe and
Boat** - There is a permanent field located near the river and of the
Boating Channel.

Golf - 100 acres - an 18 hole and a 9 hole course.

Motorway - 1/2 mile long and located on the Potomac side of the Golf Course.

Boat Station Road - 1 1/2 miles between the Boat Channel and Lockout Point.

Boat Field - 2 miles from the Potomac River Entrance to Lockout Point and return
by way of the Boat Station.

Park Drive - 3 1/2 miles of border and cross streets.

Automobile Parking - Parking space for 500 automobiles located as follows - between
the Field House and the stadium, opposite the Boat Field, Field House, Boat
House, Tennis Courts, Motorway for horses and at Lockout Point.

Swim Shelter - Near the Automobile Park at Lockout Point.

Lockout Point - The southernmost point of the Recreation Grounds - provided
with boat landings and shaded seats.

Picnic Grounds - In the many grounds about the grounds.

Approved March 1, 1914.
W. W. Harts
Colonel, U. S. Army

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